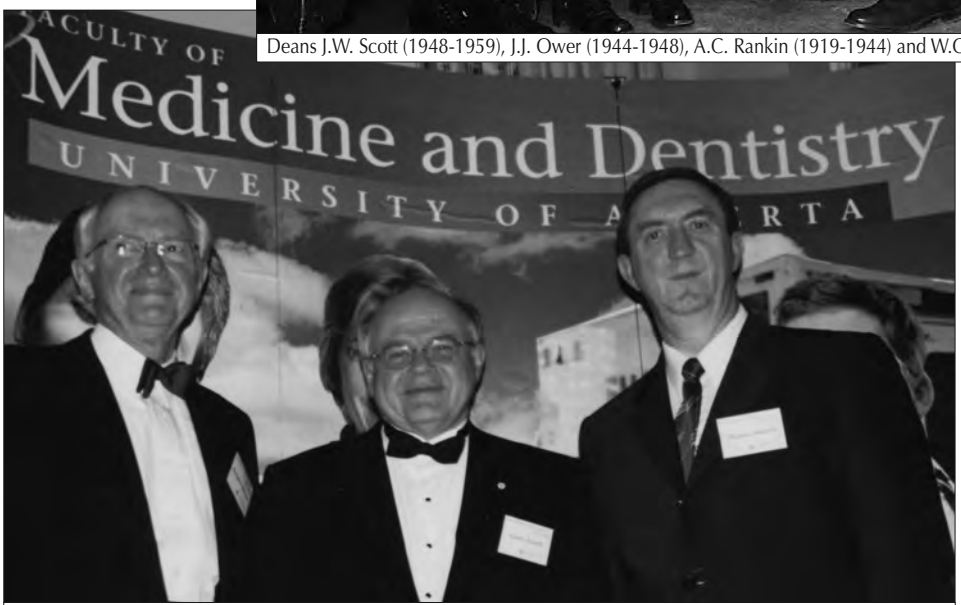
Deans, Dreams and a President

The Deans of Medicine at the University of Alberta 1913-2009

Deans J.W. Scott (1948-1959), J.J. Ower (1944-1948), A.C. Rankin (1919-1944) and W.C. Mackenzie (1959-1974)



Deans D.R. Wilson (1984-1994), D.L. Tyrrell (1994-2004) and T.J. Marrie (2004-2009)

by Robert Lampard, MD

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Front Cover: UofA Deans of Medicine, 1921-1959, photo credit Moira Scott Finnigan, 1959.
Back Cover: UofA Deans of Medicine 1984-2009, photo credit Robert Lampard, 2004;
Walter C. Mackenzie HSC, photo credit P. Marsdon.

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** There were two acting Deans, Dr. J.J. Ower (1939-1943) and Dr. Robert S. Fraser (1983/84).*

*** With Dr. Dawna Gilchrist*

DEANS, DREAMS AND A PRESIDENT

FOREWORD

In Deans, Dreams and a President, Robert Lampard provides a fascinating and informative glimpse into the history of the Faculty of Medicine at the University of Alberta from the time of its founding in 1913 until 2009. The first president of the U of A, Henry Marshall Tory founded the Faculty of Medicine as part of the University - the first such Medical School in Canada to be formed within a University. A few years before Abraham Flexner had recommended that all medical schools should be part of a University.

The first Dean of the Faculty, Dr. A C Rankin while working on the front lines during World War I described 30 cases of "Intermittent fever of obscure origin, occurring among British troops in France. The so called Trench fever." We now know that this is a bacterial infection, transmitted by the bites of infected lice, due to Bartonella quintana.

As you read this book you will learn not only about the eight deans, but also about legendary faculty members such as Moshier, Collip, Mewburn, Vant, Elliott, Levey, Callaghan, and Fraser.

My predecessor and the seventh Dean in the book, Dr. Lorne Tyrrell, has followed in the tradition of the best at U of A. An Infectious Diseases Clinician-Scientist he discovered the first treatment for hepatitis B and along with two colleagues was the first to grow hepatitis C in humanized mouse liver. Just like Tory, Tyrrell was a builder. The $600 million two new research buildings, one opened in 2008 and the other opened in 2009, are part of his legacy to U of A.

Dr. Lampard, a physician from Red Deer is a medical historian by passion and avocation. He has written extensively on Alberta's medical history and that experience has led to this book which is a rich tapestry of the events and people who have made Faculty of Medicine and Dentistry what it is today.

Thomas Marrie
June 2009

PREFACE

"The longer you can look back, the further you can look forward."[1]

Nine men have led the University of Alberta's Faculty of Medicine over its first 98 years - or 102 years since President Henry Marshall Tory's first written documentation of his plans for a medical school.[2] Much is owed to Dr. Tory by the eight deans who have followed him, and by the medical students who have graduated from the UofA, for his belief that a medical program should be a priority for the fledging University.

Tory's 1913 dream of a full degree granting, accredited medical school in just over a decade, required vision, determination, an evolving strategy, fortuitous timing, a willingness by the university and the government to support it, and a strong belief that it could happen. After the partial (three year) medical school program survived WWI, Tory realized that to graduate doctors that would stay in Alberta, then a relatively isolated part of Canada, required them to be fully trained in Alberta. That realization led to the creation of the only degree-granting medical school in Canada for 62 years - from 1883 to 1945.

Perhaps not surprisingly, the role of Dr. Tory was far more significant than first thought. Tory was determined to create a faculty of medicine from within the university - a first in Canada. His building block strategy began, when he secured control of the provincial laboratory in 1911. It provided him with an opportunity to recruit teacher/pathologists in the Osler tradition after WWI. Then he adroitly acquired a hospital by offering a poplar grove for the Strathcona Hospital ,on the UofA grounds. It opened in 1913. Tory gambled on his first recruitment opportunity when he hired Dr. Allan Rankin sight unseen in 1914, as the first university appointed Director of the Provincial Laboratory. He only knew him through his public health work in Thailand, his clinical research in Montreal, his McGill background and reputation, and his references. But that was enough for the McGill trained Tory.

To Dr. Tory's misfortune, Dr. Rankin left almost immediately after his arrival, to join the #1 Canadian General Hospital staff in September 1914. He was soon sent overseas for over five years. Rankin returned from the war with an outstanding record, making Tory's decision to appoint him as the first dean a straightforward one.

Fortuitously, Rankin already knew future Dean J.J. (Johnny) Ower. The two physicians re-met overseas in December 1914. By the end of the war Ower was looking for a pathology post. Rankin was looking for a teacher. The two fit perfectly as they continued their life-long friendship. Dr. Ower's experience allowed Dr. Rankin to answer the war-call in October 1939, when he departed for another four years, leaving the faculty to carry on almost seamlessly in Ower's hands.

Dr. Ower's successor, Dr. John Scott, became the first dean with a clinical background - in biochemistry and medicine. He succeeded by sheer hard work. Scott in turn transferred the mantle to the charismatic surgeon Dr. Walter Mackenzie, whose legacy is still being felt. Dr. Mackenzie groomed Dr. D.F. (Tim) Cameron, who earned his deanship through diligence, compatibility, loyalty, and a willingness to tolerate continuous hospital planning, redesigning and construction for a decade. His successor Dr. Douglas Wilson was the first dean appointed from outside the faculty and province. Dr. Wilson saw the opportunity to expand medical research in a newly opened Health Science Centre. A decade later Dr. Lorne Tyrrell became the glue that kept the faculty together through the fiscal crisis of 1994-1996, leading the faculty through the most difficult decade since Dr. Rankin weathered the depression. Dr. Marrie continued the faculty down the path set by his predecessor – more growth, more construction, and more integration of medical care, research and education.

The story of the faculty continues to unfold in the hands of the new Dean Philip Baker, who arrived from Manchester, England to take his post in September 2009, just in time to face the reverberations and budgetary impacts of the mini-recession of 2008/09.

Researching Dr. Tory and the deans revealed some common characteristics. The first three leaders were descendents of United Empire Loyalists. The first four leaders were McGill graduates. They all sought, as Dr. Mackenzie articulated, to contribute to the Canadian medical fabric, as a way of improving medicine in Alberta.

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1. Churchill, Winston S., "Mr. Churchill and the Physicians", speech reprinted in the CMAJ 50: 501-504, June 1944, from the Lancet of March 11, 1944.
2. Tory, Henry Marshall, "The University of Alberta", Western Canadian Medical Journal 3: 560-562, 1909.

Dr. Tory and the first five deans responded to the call of the colors during both world wars, a decision which materially affected their lives and the life of the school. During WWII almost 400 physicians enlisted including 22 faculty, representing over 70% of the 1940 registered doctors in Alberta. It was a remarkable contribution.

Another characteristic of the faculty was its response to accreditation surveys, beginning in 1918. Successful surveys were mandatory to permit the trans-border movement of undergraduate and later graduate physicians and dentists. The accreditation reports either confirmed the high quality of instruction, or highlighted the deficiencies, which were always addressed with dispatch through the efforts of the faculty, and where necessary the university and the government.

An unexpected finding stemmed from the early non-medical research initiative of Dr. Tory. In 1921 Tory started the government-funded Alberta Research Council, to focus university based research on provincial opportunities like tar sands and coal extraction. The same year Tory approved Professor J.B. Collip's around the world upgrading year that resulted in the isolation of therapeutically effective insulin in Toronto. Tory took his Alberta research experience to the national level as the President of the National Research Council (NRC), from 1923 to 1935. The NRC in turn established the MRC in 1938. In 1946, MRC President Collip returned to the west to expedite the formation of the MRC's western Canadian medical research group, and medical faculty-based research. Life long friends, Dr. Collip and Dr. J.W. Scott became contemporary deans, Collip at the UWO (1947-1961) and Scott at the UofA (1948-1959).

The faculty has been fortunate to be led by such able leaders. There have been no missteps, nor sustained setbacks. All the deans have been guided by Osler's five ideals: do a day's work well, follow the golden rule, cultivate equanimity, remember learning is a life-long experience, and be as persistent as needed.[3]

In the next two years the Faculty will bask in the opening of the Edmonton Clinic, the next step in the integration of the UofA's healthcare faculties - educationally, clinically and physically - as envisioned by Dr. Mackenzie and his colleagues 50 years ago, and educationally and physically by Dr. Tory 45 years before that. Then the Faculty will celebrate its own exciting centennial in 2013.

To research this book I was materially assisted by the previous works of 1) Walter Johns (A History of the UofA, 1979), 2) Ross Vant and Tony Cashman (More Than a Hospital, 1986), 3) Elise Corbet (Frontiers of Medicine, 1990), 4) Robert Macbeth (The Department of Surgery of the University of Alberta, 2009), and the alumni and medical student publications from 1943-2004. From my own publication, I have included the profile of Dr. Lorne Tyrrell, and substantially added to the Mackenzie and Rankin chapters.[4]

Choosing to write about anyone while they are alive and are such capable authors in their own right, carries a risk. Fortunately all three deans (Wilson, Tyrrell, Marrie) participated willingly, nee vigorously, in their own chapters. I am deeply indebted to them as well as to the families of Deans Rankin (Elizabeth Wickheim and Liz Poolman), Ower (Isabel Evans), Scott (Pat & Moira Finnigan), Mackenzie (Kim & Richard Mackenzie) and Cameron (Judy Cameron), for their ever-willing assistance to research their family archives and share anecdotes. Personally knowing all the deans from Dr. Scott forward, has provided added insight to their lives.

My closing thanks go to kindred spirits Dr. Hugh Whitney, DVM, for sharing his enthusiasm, research, rigorous attention to accuracy, and common interest in the life of Dr. A.C. Rankin; and to Dr. Dawna Gilchrist for expanding her essay on Dr. Marrie in *Deans in the Headlines*, so his profile could be included.[5] I trust this chronological study of the UofA Deans of Medicine will stimulate more in-depth research of each of the them, in manuscript or book form. Perhaps other Faculties of Medicine in Canada will start down a similar path.

Finally I must thank my wife Sharon for her support and encouragement, particularly to hurry up and finish this book.

Robert Lampard, MD
March 2010

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3. Bryan, Charles S., Osler, Inspirations from a Great Physician, page 6-7, Oxford University Press, 1997.
4. Lampard, Robert, Alberta's Medical History, Young and Lusty and Full of Life, 732 pages, Red Deer, 2008.
5. Gilchrist, Dawna M., Deans in the Headlines, pages 49-52, Faculty of Medicine and Dentistry, 2008.

ABOUT THE AUTHOR

A native of Red Deer, Dr. Lampard's interest in Alberta's history began as a Historical Society of Alberta member in 1968. In 1981 he approached the Alberta Medical Association seeking a framework to fund the documentation of Alberta's medical history. The end result was the creation of the Alberta Medical Foundation in 1987. He served as president of the Foundation from 1995 to 2006.

Dr. Lampard's determined quest to uncover the history and contributions of Alberta's medical pioneers led to the creation of the Alberta medical history website (www.ourfutureourpast.ca) and the writing of articles on Alberta's medical history in the Alberta Doctors Digest and Alberta History.

An active community member, Dr. Lampard received the Red Deer Rotary Club's Presidential Citation in 2000 and 2005. He worked to preserve the CPR bridge, create the Black Bonspiel of Willie MacCrimmon mural and the Historic Arches Park in Red Deer. He has received the Spaulding Award for his contributions to medical history in Canada and the Alberta Centennial Medal for contributions to his community. He was selected one of Alberta's 100 Physicians of the Century (2005) and awarded an honorary life membership in the Alberta and Canadian Medical Associations in 2006.

Residing in Red Deer, Dr. Lampard is married to Sharon and has three children. His son Bruce is an Emergency physician; Geoffrey is studying Emergency Medicine at the University of Calgary; and Allison is studying Modern Languages at St. Francis Xavier in Nova Scotia.

ABOUT THE BOOK

The Faculty of Medicine was the dream of the U of A's first President, Henry Marshall Tory. The faculty began as a three year program in 1913, and was extended to a full degree program because of the post WWI physician shortage, and the 1918 flu crisis. It was the only full medical program started in Canada for 63 years.

The faculty survived the depression intact under Dean Rankin. Acting Dean Ower initiated the graduation of two additional classes during WWII, by compressing the academic years to six months. In 1946, post graduate training began, and the medical research program was rejuvenated under future Dean Scott and MRC President Dr. J.B. Collip.

The Tory vision to bring all the Health Science faculties together in the new 1922 opened medical school, was revisited by Dean Mackenzie in the early 1960s and from it came the Health Science Center concept. The initiative resulted in the completion of the Clinical and Medical Science buildings by 1972, and the opening of the Walter Mackenzie Health Science Center in 1983.

Medical research was dramatically accelerated by the AHFMR in 1980 and the building of two research facilities under Dean Wilson, followed by two more under Deans Tyrrell and Marrie.

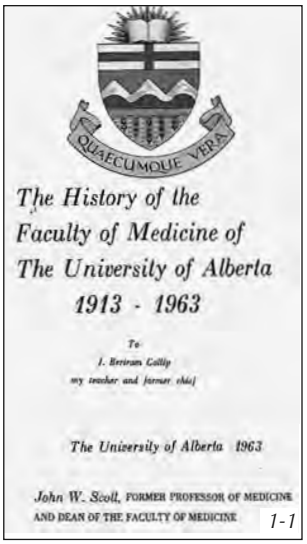
The integration of all the U of A Health Science faculties took a major step forward with the approval of the Edmonton Clinic across from the Mackenzie HSC. It will open in time for the Faculty's centennial in 2013.

During the first 98 years the eight deans convocated or graduated over 6200 MDs, 4200 Specialists, and 67 aboriginal physicians – truly a Canadian success story.

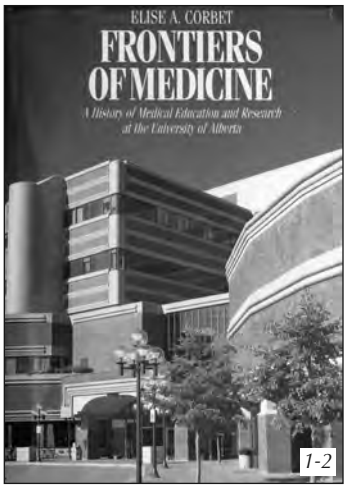
Introduction

What is the future of medicine in Alberta?
The goal… is the establishment of a first class medical school…
as part of a provincial university.
(H.G. Mackid, 1912)[1]

Leadership of the UofA's Faculty of Medicine began with the man who started the Faculty, President Henry Marshall Tory. Although not a physician, rather a trained minister, physicist and educator, Tory began the three-year medical program in 1913. For seven years he managed it, before he appointed the first Dean of Medicine. Since then eight Deans have graduated over 6,000 MDs during the faculty's first 96 years.[2]



The 50th Anniversary of the Faculty of Medicine, 1963



The 75th Anniversary of the Faculty of Medicine, 1990

Justifiable pride permeates the UofA's historical essays,[3] on its primary teaching hospital – the Walter C. Mackenzie Health Science Centre (UAH),[4] on the Faculty of Medicine,[5] and on several medical departments.[6] They cast light on the challenges (and opportunities) created by the small population and the geographic isolation of Edmonton, and the sparse funding of the medical school until the Golden years began in 1956. Since then growth has been continuous, with the exception of two setbacks – the cancellation of the Centennial Hospital

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1. Mackid, Harry G. — The President's Address at the annual meeting of the Association, August 10, 1912. Reprinted in the CMAJ 2(9): 801-811, September 1912.
2. Lampard, Robert — The total to the spring of 2010 is about 6,200, excluding the 150 who completed the MDs at McGill or the UofT before 1923, and the 50-75 who graduated from those universities before WWII.
   An overview of the Marrie years (2004-2008) was included in Dr. Dawna Gilchrist's *Medicine and the Headlines*, pages 49-52, Faculty of Medicine and Dentistry, 2008, and extended by Dr. Gilchrist to cover his last year (2009), before being reformatted in the style of the other profiles.
3. Johns, Walter H. — *A History of the University of Alberta 1908-1969*, UofA Press, 1981.
4. Vant, R. Cashman, T. — *More Than a Hospital. University of Alberta Hospitals 1906-1986*, UAH, 1986.
5. Corbet, Elise A. — *Frontiers of Medicine. A History of Medical Education at the University of Alberta*, UofA Press, 1990. For a personalized account, see Dr. J.W. Scott's The History of the Faculty of Medicine of the University of Alberta 1913-1963, UofA, 1963.
6. Gilchrist, Dawna — *The Department of Medicine at the UofA*. Other departmental histories include 1) R.S. Fraser's *Cardiology at the University of Alberta to 1969*, UofA, 1992; 2) J.C. Callaghan's *30 Years of Open Heart Surgery at the University of Alberta Hospitals, 1986*; 3) W.C. Taylor, Brock Armstrong, Ursula Mathew's *A History of The Department of Paediatrics at the UofA 1919-1991*, UofA, 1993, and 4) R.A. Macbeth's *The Department of Surgery of the University of* Alberta, *the first half century 1922-1975*, 2009. All are accessible (except the Macbeth book) through the website www.ourfutureourpast.ca/medHist.

in 1971, and the provincial and federal funding curtailments of the mid 1990s.

The faculty's first half century was anything but smooth. External events like two world wars, the 1918 Spanish flu epidemic and a severe depression, adversely affected the Faculty and very nearly destroyed it several times. The Department of Dentistry was similarly affected, and in some ways even more adversely.

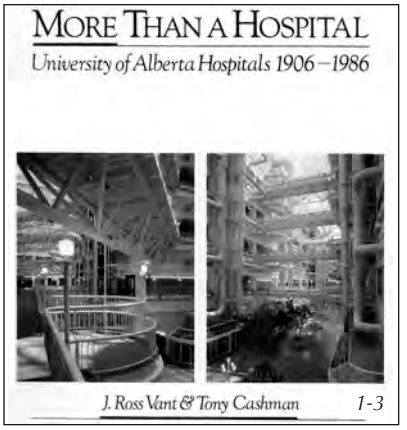
Survival required determination, leadership, adaptation, resourcefulness and teamwork. It became a byword as the cooperative government-university-medical school relationship was repeatedly challenged. Despite these uncontrollable events the Faculty of Medicine grew, as the only MD granting medical school started in Canada from 1883 (in Winnipeg) until 1945 (in Ottawa), or west of Winnipeg until 1950 (in Vancouver).

The creation of the Faculty of Medicine was followed by the approval of a Pharmacy school (1914), the first Dental school west of Toronto (1916), the only one until Manitoba began its program in 1958, and a nursing program (1923). The leadership and pioneering spirit of Albertans in university-based health education was evident from the time the UofA began.

Surviving the First Half Century: Until WWII, the Faculty operated on a nearly break-even basis, from interest on the Rockefeller grant, high student fees, few full-time professors, low salaries, little medical research and teachers often paid from other sources.

The first crisis came when Professor (Dr.) H.H. Moshier left to join the 11th Field Ambulance in early 1916 taking 15, mostly third year medical students, with him.[7] Program enrollment declined from a total of 44 students in the first two years (1913 and 1914), to 36 students in the first three years (1913-1916). There were 11 students in the third year (1915/1916) and a similar number including three women, in John Scott's class of 1917/18. The loss of students was counter-balanced by the loss of faculty through enlistments, as the first three full-time faculty members were reduced by one (Rankin in 1914), and another one (Moshier in 1916), leaving the last one (Revell). Part-timers filled the void.

The faculty losses would have been the demise of the school had not a young professor, J.B. Collip, recruited to teach the premedical zool-



The 80th Anniversary of the UAH, 1986

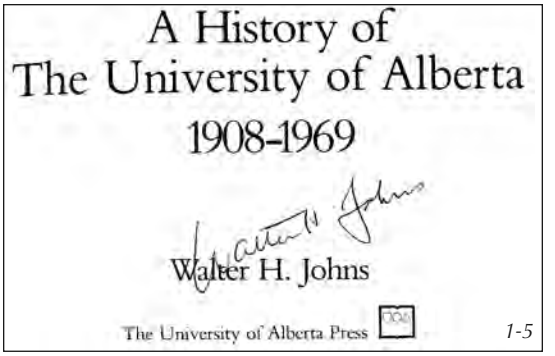
ogy and first year biochemistry classes in September 1915. A talented and versatile lecturer, he quickly upgraded his medical knowledge in order to give Dr. Moshier's courses in physiology, pharmacology, starting in September 1916. In the process he shortened the training requirements for his UofA MD degree, awarded in 1925. His success in isolating clinically effective insulin in 1921 and returning to the UofA in 1922, did much to enhance the faculty's reputation.

During the critical year (1916) a key part-time instructor, Dr. H.C. Jamieson applied to join the Army. He was refused entry because of suspected TB. After spending the summer at a fresh air camp at Jasper, Dr. Jamieson returned to give his own courses, as well as the Dr. Rankin courses, and still manage the Provincial Laboratory until Rankin's return in 1919. Other part-timers like Drs. W.A. Wilson and G. Gray helped Jamieson maintain the program.

The next near-fatal blow came following the mini-recession in 1921-1922. The story has been recounted by Elise Corbet, with some historical license. Dr. Tory saved the program by pulling from his vest-pocket a cheque from

UofA Senate with Premier Rutherford, 1908. Included Drs. W.D. Fenis, R.G. Brett, G.A. Kennedy, W.S. Galbraith

7. Lister, Reg *My Forty-Five years on the Campus*, pages 22-26, circa 1956, UofA. Reg Lister, after whom Lister Hall is named, was Dr. Moshier's batman in the 11th Field Ambulance. By September 1919, there were 76 students in the premedical class.



The 60th Anniversary of the UofA, published in 1980

the Rockefeller Foundation, showing it to Premier Greenfield as he was about to perform surgery on the school.[8]

Another crisis came in the late 1920s. The University Hospital had been running deficits since 1926 because of uncollectable and accumulating bad debts. The fiscal shortfall was resolved and university ownership maintained, but only through a $200,000 loan guarantee from the provincial government in 1929. As part of the guarantee the government appointed three of the six UAH Board members, just months before the Depression extended the hospital's precarious financial position for another seven years.[9]

During the Depression student applications declined precipitously but the Faculty didn't. First year enrollment dropped by one half to fifteen in 1933. The enrollment decline was even worse in Dentistry. After transfers to other schools, the 1932 final year dental class consisted of one student. Medical and dental students who could afford to, took their senior years at the UofT, McGill or elsewhere.

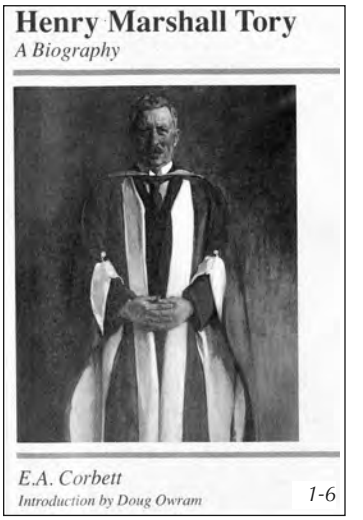
In 1933 there were discussions between the Premiers of Alberta and Manitoba to merge their professional schools, including medicine, as a cost-saving exercise. The plan was not implemented because it would have overloaded the residual faculty, which probably would have been the older Faculty of Medicine in Manitoba.

The government's alternative to merging faculties, was to reduce the UofA's faculty salaries. Annual reviews from 1931-1935 led to salary reductions of about 40%. The last 25% was paid in "scrip" instead of cash, following the Social Credit election of 1935. Fortunately none of the Faculty quit. Enrollment began to increase in September 1935, rejuvenated by the graduating class that spring, which earned the highest average marks in the national Medical Council of Canada exams.

By 1936 the worst was over. Dean Rankin turned to the accreditation process to identify academic deficiencies. Following constructive recommendations in the reports of the American Committee on Education (1936) and the American Academy of Medical Colleges (1938), clinical teaching at the Royal Alexandra Hospital was strengthened and the decrepit downtown outdoor clinic was moved to better quarters.

WWII stabilized enrollment. The importance of the Medical Faculty was underlined when the Minister of Defense J.L. Ralston requested 800 more physicians for the Canadian Army in June 1942. Most Canadian medical schools including the UofA, compressed their curriculums. Teaching continuously, the faculty graduated two additional classes for the Armed Services by the end of 1944.

Building on Strength and Capitalizing on Opportunities: The first opportunity came in 1907 when Premier Rutherford selected McGill's Henry Marshall Tory as the UofA President. A



D. Owram edition UAP, 1992

8. Corbet, Elise A. *Frontiers of Medicine*, page 39. In Merrill Distad's *The University of Alberta Library. The first hundred years, 1908-2008*, he suggests on page 30, the umbrage of the new (1921) UFA government was over the university "ranking the development of the medical faculty over agriculture". The cheque story more likely relates to the receipt of one of the quarterly ($6,250) interest cheques from the RF in 1921/22 or 1922/23.

9. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, pages 83-103, 389, and E.A. Corbet's *Frontiers of Medicine*, pages 48-54.

year after he arrived, President Tory articulated his plan for the establishment of professional faculties. Medicine was to be the third faculty after Law and Engineering.

A dynamic and persuasive leader, Dr. Tory began to assemble the essential components, well before the faculty was formed. The first was the acquisition of the provincial laboratory in 1911, followed by the opening of the on-campus Strathcona Hospital in 1913, and its acquisition by the UofA in 1914.

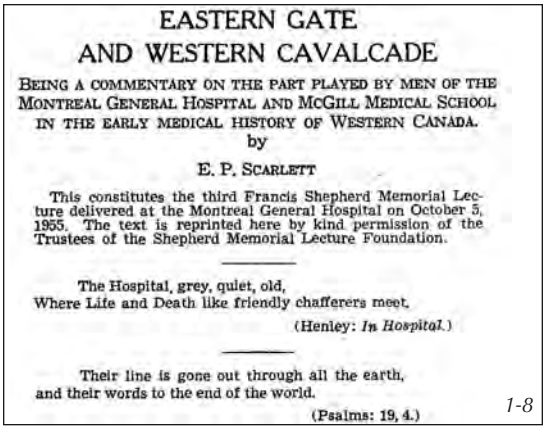
In 1913 Tory recommended the Senate approve the creation of the medical school, the first from within a university in Canada. The premedical class started that fall. Through prior affiliation agreements, all medical students who completed their first three years were guaranteed acceptance into the McGill or UofT medical programs. Less than ten years later (1920) Dr. Tory achieved his goal of extending the three-year program into a degree granting one, graduating the first MDs in 1925.

The appointment of a dean in 1920 was essential to Dr. Tory's preparations. He selected McGill trained Dr. A.C. Rankin, who with Tory's approval, appointed three clinical chiefs: Mewburn (Surgery), Pope (Medicine), and Conn (Obstetrics and Gynecology) in 1922/23. Like Rankin and Tory they were McGill graduates, as were the second and third deans (Ower, Scott).[10]


1-7

Lord Strathcona (C), with Lt. Gov. Bulyea (L) and Premier Rutherford (R), on Strathcona's last visit to Alberta in Sept. 1909

The move of the Provincial Laboratory to the UofA campus in 1911 created a remarkable opportunity for Tory. He used the laboratory budget to recruit academically competent pathologists and laboratory medicine specialists, beginning with Rankin (1914), followed by Drs. Ower (1918), Orr in public health (1919), Shaw (1920) and Vango (1924). All



EASTERN GATE
AND WESTERN CAVALCADE

BEING A COMMENTARY ON THE PART PLAYED BY MEN OF THE MONTREAL GENERAL HOSPITAL AND MCGILL MEDICAL SCHOOL IN THE EARLY MEDICAL HISTORY OF WESTERN CANADA.

by

E. P. SCARLETT

This constitutes the third Francis Shepherd Memorial Lecture delivered at the Montreal General Hospital on October 5, 1955. The text is reprinted here by kind permission of the Trustees of the Shepherd Memorial Lecture Foundation.

The Hospital, grey, quiet, old,
Where Life and Death like friendly chafferers meet.
(Henley: *In Hospital.*)

Their line is gone out through all the earth,
and their words to the end of the world.
(Psalms: 19, 4.)

1-8

CACHB May 1956.
From Dr. E.P. Scarlett's Francis Shepherd Memorial Lecture at the Montreal General Hospital, Oct 5, 1955

were McGill graduates except Orr. Rankin, Ower and Orr all had links overseas with Alberta's Public Health Officer and later Deputy Minister Dr. W.C. Laidlaw, who was an officer in the Army's sanitation section. Together their knowledge of pathology, communicable diseases and public health issues created the critical mass of competence and leadership needed to address the post WWI healthcare challenges in Alberta stemming from the return of many disabled soldiers, the high rate of venereal disease, and the lack of physicians to treat the Spanish flu epidemic.

The shortage of doctors in Alberta from the high enlistment rates, and the delayed repatriation of physicians from Europe, coupled with the high rate of illness amongst the remaining doctors during the 1918/19 flu epidemic, convinced the provincial government to support President Tory's request to fully train and thus retain more homegrown physicians. Dr. Tory secured university and government approval in 1919, to bring the two UofA health science programs (Medicine and Dentistry), together with the Provincial Laboratory, in a new medical school, built for them in 1920/21.

The fortuitous opportunity to secure a conditional $500,000 Rockefeller grant for the faculty in 1920, gave external validation to Tory's plans. The grant was required that no money be spent on building the medical school. Once it was approved in principle, Dr. Tory adroitly requested the interest income be given to the faculty, to hire and upgrade the faculty (1920-1923). It still took another ten years (1925-1935) for the isolated faculty to graduate nationally recognized, high quality MDs, a reputation it has never lost.

10. Scarlett, Earle P. "Eastern Gate and Western Cavalcade", CACHB 21(1): 8-24, May 1956.

With WWII came a demand for many more medical doctors for the armed services. Over 30% of all Canadian physicians, including over 70% of the wartime UofA graduates enlisted in the Canadian military services.

The predicted high rise in post WWII applications for medical training, encouraged the initiation of customized residency training programs starting in 1946. Full fellowship training for all major specialty programs were in place by 1959. Subspecialty training programs proliferated in the 1960s.

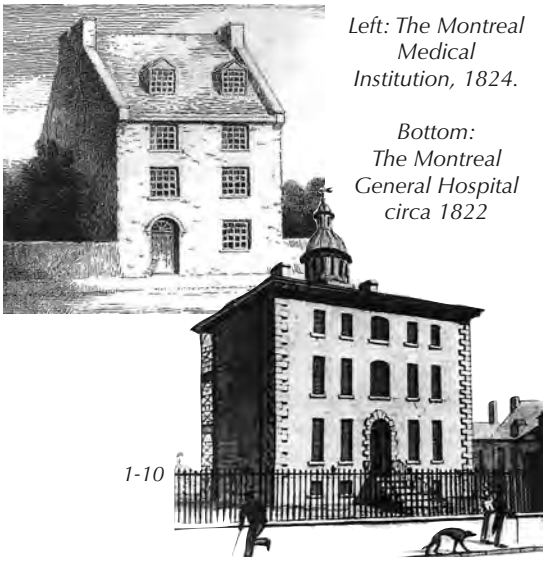
As each Dean passed the torch to his successor the curriculum became less didactic. Slowly the teaching of the basic and clinical programs became more integrated. Although careful to maintain the time-honored reliance on basic medical science teaching, emphasis on clinical teaching began to receive a higher priority after the first clinician, Dr. John Scott, was appointed the Dean in 1948.

Once the Alberta government and University provided the resources to fund full-time Faculty of Medicine positions (1956-59), the UofA became recognized, along with McGill and the UofT, as one of the leaders in medical education in Canada. When Dr. Donald Wilson initiated the Edmonton-based McLaughlin Research and Examination Center, and created the first Canadian databank to standardize undergraduate and postgraduate examination questions in the 1960s, the Faculty began to contribute nationally to the examination process for training specialists and undergraduates.

Except for the individual efforts of Dr. Collip and the UofA Tuberculosis Committee in the


1-9

Professor J.B. Collip circa 1915 (age 23), shortly after his UofA arrival


1-10

Left: The Montreal Medical Institution, 1824.

Bottom: The Montreal General Hospital circa 1822

From McGill Medicine, v. 1, 1996

1920s, medical research did not begin in Alberta until 1946, when Dr. Collip encouraged the formation of the Western Canadian MRC Group. It was followed in 1952/53 by the opening of the McEachern Laboratory and Surgical Medical Research Institute (SMRI). The medical research programs in Calgary and Edmonton were dramatically spurred by the establishment of the AHFMR (1980) and the opening of Alberta's first two Heritage medical research buildings (1988), followed by two more in 2008. The infusion of federal MRC funds (1970s) and provincial AHFMR grants (1980s), made Alberta's Faculties of Medicine two of the leaders in Canadian medical research.[11]

Now, almost 90 years later, Dr. Tory's plan to integrate all the healthcare education programs is reappearing, as the UofA health science faculties relocate to the Edmonton Clinic, with direct access to the educational, clinical, ambulatory and in-patient programs in the Walter C. Mackenzie HSC. The difference is that student enrollment will be many times larger than in Tory's 1921 time. The further integration of healthcare programs will foster teamwork within the health disciplines through joint classes, shared teachers and the use of common clinical services.

Medical milestones reached during the first Century benchmark the challenges and accomplishments of the Faculty of Medicine.[12]

11. Lampard, Robert "The Alberta Heritage Foundation for Medical Research, Its Formative Years 1975-2005", in *Alberta's Medical History*, *Young and Lusty, and Full of Life,* pages 663-678.

Nine men have now served as leaders of four generations of medical students. Their career paths reflect how medical education and teaching guided their lives, and how they capitalized upon the opportunities that led to careers and leadership positions in the Faculty of Medicine. Their experiences are unique and serve as examples for future students, as they make their own career choices.

To better understand their academic lives, the times in which the UofA Faculty was born, grew and became an educational leader have been examined in the context of early medical education in Canada.

Early Canadian Schools of Medicine:[13] Before 1822 medical care in Canada was provided by physicians attached to British militia regiments. Medical teaching, if provided at all, was on a three to five year apprenticeship basis with another physician. In 1822 a petition was presented to Governor General Lord Dalhousie, to initiate an Edinburgh-like natural science and clinical instruction program in Montreal. Approved, the Montreal Medical School was established. The medical school joined McGill University in 1829 as its second faculty, although it continued to manage its own affairs. The Montreal General Hospital (MGH) joined the merger the same year.

From the outset all MGH patients were available to the medical students for teaching purposes. It was the only open hospital on the continent. The Board of the MGH was appointed as the medical examining board for the Faculty. The Board licensed its first physician in 1834. All McGill graduates were free to practice medicine in Lower Canada (Quebec).

It wasn't until 1847 that the first Provincial College of Physicians and Surgeons was created to register physicians in Quebec. Teaching was facilitated in the 1850s with the passing of an Anatomical Donation Act to obtain cadavers to teach anatomy.[14] In 1854 Dr. Andrew Holmes was elevated from professor to become McGill's and Canada's first Dean of Medicine.[15]

1-11

The founders of the Montreal Medical Institution in 1822. (Clockwise from UL) Drs. John Stevenson, William Caldwell, Andrew Holmes (1798-1860) the first Dean of Medicine in Canada in 1854, William Robertson.

Medical Schools in Upper Canada (Ontario) followed the Lower Canada lead. In 1843 Dr. John Rolph started the first proprietary medical school, in Toronto. It was owned by Dr. Rolph. The same year Bishop Strachan began an Anglican medical school in Toronto (Trinity), and the Catholic Church started a medical school at the University of Montreal. Provincial control of healthcare and the education of physicians was enshrined in the 1867 BNA Act.

The Montreal (McGill) Medical School assiduously avoided any religious influence or control. McGill Principal William Dawson (1855-1892)[16] strongly supported the non-denominational approach of the university. He was reinforced by CPR founders and philanthropists Donald Smith and George Stephens, when they gave one million dollars to build McGill's second teaching hospital, the Royal Victoria Hospital (RVH) in 1887. Their gift commemorated the 50th anniversary of the reign of Queen Victoria.

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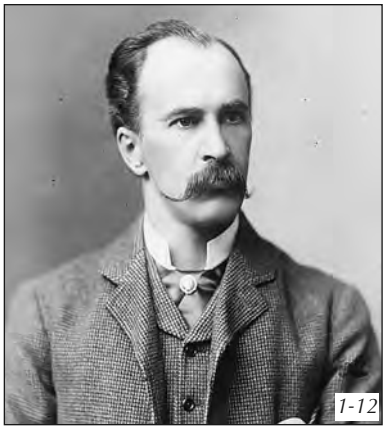
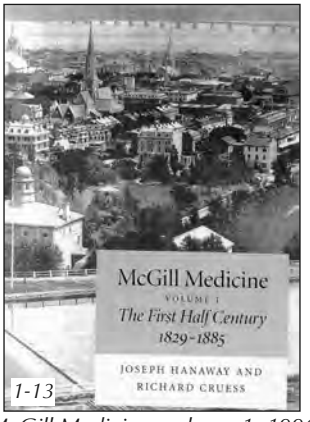
12. Lampard, Robert — See the Faculty of Medicine Milestones, pages 197-202.
13. Hanaway, Joseph, Cruess, Richard — *McGill Medicine, The First Half Century 1829-1885*, Volume 1, pages 3-25, 39, McGill-Queens, 1996.
14. McPhedran, N. Tait — *Canadian Medical Schools. Two Centuries of Medical History 1822 to 1992*, page 4, Harvest House, 1993. Cadavers cost $30-50 each.
15. Hanaway, Joseph, Cruess, Richard — *McGill Medicine*, Volume 1, page 149.
16. Hanaway, Joseph, Cruess, Richard — *McGill Medicine*, Volume 1, pages 57-59, 158-161.



Dr. William Osler at McGill 1874-1884

The medical faculty at McGill was infused with enthusiasm and innovation, when Dr. William Osler returned to it in 1874, following postgraduate studies in Europe. He was the first pathologist and salaried member of the McGill Faculty.[17] That precedent did not occur in the basic medical sciences in Alberta until 1914, when Dr. A.C. Rankin became the Director of the Provincial Laboratory and the provincial Bacteriologist.

Osler and the other Young Turks who joined him at McGill, were all Holmes gold medallists.[18] They expanded the curriculum, balanced teaching time between the basic medical sciences and clinical instruction, bought the first microscopes and increased the library from 5,000 to 13,000 books.



McGill Medicine, volume 1, 1996

Dr. Osler carefully and methodically documented over 750 autopsies, using them to teach students in small groups. The small-group teaching for which Osler became so well known had already begun in McGill as early as 1845.[19]

Pathology-based teaching continued after Dr. Osler's departure from McGill in 1884, led by Drs. George Adami and later Maude Abbott. At Philadelphia, Osler reversed his approach and introduced small group patient teaching at the bedside. Together with his medical colleagues, Osler started clinical pathology conferences to discuss complicated diagnostic and therapeutic patient problems as they occurred.[20]

From 1893-1919: In 1893, the first combined Faculty of Medicine and primary teaching hospital, opened in Baltimore, as the well-known Johns Hopkins Medical School. Dr. Osler had been appointed its first Professor and Head of Medicine in 1889.[21] The same year the Royal Victoria Hospital opened and the Dean of Medicine at McGill was appointed the President of its Medical Advisory Board.

The Rotunda of John's Hopkins Faculty of Medicine

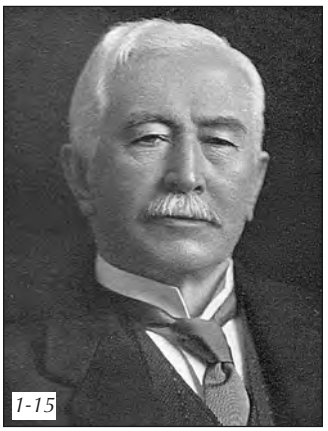
The $350,000 in residual funds from the Smith/Stephens donation began the McGill faculty's endowment. Smith gave another $100,000 to the Faculty in 1893, to fund two more full-time Department Head positions in Pathology, and Medicine and Hygiene. Fourteen years later the now titled and ever willing

17. Hanaway, Joseph, Cruess, Richard — *McGill Medicine*, Volume 1, pages 69-72.
18. Hanaway, Joseph, Cruess, Richard — *McGill Medicine*, Volume 1, pages 59, 73.
19. Bryan, Charles — Osler. *Inspirations from a Great Physician*, page 127, OUP, 1996. For further elaboration on Osler's autopsies, pathology reports and conferences see J. Hanaway and R. Cruess' *McGill Medicine*, Volume 1, pages 68-78.
20. McPhedran, N. Tait — *Canadian Medical Schools*, pages 42-43.
21. Clausen, D. Kay, Wilson, Emery A. — *The Medical School Dean*, page 21, McClanahan, 1999.

Lord Strathcona and Lord Mount Stephen gave $450,000 to rebuild the McGill medical school, after it was severely burned in 1907. They added the provision that the Faculty become functionally and fiscally integrated with McGill and not just an affiliated school that already owed McGill $60,000. The McGill – medical faculty integration occurred the year Dr. Tory accepted the presidency of the new University of Alberta (1907).

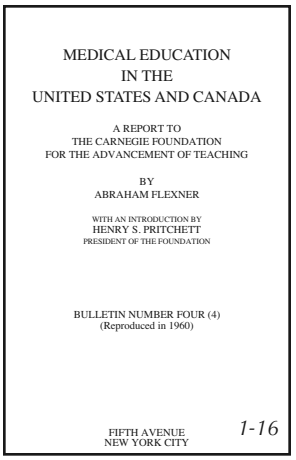
Dr. Tory had followed the Osler influence on medical teaching, and the 1899 initiative of McGill's Professor and Head of Surgery Dr. Thomas Roddick, to establish a Dominion Medical Council (MCC). Dr. Tory knew from his BC experience (1905-1907) there was strong interest in a common medical licensing examination in western Canada, that would allow physicians to register in any of the four western provinces.[22]

In the absence of a Faculty or Dean of Medicine at the UofA, Dr. Tory became directly involved in the medical examination process in 1912. He offered, and that year the College of Physicians and Surgeons of Alberta asked the University to appoint the examining physicians to assess the clinical knowledge and skills of MDs for medical registration in Alberta.[23] University involvement gave credibility to the examination process, even though the UofA would not appoint its first full-time clinical teachers until 1922, or convocate its own graduates until 1925.


1-15

Sir (Dr.) Thomas Roddick, Field Surgeon, NW Rebellion 1885, McGill Dean of Medicine 1901-1908. Founder of the Dominion Medical Council, 1913

In 1913 the Canada Medical (Roddick) Act was passed creating a Dominion Medical Council.[24] Writing the national licensing exam was voluntary. Licentiates were eligible for registration in any province in Canada. Alberta did not begin to integrate its Faculty of Medicine examinations with the MCC exams, until it had been proven that most of the Alberta graduates could pass the exams (1928), or excel at them (1935). Full integration of the two examinations did not occur until 1961.[25]


MEDICAL EDUCATION
IN THE
UNITED STATES AND CANADA

A REPORT TO
THE CARNEGIE FOUNDATION
FOR THE ADVANCEMENT OF TEACHING

BY
ABRAHAM FLEXNER

WITH AN INTRODUCTION BY
HENRY S. PRITCHETT
PRESIDENT OF THE FOUNDATION

BULLETIN NUMBER FOUR (4)
(Reproduced in 1960)

FIFTH AVENUE
NEW YORK CITY

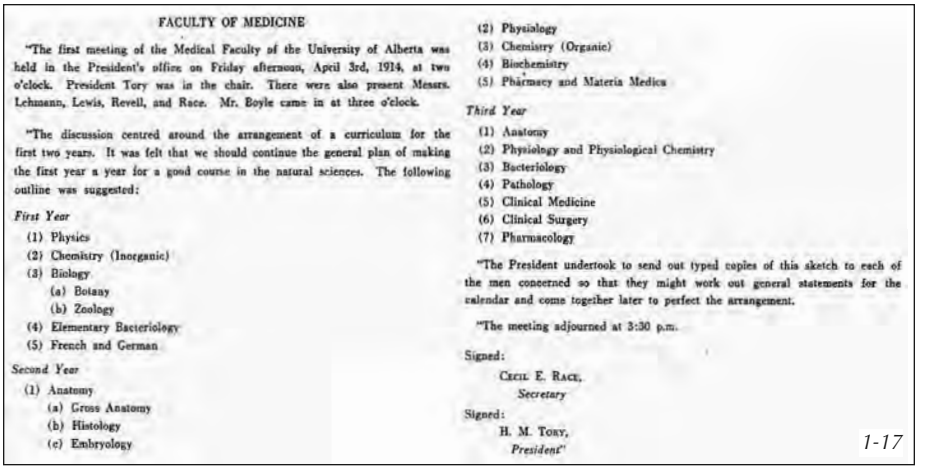
1-16

The Abraham Flexner Report to the Carnegie Foundation in 1910. It accelerated the movement to university-based Faculties of Medicine, and served as the blueprint President Tory followed in 1913.

At the same time as the protracted Dominion Medical Council deliberations were occurring, the American Medical Association asked the Carnegie Foundation (1907) to address the variable quality of medical schools and graduates, a contentious issue particularly in the United States. The Foundation appointed Abraham Flexner to survey all North American medical schools. Flexner tabled his well-known report in 1910.[26] He condemned all the medical education models, except those where the school was affiliated with or attached to a university. Flexner was particularly critical of the proprietary schools that were owned and operated by the professors who

22. Corbett, Edward A. *Henry Marshall Tory, a biography*, pages 106-107, Ryerson Press, 1954. A new edition with an introduction by Douglas Owram was published in 1992 by UAP.
23. Jamieson, Heber C. *Early Medicine in Alberta*, page 102, AMA, 1947.
24. Kerr, Robert B. *History of the Medical Council of Canada*, pages 14-23, MCC, 1969. For a discussion of the Western Canadian Federation movement (1907-1911), see the profile of Dr. R.G. Brett in *Alberta's Medical History*, pages 85-99, 2008.
25. Scott, John W. *The History of the Faculty of Medicine of the University of Alberta 1913-1963*, pages 14-15, UofA, 1963.
26. Ludmerer, Kenneth M. *Learning to Heal. The Development of American Medical Education*, pages 166-190. Basic Books Inc, 1985.

gave the lectures, and provided insufficient laboratory space for teaching students.



FACULTY OF MEDICINE

"The first meeting of the Medical Faculty of the University of Alberta was held in the President's office on Friday afternoon, April 3rd, 1914, at two o'clock. President Tory was in the chair. There were also present Messrs. Lehmann, Lewis, Revell, and Race. Mr. Boyle came in at three o'clock.

"The discussion centred around the arrangement of a curriculum for the first two years. It was felt that we should continue the general plan of making the first year a year for a good course in the natural sciences. The following outline was suggested:

First Year
(1) Physics
(2) Chemistry (Inorganic)
(3) Biology
  (a) Botany
  (b) Zoology
(4) Elementary Bacteriology
(5) French and German

Second Year
(1) Anatomy
  (a) Gross Anatomy
  (b) Histology
  (c) Embryology
(2) Physiology
(3) Chemistry (Organic)
(4) Biochemistry
(5) Pharmacy and Materia Medica

Third Year
(1) Anatomy
(2) Physiology and Physiological Chemistry
(3) Bacteriology
(4) Pathology
(5) Clinical Medicine
(6) Clinical Surgery
(7) Pharmacology

"The President undertook to send out typed copies of this sketch to each of the men concerned so that they might work out general statements for the calendar and come together later to perfect the arrangement.

"The meeting adjourned at 3:30 p.m.

Signed:
CECIL E. RACE,
Secretary
Signed:
H. M. TORY,
President"

1-17

The Tory designed curriculum for the three year medical program. April 3, 1914

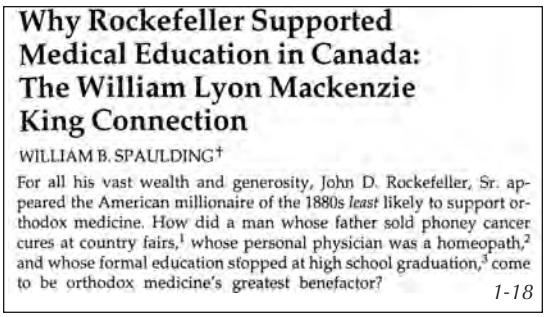
The widespread acceptance of the Flexner report stimulated the American Medical Association to appoint a Committee on Education to accredit medical schools, an offer extended to schools in Canada. These two events led to a switch in Canadian medical school curriculum leadership, from Edinburgh and Europe to North America, a move that fostered a relatively free flow of medical students and later residents-in-training across the border. Both McGill and the UofT received a Class A designation from Flexner. They were the only faculties to be so acknowledged in Canada until the 1920s. The Flexner report accelerated the demise of the proprietary medical schools and expanded the use of teaching laboratories for the basic medical sciences and pathology.

Five years after the University of Alberta opened, the Senate approved the establishment of a medical faculty (1913). The next year Dr. Tory used the Model Medical Curriculum, developed shortly before 1907 by 100 Canadian and American teachers, as the foundation of the UofA's one year premedical and two year basic medical science program.[27] Dr. Tory was well aware of the controversy over who should teach the basic medical sciences. Should they be MDs or Ph.D.s? In the UofA medical program, which Dr. Tory drafted in less than two hours in April 1914, the basic science subjects were to be taught by their own departments during the premedical year. The basic medical sciences were to be taught by MDs in the next two years.[28]

1919-1949: The immediate postwar period (1919-20) led to unprecedented growth in student applications to Universities and Faculties of Medicine across Canada. The surge in postwar applicants was a desired response to the Tory initiated Khaki University in England (1917-1919), which provided educational opportunities for soldiers near the fronts or later awaiting repatriation to Canada.[29]

In a bid to match McGill and meet the Flexner requirements, the University of Toronto hired a full-time clinical Professor and Head to manage the Department of Medicine. Known as the Sir John and Lady Eaton chair after its donors (1919), it was the first full-time, fully-funded clinical department head position in the British Empire. Symbolically it occurred the year the Oxford Regius Professor of Medicine Sir William Osler died.

Post WWI progress continued when future Prime Minister Mackenzie King obtained John D. Rockefeller's willingness to earmark $5 million from his second Rockefeller Foundation (RF) grant, for Canadian medical schools



Why Rockefeller Supported Medical Education in Canada: The William Lyon Mackenzie King Connection

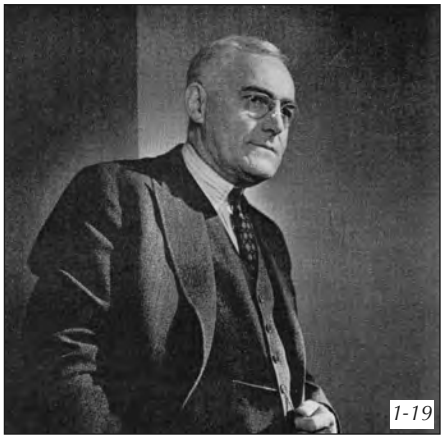
WILLIAM B. SPAULDING†

For all his vast wealth and generosity, John D. Rockefeller, Sr. appeared the American millionaire of the 1880s *least* likely to support orthodox medicine. How did a man whose father sold phoney cancer cures at country fairs,[1] whose personal physician was a homeopath,[2] and whose formal education stopped at high school graduation,[3] come to be orthodox medicine's greatest benefactor?

1-18

The Spaulding study of W.L.M. King's request to J.D. Rockefeller for $5.0M, for Canadian Medical Schools. The Faculty of Medicine received $500,000 in 1923.

27. Corbet, Elise A. *Frontiers of Medicine*, page 14.
28. Scott, John W. *The History of the Faculty of Medicine of the University of Alberta 1913-1963*, pages 5-7.
29. Johns, Walter H. "The Khaki University", pages 60-68, in *A History of the University of Alberta*, UAP, 1981.



Dr. W.E. Gallie, originator of the Gallie course in Surgery at UofT, in 1931

(1920). The new Principal of McGill Sir Arthur Currie undertook a $6.4 million fundraising campaign (1922) that included $1.0 million from the Rockefeller Foundation. It was a record that stood for half a century. By then 20% of the McGill medical faculty's budget was coming from interest on its endowment.

The UofA Faculty of Medicine received the only Canadian RF grant that had conditions attached to it. Dr. Tory immediately asked to receive the interest on it. The RF agreed and gave the UofA four installments of $25,000 per year, to upgrade and recruit faculty.

Once the RF grant was received (1923), it was invested in a 50 year Government of Alberta bond at 5% interest. The grant provided a stable funding source for the University and Faculty through the Depression, helping to guarantee the continuation of the medical school over the next 20 years.

Required by its affiliation agreements to meet the same standards as McGill and UofT, the UofA medical curriculum was extended to seven years in 1921 – two premedical, four medical and one internship year. The next year President Tory was appointed Chairman of the Board of the newly re-acquired University of Alberta Hospital (UAH). Together with Dean Rankin, they remained dominant figures on the Board, as do their successors.

The UofA Faculty of Medicine was growing. By 1925 it had 13 full-time and nine part-time basic science teachers, as well as the three 1922/23 appointed clinical department heads and 30 part-time clinical teachers.

In 1931 the first complete postgraduate surgical training (Gallie) course began at the UofT.[30] Three years later, in 1934, another one million dollar Rockefeller grant to McGill established the Montreal Neurological Institute (MNI). It was the first integrated clinical-educational-research institution in Canada, one that combined basic, medical and surgical neurosciences (neuroanatomy, neurology, neurosurgery) into a single program.

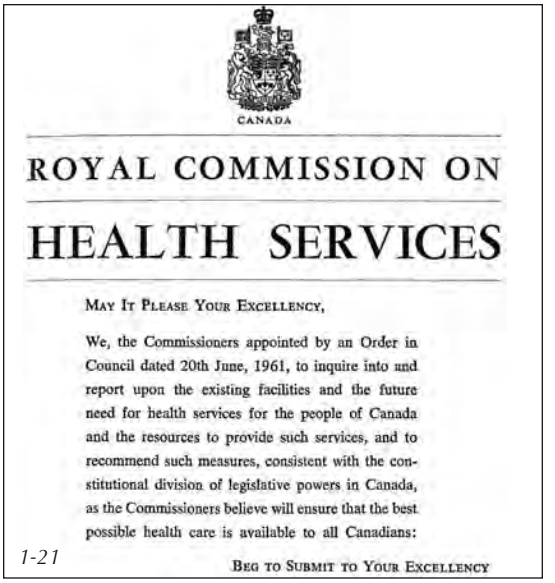
During WWII most of the 257 UofA graduates joined the medical armed services. Over fifty (two classes) were graduated by accelerating the teaching program. The post WWI surge of applicants, re-occurred after WWII. It brought many veterans back to the UofA to take medicine or complete their MD training. Some wanted to take specialty training. In anticipation, McGill began its postgraduate surgical program (1944).[31] The UofA postgraduate training program began in 1946. M.Sc. and Ph.D. basic medical science programs were approved in 1947 and began in 1948.

Initially the postgraduate medical training programs at the UofA were customized for each resident. They were designed and supervised by Dr. Mark (Levey) Marshall to meet Royal College standards. Residents who started at the UofA/UAH, usually finished their training in eastern Canada or the USA. The 1950 appointed Professor and Head of Surgery, Dr. Walter Mackenzie, was particularly helpful in securing final year posts for the residents.[32] In many cases there were faculty positions wait-

Dr. Donald R. Wilson, UofA Professor and Head of Medicine 1954-1969.

30. The Gallie Club *William Edward Gallie*, pages 8, 16-17, UTP, 1978.

31. Gurd, Fraser N. *The Gurds. The Montreal General and McGill: A Family Saga*, edited by Douglas Waugh, page 232, GSPH, 1996. The full program did not begin until 1946.


CANADA

ROYAL COMMISSION ON

HEALTH SERVICES

MAY IT PLEASE YOUR EXCELLENCY,

We, the Commissioners appointed by an Order in Council dated 20th June, 1961, to inquire into and report upon the existing facilities and the future need for health services for the people of Canada and the resources to provide such services, and to recommend such measures, consistent with the constitutional division of legislative powers in Canada, as the Commissioners believe will ensure that the best possible health care is available to all Canadians:

1-21

BEG TO SUBMIT TO YOUR EXCELLENCY

The Hall Royal Commission Report (1964) recommended a Health Resources Fund (1965) be established, leading to four new medical schools in Canada, and universal health insurance (Medicare) in 1968.

ing for the resident back at the UofA, as soon as they received their Fellowship or Certification.

Complete postgraduate programs in Surgery, Ophthalmology and Obstetrics began by 1949. Eight years later Dr. Donald Wilson recruited Dr. Richard Rossall to organize the last two years of the Fellowship training program in Medicine.[33]

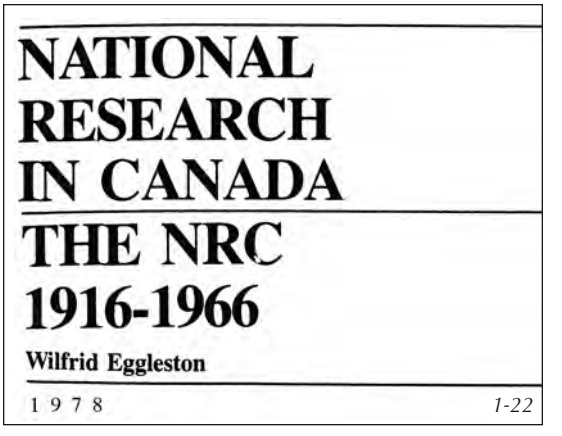
1949-1965: In 1949 Dr. J.A. MacFarlane of the UofT was appointed the first full-time Dean of Medicine in Canada.[34] Three years later a far-reaching change began, in the undergraduate curriculum at the Western Reserve University in Cleveland. Like the MNI program in neurology, all body systems were taught in their entirety: anatomy - pathology - clinical assessment - treatment, one system at a time. That integrated approach is now followed to varying degrees by all medical schools. The wartime need for doctors and the postwar university enrollment surge encouraged UBC to begin its medical undergraduate program (1950), and the UofS to complete its program by adding the last two clinical years in 1953.

In 1954 another McGill graduate Dr. Donald R. Wilson, became the first full-time clinical Geographic Full Time (GFT) Professor (after Drs. Mewburn and Pope) in the Faculty's Department of Medicine. The conditional probation accreditation approval in 1956 accelerated the GFT program.

Capital funding for medical schools was augmented in the early 1960s, under the federal Massey/University Development Fund. The program was extended to a national one, when the Hall Royal Commission (1964) recommended the federal government established the Health Resources Fund of $500 million (1965), to address the postwar baby boom and the anticipated surge in the Canadian population. Four new medical schools were approved by 1970: Memorial, Sherbrooke, McMaster and Calgary. The teaching program at two of them (McMaster, Calgary) was a continuous three year one based on the Western Reserve program. Three years later (1968) the Canada Medical Act was passed creating universal Medicare, also recommended by the Hall Commission.

1965-1993: Grants from the Health Resources Fund built the UofA's Clinical Sciences building (1969) and the Medical Sciences building (1972). The medical school was moved from its home of 50 years, leaving it for the Faculties of Pharmacy and Dentistry.

Planning for the rebuilding of the UAH as the Centennial Hospital, started in 1966. The project was frozen in 1971 by the Social Credit government, because of cost escalations. The new Progressive Conservative government extended the freeze. Although planned as a specialty hospital, discussions began as early as 1963, to introduce the Health Science Centre


NATIONAL RESEARCH IN CANADA THE NRC 1916-1966

Wilfrid Eggleston

1978

1-22

32. Macbeth, Robert A. Personal Communication October 12, 2004. For more on Dr. Mackenzie see Dr. Macbeth's *The Department of Surgery*, the University of Alberta, the first half century 1922-1975, pages 167-211, Department of Surgery, 2009.

33. Rossall, Richard E. Personal Communication, 22 July 2008.

34. McPhedran, N. Tait *Two Centuries of Medicine in Canada*, page 82.

(HSC) concept and physically bring the Faculty of Medicine together with its primary teaching hospital, and the Faculty of Nursing. Dentistry, Pharmacy and Rehabilitation were to be added later. A revised Health Science Centre proposal was approved in 1975 and the sod turning occurred in 1976. In 1979 the new UAH was named the Walter C. Mackenzie HSC after its prime architect.[35] He had died the year before. It opened in two phases from 1983-1986.

Nationally the federally funded Medical Research Council (MRC) increased its annual medical research grants from $780,000 (1958) to $85 million (1980). It supplanted the American National Institute of Health as the major funder of medical research in Canada. When inflation in the mid 1970s exceeded the federal MRC funding increases, cutbacks to medical research followed. With the establishment of the Alberta Heritage Trust Fund (1975), and the willingness of the Lougheed government to fund intellectual programs like medical research, Deans Cameron and McLeod visited Premier Lougheed and presented the concept of a separate medical research fund to the Premier (1976). It was the first step that would lead to the formation of the Alberta Heritage Foundation for Medical Research (AHFMR) in 1980.[36]

From 1984-1988, two dedicated medical research buildings were designed and constructed in Edmonton and Calgary. Two decades later two more research buildings were planned and built (2000-07), along with two dedicated institutes (2004-2009) - the Mazankowski Heart Institute (WCMHSC) and the McCaig Bone and Joint Center (Foothills Medical Center). Alberta's leadership in medical research was recognized with the induction of Premier Lougheed and his special advisor Dr. John Bradley, into the Canadian Medical Hall of Fame in 2002,[37] and Dean Lorne Tyrrell (2011).


PROVINCE OF ALBERTA

ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH ACT

Revised Statutes of Alberta 1980, Chapter A-26 with amendments in force as of June 25, 1991 not including unproclaimed amendments

Consolidated July 15, 1991 *1-23*

1993-2009: Following the 1993 election, the provincial government introduced three years of across-the-board budget reductions, stemming from the low price of oil. Along with regionalization (1994), provincial healthcare expenditures were cutback by 5% and then 6% in two successive years. The changes were followed by the implementation of some of the Barer-Stoddard report recommendations by the Ministers of Health. They were designed to reduce healthcare expenditures by reducing the number of graduating and practicing physicians. First year enrollment declined nationally from 1850 to 1577/year.[38]

The reductions exacerbated the physician shortage in Canada. Never self-sufficient, the country continued to add over 200,000 new citizens/year. Further, Canadians were aging. In 1996 the federal government added to the provincial deficit problems by decreasing equalization funding, particularly to Alberta.

Not until 1999, when the recommendations of the CMA's Task Force #1 Report on physician supply were promulgated, was a concerted effort initiated to have the federal and provincial governments reverse the decline in first year physician enrollment, and begin the eight year period required to graduate more MDs.[39]

The impact of the 1994 cutbacks would have been worse, had not the longstanding exodus of up to 600 MDs/year to the USA, declined after 2000, and the immigration of doctors from the United Kingdom, South Africa and other countries accelerated. Medical student intake rebounded to 2,500 by 2007/08, closer to the break-even point, but left the decade of doctor deficits uncorrected.

From 1968 to 2005 the intake of medical students at the UofA remained within the 104-120 range. The freeze accommodated the starting of the medical school in Calgary (1966) and the UofC undergraduate medical program (1970). In 2009 the first year enrollment of the two Faculties of Medicine was increased to 180 (UofC) and 188 (UofA), or 368

35. Lougheed, Peter "Inspiration and a source of pride", CMAJ 120: 998, April 21, 1979.
36. Lampard, Robert "The Alberta Heritage Foundation for Medical Research: Its Formative Years 1975-2005," in *Alberta's Medical History, Young and Lusty and Full of Life*, pages 663-678, 2008.
37. Lampard, Robert *Alberta's Medical History*, pages 668-674.
38. Hawkins, David In Canada, Desperately Seeking Doctors at www.acmc.ca/issues-htm.
39. Lampard, Robert "Dr. David Lorne Tyrrell", in *Alberta's Medical History*, pages 446-470.

Canadian Medical Schools by year of first degree class	1-24
McGill University	1822
University of Montreal	1843
University of Toronto	1843
Laval University	1852
Queen's University	1854
Dalhousie University	1868
University of Western Ontario	1882
University of Manitoba	1883
University of Alberta	1921
University of Ottawa	1945
University of British Columbia	1950
University of Saskatchewan	1953
Sherbrooke University	1966
McMaster University	1969
Memorial University	1969
University of Calgary	1970
Thunder Bay	2005
University of Windsor	2008

Adapted from Two Centuries of Medicine in Canada, 1993

for a population of 3.3 million, exceeding the 2,500 first year positions for 33 million Canadians by 50%.

Today's Deans of Medicine:[40] Although appointed by the university, today's Dean of Medicine must be a leading academic with a competence that extends far beyond medical education.

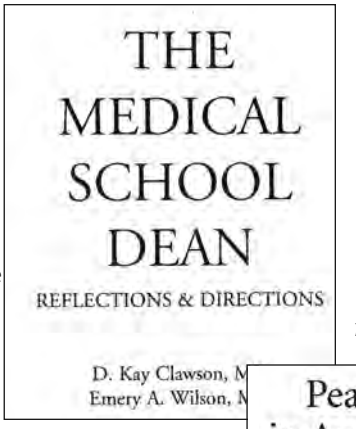
Academically, the dean must have a clear vision for the Faculty,[41] communicate it, and secure support and followship for it. The Dean must include in the vision his/her plans for medical research and patient care.

To implement his plan the Dean must be prepared to make appropriate resource allocation decisions, overcome roadblocks, deal with unforeseen crises, and yet continue to motivate the faculty to follow the plan.[42]

The tools at the Dean's disposal cover the spectrum, from appointing Department Heads, to delegating responsibilities, creating new opportunities, budgeting, controlling the faculty's cash flow, and marketing the vision for the Faculty.

As the academic leader, the Dean is ultimately responsible for 1) continually reviewing and upgrading the undergraduate and postgraduate curricula, 2) maintaining a high passing rate on the MCCs, 3) selecting exemplary students and teachers, 4) integrating the basic medical science and clinical departments in the curriculum, 5) maintaining a balance of full time and part time teachers, 6) creating multiple hospital and non-hospital teaching positions through affiliation agreements, 7) securing satisfactory accreditation reports for the undergraduate, specialty and subspecialty training programs, 8) contributing to the hospital's accreditation program, and 9) integrating the faculty's business plan with those of other health science and university faculties.

As the leading educator, the Dean must be knowledgeable in the different methods of teaching and conducting examinations. This now includes problem-focus learning, evidence-based practices, current clinical practice guidelines, computer facilitated teaching, self-learning, and how to accelerate the inte-



McClanahan 1999

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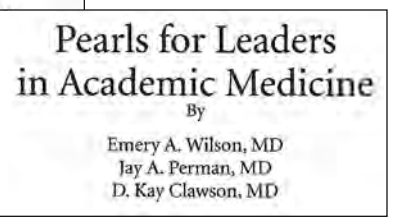
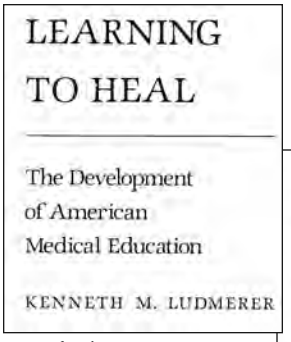


Springer, 2008

40. Clawson, D. Kay, Wilson, Emery A. — *The Medical School Dean*, pages 227-246. Elaborated upon and updated in E.A. Wilson, J.A. Perman, and D.K. Clawson's *Pearls for Leaders in Academic Medicine*, 70 pages, Springer, 2008.
41. Lynch, Tom — "The Vision Work of Deans", pages 240-243, in *The Work of Deans of Medicine*, Ph.D. Thesis, UofC, January 2007.
42. Bryan, George T. — "The Role of a Dean", pages 47-59, in *The Medical School Dean*, by D.K. Clawson and E.A. Wilson. For more reflections see pages 42-45, and Ten simple truths (page 139); The job of Dean (pages 185-193); and The Tightrope (pages 219-224). For problem solving advice see the monogram *Pearls for Leaders* in Academic Medicine, by Drs. Wilson, Perman and Clawson, Spring 2008.



Oxford University Press, 1999

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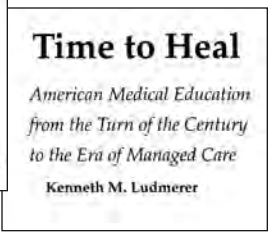


Basic Books, 1985

gration of new knowledge and discoveries into the curriculum. The dean must imbue students with the importance of continuous learning for the rest of their medical lives. He/she must be the catalyst to help students determine their career paths within medicine, by creating family practice, specialty or subspecialty learning opportunities. Within budgetary limits the faculty must graduate physicians in sufficient numbers to meet the needs of the province, and balance the requirements for more family physicians with those for specialists and subspecialists.

Fiscally the Dean must manage the university's allocated medical education budget, and stretch it by funding joint department heads and other teaching positions at affiliated teaching hospitals. Through the faculty practice plan and faculty cash flows, the Dean must manage a revenue stream that allows pressure points in the curriculum to be addressed as they arise.

When the Dean's plan requires additional funds, funding must be secured beforehand otherwise new programs develop at the expense of old ones. Priorities sometimes need to be re-juggled to achieve orderly growth.[43] In the process, the Dean must maintain the loyalty and allegiance of the staff, despite differences of opinion that inevitably arise between and within departments.

To meet unanticipated program demands, the Dean must be a successful fundraiser, and augment the faculty's endowment, to solve problems or take advantage of opportunities that cannot be funded otherwise.

Medical research has expanded rapidly in Canada since the 1970s. It is based in the faculties of medicine and has created both opportunities and challenges. Increased grants have been accompanied by a precipitous rise in the need for space, equipment and scientists. Seen from a national perspective it has diminished the brain drain of bright Canadian physician/scientists to the USA. It has also created the need for ethical oversight of bench-to-bedside research and the acceleration and introduction of new and often costly treatment modalities.

All Deans and faculties in Canada have been required to adapt to the rapid changes occurring in the delivery of medical services. In the past hospital patients have been the foundation for most of the clinical teaching of medicine. Curriculum changes have been necessary, as hospital beds in Alberta have decreased from 6/1,000 (1960s) to under 3/1,000 in the major cities. Hospital stays have been compressed, shortening the clinical teaching experience. Emergency departments have become the new hospitals for lengths of stay of less than three days, and more post-hospitalization and ambulatory care has been transferred to family physicians, or moved into long-term care facilities, assisted-living lodges and home-care programs.

As a respected medical leader in a province the size of Alberta, the Dean is expected to provide learned and thoughtful advice to the myriad of organizations that approach him/her - from the university to the government and the AMA/CPSA, profession, public, press as well as other healthcare organizations, within and beyond the province.

Indicators of Success: Already one of the top medical schools in the undergraduate MCC examinations, the UofA's Faculty of Medicine has distinguished itself in awards received by Faculty members. There have been five Markle Scholars, one Gardner, 13 Orders of Canada,

THE UNIVERSITY OF CALGARY
The Work of Deans of Medicine
by
Thomas Lynch
A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY
DEPARTMENT OF SOCIOLOGY
CALGARY, ALBERTA
JANUARY, 2007

1-27

43. Lynch, Tom "Social Capital: The Work of Connections and Obligations", pages 243-249, in *The Work of Deans of Medicine*, UofC, 2007.

43 Canadian Research chairs, 21 Fellows of the Royal Society of Canada, 10 Kaplan recipients for Excellence in Research, 13 AS Tech winners and four Howard Hughes Scholars, awarded to the Faculty (to 2009).[44] Over 6,200 UofA medical students have graduated with their MDs and another 4,200 with their fellowships. Over 5,000 MScs and PhDs, many with multiple degrees and fellowships have also graduated, along with 67 aboriginal MDs – all by 2009.

Until now no UofA medical Deans have gone beyond their deanship to the UofA presidency, although physicians have in other provinces.[45] UofA graduates have become Deans of Medicine at other medical schools including the UofC (McLeod, Watanabe, Gall), UofM (Sandham), Harvard (Martin), Oxford (Bell) and the UofA (Scott, Cameron, Tyrrell). Three Alberta Deans (Scott, Mackenzie, McLeod) have been elected to the presidency of the Royal College, and one (Mackenzie) to the presidency of the American College of Surgeons and the International College of Surgeons. Two Alberta Deans have received the CMA's Starr Award (Mackenzie, Tyrrell). No UofA Deans have ventured into politics, although all have been advisors to provincial and federal governments.

UofA Deans of Medicine have shown an envious pattern of longevity, and the stability that accompanies it. To date seven of the eight (to 2009) UofA Deans have been promoted from within the Faculty. In 1999 there were less than 10 Deans in the USA with a term of 10 years or more. The average deanship in the USA was 3.7 years. At the UofA there have been eight Deans in 89 years, for an average of 11 years per Dean.

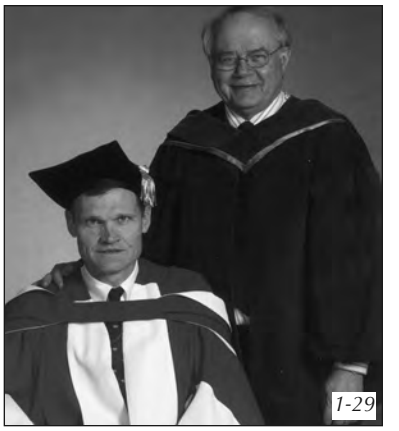
Future Challenges and Opportunities:[46] In the near term there will be pressure for more cooperation between medical schools and sharing of curriculum ideas, including websites, as occurred through the Royal College's McLaughlin Examination Center started by Dr. Donald Wilson. Medical school curriculums will become increasingly similar if not standardized. The use of electronic databanks and programs will be expanded for communication, continuing professional education, re-

There have been 9 UofA Orders of Canada in the Department of Medicine, and 4 in the Department of Surgery (to 2008)

evaluation of competence purposes, and not just for patient care. Patients will increasingly have access to the same medical information as physicians, through the internet and as classes become open to the public.

Teamwork amongst allied health professions will become mandatory or mandated, and will alter the selection criteria for all health professionals, placing a priority on working together in practice.

The lack of training programs for prospective Deans remains a deterrent. Every Dean is under pressure to provide public leadership, as medicine continues to be politicized under universal Medicare. Healthcare costs are esca-



Dean Lorne Tyrrell and Sir John Bell M.D. Regius Professor of Medicine at Oxford, a 1977 UofA, Rhodes Scholar – at the fall Convocation, 2003.

44. Marrie, Tom — Letter to the UofA Medical Alumni, November 15, 2008. Supplemented in personal conversations with Drs. Marrie and Tyrrell, February 9, 11, 2009.

45. Lampard, Robert — An incomplete list includes Dr. Wesbrook (BC), Robertson (McGill), Evans (Toronto), Cochrane (Calgary), Naimark (Manitoba) and Naylor (Toronto).

46. Clawson, D. Kay, Wilson, Emery A. — "The Changing Role of the Dean and Medical Schools of the Future", pages 245-252 in *The Medical School Dean*. For Challenges in the Future see Dawna Gilchrist's *Medicine and the Headlines*, pages 53-56, Faculty of Medicine and Dentistry, 2008.

lating. Governments, physicians and faculties are and will continue to be challenged to find less expensive ways to provide care and still graduate more physicians. The pressures are not new, rather ongoing, longstanding, and international.[47]

Faculties of Medicine have become big business and will remain so. The UofA is no exception. Revenues including capital and research grants now exceed $200 million per year. Faculty staff total 621, plus 570 support staff and 1,110 part-time clinical staff (2008/09). Total faculty and staff at the W.C. Mackenzie HSC exceeds 10,000 (2009). The faculty has come a long way from 1921 when the full MD program commenced, and there were fewer than a dozen faculty with a budget of less than $60,000/year.[48]

Keywords: Eight Deans and a President, McGill graduates on the UofA Faculty, Early Canadian Medical Schools, Health Resources Fund (1965), Today's Deans, Faculty Success Indicators


1-33

Dr. D.G. Revell, first UofA Professor of Anatomy


1-32

McGill Medical School in 1894

The Next Fifty Years

In terms of anticipated population of the Province of Alberta, demographers have estimated that by the end of the century Edmonton will have a population of one million and Calgary will likely have about the same number. By the year 2013 the total population of the Province may reach a total of three million or more. The anticipated registration at the University of Alberta by 1980 is 25,000. One can safely estimate that the registration in first-year medicine, which was 73 in 1962, will increase by 1980 to well over 100. With a population of three million in the year 2013, Alberta will require at least 3,000 doctors. To produce the number required annually, the Provincial University, or universities of that time, will have to turn out 300 doctors per year. There will likely be two or three medical schools in the Province when the centenary of the present school rolls ar 1-30

Dr. John Scott's predictions for 2013, in 1963

WESTERN CANADA MEDICAL JOURNAL 1-31

VOL. I. JANUARY, 1907 No. 1

NOTE ON THE USE OF A MEDICAL JOURNAL.

By WILLIAM OSLER, M. D., F.R.S.,

Regius Professor of Medicine, Oxford.

HEARING of a proposal to start a new medical journal, the question that at once suggests itself is—Is it worth while? So many periodicals overburden the literature of the profession, and to those of us who have to keep pace with it find an ever increasing difficulty to keep track of the new journals which start every year. But when one considers the conditions in the Canadian North West, the rapidity with which it has grown, the increasing professional population, the existence of a medical school and of several large general hospitals, the wonder rather is that a journal has not been started earlier. No reasonable criticism can be urged against its appearance.

The Vision Work of Deans

Obviously my job as it is described is to evoke a vision and make sure we discharge it. And so at the higher level my job is to make sure that we are all aware of the mark that we are sailing towards, even if we are going on a tack in another direction. 1-27

Men are immortalized on this earth when their good actions and qualities are imitated by those who come after. So it has been with Dr. Osler. So let it be with us.

—Philip A. Tumulty, M.D., *The Effective Clinician* (1973)

47. Rogers, David E., Blendon, Robert J. "The Academic Medical Center: A Stressed American Institution", NEJM 298(17): 940-950, April 27, 1978. For a review of the shortening tenures of Canadian Deans, see the Medical Post, pages 20-21, June 15, 1999.

48. Lampard, R. For a listing (1913-2010) of students, faculty, residents and programs, publications, MSc and PhD students, Research Grants, Faculty Budget and Buildings, see Appendices 1-9, pages 193-196. For an identification of the Faculty's milestones, see pages 197-202.

GLOSSARY OF ABBREVIATIONS

AAMC	Association of American Medical Colleges
AB	Alberta
ACMC	Association of Canadian Medical Colleges (Association of Faculties of Medicine of Canada)
ACS	American College of Surgeons (American College of Clinical Surgeons)
AFMC	Association of Faculties of Medicine of Canada (Association of Canadian Medical Colleges)
AFP	Alternate Funding Plans
AHFMR	Alberta Heritage Foundation for Medical Research
AHS	Alberta Health Services
Alta.	Alberta
AMA	Alberta Medical Association; *also* American Medical Association
AMA/CPSA	Alberta Medical Association/College of Physicians and Surgeons of Alberta
AOA	Alpha Omega Alpha Society
BC	British Columbia
BNA Act	British North America Act
CACHB	Calgary Associate Clinic Historical Bulletin
CAMC	Canadian Army Medical Corps
CAP	Community Acquired Pneumonia
CGH	Calgary General Hospital
CHA	Capital Health Authority
CIHR	Canadian Institute of Health Research
CMA	Canadian Medical Association
CMAJ	Canadian Medical Association Journal
CNR	Canadian National Railway
COTC	Canadian (University) Officers Training Corps
CPC	Clinical Pathological Conferences
CPR	Canadian Pacific Railway
CPSA	College of Physicians and Surgeons of Alberta
CRC	Canadian Research Chairs program
DPH	Diploma in Public Health
FACP	Fellow of the American College of Physicians
FACS	Fellow of the American College of Surgeons
FoMD	Faculty of Medicine and Dentistry, UofA
FRCPC	Fellow of the Royal College of Physicians (Canada)
FTE	Full Time Equivalent
FRCSC	Fellow of the Royal College of Surgeons (Canada)
GFT	Geographic Full-Time Professor
HBV	Hepatitis B Virus
HMRC	Heritage Medical Research Centre
HRIC	Health Research Innovation Centre, Calgary
HRIF	Health Research Innovation Facility, Edmonton
HSC	Health Science Center
MB	Bachelor of Medicine degree
MBE	Member, Order of the British Empire
MCC	Dominion Medical Council of Canada
MHC	Military Hospitals Commission
MLA	Member of the Legislative Assembly
MNI	Montreal Neurological Institute
MOANA	Medical Officers of the Army, Navy and Air Force
MPH	Masters in Public Health
MRC	Medical Research Council of Canada
MS(of A)I	Medical Services (Of Alberta) Incorporated.
MSI	Medical Services Incorporated
MUS	Medical Undergraduate Society (UofA)
NCIC	National Cancer Institute of Canada
NEJM	New England Journal of Medicine
NIH	National Institute of Health
NMR	Nuclear Magnetic Resonance
NRC	National Research Council
OBE	Officer of the British Empire
OR	Operating Room
OUP	Oxford University Press
PGME	Post Graduate Medical Education Committee
RAH	Royal Alexandria Hospital, Edmonton
RF	Rockefeller Foundation
RCMP	Royal Canadian Mounted Police
RCNVR	Royal Canadian Volunteer Reserve
RCPSC	Royal College of Physicians and Surgeons of Canada
Ref.	References
Rev.	Reverend
RVH	Royal Victoria Hospital (Montreal)
SCR	Soldier's Civil Re-establishment Commission
SIHA	Students International Health Association
SMRI	Surgical Medical Research Institute (U of A)
St.	Saint
TB	Tuberculosis
TGH	Toronto General Hospital
U of A	University of Alberta
U of C	University of Calgary
U of T	University of Toronto
UAH	University of Alberta Hospital
UAP	University of Alberta Press
UBC	University of British Columbia
WCB	Workmen's Compensation Board
WCMF	Western Canadian Medical Federation
WGH	Winnipeg General Hospital
WHO	World Health Organization
WWI	World War I
WWII	World War II

Henry Marshall Tory, MA, DSc
1864-1947

Henry Marshall Tory, MA, DSc
1864-1947

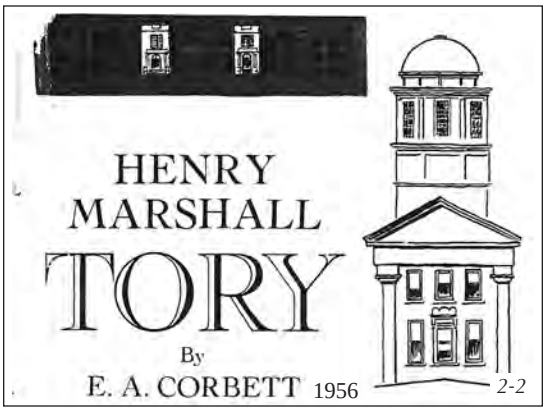
"Tory identified himself completely with any enterprise he undertook, and by his energy and drive usually dominated it… No one in the university questioned his decisions, even if they sometimes had private reservations. This applied to the Board of Governors and even the provincial government."[1]

Introduction: The Faculty of Medicine at the University of Alberta began with the entry of the first premedical class of 27 in September 1913. For the first seven years (1913-1920) the administrator and coordinator of the Faculty of Medicine was the man who started it, UofA President Henry Marshall Tory, D.Sc.[2]

From 1908 until 1928 Dr. Tory made all the important decisions at the UofA and for the Faculty of Medicine, as he became the leader in university education in Alberta and one of the leaders in Canada.

During his lifetime Tory would be involved in the starting of not one but four universities in Canada: the University of British Columbia (UBC) (1905), the University of Alberta (UofA) (1908), Khaki University during WWI (1917) and Carleton College (1942).[3]

A dynamo of ideas and energy, Dr. Tory was equal to any challenge that arose during his Presidency. He held strong views on the role of the university as the selector, teacher and examiner of all professional faculties.[4] Shortly after he arrived in Edmonton, Dr. Tory participated in the discussions that led to revisions to the University Act and the passage of the Education Act in 1910, which enshrined his views on the university's role in education. He knew the University's mandate well.[5]



Henry Marshall Tory D.Sc., circa 1909

A medical school is the most complicated and expensive faculty within a university. The challenge to construct it entirely on campus and under the control of the university, at a time when medical education was undergoing rapid change,[6] would have daunted many, but it invigorated Dr. Tory. His approach became a practiced script as he recommended the Senate approve the formation of the Faculties of Law (1912), Engineering (1912), Medicine (1913) and Agriculture (1915), and the sub-departments or schools of Pharmacy (1914) and Dentistry (1916).

1. Newton, Robert A. As quoted in Elise A. Corbet's *Frontiers of Medicine. A History of Medical Education and Research at the University of Alberta*, page 5, UAP, 1990. For more on Tory's leadership style and personality, see Ellen Schroeck's *I was There*, pages 37-49, UAP, 2006.
2. Corbett, Edward A. *Henry Marshall Tory, a biography*, 241 pages, Ryerson Press, 1954, republished with a 27 page introduction by Douglas Owram, UAP, 1992.
3. Corbett, Edward A. *Henry Marshall Tory*, 1992 edition, pages xi, xix, x.
4. Corbett, Edward A. *Henry Marshall Tory*, 1992 edition, page 132.
5. Tory, H. Marshall As quoted in Edward A Corbett's, *Henry Marshall Tory*, pages 132-133.
6. Ludmerer, Kenneth M. *Learning to Heal. The Development of American Medical Education*, 346 pages, Basic books; 1985, and *Time to Heal. American Medical Education* from the *Turn of the Century to the Era of Managed Care*, 515 pages, OUP, 1999.

Belief in Alberta's future was a prerequisite, as the 1908 population of Edmonton was only 15,000, Strathcona 7,000, and Alberta just over 300,000. By WWI (1914) those numbers had all doubled.

Over the faculty's first decade, Dr. Tory took the preparatory steps to secure University, Government and American accreditation approval for a four year MD program. Despite spending one and a half years opening and closing the Canadian Army's Khaki University in England (1917-1919), Dr. Tory met his own 1913 prediction. There would be a Class A fully approved MD training program at the UofA, within ten years. There was by 1921. The first eleven UofA MDs graduated in 1925. In the process, Dr. Tory demonstrated the power of philanthropic grants, through the acquisition of a conditional $500,000 grant from the Rockefeller Foundation (1920) and its release to the UofA (1923).[7] Dr. Tory acknowledged in 1942 it "was not an easy undertaking".[8]

From Youth to the UofA Presidency (1864-1907): Henry Marshall Tory was born in Guysborough, Nova Scotia on January 11, 1864. His family were United Empire Loyalists.

H.M. Tory, John A. Tory, James C. Tory (n.d.)

By age 15, Marsh, as he was known to his friends and close associates, had already discovered his love of books and learning. After clerking for three years and teaching for two, he met McGill's Principal George Dawson, who convinced him to recommence his studies in Montreal. An excellent debater, Tory graduated in 1890 with a B.A. and a gold medal. Then he finished his B.D. and accepted a ministerial charge for two years. Tory returned to McGill to earn an M.A. (1896) and a D.Sc. in physics (1903), alongside Ernest Rutherford.[9]

One belief Dr. Tory held throughout his life was that "the ultimate teaching of all education is just this, that every man owes to the generation in which he lives the last full measure of devotion to whatsoever things are true, or in Latin, Quecumque Vera." It became the motto of the University of Alberta[10] and the salutation for the university grace.[11]

Dr. and Mrs. H.M. Tory, married in 1892

While at McGill, Dr. Tory could not avoid being inculcated by the leadership position of McGill's Faculty of Medicine in Canadian medicine, achieved through the successive appointments of outstanding medical teachers like Dr. William Osler (1874-1884) and Deans Palmer Howard (1882-1893), Robert Craig (1883-1901), Thomas Roddick (1901-1908), Francis Shepherd (1908-1914), and the colleagues they attracted. Dr. Tory would have been aware of the medical education initiative of Dr. Osler, to teach pathology in the laboratory (morgue), and to relate the findings from autopsies to causes of death and illnesses. Dr. Osler successfully transferred that approach to small group teaching rounds at the bedside of those who were ill in

7. Fedunkiw, Marianne "University of Alberta and the Rockefeller Foundation. Wooing the Rockefellers", in *Alberta's Medical History, Young and Lusty, and Full of Life*, pages 545-557, 2008.
8. Tory, H. Marshall "A message from Dr. Tory", in the "Medical Alumni Bulletin," #1, page 1, May 8, 1942. Although only seven annual issues of the 4-12 page Medical Alumni Bulletin were printed, under the editorship of Dr. A.C. McGugan, they were very informative, outlining the lives, military service and recollections of early faculty members.
9. Boyle, R.W. *Henry Marshall Tory 1864-1947*. Proceedings of the Royal Society, pages 137-146, 1947.
10. Parlby, Irene As quoted in Barbara Cormack's *Perennials and Politics*, *The Life of Irene Parlby*, page 67, Professional Printing, c1968.
11. Alexander, W. As quoted in Walter Johns *A History of the University of Alberta, 1908-1969*, page 48, UAP, 1981.

Strathcona Cottage Hospital, 1906

hospital. From those beginnings came medical rounds with difficult case presentations at clinical pathological conferences (CPCs).

Dr. Tory would also have seen the challenges that faced McGill, when the Faculty of Medicine was severely damaged in a fire in 1907. It was rebuilt through philanthropy from Lord Strathcona and Lord Mount Stephen, who carefully nudged the Faculty into giving up its autonomy and fully merging with McGill.[12] Formerly Donald Smith and George Stephens the builders of the CPR, they were the donors who had funded the construction of the Royal Victoria Hospital (1887-1993). The residual funds from their one million dollar donation created the first major endowment ($350,000) for a Canadian medical faculty in 1893.[13]

Lord Strathcona would extend his philanthropy westward, when he contributed $25,000 in 1911 to the building of the Strathcona Hospital, in his namesake town of Strathcona or South Edmonton.[14]

Dr. Tory was aware of the efforts of McGill's Dr. Thomas Roddick, to implement a national examination and licensing system for all doctors in Canada. Its purpose was to enable licensed physicians to move from province to province without rewriting their medical exams, in a country where the registration of physicians was a responsibility assigned under the BNA Act to each province. He would have observed how Dr. Roddick promoted his concept by running in the federal election of 1896.

Although the government of Conservative Prime Minister Dr. Charles Tupper was defeated, Roddick was elected. Despite being on the wrong side of power, Dr. Roddick articulated his longstanding solution to the Canadian non-portable provincial physician registration problem (1899). He obtained all-party support for a Dominion Medical Council Enabling Act in the House of Commons (1902-1905). To be enacted it required the approval of all provincial medical associations, legislatures, the CMA and the House of Commons.[15] Dr. Tory would become personally involved in the process in Alberta in 1912, the year before the Canada Medical Act was finally passed.

Dr. Tory and staff meeting in the Library, UofA.

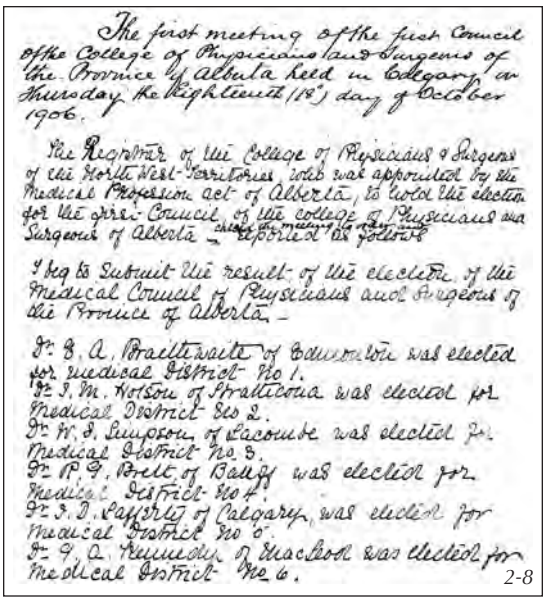
The First President of the UofA (1908): After passing the Act to establish the University of Alberta (1907), the Rutherford government located the new university in the premier's own constituency of Strathcona. Then Premier Rutherford went looking for a president. As a McGill graduate, it was not surprising that Rutherford would prefer a colleague with McGill experience and a McGill vision for the new university – a non-denominational one.[16]

Dr. Tory had worked from 1905 to 1907 to establish affiliation agreements between high schools in BC and McGill. They would lead to the signing of the McGill University/College of British Columbia affiliation agreement (1906). That step was followed by the first UBC Act (1908), and the establishment of the UBC (1910). Although the first UBC president was

12. Hanaway, Joseph, Cruess, Richard — *McGill Medicine*, Volume 1, *The First Half Century 1829-1885*, pages 10, 19-27.
13. Lewis, D. Sclater — *Royal Victoria Hospital 1887-1947*, pages 3-34, RVH, 1969.
14. Vant, J. Ross, Cashman, Tony — *More Than a Hospital. University of Alberta Hospitals 1906-1986*, page 32, UAH, 1986. For the final costing and highlights from the agreements between the cities of Strathcona and Edmonton and the University see the Medical Alumni Bulletin #3, page 2, December 30, 1944.
15. MacDermott, H. Ernest — *Sir Thomas Roddick*, pages 113-149, Macmillans, 1938. Also see R.B. Kerr's *The History of the Medical Council of Canada*, pages 14-23, MCC, 1979.
16. Schroeck, Ellen — *I was There*, pages 19-21, UAP, 2006

Dr. Frank Wesbrook a Manitoba MD (1915), there would not be a UBC Faculty of Medicine until 1950. The BC process was protracted, but it underlined how western provinces had their own point of view on how autonomous their provincial university should be. The answer was fully autonomous.

During one of his return visits to BC in 1906, Dr. Tory stopped in Edmonton and Calgary to visit the two Colleges that had already been started - Alberta College in Edmonton and the Western Canada College in Calgary. He was impressed with their vitality and development plans and wrote Rutherford detailing his observations.[17]



The first meeting of the first Council of the College of Physicians and Surgeons of the Province of Alberta held in Calgary on Thursday the Eighteenth (18th) day of October 1906.

The Registrar of the College of Physicians & Surgeons of the North West Territories which was appointed by the Medical Profession act of Alberta, to hold the election for the first Council of the college of Physicians and Surgeons of Alberta - reported the following

I beg to Submit the result of the election of the Medical Council of Physicians and Surgeons of the Province of Alberta -

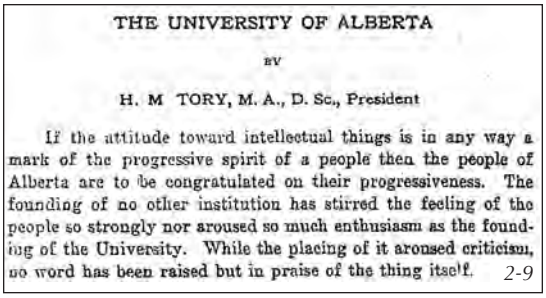
Dr. S. A. Braithwaite of Edmonton was elected for medical District No 1.
Dr. J. M. Watson of Strathcona was elected for Medical District No 2.
Dr. W. S. Simpson of Lacombe was elected for Medical District No 3.
Dr. P. G. Bell of Banff was elected for Medical District No 4.
Dr. J. D. Lafferty of Calgary was elected for Medical District No 5.
Dr. J. A. Kennedy of Macleod was elected for Medical District No 6.

2-8

Opening minutes of the CPSA, October 18, 1906

Premier Rutherford returned the favor when he took Dr. Tory out for lunch early the next year (1907) and offered him the presidency of the UofA. Dr. Tory accepted and the appointment was ratified in July 1907. Dr. Tory put pioneering opportunities ahead of his academic love of teaching and education and came to the UofA January 1, 1908.[18] A builder, Dr. Tory dedicated the rest of his career to the UofA, until he reached retirement age.

In his discussions with Rutherford and other Albertans, Tory must have outlined his vision for the faculties he wanted and the order in



THE UNIVERSITY OF ALBERTA

BY

H. M TORY, M. A., D. Sc., President

If the attitude toward intellectual things is in any way a mark of the progressive spirit of a people then the people of Alberta are to be congratulated on their progressiveness. The founding of no other institution has stirred the feeling of the people so strongly nor aroused so much enthusiasm as the founding of the University. While the placing of it aroused criticism, no word has been raised but in praise of the thing itself. 2-9

Western Canadian Medical Journal, 1909

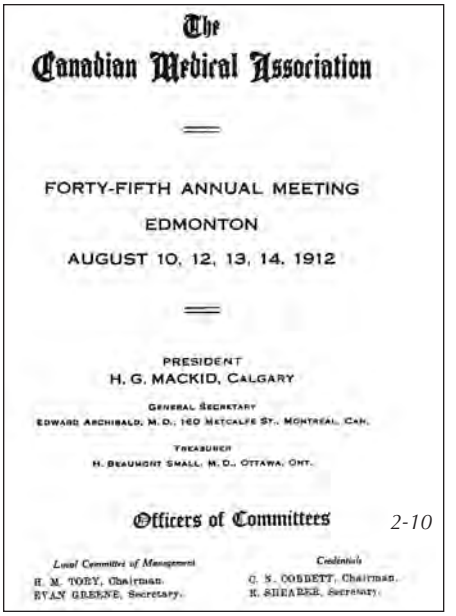
which he saw them develop. With the Senate in place (1908) and the Arts and Science faculties started, he proposed a series of professional schools and faculties, which the Senate approved in 1909. Medicine was the third faculty identified in the development plan.[19] After 1909 the question was not if, but when, there would be a Faculty of Medicine at the UofA. To Dr. Tory, it was as soon as possible, once the building blocks were assembled. Under Dr. Tory, the period of time from the establishment of the University until the commencement of a full MD degree-granting faculty took 13 years (until 1921), 40 years in BC (until 1950), and 45 years in Saskatchewan (until 1953).[20]

Initially, the University of Alberta was funded with a grant of $25,000 per year provided from a portion of the succession duties received by the province. It was a tenuous source of funding. Whatever Dr. Tory may have planned, it was nearly derailed in 1910, when Premier Rutherford resigned over the Northern Alberta Railway funding controversy.

The new premier, A.L. Sifton refused the university's annual allocation until it was approved by the Legislature, forcing Tory and a group of businessmen to borrow from the bank to meet the UofA payroll. During the melee, future Prime Minister R.B. Bennett sought to split the university and move part of it to Calgary. Dr. Tory won the argument and kept the university unified, with the support of the newly appointed Board of Governors (1910). In the process he gained an adversary, Bennett. Rutherford would return to the UofA as the third Chancellor (1927-1941).

Starting the Faculty of Medicine (1908-1913): The credit for establishing the Faculty of Medi-

17. Corbett, Edward A. *Henry Marshall Tory*, pages 87-88.
18. Low, A.P. Letter to Premier A.C. Rutherford, as quoted in Elise A. Corbet's *Frontiers of Medicine*, page 5.
19. Tory, H. Marshall "The University of Alberta", WCMJ 3: 560-562, 1909.
20. McPhedran, N. Tait *Canadian Medical Schools. Two Centuries of Medical History 1822 to 1922*, pages xii 167-168, 191, Harvest House, 1993.


The
Canadian Medical Association

FORTY-FIFTH ANNUAL MEETING
EDMONTON
AUGUST 10, 12, 13, 14, 1912

PRESIDENT
H. G. MACKID, CALGARY

GENERAL SECRETARY
EDWARD ARCHIBALD, M. D., 160 METCALFE ST., MONTREAL, CAN.

TREASURER
H. BEAUMONT SMALL, M. D., OTTAWA, ONT.

Officers of Committees

2-10

Local Committee of Management
H. M. TORY, Chairman.
EVAN GREENE, Secretary.

Credentials
C. S. COBBETT, Chairman.
R. SHEARER, Secretary.

cine was not clear when it was first examined in 1929.[21] Regardless, Dr. Tory was at the center of the process. So were Rutherford, Chancellor C.A. Stuart, the Senate, the Board of Governors, the AMA/CPSA and Dr. R.G. Brett. As the AMA/CPSA's Past-President, Dr. Brett had already gone on record as being interested in a faculty in 1908 but felt it was premature.[22]

Interest in a faculty was widespread amongst the medical profession. At the first UofA Convocation in 1907, 104 of the 364 Convocation registrants were physicians. They paid the two dollar registration fee.[23] Their interest was crystallized when four physicians were appointed to the 15-member UofA Senate (1908). The physicians were Drs. R.G. Brett, G.A. Kennedy, W.D. Ferris and W.S. Galbraith.

By 1911 the provincial medical examination and registration issue was facing the Alberta medical profession. In 1907, Alberta physicians had recommended the establishment of a Western Canadian Medical Federation to create a four-province, common, examination and licensing system, as recommended by Dr. Roddick.[24]


2-11

Anatomy Lab, pre-1915

When the initiative rekindled the discussion of a national examination at the CMA's 1909 meeting, Tory offered the University of Alberta Senate as a credible authority to appoint examiners and conduct the still-needed provincial medical examinations (1912). The CPSA accepted the offer but remained the Registrar as required by law, following in the footsteps of its predecessor the 1889 formed NWT Medical Council.[25] It became an acceptable solution on which the two bodies could agree, in the absence of a Faculty of Medicine and a binding national examination and licensing agreement.

To make a great dream come true, the first requirement is a capacity to dream. The second is persistence of faith in the dream.

Hans Selye

It doesn't matter what you think or what I think. When history is written, it will be what you do and what I do.

A.B."Happy" Chandler

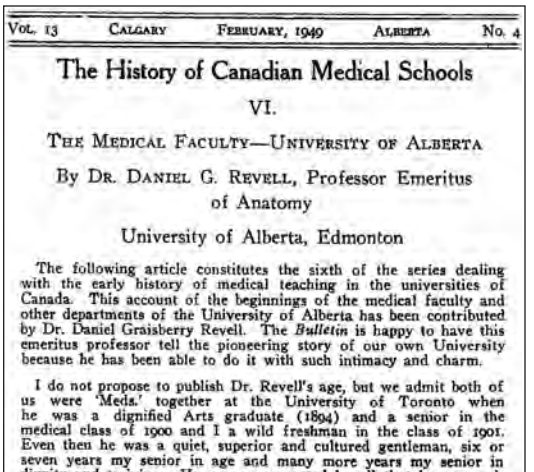
While the CPSA and CMA were deliberating the national examination issue, Dr. Tory and the AMA were working together to plan the 1912 CMA Convention in Edmonton. CMA President Dr. H.G.

21. Large, J.M., Revell, D.G., Cain, E.F. "History of the Medical Students Club, 1929", as quoted in Elise Corbet's *Frontiers of Medicine*, page xiii. In his history of the Medical Faculty of the University of Alberta, Dr. Revell did not elaborate any further, either. CACHB 13(4): 65-75, February 1949.
22. Jamieson, Heber C. *Early Medicine in Alberta, the First 75 Years*, pages 64-65, AMA, 1947.
23. Tory, H. Marshall "The University's Function in Medicine", CMAJ 26(11): 1303, November 1926, and Dr. Daniel G. Revell's, "The Medical Faculty – University of Alberta", CACHB 13(4): 67, February 1949.
24. Lampard, Robert "Dr. George Allen Kennedy" in *Alberta's Medical History, Young and Lusty, and Full of Life*, pages 115-131, 2008. Also see the chapters on Drs. Ernest Ainsilie Braithwaite, Robert George Brett and James Delamere Lafferty.
25. Jamieson, Heber C. *Early Medicine in Alberta*, page 102. The CPSA was not prepared to surrender this right. CPSA Minutes, Volume 1, November 8, 1917. Tory had anticipated the University would select and examine students for the professions, in the University Act of 1910, as E.A. Corbett noted in *Henry Marshall Tory*, page 106.

Mackid lived in Calgary. Dr. Tory offered to chair the program in Edmonton. The second (after 1889) CMA convention was held in Alberta at Edmonton's Corona hotel, starting August 10, 1912. At the conclusion of Dr. Mackid's retirement speech, he accepted a motion from Dr. Alexander Forin to appoint Dr. Roddick the honorary President of the CMA for the rest of his life, for the leading role he played in the establishment of the Dominion Medical Council in 1912. The motion was accepted with a chorus of cheers and a standing ovation.[26]

Fortuitously or possibly through prior encouragement, a 1912 UofA student J.K. Mulloy, asked Dr. Tory if he would start a medical school in Alberta, so that he didn't have to pay the extra cost of studying medicine in eastern Canada. Dr. Tory's answer was yes, so long as at least 12 students agreed to take the program. Twenty-five UofA students signed the petition asking the Senate to establish a Faculty of Medicine.[27] Dr. Tory and the Senate made the decision to proceed, by establishing a faculty in 1913.

The petition route replicated the process followed by students in Winnipeg, when the



VOL. 13 CALGARY FEBRUARY, 1949 ALBERTA No. 4

The History of Canadian Medical Schools

VI.

THE MEDICAL FACULTY—UNIVERSITY OF ALBERTA

By DR. DANIEL G. REVELL, Professor Emeritus of Anatomy

University of Alberta, Edmonton

The following article constitutes the sixth of the series dealing with the early history of medical teaching in the universities of Canada. This account of the beginnings of the medical faculty and other departments of the University of Alberta has been contributed by Dr. Daniel Graisberry Revell. The *Bulletin* is happy to have this emeritus professor tell the pioneering story of our own University because he has been able to do it with such intimacy and charm.

I do not propose to publish Dr. Revell's age, but we admit both of us were 'Meds.' together at the University of Toronto when he was a dignified Arts graduate (1894) and a senior in the medical class of 1900 and I a wild freshman in the class of 1901. Even then he was a quiet, superior and cultured gentleman, six or seven years my senior in age and many more years my senior in dignity and training. He was so respected by all that he was universally known as "Daddy Revell." That title of honour and goodfellowship followed him to the University of Alberta where he has worn it proudly through the years. While Dr. Revell may not know it, we shall advise our readers that we shall before long publish an account of his life and work in medical education.

2-12

Manitoba Medical College was established in 1883. One of the 13 Manitoba College incorporators was Dr. R.G. Brett, who had moved to Alberta in 1885. He would receive an honorary LLD from the UofA in 1915, become Alberta's second Lt. Gov. (1915-1925) and lay the cornerstone for the new Faculty of Medicine building in 1920.[28]

Dr. Tory had foreseen that basic science courses would be the foundation for teaching medical students.[29] He was well aware of the teaching struggle within the medical education field in the late 1800s over who would teach biology, physics and chemistry as those courses became part of the medical curriculum. The science proponents sought to join these subjects with the teaching of anatomy, physiology and pathology. Medical teachers felt they should be given by doctors who were sensitive to the traditions of medicine.

Dr. Tory regarded basic science education as fundamental to the understanding and treatment of diseases. He concurred with the view that anatomy, physiology, pathology and bacteriology were specialized branches of biology. Biochemistry he considered was an outgrowth of biology and chemistry. All sciences he felt centered around the problems of life. He took his position one step further. Dr. Tory felt teaching and preparing doctors to practice medicine was separate from the practice of medicine.[30]

Acquiring the Provincial Laboratory: While the Faculty was still in the formative stages, Dr. Tory saw another opportunity. It was to acquire the Provincial Laboratory. With the separation of Alberta and Saskatchewan into two provinces in 1905, the NWT Laboratory in Regina was no longer accessible to Alberta physicians. In 1907 Alberta's Public Health Act was drafted by Dr. J.D. Lafferty and passed.[31] A Provincial Laboratory was established in Edmonton the same year. Dr. D.G. Revell was appointed the first Director of the Laboratory.

With encouragement from Dr. Tory, Dr. Revell succeeded in having the Laboratory moved

26. Lampard, Robert "The CMA Convention of 1912", in *Alberta's Medical History*, pages 540-544. For Dr. Mackid's retirement speech, see the CMAJ 2(9): 801-811, 1912.

27. Mulloy, William Personal communication, November 7, 2008. Dr. Bill Mulloy quoted his father, Dr. J.K. Mulloy, as asking Dr. Tory to start a Faculty of Medicine. Tory's reply was "if you and 12 more sign up for it I will start it." Dr. Mulloy Sr. was in the first class of 1913/14. Confirmed on page 5 in the Report of the Board of Governors of the University of Alberta for the Year ending June 30, 1913. UAA.

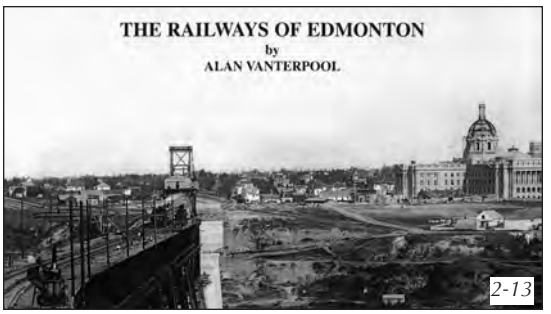
28. Lampard, Robert "Dr. Robert George Brett", in *Alberta's Medical History*, pages 85-99.

29. Tory, H.M. "The University's Function in Medicine", page 1302.

30. Tory, H.M. "The University's Function in Medicine", page 1303.

into the new Athabasca Hall on the UofA campus in 1911. Dr. Revell predicted that a university-based laboratory would help acquire better staff and would benefit the prospective Faculty of Medicine.[32] He was correct. The Laboratory would move again in 1921 to the basement of the new Faculty of Medicine building, where it remained until a freestanding Provincial Laboratory was opened in 1950.

The move to the University gave Dr. Tory control of the Provincial Laboratory budget, which was about $28,000/year in 1922. With Deputy Minister Dr. W.C. Laidlaw's approval, he was able to recruit Pathologists and Laboratory Medicine specialists - Drs. A.C. Rankin (Director and Bacteriologist, 1914), J.J. Ower (Pathologist and Serologist, 1918), R.M. Shaw (Microbiologist, 1920) and H. Vango (Tissue Pathologist, 1924). All were McGill graduates.[33] Dr. Laidlaw also recruited Dr. H.A. Orr (Syphologist and Dermatologist, 1919), a UofT graduate.



The High Level Bridge and Legislature, under construction, 1912

Acquiring a University Hospital: The biggest hurdle that Dr. Tory faced was the acquisition or construction of a university hospital. It was an essential part of his vision.

The concept of an integrated, commonly managed medical school and hospital originated in Baltimore, when Johns Hopkins was opened in 1893. It was one reason why Dr. William Osler moved to it in 1889.

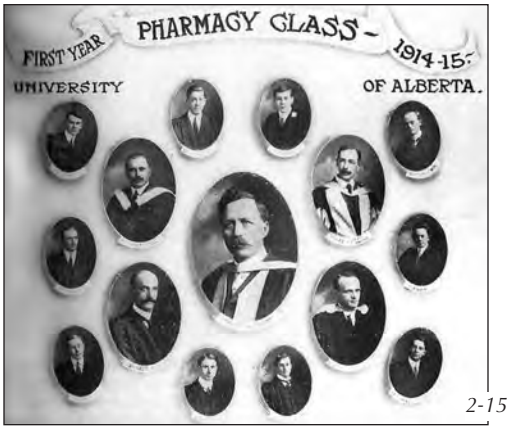
In his plan Dr. Tory wasn't just thinking of an affiliation agreement. To function he said "the university hospital [must] become of necessity a part of the medical school. It is here where the full time scientist and the clinician meet and where the laboratory worker finds the fruition of his efforts."[34]

Dr. Tory began his quest by joining the Board of the Royal Alexandra Hospital (1908-1921). It was formed by the merger of the City and Alexandra hospitals in 1906. A site for a new and larger hospital was under active consideration. Dr. Tory was elected the Chairman of the Board and did his best to locate the new hospital at the north end of the proposed High Level Bridge, near the Alberta Legislature and across the river from the University. There it would have been close to the Edmonton General and Misericordia Hospitals. Instead citizen pressure moved the hospital site to North Edmonton where it still stands. During the process Dr. Tory was attacked "as a dreamer – a visionary who wanted to grab everything in sight".[35]

Unsuccessful, Dr. Tory took a second approach, which was to have Dr. Revell join the Strathcona Municipal Hospital Board. Strathcona was separated from Edmonton by the Saskatchewan River, until the two towns were united by the High Level Bridge and merged in 1912. The Hospital Board planned to enlarge its 1906-built cottage hospital, and did temporarily to 60 beds using the Odd Fellows Hall, as it looked for a permanent location. Then Dr. Tory offered the Board a site on the University of Alberta campus at no cost. Accepted, the condition was attached, that if and when a Faculty of Medicine was established,

New $300,000, 85 bed Strathcona Hospital, opened in 1913

31. Lampard, Robert "Dr. James Delamere Lafferty" in *Alberta's Medical History*, pages 59-71.
32. Revell, Daniel G. "The Medical Faculty - University of Alberta", CACHB 13(4): 68-69, February 1949.
33. Letts, Harry "Early Pathology/Laboratory Medicine at the University of Alberta. Her Teaching Hospitals and the Provincial Laboratory." Reprinted in *Alberta's Medical History*, pages 524-533. For more information see Harry Lett's book on Pathology/Laboratory Medicine in Canada (in process).
34. Tory, H.M. "The University's Function in Medicine", page 1305.
35. Tory, H. Marshall "A Message from Dr. Tory", in the Medical Alumni Bulletin, #1, pages 1, 4, May 8, 1942.



2-15

First UofA Pharmacy class of 1914/15, under Dr. H.H. Moshier (LR)

the University could take over control of the hospital.[36]

The $350,000 Strathcona Hospital was opened in 1913 under the tri-hospital (Royal Alexandra, Edmonton General and Strathcona) management of Dr. James Fyshe,[37] a colleague of Dr. Rankin's from his Montreal and Thailand days, and the former superintendent of the Montreal Isolation Hospital. The University took over control of the Strathcona Hospital in 1914, when it began the medical school. Later that year Dr. Tory appointed Dr. H.H. Moshier as the Medical Superintendent, when Dr. Fyshe enlisted with the #1 Canadian General Hospital staff. He was joined by Dr. Rankin who took an LOA from the UofA four months after his arrival in Edmonton in May 1914.[38]

The management of the Strathcona hospital changed again when Dr. Moshier joined the army, and the federal Military Hospital Commission (MHC) appropriated it to treat returning disabled veterans in 1916. The MHC's 1918 successor, the Soldiers Civil Re-establishment Commission, kept control of the hospital until 1922, when it was returned to the University of Alberta. It reopened as the University of Alberta (UAH) hospital, with medical privileges granted by invitation to specialist trained physicians. The hospital remained under direct University control until 1929, when the government appointed three of the board's six members, to better control its expenditures. That decision was made one year after Dr. Tory left Edmonton in 1928.

The Flexner Report (1910) and the Rockefeller Foundation Grant (1920): Another problem or unusually well-timed medical education opportunity arose in 1907. The American Medical Association was concerned over the variable quality of medical teaching in North America. At the turn of the century medical schools were a mixture of proprietary, denominationally controlled, or university based institutions. The Association asked the Carnegie Institute to study the contentious problem. They appointed Abraham Flexner as their surveyor. He recommended all medical schools be university-controlled, with a program of two years of basic medical science courses and two years of clinical instruction. It became known as the classic two plus two program.

The Flexner report accelerated the changes toward university ownership, operation and control of medical schools in Canada and the USA.[39] Flexner had included surveys of Canadian medical schools in his report. The Cana-

University of Alberta and the Rockefeller Foundation
Wooing the Rockefellers

Marianne Fedunkiw, Ph.D.

Soon after the announcement of the Rockefeller gift, eleven universities across Canada began envisioning their potential role as recipients of the five million dollars. They prepared for visits from Foundation President George E. Vincent and Director of the Foundation's Division of Medical Education, Richard M. Pearce in 1920. After preliminary analysis, Pearce concluded that Canada could be served by seven strong medical schools.

Table 1
Recommended distribution of Rockefeller Foundation gift, 1920

McGill	$1,000,000
Toronto	$1,000,000
Manitoba	$750,000
Alberta	$500,000
Dalhousie	$500,000
Montreal	$500,000

An undesignated balance of $750,000 was to be kept in reserve to aid in the development of the seventh potential recipient, and the only school not yet established in Vancouver.

2-16

36. Elliott, Ms. G.H. — A Brief History of the Strathcona Hospital as it appeared in the Board of Governor's annual report of 1930. A personalized account of the acquisition of the Strathcona College Hospital, followed by the temporary 60-bed Oddfellows Hospital and Dr. Tory's request to move it to the Provincial Government's University grounds, was outlined in a letter from Mrs. George H. Elliott, June 13, 1943, in the Medical Alumni Newsletter, #3, page 2, December 30, 1944.

37. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, pages 41-46. Emily Murphy was not impressed with the hospital's management and gave her own report to the Board on its deficiencies in July 1914.

38. Cameron, Kenneth — *History of #1 Canadian General Hospital*, 1914-1919, 667 pages. Tribute Press, Sackville, New Brunswick.

39. Flexner, Abraham — "Report to the Carnegie Institute", as reviewed by Kenneth Ludmerer in *Learning to Heal: The Development of American Medical Education*, pages 166-190, Basic Books Inc., 1985.

dian schools received varying levels of accreditation from Class A (McGill, Toronto) downwards.

The Flexner report became a guide and an incentive for Dr. Tory. Although he didn't have a Faculty of Medicine to be assessed, He realized the importance of the report. To him it meant the university must control the curriculum, appoint the teachers, own the hospital, select the students, examine and graduate all prospective doctors.[40]

After WWI the Rockefeller Foundation (RF) accelerated the movement toward the Flexner model of medical education, by providing substantial grants to upgrade teachers and improve medical training facilities and laboratories across the continent. Formed and funded by 1919, the RF was directed by Dr. Simon Flexner, a noted virologist and Abraham Flexner's brother.[41]


2-17

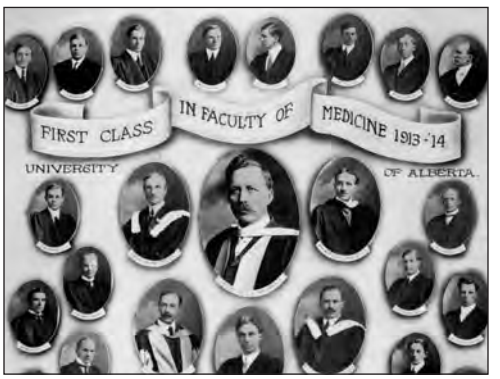
Drs. Simon Flexner, W.H. Welch and J.D. Rockefeller Jr.

On his return in July 1919 from opening and closing the Canadian Army's Khaki University (1917-1919), Dr. Tory's attention was captured by future Prime Minister W.M. King's success in securing J.D. Rockefeller's willingness (1920), to permit five million dollars of his second donation to the RF, to be used to improve the facilities and training in Canadian medical schools. Dr. Tory applied for a grant and did his utmost to persuade the Rockefeller Foundation's Pearce Committee to visit and approve the UofA Faculty of Medicine as a grant-recipient. The RF awarded a $500,000 grant to the UofA in 1920. It was the only grant made to the six successful Canadian medical schools, that had conditions attached to it.[42]

The Rockefeller Foundation conditions required the UofA to complete the construction of the medical school, extend the MD program to four years, and be granted a Class A accreditation rating. Tory and Rankin met all the conditions, and secured the accreditation approval of the American Medical Association (1922), and the American College of Surgeons (1924). The first MDs graduated in 1925.

The Rockefeller grant to the UofA was released in December 1923. The RF officers were impressed by the progress that had been made in the medical and dental programs, and viewed them as "beyond their most extravagant expectations". The release of the grant did not end the UofA/RF relationship.[43]

The First Medical Classes and Courses: It was Dr. Tory's strong belief that the university should determine the qualifications and set the standards for professional examinations for the men and women who entered the professions. In 1913 the University entrance requirement was a junior matriculation (Grade 11). High school graduates could go directly into the new medical program, which consisted of a premedical year and two basic medical science years. The premedical teaching was given in Athabasca Hall and moved to the Arts build-



Class of 1913/ 1914

2-18

40. Tory, H.M. "The University's Function in Medicine", page 1304 and Edward Corbett's *Henry Marshall Tory*, page 132.

41. Ludmerer, Kenneth *Learning to Heal, the Development of American Medical Education*, page 172. Dr. Simon Flexner was the Director of the Rockefeller Institute for Medical Research.

42. Fedunkiw, Marianne "University of Alberta and the Rockefeller Foundation (1920-1923), Wooing the Rockefellers," in *Alberta's Medical History*, pages 545-557, 2008.

43. Fedunkiw, Marianne "University of Alberta and the Rockefeller Foundation," pages 552-559. Rockefeller Foundation grants coupled with some funding from the Carnegie Corporation were made 1) to Collip for upgrading, 2) to hire the first two clinical professors (Pope, Mewburn), 3) to fund the first two provincial physician-led public health units (1929-1935), 4) for Dr. Rankin to tour US medical schools in 1935 (not taken because of illness) and Dr. Scott (1949), 5) for research grants to Ruben Sandin and William Rowan and 6) to start the UAH Psychiatric unit (1930-1935).

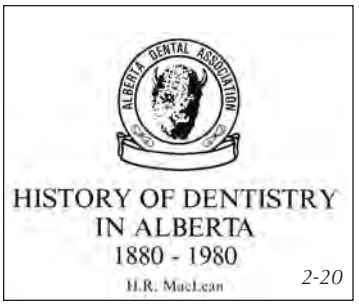
Professor J.B. Collip (R front) and the class of 1916/17

ing when it opened in 1916. Medical classes, including anatomy, were taught on the third floor of Pembina Hall, before they were moved alongside the Engineers in the university's power plant.

For instructors Dr. Tory sought the best youthful teachers that he could find and afford. He secured Dr. A.C. Rankin (1914) from McGill via Siam (Thailand). Following the outbreak of WWI in August, Dr. Rankin enlisted with the CAMC in September. His responsibilities were transferred to Dr. H.C. Jamieson. Professor J.B. Collip was recruited for premedical teaching in September 1915, before the faculty lost Dr. H.H. Moshier, who was mobilized and went overseas with the 11th Field Ambulance in the spring of 1916 with 15 medical students. Dr. Tory temporarily left the University himself from November 1917 to July 1919, to organize and manage the Canadian Army's Khaki University in England.

From the outset, Dr. Tory sought and favored McGill graduates as the UofA's senior medical teachers and clinical professors. Premier Rutherford, President Tory, Doctors Rankin, Conn, Gray, W.A. Wilson, Ower, Shaw, Mewburn, Pope, Scott and Vango were all McGill graduates. Drs. Moshier, Revell, Jamieson and Collip were from the UofT. Collip would transfer to McGill as the Head of Biochemistry in 1928.

The first class of premedical students started in 1913. The next year the first female premedical student was accepted into the program. The war impacted the first class which dropped in size from 25 (1913) to 17 (1914), to 11 (1915). Despite problems with delayed equipment, instructor changes and enlistments, the well-chosen students and their program survived.[44] Only two went to McGill in 1916. Most joined the Army. Later they completed their last two years under affiliation agreements with McGill, or the UofT if they chose or were female students, because McGill would not accept them until 1919. Two students, P.L. Bachus and Murray Blair became gold medal winners in their McGill graduating classes.[45]



Alberta Dental Association, 1987

Dr. Tory designed the medical curriculum in April 1914 during a 75 minute meeting. The mandatory premedical courses were inorganic chemistry, physics, biology, zoology, bacteriology and French and German. In the first medical year of the program, students were taught anatomy, physiology, organic chemistry, biochemistry, pharmacy and matera medical. In the second year they were taught more anatomy, physiology, physiological/chemistry, bacteriology, pathology, clinical medicine, surgery and pharmacology.[46]

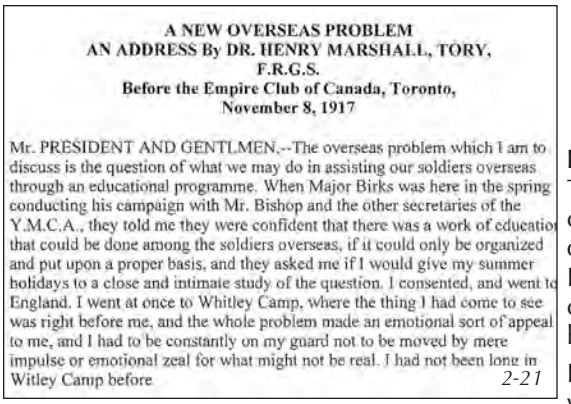
The curriculum was modeled after the Model Medical Curriculum prepared by 100 leading educators in Canada and the United States. It

44. Moorish, Walter "My Life Story." Sixty-four page manuscript deposited in the Glenbow and Provincial Archives in 1963. Dr. Moorish was in the first premedical class of 1913. He was the top student in the class (1916) and received a $100 scholarship, although getting it from Dr. Tory required some persistence. The story indicates the depth of knowledge Dr. Tory had about each medical student, and how he used it. Moorish was one of two UofA students who continued their studies at McGill and graduated in 1918, then he joined the Navy.

45. Revell, Daniel G. "The Medical Faculty - University of Alberta", CACHB 13(4): 65-75, February 1949. Confirmed in the Medical Alumni Bulletin, #2, page 4, November 24, 1943, UAA.

46. Scott, John W. *The History of the Faculty of Medicine of the University of Alberta 1913-1963*, pages 5-6, UofA 1963.

was brought to Edmonton by Dr. Revell when he came in 1907. It incorporated the Flexner supported curriculum of two years of basic medical training and two years of clinical training. With the takeover of the Strathcona Hospital in 1916 by the Military Hospitals Commission, clinical teaching was moved to the Royal Alexandra Hospital. It was taught by Drs. Jamieson, Wilson, Gray, Conn, Hall and several other part-timers.



A NEW OVERSEAS PROBLEM
AN ADDRESS By DR. HENRY MARSHALL, TORY, F.R.G.S.
Before the Empire Club of Canada, Toronto, November 8, 1917

Mr. PRESIDENT AND GENTLMEN.--The overseas problem which I am to discuss is the question of what we may do in assisting our soldiers overseas through an educational programme. When Major Birks was here in the spring conducting his campaign with Mr. Bishop and the other secretaries of the Y.M.C.A., they told me they were confident that there was a work of educatio that could be done among the soldiers overseas, if it could only be organized and put upon a proper basis, and they asked me if I would give my summer holidays to a close and intimate study of the question. I consented, and went to England. I went at once to Whitley Camp, where the thing I had come to see was right before me, and the whole problem made an emotional sort of appeal to me, and I had to be constantly on my guard not to be moved by mere impulse or emotional zeal for what might not be real. I had not been long in Witley Camp before

2-21

Dr. Tory's address to the Empire Club, Toronto, Nov. 8, 1917

The second health science school (Pharmacy) was approved by the Senate in 1914 as a one-year program. It began in 1915 under Dr. Moshier. After he went overseas in 1916 his medical courses were given by the newly arrived Professor J.B. Collip. The pharmacy courses were expanded into a two year program including an apprenticeship, and transferred to the Arts and Science Faculty under Professor H.H. Gaetz in 1917.

In 1916 Dr. Tory recommended the Senate approve the establishment of a Dental department as a sub-faculty within Medicine. The first class of dental students took two years of basic medical science courses starting in 1918, in common with the medical students.[47] The final two dental years were usually taken at UofT.

In 1922, the dental program was extended to five years. The first DDS graduates convocated in 1927.

2-22

Lt. Col. H.M. Tory. Commanding Officer, Khaki University, WWI 1917-1919

Khaki University (1917-1919): In 1916 Dr. Tory wrote a report to the YMCA voicing his concern over the under-met educational needs of the soldiers during the war.[48] In July 1917 He was asked to survey the educational courses the YMCA had already given to three hundred thousand soldiers in England.

Dr. Tory proposed a University be established within the Armed Services. His plan was accepted, and enthusiastically received when it was presented to the Empire Club of Canada on November 18, 1917, on his way overseas as Lt. Col. H.M. Tory.[49] He recommended one plan for the soldiers stationed in England and France, and one for university-destined soldiers during the demobilization period after the war. His proposal for physicians included sharing medical knowledge learned during the war, teaching current medical practices and

2-23

UofA Medical School, opened 1921

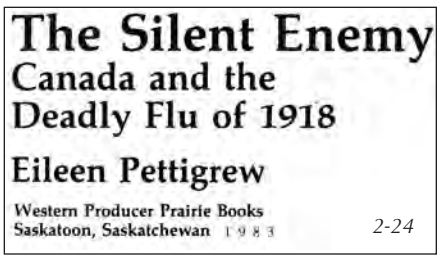
47. MacLean, H.R. *History of Dentistry in Alberta 1880-1980*, pages 123-133, ADA, 1987. The first (1918) class of three students completed their last two years of training at the UofT. There was no pre-dental year until 1922. A Dominion Dental Council was established in 1902. National Dental Council Licentiates were eligible for registration in Alberta, as they were for medicine after 1913.

48. Johns, Walter H. "A History of the University of Alberta", pages 61-68, UAP, 1981.

49. Tory, Henry Marshall "A New Overseas Problem", presented to the Empire Club of Canada, Toronto, November 8, 1917, in the Empire Club of Canada Speeches 1917-1918, pages 14-24. Before his appointment Dr. Tory had been private in the UofA's reserve militia and regularly attended drills.

bringing general practitioners up to date.[50] One consultant who advised Dr. Tory on the medical courses and texts to use was Sir William Osler.[51]

Back in Canada, $500,000 was raised by the YMCA to organize, administer and teach Khaki University students. Reorganized in the summer of 1918, 8-9,000 men signed up for year long courses. Four or five hundred went to universities in Edinburgh, Oxford, Cambridge and London, thus saving a full year of Canadian university training. Two thousand more took approved university level courses. Other British Empire countries and the United States followed the Canadian lead.[52]



Many physicians who had the time during the war, or had their repatriation to Canada delayed, took the opportunity to register or audit courses at medical schools in Britain. Drs. R. Parsons, J.W. Scott and M.A.R. Young were three participants from Alberta. Dr. Parsons secured a British Fellowship in Surgery in the process.

The Pivotal Period (1919-1923): Dr. Tory returned to Canada in July 1919. Dr. Rankin followed in October, at the tail end of the repatriation program. Physicians were commonly the last to return because of the large number of disabled soldiers who were still in hospitals in Britain.

The surge of returning veterans wanting further education, overloaded all Canadian universities. Back at the UofA there was an additional concern over the quality of the medical program. In 1918 a representative of the Education Committee of the American Medical Association visited the school. A year later it was formally assessed. The critical report was delivered in May 1920. Tory objected to many of the recommendations and replied to it vigorously, as much had been accomplished between the date of the assessment and the receipt of the report, including the commissioning of a new medical school.[53]

Although it was tough on Dr. Tory to be doing two jobs 8,000 miles apart for almost two years in England, he was already preparing for his return. Dr. Tory and Dr. Rankin had been looking for a clinically qualified Dean while in Europe.[54] They didn't find one at the salary that was being offered, so Dr. Tory offered the post to Dr. Rankin. He became the first Dean of Medicine in May 1920. By then Dr. Rankin had earned a well-deserved reputation for his wartime service and medical research.[55]

With Dr. Tory's approval, acting UofA President W.A.R Kerr had begun discussing the next building on the UofA campus with the government as early as 1918.[56] It was to house the health science programs. The 1918/1919 Spanish flu epidemic and the delayed doctor return exacerbated the physician shortage. Further, many doctors and healthcare staff became sick themselves. The virulence of the virus appeared to increase as it moved across Canada to Alberta, with 3,800 of the estimated 40,000 Canadian deaths, occurring in a province which had 6% of Canada's population.

Aerial view of the UofA campus, circa 1921

50. Corbett, Edward A. *Henry Marshall Tory*, pages 141-142.
51. Corbett, Edward A. *Henry Marshall Tory*, pages 144-145.
52. Corbett, Edward A. *Henry Marshall Tory*, pages 138-156. For more on the role and impact of the Khaki University on the UofA, see Walter Johns' *A History of the University of Alberta*, 1908-1969, pages 61-68.
53. Corbet, Elise A. *Frontiers of Medicine. A history of medical education and research at the University of Alberta*, pages 22-23, UAP, 1990. Tory's reply was summarized in R.A. Macbeth's *The Department of Surgery of the University of Alberta*, pages 12-13, Department of Surgery, 2009.
54. Tory, H. Marshall As quoted in Walter John's *A History of the University of Alberta*, page 74.
55. Lampard, Robert See the Dr. Allan Coats Rankin profile.

As occurred in WWII, Alberta had one of the highest doctor (over 30%), and soldier (over 5%) enlistment rates. Many three year graduates completed their MDs elsewhere and did not return, leading the Legislature to pass a resolution in 1919 requesting that clinical instruction and the granting of MDs occur in Alberta.[57]

2-26

UofA Medical class of 1915

Fortuitously the government was in need of postwar public works projects. On his return from England Tory completed the negotiations and secured funding approval for the new medical building by October 1919. It was built in 1920/21 at a cost of more than $1 million.

After Dr. Tory secured conditional grant approval from the Rockefeller Foundation in 1920, he asked the Foundation if the Faculty could receive the interest on the grant, or $25,000/year, to upgrade the clinical skills of the teaching staff.[58] The RF agreed.[59] Dr. Rankin then approached Dr. Tory and asked him to send Professor J.B. Collip to Toronto, New York and London for 18 months on a Rockefeller Traveling Fellowship. Dr. Tory agreed. The rest is history. While in Toronto, Collip isolated and concentrated the endocrine hormone now known as insulin.[60]

Dr. Tory used more of the RF money to retain three full-time clinical department heads, Drs. Frank Mewburn (Surgery), Edgerton Pope (Medicine) and L.C. Conn (Obstetrics and Gynecology) in 1922/23. All were McGill men. When the University re-acquired the Strathcona, renamed the University Hospital, in October 1922, Drs. Mewburn and Jamieson were appointed as original members of the UAH's Medical Advisory Committee.

By 1921 new clouds were gathering on Alberta's political scene. Disaffected by the mainline (Liberal, Conservative) parties, farmers in the province formed the United Farmers of Alberta (UFA) in 1909, and launched it as a political party in 1919. The UFA replaced the 15 year old Liberal party in the election of 1921. There was a mini-recession that year. Selected cost-cutting measures were introduced by the new government. Fortunately interest from the RF grant buffered any major government cutbacks to the faculty budget, and allowed Tory and Rankin to proceed with implementing the four year MD program.

The Canadian
Medical Association Journal

Vol. XVI TORONTO, NOVEMBER, 1926 No. 11

An Address
ON
THE UNIVERSITY'S FUNCTION IN MEDICINE*

By Henry M. Tory, LL.D.

President of the University of Alberta, Edmonton

I APPRECIATE the honour you have done me in asking me to speak on this occasion and on the suggested topic. I assume the reason is that your secretary was aware of the fact that I have just recently come through the experience of developing a university medical school, and knowing that I held very definite views on the suggested topic desired to give me an opportunity of expressing them to the conference.

It is no reflection upon medical science to say that like almost every other science or combination of sciences it had its beginning in the mystic-magic period of human history. It is perhaps not easy for us to realize to-day that just as the modern chemist is the natural successor of the old alchemist, the modern doctor of divinity, of the priesthood of the ancient world, so the modern doctor of medicine is the natural successor of the ancient medicine man with his magic and his charms.

The truth is that most of our impatience with the practice and beliefs of the past ages is due to our inability to visualize a world in which men were wholly or almost wholly ur

2-27

* Reprinted from The Proceedings, Congress on Medical Education, Licensure, Public Health and Hospitals, Chicago, February 15, 16, 17 and 18, 1926.

CMAJ 26(11): 1303-1305, 1926

To match the two premedical year requirements of McGill and Toronto, the medical course was extended from five to six years in 1920. Senior matriculation became the mini-

56. Tory, H. Marshall — As quoted in Walter John's *A History of the University of Alberta*, pages 74, 76.

57. Tory, H. Marshall — "A Message from Dr. Tory" in the Alberta Medical Alumni Bulletin, #1, pages 1, 4, May 8, 1942.

58. Fedunkiw, Marianne — "The University of Alberta and the Rockefeller Foundation. Wooing the Rockefellers", in *Alberta's Medical* History, pages 545-557.

59. Tory, Henry Marshall — Report of the Board of the University of Alberta. In addition to the grant the UofA received annual installments, paid quarterly, from the RF from 1920-1924. They totaled $100,000. At the time the salary cost for the Faculty of Medicine was $47,800 (1923). Income from student fees was $25,000 (1926). The RF interest income and student fee income covered most of the faculty salaries, until at least 1936, as noted by Dr. Rankin.

60. Lampard, Robert — "Dr. James Bertram Collip" in *Alberta's Medical History*, pages 311-323.

The 84 bed Soldiers wing added in 1922

mum academic qualification for university entrance and application to the medical school. The first four year MD class was accepted in 1921.[61] The CPSA reviewed the faculty proposal and said they expected standards for admission and examination for the proposed MD program to remain as high as anywhere else. The first class started just as the new medical school opened in September/October 1921.

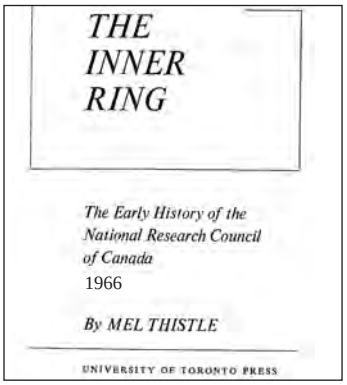
In 1920 the federal government decided to retain the Strathcona Hospital for two more years or until 1922.[62] Edmonton was so short of beds, the senior government lent the city $200,000 to build the east or veterans' wing onto the Royal Alex. Everything was completed in time to begin the last two years of clinical teaching for the first degree class in 1923. With the conditions met, the Rockefeller grant was released in December 1923.

In the Strathcona reacquisition agreement the University paid $150,000 to the City for the $300,000 (plus $50,000 for equipment) hospital. The city in turn repaid the federal government. In preparation, the university built the 84 bed Soldiers' Wing for the Federal and Civic Governments. In a repeat assessment, the University of Alberta Hospital (UAH) and the medical school received a Class A rating from the American Medical Association (1922).

In the summer of 1923 Professor Collip convinced Dr. John W. Scott to come to the UAH and assist him with his teaching.[63] It was a career changing move for Scott, who 24 years later would become the third UofA Dean of Medicine. In October of 1923, the UFA government appointed Hon. George Hoadley as the Minister of Health. He would remain the Health Minister for the next 12 years and would significantly impact medicine in Alberta and Canada.[64]

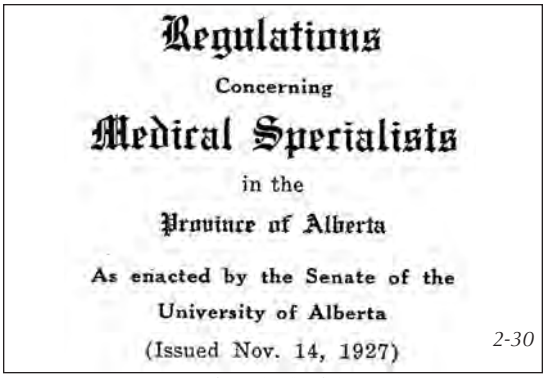
In 1924 the American College of Surgeons accreditor Dr. Malcolm MacEachern assessed the UAH. He deemed it the best hospital west of Toronto. An exuberant Tory was ready to launch his next career.

The National Research Council (1923-1935): Having gained experience starting the Alberta Research Council in 1921, Dr. Tory accepted a part-time appointment to the National Research Council (NRC) Board in 1923. By the end of the year he had been promoted from Honourary Chairman to Chairman and by 1926 was its President.[65] Tory took with him the Alberta Research Council concept of having government fund, targeted research projects, starting with coal and the tarsands.[66] It



2-29

61. Rankin, A.C. — As quoted in Walter Johns' *A History of the University of Alberta*, page 84. The class could either take their last two years at McGill or UofT, or stay at the UofA.
62. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, pages 60-63, UAH, 1986. Further details are provided in the 1930 annual report of the UofA Boards, and the Medical Alumni Bulletin, #3, page 2, December 30, 1944.
63. Lampard, Robert — "Dr. James Bertram Collip" in *Alberta's Medical History*, pages 317-318.
64. Lampard, Robert — "UFA Healthcare and the Hons. George Hoadley, Irene Parlby and W.W. Cross" in *Alberta's Medical History*, pages 558-570.
65. Thistle, Mel — *The Inner Ring. The Early History of the National Research Council*, pages 123-190, UofT, 1966 and E.A. Corbett's *Henry Marshall Tory*, pages 157-184.
66. Johns, Walter H. — The Research Council of Alberta was originally known as the Scientific and Industrial Council of Alberta and later as the Alberta Research Council as referenced in *A History of the University of Alberta 1908-1969*, pages 41, 82-84, 88. Corroborated by E.A. Corbett in *Henry Marshall Tory*, pages 131, 161. The Research Council of Alberta hired K.A. Clark in 1921 who worked for the next decade on projects funded by the province of Alberta. See *Oil Sands Scientist. The letters of Karl A. Clark*, pages 12-38, UAP, 1989.


Regulations
Concerning
Medical Specialists
in the
Province of Alberta
As enacted by the Senate of the
University of Alberta
(Issued Nov. 14, 1927)
2-30

was an extension of his belief that "the university must function… as the home of research."[67]

The NRC presidency became a full-time one for Dr. Tory (1928-1936), after he reached the age of retirement at the UofA. His term would only ended when Prime Minister Bennett refused to reappoint him in 1935, a return to the battle Tory and Bennett fought over the UofA in 1910. Bennett offered Tory a knighthood, but Dr. Tory refused it. Ernest Macmillan and Dr. F.G. Banting accepted the offer and were the last Canadians to be so honored.[68] The NRC would form a separate MRC subcommittee three years later, headed by Dr. Banting (1938).

The First Medical Specialists in Canada (1926): The last decision Dr. Tory made that significantly affected Alberta's and Canada's medical profession came in 1926. The re-elected UFA government remained concerned about the minimum qualifications of physicians who were practicing surgery and advertising themselves as qualified surgeons.

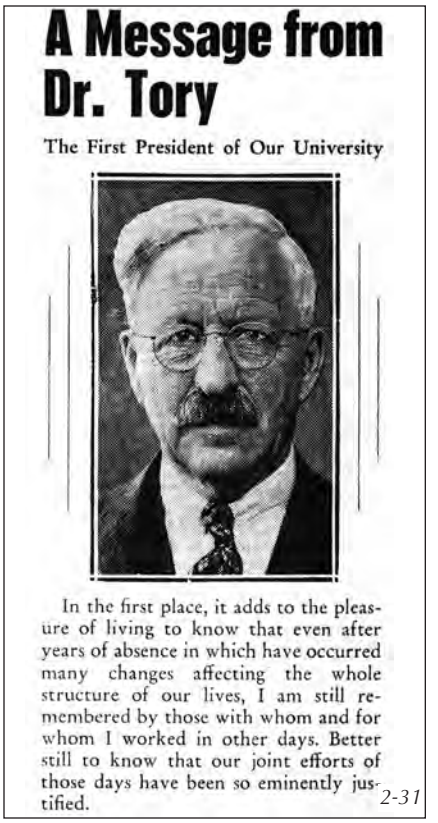
Dr. Tory offered to have the university create a credential assessment system, using the Faculty of Medicine as the assessor. That responsibility was consistent with Dr. Tory's philosophy that universities should have "the power to conduct examinations for the practice of medicine", including examinations "for those who are permitted to appear before the public as specialists."[69] The program was in place by 1926 and lasted until 1944. It would be one stimulus for the CMA to form the Royal College of Physicians and Surgeons in 1929.

Dr. Tory continued his illustrious career after his term with the NRC. In 1938 he became the President of the Royal Society of Canada (1939). Three years later at age 78 he established another university, Carleton College in Ottawa, and remained its first President from 1942-1945, for:

"He seemed somehow to belong to the place where things hadn't begun and where his restless spirit could lose itself. And he had a way with him that made you want to go along and see him do it."[70]

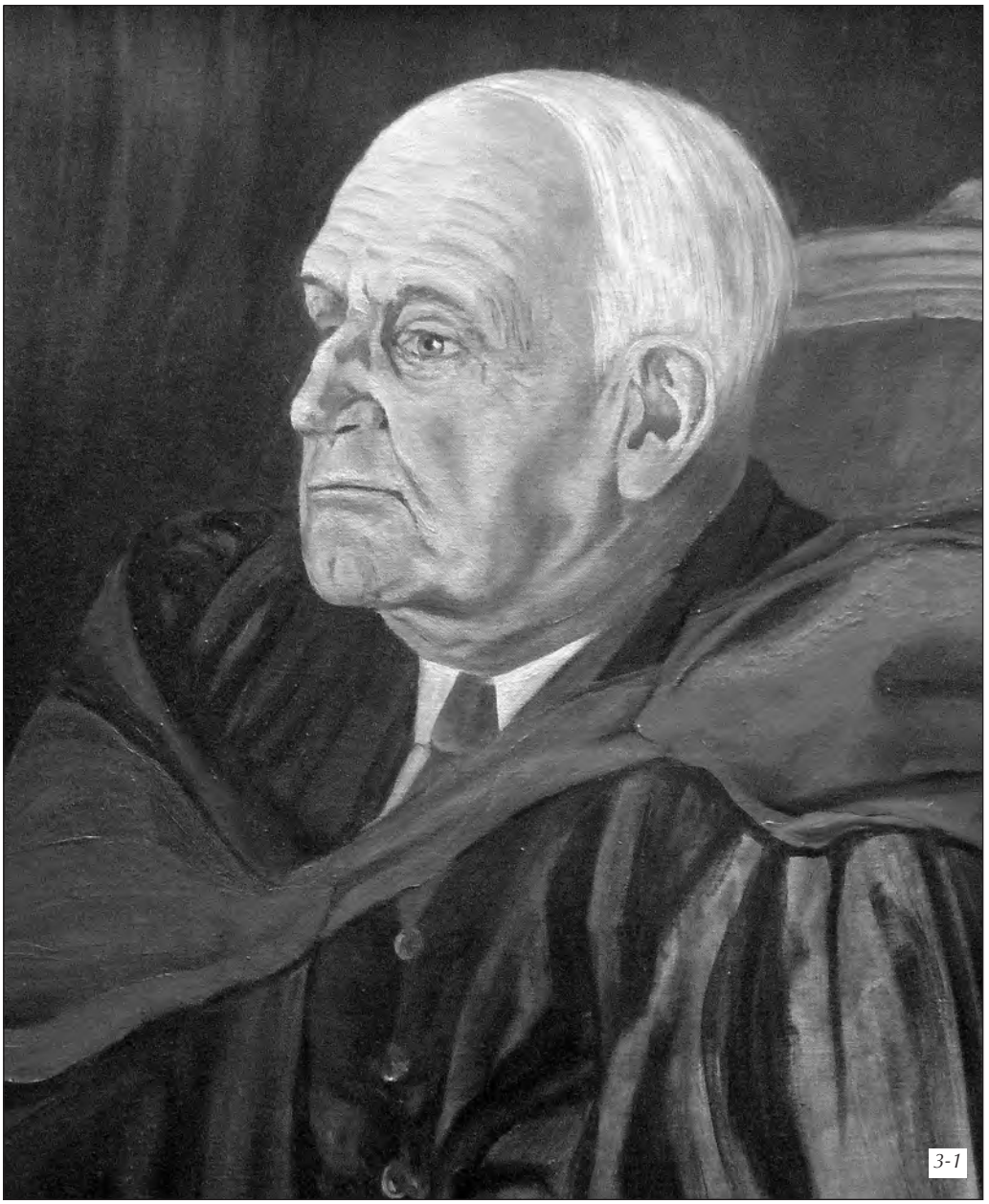
Dr. Tory died on February 6, 1947, but not before donating his retirement home in Guysborough, Nova Scotia as a hospital. Dr. Tory's brothers James and John became successful businessmen. Tory also had three sisters Martha Ellen, Sarah Jane and Elizabeth Ann. Dr. and Mrs. Tory had no children.

Keywords: McGill pre1907, UofA President, Medical Faculty Administrator 1913-1920, Provincial Laboratory, Rockefeller Grant, Khaki University, Full MD program (1921), Specialist Diplomas, National Research Council


A Message from Dr. Tory
The First President of Our University
In the first place, it adds to the pleasure of living to know that even after years of absence in which have occurred many changes affecting the whole structure of our lives, I am still remembered by those with whom and for whom I worked in other days. Better still to know that our joint efforts of those days have been so eminently justified.
2-31

Medical Alumni Bulletin # 1, 1942. The last communication received from Dr. Tory

67. Tory, H.M. "The University's Function in Medicine", page 1304.
68. Corbett, Edward A. *Henry Marshall Tory*, pages 176-180.
69. Tory, H.M. "The University's Function in Medicine", page 1305.
70. Broadus, E.K. As quoted in Barbara Cormack's *Perennials and Politics. The Life Story of the Hon. Irene Parlby, LLD*, page 66, Professional Printing, c1968.



Dr. Allan Coats Rankin, CMG, MD, MRCS, DPH, FRCPC
1877-1959

Dr. Allan Coats Rankin, CMG, MD, MRCS, DPH, FRCPC 1877-1959

"His thorough understanding of the decisions necessary for survival in the competitive university and political world's were repeatedly challenged."[1]

Introduction: Allan Coats Rankin was born and raised in Montreal, but his Canadian roots went back much further - to the late 1700s. On his maternal side, his family were United Empire Loyalists, like those of UofA President H.M. Tory and Dean J.J. Ower.

Allan Coats Rankin, as a youth

Dr. Rankin studied at McGill and graduated in Medicine in 1904, a year before Alberta became a province. He became part of an exodus of McGill MDs to Alberta that began in 1902. McGill graduates would have a significant impact on medicine in Alberta.

Like Dr. E.G. Mason who graduated two years before him, Dr. Rankin responded to the call of his country. He served with distinction in the Canadian Army Medical Corps (CAMC) in both World Wars, receiving the highest award of any Alberta physician in the medical services during WWI - a CMG. His contributions to the war effort led to the identification and eventual treatment of a new infectious disease he termed "trench fever". Dr. Rankin's medical research during the war was a continuation of the curiosity he had demonstrated in clinical medicine in Montreal and in Siam (Thailand).

Dr. Rankin's life in medicine appeared initially directed towards Surgery. He earned his MRCS in England in 1906. Returning to Montreal, his focus switched to public health, where he earned his DPH from McGill in 1909. His quiet, friendly manner obscured a man of vision, who could meet challenges, deflect the fiscal pressures caused by gyrating economic cycles, protect and sustain his faculty, manage the Provincial Laboratory (1914-1945), and remain the longest tenured Dean of Medicine at the UofA (1920-1945).

Dr. Rankin led the UofA faculty through its formative and most tumultuous years, never losing his composure, nor the vision of President Tory - to successfully extend the medical program to a full MD-granting one. As Dean for 25 years and a member of the Faculty for 32 years, he set a record of distinction for his successors to emulate.

Youth to MD: Allan Coats Rankin was born in Montreal. His mother Louisa Sophia Campbell Wurtele was a descendent of the Campbell family which, had longstanding roots in Quebec.[2] She married John Rankin of Montreal in 1861. He had come to Quebec from Scotland in 1854. Rankin was the representative of the J&P Coats thread manufacturers from Paisley, Scotland. He became a successful Montreal merchant and businessman. The Rankin's had ten children. Allan was the eighth member of the family.

On December 26, 1878, the year after Allan was born, Mrs. Rankin acquired all the shares of the Campbell seigneury, which had been in her family's hands since 1835, and in Scottish hands since 1764, five years after Wolfe de-

Le Manoir, Seigneury at Pointe Seche, circa 2000

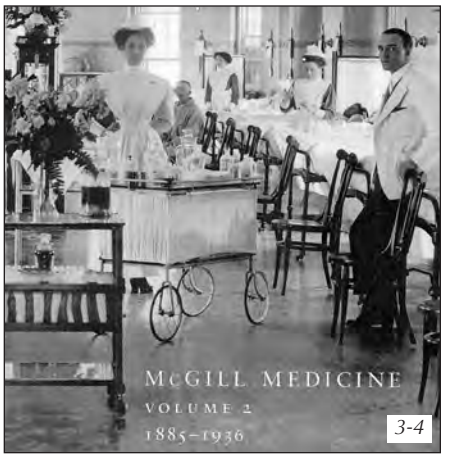
1. Rankin, A.C Obituary in the CMAJ 81: 57-58, 1959.
2. Whitney, Hugh Preliminary manuscript entitled *The Dean, A History of Allan Coats Rankin*. First Dean of the Faculty of Medicine, University of Alberta. 200 page manuscript in the possession of the author. Due for publication in 2011.

feated Montcalm on the Plains of Abraham.[3] The seigneury was founded in 1672, 100 miles downstream from Quebec City on the south side of the St. Lawrence River. It had six miles of riverfront, was eight miles deep and had 30,000 acres of virgin timber on it. The timbers were said to have been used to build the famous Royal William in Quebec City in 1831. The Royal William was the first vessel to cross the Atlantic wholly by steam power in 1832.[4]

Mrs. Rankin Sr. died at age 98 on January 31, 1936.[5] She bequeathed the seigneury to Allan and Ernest. Seigneury rights had been discontinued in 1854 and were annulled by the Canadian government in 1941, although payments continued to be made into the 1980s. The manor house remains on the property.

Allan Rankin went to a private school (1884-1892) and the Montreal High School (1892-1894). His activities from 1894-1900 remain uncertain except he completed his premedical studies presumably at McGill, before being accepted into the Faculty of Medicine (1900-1904). Rankin referred to his McGill teachers as the "greats" in Canadian Medicine and Surgery. They included Drs. Thomas Roddick (Dean, 1901-1907), John McCrae, George Ross, James Bell, H.A. Lafleur, H.S. Birkett, Francis Shepherd, Edward Archibald, George Adami, A.D. Blackader, Maude Abbott, Charles Martin, Andrew MacPhail, to acknowledge some of the most illustrious.[6]

Jeffrey Hale Hospital, Quebec City, circa 1907



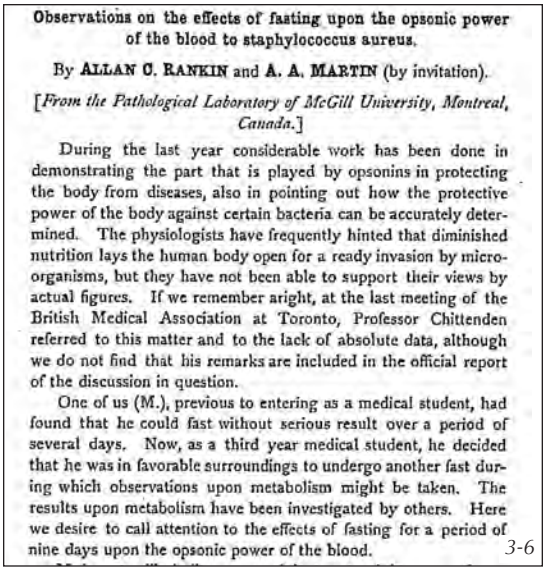
J. Hanaway, R. Cruess, J. Danagh
McGill Medicine v. 2, 1884-1936, 2006

Dr. Rankin was awarded an MD CM in 1904. He interned at the Montreal General Hospital (1904), and completed a residency at the Jeffrey Hale Hospital in Quebec City (1904/05), before going to England.

The McGill exodus to Alberta had already begun in 1902. Five members of that class eventually came to Calgary.[7] Dr. Rankin's route to Edmonton, much like another Edmonton bound McGill graduate Dr. W.A. Wilson, was circuitous and took almost ten years.

Before he left Quebec in 1905 Dr. Rankin joined the newly formed 7th Field Ambulance militia unit in Quebec City. On his return he transferred to the McGill based 5th Field Ambulance in 1908. Dr. Rankin probably met J.J. Ower, the future second Dean of Medicine,

3. Whitney, Hugh — *The Dean. A History of Allan Coats Rankin*. Manuscript in possession of the author, pages 21-22, 26. The Seigneury was known as the Sergneurice of L'Islet du Portage at Pointe Seche and was bought by John Sexton Campbell, the uncle of Louisa Rankin in 1835. One member of the Rankin family contributed land on the Plains of Abram to create the National Park that is now located there.
4. Wallace, Frederick W. — *In the Wake of the Wind-Ships*, pages 78-82, 265, Sully, 1927. Whitney notes that Samual Cunard was one of the original investors, in his manuscript, page 26.
5. Ower, John J. — Ower Diary, February 1, 1936.
6. Hanaway, Joseph, Cruess, Richard, Darragh, James — *McGill Medicine, 1885-1936*, Volume 2, pages 25-26, 37-70, 212-237, McGill-Queens, 2006. Dr. William Osler left McGill in 1884, to become the Professor and Head of Medicine at the Philadelphia Medical School. For more on the prominent McGill physicians see E.H. Bensley's McGill *Medical Illuminaries*, 181 pages, Osler Library studies in the History of Medicine, November 1, 1990.
7. Johnson, George R. — Letter to "Fred", December 6, 1939 giving brief biographies of five members of the McGill class of 1902 who went to Calgary. The sixth one presumably was Fred. Dr. G.R. Johnson was the longstanding Registrar of the College of Physicians and Surgeons of Alberta (1922-1945). Deposited in the Johnson Fonds M6W file 6, Glenbow, Calgary.



Observations on the effects of fasting upon the opsonic power of the blood to staphylococcus aureus.

By **ALLAN C. RANKIN** and **A. A. MARTIN** (by invitation).

[*From the Pathological Laboratory of McGill University, Montreal, Canada.*]

During the last year considerable work has been done in demonstrating the part that is played by opsonins in protecting the body from diseases, also in pointing out how the protective power of the body against certain bacteria can be accurately determined. The physiologists have frequently hinted that diminished nutrition lays the human body open for a ready invasion by micro-organisms, but they have not been able to support their views by actual figures. If we remember aright, at the last meeting of the British Medical Association at Toronto, Professor Chittenden referred to this matter and to the lack of absolute data, although we do not find that his remarks are included in the official report of the discussion in question.

One of us (M.), previous to entering as a medical student, had found that he could fast without serious result over a period of several days. Now, as a third year medical student, he decided that he was in favorable surroundings to undergo another fast during which observations upon metabolism might be taken. The results upon metabolism have been investigated by others. Here we desire to call attention to the effects of fasting for a period of nine days upon the opsonic power of the blood. *3-6*

Proceedings of the Society for Experimental Biology and Medicine 4:81-83, 1907

when Ower joined the 5th Field Ambulance in 1908. Military medicine would significantly influence their lives.

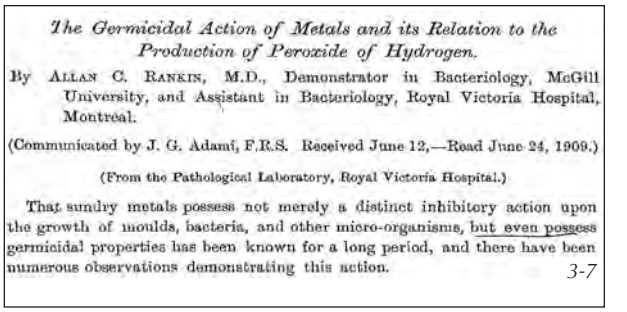
Postgraduate Studies: Dr. Rankin's quest for more medical knowledge took him to England. There he earned an LRCP and an MRCS.[8] Back in Montreal by December 1906, Dr. Rankin was appointed a Demonstrator in Bacteriology at McGill and an Associate in Bacteriology in the Pathology Laboratory at the Royal Victoria Hospital (RVH).[9] He came under the direction of the well-known pathologist and author Dr. George Adami.[10]

Dr. Rankin's first authored publication in the medical literature came when Dr. Adami asked him to study a case of voluntary starvation in a third year medical student.[11] Dr. Rankin and the student studied the effects of a nine day fast, which lasted from December 27, 1906 to January 5, 1907, on the opsonic power of the blood. It was thought to be the antibacterial power of the blood to promote phagocytosis. The phagocytic index dropped from 1.98 to 0.7.[12] The student lost 14 pounds. Dr. Rankin concluded that natural opsonins existed in the body and the phagocytic index diminished with starvation.[13]

Dr. Rankin extended his research to pneumonia. In 22 cases he found that the phagocytic index of an attenuated culture of pneumococcus peaked shortly after the pneumonia crisis. He hypothesized that during the crisis there was a change in the patient's serum and in the nature of the pneumococcal organism.

Dr. Rankin then studied the effects of ether on the opsonic power of the blood, concluding it had no effect against staph aureus, E. coli or streptococcal pneumonae.[14] Rankin's research consultant was the Montreal physician-teacher Dr. Oskar Klotz.

Dr. Rankin's next research project compared the skin reactions from tuberculin injections, using the common cutaneous pricking method



The Germicidal Action of Metals and its Relation to the Production of Peroxide of Hydrogen.

By ALLAN C. RANKIN, M.D., Demonstrator in Bacteriology, McGill University, and Assistant in Bacteriology, Royal Victoria Hospital, Montreal.

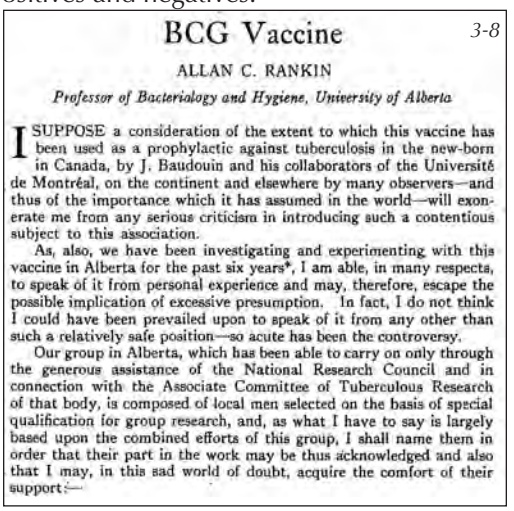
(Communicated by J. G. Adami, F.R.S. Received June 12,—Read June 24, 1909.)

(From the Pathological Laboratory, Royal Victoria Hospital.)

That sundry metals possess not merely a distinct inhibitory action upon the growth of moulds, bacteria, and other micro-organisms, but even possess germicidal properties has been known for a long period, and there have been numerous observations demonstrating this action. *3-7*

8. Rankin, Allan C. — Dr. Rankin listed his MRCS degree in the second and third articles in his cv (attached). Dr. Rankin omitted any reference to his MRCS studies in his Record of Educational and Technical Qualifications (Officers), when he completed his Officers Declaration Paper, September 24, 1939.
9. Rankin, Allan C. — Recorded in "The Germicidal Action of Metals and its Relation to the Production of Peroxide of Hydrogen". Proceedings of the Royal Society of London, Series B, Biological Science 82(553): 78-87, January 14, 1910.
10. Hanaway, Joseph, Cruess, Richard, Darragh, James — *McGill Medicine*, Volume 2, pages 213-214. For more see Marie Adami's, *J. George Adami. A Memoir*, 179 pages, Constable & Co., 1930.
11. Rankin, Allan C., Martin, A.A. — "Observations on the effects of fasting upon the opsonic power of the blood towards staphylococcus aureus." Proceedings of the Society for Experimental Biology and Medicine 4: 81-83, 1906/07.
12. Meakins, John C. — "An Experimental Study of the Phagocytic Immunity Produced by Tuberculin", CMAJ 1(12): 1141-1153, December 1911.
13. Rankin, Allan C. Martin, A.A. — "Observations on the effects of fasting upon the opsonic power of the blood to staphylococcus aureus," Proceedings of the Society for Experimental Biology and Medicine 4: 81-83. Opsonins were any substances (immune globulins IgM, IgG) that bound to antigens and induce phagocytosis or absorption by macrophages or leukocytes.
14. Rankin, Allan C. — "The Effect of Anesthesia on the Opsonic Index." Montreal Medical Journal 37(1): 40-42, 1908.

with the less frequently used subcutaneous injection method. The results were published in 1909 through the Pathology department of the RVH.[15] He found that 47% of the 100 cases he studied had positive tuberculin reactions. The positive reactor rate using the easier-to-perform subcutaneous injection method, was close to the estimated incidence of contact with TB in Montreal, which according to Dr. John McCrae was 43.7%. There was a practical problem though, with the finding of 15% false positives and negatives.



BCG Vaccine 3-8

ALLAN C. RANKIN

Professor of Bacteriology and Hygiene, University of Alberta

I SUPPOSE a consideration of the extent to which this vaccine has been used as a prophylactic against tuberculosis in the new-born in Canada, by J. Baudouin and his collaborators of the Université de Montréal, on the continent and elsewhere by many observers—and thus of the importance which it has assumed in the world—will exonerate me from any serious criticism in introducing such a contentious subject to this association.

As, also, we have been investigating and experimenting with this vaccine in Alberta for the past six years*, I am able, in many respects, to speak of it from personal experience and may, therefore, escape the possible implication of excessive presumption. In fact, I do not think I could have been prevailed upon to speak of it from any other than such a relatively safe position—so acute has been the controversy.

Our group in Alberta, which has been able to carry on only through the generous assistance of the National Research Council and in connection with the Associate Committee of Tuberculous Research of that body, is composed of local men selected on the basis of special qualification for group research, and, as what I have to say is largely based upon the combined efforts of this group, I shall name them in order that their part in the work may be thus acknowledged and also that I may, in this sad world of doubt, acquire the comfort of their support:—

Canadian Journal of Research, 1929

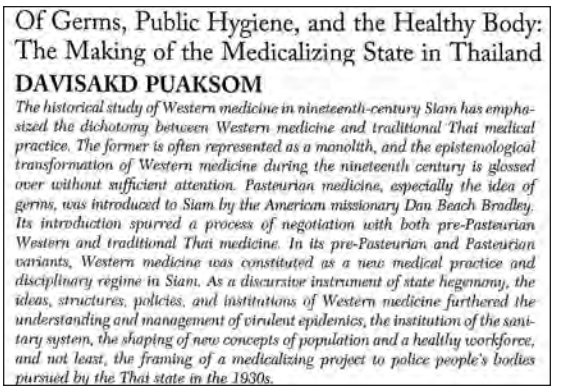
Dr. Rankin then studied the germicidal action of aluminum and zinc.[16] He immersed pure forms of both minerals in distilled water and tested the water for the production of hydrogen peroxide. Both minerals produced it. He noted zinc had some bactericidal action, even when there was no production of hydrogen peroxide. He also found the bactericidal action of zinc exceeded that of aluminum or copper, but required the presence of oxygen to be effective.

Dr. Rankin was always careful to narrowly interpret his findings and acknowledge the contributions of others who worked with him. In the article on zinc, aluminum and copper, he included French and German references raising the possibility that he was multi-linguistic. He did speak French and later published the Alberta TB Committee's preliminary BCG Research (1929) in French in the Annals of the Pasteur Institute.

Dr. Rankin's last RVH publication with Dr. Klotz, was a study of the use of the Agar plate culture medium for estimating the bacterial count, or degree of water contamination. It grew E. coli but only 22 of 62 bacterial strains found in human excreta. He concluded the media was unsatisfactory for the purpose proposed.[17]

In 1909 Dr. Rankin received his DPH from McGill at the age of 32. Before year-end he was on his way to Bangkok, Siam, as the Government Bacteriologist and the Director of the Public Health Laboratory.[18]

The Study of Beriberi in Siam (Thailand): Interest in public health in Siam began under King Chulalongkorn, the Monarch from 1868 to 1910. Time Magazine declared the King to be one of the 20 most influential Asians in the 19th century. The King encouraged Royal hospitals to be built, and presented medals and certificates to those who managed them. He started the first Royal hospital in 1886, set up the first medical school in 1889, established a



Of Germs, Public Hygiene, and the Healthy Body: The Making of the Medicalizing State in Thailand

DAVISAKD PUAKSOM

The historical study of Western medicine in nineteenth-century Siam has emphasized the dichotomy between Western medicine and traditional Thai medical practice. The former is often represented as a monolith, and the epistemological transformation of Western medicine during the nineteenth century is glossed over without sufficient attention. Pasteurian medicine, especially the idea of germs, was introduced to Siam by the American missionary Dan Beach Bradley. Its introduction spurred a process of negotiation with both pre-Pasteurian Western and traditional Thai medicine. In its pre-Pasteurian and Pasteurian variants, Western medicine was constituted as a new medical practice and disciplinary regime in Siam. As a discursive instrument of state hegemony, the ideas, structures, policies, and institutions of Western medicine furthered the understanding and management of virulent epidemics, the institution of the sanitary system, the shaping of new concepts of population and a healthy workforce, and not least, the framing of a medicalizing project to police people's bodies pursued by the Thai state in the 1930s.

Journal of Asian Studies 66(2): 311-344, May 2007 3-9

15. Rankin, Allan C. "The Von Piquet Tuberculin Reaction." Montreal Medical Journal 38: 666-670, October 1909. A comprehensive summary of 6 different methods to detect TB using injections of old Tuberculin, and the difficulties with each one of them, was outlined by Rankin's colleague in the Pathology Department and later during the War, Dr. J.C. Meakins. CMAJ 1(3): 223-231, March 1911.
16. Rankin, Allan C. "The Germicidal Action of Metals", pages 78-87.
17. Klotz, Oscar, Rankin, Allan C. "The Reaction of Various Bacteria upon Aesculin Agar", Journal of Infectious Diseases 7:67-72, Chicago, 1910. The article was received for publication October 6, 1909.
18. Puaksom, Davisakd Of Germs, Public Hygiene and the Healthy Body: the Making of the Medicalizing State in Thailand. The Journal of Asian Studies 66(2): 311-344, May 2007. The Public Health Laboratory opened in 1901 on the recommendation of Dr. Campbell Highet. It was of assistance in diagnosing the plague epidemic in Thailand in 1903/04. The Pasteur Institute was opened in Bangkok in 1913 to produce serum, and a Public Health Department was established in 1918.

branch of the Red Cross in 1893, and fostered European education in Siam, the genesis of the movie "The King and I". His children established a Memorial hospital in his name after his death in 1910. The hospital later became the primary teaching hospital in Thailand.[19]

In 1909 a paper entitled "The Etiology of Beriberi" in the Malayan States was published by Drs. H. Fraser and A.T. Stanton. The authors noted white Siam rice had a reduced fat component, and inferred it was of lower quality. They alleged it caused beriberi.[20] At the first far eastern Congress on Tropical Medicine on March 11, 1910 in Manila, the Principal Medical Officer of Health in Bangkok, Dr. Campbell Highet, gave a paper on the prevalence of beriberi in Siam.[21] He estimated there had been 3,000 deaths per year in military and health institutions alone, between 1900-1909.

From the Manila meeting came a resolution to "inform the governments of southeast Asia that beriberi was associated with the continuous consumption of white [polished] rice."[22] The Siam government called a meeting of the 16 European physicians practicing in Siam on August 15, 1910, and requested an investigation of the Fraser and Stanton allegations.

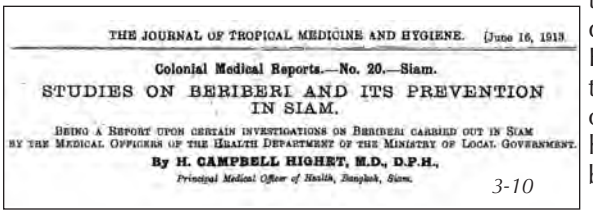
Dr. Rankin began the investigation immediately after the August meeting.[23] He sent rice samples from Hong Kong, Singapore, Saigon,


3-11

A Companion to the Most Noble Order of the Crown of Siam (4th class). Appointed in 1914.

Java and Siam to laboratories in Antwerp, Berne, Copenhagen, Washington and his own laboratory in Bangkok. The analyses were done on a double blind basis, with only an identification number given to each sample. In the 27 samples of rice from Siam, Saigon and Rangoon, Rankin found considerable variation in the fat and phosphorus content. When he resorted the results on the basis of the degree of milling or polishing, which separated the kernel from the outer shell, he found the reduction in fat and phosphorus related directly to the degree of milling of the rice. The results were likely shared in communiqué form but were not published until the summer of 1913.[24]

In his 1913 summation Dr. Highet concluded the Rankin findings differed from those of Fraser and Stanton. They were not based on the city or country of origin, rather on the degree of over-milling. Highet agreed with Fraser and Stanton that the phosphorus content of the rice could be used as an indicator of the extent to which milling and polishing had occurred, but concluded Siam rice had been wrongfully singled out and discredited.


THE JOURNAL OF TROPICAL MEDICINE AND HYGIENE. [June 16, 1913.

Colonial Medical Reports.—No. 20.—Siam.

STUDIES ON BERIBERI AND ITS PREVENTION IN SIAM.

Being a Report upon certain investigations on Beriberi carried out in Siam by the Medical Officers of the Health Department of the Ministry of Local Government.

By H. CAMPBELL HIGHET, M.D., D.P.H.,

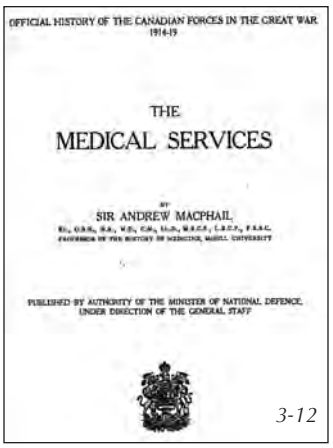
Principal Medical Officer of Health, Bangkok, Siam.

3-10

19. Charulukananan, Sombrat, Sueblinvong, Tada "King Chulalongkorn: Biography and his Activities in Medicine and Public Health." Journal of the Medical Association of Thailand 86 (Suppl 2): 5123-5128, 2003. The movie the King and I is not allowed to be shown in Thailand as the Thai's feel it depicts their country as medieval and poorly educated (personal communication, Hugh Whitney, March 4, 2009). Elizabeth Wickheim, Dr. Orr's daughter and Dr. Rankin's niece, recalled how Dr. Rankin and Anna would have lunch with the King. Personal Communication, August 2, 2009.
20. Fraser, H., Stanton, A.T. "An enquiry concerning the etiology of beri-beri." Studies from the Institute for Medical Research, Federated Malay States, Nos. 10, 11, 1909.
21. Highet, H. Campbell "Beriberi in Siam." Philippine Journal of Science 5B: 73-79. There were 22,670 cases with 1063 deaths in the public jails, army and navy, and the hospitals in Siam, from 1900-1910. The treatment was to send cases home, where they got better quickly. Steam-milled rice could be produced cheaper than hand-milled rice, after slavery was abolished in Siam in the 1890s.
22. Highet, H. Campbell "Studies of Beriberi and its Prevention in Siam." Colonial Medical Reports - No. 20 – Siam. The Journal of Tropical Medicine and Hygiene 16: 48-61, June 16, 1913 and printed serially in issues dated June 16, July 1, July 15, August 1 and August 15, 1913.
23. Highet, H. Campbell Dr. A.C. Rankin as quoted in "Studies of Beriberi", pages 56-58, July 15, 1913.
24. Highlet, H. Campbell "Studies on Beriberi", page 58. The beriberi experience in Siam was presented at the second Biennial Congress in Manila, January 20-27, 1912.

Highet, Rankin and their colleagues continued to research the relationship of milling to beriberi. The polished rice theory was tested in jails and asylums. In every case where beriberi occurred, supplementation with under-milled rice almost immediately reversed the clinical features of beriberi. When the rice that reversed the syndrome was tested, it was found to have over 0.4% phosphorus content. In one prison under-milled or less polished rice had been used for five years with no cases of beriberi.[25]

During Dr. Rankin's four years in Siam the death rate from beriberi varied from 4.6% of those diagnosed, to 26% in the Beriberi Hospital and 78-88% in the asylum. Ninety-one percent were males.


OFFICIAL HISTORY OF THE CANADIAN FORCES IN THE GREAT WAR 1914-19

THE

MEDICAL SERVICES

BY

SIR ANDREW MACPHAIL

PUBLISHED BY AUTHORITY OF THE MINISTER OF NATIONAL DEFENCE UNDER DIRECTION OF THE GENERAL STAFF

3-12

Sir Andrew MacPhail's WWI Medical History, Kings Printer, 1925

Although the Philippine government legislated the compulsory use of under-milled rice, eating it was resisted because of its musty smell. The rate of beriberi only started to drop in 1920, as it did in most southeast Asian countries. Dr. Rankin's research results contributed to solving the beriberi mystery as a nutritional deficiency and not an infection. For his research Dr. Rankin received the Companion to the Most Noble Order of the Crown of Siam (4th Class) from King Rama VI in 1914.[26]

Beriberi was later identified as a Thiamine or water soluble Vitamin B1 deficiency. It was isolated or crystallized in 1927. C. Eijkman and F. Hopkins were jointly awarded the Nobel Prize in 1929 for their identification of vitamins and the important role they played in the development of a normal body, through research done in 1886 and 1912 respectively.[27]

Wartime Services (1914-1919): By 1914 Dr. Rankin's work as the Director of the Public Health Laboratory had come to the attention of Dr. Tory, likely through Dr. Rankin's Montreal colleague Dr. James Fyshe, who had been in Siam since 1907. In 1913/14 Dr. Fyshe returned to Canada and became the medical superintendent of three Edmonton Hospitals including the Strathcona Hospital and Royal Alexandra Hospital.[28]

In 1914 Tory needed a replacement for Dr. D.G. Revell, who had accepted a transfer from his directorship of the Provincial Laboratory, to become the full-time UofA anatomy instructor.


3-13

Informal CAMC inspection, Dec 10, 1914 (LtoR) Capt. Geo. Shanks, Lt. Col. Murray MacLaren, Capt. Allan C. Rankin, Col. G. Carleton Jones, D.M.S., Bulford Manor, England

25. Highet, H. Campbell "Studies on Beriberi", pages 56-58.

26. Whitney, Hugh Personal Communication, October 24, 2008. Dr. Rankin's and his wife's war medals are being donated to the National War Museum. Dr. Rankin was affectionately called by some colleagues at the UofA as "The Count", because of his Siam medal.

27. Carpenter, Kenneth J. *Beriberi, White Rice and Vitamin B. A Disease, a Cause and a Cure*, pages 35-41, 98-111, University of California Press, 2000. The separate contributions of C. Eijkman (1886) and F. Hopkins (1912) on the cause of Beriberi and the concept of vitamins, were recognized when they shared in the Nobel prize in 1929. Lancet 352: 1868, December 5, 1988.

28. Whitney, Hugh Personal Communication, October 21, 2008. Dr. Rankin was a close friend of Dr. James Fyshe, another McGill graduate. The two physicians had been together in Siam (1909-1913). Fyshe had been the superintendent of the Montreal General Hospital before he went to Siam. In Edmonton he was the Medical Superintendent of three Hospitals (Strathcona, RAH, and (?) Edmonton General) in 1913/1914. He enlisted at the same time as Dr. Rankin, in September 1914 with the #1 Canadian General Hospital. Dr. Fyshe's grandmother was Anna Leonomens, who was popularized in the Hollywood movie Anna and the King of Siam.

Without ever having met Dr. Rankin, Dr. Tory appointed him as Dr. Revell's successor early in 1914. Dr. Rankin came to Edmonton via London, arriving in May 1914.[29] Shortly afterwards Tory was showing Rankin around the campus when they came across a field of turnips. Dr. Tory climbed over the fence, pulled up a turnip, wiped it clean with his handkerchief, and cut off a piece with his pocketknife. He offered it to Rankin to sample and "asked him if it were not the best turnip he had ever tasted."[30]

Dr. Revell was already at work building the anatomy lab on the third floor of the new Pembina Hall. It was a short distance from Alberta's Provincial Laboratory, which was located in the basement of the adjacent Athabasca Hall, having moved there from its original downtown Edmonton location (1907-1911), after it came under the authority of the university.

Dr. Rankin's appointments were several. He was the second Director of the Provincial Laboratory, the Professor of Bacteriology and Pathology at the University and the provincial Bacteriologist, with a salary of about


3-14

Lt. Col. George Nasmith, C.M.G.


ON THE FRINGE OF THE GREAT FIGHT

COLONEL GEORGE G. NASMITH, C.M.G.

McClelland and Stewart, Toronto, 1917 3-15

$4,000/year. It would be increased in the 1920s, with a $500/year supplement for his dean and teaching responsibilities.

When war was declared on August 4, 1914 Dr. Rankin applied for a leave of absence from the UofA to join the Canadian Army Medical Corps (CAMC). Once accepted, he left Edmonton, and Dr. Heber Jamieson was appointed his acting incumbent as the Director of the Provincial Laboratory. Dr. Jamieson also gave Dr. Rankin's university lectures.[31]

With the outbreak of hostilities, many Montreal based 5th Field Ambulance medical officers were mobilized on September 3, 1914, to form the core of the medical staff of the #1 Canadian General Hospital.[32] Rankin was in Valcartier, Quebec by September 4, 1914,[33] where he was joined by Dr. Fyshe. Both were former 5th Field Ambulance officers who joined colleagues from Montreal and New Brunswick.[34] The Hospital staff went overseas with 26 officers, 149 other ranks, as well as 100 nurses and 7,000 horses on October 3, 1914. The Provisional Commanding Officer was Major Roland Campbell, who had been the medical superintendent of the Montreal General Hospital for the previous two years. They camped in tents on the Salisbury Plains.

As soon as he arrived in England Captain Rankin and several of his colleagues were assigned to treat the meningococcal encephalitis outbreak in the Canadian troops.[35] On De-

29. Revell, Daniel G. "Early History of the Medical Faculty" in the Medical Alumni Bulletin, #2, pages 3, 4, November 24, 1943.
30. Newton, Robert "I passed this way", page 284, as quoted in Ellen Schroeck's *I was there*, page 48, UAP, 2006. Turnips are planted in May, not harvested then. Tory many have been on his annual vacation to Nova Scotia when Rankin arrived, and only toured the campus with him on his return.
31. Lampard, Robert "Dr. Heber Carss Jamieson" in *Alberta's Medical History, Young and Lusty and Fully of Life*, pages 277-287, 2008.
32. Cameron, Kenneth *History of #1 Canadian General Hospital 1914-1919*, page 12, Tribune Press, Sackville, N.B., 1938.
33. Rankin, Allan C. Canadian Attestation Paper. Canadian Over-seas Expeditionary Force, dated September 23, 1914. Dr. Rankin's Army Registration number was #20694. He had been an officer in the Reserves before being mobilized for Active Service. He was Commissioned as an officer on September 22, 1914.
34. Adami, J. George *The War Story of the CAMC 1914-1915*, page 278, Colour Ltd, 1918.
35. Adami, J. George *The War Story of the CAMC 1914-1915*, pages 57-78, 278, 283-285. Confirmed in the AMA/CPSA Proceedings of September 14-17, 1927, page 17. Also see the History of #1 Canadian General Hospital, pages 84, 95-96.

cember 16 a laboratory was established at nearby Bulford Manor under Dr. Rankin. Ten days later on December 23, newly arrived Dr. J.J. Ower was assigned to help Dr. Rankin's illness-depleted staff. There were 327 admissions to the hospital in two weeks. Of the 50 meningococcal cases that were diagnosed, 36 died. The medical staff treated the meningococcal fever cases with serum injections, and the carriers by isolating them.[36]

The laboratory staff's next challenge was to vaccinate suspected diphtheria cases.[37] Then, in preparation for their transfer to France, all the Salisbury stationed Canadian troops were inoculated against typhoid fever, raising the immunization rate from 65 to 97%.[38]

On September 10, 1914, the CAMC formed the No. 5 Canadian Mobile Laboratory in England. Initially called the Canadian Army Hydrological Corps and Advisor on Sanitation, the unit was moved to France on March 21, 1915. With the move the laboratory management was taken over by Captains A.C. Rankin, A.W.M. Ellis and B. Tytler.[39] In addition to the three officers, there were three NCOs and a support staff of seven.[40] The mobile laboratory was responsible for swabbing, culturing, staining and testing for infectious diseases, examining surgical tissues, performing autopsies, assisting in the diagnosis of fatal diseases, determining whether or not there were any communicable infections present, investigating and treating suspected infectious outbreaks and ensuring there was a clean water supply for the troops.[41]

Introduction to the risks of war came quickly for Dr. Rankin. A few days after arriving in France a bomb hit his billet. Fortunately he was not in it at the time and the bomb did not explode.[42] Rankin's oft repeated response was, a bomb never hits twice in the same place.

Dr. Rankin's mobile laboratory introduced new methods for determining infectious disease outbreaks and potential epidemics, both in the military and adjacent civilian sectors. Typhoid carriers were a particular focus. A typhoid outbreak in Flanders in the autumn of 1914, confirmed 8,000 cases of whom 2,000 died. Widespread inoculation using a combined typhoid/paratyphoid and tetanus toxoid vaccine (TABT), supplemented by door to door case finding and isolation of the carriers, eradicated the disease by the summer of 1915.[43]

The methods used by the unit to chlorinate the water were developed by Lt. Col. George Nasmith, the Commanding Officer of the Laboratory and its epidemiologist-chemist.[44]

As the battle lines became stationary, the laboratories did too. Regimental medical officers at the front consulted the laboratory constantly. Hospitals, even Casualty Clearing Stations, increased their laboratory demands. They soon became onerous.

The 2nd Battle of Ypres and the First German Chlorine Gas Attack:[45] On April 17, 1915

36. MacPhail, Andrew — *The Medical Services Official History of the Canadian Forces in the Great War 1914-1918*, pages 259-260, Kings Printer, 1925. Captain Ellis who worked with Dr. Rankin in the 5th Mobile Laboratory in France, later improved the effectiveness of the serum as part of his wartime medical research in England.
37. Adami, J. George — *The War Story of the CAMC*, page 279.
38. Nasmith, George — *On the Fringe of the Great Fight*, page 23, McClelland and Stewart, 1917.
39. MacPhail, Andrew — *The Medical Services*, pages 235-237. Dr. George Adami indicated the officer i/c was Lt Col G.G. Nasmith, an epidemiologist and water purification specialist from the University of Toronto, in *The War Story of the CAMC*, pages 278-79.
40. Adami, J. George — *The War Story of the CAMC*, pages 278-79.
41. Nasmith, George — *On the Fringe of the Great Fight*, pages 92, 140-141, 152-168. Confirmed in GWL Nicholson's *Seventy Years of Service*, page 88, Borealis Press, 1977.
42. Nasmith, George — *On the Fringe of the Great Fight*, page 72.
43. MacPhail, Andrew — *The Medical Services*, pages 256, 265. See George Nasmith's *On the Fringe of the Great War* for more details.
44. Adami, J. George — *The War Story of the CAMC*, pages 222, 281. Like Rankin at 5'7", Nasmith was even shorter at 4'6".
45. Adami, J. George — *The War Story of the CAMC*, pages 101-110. For more on the contribution of other Canadian medical units during the battle, see pages 111-132. Also see Tim Cook's *No Place to Run. The Canadian Corps and Gas Warfare in the First World War*, pages 17-45, UBC Press, 1999. Cook makes no mention of George Adami's summary of the No. 5 Mobile Laboratory diary, written after Nasmith's book (1917). Adami included his former student's (Dr. Rankin) comments on the Nasmith diary. For a gruesome and desperate account of the 1917 methods for treating gassed soldiers, including the injection of subcutaneous oxygen see Dr. G.B. Peat's "The Effects of Gassing as seen at a casualty clearing station". CMAJ 8(1): 17-24, January 1918.

Canadians suffering from gas poisoning at a Field Ambulance Unit, 1915

Captain Rankin was promoted to Major. Five days later on April 22 at 5:00 PM, the rumored use of a poisonous gas by the Germans occurred for the first time. A three-mile long cloud of green-yellow gas was noticed. It was 10 and in some places 30-40 or even 100 feet high. The wind carried it westward against the defending French Colonial (Algerian/Moroccan/Sengalese) sector near Ypres.

Drs. Nasmith and Rankin went to see it. Nasmith said it looked and smelled like chlorine. Dr. Rankin agreed. The symptoms were an irritated throat followed by a frothy cough leaving the soldiers gasping for air. The French colonial troops bolted, leaving a mile wide gap in the Allied line. Canadian reinforcements under Brigadier (later General) Arthur W. Currie were ordered to shell the line and close the gap.

THE EFFECTS OF GASSING AS SEEN AT A CASUALTY CLEARING STATION

By Major G. B. Peat, C.A.M.C.

There were fifteen very bad cases, twenty-five severe ones, and twenty fairly mild ones.

I gave oxygen inhalations every hour for ten minutes at a time. At noon he was about the same so I tried giving hydrogen peroxide, one-half drachm to the ounce of water every hour. At three p.m. he was still no better, so I gave oxygen sub-cutaneously in pectoral regions up to about four litres. After this he became quieter, his colour improved and he seemed better in every way.

CMAJ 8(1): 17-24, January 1918 *3-18*

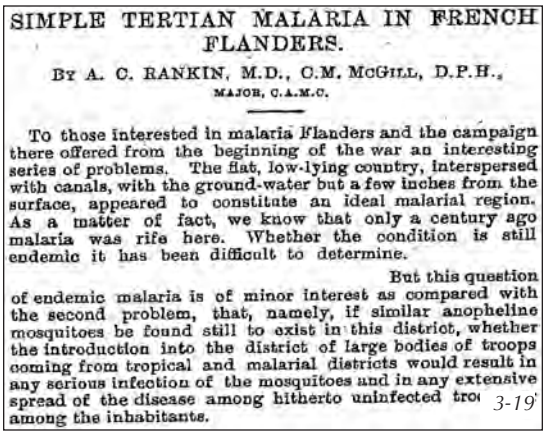
As the Canadian troops arrived, the Germans began shelling them. One shell landed a short distance in front of observers Rankin and Nasmith. Another bullet struck three yards in front of Nasmith, and Rankin said "I think we had better move".[46] Arriving at their Lozier car which was still intact behind a wall, they took one wounded soldier back to the Field Ambulance station.[47] On the way they met Captain William Boyd, the future well-known Canadian pathologist, who had just been shot in the calf near the Ypres casualty station. Captain F.A.C. Scrimger was ordered to replace him.[48]

The day was saved by the immediate action of the mask-less Canadians, and the lack of a German advance, deterred only because the cylinder operators releasing the gas had gas masks, but the German troops didn't. The Canadian response was an early indication of the reputation they would earn two years later on Vimy Ridge on April 9, 1917. As the gas-cloud passed over the troops, those who fell or remained in the bottom of the trenches usually died because chlorine gas was heavier than air and suffocated them. For any animals it was deadly. The only side benefit was that it exterminated the prevalent scabies.

The next day Officers Nasmith and Rankin sent their report on the gas mixture to British Army headquarters, identifying it as a mixture of chlorine and possibly bromine. They suggested hyposulfite of soda-soaked breathing pads as protection. They further recommended "if a search were made for a mask on the field, the enemy probably had one designed."[49] On April 24 the British Commanding Officer General (Sir) Henry Rawlinson requested a presentation from Nasmith on what the gas was and how it could be combated.[50] By April 28 the Dean of Medicine at the University of London was in agreement with Drs. Nasmith and Rankin, that it was the first chlorine gas attack in WWI.

Two days later, on April 24, a second German gas attack occurred. McGill surgeon Dr. F.A.C. Scrimger earned his Victoria Cross working continuously for three days evacuating over 20 seriously wounded troops from a nearby am-

46. Nasmith, George *On the Fringe of the Great Fight*, pages 97-104.
47. Nasmith, George *On the Fringe of the Great Fight*, page 97.
48. Nasmith, George *On the Fringe of the Great Fight*, page 101. Dr. Boyd was the Manitoba physician who went on to a distinguished career in Pathology. Although he wrote letters home on April 23, 24 he did not mention the gassing until his April 28th letter, noting the rumor was a fact. A wounded German officer described how first-line troops were given some form of mask impregnated with a chemical and efforts were being made by the Canadians to obtain one. Boyd described one hospital with 2000 gassed Canadians on stretchers, all in varying degrees of respiratory distress from life to death, in his *With a Field Ambulance*, pages 64-67, Musson Co., 1916.
49. Nasmith, George *On the Fringe of the Great Fight*, page 104.
50. Adami, George *The War Story of the CAMC*, page 107-108.



SIMPLE TERTIAN MALARIA IN FRENCH FLANDERS.

By A. C. RANKIN, M.D., C.M. McGill, D.P.H., MAJOR, C.A.M.C.

To those interested in malaria Flanders and the campaign there offered from the beginning of the war an interesting series of problems. The flat, low-lying country, interspersed with canals, with the ground-water but a few inches from the surface, appeared to constitute an ideal malarial region. As a matter of fact, we know that only a century ago malaria was rife here. Whether the condition is still endemic it has been difficult to determine.

But this question of endemic malaria is of minor interest as compared with the second problem, that, namely, if similar anopheline mosquitoes be found still to exist in this district, whether the introduction into the district of large bodies of troops coming from tropical and malarial districts would result in any serious infection of the mosquitoes and in any extensive spread of the disease among hitherto uninfected tro among the inhabitants.

3-19

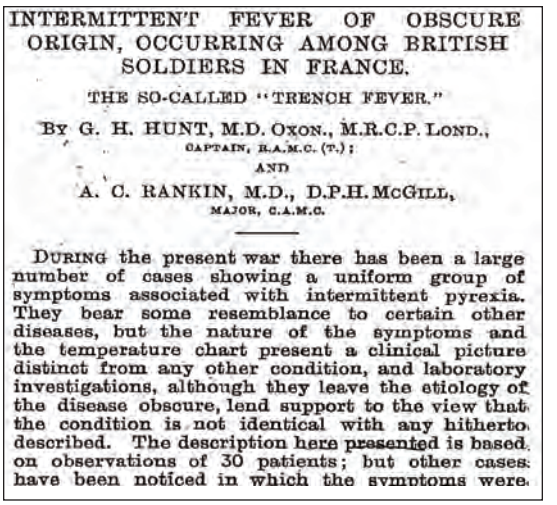
The Lancet, 1916

munition filled, burning farmhouse.[51] He pulled the last officer to an adjacent moat, and protected him with his own body until shelling permitted stretcher bearers to remove Captain McDonald to safety. Scrimger was one of only two physicians in the Canadian Army to be so honored.[52]

After the third chlorine gas attack on May 2, and shelling that killed his friend, Dr. John McCrae wrote the famous poem In Flanders Fields.[53] Although seven miles from the front in late May, the laboratory staff were chlorine gassed again. Newly promoted Major Rankin performed autopsies on those who died.[54] About June 3 Dr. Rankin was transferred out of the Laboratory Unit, to be trained for a D.A.D.M.S (Deputy Assistant Director of Medical Services) position.[55]

Malaria Outbreak in France: By June the Laboratory was serving the 1st Army, which included Canadians and the newly arrived Indian Corps. Dr. Rankin was asked to investigate an outbreak he thought was malaria. It had not been seen in Flanders for a century, but Rankin had seen it in Siam.[56] Dr. Rankin examined the blood of 30 individuals taken from April-July 1915, and found five carried the malaria parasite Plasmodium vivax.[57] A more thorough examination of the Indian troops was undertaken. Ninety-three of the 200 troops tested carried P-vivax and four, L-malariae. All the troops had been infected before their transfer to Europe.

Dr. Rankin found two known malaria-carrying mosquitoes - anopheles bifurcates and A. maculipennis. The latter became widely distributed amongst the troops in France. Fourteen more cases were diagnosed in August and September of 1915. Only 12 clinical cases of malaria were diagnosed amongst troops who had never been outside England.[58] The outbreak died out because growth of the malarial virus required four consecutive days of hot weather. The fall brought cooler weather and no new cases were diagnosed, as Dr. Rankin had predicted.[59] He "knew tropical medicine like a book" according to Nasmith.[60]



INTERMITTENT FEVER OF OBSCURE ORIGIN, OCCURRING AMONG BRITISH SOLDIERS IN FRANCE.

THE SO-CALLED "TRENCH FEVER."

By G. H. HUNT, M.D. Oxon., M.R.C.P. Lond., CAPTAIN, R.A.M.C. (T.); AND A. C. RANKIN, M.D., D.P.H. McGill, MAJOR, C.A.M.C.

During the present war there has been a large number of cases showing a uniform group of symptoms associated with intermittent pyrexia. They bear some resemblance to certain other diseases, but the nature of the symptoms and the temperature chart present a clinical picture distinct from any other condition, and laboratory investigations, although they leave the etiology of the disease obscure, lend support to the view that the condition is not identical with any hitherto described. The description here presented is based on observations of 30 patients; but other cases have been noticed in which the symptoms were

The Lancet, 1915 3-20

51. Nasmith, George — *On the Fringe of the Great Fight*, page 106.
52. (Scrimger, F.A.C.) — "Scrimger, Captain FAC", CMAJ 6(4): 334-336, April 1916. The patient, Captain MacDonald described the three hours it took for Dr. Scrimger to carry him to a nearby moat, while the hospital/stable burned. Scrimger's impression of the event and the honor bestowed on him were recorded in Suzanne Kingsmill's *Francis Scrimger. Beyond the Call of Duty*, pages 47-49. Hannah Dundurn, 1991.
53. Prescott, John F. — *In Flanders Fields. The Story of John McCrae*, pages 85-96. Boston Mills 1985.
54. Nicholson, G.W.L. — *Seventy Years of Service*, pages 83-84, Boreal Press, 1977. For a firsthand description see George Adami's *The War Story of the CAMC*, pages 144-147.
55. Nasmith, George — *On the Fringe of the Great Fight*, pages 240-242.
56. Nasmith, George — *On the Fringe of the Great Fight*, page 242.
57. Adami, J. George — *The War Story of the CAMC*, page 281.
58. Rankin, Allan C. — "Simple Tertian Malaria in French Flanders", Lancet 190: 1079-1080, May 27, 1916. Rankin's role was also mentioned in J.G. Adami's The War Story of the CAMC, page 282.
59. Nasmith, George — *On the Fringe of the Great Fight*, pages 162-163. Confirmed in George Adami's *The War Story of the CAMC*, page 282.
60. Nasmith, George — *On the Fringe of the Great Fight*, pages 163.

Dr. Rankin and Trench Fever: Trench fever was a non-fatal syndrome that appeared amongst the front line troops in the summer of 1915. It was later diagnosed (1919) as a louse-born disease. The first two cases of "relapsing febrile illnesses of unknown origin" were reported in the Lancet in September 1915.[61] On November 20, 1915, Drs. G.H. Hunt and A.C. Rankin summarized their observations on 30 cases of "Intermittent Fever of Obscure Origin, Occurring among British soldiers in France. The so-called Trench fever."[62]


3-21

Lt. Col. Allan Coats Rankin

The authors were the first to recognize and describe the common symptomatology, publicize its name, and note the course of the accompanying pyrexia was variable and relapsing, but rarely fatal. Blood cultures were negative as were stains, cultured swabs, fecal specimens, and urine tests. There was only a slight lymphocytosis and a widely variable leukocytosis. Treatment was symptomatic with salicylates (30 grams three times a day) for the pyrexia and quinine (5-10 grams three times a day) for the disease.

Hunt and Rankin found the contagiousness of the disease was limited, as none of the orderlies or other staff in the hospitals developed it. One reader of the Lancet suggested it was a form of paratyphoid, a conclusion refuted by Hunt and Rankin.[63] In February 1916 variations in the duration and relapsing frequency of the pyrexial patterns were published. McNee, Renshaw and Brent found the disease was not transmittable by human serum but by red cells. The vector was alleged to be carried by flies or parasites found in the trenches.[64]

The disease affected upwards of 800,000 Allied troops, including 17,122 Canadians, resulting in 14 Canadian deaths.[65] Cases peaked in 1917.[66] Trench fever infected Lt. Col. J.N. Gunn of Calgary twice, leading to the loss of

Dr. Rankin's CMG, received from King George VI, July 19, 1919


3-22

3-16

Scrimger's Victoria Cross

61. Graham, J.H.P. "A Note on a Relapsing Febrile Illness of Unknown Origin", Lancet 186: 703-704, September 25, 1915.
62. Hunt, G.H., Rankin, Allan C. "Intermittent Fever of Obscure Origin, Occurring among British Soldiers in France. The so-called Trench Fever." Lancet 189: 1133-1136, November 20, 1915. Dr. G.H. Hunt was an ENT Specialist from Montreal, attached to the #1 Canadian General Hospital medical staff.
63. Hunt, G.H., Rankin, Allan C. "Letter to the Editor of the Lancet." Lancet 186: 1368-1369, December 18, 1915.
64. McNee, J.W., Renshaw, Arnold, Brunt, E.H. "Trench Fever: a relapsing fever occurring with the British Forces in France", British Medical Journal 1: 225-234, February 12, 1916.
65. Morton, Desmond "Military Medicine and State Medicine: Historical Notes on the Canadian Army Corps in the First World War 1914-1919", pages 38-66, in C. David Naylor's *Canadian Health Care and the State*, McGill-Queens 1992.
66. Strong, Richard P., et al *Trench Fever. Report of Commission Medical Research Committee.* American Red Cross, 446 pages, Henry Frowde, Hodder & Stoughton, 1918. The frequency of trench fever was variably described as: 1) 350 cases per month per division actually engaged; 2) up to 40% of all evacuations to hospital and 3) 60% of all sickness. 4) M.G. Miller calculated it as 45,000 casualties per 1 million men, with infestation rates of the officers and men running at 97% and 5) J.H. Hill in *Silent Enemies: the Story of the Diseases of War and Their Control*, G.P. Putman 1942 as affecting 1/5 to 1/3 of all British troops and 1/5 of all German troops in WWI.

his command of the 8th Field Ambulance in February 1917. J.R.R. Tolkien of Hobbit fame also suffered from it. The disease usually lasted five days but there could be up to 12 recurrences, resulting in prolonged disability. The average absence from the frontline was three months.

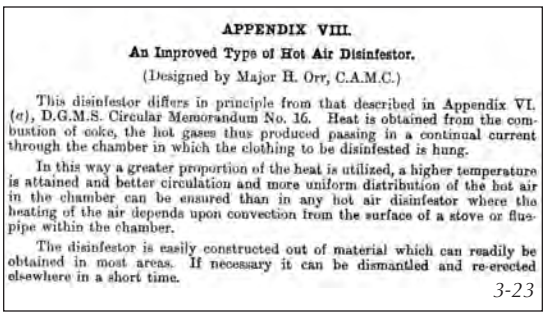
The causative organism was found to be Rickettsia (now Bartonella) Quintana with the bacterium being transmitted through the lining of the louse stomach.[67] Body lice was more prevalent in the Allied trenches than the German ones, because the latter were deeper, drier and on higher ground. More importantly the German troops bathed more frequently. Manual removal of the lice from the seams of clothing provided temporary relief at best. The incubation period was 8-30 days with whole battalions becoming re-infected in short order. It was the second most debilitating disease of the war, after scabies.

The treatment program was discovered serendipitously, although it was introduced belatedly by the Allies. Captain (Dr.) Harold Orr of Medicine Hat, the sanitary officer at the large Shorncliffe military base in southern England, was conducting experiments to kill body lice in the summer of 1915. After being advised to try heat by Professor Nuttall of Cambridge, Orr discovered that parasites could be killed by dry heat between 50-55°C.[68] He built a galvanized tin hut with a brazier (heater) in the floor that increased the temperature to 65°C. Contaminated clothes were hung for 20 minutes, killing the lice.[69] The Orr hut could disinfect the clothes of one thousand troops a day.

By the end of 1915 the Orr Disinfector was in operation in all the large Canadian rest camps and bathhouses.[70] For the front line troops the re-infection rate remained very high because of the short incubation period. The British and American Medical Services conducted major investigations into the transmission problem in early 1918, and reached similar findings on its communicability. The Americans adopted the dry heat method in February 1918. The British followed suit.[71] The French military awarded Dr. Orr the Silver Medaille des Epidemies and the British an O.B.E. for his work.[72]

The Rankins and the Orrs: Drs. Orr and Rankin must have crossed paths during the war. Dr. Orr had met Margaret West a nurse from Quebec, who had moved to Medicine Hat where Orr lived. Both Dr. Orr and Nurse West joined the CAMC. They were married overseas in 1916.

Dr. Rankin met and befriended Florence West, Margaret (West) Orr's sister, early in the war. She was a nurse working in the same hospital



APPENDIX VIII.

An Improved Type of Hot Air Disinfestor.

(Designed by Major H. Orr, C.A.M.C.)

This disinfestor differs in principle from that described in Appendix VI. (*a*), D.G.M.S. Circular Memorandum No. 16. Heat is obtained from the combustion of coke, the hot gases thus produced passing in a continual current through the chamber in which the clothing to be disinfested is hung.

In this way a greater proportion of the heat is utilized, a higher temperature is attained and better circulation and more uniform distribution of the hot air in the chamber can be ensured than in any hot air disinfestor where the heating of the air depends upon convection from the surface of a stove or flue-pipe within the chamber.

The disinfestor is easily constructed out of material which can readily be obtained in most areas. If necessary it can be dismantled and re-erected elsewhere in a short time.

3-23

The Canadian Army description of an Orr Hut. 1917

67. Miller, M.G. "Of Lice and Men. Trench Fever and Trench Life in the AIF." http://www.gwpda.org/medical/liceand.htm.

68. (Orr, Harold A.) "Trench Fever." Letter to the Editor of the (London) Times, Friday, May 24, 1918. A precursor disinfector unit using moist heat was designed by Dr. Amyot to disinfect smallpox contaminated clothing, in Sudbury in 1902-3. Dr. Amyot was Dr. Orr's superior officer while he was at Shorncliffe. Dr. J.G. Adami discussed the role of both physicians in *The War Story of the CAMC 1914-1915*, pages 228-29, Colour Ltd, 1918. Dr. Ower was not involved in the research of "Trench Fever and PUO", as he had no access to experimental animals. How the disease affected the patients that were admitted, Dr. Ower outlined in the *History of #1 Canadian General Hospital*, pages 442-451.

69. Rentier, Paul "Biography of Dr. Harold Orr." Five pages, September 1985. Copy deposited with the Alberta Medical Foundation. Dr. Orr previously worked with the medical team determining, isolating and treating the cerebrospinal meningitis carriers at Shorncliffe. Rankin did as well with the #1 Canadian General Hospital staff in late 1914 on the Salisbury Plains. Both related their observations and recollections at the AMA/CPSA meeting, September 14-17, 1927, as recorded in the AMA/CPSA Proceedings, page 17, that followed.

70. Byam, W., et al "Trench Fever. A louse-borne Disease", pages 136-137. Frowde, Hodder & Stoughton, 1919. Eight different treatment methods were described of which the Orr Hut was the most economical.

71. MacPhail, Andrew *The Medical Services*, pages 354-357.

72. MacPhail, Andrew *The Medical Services*, pages 274-275.

as Dr. Rankin. The West girls were originally from St. Foy near Quebec City, where their father was the Mayor.[73] After the war Florence West returned to work for the Red Cross in Calgary. The Rankins were married in the Orr home in 1926.[74] Dr. Rankin was then 49.

In May 1929 Mrs. Rankin was admitted to the UAH with bronchitis, a complication of her asthma.[75] Her condition did not improve so Dr. Rankin sent her to the Mayo Clinic on July 5th.[76] The source of her asthma Dr. Ower suspected was an allergy to hay. Asthma continued to limit her physical activities. After moving with Dr. Rankin to Ottawa in 1939, she developed pneumonia and was transferred to the Royal Victoria Hospital in Montreal, where she died on March 23, 1943 at age of 56.[77]

Following WWI, Dr. Orr was enticed to move to Edmonton and join the new Department of Public Health, the second in Canada. His post-war assignment was to control the spread of venereal diseases amongst returning soldiers. It had reached epidemic proportions in the Canadian Army. Some observers estimated up to 20% of all veterans were infected.[78] Dr. Orr was given the directorship (1919) of the new Division of Social Hygiene created under the Alberta Venereal Disease Act of 1918, a Canadian precedent.[79] The appointment would have required the approval of Dr. W.A. Laidlaw, Alberta's Public Health Officer. After further studies in Europe Dr. Orr returned to Edmonton and became the first dermatologist in Alberta. In 1952 Dr. Orr was elected the fourth President of the CMA from Alberta.

Drs. W.A. Laidlaw (L) and H.A. Orr (R), circa 1921

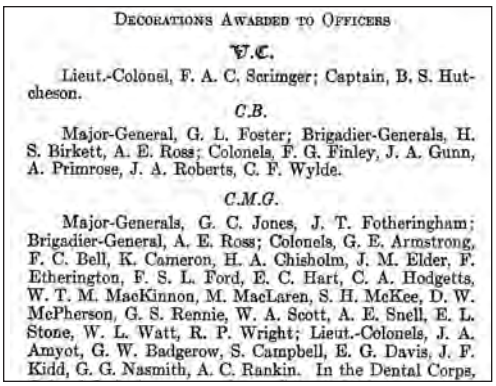
1915-1919: In late 1915, Major Rankin with Captain A.W.M. Ellis and Major J.C. Meakins of Montreal, were assigned to the Canadian Corp Headquarters – Research, to work under a research Board funded through the British Insurance Act of 1913. The Board included Sir William Osler. It dispersed over $250,000 (£60,000) per year in research grants.[80]

On June 20, 1916 Dr. Rankin was re-assigned to the 1st Division Ammunition Column as its medical officer, before being attached for almost a year to the Canadian Corps Headquarters starting on August 19, 1916.

Dr. Rankin was promoted to Lieutenant Colonel on June 27, 1917 and was appointed the Commanding Officer of No. 7 Canadian Cavalry Field Ambulance in France.[81] On April 1, 1918, at the end of the three day Battles of Moreail Wood and Rifle Wood, Dr. Rankin received a gunshot wound to his left leg. The injury was not serious enough for him to be evacuated.[82]

73. Whitney, Hugh	Preliminary manuscript on *The Dean, A History of Allan Coats Rankin*. Copy in the possession of the author.
74. Editor	UofA student newspaper the "Gateway", page 4, October 14, 1926. Dr. Orr purchased her wedding dress in New York City. Personal communication with Elizabeth Wickheim September 27, 2009.
75. Petley-Jones, Mary	Personal communication October 30, 2008. Mary was Dr. H.C. Jamieson's daughter. Every Sunday Dr. Jamieson would take his children to visit Dr. Rankin. As a Laboratory Technician she enjoyed having lunch at the Rankins. Mrs. Rankin, she said was assisted by a maid. Several of Florence West's sisters had asthma.
76. Ower, John J.	Ower Diary entries for May 29, July 5, 11, 18, 1929, UAA 72-73.
77. Wickheim, Elizabeth	Personal communication September 27, 2009. Elizabeth Wickheim was Dr. Harold Orr's daughter. Dr. Rankin was her uncle. Confirmed in the Ower diary entry for July 30, 1930.
78. Morton, Desmond	"Military Medicine and State Medicine", pages 46-48, in C. David Naylor's *Canadian Healthcare and the State*, McGill-Queens, 1992.
79. Jamieson, Heber C.	*Early Medicine in Alberta*, pages 73-74, AMA, 1947.
80. MacPhail, Andrew	*The Medical Services*, page 165.
81. Rankin, Allan C.	*Confidential Diary of the 7th Canadian Cavalry Field Ambulance, National Archives of Canada*. Microfilm reel T-10918. For a more detailed description of "The Field Ambulance and Its Organization" see Lt. Col. (Dr.) Walter L. Watt's article in the CMAJ 6(9): 811-816, September 1916.
82. Rankin, Allan C.	*War Diary of the Seventh Canadian Cavalry Field Ambulance*, April 1918.

On June 15, 1918 Dr. Rankin was transferred to England and posted to the CAMC Depot. A day later he was placed in charge of the 210 bed officers' convalescent hospital in Matlock, Bath, England.[83] He remained there until January 2, 1919, when he was appointed the Assistant Director of Medical Services in the office of the Director General of Medical Services in London.



DECORATIONS AWARDED TO OFFICERS

V.C.

Lieut.-Colonel, F. A. C. Scrimger; Captain, B. S. Hutcheson.

C.B.

Major-General, G. L. Foster; Brigadier-Generals, H. S. Birkett, A. E. Ross; Colonels, F. G. Finley, J. A. Gunn, A. Primrose, J. A. Roberts, C. F. Wylde.

C.M.G.

Major-Generals, G. C. Jones, J. T. Fotheringham; Brigadier-General, A. E. Ross; Colonels, G. E. Armstrong, F. C. Bell, K. Cameron, H. A. Chisholm, J. M. Elder, F. Etherington, F. S. L. Ford, E. C. Hart, C. A. Hodgetts, W. T. M. MacKinnon, M. MacLaren, S. H. McKee, D. W. McPherson, G. S. Rennie, W. A. Scott, A. E. Snell, E. L. Stone, W. L. Watt, R. P. Wright; Lieut.-Colonels, J. A. Amyot, G. W. Badgerow, S. Campbell, E. G. Davis, J. F. Kidd, G. G. Nasmith, A. C. Rankin. In the Dental Corps,

3-25

On September 12 Dr. Rankin sailed for Canada. He was struck off the CEF staff on September 25, 1919, demobilized in Edmonton on October 4, 1919, and returned to the UofA staff. For his war contributions Lt. Col. Rankin received a CMG from King George V, on July 19, 1919. He was one of 29 Canadian physicians to be so honored, including Lt. Col. Nasmith.[84] It was the third highest war-time decoration received by any Canadian physician, after the Victoria Cross (2 recipients) and the Order of the Bath, Companion (8 recipients), and was the highest award received by any physician from Alberta. Dr. Rankin was also mentioned in dispatches twice, on June 15, 1916 and May 28, 1918.[85]

1919-1923: Dr. Rankin returned to the UofA during the most important period in the Faculty of Medicine's history, 1919-1923. The three-year premedical and basic medical science program had survived the war, despite the high enlistment rate of faculty physicians and students. Although UofA medical students had the option of transferring to Toronto or McGill after their third year, most joined the Armed Services. Fortunately they did, as the Toronto and McGill medical faculties were similarly overtaxed by high faculty enlistment rates.

In the fall of the 1918 the returning WWI troops brought the Spanish flu to Canada, and the demobilization trains spread the communicable disease across the country.[86] As it spread the virulence of the virus appeared to increase, as measured by the provincial death rates. Three thousand eight hundred Albertans died. The UofA's Pembina Hall was converted to a hospital in late 1918. Medical school classes were suspended for three weeks. In many locations, particularly in rural Alberta, Dr. Rankin recalled physician numbers were so depleted there was no medical assistance whatsoever.[87]

Tory and Rankin had anticipated the postwar need for a Dean. While overseas both men approached prospective candidates. Tory wanted a clinician to implement the last two years of the undergraduate program.[88] They were unsuccessful. Whether this was for salary reasons, or because of the pressure on prospective candidates to return to their faculty of origin to face their own postwar surge of veterans' medical applications, was never clear.

3-26

The WWI Victory Parade in Banff, November 11, 1918. Everyone wore masks.

83. MacPhail, Andrew — *The Medical Services*, pages 220.
84. Nasmith, George — *On the Fringe of the Great Fight*, page 260. Nasmith noted when he received his CMG, that 6 of the 8 recipients were Generals. The 129 recipients were listed in Dr. Andrew MacPhail's *Medical Services in WWI*, pages 354-355.
85. (Rankin, Allan C.) — For a certified copy of Dr. Rankin's Militia Service see his Record of Service, Canadian Expeditionary Force, January 15, 1941 signed by Lt. Col. W.E.L. Coleman.
86. Pettigrew, Elieen — *The Silent Enemy. Canada and the Deadly Flu of 1918*, pages 23-77, Prairie Books, 1983.
87. Rankin, Allan C. — "The Provincial Medical School", AMB 1(2): 7, 1935.
88. Corbet, Elise A. — *Frontiers of Medicine*, page 30, UAP, 1990.


3-27

The first graduating class, 1925

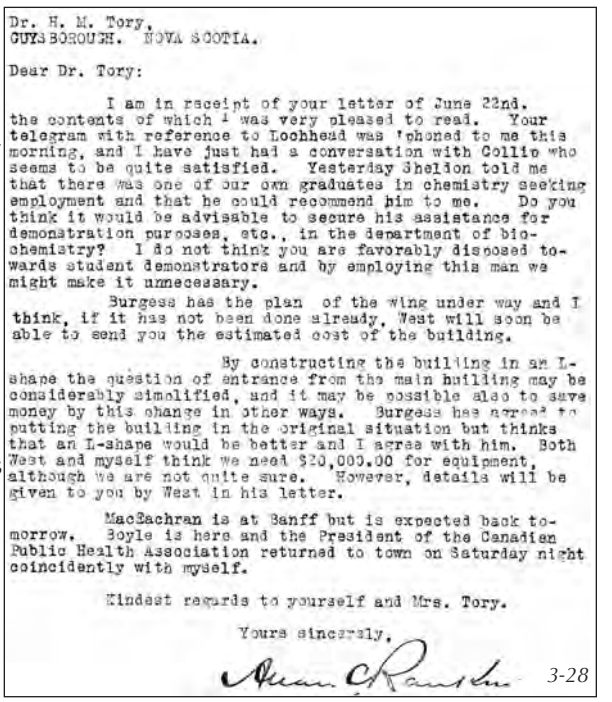
Early in 1920 the Alberta government formally requested the University teach the full four-year course in medicine and graduate MDs. Dr. Tory concurred and the UofA Senate approved the full-degree granting MD program in May 1920. It was based on the principle that Alberta graduates were more likely to remain in the province. Almost 50% did. Another 30% located in or returned to BC or Saskatchewan. That same month Dr. Rankin was appointed the UofA's first Dean of Medicine.[89]

The government had already agreed to fund the building of the medical school as a post-war winter-works project. Designing it began in 1919 and construction started in March 1920. The school was completed in the summer of 1921.

While Dr. Tory worked on building the medical school, Dr. Rankin began to take the necessary steps to implement a full MD degree program. He had predicted that the eastern affiliated faculties would begin to limit the number of students they would accept from western Canada.[90] Taking advantage of the large increase in University and Faculty applications, the faculty agreed to implement the McGill and UofT two-year premedical training requirements starting in 1920. A senior matriculation (Grade 12) was also required. It created two streams of medical students. One stream entered the (now) six year medical program. The other stream consisted of returning veterans, who had interrupted their studies under the five-year program to serve overseas. UofA, UofT and McGill all honored the veterans previous experience and admitted them to the five year program.

Then the serendipitous happened. Rumors of a large grant by J.D. Rockefeller to the Rockefeller Foundation (RF) on December 19, 1919, were substantiated. It was earmarked to support medical education, with $5 million to be set aside for Canadian medical schools. Tory and Rankin worked hard to satisfy the Pearce visiting committee and secured a $500,000 conditional grant by mid-1920. It required the medical school to be completed, a clinical faculty to be hired, and the university to grant MD degrees.[91]

As soon as Dr. Tory secured the RF grant, he made a request for the annual interest of $25,000, to be given to the faculty. Accepted, quarterly payments started in the fall of 1920. Dr. Rankin immediately presented Professor J.B. Collip's request to upgrade his skills, to Dr. Tory. Tory approved the 18 month sabbatical to study at the best biochemical laboratories in the world. Collip started at the UofT in April 1921. His purification of insulin in December 1921, two weeks after he was assigned to the Banting and Best team, was a turning point in



Dr. H. M. Tory,
GUYSBOROUGH. NOVA SCOTIA.

Dear Dr. Tory:

I am in receipt of your letter of June 22nd, the contents of which I was very pleased to read. Your telegram with reference to Lochhead was 'phoned to me this morning, and I have just had a conversation with Collip who seems to be quite satisfied. Yesterday Shelton told me that there was one of our own graduates in chemistry seeking employment and that he could recommend him to me. Do you think it would be advisable to secure his assistance for demonstration purposes, etc., in the department of biochemistry? I do not think you are favorably disposed towards student demonstrators and by employing this man we might make it unnecessary.

Burgess has the plan of the wing under way and I think, if it has not been done already, West will soon be able to send you the estimated cost of the building.

By constructing the building in an L-shape the question of entrance from the main building may be considerably simplified, and it may be possible also to save money by this change in other ways. Burgess has agreed to putting the building in the original situation but thinks that an L-shape would be better and I agree with him. Both West and myself think we need $20,000.00 for equipment, although we are not quite sure. However, details will be given to you by West in his letter.

MacEachran is at Banff but is expected back tomorrow. Boyle is here and the President of the Canadian Public Health Association returned to town on Saturday night coincidently with myself.

Kindest regards to yourself and Mrs. Tory.

Yours sincerely,

Allan C. Rankin

3-28

Rankin's letter to President H.M. Tory, June 28, 1922

89. Revell, Daniel G. "History of the Faculty of Medicine", in the Medical Alumni Bulletin, #2, page 4, November 24, 1943.
90. Rankin, Allan C. "The Provincial Medical School", page 9.
91. Fedunkiw, Maryanne "University of Alberta and the Rockefeller Foundation. Wooing the Rockefellers", in *Alberta's Medical History*, pages 545-557, 2008.

his career and a significant milestone for the Faculty and the diabetic world.[92]

After the Provincial Laboratory came under university control (1911), so did the funding of pathology and laboratory medicine positions. By December 1917 Tory was overseas with the Khaki University. There he secured the approval of Alberta's Public Health Officer Dr. W.A. Laidlaw, who was also overseas as the Commanding Officer of No. 1 Sanitary Section in England, to appoint more pathologists beginning in 1918.[93]

Acting President W.A.R. Kerr appointed Dr. J.J. Ower as the provincial pathologist in 1918, although Ower was not released from the Army until late 1919. Ower's appointment was followed by microbiologist Dr. R.M. Shaw (1919), and venereal disease specialist Dr. H. Orr (1919 briefly), who returned permanently in 1922 to manage the postwar venereal disease problem. Dr. Rankin returned in 1919 to run the Provincial Laboratory and teach bacteriology. Dr. H. Vango came permanently as a tissue pathologist in 1924. A similar postwar recruitment of pathologists occurred in Saskatchewan, but the appointments were spread equally between Regina and Saskatoon. Most of the early pathologists in Alberta worked at the UofA's Provincial Laboratory.[94]

To provide clinical teaching, Dr. Rankin recommended the appointment of three McGill trained physicians, Drs. F.H. Mewburn (Surgery), E.W. Pope (Medicine) and L.C. Conn (Obstetrics and Gynecology) in 1922/23. Clinical teaching was a problem. The medical school had been using the Royal Alexandra, Misericordia and Edmonton General Hospitals from 1916-1922. The Strathcona Hospital remained under the control of the federal Military Hospitals Commission (1916-1918) and the Soldiers Civil Rehabilitation Commission (1918-1922). The hospital didn't revert to the University until October 1922. To repurchase the hospital, the University paid the City of Edmonton $150,000 at $15,000 per year over ten


3-29

Class of 1927 Dental students in the new clinic.

years. The civic and federal governments built the 84-bed veterans' wing in 1922 for another $100,000. It was located on the current Mackenzie HSC site. Dr. Rankin viewed the design of the veterans pavilion as protracted, and the costs as expensive.[95]

UofA Dental and Pharmacy Programs: Two other healthcare programs had been started during the war. The pharmacy program was approved in 1914 as a one year course, and began in the fall of 1915 under Dr. H.H. Moshier.[96] It lasted for one year, but did not continue when Moshier joined the CAMC in the spring of 1916. In 1917 Pharmacy became a school with a two year program under Pro-

3-30

The first Department Heads at the UofA, Faculty of Medicine, 1913-1923

92. Lampard, Robert — "Dr. James Bertram Collip" in *Alberta's Medical History*, Young and Lusty and Full of Life, pages 311-323, 2008. Dr. Tory noted how much Collip excited the classes he taught, in the CMAJ 26(11): 1303-1305, 1926.
93. MacPhail, Andrew — *The Medical Services*, page 238.
94. Letts, Harry — "Early Pathology/Laboratory Medicine at the University of Alberta, Her Teaching Hospitals and the Provincial Laboratory", reprinted in R. Lampard's *Alberta's Medical History*, pages 524-533, 2008; and Early Pathology/Laboratory Medicine in Saskatchewan, 7 pages (in process).
95. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, pages 60-63, UAH, 1986.
96. Penley, J. Kenneth — *The History of the Pharmacy in Alberta: The First One Hundred Years*, pages 44-47. Alberta Pharmaceutical Association, 1993.

fessor H.H. Gaetz. In 1938 the program was transferred to the Faculty of Medicine, under Dean Rankin. It became an autonomous school in 1950 and a Faculty in 1955 under Professor Mervin Huston.

The dental program was approved by the Senate in 1916 and began as a department within the faculty of Medicine. The first class of dental students began in September 1918. It was a two year program with its students, like those in medicine, finishing their last two years at UofT, or later at McGill. The dental program increased to 20 students (1919) but had no faculty and no textbooks, and would have no laboratory until the medical school opened in 1921. Initially the first year dental courses were the same as the medical students took.

Eastern schools required the teaching of some dental courses in the first three years so Dr. Rankin recommended Tory appoint Dr. H.E. Bulyea DDS, as a part time dental instructor in 1920/21. He was promoted to an Assistant Professor in 1922. Two large practice labs were opened in the new medical school in 1921. Senior matriculation (Grade 12) along with one year of pre-dentistry were required starting in 1922.

In 1923 the last two years of the dental program were approved at the UofA, with instruction provided by two part-time and 11 minimally-funded sessional instructors. The first DDS class graduated in 1927, two years after the first class of MDs. The dental department became a school in 1930 and an autonomous Faculty in 1944 under Dr. Rankin's watch.

The Depression reduced the graduating dental class to one DDS in 1932/33. Fortunately the Dental Faculty remained almost financially self-sufficient through the Depression, surviving on high university fees until the 1940s.[97]

The first class of seven D.D.S. graduates, UofA, 1927

The University of Alberta Hospital, the Faculty and the Minister: As soon as the Strathcona Hospital was returned to the University of Alberta in October 1922, and renamed the University of Alberta Hospital (UAH), a Board of five was appointed under the new UAH Act. It included Drs. Tory, Rankin and Kerr, the financial administrator (Archibald West) and the medical superintendent (Dr. W.T. Washburn), with Dr. Tory as the Chairman. A Medical Advisory Committee was struck consisting of Drs. Mewburn, Ower, and Jamieson and several others.

With the acquisition of the UAH by the University it became a closed hospital. All the Department Heads were appointed by the Faculty and all the medical staff were appointed to a department. There was no department of General Practice nor were general practitioners given admitting privileges.

The UAH, 1929

In 1922 Professor Collip returned to the UofA. At a 1923 continuing education program on the administration of insulin organized by Collip and Jamieson, Collip convinced one participant, Dr. John W. Scott, to join the Faculty and assist him with his teaching load. It was the start of Dr. Scott's long association with Collip and the UofA medical school.[98]

In 1918 and again in 1919 the American Medical Association's Committee on Education was invited to visit and accredit the undergraduate program. The arrival of their report was delayed until May 1920 to the chagrin of Dr. Tory.[99] Sufficient progress was made toward establishing a clinical program, to have the Committee reassess the undergraduate program in 1922. The 1922 report was favorable, leading to a Class A designation, and a request by the university to release the Rockefeller

97. MacLean, H.R. *History of Dentistry in Alberta 1880-1980*, pages 123-129, 136, Alberta Dental Association, 1987.
98. Lampard, Robert "Dr. James Bertram Collip", in *Alberta's Medical History*, pages 311-323.
99. Corbet, Elise A. *Frontiers of Medicine*, pages 22-23.

grant, which they did in December 1923.[100]

Further confirmation of the quality of care at the UAH came in 1924 when the American College of Surgeons accredited the hospital. They declared it one of the five best in Canada and the best west of Toronto.[101] Enthused, the UAH appointed its first resident medical officer (Dr. H.A. Crawford) and three interns in pathology, medicine and surgery.[102]

First UofA M.D. class of 1925

The 1921 elected UFA government replaced the 16 year Liberal administration, but kept Dr. Laidlaw as the deputy minister. In October 1923 a fundamental change occurred in Alberta's healthcare system with the appointment of the Honorable George Hoadley as the Minister of Health. He remained the Health Minister until 1935 and introduced many changes that affected medicine in Alberta and beyond.[103]

In 1924 the rural based, healthcare sensitive, United Farmers of Alberta government noted that Alberta had the highest postoperative mortality rate in the country at over 2.0%. It reached 3.89% in 1929, well above the 1.22% rate (1926) of Drs. Archer and Young for appendectomies in Lamont.[104] Through changes to the Alberta Hospital Act's Regulation No. 46, a second surgical opinion was required

Hon. George Hoadley, Minister of Health 1923-1935

prior to any abdominal surgery, and any tissue obtained during surgery had to be examined by the provincial pathologist. The results had a marked impact on the volume of pathology work of the Provincial Laboratory, addressed by the arrival of tissue pathologist Dr. H. Vango.[105]

When the new Regulations did not lead to a perceptible improvement in the mortality rate, Minister Hoadley requested the University of Alberta Senate establish a system for assessing the credentials of all physicians who represented themselves as specialists in the province (1926). Hoadley contemplated hiring a surgeon to perform surgery in rural Alberta.

Dr. Tory was in agreement with the credentialing proposal and the Senate accepted the responsibility.[106] Tory delegated the credential assessments to Dean Rankin and a committee of the Faculty of Medicine, including Deputy Minister Laidlaw. Thus began the first specialist diploma granting system in Canada, one that antedated the formation of the Royal College of Physicians and Surgeons by three years. It was not replaced by the Royal College's examination and fellowship program until 1944. Over 100 Alberta specialist certificates were issued, before the Alberta regulations were repealed.

100. Fedunkiw, Maryanne "University of Alberta and the Rockefeller Foundation. Wooing the Rockefellers", in *Alberta's Medical History*, pages 545-557.

101. Corbet, Elise A. *Frontiers of Medicine*, page 37. It took considerable effort to receive that recognition, as Dr. R. Macbeth indicated in his history of the *Department of Surgery of the University of Alberta*, pages 59-61, Department of Surgery, 2009.

102. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 86.

103. Lampard, Robert "Hons. George Hoadley, Irene Parlby, W.W. Cross and the UFA Government Healthcare Program, 1921-1935", in *Alberta's Medical History*, pages 558-570, 2008.

104. Archer, Albert E., Young, Morley A.R. "The Mortality from Appendicitis in Alberta", CMAJ 36: 507-510, May 1937.

105. Letts, Harry "Early Pathology/Laboratory Medicine at the University of Alberta", page 528, in Robert Lampard's *Alberta's Medical History*, pages 524-533, 2008.

106. Tory, H. Marshall "The University's Function in Medicine", CMAJ 26(11): 1303-1305, November 1926.

Dr. M.R. Bow, Deputy Minister of Health 1927-1952

Dr. Rankin voiced his own opinion of the Alberta diploma program in 1933, in a detailed reply to the Registrar of the Royal College.[107] In contradistinction to Dr. Tory, Rankin felt the medical profession (Royal College) should be the credential assessor and examiner, not the university. The responsibility issue would not be fully resolved until 1971 when the Royal College required the universities to manage the postgraduate residency training programs, while the Royal College remained the national examiner.

In the spring of 1925 the first class of eleven MD students graduated. The gold medalist was Leone MacGregor, the only female in the class. It was an exciting time.[108] As Dr. Rankin noted, Professor Collip was associated with the 1925 class but was unable to graduate until later in the year, because he had not performed enough obstetrical deliveries.[109]

In 1926 Deputy Minister Laidlaw died. He was succeeded by Dr. M.R. Bow in 1927 who remained the Deputy Minister for the next 25 years. He came with considerable communicable disease experience acquired as the Regina MOH (1913-1926).[110] At the University, Dr. Bow was appointed the Professor and Head of Community Medicine from 1927-1952 under Dr. Rankin.

It was to Dr. Bow and Premier Brownlee that Acting President Dr. Kerr turned for financial help with the UAH budget in 1929, less than a year after Dr. Tory's departure. The UAH had accumulated $260,000 in bad debts from 1926-1929, compounded by high winter occupancy rates and little revenue from the outpatient clinic. When Premier Brownlee suggested the hospital implement the 1922 UAH Act and the government appoint three of the six board members, in return for guaranteeing $200,000 of the debt, the University quickly agreed and effectively transferred financial control of the hospital to the government.[111]

3-36

Dr. A.C. Rankin, circa 1930

Dr. Rankin remained on the UAH Board.[112] So did Acting President Kerr and his successor President Dr. R.C. Wallace, both as Chairmen. Financially strapped through the 1930s, the University reduced its $25,000 annual grant to the hospital to $17,500.[113] The Hospital re-

107. Lewis, D. Sclater — *The Royal College of Physicians and Surgeons of Canada 1920-1960*, pages 144-147. McGill 1962.

108. Scott, John W. — "Retirement dinner speech", 1969. Five pages. Copy in the Scott/Finnigan family archives.

109. Editor — *New Trail*, UofA's Alumni Magazine 17: 17, Summer 1959. Also see the profile of "Wilfred Alfred Wilson" in R. Lampard's *Alberta Medical History*, pages 228-229, 2008.

110. Lampard, Robert — "Dr. Malcolm Ross Bow" in *Alberta's Medical History, Young and Lusty and Full of Life*, pages 297-310, 2008. The Community Medicine appointment was confirmed in E.A. Corbet's *Frontiers of Medicine*, page 199, UAP, 1990.

111. Macbeth, Robert A. — *Department of Surgery of the University of Alberta: the First Half Century, 1922-1975*, pages 43-44, Department of Surgery, 2009.

112. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, pages 84-85.

113. Corbet, Elise A. — *Frontiers of Medicine*, page 52.

Class of 1925 (included Professor J.B. Collip) 3-37

sponded by reducing the number of teaching beds available to the medical school.

Dr. Rankin sat on many UofA Committees including the Library Committee (1920-c1930). In 1928 the Edmonton Academy of Medicine offered to donate its 15 year old library to the UofA.[114] The Academy's gift coincided with the completion of the Bibliotheca Osleriana, the move of Osler's books to McGill, and the opening of the Osler Library. In return the UofA library agreed to provide any library information requests free to the medical profession. More importantly the enlarged UofA medical library supported the Continuing Medical Education Course that began in 1932, a program that continues to this day.

Dr. Frank Mewburn died unexpectedly in 1929. In the Osler tradition his son, the UofA's first orthopedic surgeon Dr. F.H.H. Mewburn, donated the family's medical books and certificates to the UofA in 1940.[115] It was augmented by another donation by the Dr. Robert Mewburn family in the late 1970s.

Medical Research: Although no research facilities were incorporated in the Faculty of Medicine's new medical school (1921), there were laboratories including the Provincial Laboratory, which moved into it from Athabasca Hall. The laboratories were so constructed that research was possible, as Professor J.B. Collip demonstrated when he published 77 articles in the medical literature, 75 written during his last eight years (1920-1928) at the UofA.[116]

Dr. Rankin's UofA research career began in 1924 when Minister Hoadley asked the Faculty of Medicine to research the value of BCG administration in cattle. From 1900-1910 many cattle had been vaccinated with a live tubercle bacillus from a human source. Research at the time showed that resistance to tuberculosis in cattle was transient so the process was abandoned. The question of vaccination in humans and cattle using the new heat attenuated BCG vaccine created by Calmette at the Pasture Institute, was re-raised as part of a collaborative effort with nine other Canadian institutions. The project was funded by the National Research Council (NRC) under its new head Dr. H.M. Tory. Dr. Rankin chaired the Alberta Tuberculosis Committee.

UofA Faculty, 1929

After four years work, the UofA TB research team concluded in 1928: 1) the BCG vaccine was entirely harmless when given to newborn calves, 2) most of the vaccinated calves reacted positively for TB contact to subsequent tuberculin tests, 3) vaccinated calves that were exposed to TB showed some increase in resistance to it. Calves that were vaccinated and kept free of TB exposure for a minimum of two months, showed an 84% immunity, as compared with 21% for the controls in the study. The tubercular lesions were generally much less pronounced and less numerous in the vaccinated group than in the unvaccinated animals.[117]

Dr. Rankin went annually to Ottawa to meet with the NRCs' BCG Committee and share their results. In one published article Dr. Rankin addressed the question, "Could vaccinated cows excrete TB in their milk, if their vaccination had lapsed for a period of over 12

114. Cameron, Donald E. "Report of the Board of Governors and President of the University of Alberta, 1929-30", page 39, UAA, Edmonton. Confirmed in Merrill Distad's *The University of Alberta Library*, page 30.
115. Cameron, Donald E. "Report of the Board of Governors and President of the University of Alberta, 1939-40", page 32.
116. Lampard, Robert "James Bertram Collip", in *Alberta's Medical History*, pages 322-323.
117. Rankin, Allan C. "Vaccination against Tuberculosis with Bacillus Calmette – Guerin", Canadian Journal of Research 1: 48-85, May 1929.

BCG Committee, 1925. Dr. Rankin (front R)

months?" He said "there is no research evidence to support this point" and sagaciously commented that because of a lack of unanimity within the medical profession that "some of the questions have not yet reached the position where the uninformed could be assured of a reasonably accurate judgment, on the part of the profession as expressed by those capable of forming an opinion."[118] The Alberta Committee's final conclusion was that BCG given to newborn calves did not produce TB or carriers, and vaccinated animals were not a source of danger to unprotected animals. They were important findings.[119]

In 1950 Dr. Armand Frappier of Montreal visited Dr. Rankin and asked him to summarize the Alberta BCG research. No summary has surfaced, only the reports he presented in Ottawa and the articles referenced in Dr. Rankin's CV (attached).

The MCC Examination: Taking the MCC examination was voluntary. For the first decade (1925-1935) there were questions about the quality of medical training at the UofA. In 1926 eight of the 11 graduates attempted the national MCC examination. Six passed. That year the pass rate in Manitoba was 85% for the whole class. In 1927 five of the six Alberta MDs who attempted the MCC exams passed them. Dr. Rankin and his colleagues studied the results. Curriculum changes were made to reduce the number of didactic lectures. In 1931, 100% of the students who wrote the LMCCs passed them. In 1932, it was 22 of 24 graduating students. More notably in 1935 the UofA medical class had the highest MCC examination average in Canada, burying forever Alberta's reputation as a second rate faculty.[120]

TABLE 1: THE MEDICAL COUNCIL OF CANADA EXAMINATIONS[51] JUNE 1935

	Average in All Subjects Combined Written & Oral	*Number of Students*	*Passed*	*Referred*	*Rejected*
Alberta	71.24%	33	31	2	0
Dalhousie	70.88%	11	10	1	0
McGill	69.97%	43	41	1	1
Western Ontario	69.70%	34	34	0	0
Manitoba	68.91%	40	36	4	0
Toronto	67.78%	110	104	6	0
Queen's	67.56%	44	38	6	0

3-41

From 1925 to 1935, 220 graduates received their MDs. One hundred and five remained in Alberta, 65 moved or returned to Saskatchewan and BC, and 55 relocated to eastern Canada or went to the USA to take postgraduate studies. The stay-at-home rate was not exceptional unless the statistics from the two neighboring provinces were included. The stay-in-Alberta rate would drop from 50% to 40% by 1955.[121]

Dr. A.C. Rankin chairman, Alberta Committee on Tuberculosis circa 1928

The Literature Review Clubs:[122] Because of the isolation of the faculty, one thousand kilometers from the nearest medical school in Winnipeg, Dean Rankin and the newly arrived pathologist Dr. J.J. Ower organized evening medical staff study sessions to review the medical literature. It was an opportunity to bring the faculty and later non-faculty physicians together to review the current literature and socialize. The Journal or Reporting clubs as they

118. Rankin, Allan C. "BCG Vaccine", CPHJ 22: 459-466, 1931.
119. Rankin, Allan C., et al "Studies on B.C.G. Vaccine II Non-virulence and resistance in new-born calves", Canadian Journal of Research 6: 177-191, February 1932. Reaffirmed as important by Arnold Branch in the CMAJ 26(5): 585-586, May 1932.
120. Corbet, Elise A. *Frontiers of Medicine*, page 39.
121. Rankin, Allan C. "The Provincial Medical School", page 10, AMB 1(2): 10, 1935 and John W. Scott's The Faculty of Medicine, AMB 20: 58, August 1955.
122. Lampard, Robert See the profile of Dr. John James Ower.

were called, focused on the faculty member's area of expertise.

REFRESHER COURSE PROGRAMME

May 8-12, 1944

TUESDAY	WEDNESDAY	THURSDAY
Chairman Dr. J. R. Vant	Chairman Prof. R. F. Shaner	Chairman Dr. H. B. Hepburn
Surg. Lt. Comm. D. M. Whitelaw, R.C.N. Communicable Diseases in the Forces	Lt.-Col. Harold Orr Scabies and Other Animal Parasitic Skin Diseases	Theatre Clinics (at the Hospital) (9:00-10:30)
S/L W. S. Anderson R.C.A.F. Burns	Dr. A. E. Brown Rochester Clinical Use of Sulphonamides	
Col. W. P. Warner R.C.A.M.C. Virus Pneumonia	Lt.-Col. A. W. M. White R.C.A.M.C. Treatment of Wounds of the Extremities	Dr. A. Earl Walker Chicago Cerebral Trauma
Noon	Noon	Noon
Chairman Prof. A. Downs	Chairman Dr. J. W. Scott	Chairman Prof. G. Hunter
S/L W. S. Anderson R.C.A.F. Wound Therapy	Capt. D. J. Moss U.S. Station Hosp. Exudate Study in Acute Intra-Abdominal Disease	CLINICO-PATHOLOGICAL CONFERENCE A Case of Jaundice
Col. W. P. Warner R.C.A.M.C. Peptic Ulcer in the Army	Dr. A. E. Brown G-I and Urinary Infec- tions Therapy	Dr. A. Earl Walker Principles of Treatment of Peripheral Nerve Lesions
ROUND TABLE Problem of Back Strain [illegible] H. Mewburn H. Hepburn E. Alexander Major O. Rostrup	Lt.-Col. A. W. M. White R.C.A.M.C. Surgery in a Field Hospital LAB. DEMONSTRATION Tropical Medicine Dr. R. M. Shaw	ROUND TABLE Acute Respiratory Infections Col. J. D. Adamson Col. W. P. Warner Major W. R. Feasby S/L J. A. Kerwin Dr. W. H. Scott

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The Rankin club was the first one and started in 1920 in Dr. Ower's home. Ower remained the secretary of the club for 38 years, or until 1958, one year before it was discontinued. Medical students organized the Osler club in Medicine in 1924. The Rankin club changed its name to the Mewburn club in 1925. A Junior Reporting club for recent graduates was started in 1929. There were Reporting clubs in pathology, obstetrics and gynecology (1935), followed by the Fifth Reporting (later Conn) club for younger faculty (1933), the Jamieson Medical History club (1935) and the Collip Research club (1946), to name the most prominent early ones.[123]

Dr. Rankin was elected President of the Jamieson Medical History club in 1938. When a new Rankin club was formed in January 1946, Dr. Rankin was appointed the "patron saint".[124] In 1947 he wrote a manuscript entitled "Fever Bark Tree – the History of Quinine" and gave a presentation on it, although there is no record of it being published.[125]

The Depression: The 1930s were an exceptionally difficult time for the faculty. The number of students entering medicine declined from 31

The Provincial Medical School

UNIVERSITY OF ALBERTA FACULTY OF MEDICINE

ALLEN C. RANKIN

Dean of the Faculty of Medicine, University of Alberta

Of the ten medical schools (University of Saskatchewan gives a partial course) in Canada, that of Alberta is possibly the most isolated. Almost in the foothills of the Rocky Mountains it is far distant from its nearest Canadian neighbor and from the eastern centers of medical education. Situated in the capital city of Alberta with a population of eighty thousand people it has developed with considerable rapidity since its inception in nineteen hundred and thirteen.

3-43

in 1931, to a low of 15 in 1933. In Dentistry, the final year class was reduced to one in 1932, because of transfers.[126]

In 1932/33 there was discussion amongst the western Premiers on ways to reduce university costs. One suggestion was to consolidate the professional schools including medicine.[127] Fortunately the idea was not pursued, because one faculty did not have sufficient clinical opportunities to handle all the medical students.

The medical faculty funding was reduced to $60,000 per year in 1934.[128] The University had already reduced faculty salaries by 2-10% (1932), a further 7-15% (1933), then by another 25% (1935), paid in Social Credit scrip.[129]

Enrollment rebounded in 1935 and it was possible for the faculty to set a minimum second year entrance requirement of 65%. The rebound in applications continued, reaching 71 (1937), 102 (1938), and 125 (1939). Invigorated, Dr. Rankin proposed the faculty be re-accredited by the American Medical Association's Committee on Medical Education in 1936, with the survey to be paid for by the Board of Governors. It was the first re-survey or assessment since the four in 1918-1924. The action was precipitated in part by final year students who could afford to, leaving the UofA to complete their last two years of study in eastern Canada.

Dr. Rankin had planned to undertake a North American medical school tour in 1936 but declined the opportunity because of illness, prior commitments, and a change in the UofA presidency from Wallace to Kerr. Two years later another site review was undertaken by the new

123. Corbet, Elise A. *Frontiers of Medicine*, pages 40-43.
124. Ower, John J. Ower Diary entry for December 12, 1945.
125. Ower, John J. Ower Diary entries for March 10, 16, 1947.
126. MacLean, Hector R. *History of Dentistry in Alberta 1880-1890*, page 136, Alberta Dental Association, 1987.
127. Corbet, Elise A. *Frontiers of Medicine*, pages 48-49.
128. Scott, John W. Memoirs of a Career in Medical Education in Alberta 1914-1959, page 125, in Dr. D.R. Wilson and W.B. Parsons' *Medicine in Alberta: Historical Reflections*, AMF, 1992. It had been $47,800 (1923) and $63,500 (1927), excluding the Laboratory.
129. Corbet, Elise A. Frontiers of Medicine, page 48.

Association of American Medical Colleges. Successful again, the faculty was granted membership in the Association of American Medical Colleges (AAMC), joining McGill, Toronto and Manitoba.

These two surveys included the Faculty's undergraduate clinical programs for the first time. While the site visit reports were favorable, both criticized the shortage of clinical teaching opportunities for the students, and the decrepit state of the downtown clinic, which had been started because the University Hospital was too far away from the outpatient center of the City. Rankin was well aware of the problem.[130] After the October 1938 AAMC visit, Dr. Rankin appointed Drs. W.C. Mackenzie and H. McLennan as lecturers at the Royal Alexandra Hospital. To improve the outdoor clinic facilities, Dr. Rankin accepted the government's offer of a new Jasper Avenue location.

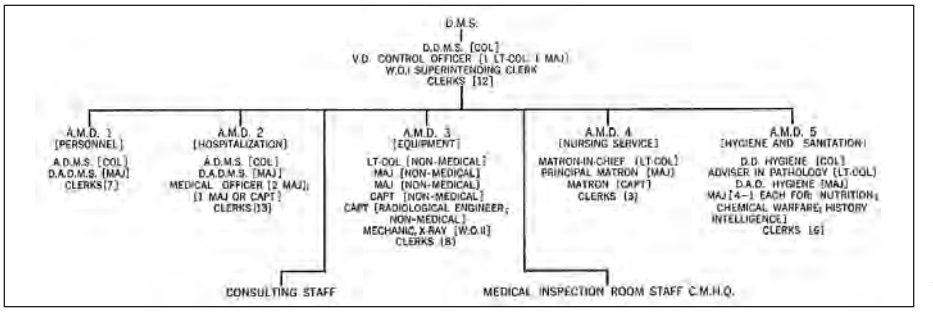
Despite the Depression, the Faculty established a B.Sc. program in medical research in 1930. It required the student to take an extra year of graduate studies in one of the basic sciences, usually after the second year of the medical program. The program demanded a thesis. No student enrolled for 10 years, until Dr. Walter Stanley Hartroft did in 1939. He went on to an illustrious career as a teacher and researcher in Canada and the United States.[131]

War Torn Years Again, 1939-1945: Since at least 1927, Dr. Rankin had been giving medical lectures to the University Officers Training Corps or COTC. As soon as war was declared in September 1939, the Canadian Army asked

Boyle Street Out patient clinic, 1921-1939

Dr. Rankin to become the Director of Hygiene and Sanitation Services. As the Director Dr. Rankin was the senior consultant responsible for Hygiene, Nutrition, Chemical Warfare, Histology, Pathology as well as the Mobile Hygiene and Bacteriology Laboratories in the Army.[132] Rankin's acceptance was subject to the University giving him an LOA, which he applied for on September 14. Accepted, he left for Ottawa on October 5th. Mrs. Rankin joined him in December. Dr. Ower took over Dr. Rankin's duties from 1939 to 1943 as the acting Dean, and as the acting Director of the Provincial Laboratory.

In June 1941 the Deputy General of the Medical Services asked for 300-350 more doctors. The faculty agreed to shorten the intern year to 8 months and graduated the class of 1942 in January.[133] In anticipation of a revised request for a total of 800 physicians by Defense Minister J.L. Ralston in June 1942, the undergraduate program was compressed, with each



3-45

The chart of the Canadian Medical Services, Ottawa, 1944

130. Macbeth, Robert A. The *Department of Surgery of the University of Alberta*, pages 81-85.

131. Corbet, Elise A. *Frontiers of Medicine*, page 136.

132. Feasby, William R. *The Official History of the Canadian Medical Services 1939-1945*, Volume 1, pages 56-60, 95, 541, Kings Printer 1953.

133. Ower, John J. Ower Diary entry for May 19, 1941. Dr. Rankin represented the UofA at the Deans' meeting in Ottawa, along with senior members of the military medical services, only after The Council of the Faculty gave him the authority to represent the faculty, as noted by Dr. R.A. Macbeth in the Department of Surgery, pages 113-117.

academic year reduced to six months and taught continuously.

In October 1941 Dr. Rankin indicated there was no chance of him returning to Alberta before the fall of 1942. The implementation of a general army order, that any officer over the age of 60 must retire, gave Dr. Rankin a reason, but he was unable to secure his release until September 13, 1943. On his return he was immediately immersed in the preparations for the anticipated postwar surge of veterans, and the building and opening of the dormitory style 240 bed Mewburn Pavilion for veterans on February 22, 1945.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The UAH Medical Staff, 1939

Dr. Rankin also supervised the drafting of plans for the expansion of the west and east wings of the medical school, in accordance with the University's 1942 Parlee expansion plan. They were opened for the 1948/49 session. Then Drs. Rankin and Ower had a meeting with President Newton in November 1943 to outline the need for a new Provincial Laboratory. A Committee was struck to study the problem.

In July 1944 Dr. Rankin told the President he would step down by September 1, 1945. He retired in August 1945 as the Dean and Director of the Provincial Laboratory at age 67. By then 619 MDs had graduated from 1925-1945. Another 150 had graduated from McGill or Toronto before 1925, while 50-75 went east to complete their MDs after 1925. As a retirement focus, in December 1945 Dr. Ower proposed a new Rankin Reporting club be formed with Dr. Rankin as the patron. Rankin grudgingly agreed.[134]

Awards and Honors: In January 1946 the UofA awarded Dr. Rankin an Honorary Doctor of Laws. Dr. Ower presented the citation.[135] On May 7, 1946 Drs. Rankin and Ower were granted honorary memberships in the Edmonton Dental Association in recognition of their services to dental education.[136] In July 1946 Dr. Rankin let his name stand for Chancellor of the UofA, but withdrew it after having second thoughts.[137]

To many Dr. Rankin remained "the Dean".[138] He had presided over the UofA Faculty of Medicine for longer than anyone else, and remained on staff for one of the longest periods – 32 years. He weathered the growth cycle after WWI, the spartan times during the Depression, and the preparation of the faculty for the surge that followed WWII.[139]

Dr. Rankin was made a Fellow of the Royal Sanitary Institute of England and an Honorary Life Member of the Canadian Public Health Association. His only post-Dean medical work was as the Chairman of the Medical Reference Board of the WCB. With Dr. Robert M. Shaw he was granted the R.D. Devries Award by the


3-47

(L to R)Florence Rankin, Margaret Orr, Mrs. D.J. Dunn, Dr. Allan Rankin, Royal Visit 1939

134. Ower, John J. Ower Diary entries for December 12 and 15, 1945.
135. Ower, John J. Alberta Medical Alumni Bulletin #4, page 11, April 20, 1946.
136. Ower, John J. Ower Diary entry for July 14, 1946.
137. Ower, John J. Ower Diary entry for May 7, 1947.
138. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, pages 65-66.
139. Thompson, J.S. "Dr. Allan Coats Rankin. An Appreciation", CMAJ 81: 57-58, July 1, 1959.

Public Health Association in 1955. In 1958 UofA President Dr. Walter Johns consulted Dr. Rankin as he developed his 50th anniversary program for the UofA.[140]

Dr. Rankin endowed an award for the most deserving and outstanding student in medicine.

Dr. Rankin: The life-long relationship between Drs. Rankin and Ower began in the #1 Canadian General Hospital Laboratory, on the Salisbury Plains in December 1914, or perhaps even earlier in 1909 in the Montreal based #5 Field Ambulance. By 1918 Dr. Ower had accepted a position working under Dr. Rankin at the UofA's Provincial Laboratory.

Dr. A.C. Rankin (L), friend, Dr. H.A. Orr, fishing at Victoria circa 1950

The two leaders shared common McGill undergraduate and postgraduate roots. Dr. Ower frequently sought Dr. Rankin's advice on professional as well as personal matters, even during Rankin's WWII absence. When Ower substituted for Rankin during WWII there was no disruption to the UofA program. They had similar approaches, always waiting for the best time or opportunity to make faculty decisions. Their goals were simply to increase enrollment, expand teaching facilities, improve the quality of medical students and teachers, deflect political interventions, and begin the first medical research program. They were two of a small core of collegial, socially active leaders and friends, who stabilized the program through the Depression, compressed it during WWII and prepared to respond to the post WWII veterans applicant surge.

On a personal note, Dr. Rankin's driving habits were worthy of mention. Despite several accidents, numerous fender benders, and a few tickets, he was remembered for one cross-town laboratory visit. He came out of the lab, hopped into the car he thought he had left running, and drove it away to the next laboratory. It wasn't the lab car, rather a Mountie's car. Rankin only realized his error when he was approached during rounds in the next hospital.[141]

Driving distances were no impediment. In retirement he would drive to Victoria for New Year fishing breaks with the Orrs, or to Quebec for the summer with his friend Professor John MacEachern.

Like President Tory, Dr. Rankin held an annual tea in May at the Macdonald Hotel for faculty and friends. It was always well attended, by up to 200 guests. Margaret Orr joined him as hostess after his wife died. Although he was again a bachelor after 1943, his home was always busy with drop-ins and out-of-town visitors.

By the mid 1930s Dr. Rankin's health was anything but robust. He was hospitalized about once a year usually for colds, the flu or fatigue. In 1937 he passed some blood and collapsed when he got up during the night. After that his stomach became a recurring problem. In retirement he developed diverticulitis and a recurrent cystitis. On July 25, 1951 he had gallstone problems and required a UAH admission and IVs because of jaundice. On September 26 he fell on the stairs of his house and cracked several ribs. It resulted in another hospitalization with pneumonia.

Still Dr. Rankin was robust enough to be photographed in May 1959 with the next three UofA Deans of Medicine - Drs. Ower, Scott and Mackenzie.[142] He passed away a week later on May 27, 1959 at the age of 82. Dr. Rankin was survived by two brothers Ernest, a Montreal Notary Public and John Rankin. Burial was in the Mt. Royal Cemetery in Montreal.

Dr. J.S. Thompson noted in his 1959 "Appreciation", how Dr. Rankin used the time-honored qualities of courtesy and kindness, consideration and wisdom, and the requisite organizational skills to knit together a team of teachers, to survive and be successful. "His thorough understanding of the decisions necessary for survival in the competitive academic and political worlds were repeatedly challenged."[143]

140. Johns, Walter S. *A History of the University of Alberta 1908-1958*, page 275, UAP, 1981.
141. Petley-Jones, Mary Personal recollection, June 7, 2002. Corroborated by Isabel Evans, July 31, 2009.
142. Corbet, Elise A. *Frontiers of Medicine*, opp. pages 76-77. Elizabeth Wickheim indicated Dr. Rankin died of cancer. Personal communication September 27, 2009.
143. Thompson, J.S. "Dr. Allan Coats Rankin. An Appreciation", pages 57-58.

Retired Chancellor Dr. E.P. Scarlett described Dr. Rankin as "one of those remarkable Victorian breed, who processed the virtues of that age," when he acknowledged Dr. Rankin on the 50th Anniversary of the Faculty of Medicine in 1963.[144]

Keywords: United Empire Loyalist, MRCS/DPH, Beriberi in Siam, #5 Canadian Mobile Laboratory, 1st WWI Chlorine Gas attack - 2nd Battle of Ypres, Malaria in Flanders, Trench Fever, Orr Disinfector, Director - Provincial Pathology Lab (1914-1945), Dean (1920-1945), TB Research, WWII - Director of Hygiene and Sanitation Services in the CAMC

3-49

Academy of Medicine Life members (35 yrs)
Drs. A.C. Rankin, D.B. Leitch, H.H. Hepburn,
J.J. Ower, 1955

There is no limit to what can be accomplished if we don't mind who gets the credit. Robert Woodruff

3-50

Rankin Memorial, Mount Royal Cemetery,
Montreal

This abridged official citation of the services of our colleague to state and community would in no sense be complete without some reference to certain inherent qualities which in addition to his academic and scientific attainments have been fundamentally responsible for the effectiveness of his life in this University circle and elsewhere in the world where duty has found him. Certain attributes of character which seem to be diffusely embedded in the very warp and woof of his nature tend to render him the prototype of what the late Sir William Osler described as the good physician possessing to a high degree the basic qualities of honor and loyalty, quietness and efficiency, dignity and wisdom, imperturbability and equanimity, savoir faire, courtesy and diplomacy and lastly but by no means least friendliness, thoughtfulness for and kindliness to other people.

All of which readeth a full book—Virum clarissimum

JOHANNUS JACOBUS OWER
Decanus.

3-51

From Dr. J.J. Ower's citation of Dr. A.C.
Rankin for an Hon. LL.D, UofA,
January 5, 1946

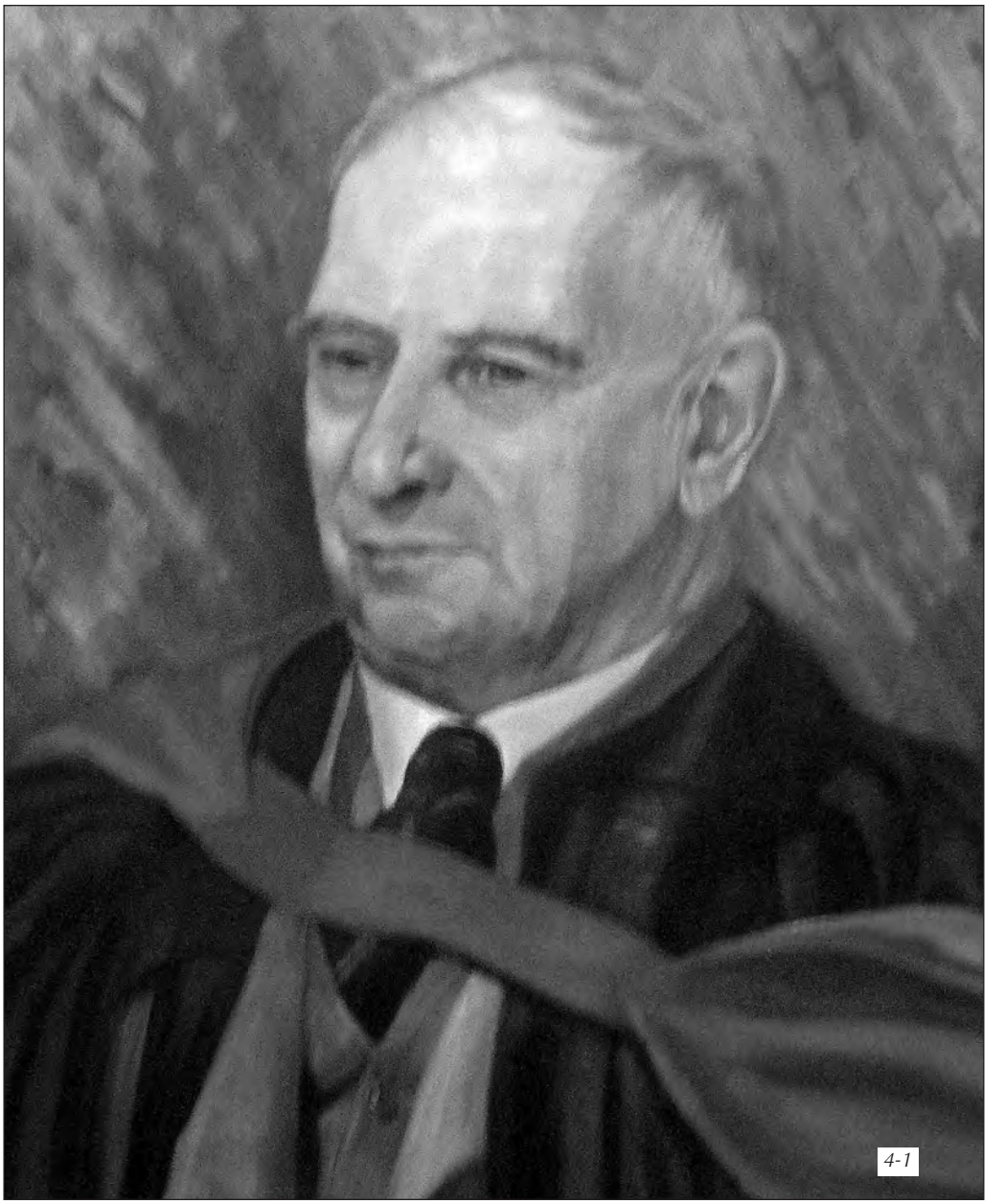
The government of the province, which has always shown a laudable appreciation of its responsibilities regarding the prevention of disease and the care of the sick and has, indeed, pioneered in the introduction of many progressive health measures, some of which have been the first of their kind in Canada, can quite properly derive satisfaction from the achievements of the graduates of this school which holds such a unique territorial position and has received the approbation of professional and educational authority. The success of this school has been largely due to the efforts of members of the local profession. For a long time they have carried on under limited physical circumstances, gradually year after year adding to the reputation of the faculty and sending out a well trained product now eagerly sought to fill an important public demand. The University and the Province can indeed take pride in this important participation in professional education.

ALLAN COATS RANKIN M.D.

3-52

From Dr. A.C. Rankin's Convocation address,
January 5, 1946

144. Scarlett, Earle P. "Quaecumque Vera Medica", AMB 28(4): 163-166, November 1963.



Dr. John James Ower, MD, FRCPC
1885-1962

Dr. John James Ower, MD, FRCPC 1885-1962

He had a buoyancy of spirit and humor that helped him to bear "the slings and arrows of outrageous fortune" of which he had more than his share.[1]

Introduction: Dr. John James Ower was part of a contingent of influential graduates from McGill, who came west and led the growth and development of the UofA's Faculty of Medicine from 1913 until 1959. They were not easy times to secure a stable faculty, and mold them into a teaching team. There were two World Wars, with a Depression in between, and a growing province that needed more doctors.

Dr. J.J. Ower, by Karsh, 1948

Fortunately there was a supportive Premier (Rutherford) and UofA President (Tory) who wanted a fully-accredited, degree-granting, medical school. Dr. Tory's guiding hand on the faculty lasted until 1928 and could be felt through his successors for the next 30 years.

Until after WWII, the efforts of the faculty focused on teaching and educating undergraduate medical students, in the small isolated provincial capital of Edmonton. Success required patience, hard work, teamwork, faculty stability, some new approaches, adequate government and university funding, and the stimulus that comes from enthusiastic students asking penetrating questions.

The McGill Medical School, in 1910, rebuilt after the 1907 fire

Dr. Ower the second UofA Dean of Medicine understood students. Colleagues called him a perpetual student. As Acting Dean (1939-1943) and Dean (1945-1948) he endeared himself to his students in ways they remembered for a lifetime. Whether it was his 40 year commitment to Scouting, 38 years to the Ower Reporting club, or 32 years to the faculty, when he made a commitment Dr. Ower held to it.

Dr. Ower retired in 1948. By then the faculty was graduating 50 MDs per year. The plan for teaching medical postgraduates had been initiated, and the seeds for M.Sc. and Ph.D. programs planted. Interest in medical research had resurfaced and the first major expansion of medical facilities at the UofA since the medical school was built, had been completed, were under construction, or were in the planning stage. The post war surge of veterans had peaked. There was broad support from the medical community for the Faculty, which already had a reputation for survival, a growing pride in its medical teaching program, and a post WWII reputation as a faculty to join, as the 1950s would confirm.

The contributions of Deans Rankin and Ower to the development of the medical school, occurred before oil was discovered in Alberta (1947), and significant provincial oil revenues increased the faculty's operating budget (1956-1959).

Dr. Ower turned over the deanship in 1948 to the first McGill graduate who was not a

1. Scott, John W. Memoirs of John W. Scott 1914 to 1979, page 9, March 1979. The quote is from Hamlet, Act III, verse 1. Copy deposited in the Scott/Finnigan family archives.

Johnny Ower (R) and the McGill Running Club

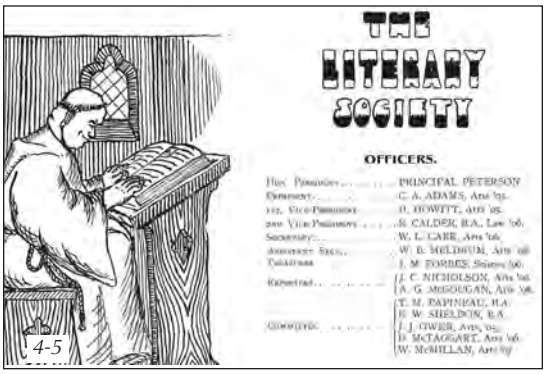
pathologist or laboratory specialist, Dr. John W. Scott, and returned to his first love – pathology, for his last three years on the faculty.

Youth to MD and Pathology:[2] John James "Johnny" Ower (pronounced Orr) was the eighth consecutive John Ower. He was born in Smiths Falls, Ontario on December 4, 1885. After taking his primary schooling, he completed his junior matriculation in 1901 and headed to McGill. He recalled three impressionable experiences as a youth that guided his decision to take medicine. As a youngster, members of his family protected cemetery tombs from being entered or gravesites unearthed by medical students, ostensibly to procure bodies for the nearby Queen's medical school. He had a school chum who developed diphtheria and died. At age 12 Ower had his own need to see a doctor when he broke his leg. It was set by his local family physician "straighter than the other one without the assistance of x-rays".[3] Although he flirted with taking law, his interest in medicine never left him.

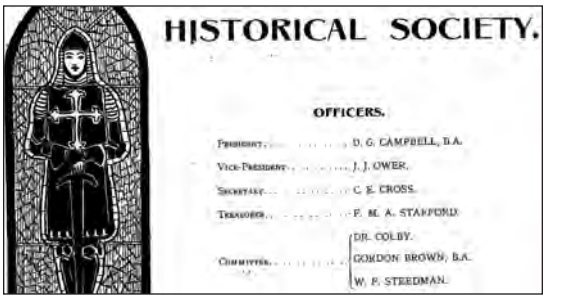
In 1901 Johnny Ower was accepted into the McGill undergraduate program at the age of 16. He earned his B.A. in 1905, focusing on the biosciences. That fall he started his formal medical training and graduated in 1909.

During his McGill years Ower was a member of the McGill Harriers (runners) Club. Their annual marathon included two sprints around Mount Royal in the center of Montreal. Ower's best placing was fourth. The captain of the team was W. Muir Edwards, an engineering student, who was the son of Dr. Oliver and Henrietta (of Five Persons fame) Muir Edwards of Fort Macleod. Muir Edwards, became the first Head of Engineering at the University of Alberta (UofA), but died during the Spanish Flu epidemic on November 18, 1918, after acquiring the flu while treating UofA students in Pembina Hall. Ower was also Vice-President of the McGill Historical Society, despite his later comments about preferring to live in the present, not the past.[4]

An irascible student, Ower and classmate Leighton Conn painted the arch dome of the Arts building with their class "09" emblem. The sandblasting of the advertisement significantly reduced the cautionary money each member of the class deposited with the University before they started. At Convocation, the "09" class valedictorian lambasted the Dean, the well known anatomist and surgeon Dr. Francis J. Shepherd. The Dean responded to the diatribe with "my only comment is that knowledge is the prerogative of youth and wisdom of age".[5] As Dr. Ower recounted in



J.J. Ower, McGill Literary Society executive



J.J. Ower, VP McGill Historical Society 4-6

2. Ower, John J. "Pictures on Memory's Walls. Some of the Polychromasia of a Pathologists Life and Times", Part I, CACHB 19(1): 1-22, May 1954.
3. Ower, John J. "Pictures on Memory's Walls", Part I, page 3. It still left him 5'5" in height (personal communication, Isabel Evans).
4. Ower, John J. "Pictures on Memory's Walls", Part I, CACHB 19(1): 2 May 1954.
5. Ower, John J. "Pictures on Memory's Walls", Part I, page 11.

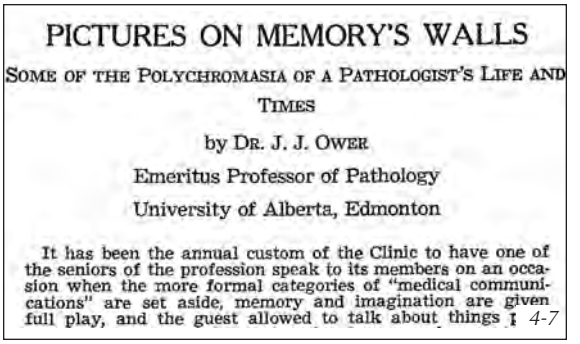
1954, "the golden haze of student days is around about us yet".[6]

Ower's graduation package included a certificate of attendance for every one of his courses, signed personally by the great ones of McGill, as he called them. His Chief of Pathology, Dr. George Adami, was the author of the standard two volume Textbook of Pathology. For Therapeutics he had Dr. Blackader, the father of Pediatrics in Canada, whom Ower described somewhat irreverently as a polypharmacist. At clinics he learned from the well-read internist, writer and poet, Dr. John McCrae. When he missed a lecture on the newly discovered relationship between sore throats, streptococcal infections, rheumatic fever and nephritis, he failed the oral exam. Fortunately it occurred in his third and not his last year. In pathology he didn't have a microscope with a gear to adjust the focus, only a sliding eye-piece. After complaining to his instructor, Ower was reminded that it was the same type of microscope Osler used.

Because he didn't have experience examining female patients, Dr. Ower started his internship (1909/1910) with nine months at the Montreal Maternity hospital. After his internship he took rotations in anesthesia, medicine and surgery, and rode horse-drawn ambulances to attend emergency cases. His privilege was pumping the hand bell.

As Dr. Osler had demonstrated through meticulous autopsies and clinical pathology rounds two decades before, seeing medicine from the perspective of the deiner (morgue assistant) was insightful. There were many autopsies from multiple fracture patients in nearby industrial factories, delayed referrals for appendectomies, perforated ulcers, osteomyelitis, pneumonias with empyema, failed typhoid treatment, pernicious anemia, rheumatic fever, innumerable cases of tuberculosis and late stage syphilis. Blood cultures for bacteria were new, as were Wassermann tests for syphilis. So was carbon dioxide freezing of blocks of pathology tissues secured during surgery or autopsy. That advance led to a new pathology slide museum at McGill, as it did at other Faculties of Medicine.

After completing his postgraduate training in 1913, Dr. Ower was appointed the AA Browne



PICTURES ON MEMORY'S WALLS

SOME OF THE POLYCHROMASIA OF A PATHOLOGIST'S LIFE AND TIMES

by DR. J. J. OWER

Emeritus Professor of Pathology

University of Alberta, Edmonton

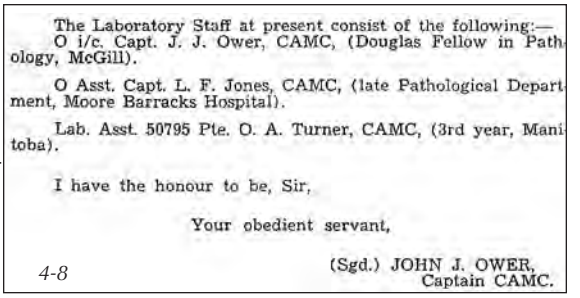
It has been the annual custom of the Clinic to have one of the seniors of the profession speak to its members on an occasion when the more formal categories of "medical communications" are set aside, memory and imagination are given full play, and the guest allowed to talk about things I 4-7

CACHB Part I, 19(1), May 1954

Fellow in Pathology. "By then he knew he preferred patients who couldn't talk back, to ones who cried on his shoulder".[7] It led to a year of pathology under Dr. Frank Mallory, the expert on eosin and methylene blue staining at Harvard in Boston.

Before leaving Montreal he married Lena Cossman Anderson, a Montreal General Hospital (MGH) RN, originally from Nova Scotia. After his year in Boston Dr. Ower was successful in securing the James Douglas Fellowship in Pathology. Searching widely for his next place to study, he was accepted at the Ludwig Aschoff Laboratory in Germany. During the transoceanic trip with his wife, word was received that England had declared war on Germany on August 4, 1914. That left him in Glasgow, Scotland awaiting the arrival of his #1 Canadian General Hospital colleagues. He spent his free time working under Sir Robert Muir.

World War I:[8] While a medical student, Ower joined the newly formed 5th Field Ambulance in 1909. It was the last year Dr. Rankin was also a member of the unit. In 1912 Dr. Ower received a certificate of military instruction and another one on equitation. On graduation



The Laboratory Staff at present consist of the following:—
O i/c. Capt. J. J. Ower, CAMC, (Douglas Fellow in Pathology, McGill).

O Asst. Capt. L. F. Jones, CAMC, (late Pathological Department, Moore Barracks Hospital).

Lab. Asst. 50795 Pte. O. A. Turner, CAMC, (3rd year, Manitoba).

I have the honour to be, Sir,

Your obedient servant,

4-8 (Sgd.) JOHN J. OWER,
Captain CAMC.

Laboratory Staff, #1 Canadian General Hospital, 1916

6. Ower, John J. "Pictures on Memory's Walls", Part I, page 5.
7. Evans, Isabel Interview with Dr. Robert Lampard, August 16, 2008. Isabel Evans married Theodore Orr, Dr. J.J. Ower's youngest son.
8. Ower, John J. "Pictures on Memory's Walls, Some of the Polychromasia of a Pathologists Life and Times", Part II, CACHB 19(2): 35-62, August 1954.

he was commissioned a Lieutenant in the Canadian Army Medical Corps Reserve and promoted to Captain on June 25, 1913. The #1 Canadian General Hospital was formed quickly in 1914 at Valcartier, Quebec, primarily of officers and men from the 5th Field Ambulance. It was originally organized and staffed to treat 800 patients.[9]

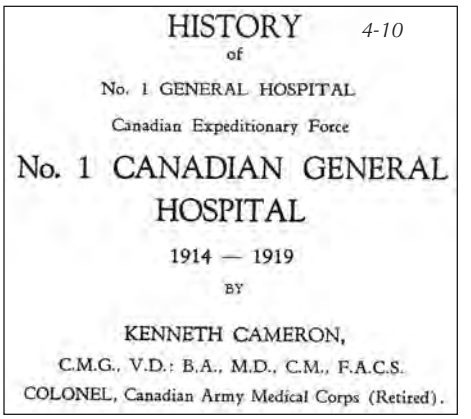
The #1 Canadian Hospital went overseas in October 1914. The troops may have been carrying the meningococcal meningitis bacteria with them, as there were four cases diagnosed as the troops left Canada. A severe outbreak followed once the hospital staff were encamped in tents on the Salisbury Plain in Southern England. There were 50 deaths. Professor Adami disputed the conclusion that Canada was the source.[10]

An emergency pathology laboratory was opened by the hospital under Dr. Allan Rankin, to provide diagnostic information for the consultants, who were brought in to help with the diagnosis, treatment and where necessary the performance of autopsies. Dr. Ower was assigned to the hospital medical staff on December 23, arriving three days later to work in the laboratory under Dr. Rankin.

In February 1915 Dr. Ower was transferred to the #2 Canadian (Toronto) General Hospital. The #2 Canadian Hospital was already located at the Golf Hotel at Le Touquet on the French coast, south of Boulogne and opposite the English Channel port of Dover as part of a buildup of allied hospitals continued in the area, with serious consequences three years later. In France Dr. Ower saw his first case of Trench foot. It was a mild form of frostbite, with a swollen, painful or numb leg that usually recovered in six to eight weeks. There were serious cases of acute nephritis. Any gas gangrene patients usually died within hours. Typhoid was virtually eliminated by vaccination. There were long lulls and downtimes between major battles.

In 1915 new pathology equipment arrived from Britain. So did more British hospitals bringing the area bed total to 10,000. There was even one Blue Cross hospital for horses.

In April 1915 the Germans began a drive to divide the British forces at Calais. They used chlorine gas for the first time in the second battle of Ypres.[11] The French colonial troops bolted leaving the Canadians exposed to the German troops and the chlorine gas. The symptoms started with cyanosis followed by bronchopneumonia, and the lungs filled with fluid causing respiratory suffocation. There were 1,200 casualties in one week.


HISTORY 4-10
of
No. 1 GENERAL HOSPITAL
Canadian Expeditionary Force
No. 1 CANADIAN GENERAL HOSPITAL
1914 — 1919
BY
KENNETH CAMERON,
C.M.G., V.D.: B.A., M.D., C.M., F.A.C.S.
COLONEL, Canadian Army Medical Corps (Retired).

By October 1915 there were 23,000 patients and beds in the sprawling camp. The #1 Canadian Hospital census was up to 2,300. In November 1915, Dr. Ower was transferred back to the #1 hospital, and on April 15, 1916 he was appointed the officer in charge of the hospital laboratory. He remained at the hospital until the end of the war.[12] On December 5, 1916 he was promoted to Major.


4-9

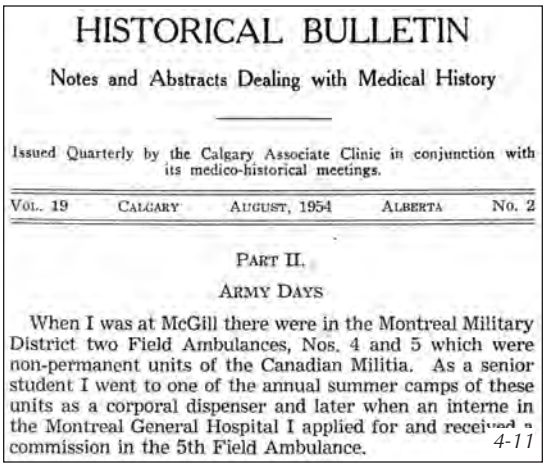
(Front) Lt. Col. J.A. Hutchinson (L), Col. G.E. Armstrong (R). McGill Professors of Surgery, with their students. Major Ower 2nd from (L). Feb 17, 1917

9. Cameron, Kenneth — "History of #1 Canadian General Hospital 1914-1919", 667 pages, Tribune Press, Sackville, New Brunswick, 1938.
10. MacPhail, Andrew — *History of the Canadian Forces Medical Services*, pages 165, 235, 262-263, Kings Printer, 1925.
11. Lampard, Robert — See the Dr. Allan Coats Rankin profile for further details on the first German Chlorine gas attacks in April 1915.
12. Cameron, Kenneth — History of #1 Canadian General Hospital 1914-1919, pages 261-263. Dr. Ower summarized the Laboratory's first year of work to June 1, 1916. The work of the laboratory doubled in the next year (page 345).

#1 Canadian General Hospital – a Tent Hospital until 1917

Dr. Ower together with other pathologists in the camp began continuing education conferences for their colleagues.[13] It wasn't long before two US medical units arrived at the now crowded camp. One was the famous Harvard medical unit under Drs. Richard Cabot and Harvey Cushing. The American physicians arrived well before the USA declared war on Germany in 1917.

Dr. Ower noted that one third of the patients they saw were wound and chest injuries. Two thirds had various illnesses. Nephritis was common. Trench foot could be prevented with grease, massage and two clean pairs of socks a day. Trench fever was a new problem that became apparent in September 1915. It was identified as an E. coli seronegative syndrome by two McGill trained men, pathologist Dr. A.C. Rankin and ENT specialist Dr. G.A. Hunt.[14] The vector was later determined (1918) to be lice and the organism Bartonella Quintana. In 1915 Dr. Harold Orr of Medicine Hat identified the treatment for trench fever – to heat soldiers' clothes to 65 degrees Celsius


HISTORICAL BULLETIN

Notes and Abstracts Dealing with Medical History

Issued Quarterly by the Calgary Associate Clinic in conjunction with its medico-historical meetings.

VOL. 19 CALGARY AUGUST, 1954 ALBERTA No. 2

PART II.

ARMY DAYS

When I was at McGill there were in the Montreal Military District two Field Ambulances, Nos. 4 and 5 which were non-permanent units of the Canadian Militia. As a senior student I went to one of the annual summer camps of these units as a corporal dispenser and later when an interne in the Montreal General Hospital I applied for and received a commission in the 5th Field Ambulance.

4-11

CACHB Part II, 19(2), August 1954

for 15 minutes.[15]

Dr. Ower enumerated other wartime Canadian-linked advances including metal helmets, the Carrel-Dakin hyposulfate cleansing solution, adding citrate to blood to store it longer using the formula developed by Toronto's Captain (Dr.) Robertson, and avoiding infectious jaundice (Wiels disease).[16]

Dr. Ower had worked under canvas tent conditions since arriving at Le Touquet in 1915. When the newly appointed #1 Canadian Hospital's commanding officer, Dr. R.M. Simpson of Winnipeg arrived in 1917, he was not impressed. He threatened to reduce the hospital bed capacity by one half if there weren't huts for patients and staff to replace the tents. Twenty new huts arrived within six months. So did more casualties in the summer of 1917 when the Germans introduced mustard gas. They rued the day when the Allies retaliated by using it in earnest.

The huts arrived in time to handle the next German breakout attempt in April 1918, which occurred while Dr. Ower was visiting a colleague at another section of the front line. As the battle continued he hurried back to his hospital by train and bicycle, in time to see its role change from a treatment centre to one of casualty clearing, it was so busy. Casualty clearing stations were primarily for debridment, suturing and referral and not treatment.

In April 1918 casualties reached their peak. By then the #1 Canadian Hospital had earned a reputation for successfully treating hip fractures. Good results were achieved by using a four poster bed, a Thomas splint and metal calipers for traction. The hospital at one time had 300 hip-fractured patients.

On May 12, 1918 the sprawling hospital site, frequently over-flown by German Zeppelin observation planes, was attacked with incendiary bombs. Of the 250 staff at the #1 Canadian Hospital, 58 were killed and 47 were wounded. Eight of the hospital's patients were killed and 34 were injured. After the attack the

13. Cameron, Kenneth *History of #1 Canadian General Hospital*, pages 472-475.
14. MacPhail, Andrew *History of the Canadian Forces Medical Services 1914-1919*, pages 257-260. The task of searching for a virus as a cause of the PUO was assigned to #26 General Hospital (Captain Bashford) and the Harvard Unit. Research animals were in short supply and strictly limited. Skin biopsies were done by Drs. Ower and H.E. MacDermot, without positive results (History of #1 Canadian General Hospital, pages 442-451).
15. Lampard, Robert See the Dr. Allan Coats Rankin profile.
16. Ower, John J. "Pictures on Memory's Walls", Part I, pages 50-51.

Laboratory, #3 Canadian General Hospital

hospitals were marked with a Red Cross and dispersed to the extent possible.

In June 1918 Dr. Ower saw a new disease, which they hadn't seen before - the Spanish flu. The cases were mild and patients recovered in four to five days. They literally came onto the hospital grounds as a total battalion, up to 1,000 men at a time.[17]

In July 1918 Dr. Ower's application to the UofA was accepted and he returned to Canada. His arrival preceded the Spanish flu, which came in September/October. Refused discharge, he was assigned to the St. Anne de Bellevue Military Hospital as a pathologist. His work there and at the MGH involved doing compliment fixation tests (Wassermanns) for syphilis on the returning soldiers, and autopsies on flu victims. By then it was evident that the mortality rate from the Spanish flu was markedly higher than it had been in France.

In September 1919 Dr. Ower moved with his family to Edmonton where he was discharged with the rank of Major. His only known post-WWI appointment was as Lt. Col. Ower, Officer Commanding #13 Stationary Hospital from 1929-1933 in Edmonton.

When Dr. Earle Scarlett convinced him to write and talk about things past, present and those to come in 1954, Ower gave memory and imagination full play. He entitled his two part written recollections "Pictures on Memory's Walls – Some of the Polychromasia of a Pathologist's Life and Times". He introduced the recollections with the word polychromasia "to appeal directly and imaginatively to the medical mind and send the uninitiated layman to the dictionary".[18] The articles end with Ower's arrival in Edmonton. He promised to continue relating his experiences on another occasion, but sadly never did.

Professor of Pathology (1919-1939): Although the reasons for his decision to accept the UofA appointment in 1918/1919 were not documented, his anatomy tablemate Dr. L.C. Conn had already moved to Edmonton in 1913 and would become the first Professor and Head of Obstetrics & Gynecology at the UofA in 1923.

Two important McGill graduates had preceded Dr. Ower to Alberta – Dr. A.C Rankin, who graduated with an DPH in 1909 and was appointed the second Director of the Provincial Laboratory (1914), and Professor H.M. Tory who was the first UofA President, appointed January 1, 1908.

Dr. Ower took up his new appointment as the Provincial Pathologist, Professor and Head of Pathology at the University of Alberta, and Pathologist at the Provincial Laboratory, in September 1919. His arrival preceded by one month the return of Lt. Col. A.C. Rankin, the Director of the Provincial Laboratory and its Bacteriologist, in October.

Dr. Ower was the third pathologist to come to Alberta, after Dr. Rosamund Leacock at the Calgary General (1912), and Dr. Morton Hall at the Royal Alexandra Hospital (1914), who returned to the RAH after WWI in 1919. For 25 years Dr. Ower provided pathology supervision to the Misericordia and Edmonton General Hospitals.[19] He would sometimes bike across the High Level bridge to attend meetings or conferences. At different times he was the President of the medical staff of both the hospitals.

All three hospitals (the UAH, the General to 1946, and the Misericordia to 1952) relied on the Provincial Laboratory for their surgical pathology service. After the new medical school building was opened in 1921, the

Dr Ower told some of his students that as a Regimental Medical Officer in the front in France during WWII he developed a severe unremitting abdominal pain. He was evacuated down the line and ended up in a Canadian Army hospital in England where a diagnosis of pancreatitis was confirmed by none other than Sir William Osler.

Dr Frank Hall was in the class ahead of ours and Dr Ower was their Honorary Class President. Frank told me that at a class reunion many years later Dr Ower greeted the group by going down the names in reverse alphabetical order and missed no one- despite being blind!

4-14

Letter from Dr. G.S. Balfour, August 6, 2009

17. Ower, John J. "Pictures on Memory's Walls", Part I, page 62.
18. Scarlett, Earle P. "A Medical Miscellany" in the CACHB 19(2): 66, August 1954.
19. Letts, Harry Early History of Pathology/Laboratory Medicine at the University of Alberta, Her Teaching Hospitals and the Provincial Laboratory, as reprinted in *Alberta's Medical History*, pages 524-533, 2008. Dr. Rankin's brief stay in May-August 1914 was excluded. Also see the Ower diary entry for December 31, 1944.

Provincial Laboratory was relocated from the basement of Athabasca Hall where it had been since 1911, to the medical school basement. It would remain there until 1950, when a self-standing Provincial Laboratory was opened immediately west of the UAH.

In 1924 Health Minister George Hoadley amended the provincial Hospital Regulations to require the examination of all surgical tissues obtained during surgery anywhere in the province, by a pathologist. The volume of tissue specimens rose from 1,500 (1924/25) to 9,000/year (1940), except for 1933-1935 when the provincial service was temporarily suspended by Minister Hoadley as a cost reduction measure. Specimens came from 80 different hospitals. The volume exceeded any other surgical pathology service in Canada, by far. The program was markedly cut-back in 1941, as the teaching demands increased and Dr. Rankin and other staff enlisted in the Army.[20]

Other Provincial Laboratory tests increased even more, rising from 600 tests performed in the provincial lab's first year (1907) to 67,000 (1914), and to much higher figures in succeeding years. Wassermann tests for syphilis started in 1919. Together with gonococcal smears, they increased from 1,000/year (1919), to 33,000 (1940). With pressure to test new military recruits, these two tests rose to 60,000/year (1942).[21] Staff-wise, Dr. Ower was assisted by Dr. Harold Orr who came back to Edmonton after the war (1919) as a Syphologist and public health specialist and later as a Dermatologist, and Dr. H.A. Vango (1924) who arrived as an assistant Pathologist. Sadly Dr. Vango died in 1931 from a streptococcal septicemia secondary to a skin-cut during an autopsy. He was succeeded by UofA graduate Dr. J.W. Macgregor in 1932.

Edmonton Hospitals circa 1921

In 1929 Dr. Ower was offered and seriously considered a pathology position at the Toronto Western Hospital and University of Toronto for $7,500 per year. Not wanting to leave, he negotiated a minor salary increase and stayed in Alberta.[22]

In May 1931 Dr. Ower left for Minneapolis, before traveling on to Hamburg, Germany for medical discussions, and improve his German. It was followed by a tour of Europe and the UK with his wife. Fortunately Dr. Vango was able to replace him, and did not suffer his fatal septicemia until December, two months after Dr. Ower returned.

After 2-10% salary reductions were introduced in 1932, Dr. Ower was relieved when President Wallace came over for dinner and said there was "no question of shutting down the medical school".[23] The evening was part of the Owers' active social life. That year, it included attending the 150th anniversary of the United Empire Loyalists and the annual McGill Alumni dinner with Dr. Rankin.

Provincial Laboratory Place of 1,000 Tests

Work of Staff Increases During War Time

By HELEN TOOTH

"Spring cleaning?"

As the visitor enters the door of the basement of the Medical Building that leads to the Provincial Laboratory in Edmonton, that is the question that one is tempted to ask.

All up and down the hallway is piled a profusion of cardboard boxes, crocks and crates. They are two tiers high and look as if they are awaiting the junk man.

In the four rooms where the work of the laboratory is going on there are 19 members of the technical staff crowded together, and the rooms are overcrowded with equipment and tables.

MILK ANALYZED

This is the Provincial Laboratory—in volume of work the largest single unit of its type in Canada.

It is here that tests for tuberculosis, diphtheria, typhoid fever and other infectious diseases are made.

It is here that in a normal year 20,000 Wassermann tests are made, but during 1942 over 60,000 were made. And it is here that analyses of water and milk are made, where up until 1940 all operative tissues removed in all hospitals in Alberta (except those with pathologists on their staff) were sent for examination.

DR. J. J. OWER
... His work increased three-fold

Calgary Herald, June 7, 1942 4-15

20. Tooth, Helen Calgary Herald, June 7, 1942.
21. Tooth, Helen Calgary Herald, June 7, 1942.
22. Corbet, Elise A. *Frontiers of Medicine*, page 34, UAP, 1990.
23. Ower, John J. Ower Diary entry, January 1, 1933.

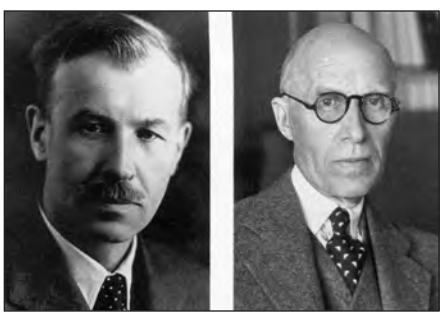
4-17

Dr. J.J. Ower Honorary Class President, 1927

On June 22, 1933 Dr. Ower was on his way back to Europe, this time to Spain to study Spanish, meet medical colleagues and watch bull fights. On the trans-Atlantic trip he met the German ambassador to the USA, who described the unrest amongst the German youth and the negative effect the Versailles Treaty constraints and the loss of 43 colonies were having on Germany.

In 1934 Dr. H.E. MacDermot asked Dr. Ower for stories to include in the history of the #1 Canadian General Hospital. The book was completed in 1938.

Although Dr. Ower enjoyed giving his presentation "Are We Tuberculous?" to receptive audiences, it was not until 1939 that he realized his own x-rays showed calcified nodes in both lungs, indicating a previous contact with TB. Not deterred he went to Washington, Boston and his usual eastern Canadian stops, for the month of March.

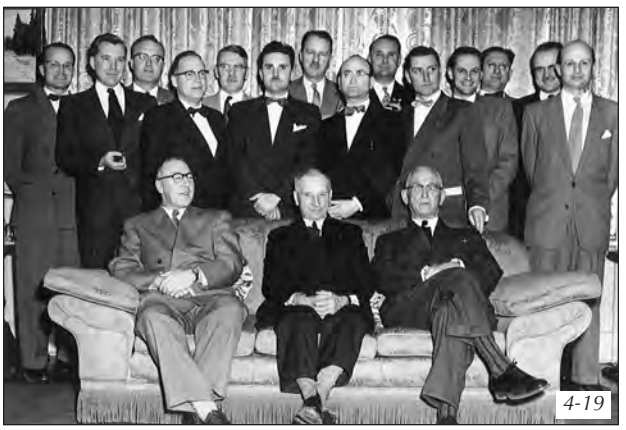


4-18

UofA Presidents R.C. Wallace (1928-1936) and W.A.R. Kerr (1936-1941)

Dr. Ower had limited time for research (see his CV). He assisted Dr. Rankin with the evaluation of the BCG vaccine to prevent and treat tuberculosis in cattle.[24] The loss of staff in WWII because of enlistments, and the acceleration of the medical classes starting in June 1942, curtailed his time for performing pathology work. While Acting Dean (1939-1943) his academic work was limited to teaching pathology. He did assist Dr. Macgregor in the establishment of a pathology museum for gross specimens and slides.

Dr. Ower was intrigued by the new Banff-Jasper highway, then under construction. He drove to Bow Summit (mile 25) from Lake Louise, hiked to Peyto Lake and stayed at the Alpine Club in Banff in September 1935. He reversed the trip driving from Jasper to the Columbia Icefields in September 1938 and completed the whole route when it opened in August 1940, continuing on via the Big Bend highway to Langley, BC.



4-19

J.O. Baker Reporting Club, 1952. Dr. Ower (Front Center)

Journal or Reporting Clubs* (1920-1971): In 1913 Edmonton was a frontier Canadian city, 300 kilometers north of Calgary and 1000 kilometers from the nearest Faculty of Medicine in Winnipeg. All connections to it were by rail until after WWII. The UofA's isolation thwarted its ability to attract notable faculty, medical speakers, or major medical conferences. Dr. Ower introduced a second approach to keep his colleagues and later undergraduates current with the medical literature.[25]

See Appendix A for a 1950 listing, p66.

24. Rankin, A.C. "Studies on B.C.G. Vaccine II, Non-virulence and Resistance in New-Born Calves." Canadian Journal of Research 6: 177-191, 1932.

25. Letts, Harry The first was the formation of the Edmonton Academy of Medicine in 1902, as recorded in *The Edmonton Academy of Medicine, a History*, 1986. Journals or Reporting Clubs were started as "foreign periodical clubs" in McGill by Osler, as noted by Charles Bryan in *Osler, Inspiration from a Great Physician*, page 125, OUP, 1997.

Mewburn Reporting Club meeting with Dr. J.B. Collip, October, 1934

Dr. Ower had noted the new medical journals received by the library were slow to circulate, and there was a long list of readers waiting in line. He saw in a journal club program, a positive potential for dialogue and socialization amongst faculty physicians. Ower organized the first monthly medical journal or reporting club in 1920, by inviting medical staff to his own home. The first club was known as the Rankin Club. Each member gave a summary of an article from his favorite reading source, or a recent medical journal. A discussion followed, before adjournment for libation purposes. The name of the club was changed to the Mewburn Reporting Club in 1925, to reflect its new leader and the prestige attached to chairing the club. Each club focused on a different field of medicine. In 1930 a Junior Reporting Club was formed for recent graduates. As more clubs started, the tradition of naming them after early senior members of the early Faculty of Medicine continued. While Dr. Ower was the secretary and mainstay of the first club, it didn't limit him from forming at least 12 more, and attending many of their meetings.

Dr. William Boyd, Toronto, circa 1937

Despite the Depression, the reporting club idea continued and the number of members actually grew. WWII didn't destroy the program either. Instead Dr. Ower extended the concept beyond the closed UAH hospital staff to include cross-town colleagues. Dr. Ower personally participated in the formation of the new Rankin Club (1946), the Baker Club (1946), the Leitch Club (1951) and the Scott Club (1953). On December 4, 1950, 12 Reporting Clubs held a surprise dinner for Dr. Ower's 65th birthday. One hundred and twenty members attended. Dr. Ower was presented with a silver tray by Dr. Rankin.

In 1954 Dr. Pat Rose was asked to inventory all the reporting clubs.[26] There were 14 clubs meeting monthly with a membership of 14-22 members each, for a total of 269 participants. The club names (1954) included Baker, Conn, the Edmonton Garrison Medical Officers, Gillespie, Harrison, Hurlbert, Medical Digest, Mewburn, Ower, Pope, Rankin, Revell, Scott and Shaw. There were no female members. A few out-of-towners were invited and occasionally non-medical guests attended.

Most physicians held memberships in only one club, except Dr. Ower. Dr. Rankin was in at least two. As the years passed club meetings became more social in nature and included dinners and guest speakers. The evenings never lost their primary focus though, which was to share knowledge and discuss current medical topics, issues and new therapeutic ideas. The Mewburn Club lasted until 1958, when Dr. Ower resigned as the secretary. The last club to meet regularly was the J.O. Baker Club, which continued until 1971.

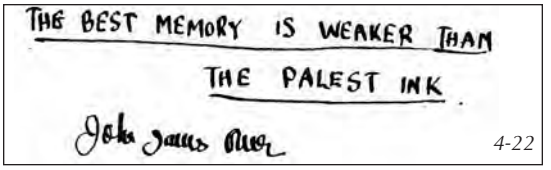
The popularity of the program was highlighted by Dr. E.P. Scarlett in 1935, when he recommended the concept as an adjunct to the meetings of local medical societies. To avoid the dreary round of medical meetings he suggested a wholesome purge of the usual practices, to be replaced with "each man contributing his share and in which the boredom is resolved in exchange of opinion, and increasingly friendly understanding".[27]

The Ower Diaries:[28] For at least 30 years or from 1929-1958, Dr. Ower kept a one page

26. Rose, Pat — Secretarial Binder of the J.O. Baker Journal and Reporting Club (1953-1971) with a survey of other clubs. Given to the author by Dr. Pat Rose.

27. Scarlett, Earle P. — "Local Medical Societies", AMB 1: 26-28, October 1935.

28. Ower, John J. — Ower Diaries 1929-1958. 30 volumes plus 10 volumes of daily schedule books (1948-1958), UAA 72-73 (5 boxes). There is mention by Dr. G.S. Balfour (*Iatros* 2(2), page 3, Spring 1988) that Dr. Ower kept a WWI diary, which secured him a WWI pension. No WWI or post-WWI diaries have surfaced. The author's 23 page summary of the Ower diaries was deposited (August 2009) in BARD (the UofA Archives), with the Diaries.



4-22

from Dr. Ower's Diary

per day diary of the personal, professional and family events in his life. Kept in his study in his home at 11118 - 85th Avenue, he would take it with him on his extended travels. He encouraged colleagues and students to follow his example noting how his diary had been instrumental in getting him a post-WWI disability pension. Only Dr. J.W. Macgregor is recorded as having started one circa 1931.

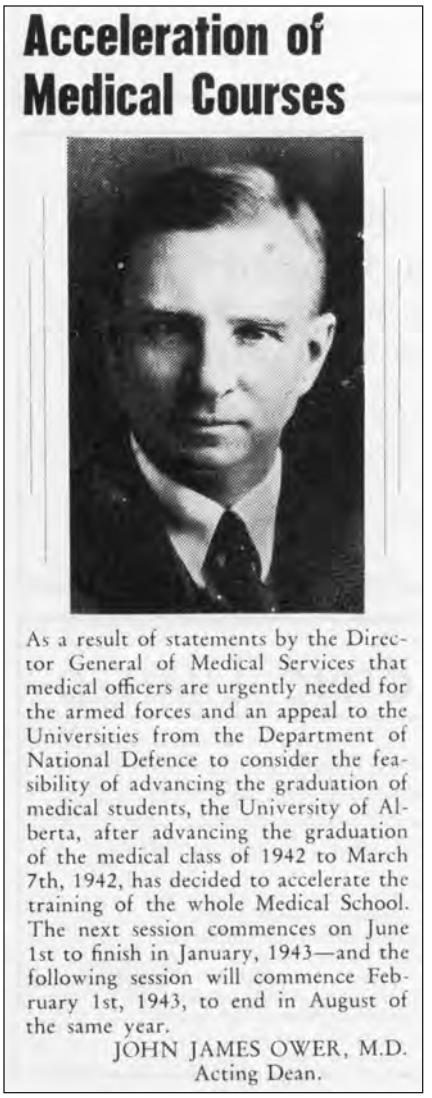
Dr. Ower's two articles in the Calgary Associate Clinic Historical Bulletin (May, August 1954) cover his 1885-1919 life leaving only the period 1920-1928 unrecorded. Although in places difficult to decipher, like all diaries they give personal insight into his observations and activities. They are factual and rarely record any gossip or opinions. The diaries confirm Dr. Ower's interest in languages (German, Spanish, French, Latin, and Greek) and his verbal and written competence in all of them but Greek. He recorded the pathology courses he gave, his surgical and autopsy rounds, the medico-legal requests by the provincial coroner Dr. E.A. Braithwaite, and the Clinical Pathology conferences (CPC) he attended at which he gave a presentation. Important faculty meetings were often accompanied by a list of the participants, with occasional comments about the discussions. The daily weather was a constant, as were Edmonton Eskimo football scores and the times he attended the racetrack.

Dr. Ower kept up a voluminous correspondence, particularly with top students living elsewhere. Each Christmas he sent hundreds of cards and recorded everyone who sent one back. Every Reporting Club and Academy of Medicine meeting he went to was recorded, usually with the topic(s) discussed. So were the many social events and dinners he attended - up to four per week - and the symphonies, operas, and movies the family attended.

Important scouting occasions were mentioned, as were the frequent trips to the family cottage at Kapasiwin Beach on Lake Wabamun. All his medical travels were detailed together with the colleagues he met, often accompanied by the local prices. Family life and its challenges were a constant as were references to Dr. Rankin, to whom he always respectfully referred to as Allan or ACR.

His own health received little attention except for occasional insulin dose changes, hospitalizations, and deaths of close colleagues, until he developed his own diabetic complications in 1947. Books he borrowed and read and the quotes that captured his fancy were mentioned too. He loved gardening and growing lady's slippers at the cottage. Besides scouting he enjoyed bridge, canoeing down the Rideau Canal or on Lake Wabamun, golfing though more as a spectator, occasional fishing, reading, corresponding and socializing. An insulin dependent diabetic after 1926, he heralded reaching age 60 and then 65 as significant accomplishments.

The consistency of the diaries was remarkable. They never peter out nor are they backfilled by


Acceleration of Medical Courses

As a result of statements by the Director General of Medical Services that medical officers are urgently needed for the armed forces and an appeal to the Universities from the Department of National Defence to consider the feasibility of advancing the graduation of medical students, the University of Alberta, after advancing the graduation of the medical class of 1942 to March 7th, 1942, has decided to accelerate the training of the whole Medical School. The next session commences on June 1st to finish in January, 1943—and the following session will commence February 1st, 1943, to end in August of the same year.

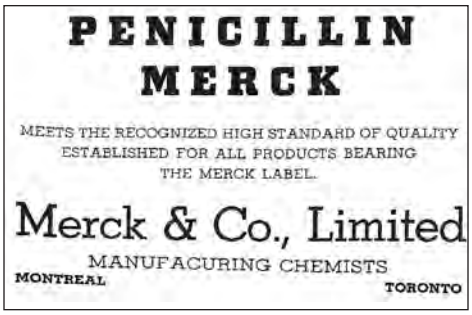
JOHN JAMES OWER, M.D.
Acting Dean.

4-23

Medical Alumni Bulletin, 1942

more than a day or two. The diaries were given to the UofA by his daughter Dorothy in 1972, and have rarely been perused because of the challenging penmanship and lengthy period they cover.

Ower as Acting Dean (1939-1943):[29] With the departure of Dr. Rankin to become the Director of Hygiene for the Canadian Armed Services in October 1939, Dr. Ower was appointed as the Acting Dean, as well as the acting Director of the Provincial Laboratory. The Provincial Laboratory staff at the time totaled twenty-three including four physicians and two interns. The whole laboratory was still housed in the basement of the medical school. The staff were responsible for performing urgent and medico-legal or coroner requested autopsies from Olds to St. Paul, except for the RAH autopsies. Most of them were delegated to Dr. Macgregor. Dr. Ower continued to regularly attend and lead CPC discussions at the three Edmonton hospitals. After the Provincial Laboratory moved to its new quarters (1950), the original laboratory space became part of the new McEachern Cancer Research Laboratory (1952) and the adjacent Surgical Medical Research Institute (1953).



4-24

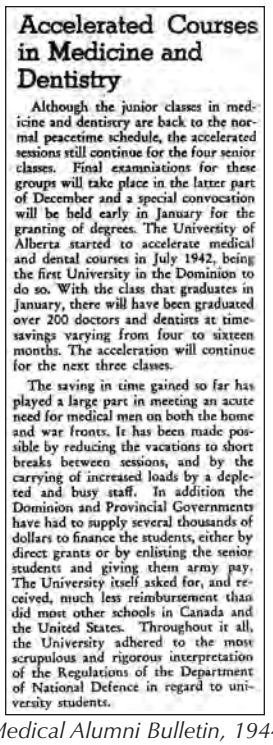
Medical Alumni Bulletin, 1946

The medical curriculum remained essentially unaltered until 1941. Medical class sizes were 33-40 per year after 1935. Ten to fifteen percent were female students. In 1939 entrance into the medical program was by two routes, either by obtaining a Bachelors degree in Arts or Science, or by taking the six year combined B.Sc./MD program. The two programs merged in the third (Med I) year. After 1935 the minimum mark in the merging year was increased from 50 to 65%. In 1940/41 more prerequisites in the B.Sc./BA program were added. Minor changes were made to the four-year curriculum, and an internship was made mandatory. MDs were granted after a successful internship, at which time the MCC exam could be written.

As the war continued, the demands for more physicians increased. It impacted the faculty much more than it had during WWI. Over 20 faculty enlisted including the UAH medical superintendent Dr. R.T. Washburn in December 1939. He took with him a large number of medical students. They went overseas as an intact unit, the No. 4 Casualty Clearing station. Dr. Ross Vant replaced Washburn for one year in 1940. Dr. Washburn returned in 1941 but retired shortly thereafter, to be succeeded by Dr. Angus McGugan in 1942.

By 1941 the reduction in faculty members was becoming critical and unpredictable in the departments it affected. It led to an agreement with the federal government that no faculty member would be accepted into the Armed Services without the prior approval of the (acting) Dean.

At the student level the undergraduate medical club was reorganized as the Medical Undergraduate Society (MUS). The first O&G professor and Dr. Ower's long time friend Dr. L.C. Conn died. In recognition of his contributions,



Accelerated Courses in Medicine and Dentistry

Although the junior classes in medicine and dentistry are back to the normal peacetime schedule, the accelerated sessions still continue for the four senior classes. Final examinations for these groups will take place in the latter part of December and a special convocation will be held early in January for the granting of degrees. The University of Alberta started to accelerate medical and dental courses in July 1942, being the first University in the Dominion to do so. With the class that graduates in January, there will have been graduated over 200 doctors and dentists at time-savings varying from four to sixteen months. The acceleration will continue for the next three classes.

The saving in time gained so far has played a large part in meeting an acute need for medical men on both the home and war fronts. It has been made possible by reducing the vacations to short breaks between sessions, and by the carrying of increased loads by a depleted and busy staff. In addition the Dominion and Provincial Governments have had to supply several thousands of dollars to finance the students, either by direct grants or by enlisting the senior students and giving them army pay. The University itself asked for, and received, much less reimbursement than did most other schools in Canada and the United States. Throughout it all, the University adhered to the most scrupulous and rigorous interpretation of the Regulations of the Department of National Defence in regard to university students.

4-25

Medical Alumni Bulletin, 1944

29. Ower, John J. Dr. Ower's Annual Reports to the Senate 1940-1943, 1945-1948, bound and deposited in the UofA Dean of Medicine's Office. The volume contains annual reports by the deans from 1938-1965.

the medical library and reading room was named after him. As Dr. Ower noted in his 1941 annual report "the freshness of our sorrow is still upon us".[30] A year later the first head of Dentistry Dr. H.E. Bulyea DDS, retired after 22 years of service and was succeeded by Dr. Scott Hamilton.

A discouraging message came in October 1941 when Dr. Rankin indicated his earliest return would be the fall of 1942 – and that didn't happen.[31]

Wartime Class Acceleration: In March 1941 Dr. Rankin wrote to Dr. Ower from Ottawa, after a national meeting of the Deans of Medicine and the government's Medical Services Department, noting there was nothing new on accelerating the final year class. But there was a request for more doctors by May 1941. The internship for the class of 1942 was shortened from 12 to 8 months. By June 1942 the Ministry of Defense's request for 300-350 more doctors had increased to 800. Drs. Rankin and Ower responded on February 25, 1942 by agreeing to accelerate all medical classes starting June 1, 1942.[32] The Faculty confirmed the decision in April.

Drs. R.M. Shaw and J.J. Ower discussing the Med Show

Each academic year was compressed into six month blocks. Students had one month off per year. In February 1943 selected medical and dental classes were merged as the dental classes were accelerated too. To help with increasing student indebtedness, the Kellogg Foundation gave the medical faculty $2,000 for scholarships and $8,000 in revolving student loans. The dental faculty received $10,000 for student loans. The military services paid physically fit, fourth and fifth year medical students as privates, if they joined the reserves. Most did.

In 1943 there was no third year medical class. The total number of students was down to 182 with class sizes about 33-36 per year. A special medical/dental convocation was organized on January 4, 1943 for the 33 accelerated MD students. After their internship, 27 enlisted.

The start of the Alaska Highway in Edmonton, 1943

The arrival of American physicians to staff the Charles Camsell Hospital, built by the US Army in 1942/43 to treat soldiers and workers injured during the construction of the Alaska Highway, provided some teaching assistance. An RCAF Investigation Unit was located in nearby Corbett Hall adjacent to the UofA Hospital. It included Dr. Donald Wilson, who assisted the faculty with teaching as well.

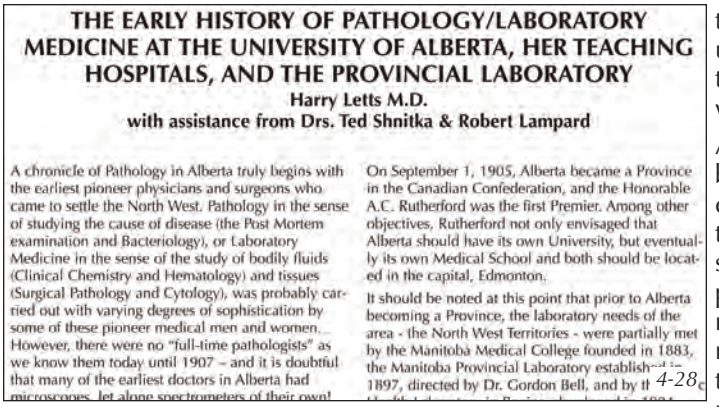
An emergency faculty decision was required when five more members (Drs. Levey, Watts, Macgregor, Cantor and Romeyn) requested LOAs to join the armed services in July 1943. With the support of President Newton the requests were placed on hold.

Beginning in September 1944, acceleration for the first year medical class was discontinued and the former 32 week academic year was reintroduced. Three students were accepted from BC. By 1945 class sizes ranged from 21-42 per year. The second, third and fourth year medical classes returned to the 32 week academic year schedule in September 1945. The

30. Ower, John J. Dr. Ower's "Annual Report for 1940-1941".

31. Ower, John J. Ower Diary entry, October 23, 1941.

32. Ower, John J. Ower Diary entry, February 18, 25, 1942. Confirmed by Dr. Ower in the Medical Alumni Bulletin, #1, page 4, March 8, 1942. The Faculty confirmed the decision in April as Dr. Scott noted in *The History of the University of Alberta 1913-1963*, page 20, UofA, 1963.



THE EARLY HISTORY OF PATHOLOGY/LABORATORY MEDICINE AT THE UNIVERSITY OF ALBERTA, HER TEACHING HOSPITALS, AND THE PROVINCIAL LABORATORY

Harry Letts M.D.
with assistance from Drs. Ted Shnitka & Robert Lampard

A chronicle of Pathology in Alberta truly begins with the earliest pioneer physicians and surgeons who came to settle the North West. Pathology in the sense of studying the cause of disease (the Post Mortem examination and Bacteriology), or Laboratory Medicine in the sense of the study of bodily fluids (Clinical Chemistry and Hematology) and tissues (Surgical Pathology and Cytology), was probably carried out with varying degrees of sophistication by some of these pioneer medical men and women. However, there were no "full-time pathologists" as we know them today until 1907 – and it is doubtful that many of the earliest doctors in Alberta had microscopes, let alone spectrometers of their own!

On September 1, 1905, Alberta became a Province in the Canadian Confederation, and the Honorable A.C. Rutherford was the first Premier. Among other objectives, Rutherford not only envisaged that Alberta should have its own University, but eventually its own Medical School and both should be located in the capital, Edmonton.

It should be noted at this point that prior to Alberta becoming a Province, the laboratory needs of the area - the North West Territories - were partially met by the Manitoba Medical College founded in 1883, the Manitoba Provincial Laboratory establish[illegible] 1897, directed by Dr. Gordon Bell, and by th[illegible]

4-28c

Harry Letts M.D., on the History of Medicine at the UofA

fifth (intern) year was re-lengthened to 12 months. Summers again became non-academic teaching times. The wartime period brought the retirement (or passing) of several of the remaining original faculty: Conn (1941), Revell (1944), Pope (1944), Gray (1946) and Jamieson (1946).

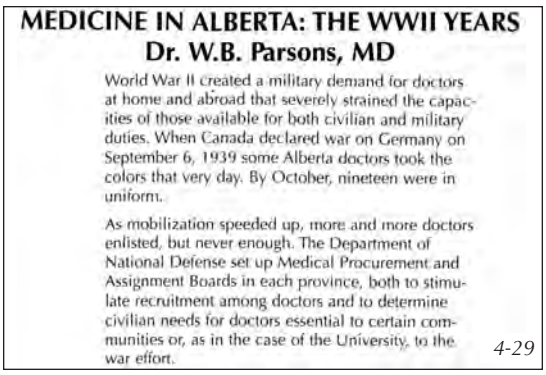
The acceleration of classes resulted in the classes of 1946 and 1947 graduating during WWII. From 1939-1945 eight classes with 257 students graduated. Over 70% enlisted. Another 173 or more practicing MDs enlisted as well. Alberta provided an estimated 375-400 physicians for the armed services from a 1940 MD registration of about 586 active practitioners (for 780,000 Albertans).[33] The enlistment rate represented about 70% of the prewar registered physicians in Alberta, almost triple the enlistment rate for the rest of Canada, and considerably above the general enlistment rate of 5% of the healthiest Canadians. The dental enlistment figures followed a similar pattern, as there was a serious shortage of dentists in the military and no dental school west of Toronto, except in Edmonton.

Despite the wartime distractions, the government requested the University appoint a government/university committee under UofA Board Chair H.H. Parlee, to develop a long-term plan for the University. Their report was tabled a year later in 1942. The committee made 58 recommendations, including a ten-year building program. The plan took years to implement but provided a blueprint to address the space problems facing all faculties as they tried to cope with the surge of veterans after the war.[34]

As late as 1946 there had not been a new academic building on campus since the completion of the medical school in 1921, despite a doubling of the campus population. The medical space recommendations in the Parlee report included an extension of the west and east wings of the medical school completed for the 1948/49 years, a new Provincial Laboratory (1950), and a 350 bed addition to the UAH (1951). In addition, the federal government planned and opened (1943-1945) the 240 bed Mewburn Pavilion for Veterans, immediately northwest of the UAH.

The 1932 initiated annual refresher course continued to be held during the war. All the military physicians stationed in western Canadian were invited. In 1942 there were 250 attendees, including 60 civilian doctors.

Because of the strong economy during the war, the patient volume in the outpatient clinic began declining, undermining its educational value. Academically, several of the clinical courses in the fourth and fifth years were merged. Some teaching and administrative relief came when Dr. Rankin was released from the Armed Services, because he was over the age of 60 - actually 66. He returned in September 1943 and remained the Dean until his retirement in August 1945.[35]



MEDICINE IN ALBERTA: THE WWII YEARS
Dr. W.B. Parsons, MD

World War II created a military demand for doctors at home and abroad that severely strained the capacities of those available for both civilian and military duties. When Canada declared war on Germany on September 6, 1939 some Alberta doctors took the colors that very day. By October, nineteen were in uniform.

As mobilization speeded up, more and more doctors enlisted, but never enough. The Department of National Defense set up Medical Procurement and Assignment Boards in each province, both to stimulate recruitment among doctors and to determine civilian needs for doctors essential to certain communities or, as in the case of the University, to the war effort.

4-29

33. Parsons, William B. "Medicine in Alberta: the WWII Years", in *Alberta's Medical* History, *Young and Lusty and Full of Life*, pages 649-652, 2008. Dr. Parsons' figures only include those graduates that entered the armed services, and were registered in 1940. Estimated another way, of the 619 UofA graduates to 1945, 20 joined the Navy, 51 the RCAF and 277 the Army, for a total of 348. Each graduate who enlisted was identified in the Medical Alumni Bulletin, #4, April 20, 1946.

34. Corbet, Elise A. *Frontiers of Medicine*, page 60.

35. Lampard, Robert See the Dr. Allan Coats Rankin profile.

TABLE 3: TEN-YEAR BUILDING PLAN PROPOSED BY THE SURVEY COMMITTEE[25] 1942 *4-30*

Proposed Building	*Year*	*Cost*
1. East wing of Medical Building	1942-43	$100,000
	1943-44	100,000
2. Centre wing of Medical Building	1944-45	100,000
	1945-46	90,000
3. Completion of Normal School to house Faculty of Education	1945-46	10,000
4. New wing at University Hospital	1946-47	100,000
	1947-48	100,000
5. Biological Sciences Building	1948-49	100,000
	1949-50	100,000
6. Chemical and Petroleum Engineering Building	1950-51	100,000
7. Nurses Home at University Hospital	1951-52	100,000

The Parlee 10 yr plan, Frontiers of Medicine

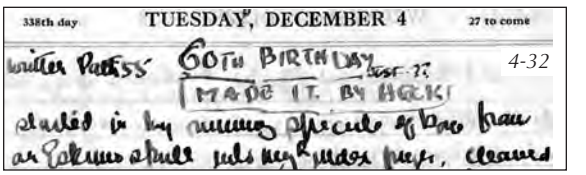
Following Dr. Rankins' return, Dr. Ower returned to his work as head of the Pathology Department for the next two years. In December 1944 he relinquished the leadership of the Misericordia and General Hospital Laboratory departments after 25 years of service.

Dean, Faculty of Medicine (1945-1948):[36] On March 14, 1944 Dr. Rankin indicated he would be retiring on September 1, 1945. Dr. Ower was appointed to succeed him, four months after WWII ended. He was 60 and noted in his diary he "Made it by Heck". In a celebratory mood he paid for three strings and a piano to play at the annual medical student dance in October. At a special Convocation on January 5, 1946, Dr. Rankin received an honorary doctorate from the UofA. Dr. Ower read the citation.[37]

In 1945 the entrance or third year class size increased to 45. Tim Cameron was one member. Priority was given to veterans over civilians, and was closely monitored by the Legion. Transfers for the last two years to McGill and UofT were discouraged. Not only were those two universities deluged with applications from returning veterans, but they were expanding their new postgraduate residency training programs as well. That step was not overlooked in Alberta. To separate undergraduate from postgraduate programs, the faculty decided to grant their MDs at the end of the four years of medical undergraduate training, and not after the fifth year internship, starting in 1948.

Unknown, Dr. M. Marshall, Patricia Cameron, 1968 *4-31*

Postgraduate medical training first appeared as a topic of faculty interest in November 1944, when Dr. H.H. Hepburn returned from a discussion of the subject at the ACMC meeting in Ottawa.[38] Anticipating a postwar return of many premedical, partially trained, or already graduated physicians who wanted further education, the faculty leaders suggested a postgraduate medical training program be started. Such programs had already begun before the war at the UofT (Gallie Course, 1931) and during the war at McGill (1944). The first programs were to train surgeons.


338th day TUESDAY, DECEMBER 4 27 to come
60TH BIRTHDAY
MADE IT BY HECK!

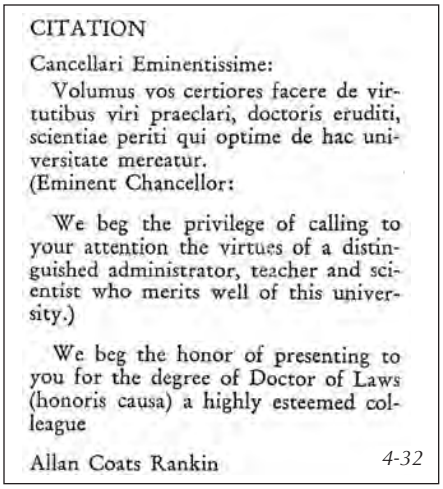
Diary entry on J.J. Ower's 60th Birthday *4-32*

Dr. Ower formed a committee to consider how to start a postgraduate program in 1946.[39] Ophthalmologist Dr. A.M. Mark (Levey) Marshall was appointed the program Director in the fall, a position he held for the next 15 years. By 1949 full on-site residency training programs were being offered in Surgery and Ophthalmology, although most residents preferred or were required to go to other eastern Canadian or American centres to complete their training and write their specialty examinations.

Starting in 1946 the Board of Governors provided some medical research funding, which Dr. Ower acknowledged in his annual report "if properly handled will transfer into a high state of efficiency".[40] The source of funds was likely from interest on the original Rockefeller grant. The Research Allocation Committee consisted of Drs. John Scott, Robert Shaw, John

36. Ower, John J. Dr. Ower's "Annual Reports to the Senate 1945-1948". Copies in the Deans office, Faculty of Medicine, UofA.
37. Rankin, Allan. C. Convocation Speech, following presentation by Dr. J.J. Ower. Medical Alumni Bulletin, #4, page 11, April 20, 1946.
38. Scott, John W. *The History of the Faculty of Medicine*, 1913-1963, page 23, UofA, 1963.
39. Ower, John J. Ower Diary entries, March 18, 20, April 2, September 17, 1946.
40. Ower, John J. Dr. Ower's "Annual Report for 1945/1946", Dean's Office, UofA.

MacGregor and Walter Mackenzie, with Dr. Ower as an observer. Another request was made to the Rockefeller Foundation to fund a position in Hygiene and Preventive Health. Dr. Ower and Dr. Rankin also made a presentation to President Newton to construct a new Provincial Laboratory. He approved the appointment of a planning committee in late 1943.



CITATION

Cancellari Eminentissime:

Volumus vos certiores facere de virtutibus viri praeclari, doctoris eruditi, scientiae periti qui optime de hac universitate mereatur.
(Eminent Chancellor:

We beg the privilege of calling to your attention the virtues of a distinguished administrator, teacher and scientist who merits well of this university.)

We beg the honor of presenting to you for the degree of Doctor of Laws (honoris causa) a highly esteemed colleague

Allan Coats Rankin 4-32

Part of Dr. J.J. Ower's citation of Dr. A.C. Rankin for an Hon. LL.D., January 6, 1946

In June 1946 Dr. Ower attended the CMA Convention in Banff. He was asked to review the Dolman report, which recommended a BC medical school start immediately. Dr. Ower viewed the report as idealistic. In July he was appointed by the BC government advisory committee to study the report further. Approved, the UBC medical undergraduate training program began in 1950.

In August of 1946 Dr. Ower was appointed the pathologist and coroner to investigate the deaths of two Eskimos, Ayalik and Popaka, and flew to Coppermine, NWT for interviews, autopsies and examination of the evidence.

By the fall of 1946, 22 faculty members had returned and the fifth-year medical class was released from any military commitments. In 1947 there was no graduation as there were no convocating students. Applications from veterans continued to be given priority – for premedical training, admission to medical school, or for completion of any medical studies.

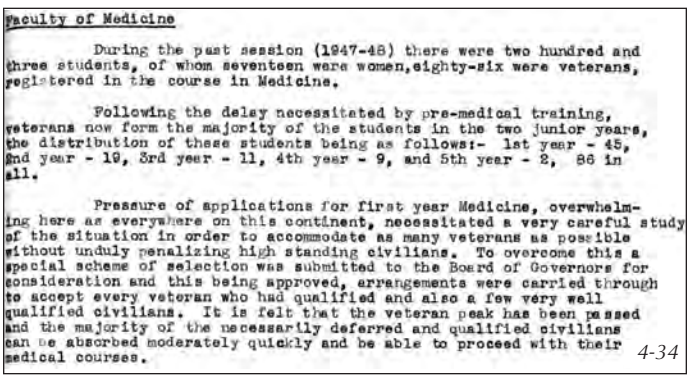
By 1946/47 class sizes were up to 32-44 in the last four years. Veterans totaled 40 and the four year medical student body totaled 155, excluding the last accelerated class of 21. The last five students accepted that year included Lionel McLeod, a future Dean of Medicine at the UofC, Helen Hayes and Gordon Bain. By September 1946 all classes were on the pre-war schedule.

In 1947 a medical science research club was started and named the Collip Research Club after Dr. J.B. Collip who received an Honorary LLD at the 1947 Convocation. The CPSA funded one research fellowship. Teaching in the fourth year was extended to the Camsell Hospital, which became a federal hospital, primarily treating pediatric infectious diseases from the NWT. The Oliver Mental Hospital and the Misericordia and Edmonton General Hospitals were used for teaching as well.

In the fall of 1947 the veteran admission rate peaked. Forty-five veterans applied and were accepted into the medical school program, filling almost all the third year or merging year positions. A rumor began circulating that Dr. Ower was to be fired for accepting too many veterans. Under duress, the faculty increased the third year or merging year quota by five to 50. MD applications skyrocketed to 890, of which almost 600 were from American students.

Starting in 1948 graduates received their MDs at the end of their medical training and before internship. This resulted in two medical classes' convocating in 1948. There was no graduating class in 1947, because of the relengthening of the accelerated classes.

The opening of the Mewburn Pavilion in 1945 created joint appointment opportunities for the Dean. In 1947 the DVA offered to remunerate Dr. Donald Wilson 3.5 days per week to work in the Mewburn Pavilion. This ensured his return to the UofA. Once back, Dr. Wilson successfully applied to the American Markle Foundation, for a five year scholarship, to open and operate a clinical endocrinology lab. Four



Faculty of Medicine

During the past session (1947-48) there were two hundred and three students, of whom seventeen were women, eighty-six were veterans, registered in the course in Medicine.

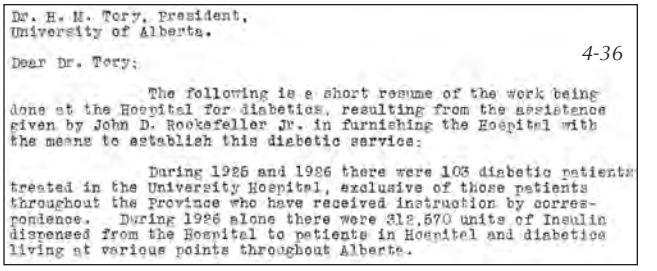
Following the delay necessitated by pre-medical training, veterans now form the majority of the students in the two junior years, the distribution of these students being as follows:- 1st year - 45, 2nd year - 19, 3rd year - 11, 4th year - 9, and 5th year - 2, 86 in all.

Pressure of applications for first year Medicine, overwhelming here as everywhere on this continent, necessitated a very careful study of the situation in order to accommodate as many veterans as possible without unduly penalizing high standing civilians. To overcome this a special scheme of selection was submitted to the Board of Governors for consideration and this being approved, arrangements were carried through to accept every veteran who had qualified and also a few very well qualified civilians. It is felt that the veteran peak has been passed and the majority of the necessarily deferred and qualified civilians can be absorbed moderately quickly and be able to proceed with their medical courses. 4-34

Dr. Ower's Annual Report to the Senate, 1948

clinical articles by faculty members were published in the medical literature that year.

The Medical Research Council (MRC), which had been separated from the NRC by Dr. Collip in 1946, initiated a Western Regional Research conference. The first meeting was organized by the faculty in Banff in 1947. The western research conference was consistent with Dr. H.M. Tory's model of promoting research at universities instead of building dedicated research laboratories like the National Institutes of Health in the USA.



Dr. H. M. Tory, President,
University of Alberta.

4-36

Dear Dr. Tory:

The following is a short resume of the work being done at the Hospital for diabetics, resulting from the assistance given by John D. Rockefeller Jr. in furnishing the Hospital with the means to establish this diabetic service:

During 1925 and 1926 there were 103 diabetic patients treated in the University Hospital, exclusive of those patients throughout the Province who have received instruction by correspondence. During 1926 alone there were 312,570 units of Insulin dispensed from the Hospital to patients in Hospital and diabetics living at various points throughout Alberta.

Letter from Dr. Washburn on the Insulin Outpatient Program, 1927

In February 1948 Dr. Ower hosted the Western Regional Research conference delegates in Edmonton. In March, inspired by a suggestion during a visit the week before by Dr. Allan Blair the new Executive Director of the NCIC, the President of the Alberta Cancer Society and the Faculty of Medicine Research Committee met. The meeting was to discuss the funding of a Cancer Research laboratory at the UofA. With everyone in agreement, the McEachern laboratory was built for $150,000 by the Alberta Cancer Society and opened in 1952 as the first dedicated medical research laboratory at the UofA.

One of Dr. Ower's last enjoyable tasks was to nominate his friend Dr. A.E. Archer for an honorary LL.D. Accepted, Dr. Archer addressed the graduates at the two year combined Convocation (76 students) in 1948.[41] Dr. Ower ended his deanship with a trip to the ACMC and CMA meetings in Toronto, during which he was "Karshed".[42] Having recommended Dr. John W. Scott as his successor, Dr. Ower retired as Dean on August 31, 1948.

In second year we were joined by a number of war vets. Don McDonald and Jack Staples from the Armoured Corps, and Bob Reikie and Bill Edwards from the Air Force. Their boisterous humour, well-honed in the Officers' Mess, was a lively source of fun but occasionally strained the tolerance of our pathology teachr Dean Ower, himself a veteran of W.W.I but by this time content with running a Boy Scout troop.

Our clinical teachers, even our revered Professor of Medicine John Scott, all had downtown offices: the G.F.T. had not yet arrived on the scene. While the wartime speedup course had finished in 1945 or 46, the teaching staff were still gearing down from their hectic load. *4-35*

Letter from Dr. G.S. Balfour, August 6, 2009

Student Stories of Dr. Ower: As Dr. Pat Rose recalled from his newspaper delivery days to the Ower home in Garneau, Dr. Ower had an affection for youths and students. Dr. J.B. Corley remembered his interview with Dr. Ower for entrance into medicine in 1936. Corley said he didn't want to practice medicine, just acquire the knowledge. He still wanted to be a psychologist after graduation. Dr. Ower declined his application saying he had only 50 positions. Corley replied that he thought the responsibility of a University was the pursuit of knowledge and that he must have been under a misconception as medicine must be a trade school. Dr. Ower relented with the reply "be sure you carry your weight". After serving in WWII Dr. Corley decided to remain in medicine. He moved to Calgary and in 1966 began the first 2 year College of Family Practice program in Canada.[43]

Dr. G.S. Balfour first met Dr. Ower when he was a scout in his troop. Balfour spent one weekend at Lake Wabamun participating in scouting activities organized by his leader. He wasn't surprised when Dr. Ower arrived one day to teach a pathology class in full scouting uniform, including shorts. The other students were. Years later at a class reunion of which Dr. Ower was the honorary class president, Dr. Balfour remembered Dr. Ower reciting the names of every class member, alphabetically and in reverse order, despite being blind.[44]

Dr. Gordon Brown was a Juvenile (Type I) diabetic, whom Dr. Ower accepted into medicine in 1943. Brown noted Ower never turned down another diabetic student after him, so

41. Corbet, Elise A. *Frontiers of Medicine*, pages 67-68, Dr. J.W. Scott's *History of the Faculty of Medicine*, pages 14-14 and Dr. R.A. Macbeth's *The Department of Surgery of the University of Alberta*, pages 117-118.
42. Ower, John J. Ower Diary entries, June 16-24, 1948.
43. Corley, John B. "Memories of Days Gone by." Iatros 3(1): 35, Winter 1989. The two year residency program for certification in General Practice was outlined in Dr. Corley's article, "Planning the Alberta Project for Advanced Training in General Practice", AMB 31(1): 11-13, February 1966.
44. Balfour, G. Sig Personal communication, August 6, 2009.

MRC's Western Canadian Medical Research Group, Feb 1948. Dr. Ower (R)

long as he had the marks.[45] Dr. Kathleen Swallow remembered how he stopped her in the hallway of the Provincial Laboratory where she was working as a laboratory technician and encouraged her to take medicine. She did and went on to an illustrious career in Pediatrics, following in the footsteps of her father.[46]

In the spring of 1942 Marmora Sanmya, a Japanese-Canadian student, graduated but couldn't get an internship because of the recent attack on Pearl Harbor and the internment of Japanese-Canadian citizens. Dr. Ower found him a place in the Lamont clinic with Dr. Morley Young.[47]

The Post Dean Years (1948-1951) and Retirement (1952-1962): Although never confirmed publically, the reason for Dr. Ower's retirement as the Dean at age 62 was thought to be diabetes. During WWI Dr. Ower was evacuated from France when he developed an acute abdomen. He was diagnosed by Sir William Osler as having pancreatitis.[48] Osler cautioned him that it might lead to diabetes, which it did a decade later, circa 1926.[49] Dr. Ower was more fortunate than Calgarian and 1911/12 CMA President Dr. H.G. Mackid, who was diagnosed with diabetes in 1910 and died in 1916. The difference came when Professor Collip isolated therapeutically effective insulin in early 1922.

Dr. Ower lived with his diabetes and actually did very well. An outpatient insulin program was started at the UofA in 1923 by Drs. Collip and Jamieson. J.D. Rockefeller personally gave $5,000 to help pay for the insulin that was ordered. Insulin was being mailed to 325 diabetics on a weekly basis, by the late 1920s.[50] In 1933 Dr. Ower was receiving 10 units of Toronto (CZI) in the morning in his arm. By 1947 it was 10 units of CZI and 20 units of Protamine in the AM. In December that year Drs. Wilson and Marshall saw the first small retinal hemorrhages in the back of his eyes.[51] By 1955 he was on 10 (CZI), 25 (PZI) in the morning, 10 CZI at noon and 10 CZI at supper.

Dr. Ower had relinquished his non-academic pathology duties during his deanship (1945-48). He returned to them as head of the Pathology Department, for the last three years of his career (1948-1951). It allowed him to chair the design and oversight committee for the new Provincial Laboratory, which opened in 1950. The laboratory was located immediately west of the UAH, where the Walter C. Mackenzie HSC now stands.

Not done, Dr. Ower participated in the founding of the Alberta Society of Pathologists (1948), and the Canadian Society of Pathologists (1949).[52] He was appointed Emeritus

Dr. Ower at work circa 1949

45. Brown, Gordon D. *Iatros* 4(1): 17-19, Fall/Winter 1989. Like Dr. Brown, the UofA Registrar and Dean Ower were Diabetics.
46. Lampard, Robert "Kathleen Anderson Swallow, B.Sc., MD, FRCPC." The Red Deer Years 1974-1984, published in *Women of Aspenland*, pages 83-92, October 2003.
47. Rose, Pat Interview with Dr. Lampard, August 9, 2008. Dr. Sanmya was a classmate of Dr. Rose.
48. Balfour, G. Sigmund Alumni Letter, Iatros 2(2): 31, Spring 1988.
49. Wilson, Betty *To Teach this Art. The History of the Schools of Nursing at the University of Alberta 1924-1974*, page 34, Nurses Alumni, 1977. That was when Dr. Ower began to require insulin, and nursing staff gave his first injections.
50. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 259. The program was summarized in a letter to Dr. Tory from UAH Superintendent Dr. W.T. Washburn written on March 19, 1927.
51. Ower, John J. Ower Diaries entry, December 16, 18, 23, 1947.
52. Letts, Harry "Early Pathology/Laboratory Medicine at the UofA", page 528. Confirmed in the Ower Diary entries, October 5, 1948 and June 15, 1949.

Professor of Pathology in 1951 on presentation by Dr. J.W. Scott, and was succeeded as the Professor and Head of Pathology by Dr. J.W. Macgregor. He continued to work part-time doing autopsies and teaching, giving his last lecture on diabetes in April 1953. His Reporting Club initiative wasn't over either, as he started the Scott Reporting Club (#15) in January 1953.

In early 1953 Dr. Ower began suffering foot infections, followed by pain and poor circulation in his legs, and chest pains (1956). It led ultimately to the amputation of three toes. In 1958 he retired from the Mewburn Reporting club, after almost 40 years as its secretary. He had become totally blind in June from recurring retinal hemorrhages. In anticipation he learned to read Braille and how to use the Braille typewriter. Unfortunately he didn't write any more autobiographical essays other than the two-part article he wrote for the CACHB in 1954. Despite his interest in history and literature as a student, and his eloquent penmanship, Dr. Ower closed his publishing and writing career at the end of the second article on "Pictures on Memory's Walls", with the note of resignation "O passi graviora, dabet deus his quoque finem. You, who have suffered greater ills than these, even to this shall God appoint an end".[53]

Retirement wasn't just about aches, pains and failing vision. Dr. Ower began taking one or two UofA courses per semester on Art History, Ancient Civilization, Roman History, Geography, Geology and Drama. He also did 2-4 week pathology locums each year at the Calgary General Hospital from 1954-1957.

Pre-Jamboree photo. Dr. Ower was notified of his nomination for the Silver Acorn, Edmonton Journal, July 1, 1955

Scouting:[54] Dr. Ower's extracurricular activities focused primarily on the Scouting movement. His scouting name was "Barnowl". He was a certified cubmaster by 1923 and was awarded the Canadian Wood Badge in 1925. By 1927 he was running a cubpack for the 6th Edmonton Troop, with Dr. R.K. Gordon of the English department.[55] At the same time he was the Scoutmaster of the 4th Edmonton Troop (1922-1942) and rarely missed a weekly meeting. He was on the Edmonton District Scouts' Council until 1946.

His Scout hut was located on the UofA campus, in the grove of trees between the UAH and Faculty of Medicine, roughly where the Faculty of Education building is now located. To help the troop raise funds in the mid 1930s, he sold Christmas trees around the campus.

Dr. Ower receiving an Hon. Queen Scout certificate from Mayor Elmer Roper, November 13, 1959

Dr. Ower's most noteworthy scouting contribution came when he was appointed the Assistant Provincial Commissioner for Lone Scouts. Lone Scouts lived in rural Alberta and had no troop to which they could belong. The meetings and badge work occurred through correspondence with Dr. Ower and the volunteers who assisted him. For his work the Scouting Association gave him their Medal of Merit in 1939 and added a bar to it in 1950.

In 1955 Dr. Ower went to the 8th World Jamboree at Niagara-on-the-Lake, as the physician for the Rocky Mountain (Alberta) Camp.[56] A year later he was presented the highest award a Scouter could receive, the Silver Acorn, for his "unselfish and valued service".[57] He con-

53. Ower, John J. "Pictures on Memory's Walls", Part II, page 62.
54. Editor Edmonton Journal July 1, 1955.
55. Rose, Pat Alumni Letter, Iatros 3(1): 27, Winter 1988/89.
56. Ower, John J. Ower Diary entries, August 14-31, 1955.
57. Editor Edmonton Journal July 1, 1955.

sidered it his most prized award. The presentation was made by Governor General Vincent Massey in Ottawa. In 1959 he was given an Honorary Queen's Scout Certificate by the Legislative Assembly of Alberta.

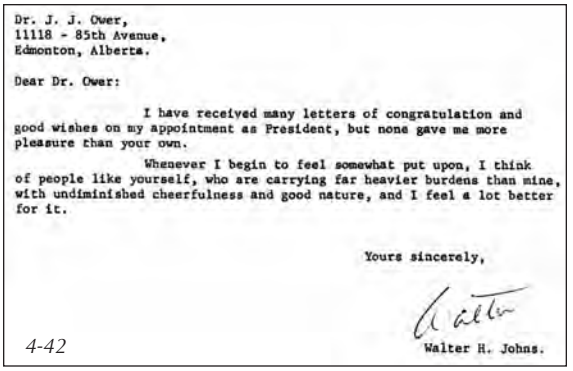
Awards and Appointments:[58] In addition to his many scouting acknowledgements Dr. Ower was awarded a Fellowship in the Royal College of Physicians and Surgeons of Canada (1931) and a Specialist Certificate (Pathology and Bacteriology) in 1945. The Canadian Army recognized his contribution to their medical library and appointed him an Honorary Consultant in 1944. The Edmonton Dental Society made him an honorary member in 1947. The graduate society of McGill University gave him an Award of Appreciation in 1948.

On his retirement from the faculty on October 30, 1953 he was named an Emeritus Professor at UofA and was presented with a Scroll of Tributes signed by numerous colleagues. The Edmonton Academy of Medicine appointed him an Honorary Life Member in 1955, as did the Canadian Diabetic Society. The AMA granted him an Honorary Membership in 1958. The CMA followed with a Senior Membership in 1959, at the same time as one was given to Alberta's retired Minister of Health Dr. W.W. Cross. The UofA class of 1940 elected him their honorary class President, and honored him at their 20th class reunion at the Timberline Hotel in Banff on June 23, 1960. Class members included Drs. Doug Wallace and Jack Bradley.

Dr. Ower's most prestigious award was the Honorary LLD McGill conferred upon him on October 6, 1959, on the 50th anniversary of his McGill graduation. He joined Dr. Wilder Penfield, who was celebrating the 25th anniversary of the Montreal Neurological Institute. The McGill Dean of Medicine Dr. Lloyd Stevenson made the presentations.


4-41

McGill Honorary Degree recipients, 1959
Dr. Penfield (4th from L), Dr. Ower (5th from L)


Dr. J. J. Ower,
11118 - 85th Avenue,
Edmonton, Alberta.

Dear Dr. Ower:

I have received many letters of congratulation and good wishes on my appointment as President, but none gave me more pleasure than your own.

Whenever I begin to feel somewhat put upon, I think of people like yourself, who are carrying far heavier burdens than mine, with undiminished cheerfulness and good nature, and I feel a lot better for it.

Yours sincerely,

Walter H. Johns.

4-42

February 26, 1959

After his death in 1962 a memorial trust was established in Dr. Ower's name. It received $5,000 in donations and funded the Ower award to recognize the top student in third year medicine.[59] A medallion was struck and given to the student with the highest marks in Pathology in the fourth year. The first medallion was presented on September 21, 1963 by AMA President Dr. Allan Hepburn. Dr. Ower was not forgotten by the City of Edmonton. They named Ower Place after him. It is located in Ogilvie Ridge overlooking the Whitemud Ravine in southwest Edmonton.

Ower Persona: Dr. Ower frequently recommended his daily diary habit to his students. Dr. Vant remembered how he urged students to write things down. "The greatest memory is weaker than the palest ink", was one of his favorite quotes.[60] Others he recorded in his diaries were: "It is a great thing to have responsibilities and the loyalty to go with it; the great secret to help, is in encouragement; the only way to have a friend is to be one; chop your own wood and it will warm you twice; the mirror, above all – the mirror is our teacher."

The Ower diaries served Dr. Ower as a form of commonplace book for his personal observations. They gave character to the very social life of the faculty and profession, through the monthly Reporting club meetings, regular Academy meetings, afternoon teas, after 5 parties and evening dinners. The longest thread through the diaries was his close, nearly half-century long friendship with Dr. Allan Rankin.

As Dr. E.P. Scarlett noted, Dr. Ower was "one of the small group of men who created the

58. Ower, John J. From a list of Awards in the Dr. J.J. Ower file, Ower Archives, UAA.
59. Macgregor, John W. John James Ower Memorial Trust Fund, AMB 27(4): 268, November 1962.
60. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 155.

Faculty of Medicine and stayed to contribute to its growth. He dedicated himself to his work and his school. A man of singular directness, energy of mind, sincerity and courage, uncompromising in his standards and yet a natural charm and almost boyish spirit, as he has won the affection of his colleagues and students."[61]

Driven by an untiring intellectual curiosity, Dr. Ower's enthusiasm was infectious and all-consuming, whether it focused on scouting, medicine, languages, archaeology or the higher reaches of science. He was fluent in French and could comprehend and speak Spanish, French, German and some Greek and Latin.[62] Although short in stature he was a dynamo.

Dr. Scarlett, whom he admired very much, wrote of him in his introduction to Pictures on Memory's Walls. "He fared through life in questing wide-eyed fashion like a schoolboy on his first vacation in a new and fascinating city. As a pathologist he has spent much of his time gazing down a microscope but in the process he has seen much more than cells and organisms – he has caught glimpses of the light that never was on sea or land, and it has entranced him."[63]

Dr. and Mrs. J.J. Ower, April 5, 1950

Dr. J.W. Macgregor, a colleague for over 30 years recalled in his tribute to Dr. Ower, "In spite of his loss of vision and other infirmities, Dr. Ower continued with great courage, rarely speaking of himself, while still contributing to the Canadian Diabetic Association and the Canadian National Institute for the Blind. He carried on an extensive correspondence with many friends and maintained a constant interest in the progress of the many students whom he had taught. He was remembered by many for many different reasons but primarily as a capable teacher, wise counselor and friend to a host of students."[64]

Kapasiwin, Lake Wabamun

Despite his loss of vision, Dr. Ower typed a congratulatory letter to Dr. Walter Johns, after his appointment as the UofA President in February 1959. President Johns commended him in his reply. "None gave me more pleasure than your own. It was most kind and thoughtful of you to take the trouble to type a letter to me, and I should like to congratulate you on a very fine piece of work. Whenever I begin to feel somewhat put upon, I think of people like yourself, who are carrying far heavier burdens than mine, with undiminished cheerfulness and good nature, and I feel a lot better for it. You are a model to us all."[65] Dr. A.C. McGugan noted how he regarded each new disability as a challenge, not an affliction, for "It's not so much what happens to a man that matters, rather it is how he adjusts to what happens".[66]

The Ower Family: Dr. Ower married Lena Cossman Anderson of Lunenberg, Nova Scotia in 1913. She was a meticulous, capable and supportive wife. Lena died on May 18, 1974. The Owers had four sons (John, Bernard, Campbell, Theodore) and one daughter (Dorothy). John and Bernard were twins who were born in 1915 with hair lips and cleft

61. Scarlett, Earle P. "Introduction to Pictures on Memory's Walls", Part I, page 1. Repeated in AMB 28(4); 163-166, November 1963.
62. Lampard, Robert Ascertained by the author from reading the Ower diaries.
63. Scarlett, Earle P. "Pictures on Memory's Walls", CACHB 19(1): 1 May 1954.
64. Macgregor, J.W. Obituary of Dr. J.J. Ower, CMAJ 86: 796-797, April 28, 1962.
65. Johns, Walter H. Letter to Dr. J.J. Ower, February 26, 1959. Filed in the UAA Ower Archives.
66. McGugan, Angus C. *The First Fifty Years. The University of Alberta Hospital 1914-1964*, page 42, UAH, 1964.

UofA class of 1940 at Banff, June 23, 1960. Included Drs. J.W. Wallace (2nd L front), J.J. Ower (4th L front), J.A. Bradley (9th L back)

palates. Bernard's cleft palate was so severe he was never able to speak intelligibly, after 22 operations. Despite these impairments, both twins earned Tegler scholarships. Bernard became a librarian for Statistics Canada, and later the chief parliamentary librarian and archivist in Ottawa. When Bernard was investigated in Ottawa by the RCMP during a wartime incident, for possessing Technocracy literature, Dr. Rankin assisted him and arranged for his bail, and helped to have the charges eventually dropped. John spoke more clearly and became the Chief Geologist in western Canada for California Standard Oil.

Dr. Roland Campbell Ower (born 1919) graduated from the UofA with his MD (1945) and became a plastic surgeon. He was a noted artist, and trained under Sir Archibald McIndoe at England's Queen Victoria Hospital in East Grinstead, where he was succeeded by Dr. W.A. (Bert) Fowlow of Calgary. Dr. R.C. Ower's extra-medical interests extended to the Chinese Ming Dynasty. He accumulated a valuable collection of antiques in England, which he sent back to his parents. Like his father, Dr. R.C. Ower was very interested in students and their welfare, particularly after he became an Assistant Professor of Anatomy at the UofT. Dr. R.C. Ower died suddenly at age 47.[67]

The Ower's only daughter Dorothy (born 1924) married William Harrison in 1950. Dr. Macgregor was the soloist at their wedding and sang "Oh Perfect Love" to them.[68] Dorothy became the Laboratory Coordinator at the Calgary General Hospital before passing away of acute leukemia in 1978. The Ower's youngest son, Donald Theodore (born 1926), was proficient in electronics and held three patents, despite the loss of one eye in a hunting accident (1943) and damaging the other eye in a welding accident.[69]

The Ower refuge was a cottage at Kapasiwin Beach on Lake Wabamun. It was a former hunting lodge with a mezzanine on the upper floor for musicians to play to the guests. Dr. Ower bought it in 1939 for $1,000. He spent as much time there as he could, particularly after he became blind. Dr. Ower died on March 5, 1962 at age 76.

Keywords: Laboratory Medicine in WWI, Reporting Clubs, Acting Dean 1939-1942, Dean 1945-1948, WWII Accelerated Classes, Post WWII Veterans Surge, Pathologist, Scouting, Diabetes

Ower Place, S.W. Edmonton

Provincial Pathology Laboratory, opened 1950

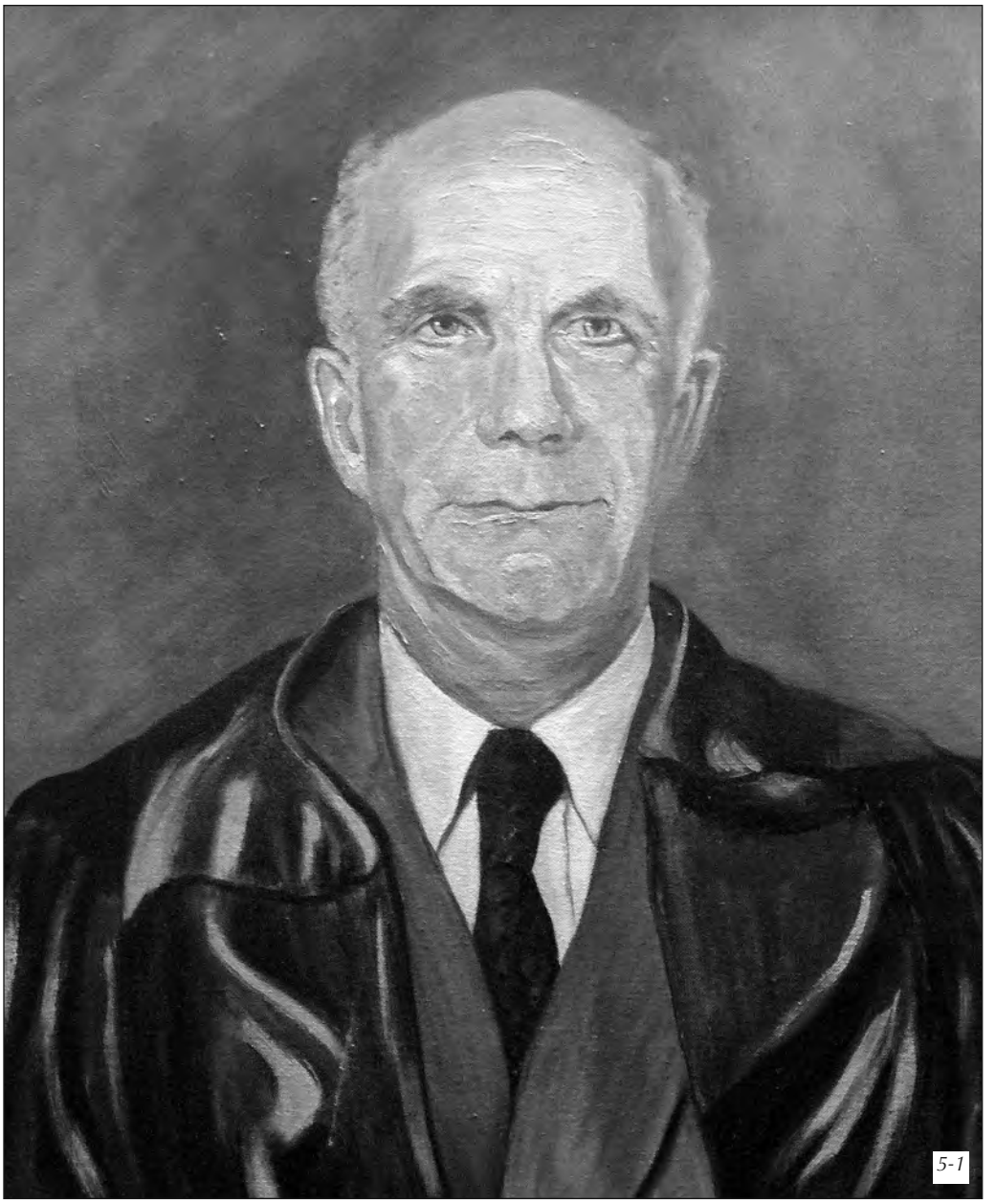
67. (Ower, R. Campbell) Three page Resolution sent to Mrs. Ower after Dr. R. Ower's death, taken from the Minutes of the Council of the Faculty of Medicine, UofT, March 25, 1966. Copy in the Ower Archives, UAA.

68. Editor Calgary Herald, August 26, 1950.

69. Evans, Isabel Ms. Isabel Evans was the daughter-in-law of Dr. J.J. and Mrs. Ower. Based on interviews with Dr. Robert Lampard, May 15, 2007 and July 21, 2008.

Appendix A: REPORTING CLUBS, 1950 (from the Ower Diaries)

Mewburn 2nd **Monday**	**Medical Digest** 3rd **Monday**	**Harrison** 4th **Monday**	**Ower** 1st **Monday**	**Conn** 4th **Tuesday**	**Revell** 3rd **Tuesday**	**Hurlburt** 2nd **Tuesday**	**Rankin** 4th **Monday**	**Baker** 1st **Monday**	**Pope** 1st **Tuesday**	**Gillespie** 1st **Tuesday**	**Shaw**
Rankin	Calder	Orobko	Allin	Thomson K	Bromley Moore	Wilson G	Elliott F	Lees	Cairns	Clarke K	Blacker
Shaw	Bow	Miller	Davidson Armstrong W	McGugan	Geissinger	Hanson	Bell G	Easton	Leach	Rodman	R. Corbet
Ower	Proclef (?)	Weinlos M	Elliott	Calder	Richard	Semulski	Shaner	Harrison	Theman	Bell RE	D Hanson (?)
Shaner	Anderson CC	Field	Hamilton K	Vant	Jesperson	Bode	Musgrove	Duggan E	Megan	Cooper Johnson	J Dvorkin
Collier	Baker	Samuell	Hohn	Wallis	Archibald	Sereda	Hanson	Bromley Moore	Lloyd	Gain	M Laskin
Rice	Allan	Conroy	Law	Malcolmson	McPherson Cam	Gross	Homer	Begg	McAlpine	Wilson TS	
Downs	Young M	Shandro	MacLennan	Hamilton R	Ross Don	Hitchen	Hebb	Hutchinson	Dorsey	Ritchie	
Vant	Shaw	Allard	Mackenzie W	Marshall	Bell G	Porrier	Morton	Nix N	Margolis	Gander	
Munroe	JW Scott	Swallow	McGugan	Huckell	Clarke TR	Stediesher	Learmonth	Ritchie	Schwartz		
Ellis	Mac Scott	Theman	McPherson AD	Mackenzie W	Dobson	Rentiers	Wilson D	Rose	Reid (Wes)		
Mewburn H	Cantor	Lobinger	Mallett	Macgregor	Donald	Clare	Rentiers	Whiting	Neiwchas		
Marshall	Shaner	Gross	Mousseau	Ellis	Fay	Kato	Gourlay	Young MR			
Orr	Macgregor	Hutchinson	Rumsey	Little	Hardy	Downs	Fay	Kelly			
Bell I.	Easton	Rich	Rawlinson	Gourlay	Hitchen	Lefebre	Clare	Poirrier			
Hepburn	Meltzer	Ower	Sereda	Cantor	Weinlos H	Allard	Bright	Hobb			
Greene	Rostrup	Mackay A	Stirrat	Medie	Parlee	Meltzer		Greenhill			
Jamieson H	Duggar E	Mackay JB	Sprague		Thomson K	Conroy		Wilson G			
Leitch	Stewart W		Tucker		TQuehl	Fortis		Wilson TC			
Stuart RD	Weatherill		Vant			Moreau		Shaner			
Hunter	Watts		Verchmin								
Gillespie	Anderson R		Weinlos M								
Popecentes	Parson G		Wilson D								
	MacLean R										
	Gillespie										
	Greenhill										
	Tucker										
	Wheeler										
	Clarke K				**Hon**	**Hon**	**Hon**	**Hon**	**Hon**	**Hon**	**Hon**
	Hon		**Hon**		Revell	Mousseau	Rankin	Baker	Pope	Ower	Shaw
	Ower		Ower		Ower	Ower	Ower	Ower	Ower	Macgregor	Ower
Totals 23	29	17	26	16	18	19	15	19	11	8	5
						Hon Members	16	**Members**	206	**Clubs**	12



Dr. John William Scott, MD, FACP, FRCPC
1894-1982

Dr. John William Scott, MD, FACP, FRCPC
1894-1982

"I have had the good fortune of being associated with the University of Alberta and the Faculty of Medicine since 1914, with the privilege of being a member of the Academic Staff for 36 years and serving under all six University Presidents".[1]

Introduction: John W. Scott began his medical career in September 1915, as a member of the third class of premedical students at the University of Alberta. Until 1921 the UofA program was a three year one, with one year of premedical education and two years of basic medical science teaching. The last two years were completed under affiliation agreements, usually at UofT or McGill and occasionally at Manitoba or elsewhere.

Dr. John W. Scott, Dean 1948-1959

Scott's medical studies were interrupted by his war service (1918/19). He returned to Canada and graduated from McGill in 1921. After interning Dr. Scott came back to Alberta to do general practice locums. Then Professor J.B. Collip enticed him to join the Biochemistry Department in 1923. One year with Collip became five, and then six when Dr. Scott succeeded Collip as the acting head of biochemistry, after Collip's departure for McGill in 1928. Having postponed any postgraduate studies until then, Dr. Scott left the UofA in 1929 to study Internal Medicine at hospitals in Montreal and London, England. He returned to the UofA in 1931 to work as a private practitioner and part-time lecturer in Medicine under Dr. Edgerton Pope. Dr. Scott stayed for the rest of his life.

Dr. Scott succeeded Dr. Pope as the Professor and Head of the Department of Medicine in 1944. He retired from that post in 1954 and turned the chair over to Dr. D.R. Wilson. In 1948 Dr. Scott was appointed the third Dean of Medicine at the UofA, following in the footsteps of two previous McGill graduates, Dr. A.C. Rankin (1920-1945) and Dr. J.J. Ower (1945-1948). Dr. Scott remained the Dean for over a decade until reaching retirement age in 1959. Although he stepped down as the Dean, Dr. Scott continued to practice with Dr. J.F. Elliott for another 20 years, or until 1979 when he retired permanently.

Highlights from Dr. Scott's medical life include working for Dr. Collip in the 1920s, participating in the initiation of the postgraduate resident training program in 1946, opening the first research laboratory at the UofA – the McEachern laboratory in 1952, initiating the first clinical research programs at the UAH in Endocrinology (1948), and Cardiology (1953), departmentalizing the Department of Medicine (1950s), starting and substantially increasing the funding for geographic full-time and part-time professors (1954-1959), and removing the 1956 conditional-probationary accreditation designation from the American Medical Association by 1959. Dr. Scott memorialized his observations and recollections in his 50th an-

John Scott, Boston, 1910

1. Scott, John W. Retirement speech given at a dinner held in his honor March 21, 1969, to acknowledge his 75th birthday and recognize his retirement from the Faculty of Medicine at the UofA. Copy deposited in the Finnigan/Scott family archives.

niversary monogram, the History of the UofA's Faculty of Medicine 1913-1963, published in 1963.[2]

From Youth to MD: John William Scott was born on February 5, 1894 on his father's farm, at Clones in County Monaghan, 80 kilometers southeast of Belfast, Northern Ireland. He completed his schooling at the Royal Academia Institute in Belfast, graduating in 1908.[3] Although only 14, he entered the real world when his mother sent him out to Boston. There he worked in his uncle's tea emporium for four years driving horses as a member of the Teamster's Union.

In 1912 he found his way to Edmonton where he secured a job as a shipping clerk in the Northern Alberta Railway freight office. Not affluent, he acquired a tent and pitched it on the North Saskatchewan river flats for at least one winter, heating it with a Coleman stove. Two years later he applied to the UofA Registrar Cecil Race for a credential assessment and possible admission to medicine. The Registrar said he was qualified to write the Grade 11 matriculation examinations, which were the UofA's entrance requirement. Race suggested Scott spend three months at Alberta College to update his knowledge, which he did before writing the diploma exams.[4]


5-4

John Scott (4th L front), with Professors Gillespie, Collip, Revell and the class of 1917

The following September, John Scott registered in the Faculty of Medicine (1915). Most of the premedical teaching was given in the new Arts building. First year courses included physics, organic chemistry, botany and zoology, French and German. Zoology was taught by a new Professor, J.B. Collip, who would leave an imprint on Scott for the rest of his life. At age 22, Collip was younger than most of his students and one year older than Scott.[5] In the fall of 1916 Collip was assigned all of Dr. Moshier's classes (physiology, pharmacology, biochemistry), after Captain Moshier's 11th Field (Western Universities) Ambulance Unit was mobilized and sent overseas.


5-5

Medical class of 1917/18. John Scott is 2nd L back row

Living across the North Saskatchewan River, Scott had either to walk across the ice in the winter, walk over the High Level Bridge or take the trolley which went over the Low Level bridge, up 99 Street and west along Whyte Avenue to 109 Street. From there it was a mile-long walk through the bush to the Pembina, Athabasca and Assiniboia Halls. The more prosperous students rode bikes. In 1914 the UofA student population was 500. Classes were taught by 30 teachers, and the university had an operating budget of $150,000.

In his second year (1916/17) Scott and 19 of his classmates studied anatomy, physiology, biochemistry and bacteriology. There were two full time teachers, Dr. Revell (anatomy) and Professor Collip (physiology), and seven or

2. Scott, John W. *The History of the Faculty of Medicine of the University of Alberta 1913-1963*, 43 pages, UofA, 1963.
3. Macbeth, Robert A. Nomination (of Dr. John W. Scott) for an Appointment to the Order of Canada, 1975. The nomination was not successful. Copy deposited in the UAA Archives.
4. Scott, John W. Memories of John W. Scott 1914 to 1979, page 1, March 1979. This memoir was revised by Dr. Scott and included as "Memoirs of a Career in Medical Education in Alberta, 1914-1959" in *Medicine in Alberta, Historical Reflections*, pages 120-135 by Drs. D.R. Wilson and W.B. Parsons, AMF, 1993. It was abridged in *The History of the Department of Medicine at the University of Alberta* by Dr. Dawna Gilchrist, pages 11-16, Friesens, 2004.
5. Lampard, Robert "Dr. James Bertram Collip", in *Alberta's Medical History, Young and Lusty and Full of Life*, pages 311-323, 2008.

Experimentation Lab, circa 1929

eight part-timers.[6] The anatomy and physiology classes were taught in the University's Powerhouse, alongside the Engineering students. In his third year (1917/18) the class size was down to 11, because of enlistments or the lack of funds to continue. Scott's class included three women. He provided a descriptive recollection of the university and the classes his teachers gave in 1957, noting "nothing is static in medical education."[7]

Scott completed his third year in the spring of 1918 and could have stayed on staff as a demonstrator in physiology while taking courses towards his B.Sc.[8] Instead, he and classmate Morley Young joined the 1st Tank Battalion of the Canadian Expeditionary Force on April 20, 1918, as privates.[9] The two recruits were sent overseas with UofA contemporaries Lt. George Steer, A.L. Burt, and W.R. Howson. Although they arrived in England on June 21, 1918, the two soldiers never reached the frontlines in France. The war ended with the signing of the Armistice on November 11.

UofA's 1st Tank Battalion, CEF
Pte J.W. Scott, front row (L), April 26, 1918

Pte. John W. Scott, 1918

Scott's return to Canada was delayed by the last to arrive – last to return repatriation formula. With time on their hands, Scott and Young applied to audit medical courses in Glasgow, Scotland from January 28 to May 23, 1919, under the Khaki University program organized by UofA President H.M. Tory. Told by the Glasgow Dean of Medicine he couldn't allow colonials into the program, the over six foot Morley Young (Scott was 5'7")[10] replied, "perhaps [you] could tell your faculty members that the colonials were good enough to fight for your country." The Dean apologized and made them welcome.

While in Glasgow, Scott and Young attended the lectures of Professor Teachers, whose family were famous for the Scotch whiskey they produced. Attending Glasgow left Scott unable to fulfill the advice given to him one winter's evening by Alberta's pioneer physician Dr. W.M. MacKay. When Scott told him he hoped to study medicine, MacKay replied "good laddie, but be sure to go to Edinburgh.

6. Corbet, Elise A. *Frontiers of Medicine*, pages 13-17, UAP, 1990. Dr. Moshier was a part-timer, who had been appointed the Medical Superintendent of the Strathcona Hospital in 1914, when it was taken over by the UofA. Superintendent Dr. James Kyshe left to join the CAMC in 1944.
7. Scott, John W. *The Faculty of Medicine. A Historical Sketch*. MUS Bulletin 1(1): 3-4, February 1957.
8. Corbet, Elise A. Letter from Dr. Revell to acting President Kerr, 31 August 1918, P.P. f150, UAA, as cited in Elise Corbet's *Frontiers of Medicine*, page 19, UAP, 1990.
9. Johns, Walter H. *A History of the University of Alberta, 1908-1969*, opp page 114, UAP, 1981. Scott's Canadian Army Regimental Number was #2765327. A decade later Dr. Scott was one of the Faculty of the UofA who served as a medical officer in the Canadian Officers Training Corps (COTC) in the 1930s.
10. Scott, John W. Story recounted by Pat Finnigan and Moira Scott-Finnigan, August 11, 2008. Four of the first five deans were short in stature: Drs. Rankin (5'7"), Ower (5'7"), Scott (5'7") and Cameron (5'6").

It's the only medical school worth thinking about."[11]

Temporarily transferred to the Canadian Tank Depot at Camp Witley where Lt. Col. Mewburn had been stationed, Scott returned to Canada on the S.S. Regina and was discharged in Edmonton on July 29, 1919. In the fall Scott enrolled at McGill for his final two years of medicine. He graduated with an MD CM in 1921, followed by a six month internship at the Montreal Maternity Hospital. Dr. Scott returned to Alberta in late 1921, and for the next year and one half performed locums at Provost, Hughenden and Czar, east of Edmonton.

Rural winter house calls were a challenge. The most reliable winter transportation for the 10-20 mile trips was with a horse and cutter, requiring a fur coat, felt boots and a charcoal foot warmer. When he became lost he followed Dr. G.A. Stanley's advice and tied the reins to the buckboard and went to sleep. The horse invariably found its way to a stable door. In the summer, changing flat tires on the Model T, digging the car out of the mud with a shovel, and occasionally borrowing a farmer's horse to pull the car out of the bog, were just as necessary. Not infrequently Dr. Scott was paid in kind – a load of rhubarb, a sewing machine or a pot-bellied stove.

John W. Scott MD, CM, McGill 1921

Dr. and Mrs. John W. Scott, January 1, 1923

Dr. Scott always said that a period of practice as a GP was an invaluable experience. It had another benefit. During his locum at Hughenden, he met his future wife Ellen Margaret Foster who worked in the bank. Two of her sisters were 1910 nursing graduates from the Holy Cross Hospital in Calgary. The Scotts were married on New Year's Day in 1923.

The Years Under Dr. J.B. Collip (1923-1929): In the summer of 1923 Dr. Scott registered in Edmonton for a three day continuing education program on the administration of newly available insulin. It was given by Dr. H.C. Jamieson and insulin isolator Professor J.B. Collip. During the course, Collip persuaded Dr. Scott to stay and join him. Scott described this decision as a turning point in his life.[12]

Dr. Scott was appointed an Assistant Professor at the University and given an honorary appointment in the Department of Biochemistry at the University of Alberta Hospital (UAH).[13] He performed many of the simple lab tests (urinalysis, RBC counts, glucose levels), because there were no laboratory technicians. He expanded the battery of tests to include Ziehl-Neelsen stains for TB and biochemical testing for levels of urea, calcium and phosphorus. Dr. Scott introduced the first testing of oxygen and carbon dioxide concentrations in expired air, by collecting air in a Douglas bag,

11. Scott, John W. "Early Medical Education and Practice in the Province of Alberta", page 4, of an 11 page manuscript, November 1975. Copy in the Scott-Finnigan family archives.

12. Johns, Walter H. From his Eulogy given at the funeral service for Dr. John William Scott, Garneau United Church, April 14, 1982.

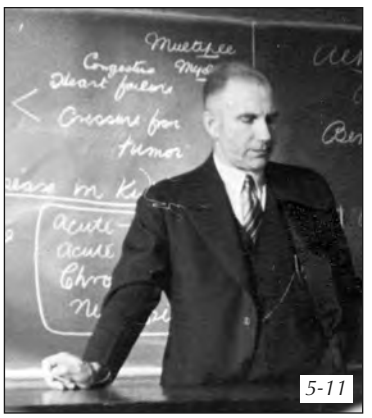
13. Scott, John W. This was Dr. Scott's first UofA academic appointment. He would, in succession, become a Lecturer in Biochemistry (1923-1926), Assistant Professor of Biochemistry (1927-1928), Assistant Professor of Biochemistry at McGill (1929-1930), Assistant Professor of Medicine (1931-1941), Associate Professor of Medicine (1941-1944), Professor of Medicine and Director of Medical Services (1944-1954) and Dean of Medicine (1948-1959). From Dr. Scott's CV, dated May 27, 1948, UAA, Edmonton.

sealing it and taking it over to the Faculty of Medicine for analysis.[14]

Dr. Scott's University Hospital laboratory work was gifted as there was no additional stipend for it. As if he didn't have enough to do, the Royal Alexandra Hospital (RAH) appointed him to their Laboratory department to do the same tests for them. In his free time he assisted Professor Collip with his teaching, allowing Collip more time for research on insulin and parathyroid hormones.

Two more remunerative appointments followed. Dr. Tory appointed him the physician/director of the UofA Student Health Service with an honorarium of $500/year, and he began working in the Outpatient department at the UAH. The 1923 jobs gave Dr. Scott his first opportunity to practice medicine in a university setting. He continued working in that setting for another 46 years.

Dr. Scott's return to Edmonton in 1923 followed the opening of the new medical school building (1921), and the takeover of the Strathcona Military Hospital, renamed the UAH by the University of Alberta (1922). Dr. Heber Jamieson was the acting head of the Department of Medicine, while the department awaited the arrival of Dr. Edgerton Pope from Winnipeg. Dr. Frank Mewburn was appointed the Professor and Head of Surgery and Dr. Leighton Conn, the Professor and Head of O&G. By then, 150 UofA students had completed their MDs at McGill, Toronto or Manitoba.



Dr. Scott lecturing circa 1923

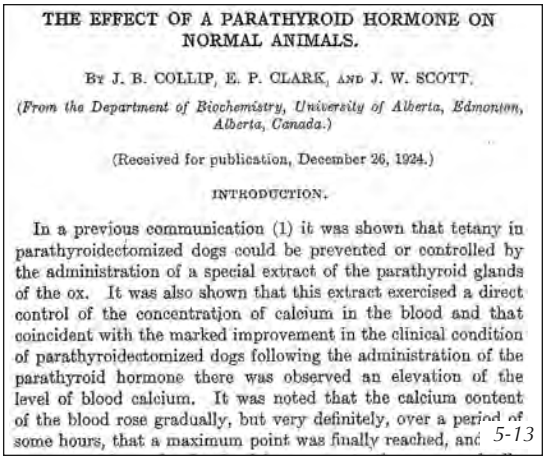
Dr. Edgerton L. Pope, Professor and Head of Medicine 1922-1944

In 1923 the faculty began teaching the last two clinical years of medicine, graduating the first eleven UofA MDs in 1925. Dr. Scott remembered what a thrill it was to attend the Convocation of the first class.[15] The class included Dr. Collip, although his graduation was delayed temporarily, because he had not performed enough deliveries.[16]

Teaching during the academic year left Dr. Scott free in the summer. He jumped at the chance to take a four month postgraduate course at the University of Chicago in 1924. Clinical practice was beginning to change. Acute myocardial infarction was a new diagnosis. Liver supplements were being introduced for the treatment of pernicious anemia. Typhoid and syphilis were still the commonest communicable diseases. There was little to offer in the way of specific treatment, except for typhoid vaccinations and taking precautions to prevent the spread of venereal diseases.

When Dr. Collip left in 1928, President Tory asked Dr. Scott to take over the Biochemistry Department. Dr. Scott accepted and was appointed the acting head for a year. In 1929 the Scotts, with son Foster in tow, went to England. Dr. Scott planned to study at the London School of Medicine Hospital. No sooner was he there, than he received two telegrams from

14. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, pages 108-109, UAH Hospital, 1986. No specific date for the introduction of these tests was given by Dr. Elliott.
15. Scott, John W. — Everyone was excited as Dr. Scott recalled in 1969, in his after dinner presentation, during an evening held to honor his retirement from the UofA Faculty of Medicine in 1969. The five page speech is held in the Scott/Finnigan family archives.
16. Lampard, Robert — "Dr. Donald Robert Wilson", in *Alberta's Medical History, Young and Lusty and Full of Life*, pages 388-400. Dr. Leone MacGregor was the class president. She was the only female student in the class.



THE EFFECT OF A PARATHYROID HORMONE ON NORMAL ANIMALS.

By J. B. COLLIP, E. P. CLARK, and J. W. SCOTT.

(From the Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada.)

(Received for publication, December 26, 1924.)

INTRODUCTION.

In a previous communication (1) it was shown that tetany in parathyroidectomized dogs could be prevented or controlled by the administration of a special extract of the parathyroid glands of the ox. It was also shown that this extract exercised a direct control of the concentration of calcium in the blood and that coincident with the marked improvement in the clinical condition of parathyroidectomized dogs following the administration of the parathyroid hormone there was observed an elevation of the level of blood calcium. It was noted that the calcium content of the blood rose gradually, but very definitely, over a period of some hours, that a maximum point was finally reached, and

5-13

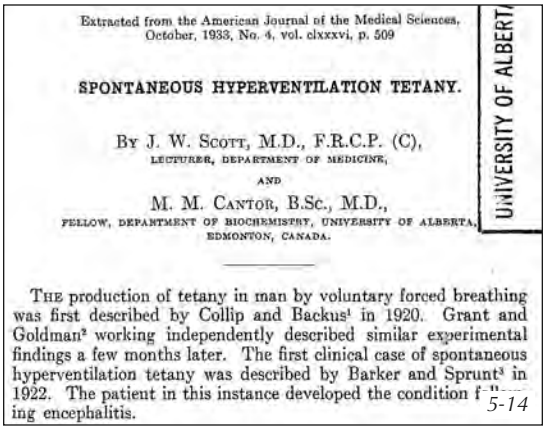
Journal of Biological Chemistry, 63(2): 439-460, 1925

Dr. Collip begging him to come to Montreal because he was so short of staff. Dr. Scott relented and joined Dr. Collip for one year (1929/30), before returning to Guys and the London Hospital to finish his training (1930/31). The Scotts returned to Edmonton in 1931 and Dr. Scott appointed a part-time lecturer under Dr. Pope.

The Depression Years (1931-1938): In 1931 Dr. Scott received his Fellowship in Internal Medicine with a Specialty in GI and Metabolic diseases. It was granted by the new Royal College of Physicians and Surgeons of Canada without an examination, as the College did from 1929-1931 to qualified applicants. Four years later Dr. Scott received a Fellowship from the American College of Physicians and Surgeons (1935). He would be granted a Mastership in the American College of Physicians in 1973.

The 1930s were particularly difficult because of the drought in southeastern Alberta, which began in 1926, compounded by the Depression in 1929. Agricultural revenues plummeted as farm commodity prices fell by up to 90%. The only province hit worse and longer than Alberta was Saskatchewan. The Alberta GDP dropped by 42%. Fiscal constraints reduced the government's annual requisition for the university, which was one million dollars. It included $60,000 for the Faculty of Medicine. As Scott noted research funds shrank like "a snowball in the July sun."[17]

Dr. Scott recalled how times were tight, finances limited and medical classes small. Still, out of the Depression came a continuing medical education or refresher course started in 1932. He regularly gave lectures at it. Despite the economic difficulties Dr. Scott enjoyed bedside teaching especially during the 1930s. The bedside groups were small and the questions stimulating. Another teaching opportunity at which Dr. Scott excelled were the Clinical Pathological Conferences. They were usually led by a clinician and a pathologist. In early 1936 Dr. Ower noted in his diary that Dr. Scott handled them as well as Dr. Fulton Gillespie and "He's developing wonderfully."[18] Despite salary and income reductions, Dr. Scott was able to take another four month refresher course at the University of Michigan in Ann Arbor (1934) and one at the St. Thomas' Hospital, London in 1939.



Extracted from the American Journal of the Medical Sciences, October, 1933, No. 4, vol. clxxxvi, p. 509

SPONTANEOUS HYPERVENTILATION TETANY.

By J. W. Scott, M.D., F.R.C.P. (C), Lecturer, Department of Medicine, and M. M. Cantor, B.Sc., M.D., Fellow, Department of Biochemistry, University of Alberta, Edmonton, Canada.

UNIVERSITY OF ALBERTA

The production of tetany in man by voluntary forced breathing was first described by Collip and Backus[1] in 1920. Grant and Goldman[2] working independently described similar experimental findings a few months later. The first clinical case of spontaneous hyperventilation tetany was described by Barker and Sprunt[3] in 1922. The patient in this instance developed the condition f... ing encephalitis.

5-14

American Journal of the Medical Sciences 186(4): 509 1933

In the 1930s Dr. Pope still devoted 10 lectures to typhoid and tertiary syphilis in his introductory course in clinical medicine. Brucellosis disappeared after pasteurization of milk became mandatory. Tularemia was found to be a disease transmitted to humans when rabbits

By 1941 there were over 20 members on active service. Dr. John Scott was president that year, and, until he resigned to "join up the Navy," Ken Thompson served as secretary. A portion of regular meetings was specifically set aside to hear reports from representatives of the College of Physicians and Surgeons and the Alberta Medical Association.

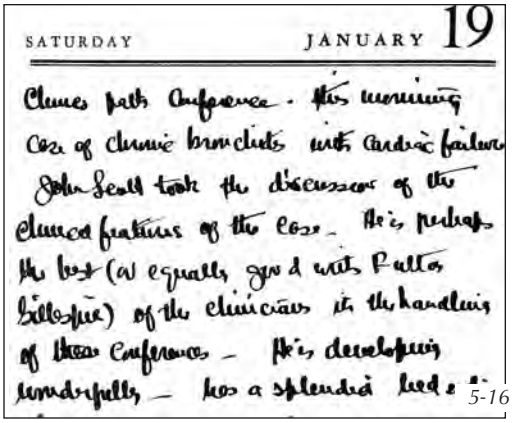
On one occasion during the year Dr. Max Cantor, a biochemist who would later become chief coroner, filled in for a guest speaker who had failed to appear, and spoke extemporaneously for almost an hour on "Liver Function Tests." That summer the Academy heard major seminars on "Venereal Disease" and "Prostitution Control." The yearly banquet was held at the Macdonald Hotel, where Mr. Justice O'Connor regaled almost 100 members and guests with stories on "Early Alberta Doctors."

5-15

From Harry Letts History of Edmonton Academy of Medicine, 1986

17. Scott, John W. *The History of the Faculty of Medicine of the University of Alberta*, page 15, UofA, 1963. He noted. Depressions come and go, Universities are everlasting, so "Dabit dues his quoque fin em", tighen your belts and carry on.

18. Ower, John J. Ower Diary entry for January 19, 1936. UofA Archives 72-73.


SATURDAY JANUARY 19

Clinics path Conference. This morning Case of chronic bronchitis with cardiac failure. John Scott took the discussion of the clinical features of the case. He is perhaps the best (as equally good with Pathology) of the clinicians in the handling of these Conferences. He is developing wonderfully. has a splendid head

5-16

"He's developing wonderfully." from the Ower Diary, 1935

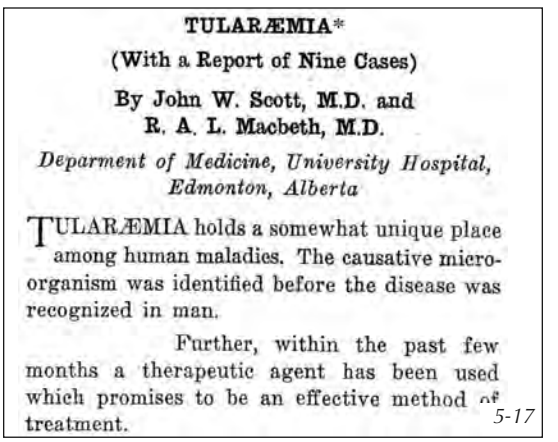
and other animals were skinned. Drs. Macbeth and Scott reported on nine cases, including three deaths.[19] There were major polio epidemics in 1927, 1937, and 1953. The last one affected more adults, including Dr. R.E. Bell the future Director of the UAH Clinical Laboratory Services. A scarlett fever epidemic hit the university in the 1930s. Dr. Scott, who had managed the Student Health Service starting in 1923, and directed it from 1944-1954, ordered university courses shut down for three weeks. As Dr. Scott noted, many new drugs came on stream – the sulfas (1936), penicillin (1943), ACTH, radioactive iodine for hyperthyroidism.

The War Years (1939-1945): Twenty-two Faculty of Medicine members enlisted during WWII, markedly increasing the teaching load on those who didn't, and leaving Dr. Scott teaching 20 hours per week despite his busy practice. To provide 300 more physicians to meet the anticipated request of Defense Minister L.C. Ralston, the internship for the class of 1942 was shortened to eight months. When the request was increased to 800 the faculty agreed to accelerate all classes by compressing each academic year into six month blocks and teaching continuously, starting June 1, 1942.[20] The faculty obtained an agreement from the Army in March 1943 to secure the acting Dean's approval before any further faculty were allowed to enlist. Despite almost doubling the teaching time, the faculty's budget only increased to $130,000/year (1944).

In anticipation of a request for more physicians to serve in the tropical areas of the South Pacific, Drs. Scott and R.M. Shaw attended a refresher course (1943) on tropical diseases (malaria, dysentery), at the Tulane University School of Tropical Medicine in New Orleans. It led to a new laboratory course in the third year of the medical program. That year Dr. Ower recommended full Professorships for Dr. Scott and Dr. Jamieson.[21]

With considerable foresight, the Provincial Government requested the University Board of Governors develop a long term plan for the University in 1941.[22] The Parlee report (1942) recommended structural additions to the east and west wings of the medical school which were completed by 1948/49, together with a new provincial laboratory (1950), and the first post WWII addition to the UAH (1951), which added 350 beds to it. The Department of Veterans Affairs opened the Mewburn Pavilion (1945), a 240 bed dormitory style facility immediately northwest of the UAH.[23]

The wartime period brought the retirement of the remaining original faculty – Conn (1941), Revell (1944), Pope (1944), Gray (1946), and Jamieson (1946). On July 10, 1944 Dr. Rankin asked Dr. Scott to succeed Dr. Pope as the Professor and Head of the Department of Medicine. After he accepted, Dr. Ower suggested he look for a successor. Dr. Scott had already been encouraging Dr. Donald Wilson to return to the UofA.[24]


TULARÆMIA*

(With a Report of Nine Cases)

By John W. Scott, M.D. and R. A. L. Macbeth, M.D.

Deparment of Medicine, University Hospital, Edmonton, Alberta

TULARÆMIA holds a somewhat unique place among human maladies. The causative micro-organism was identified before the disease was recognized in man.

Further, within the past few months a therapeutic agent has been used which promises to be an effective method of treatment.

5-17

CMAJ, 55: 564-566, 1946

19. Scott, John W., Macbeth, Robert "Tularemia (with a Report of Nine Cases)", CMAJ 55: 564-566, December 1946.
20. Ower, John J. *Alberta Medical Alumni* Bulletin, #3, May 8, 1942, page 4, UAA.
21. Ower, John J. Ower Diary entry for August 4, 1943.
22. Corbet, Elise A. *Frontiers of Medicine*, pages 60-61.
23. McGugan, Angus *The First Fifty Years. The University of Alberta Hospital 1914-1964*, pages 21-22, UAH, 1964.
24. Lampard, Robert "Dr. Donald Robert Wilson", in *Alberta's Medical History, Young and Lusty, and Full of Life*, pages 388-400, 2008.

In his 1944 Reminiscences Dr. Pope described Dr. Scott as unsurpassable, steadfast and strong, "who had been basking for some years in the sunshine of Collip's chemistry and endocrines, suddenly evolved into a general internist of rare qualities, founded upon the sound basis of laboratory physiology."[25]

Students: Not only did Dr. Scott have a well recognized competence in clinical medicine, he was known for leaving his classes with impressionable personal experiences. One patient was a very attractive soon-to-be-wife of a class member. All the students were curious as to why she was invited to class, until Professor Scott arrived, "And in his dignified way commented that Eleanor had a story to tell us. She had, she confessed, embarrassed her fiancée [Bill Simpson] on several occasions by eating excessively while on dates with him and it was costing him a lot of money. The polydipsia and polyuria were soon apparent, and Bill insisted that she see John Scott immediately. It was our first and most dramatic lesson, in the class presentation of what was then called juvenile diabetes."[26] Another was the presentation of medical student Charles Allard, who had been cross-country skiing on the North Saskatchewan River, and arrived in the emergency department short of breath. Only Pat Rose made the correct diagnosis – a spontaneous pneumothorax.[27]

After WWII (1945-1948): Dr. Scott developed a very busy private practice. In January 1946, he asked Dr. Frank Elliott to join him. The two internists practiced together for 32 years, until Dr. Scott's retirement in 1979. They were joined by Dr. A.M. Edwards in 1956, and moved their office from the downtown Tegler Building, to one across the street from the UAH, with the hospital squarely framed in their windows.

Prior to 1946 individual residents organized their own postgraduate programs, usually beginning at the UAH and completing them elsewhere. Two early postgraduates were Drs. R.K.C. Thomson and Keith Maclean.

Faculty crave order but defy authority.

Dr. Scott held two long discussions on March 17 and 20, 1946 with Dr. Ower, about the possibility of starting a postgraduate training program at the UofA[28]. The faculty met to discuss the topic on March 18, 1946. On April 2, at Dr. Mark (Levey) Marshall's home, Dr. Scott led the discussion which recommended the formation of a nucleus committee to study the idea. It included himself, several faculty members, and representatives from the RAH and Edmonton General hospitals,.[29]

On September 17 there was another dinner meeting at Dr. Marshall's home, with the now enlarged 16 member Graduate Training Committee.[30] Everyone present supported starting the program, so Dr. Ower took the next step and appointed Dr. Marshall as the Director of Graduate Medical Training, with the responsibility for initiating new and individualized postgraduate residency training programs.

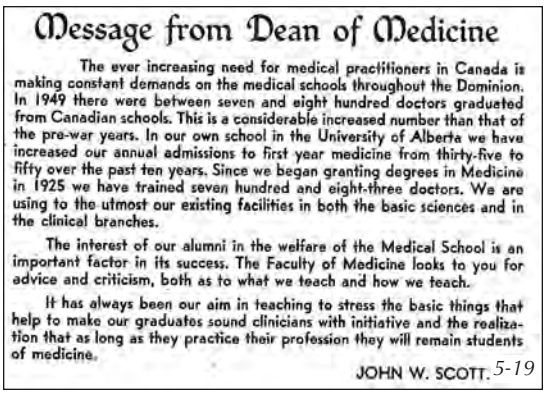
Drs. M.R. Bow and M. Marshall at the Scott retirement dinner, March 21, 1969

25. Pope, Egerton L. "Some Reminiscences." Presented at the Annual Medical Alumni Association meeting, September 20, 1944 and reprinted in the Alberta Medical Alumni Bulletin, #3, pages 1, 5, December 30, 1944.
26. Waldie, A.C. *Iatros* 3(1): 25, Winter 1988/89. Dr. Simpson continued on to an illustrious career in Psychiatry at the Menninger clinic.
27. Rose, Pat Interview with Dr. Robert Lampard, August 9, 2008. Dr. Scott became involved in Pat Rose's care, when he diagnosed him with Scarlett fever and isolated him for 5 weeks, after his Ponoka Mental Hospital rotation.
28. Ower, John J. Ower Diary entries for March 18, 20, 1946 and Dr. R.A. Macbeth's The Department of Surgery of the University of Alberta, pages 121-122. Dr. Ross Vant quoted Dr. Ken Thomson as saying the first meeting was in late 1945 (page 154). Also see the profile of Dr. J.J. Ower.
29. Ower, John J. Ower Diary entries for March 20, April 2, and Sept 17, 1946.
30. Ower, John J. Ower Diary entry for September 17, 1946.

Dr. Marshall's approach was to develop a customized program for each resident and secure Royal College approval for it.[31] The approach worked until Royal College approval could be obtained to teach the full program at the UofA.

Shortly afterwards, at two more evening meetings at the Scott home, Dr. Ower raised the need for more teaching of psychiatry and psychology to medical students. Two days later at an evening cocktail party at the Scotts, Dr. and Mrs. J.B. Collip were honored, as they visited colleagues and family in Edmonton.[32] It was by 1949 there were 19 residents in the postgraduate program and a full fellowship program was being offered in Surgery. Despite the fellowship program, most residents still finished their studies, or took additional specialty training in older eastern Canadian and US centers. One compelling reason was that there was no salary for postgraduate residents in Alberta until 1958.

Dr. Scott's Medical Research:[33] Dr. Scott's research career began when he joined Professor Collip in 1923. Although he co-authored but one publication with Dr. Collip (see the Scott CV), his competence in teaching liberated Collip's time for research. Scott's preference for medical education over medical research was apparent, when he submitted his second publication to the Rockefeller Foundation in 1930, on the UofA's facilities for teaching biochemistry. Most of his subsequent clinical research focused on the endocrine system and unusual cases presentations, which were published in the CMAJ. Addison's disease of the adrenal glands was of particular interest to him, but he wrote or gave presentations on diabetic, thyroid, and parathyroid problems. Many of his articles were jointly authored with Drs. Heber Jamieson or Max Cantor of the Department of Medicine.



Message from Dean of Medicine

The ever increasing need for medical practitioners in Canada is making constant demands on the medical schools throughout the Dominion. In 1949 there were between seven and eight hundred doctors graduated from Canadian schools. This is a considerable increased number than that of the pre-war years. In our own school in the University of Alberta we have increased our annual admissions to first year medicine from thirty-five to fifty over the past ten years. Since we began granting degrees in Medicine in 1925 we have trained seven hundred and eight-three doctors. We are using to the utmost our existing facilities in both the basic sciences and in the clinical branches.

The interest of our alumni in the welfare of the Medical School is an important factor in its success. The Faculty of Medicine looks to you for advice and criticism, both as to what we teach and how we teach.

It has always been our aim in teaching to stress the basic things that help to make our graduates sound clinicians with initiative and the realization that as long as they practice their profession they will remain students of medicine.

JOHN W. SCOTT. 5-19

Medical Alumni Bulletin #8, September 1, 1950

Dr. Scott's attitude towards research in medical education was articulated a few years later. "Research should not be looked on as a luxury but as a very necessary part of the activities of a medical school. The student who participates in it, either at the undergraduate or graduate level is a better doctor."[34]

When post-depression funding became available in 1938, through the NRC's newly appointed MRC associate committee, Dr. Scott applied for grants to continue his research on tularemia – a disease in beavers, rabbits and other wild animals that was transmitted to man.

With encouragement from Dr. Collip, after WWII, Dr. Scott helped Dr. Ower start the Western Working Group of the Medical Research Council (MRC) of Canada in 1946. The first two annual meetings were held in Banff and Edmonton. The process was formalized when Dean Ower appointed Dr. Scott to the faculty's new Medical Research Allocation Committee that year.[35]

In 1948 representatives of the Alberta Cancer Society, encouraged by the National Cancer Institute of Canada (NCIC) Director Dr. Allan

Western Canadian Medical Deans: (back) Drs. Lennox Bell (MN), J.J. Ower, M.M. Weaver (BC). (front) John Scott, Allan Rankin, W.S. Lindsay (SK), February 1951

31. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, page 118.
32. Ower, John J. — Ower Diary entries for September 23 and 29, 1946.
33. Scott, John W. — See the preliminary list of publications of Dr. J.W. Scott on pages 204-205.
34. Scott, John W. — "Faculty of Medicine University of Alberta", in the Alberta Medical Bulletin 20(3): 58-61, August 1935.
35. Ower, John J. — Ower Diary entry for March 13, 1946.


5-21

UAH Medical Staff, 1949

Blair, met with senior faculty including Dr. Scott, to discuss the possibility of a fundraising campaign for a Cancer Research Centre at the UofA.[36] At the same time Drs. Ower and Scott were working on another proposal for a Department of Preventative Medicine and Public Health, which they submitted to the Rockefeller Foundation for seed funding.[37]

Medical Research At the University

There are two types of medical schools. First the one which is not satisfied with merely giving professional training but strives to add new knowledge to the science and art of medicine. The second type of school is one whose staff is content with existing knowledge and presents it in its program of teaching. Many excellent schools with well qualified staffs fall in the second group and have trained good doctors. Why then go to the expense and effort of carrying out original investigation or as it is commonly called research in Medical Schools?

Many reasons might be given in an attempt to answer this question. Perhaps the greatest argument for encouraging research is that it stimulates the minds of those who do it and makes them more dynamic and critical teachers. Many of us erroneously think of the research worker as a laboratory recluse with a zeal to make new discoveries and startle the world. Actually research in universities can be carried out to its best advantage by those who are primarily teachers. Such interested teachers should have provided for them facilities, technical and financial assistance to allow them to carry on research activities. Further their teaching load should be such that they have adequate available time for investigative work.

5-22

By Dr. JW Scott, September 1, 1950

By 1949 Dr. Scott had secured the University's approval to transfer the 1920 Rockefeller grant to the Faculty of Medicine. After he became dean in 1948, Dr. Scott assisted with the implementation of the University's 1942 capital recommendations as they affected the faculty of medicine. The new (1950) Provincial Laboratory opened, releasing space in the basement of the medical school. With $150,000 in funds from the Alberta Cancer Society, the McEachern medical research laboratory was opened (1952) adjacent to the provincial laboratory space. It was renovated and expanded to house the Surgical Medical Research Institute (SMRI) (1953), under its new director, Dr. Kasmir Kowalewski.[38]

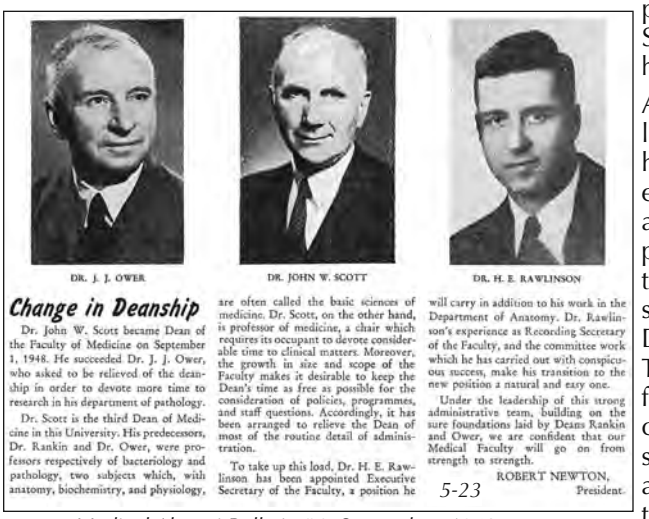
Dr. Scott's attitude toward medical schools was to divide them into two categories - those which added new knowledge to the science and art of medicine, and those which were content with teaching existing knowledge. The Faculty had already approved research programs in the basic medical science departments in 1947. Scott wanted to extend research to the clinical departments.[39]

Clinical research took a step forward when Dr. Scott was instrumental in securing the first of three Markle scholarships, starting with Dr. Donald Wilson (1948). Another opportunity to expand the clinical research program came with the formation of the Hospital based Special Services and Research Fund in 1955. Dr. Scott was appointed to the Application and Approval Committee.[40]

In 1958 the Faculty secured funding from the Kinsmen Club and Cancer Society for two clinical research beds in the hospital. Further expansion of medical research facilities in the SMRI and McEachern laboratories came in 1960/61. The laboratories provided training

36. Ower, John J. — Ower Diary entries for February 13 and March 13, 1946, March 5, 1947, March 10 and August 24, 1948. Dr. Collip also supported the McEachern laboratory proposal (Ower Diary March 24, 1948).
37. Ower, John J. — Ower Diary entry for June 2, 1948.
38. Macbeth, Robert A. — The Department of Surgery of the University of Alberta. The First Half Century, 1922-1975, pages 201-204, Department of Surgery, 2009.
39. Scott, John W. — "Medical Research at the University", in the Alberta Medical Alumni Bulletin, #8, page 1, September 1, 1950. (His article is reprinted above.)
40. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, page 216. The Special Services and Research Fund was established with $500,000 from the transfer of the Rockefeller grant and $1,000,000 from budgetary surpluses at the UAH, saved by Superintendent Dr. Angus McGugan.

opportunities to expand the clinical research programs at the UofA in the 1960s and 1970s. The publication of research papers increased. Two years after Dr. Scott retired as the Dean in 1959, there were 140 clinical research articles published by the faculty, up from 4 in 1948. By 1962 annual medical research grants reached $920,000 per year, a marked increase from the $10,000 when Scott became Dean.



DR. J. J. OWER DR. JOHN W. SCOTT DR. H. E. RAWLINSON

Change in Deanship

Dr. John W. Scott became Dean of the Faculty of Medicine on September 1, 1948. He succeeded Dr. J. J. Ower, who asked to be relieved of the deanship in order to devote more time to research in his department of pathology.

Dr. Scott is the third Dean of Medicine in this University. His predecessors, Dr. Rankin and Dr. Ower, were professors respectively of bacteriology and pathology, two subjects which, with anatomy, biochemistry, and physiology, are often called the basic sciences of medicine. Dr. Scott, on the other hand, is professor of medicine, a chair which requires its occupant to devote considerable time to clinical matters. Moreover, the growth in size and scope of the Faculty makes it desirable to keep the Dean's time as free as possible for the consideration of policies, programmes, and staff questions. Accordingly, it has been arranged to relieve the Dean of most of the routine detail of administration.

To take up this load, Dr. H. E. Rawlinson has been appointed Executive Secretary of the Faculty, a position he will carry in addition to his work in the Department of Anatomy. Dr. Rawlinson's experience as Recording Secretary of the Faculty, and the committee work which he has carried out with conspicuous success, make his transition to the new position a natural and easy one.

Under the leadership of this strong administrative team, building on the sure foundations laid by Deans Rankin and Ower, we are confident that our Medical Faculty will go on from strength to strength.

ROBERT NEWTON,
President.

5-23

Medical Alumni Bulletin #6, September, 1948

Dean of the Faculty of Medicine (1948-1959) – the Faculty: Dr. Scott was the first clinician and the last McGill graduate to become the UofA's Dean of Medicine. He succeeded Dr. Ower on September 1, 1948. Scott noted that Dr. Ower had suffered from diabetes for over 20 years, but had maintained a buoyancy of spirit and humor that helped him suffer the "slings and arrows of outrageous fortune", of which he had more than his share.[41]

Despite the post WWII expansion of Faculty of Medicine facilities, the first since 1920/21, there was an operational problem. In 1948 the UofA had a reputation across Canada for paying the lowest salaries in the country, a carryover from the 1930s. One of Dr. Scott's first steps as Dean was to double the amount of money received by the basic medical scientists to $4,500/year. He increased the Department of Medicine's budget from $4,000 to $8,000 per year. His own academic salary was $4,500, or less than Drs. Mewburn and Pope received in 1923. Propitiously, oil was discovered at Leduc (1947).

Dr. Scott did not inherit any major town-gown clashes. In many ways the harmony in the faculty reflected favorably on the activities of the respected 1902 formed Edmonton Academy of Medicine, and the 1920 Reporting Club initiative of Dr. Ower. To help foster these links Dr. Scott was elected President of the Edmonton Academy in 1940/41. He continued to support Dr. Ower as more Reporting clubs were incorporated, including one named after Dr. Scott (1953), which informally required him to join it.[42]

Although funds and opportunities were limited, Dr. Scott was very good at shepherding good students. One way was to encourage them to study biochemistry, as part of their postgraduate training program. Another way was to assist them with their applications for scholarships. In 1947/48 Dr. Wilson accepted Dr. Scott's offer to return to Edmonton. Then he encouraged Dr. Wilson to apply for a five-year Markle scholarship. Successful, Dr. Wilson used the funds to start the first metabolic and steroid lab at the UAH. Dr. Scott's next opportunity to find an outstanding candidate came in 1950 when he appointed Dr. W.C. Mackenzie as the Professor and Head of Surgery.[43]

In a tabulation of MD graduates, Dr. Scott discovered there had been 708 MDs graduate from the Faculty of Medicine from 1925 to 1950. The number would double to 1459 by 1963. That figure excluded over 150 UofA students who graduated before 1925 from eastern Canadian universities, including Dr. Scott, and the 50-75 graduates who started at the UofA after 1925, and who graduated elsewhere, in-

5-24

Mrs. McEachern sod turning for the McEachern Lab, 1951

41. Scott, John W. *Hamlet* Act III, Scene I, line 56, as paraphrased by Dr Scott in "Memoirs of John W. Scott 1914 to 1979", page 9, March 1979. Copy in the Scott/Finnigan family archives.
42. Rose, Pat The History of the J.O. Baker Reporting Club in Edmonton and a synopsis of reporting clubs in Edmonton, 1954. Copy in the possession of the author.
43. Lampard, Robert "Dr. Walter Campbell Mackenzie", in *Alberta's Medical History*, pages 366-382.

cluding Drs. W.S. Anderson and W.B. Parsons.

In 1949 the post war undergraduate application boom peaked. There were 690 applicants. One-half were from the USA. The plethora of postwar applications led to a marked increase in the quality of medical students accepted into medicine. That year the combined six year B.Sc./MD program was discontinued but the mandatory premedical courses were retained, along with a minimum of two years of university studies. The medical program was formally reduced to a four year one in 1951.

In 1948 the national MCC exam was still being offered at the end of the internship. Dr. Scott introduced a trimester system in the last undergraduate year and students were assigned as clinical clerks to the teaching hospitals. This change led to MD degrees being given before the internship. Not until 1961 were the provincial and national MCC exams fully integrated and given at the end of four years of medical training.

Additionally, the faculty obtained Provincial College approval to allow a few electives with selected GPs. Small group teaching was expanded. Dr. Scott gave a History of Medicine elective one hour per week, after Dr. Heber Jamieson retired from the Faculty in 1946.

Dr. Scott had been part of the first undergraduate medical student organization formed in 1916. It became the Medical Undergraduate Society in 1940. Student sensitive, Dr. Scott supported the formation of a liaison committee with staff and students, to meet and hear their complaints, suggestions and recommendations. Gender sensitive, in 1950 he abolished the tradition of holding separate graduation banquets for male and female graduates.

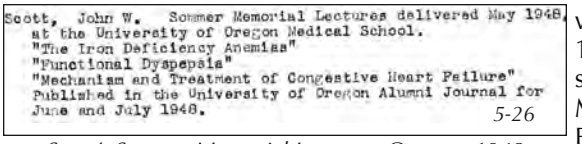
The History of Nursing in Alberta by Janet Ross-Kerr

Postwar undergraduate class sizes had varied from 42 to 50. In 1951 the medical class was increased to 58 and 60 in 1952. The Alberta classes included up to eight students per year who transferred from the University of Saskatchewan. Like the pre1921 Alberta program, Saskatchewan students completed their premedical and first two years of basic medical teaching in Saskatchewan, until 1953 when the UofS extended its program to a full MD granting one.[44] Prior to 1950 there was pressure from BC to take their students too, until the UBC program began that year.

The Healthcare Faculties: The 1940s and 1950s saw considerable changes in the level of autonomy of the Health Science Faculties. Dentistry had started as a sub-faculty or half school in 1918, and became an independent faculty in 1944.[45] After being started by Dr. Moshier in 1914, Pharmacy became a school in the Arts and Science Faculty in 1916, where it remained until it returned to the Faculty of Medicine in 1938. In 1955 Pharmacy became an autonomous faculty. The Strathcona School of Nursing for RNs had started in 1906. The B.Sc. RN program commenced in 1923. A separate Faculty of Nursing was created in 1946,[46] although the hospital based RN program continued until 1995. The Medical Laboratory Science program started in 1950, and a Physiotherapy school was begun in 1954 under Dr. Scott.

In 1951 Dr. Scott shrugged off his 1950 prediction he had made to Dr. Ower that it would be his last year as Dean. By 1954 Dr. Scott had developed mild hypertension and rumors were again surfacing on his possible retirement. More help in the dean's office was required and came when Dr. H.E. Rawlinson was replaced by Dr. J.S. Thompson.[47]

44. Scott, John W. Annual Faculty Report to the Chancellor and Board, May 1, 1950. Also noted in Elise Corbet's *Frontiers of Medicine*, page 67.
45. McLean, H.R. *The History of Dentistry in Alberta*, pages 121-159, Alberta Dental Association, 1987.
46. Wilson, Betty *To Teach this Art*, Hallamshire Publishers, 1977, pages 98-100.
47. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, pages 156-157. Dr. Ower references Dr. Scott's "impending retirement", in his diary note of April 14, 1951. Elsie Corbet noted that Dr. Scott submitted his resignation in 1954 (page 64). This could not be confirmed by his daughter, Dr. Moira Scott Finnigan, but does coincide with the appointment of Dr. D.R. Wilson as a GFT (1954). He succeeded Dr. Scott as the Professor and Head of Medicine (1955). Further help came with the appointment of Dr. J.S. Thompson as the Faculty Secretary succeeding part-timer Dr. Rawlinson (1956). It was enough to support a request for another accreditation application (1955).


Scott, John W. Somner Memorial Lectures delivered May 1948, at the University of Oregon Medical School.
"The Iron Deficiency Anemias"
"Functional Dyspepsia"
"Mechanism and Treatment of Congestive Heart Failure"
Published in the University of Oregon Alumni Journal for June and July 1948.
5-26

Scott's Somner Memorial Lectures, Oregon, 1948

Postgraduate Programs: Dr. Scott was becoming the product of his own success. The number of postgraduate residency training programs and the number of residents were accelerating.[48]

Another positive trend evident by the early 1950s, revealed that 70% of the postgraduate residents who complete their fellowship or certificate training, passed the Royal College examinations and returned to Alberta. Many returning graduates joined the UAH staff. In Medicine they included Drs. Cameron, Fraser, Gain, Kidd, McLeod, and Sproule. In Surgery came Drs. Harrison, Macbeth, Metcalfe, Rostrup, Speakman, and Willox. This markedly increased the quality and depth of the faculty. By 1954, 23 postgraduates had completed their training. Eleven were on the UAH staff. The pattern continued with 67 students receiving their fellowship or certification by 1962. Forty-seven returned to Alberta and 20 were on the UAH staff.

New departments were being created and divisionalization was starting in the 1950s, particularly in Surgery. From 1952-1959 the Departments of Psychiatry, Radiology, Pediatrics, Physical Medicine, Rehabilitation, and Anesthesia were created from the Department of Medicine.[49] New divisions within medicine replaced them, beginning with Cardiology in 1953.[50] It helped that UAH beds almost doubled to 1200, with additions in 1951 (365 beds) and the polio wing in 1956/57 (275 beds).[51] The medical staff increased from 70 to 169 during the Scott decade.

In 1953 Dean Scott asked Dr. R.S. Fraser to begin the cardiac catheterization program, which he did as a five year Markle scholar. In 1955 the Muttart family endowed the first associate professorship in the Department of Medicine with $15,000, which supported Dr. Fraser. The arrival of Cardiovascular surgeon Dr. J.C. Callaghan in 1955 had an instantaneous impact on cardiac surgery and a secondary one on cardiology and medicine. Funding requirements for the program rose dramatically, following the first open heart surgery operation in 1956.[52] By 1958/59, $150,000 per year had been found from multiple sources to support the program.

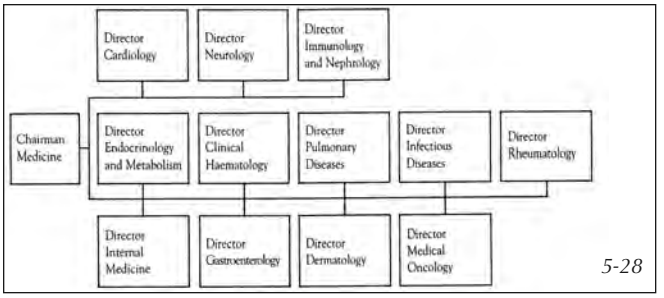
1956-1959: The impact of the faculty's growth came to a head in 1956. The American Medical Association's Liaison Committee on Medical Education (LCME), was arrived to accredit the Faculty programs. Its approval was needed to continue to allow interns and residents to finish their training elsewhere in Canada or the United States, and vice versa.

The site visit report was a bombshell.[53] It downgraded the Faculty to a conditional-probation status on May 15, 1956, because there was only one full-time teacher. Dr. Donald Wilson had been appointed the first geographic full-time teacher (GFT) on September 1, 1954, and was made the Professor and


5-27

Dr. Margaret Hutton, first resident in O&G, and Dr. Donald Wilson, March 21, 1969

48. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, page 189.
49. Vant, J. Ross Cashman, Tony — *More Than a Hospital*, pages 198-205. For a list of all Departments and Divisions, see Elise Corbet's *Frontiers of Medicine*, pages 199-203 and Dawna Gilchrist's *Medicine in the Headlines*, pages 57-59, 2007.
50. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, page 208.
51. McGugan, Angus — *The First Fifty Years. The University of Alberta Hospital 1914-1964*, pages 28, 29, UAH, 1964.
52. Callaghan, John C. — *30 Years of Open Heart Surgery at the University of Alberta Hospital*, pages 12-14, 64, 1986. The impact of the program was reviewed by Vant and Cashman in *More Than a Hospital*, pages 234-239, by Elise Corbet in *Frontiers of Medicine*, pages 188-190, and by Dr. R.A. Macbeth in *The Department of Surgery of the University of Alberta*, pages 352-356.
53. Macbeth, Robert A. — The Accreditation Team Visit of 1956 and its Impact on Surgical Staffing, in *The Department of Surgery of the University of Alberta*, pages 211-218.



Department of Medicine circa 1960

Head of Medicine.[54] But, where there was a problem, there was an opportunity. Although a busy part-timer, Dean Scott went to the University Board for financial assistance and it was forthcoming.

The Golden decade began in 1956 with a faculty budget of $394,000.[55] The undergraduate program year was increased from 28 to 33 weeks. More formal small group teaching was incorporated into the program. The emphasis on anatomy, which was allocated 870 of the 4640 teaching hours, was reduced again. More GFTs were appointed. Further assistance came on the hospital and laboratory side through the 50:50 federal/provincial cost sharing agreement – the Hospital and Diagnostic Services Act – passed by the federal government in 1957. Three years later (1959) the faculty budget had risen to $825,000. By then, there were 22 GFTs on staff, 229 students in the four year undergraduate program, 44 post-graduate residents, and a full-time and part-time medical staff of 169. That year (1959) a practice plan agreement was reached with the full-time staff. Staff physicians accepted an income ceiling of $10,000. Any income exceeding that amount was allocated, one half to the individual, one quarter to the department and one quarter to the faculty.

During the re-accreditation revisit in 1959, the American visitors were impressed by the remarkable changes and progress the faculty had made.[56]

1959 revealed the first signs of the Faculty GFT/part-timer split, even though as Dean Dr. D.F. Cameron pointed out 25 years later, the UofA "must have been one of the last Faculties to appoint GFTs."[57] Dr. Scott viewed the change as a necessity.[58] While necessary, the new GFTs were viewed as a threat by the part-timers. GFTs did not have to rent space, buy furniture or hire a secretary or nurse. It was all provided. Some part-timers viewed the GFTs as patient competitors, while they still carried the bulk of the teaching load.

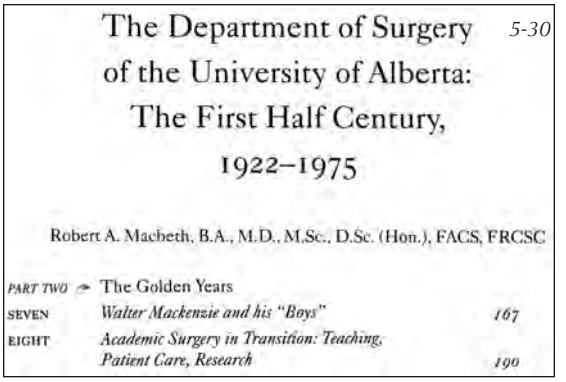
It wasn't until 1969 that Medicare would end the era where a part-timer could budget his time for teaching "a half day a week and compensate himself by charging the patients, Robin Hood style."[59] Dr. Ross Vant noted in 1986, "opposing viewpoints haven't budged one inch in 30 years."[60] As the GFTs were joint (university/hospital) appointments the two organizations had to agree over their funding. Dr. L.E. McLeod believed GFTs had to "absolutely be able to ride two horses", the hospital's and the faculty's.[61]

Visit of the Liaison Survey Committee, 1956

Despite these full-time appointments, part-time teachers still conducted much of the clinical teaching and often served as heads of departments. There were still too few full-time professors in both the medical and clinical science departments, and they were too busy with their teaching schedules and administrative duties to initiate any changes in a curriculum that had remained static for many years. Aware of changes in curriculum and teaching methods taking place in more progressive schools, certain members of the faculty felt the need for professional guidance in adapting these changes to Alberta's medical school. One way of achieving this was to request a "visitation" by an accreditation team of the Education Committee of the American Medical Association. The team typically consisted of three or four experienced academics, who could not only point out deficiencies and problems in a school but also offer expert advice on how to overcome such problems. Since the formation of the Association of Canadian Medical Colleges in 1943, the team included a Canadian when Canadian colleges were being assessed.[68] 5-29

Frontiers of Medicine by E.A. Corbett, page 76, UAP 1990

54. Corbet, Elise A. *Frontiers of Medicine*, pages 72-75. Also see Dawna Gilchrist's *The History of the Department of Medicine at the University of Alberta*, page 17, 2004, and "Dr. Donald Robert Wilson", in *Alberta's Medical History*, pages 388-400.
55. Macbeth, Robert A. *The Department of Surgery of the University of Alberta*, pages 167-238.
56. Corbet, Elise A. *Frontiers of Medicine*, page 76-79.
57. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 195.
58. Vant, J. Ross, Cashman, Tony More Than a Hospital, pages 194-196. Elise Corbet in *Frontier's of Medicine*, pages 72-75 elaborates further on the GFT/PT issue. Dr. Macbeth described how important the few GFTs were in surgery and how the loss of even one of them was stressful on the department, in *The Department of Surgery of the University of Alberta*, pages 258-271.
59. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 196.
60. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 196.
61. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 197.


The Department of Surgery of the University of Alberta: The First Half Century, 1922–1975

Robert A. Macbeth, B.A., M.D., M.Sc., D.Sc. (Hon.), FACS, FRCSC

5-30

The Golden Years – from a surgical perspective

More Medical Education Programs: The 1932 initiated continuing medical education refresher course never lost its popularity or following. Dr. Scott was a regular contributor. By 1954, 3048 doctors had participated in it. In response to local and AMA requests, traveling teams began going out to smaller centres to conduct more education programs.

In 1948 M.Sc. and Ph.D. programs began in the basic medical sciences. By 1962, 82 graduate students had completed either one of these degrees.

Considerable teaching was also being done for the Faculty of Nursing and eight other faculties.

The Quality of Students: As the 1950s progressed there was a slow decline in the quality of applicants to the medical school. The postwar surge of veteran applications had been addressed. So had the deferment of high quality applicants. UBC began its medical school (1950) and the UofS completed its MD course (1953), bringing transfers to a halt. The Med I class sizes remained in the 54 to 60 range. As the decline in the quality of the applicants continued the number of students accepted into medicine with a premedical average of less than 65%, increased from 0 to 18% of the total class. Twenty percent of the students with below 65% averages failed, usually in Med I.

In 1957 Dr. J.S. Thompson surveyed the selection of medical students and the number of hours of teaching accorded the basic medical sciences, in selected Canadian and USA medical schools. UofA was in the middle of the survey.[62]

A new approach to teaching undergraduates one body system at a time had started at Western Reserve in Cleveland in 1952. In typical pithy fashion, Dr. R.F. Shaner described it as converting "basic science teachers into casual peddlers of useful bits of information as required in clinical years."[63]

5-31

Moira Scott's BSc graduation, UofA, 1953

In 1958 more post WWII trained teachers arrived including Drs. J.A.L. Gilbert and W.C. Taylor. Dr. Lionel McLeod became the third Markle scholar, focusing his clinical research on body metabolism and renal diseases. That program would lead to the first kidney dialysis program in the British Commonwealth in 1962. On the clinical enrichment side, Dr. Sheila Sherlock, the famous British hepatologist, came to the UofA as a visiting professor and lecturer.

Although there was a scarcity of qualified undergraduates, the postgraduate residency training programs were flourishing with 41 students applying for the 15 first year positions in 1958. The extension to the south wing of the hospital was opened and an expansion of the central wing of the medical school was planned. The medical curriculum was altered in the second year to decrease the didactic teaching time and increase student interaction with patients. Student preceptorships in general practice

TABLE I

Approximate Hours of Teaching in Basic Sciences[1]

Subject	Maximum hours	Median hours	Minimum hours	Alberta hours
Anatomy (all branches)	770	603	408	594
Biochemistry	338	229	144	248
Physiology	440	256	100	312
Microbiology	327	224	144	200
Pharmacology	358	165	80	165
Pathology	462	312	108	396[2]

1. Based upon J.A.M.A. 161:1646, 1956.
2. This figure for pathology is based upon the new second year and the old third year. When the new third year starts this will probably be different.

5-32

Dr. J.S. Thompson's study of curriculum hours, 1957

62. Thompson, J.S. "The Revision of the Medical Curriculum." MUS Bulletin 1(1): 5-7, February 1957.
63. Shaner, Ralph F. "The Teaching of the Basic Sciences", MUS Bulletin 1(1): 8-9, February 1957. Repeated in Elise Corbet's *Frontiers of Medicine*, page 156.

were started in the third and fourth years. That would herald the first discussions on the integration of basic science and clinical teaching.[64]

At the clinical research level Drs. R.C. Harrison (1953), W.M. Lakey (1956) and Dr. P.B.R. Allen (1959) received Royal College gold medals for their medical research and subsequent theses.[65] Seven visiting professors came to give presentations, including three who helped start the Alpha Omega Alpha (AOA) program for exceptional undergraduates and faculty. Dean Scott and all the clinical department heads were given AOA memberships in November 1959.[66]

The next year (1960) the large six-story clinical wing at the north end of the UAH opened, providing a substantial expansion of clinical facilities, including a clinical laboratory, new ORs, a cardiovascular surgery suite, a new emergency department, and an ambulatory care clinic.


5-33

RCPSC Past Presidents (L to R) Walter Mackenzie, Robert Kerr, John Scott, Charles Drake, Malcolm Brown, Jacques Turcot, Robert Dickson, 1973

In August 1959 Dr. Scott was 65. He retired on August 31, having reached the University's mandatory retirement age. As one of the old guard and dean-elect, Dr. W.C. Mackenzie spoke to the Academy of Medicine, where he was asked if he was going to take John Scott's place. "I quickly replied, nobody, nor anybody in the near future, is going to take Dr. John Scott's place in the University of Alberta Medical School. Through his devotion to the preclinical and clinical sciences in our school, from the time he came to help Dr. Collip…and came back to join the Department of Medicine…he has created a special place in the hearts of everyone connected with this school."[67]

As part of Dr. Scott's pre-retirement program, the University invited Dr. Collip back to unveil a plaque that commemorated his isolation of parathyroid hormone in the basement of the medical school. Dr. Scott praised Collip for the enthusiasm for research he instilled in his students and the zeal with which he conducted his own research. "He was a dynamic person who carried a load of work which astounded many students. His contribution was monumental. He never lost his interest in the roots of medicine."[68] Drs. Collip and Scott had much in common, not the least of which included a love of biochemistry and a proclivity for hard work.

At his retirement dinner Dr. Scott was presented with his self-portrait painted by Mrs. M.R. Marshall.

Reflections on Dr. Scott by Students and Colleagues: Dr. J.D. Wallace, while a student between this second and third years, was working at the mental hospital in Ponoka circa 1937. He developed a severe pneumonia. Dr. Scott drove to Ponoka to consult on his case. "I have always felt that he had a great deal to do with my squeaking through."[69]

The Alpha Omega Alpha Honour Medical Society
D.R. Wilson

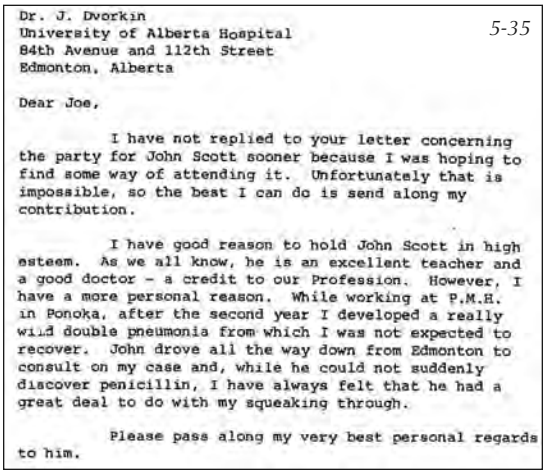
The Alberta Chapter of the Alpha Omega Alpha Honour Society (AOA) originated at the Digby Pines Hotel in Nova Scotia in the early 1950s when Dr. Harold Orr, with two guest speakers, Dr. Walker MacKenzie and Dr. Donald R. Wilson, made his Presidential tour of the Maritime provinces on behalf of the Canadian Medical Association (CMA). 5-34

From Medicine in Alberta. Historical Reflections, AMF 1993

Dr. Gordon Brown, the noted Edmonton diabetologist and a Type I insulin dependent diabetic, graduated in 1948. After completing a senior internship, Dr. Scott suggested he apply

64. Corbet, Elise A. *Frontiers of Medicine*, page 156.
65. Corbet, Elise A. *Frontiers of Medicine*, page 179.
66. Corbet, Elise A. *Frontiers of Medicine*, page 121, UAP, 1990.
67. Mackenzie, Walter C. Address to the Edmonton Academy of Medicare, May 6, 1959. Reprinted in the AMB 24(3): 174, August 1959.
68. Scott, John W. AMB 24(3): 156, August 1956. The bronze tablet commemorating Dr. Collip's isolation of the parathyroid hormone was unveiled June 12, 1959.
69. Wallace, J. Douglas Letter to Dr. J. Dvorkin February 18, 1969, on the 75th birthday of Dr. John W. Scott, March 21, 1969. Copy in the Scott-Finnigan archives.

for a Canadian Life Assurance Company scholarship, which he was awarded. Dr. Brown later said "the receipt of that scholarship was one of the most fortunate moments in my career." It sent him to Toronto where he met Dr. A.L. Shute, the Chief of Pediatrics, who appointed Brown to the juvenile (Type 1) diabetic follow-up clinic at the TGH. After graduation, Dr. Brown returned to Edmonton, specialized in diabetic care, and built the largest diabetic practice in the city. It became a valuable teaching resource for students.



Dr. J. Dvorkin
University of Alberta Hospital
84th Avenue and 112th Street
Edmonton, Alberta

5-35

Dear Joe,

I have not replied to your letter concerning the party for John Scott sooner because I was hoping to find some way of attending it. Unfortunately that is impossible, so the best I can do is send along my contribution.

I have good reason to hold John Scott in high esteem. As we all know, he is an excellent teacher and a good doctor – a credit to our Profession. However, I have a more personal reason. While working at P.M.H. in Ponoka, after the second year I developed a really wild double pneumonia from which I was not expected to recover. John drove all the way down from Edmonton to consult on my case and, while he could not suddenly discover penicillin, I have always felt that he had a great deal to do with my squeaking through.

Please pass along my very best personal regards to him.

Letter from J.D. Wallace to Dr. Dvorkin, Feb. 6, 1969

Dr. Scott's long time partner, Dr. J.F. Elliott, remembered his association with Dr. Scott by hanging a picture of him in front of his office desk. In answer to the question about the high point in his career, Dr. Elliot said "I suppose it was my contact with Dr. Scott, and his influence on me… He was a very humane and kindly person, and I admired him and treasured his wisdom. Unlike many of the original cast he was not a character. He was a calm, kind gentleman who never got tired. He had strong personal convictions about his role in the teaching hospital and in practice."[70]

5-36

President W. Johns (middle), transferring the Deanship from Dr. Scott to Dr. Mackenzie, 1959

In 1931 a farmer from the Provost district proved the point when he arrived in Dr. Scott's office and announced "My daughter is pregnant. I want you to look after her." Dr. Scott in his quiet way, explained he was not an obstetrician and could not deliver her in a teaching hospital. Despite their friendship, Scott stuck to his principles and declined the request.[71]

Dr. Scott could lecture brilliantly. His photographic memory never failed him. He could phone the pharmacist about any prescription without a paper in front of him, or diagnose the rose spots on the abdomen of a typhoid patient in one minute over the telephone.[72]

Dr. Max Cantor acknowledged Dr. Scott's well known honesty, integrity, devotion to medicine, analytical mind and encyclopedic memory. "I have never heard an unkind remark about him, nor have I heard him make any in return."[73] Dr. D.F. Cameron echoed these sentiments thirty years later. "He has never been known [well almost never] to turn away a patient…his care has been accompanied by sympathy, kindness and understanding that has served as a model for all of us. During WWII his teaching load was in excess of 20 hours per week. His modestly, sympathy and quiet good humor have endeared him to all his patients and to us, his students."[74]

Dr. Scott was the honorary president of the class of 1950. At their 20th reunion Dr. E.W. Bissell wrote that the highlight of the party at the Harrison Hot Springs in BC was "the presence of Dean and Mrs. John Scott who came as our guests. We still well remember the Dean and Mrs. Scott sitting in the foyer of the hotel greeting each classmate as they arrived, by name, and with no script. Later at the cocktail party (really an all night bash) he would recall again without script the academic shortcomings of each classmate. His memory was fresh in our minds at our 40th reunion,

70. Elliott, J. Frank — *Iatros* 3(1): 22, Winter 1988/89.
71. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, page 108/109.
72. Brown, Gordon — *Iatros* 3(1): 18, Winter 1988/89.
73. Cantor, Max M. — Quoted in Dr. R.A. Macbeth's "Nomination (of Dr. John W. Scott) for an Appointment to the Order of Canada", page 3, 1975, UAA.
74. Cameron, Donald F. — Quoted in Dr. R.A. Macbeth's "Nomination (of Dr. John W. Scott) for an Appointment to the Order of Canada", page 3, 1975, UAA.

Dr. J.B. Collip UWO Dean 1947-1961

and he was remembered with admiration and respect."[75]

Dr. W.C. Mackenzie summarized his contributions to the Faculty in 1963 when he wrote, "Dr. Scott was Dean of the Medical School at a crucial time in its history and was responsible for the organization and development of graduate training programs which involved most of the clinical specialties. His vision and dedication contributed, in no small measure, to the success of these graduate training programs and, later in his regime, he was responsible for the growth of research programs in all the preclinical and clinical departments of the Faculty."[76]

Dr. Scott resigned from the faculty on his 75th birthday in 1969. At his retirement dinner, Dr. L.O. Bradley sent a letter/telegram in which he recalled, "My continuing appreciation and thanks for your past, present and continuing concern and contribution to the student who, because of your presence, has and will be a better doctor and a better man."[77] Dr. Scott continued his office practice with Dr. Elliott until 1979, when he retired at age 85.

The John W. Scott Library:[78] In 1928 the Edmonton Academy of Medicine gave its library to the University. The Academy library had been created through an annual grant from the CPSA. It was housed in the medical school's L.C. Conn library and reading room. The medical library was transferred to the Rutherford Library when it opened in May 1951 and moved to the fifth floor of the D.E. Cameron Library when it opened in November 1963.[79]

At the suggestion of the class of 1961 the Dr. John Scott medical library and reading room was opened in the hospital in 1959. It was located on the lower floor of the new 1960 clinical wing. The library became a branch of the University library in 1965. In 1969 "the Friends of the University" presented a copy of Robert Carswell's 1838 Pathological Anatomy to the medical library, in honor of Drs. J.W. Scott, R.F. Shaner, R.M. Shaw and H.E. Rawlinson. The next year, colleagues and former students of Dr. Scott's presented the library with ten volumes for the Rawlinson Rare Book collection.[80]

Dr. Frank Elliott congratulating Dr. Scott on his 80th birthday, 1974

In the plans for the Mackenzie HSC, 20,000 square feet of space was initially allocated for the hospital library. When it was decided to merge the hospital and campus medical libraries, the size was increased to 44,000 square feet. The substantially enlarged library

75. Bissell, Irwin W. *Iatros* 5(1): 22, Fall/Winter 1990.

76. Mackenzie, Walter C. Foreword, page V, in *The History of the Faculty of Medicine of University of Alberta 1913-1963, written by Dr. Scott for the 50th anniversary of the Faculty in 1963*.

77. Bradley, Leonard O. Letter to Dr. Scott included in the photo album presented to "Dr. John W. Scott in honor of his 75th birthday by his former students and colleagues, March 21, 1969." Prepared by Dr. Joe Dvorkin. Deposited in the Scott-Finnigan family archives.

78. Holmgren, Pat The John W. Scott Health Sciences Library. A Historical Review. Faculty of Medicine Bulletin #7, page 29, Fall 1988.

79. Lampard, Robert See the Dr. D.F. (Tim) Cameron profile. The D.E. Cameron Library was named after the second UofA chief librarian appointed in 1921. He was the father of the fifth Dean of Medicine at the UofA, Dr. D.F. Cameron. For additional information on D.E. Cameron and the Scott Library see Walter H. Johns *A History of the University of Alberta*, pages 87 and 116, and Merrill Distad's *The University of Alberta Library. The first hundred years, 1908-2008*, pages 23-52, 157, 170, 171, 198, 223, UofA Libraries, 2009.

80. Mackenzie, Walter C. Report to the President of the University, Dr. Max Wyman from the Dean of Medicine, page 3, June 5, 1970, UAA.

5-39

The Scott Award, Department of Medicine foyer.

occupied three stories between the hospital and the Medical Sciences building. Rectangular in shape and open in the middle, it was covered by a skylight or canopy that ran two-thirds of the length of the library making it naturally lit and airy. In the middle were crosswalks.

In 1984 the Cameron medical library was closed and the books and journals were transferred to the spacious new library. The hospital library kept its original name, the Dr. John Scott Library. It was officially opened by his daughter Dr. Moira Scott-Finnigan. She unveiled the plaque outside the library which read "He was to us all like Luke The Beloved Physician."

A wireless network was installed in the library in 2003. In 2009 the Scott library had over 85,000 titles and 2,600 (including electronic) journal subscriptions. It has eight librarians, and 14 support staff. The library is electronically integrated with the other faculty libraries on campus. A regional drug information centre was opened in the library in conjunction with the Capital Health Region, and staffed by two pharmacists one of whom is a librarian.

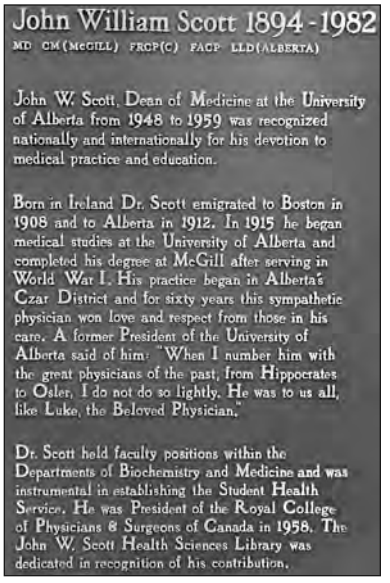
Appointments and Acknowledgements: From 1939-1947 Dr. Scott was a member of the Board of Governors of the American College of Physicians. He was elected President of the Edmonton Academy of Medicine (1940-42). Dr. Scott served on the Medical Research Committee of the National Research Council (1946-52 and 1957-59) and was elected a member of the Council of the RCPSC (1949-60). During

5-40

The Dr. John W. Scott Library, WCM HSC, opened 1984

his years as a member of the Royal College, it grew from a small group (1930) to over 26,000 (1980).

In 1946/47 Dr. Scott was appointed to the Executive Committee of the CMA. The next year he gave the Somner Memorial lectures at the University of Oregon (1948). Dr. Scott was an examiner for the Royal College certification exams in 1948 and the Fellowship exams from 1954-56. When he became president of the RCPSC (1957-1960) his focus was on expanding the continuing education programs for its members.[81] During his presidency, the cornerstone was laid for a new building by Governor General Vincent Massey. Dr. Scott's speech on the history of the Royal College was deposited in the cornerstone.[82] Regional meetings were



5-41

Dedication plaque, Scott Library, WCM HSC, 1984

81. Graham, James H. Letter to Dr. R.A. Macbeth, February 14, 1975. Copy deposited in the Dr. J.W. Scott file UAA.

82. Lewis, D. Sclater The Royal College of Physicians and Surgeons of Canada 1920-1960, page 182, McGill Press, 1962. For more on Dr. Scott's work with the Royal College, see Dr. D. Shepherd's *The Royal College of Physicians and Surgeons of Canada 1960-1980*, pages 128, 145, 203, 312, 316, RCPSC, Ottawa 1985.

also started by the Royal College (1958). From 1955-57 Dr. Scott was President of the 1944 formed Association of Canadian Medical Colleges (ACMC now AFMC).

In 1961 Dr. Scott was made an emeritus member of the Association of American Medical Colleges, a senior member of the CMA (1965) and AMA (1969), and was awarded an honorary degree from the UofA (1970) on presentation by Dr. Frank Elliott. He had the pleasure of presenting his daughter with her medical degree (1957) and his son with his Fellowship in the Royal College (1961). In 2005 he was selected as one of Alberta's 100 Physicians of the Century.

The Dr. John W. Scott Honor award was donated by the Medical Alumni Association, to be given to a final year student who is expected to achieve a distinguished position in the medical profession. As Dr. Cameron noted at the first presentation, the student must display "those qualities of scholarship, leadership and character…[characteristic of Dr. Scott who] was a man of vision, a man of dedication. His modesty, sympathy and good humor will be greatly missed by us all."[83] Past UofA President Walter Johns described him in his eulogy as "as fine a physician as Edmonton ever had."[84] Dr. Scott passed away after a lengthy illness on April 7, 1982 at age 88.

The Scott Family: The Scotts had two children Moira and Foster. Foster (born 1925) graduated with his MD from the UofA in 1951 and earned a fellowship in pathology in 1961. Although it was the year after he retired as the president of the Royal College, Dr. Scott was privileged to give Foster his Fellowship. Dr. Foster Scott became the Professor and Head of Pathology and later acting Dean at the University of Albany's Faculty of Medicine in New York.[85] Moira (born 1933) graduated in medicine from the UofA in 1957. She subsequently studied pathology at the UAH, and practiced in Edmonton for many years. Mrs. J.W. Scott died in 1985.

Dr. Scott provided the salutation to his life in medicine, when he closed one of his memoirs with a modest reflection, "This ends this common-place and uneventful history."[86]

5-42

Drs. Foster Scott, J.W. Scott, J. Dvorkin, Mar 21, 1969

Keywords: Medical Students in WWI, Under J.B. Collip, Medical Research, and Prof. Head of Medicine 1944-1948, Dean 1948-1959, Special Services and Research Fund, Markle Scholars, First GFT – D.R. Wilson, Golden Decade 1956-1966, John W. Scott Library.

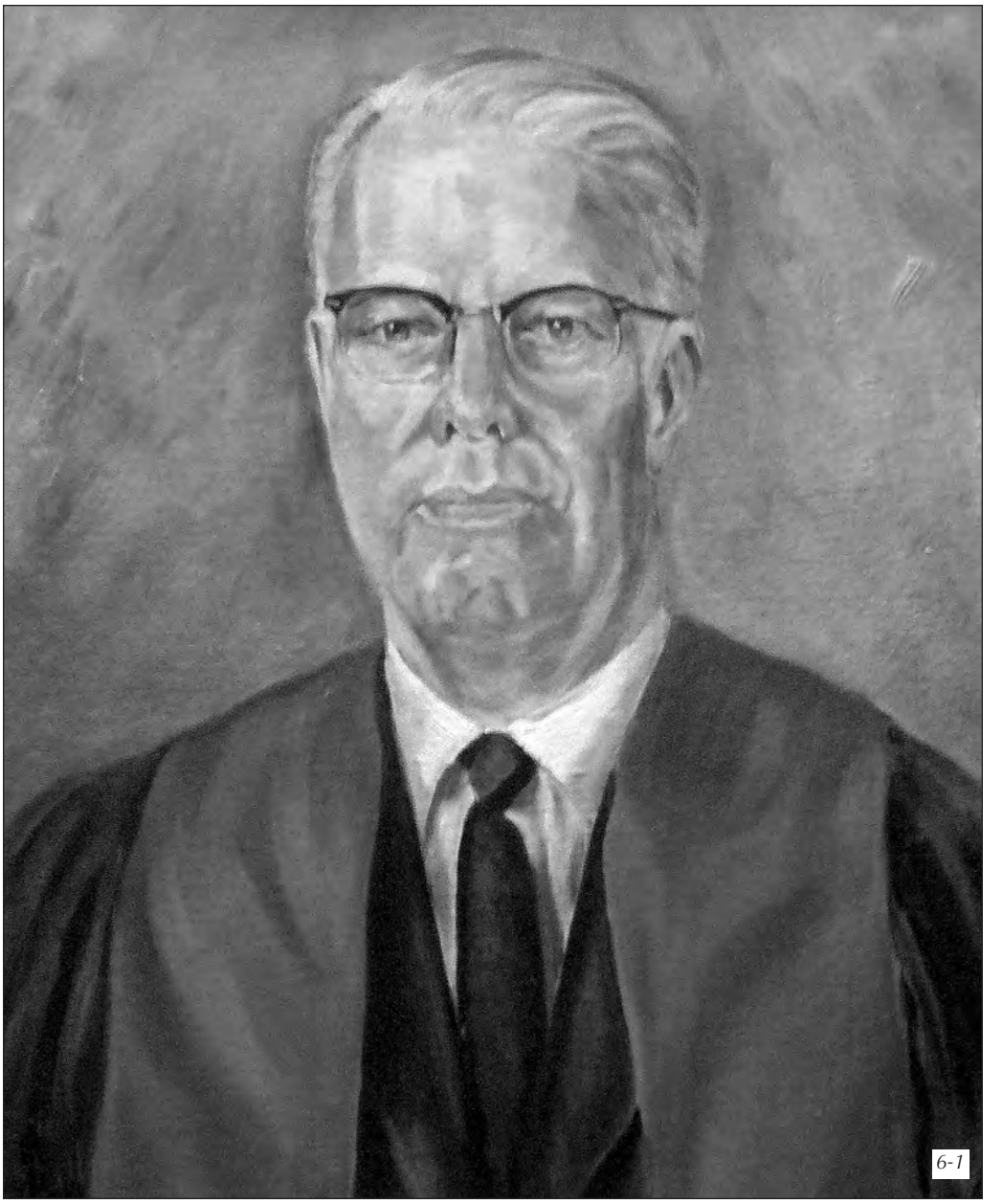
Gov. Gen Vincent Massey and Dr. J.W. Scott opening the Headquarters of the Royal College, Ottawa, 1959

5-43

Dr. Scott (R) with his brothers Dr. Henry Scott (L) and George Scott (middle), Edmonton, 1969

5-44

83. Cameron, D.F. (Tim) John W. Scott 1894-1982. Folio 18(41): 2, 22 April 1982.
84. Johns, Walter H. Eulogy, Memorial Service for Dr. John William Scott, Garneau United Church, April 14, 1982.
85. (Scott, John W.) Confirmed in an interview with Pat and Moira Finnigan, August 2008.
86. Scott, John W. "Memoirs of John W. Scott 1914-1979", page 14, March 1979. Copy in the Scott/Finnigan family archives.



Walter Campbell Mackenzie, OC, MD, MSc, FACS, FRCSC
1909-1978

Walter Campbell Mackenzie, OC, MD, MSc, FACS, FRCSC 1909-1978

Hon FRCS (England, Edinburgh, Glasgow, Ireland, West Africa),
Hon MRCS (South Africa, South West Africa)

"I have gathered a poesy of other men's flowers, and nothing but the thread that binds them is my own"[1]

Introduction: One of the most fortuitous decisions for Albertans, occurred when Dr. Walter Campbell Mackenzie twice chose Edmonton (1938, 1945) to locate his surgical practice. Following his father's advice to go west, Dr. Mackenzie became one of the best examples of a physician who came to Alberta and, as Dr. H.G. Mackid foresaw in 1912, "thinks boldly and acts boldly, by necessity first, then by conviction, and ultimately by habit."[2]

Dr. Walter Mackenzie, Dean 1959-1974

When Dr. Mackenzie first came to Alberta, he had already earned a Master's degree in Surgery from the University of Minnesota, through its Mayo Clinic postgraduate program, and a Fellowship in the American College of Surgeons.

In 1939 he joined the army and then the naval reserve before going overseas in the Canadian Navy in 1940. As a Cape Bretoner it was a natural decision and followed the seafaring tradition of his father and grandfather.

Atrium of the WCM HSC

At the end of the war, after Pacific coast, Atlantic coast and British postings, Dr. Mackenzie returned to Edmonton to pick up the threads of his Edmonton surgical practice. With an academic future in mind, he applied for and received his Canadian certification in Surgery without examination in 1945. Not satisfied he began studying for the difficult Fellowship examination.[3] He was successful in 1948. It opened the door for his appointment as the Professor and Head of the Department of Surgery at the UofA from 1950-1960. With the retirement of the third UofA Dean of Medicine Dr. J.W. Scott in 1959, Dr. Mackenzie was

1. Mackenzie, Walter C. Dr. Jan H. Louw quoting Dr. Mackenzie in "A Tribute from South Africa," in "A Memorial to Walter C. Mackenzie," Canadian Journal of Surgery 22(4): 311, 1979. The quote was a favorite of Lord Moynihan too, as Dr. Mackenzie noted in his Moynihan Lecture on Pancreatitis, 19 May 1954. The Lecture was reprinted in the Annals of the Royal College of Surgeons of England 15: 220-235, October 1954.
2. Mackid, H.G. "The Presidents Address at the Annual Meeting of the Association," CMAJ 2(9): 801-811, September 1912. For the full quote see the profile of Dr. H.G. Mackid in Dr. Robert Lampard's *Alberta's Medical History, Young and Lusty and Full of Life*, pages 132-142, 2008. The openness and cooperative spirit within the medical profession in Edmonton helped "Walter to choose Edmonton over Winnipeg" as noted in *More Than a Hospital*, page 219 by Ross Vant and Tony Cashman, UAH, 1986.
3. Macbeth, Robert A. Letter to Robert Lampard, October 22, 2004.

appointed the fourth Dean (1959-1974).

Dr. Mackenzie was a physician whose influence in medicine went far beyond Edmonton. He accomplished this by accepting local, national and international positions, promoting teamwork, leading a growing and talented faculty, and never remaining content with the status quo. He was not alone. Alongside him were exceptional UAH Executive Directors like Drs. Douglas Wallace and Bernard Snell, and behind him the respected UAH Board and Faculty.

Walter Mackenzie, visiting Uncle Sandy Rosier, Montana, 1923

Dr. Mackenzie had few parallels when it came to leadership - if that meant taking what one inherited, adding to it the necessary space, people and financial resources, and then building an outstanding team. He knew the measuring sticks - student and resident pass rates, accreditation approvals, research grants and publications, funding levels, and reputation. Although he was a tough taskmaster and his deadlines were usually short-roped, at the end of his twenty-five years as Professor and Head of Surgery and Dean, his national reputation was that of "Mr. Academic Surgeon" in Canada.[4]

Dr. Mackenzie was advantaged by his timing as Professor and Head of Surgery and Dean. It coincided with the Golden Decade of Medicine in Alberta 1956-1966. That was just before Medicare was introduced. Further, Alberta was under doctored. Provincial oil revenues were increasing and the government was willing to increase its support to the University. More importantly there was a stable government-university-faculty-medical profession relationship. He counted on it and added measurably to it.

From Youth to MD and Surgeon 1909-1937: Dr. Mackenzie's ancestors came to Pictou, Nova Scotia circa 1817. One reason for the emigration from Scotland was to protest the inclusion of music in the Church of Scotland services. Another version has them seeking religious freedom.

The Mackenzie family lived in Glace Bay, Cape Breton, where Walter was born on August 17, 1909. Dr. Mackenzie's father and grandfather sailed schooners, trading coal, timber, salt fish, and potatoes from Nova Scotia, for manufactured goods in Boston, and sugar, rum, molasses and even a grand piano from the Caribbean.[5] In 1923 the family changed their lifestyle and moved to nearby Baddeck, where his father bought a hotel. Fourteen-year-old Walter became the host and greeter for returning visitors, and learned to recognize their faces, calling them by name, right down to their dog.[6]

Walter Mackenzie fishing at Baddeck, circa 1924

Walter was one of several young people welcomed to "Beinn Bhreagh", the Baddeck summer home of Sir Alexander Graham Bell. Bell would pique the youngsters' curiosity by showing them his barn full of emerging inventions. Another young man, Douglas McCurdy, became the first person in the British Empire to fly an aircraft, when he piloted the Silver Dart

4. Macbeth, Robert A. "Walter Campbell Mackenzie: Pioneer International Surgical Statesman, Part 1: Background and International Recognition," in the Annals of the Royal College of Physicians and Surgeons of Canada 22(2):109-113, March 1989.
5. Mackenzie, Richard Interview with Robert Lampard April 24, 2009.
6. Williams, H.J.G. "The Department of Surgery. Taking the Chair", pages 180-186, in *Echoes in the Halls*, UAP, 1999.

over the Bras d'Or Lakes in 1909. Walter maintained contact with McCurdy, as he did with many friends, and invited him to his home in Edmonton.

Jack and Anna Mackenzie with their son Walter, circa 1930

In 1923 Walter visited his uncle Sandy Rosier, who was a general practitioner living in Great Falls, Montana. One of Dr. Rosier's patients was Charlie Russell. If Walter wasn't convinced to take medicine before the visit, he certainly was afterwards.

In 1925 at age 16 Walter Mackenzie entered Dalhousie University as the youngest medical student in the six-year program. Youth was no impediment. His popularity and ability to form new friendships led to lifelong ones. At Dalhousie he managed the rugby and hockey teams and was elected President of the Students' Council. His most notable extracurricular talents were dancing, singing and acting. He played Porky in the musical production Carrie Comes to College, where he met his future wife on stage, Dorothy Rosier.[7]

Walter received his B.Sc. (1929) and was honored with one of two Malcolm Honor Society Medals in his final year of Medicine (1932). It reflected the respect his classmates held for him, earned by his willingness to offer a helping hand. After completing his internship he received his MD CM. His surgical residency started at the Royal Victoria Hospital in Montreal in 1933. There he worked alongside another resident, Dr. Norman Bethune, before Bethune left on his legendary missions to participate in the Spanish Civil War and later the Communist Revolution in China.

In 1934 Dr. Mackenzie accepted a Mayo Fellowship. During his last fifteen months at Rochester, Minnesota he was the Surgical First Assistant. It was a busy time as he also completed his M.Sc. in Surgery in 1937, on Benign and Malignant Polyps of the Stomach.

"Truth to Tell," he wrote, "without Fred C. Jennings as 'Freddie,' and Walter MacKenzie as 'Porky' another college sheik in gay raiment, 'Carrie Comes to College' would have lost 50 per cent of its appeal, for upon them was imposed the burden of occasioning the major portion of the show's laughs. Perfectly at home on stage and introducing many little effective pieces of side play, decidedly their own, they were two brilliant stars. 6-7

MeDal. Medical Alumni of Dalhousie, 1977-78

Before, During and After WWII 1938-1950:
Dr. Mackenzie came to Edmonton in 1938 at the age of twenty-nine, because it was a frontier city – small but with great possibilities – and it was in Canada and had a medical school.[8] He accepted an offer to join Edmonton's J.O. Baker Clinic, as a general surgeon. One of his first patients was his aunt's brother-in-law, who was a blacksmith and worked at the Edmonton Exhibition grounds. He introduced Dr. Mackenzie to many of the jockeys, stewards, trainers and stable hands, who would give him the "picks of the day."[9] During his next two years in Edmonton, Dr. Mackenzie became a member and was elected President of the Edmonton Athletic Club.[10]

On May 11, 1939 Dr. Mackenzie joined the 19th Alberta Dragoons as their medical officer.

7. Macbeth, Robert A. "Walter Campbell Mackenzie: Pioneer International Surgical Statesman, Part I," page 110. Dr. Mackenzie's undergraduate talents received further elaboration in Alex Nickerson's "Looking Back on the Student Days of Dr. Walter Mackenzie" in MeDal, The Medical Alumni of Dalhousie magazine, pages 6-7, 1977-78. A reviewer of the play called him one of the two brilliant stars of the musical, especially in the burlesque hit, Old Man River.
8. Mackenzie, Walter C. "Medicine – Highest professional award bestowed on UofA dean," in the St. John's Edmonton Report, July 15, 1974. Dr. Mackenzie traveled west with his mother and father at age 14 (1923) and spent time on a dude ranch near Great Falls, Montana where his Uncle Sandy practiced medicine. The family impression is that his Uncle was likely his inspiration to take medicine.
9. Mackenzie, Richard Personal Communication, April 23, 2009.
10. Tyrrell, D. Lorne Profile of Dr. Walter Campbell Mackenzie 1909-1978. Three page manuscript submitted as part of the nomination of Dr. Mackenzie as an Edmontonian of the Century. When Dr. Mackenzie retired as the President of the Edmonton Athletic Club, goalie Howie Blefgen closed his comments with "you are our friend…we'll never forget you. We are grateful for all you have done for us". He presented Dr. Mackenzie with a pen and pencil set. Edmonton Journal circa December 1, 1940. Mackenzie Family Archives.

Walter Mackenzie, President of the Dalhousie Students' Council, 1932-33

In September he was appointed to the Faculty of Medicine as an Assistant Demonstrator. On October 7, 1939, he switched to the Royal Canadian Navy Volunteer Reserve (RCNVR) based at HMCS Nonsuch in Edmonton, which was named after the HBC's first ship.

By the time he was called up on December 2, 1940 Dr. Mackenzie had already made a lasting impression in Edmonton. As Dr. G.H. Malcolmson noted during Dr. Mackenzie's departure banquet on December 4, "The young man from the east who came west, made good and [will] now be missed by everyone who had met him."[11]

HMCS, Iroquois Sick Bay, 1943

Surgeon Lieutenant Mackenzie was posted to HMCS Naden (Esquimalt) for training on December 9, 1940. A year later on December 24, 1941 he was transferred to another "stone frigate", the HMCS Avalon in St. John's, Newfoundland, and was promoted to a Surgeon Lieutenant Commander.[12] On December 12, 1942, a fire at the popular naval KofC hostel, killed over 100 and sent 48 to the Avalon Hospital. Dr. Mackenzie was the Chief of Surgery at the time but he may have been on leave in preparation for his next postingwhen it occurred.[13]

In January 1943 he was posted to sea and went overseas on a lend-lease American destroyer, that rolled terribly for nine days in gale-force winds. While on watch one night a colleague on the bridge pointed out a German sub's periscope 1,000 yards away. Dr. Mackenzie said "he had never been so frightened in his life."[14] His duties overseas began as a medical officer on sea escorts that protected convoys on the dangerous supply run from the Orkney Islands to Archangel. They were often strafed by German aircraft based in Norway. Later escorts were on the destroyer Iroquois patrolling the Bay of Biscay off the French coast. Shore furloughs were based at HMCS Niobe at Greenock, Inverclyde, Scotland.[15]

HMS Iroquois, Bay of Biscay, near France, 1943

On July 14, 1943, after seven months at sea, he was transferred back to HMCS Stadacona in

11. Malcolmson, George Edmonton Journal, December 4, 1940.
12. Morton, H.S. *Canadian Medical Officers in the Royal Navy – World War II*, pages 5-10, 84-87. Privately published, Morton gives a flavor of the medical lives of RCNVR Medical Officers. Dr. Mackenzie was one of 400 physicians in the Canadian Navy. His RCNVR Registration No. was 0-44700.
13. Richards, S.T. *Operation Sick Bay*, pages 67-73, Cantaur, West Vancouver, 1994. Also see the Medical Report on the St. John's Conflagration in the CMAJ 48(3): 191-196, March, 1943.
14. Mackenzie, Richard Written Communication, April 23, 2009.
15. Mackenzie, Richard Written Communication, April 23, 2009. From 1941-1946 HMCS Niobe was the Canadian Navy's training, manning and crew transit facility at Inverclyde on the mouth of the Clyde, next to the Royal Navy's home fleet. It had formerly been a mental hospital.

Surg. Comm. W.C. Mackenzie medals: 1939-45 Star Medal, 1945 War medal, CVSM with clasp, Defense medal, Cornation medal, 125th Centennial medal, Queen's Silver Jubilee medal

Halifax. Four months later on November 11, 1943 he was transferred again, this time to HMCS Protector in Sydney. Dr. Mackenzie was promoted to Surgeon Commander on January 1, 1944. On March 5, 1945 he was lent to the Army and posted to the Queen Victoria Military Hospital in East Grinstead under the famed plastic surgeon Sir Archibald McIndoe.[16] Back in Canada by October 5, 1945, he was demobilized at HMCS Cornwallis in Deepbrook, Nova Scotia and transferred back to HMCS Nonsuch where he was discharged.

By the end of the war Dr. Mackenzie had published six articles in the literature (see attached CV). He was awarded the 1939-45 Star medal, the CVSM with Clasp, the 1945 War medal, and the Defense medal. After the war he received the Coronation medal, the 125th Centennial medal and the Queens Silver Jubilee medal.

In October 1945 he entered the Active retired list and remained in the Naval Reserve until June 5, 1948 when he fully retired. That year Dr. Mackenzie was appointed the senior surgical consultant in Northern Alberta for the Department of Veterans Affairs.[17] Later he was named to the Canadian Armed Forces Medical Council.

Dr. Mackenzie seriously considered moving to Winnipeg or Victoria after the war but felt the Edmonton setting was more open to young specialists. He did not rejoin Drs. W. Anderson and A. McLennan in the Baker Clinic, but instead entered private practice as an independent general surgeon. In January 1946 he was reappointed to the Faculty of Medicine as an Instructor.

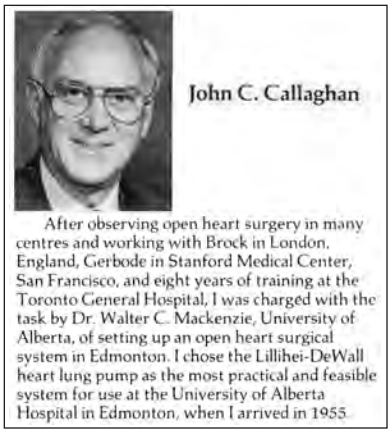
Although promoted from a Lecturer to a Clinical Professor, Dr. Mackenzie felt obligated to improve his eligibility for higher academic positions. He was not satisfied with receiving his certification in Surgery without examination, although he had earned it through his prewar training and wartime experience. To be fair, especially if he expected others to follow him, Dr. Mackenzie felt obligated to successfully challenge the American Board Examinations on April 21, 1948, and then the rigorous Canadian Fellowship examination, following a brush-up in pathology.[18] He earned his FRCSC designation in late 1948.

The idea of starting postgraduate residency training programs in the Faculty of Medicine was first discussed at the UofA in November 1944.[19] At that time there were postgraduate surgical training programs in Toronto (Gallie, 1931) and one starting at McGill (Gurd, 1944).[20] In 1946 Dean J.J. Ower organized several meetings that culminated in the appointment of a Graduate Training committee (Drs. Mark (Levey) Marshall, Percy Sprague, Walter Mackenzie and John Scott) that initiated the "Marshall Plan", to begin Royal College approved postgraduate residency training programs.[21] The first approved full four-year postgraduate programs were in General Surgery and Ophthalmology (1949) and Obstetrics and Gynecology (1951). Internal Medicine followed later in 1957.

Drs. Mackenzie and Percy Sprague were appointed as the Advisory Committee for the General Surgery training program. Dr. Mackenzie's forte was finding senior residency

16. Mackenzie, Richard — Written Communication, April 23, 2009. One trick Dr. Mackenzie learned was to scotch tape instead of suture some wounds, with less scarring as a result. Dr. J.J. Ower's son Campbell Ower was posted to East Grinstead after WWII, followed by Dr. Bert Fowlow of Calgary.
17. (Mackenzie, W.C.) — The Financial Post, page 47, June 6, 1964. The appointment began in 1948.
18. Ower, John J. — Ower Diary entry for October 23, 1948.
19. Corbet, Elise A. — *Frontiers of Medicine*, pages 69-72, UofA, 1990. Dr. H.H. Hepburn raised the suggestion of a postgraduate training program after returning from an ACMC meeting in Ottawa. He then organized a series of short courses in the UofA teaching hospitals, as noted in Dr. J.W. Scott's History of the Faculty of Medicine at the UofA, page 23, UofA, 1963.
20. Gurd, Fraser — *The Gurds. A Family Saga*, ed. Douglas Waugh, MD, page 232. General Store Publishing House, 1996. Dr. C.A. Allard switched to it from the UofT Gallie course in 1944 (see R. Lampard's Alberta's Medical History, page 404). The residency program formally started in 1945.
21. Ower Diaries — Ower diary entries for March 18 and 20, April 2 and September 17, 1946.

training positions in other Canadian and American general surgical training programs, for the UofA residents who excelled.[22] Although the number of residents in the postgraduate program were few, the initial return rate to Alberta was over 70% with up to 50% of the graduates returning to the faculty.



6-12

From 30 years of Open Heart Surgery at the UAH, 1986

Following the death of Dr. W.F. Gillespie and the one-year term of Dr. H.H. Hepburn, the UofA's Professor and Head of Surgery position came open in December 1949. Dr. Mackenzie applied for it and was successful.

Dr. Mackenzie was already immersed in the department's post-war challenges. From the large number of well-motivated post-war medical graduates who returned, he was able to select or guide the residents he wished to undergo further training, and hand pick those who fit the needs of the Department of Surgery, or his own surgical practice. As the Department expanded, Dr. Mackenzie's ability to promote teamwork and develop an academically orientated team became evident.[23]

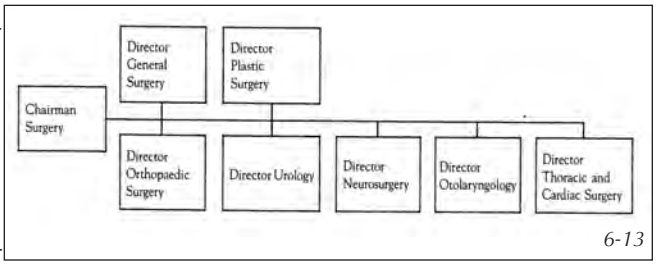
In March 1946 Dean Ower appointed Dr. Mackenzie to the new Medical Research Allocation Committee, to approve the first medical research projects funded by the UofA Board.[24]

In 1946 Dr. Collip was fostering the formation of the Western Canadian Medical Research Group of the NRC/MRC, and was willing to provide seed funding for medical research.[25] In 1948, the newly appointed Director of the National Cancer Institute of Canada (NCIC) Dr. Allan Blair, toured the western provinces. In Edmonton he encouraged the faculty to meet with the officers of the Alberta Division of the Canadian Cancer Society to examine the possibility of building a medical research laboratory. One week later Drs. Ower, Scott and Mackenzie did.[26]

No one was adverse to the idea, including UofA President Newton. Plans were reviewed by NRC (Dr. Collip) and funds were raised for the McEachern Memorial Cancer Laboratory starting in 1949/50. The $150,000 laboratory was completed in 1951/52, permitting medical and surgical residents to undertake research projects as part of their postgraduate residency training.

Professor and Chairman, Department of Surgery 1950-1959: When Dr. Mackenzie was appointed the Professor and Head of the Department of Surgery in 1950, he joined a notable line of Professors' of Surgery that included Drs. Frank Mewburn (1921-1929), A.R. Munroe (1929-1938), W.F. Gillespie (1938-1949), and H.H. Hepburn (1949).[27] It was an important step for Dr. Mackenzie as it gave him the opportunity to meet more internationally known and prestigious surgeons. To expand his contacts, in 1950 Dr. Mackenzie stood for the Board of Regents of the American College of Surgeons (ACS). He held that position for over ten years and in 1966 was elected the President of the ACS.

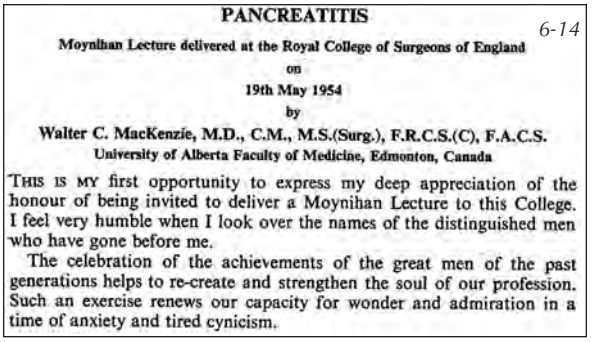
In 1954 Dr. Mackenzie accepted his first guest lectureship. He was invited to give the Moyni-



6-13

The organization of the Department of Surgery, circa 1960

22. Corbet, Elise A. *Frontiers of Medicine*, page 80. For further commentary see R. Vant and T. Cashman's *More Than a Hospital*, pages 137-138,
23. Macbeth, Robert A. "Walter Campbell Mackenzie, Pioneer International Surgical Statesman. Part 2: What Manner of Man?" Annals RCPSC 22(3): 209-212, 1989.
24. Ower, John J. Ower Diary entry for March 13, 1946. UAA 72-73.
25. Ower, John J. Annual Report to the UofA Board of Governors, Spring 1946.
26. Ower, John J. Diary entry for March 10, 1948.
27. Macbeth, Robert A. *The Department of Surgery of the University of Alberta. The First Half Century, 1922-1975*, page 176, Department of Surgery, 2009.



PANCREATITIS

6-14

Moynihan Lecture delivered at the Royal College of Surgeons of England
on
19th May 1954
by
Walter C. MacKenzie, M.D., C.M., M.S.(Surg.), F.R.C.S.(C), F.A.C.S.
University of Alberta Faculty of Medicine, Edmonton, Canada

THIS IS MY first opportunity to express my deep appreciation of the honour of being invited to deliver a Moynihan Lecture to this College. I feel very humble when I look over the names of the distinguished men who have gone before me.

The celebration of the achievements of the great men of the past generations helps to re-create and strengthen the soul of our profession. Such an exercise renews our capacity for wonder and admiration in a time of anxiety and tired cynicism.

Moynihan Lecture, 1954

han lecture in London, England at the joint American/British College of Surgeons meeting. His topic was Pancreatitis,[28] a subject on which he would become a world authority.[29] Dr. Mackenzie would be invited to participate in another twelve distinguished lectureships and traveling professorships.

In the 1950s UK currency restrictions limited travel by British physicians and surgeons unless they were billeted. Dr. Mackenzie used his hotel experience to host a retinue of accomplished surgeons including Sir Arthur Porritt (of Chariots of Fire fame), Sir James Patterson Ross (surgeon to the King and Churchill), Sir John Bruce (a descendant of Robert the Bruce), Sir Geoffrey (younger brother of economist Lord Maynard) Keynes and Lady Keynes (Charles Darwin's granddaughter), all of whom reciprocated the Mackenzie's hospitality when they traveled to England. There were other visitors - Angus MacDonald (Premier of Nova Scotia), Clarence Campbell (NHL President), Douglas McCurdy (of Silver Dart fame), Hugh McLennan (author) as well as new and old faculty, residents and interns. Their home at 31 Clifton Place was the center of a very active social life.[30]

6-15

Dr. Geoffrey Keynes, Queen Elizabeth, Lord Porritt, 1962

In 1954 Dr. Donald Wilson became the first faculty "full timer", since the appointment of Dr. F.H. Mewburn in Surgery and E.L. Pope in Medicine in 1922. He remained Dr. Mackenzie's counterpart as Professor and Chairman of the Department of Medicine, (1954-1969).[31] Dr. Mackenzie did not accept a full-time position, but rather chose to continue his private practice with Drs. Leslie Willox and H.T. (Tom) G. Williams until he retired as Dean in 1974. He was the only Chairman of the Department and Dean of Medicine in Canada to have a practice.[32] He treasured his practice, the personal relationships it created and the loyalty he received in return. He wept the day he brought home his OR shoes.

6-16

Unknown, Dr. Les Willox, Dr. W.C. Mackenzie, 1974

Under Dr. Mackenzie's direction the Department of Surgery's organizational structure expanded considerably. From 1952 to 1961 the

28. Mackenzie, Walter C. "Pancreatitis," published in the Annals of the Royal College of Physicians and Surgeons of England, 15: 220-235, October 1954. Dr. Mackenzie's CV listed his publications to 1977 but only on Surgery and Medical Education. Copy deposited in the Mackenzie family archives.
29. Louw, Jan H. "Citation – Professor Walter Campbell Mackenzie." Transactions of the College of Medicine in South Africa 19(2): 57-59, September 1975.
30. Mackenzie, Kim Written Communication, April 23, 2009.
31. Wilson, Donald R. "The History of the Department of Medicine" edited by Donna Gilchrist, pages 17-22, UAH 2004. Also see R. Lampard's "Donald Robert Wilson" in *Alberta's Medical History*, pages 388-400, 2008 and *Medicine in Alberta: Historical Reflections*, pages 292-295, AMF 1993. One of the initiatives of Dr. Mackenzie and Dr. Wilson was to charter an Alpha Omega Alpha Honor Society in 1958, with the help of Dr. T.C. Routley.
32. Vant, Ross, Cashman, Tony *More Than a Hospital, the University of Alberta Hospitals 1906-1986*, page 219, UAH, 1968.

department evolved to a Professor and Chairman with seven subspecialties, each headed by a Director - in General Surgery, Plastics, Orthopedics, Urology, Neurosurgery, ENT, Cardiovascular and Thoracic Surgery.[33]

The Mackenzies returning to Nigeria, 1975

Even before the opening in 1953 of the Surgical Medical Research Institute (SMRI) adjacent to the McEachern research laboratory, and the development of the clinical investigation programs in cardiology and cardiac catheterization in 1953/54, Dr. Mackenzie had mapped out a postgraduate training program for Dr. John C. Callaghan, starting in 1952. Callaghan returned in 1955 to direct the multidisciplinary open-heart surgery program.[34] As Dr. Cameron noted, Dr. Mackenzie would have been "delighted at the international recognition the program received – but he would have expected no less."[35]

But not everything was going smoothly at the Deanship level. Dr. Scott contemplated resigning (1950, 1954) from over-work and too much responsibility.[36] An even more serious wake-up call came in 1956. The Council on Medical Education of the American Medical Association came to accredit the UofA/UAH training programs and left a disconcerting assessment. Their confidential probation approval gave Dean J.W. Scott the biggest challenge of his deanship – to retain the UofA's American Class A standing. When Dr. Scott retired in 1959, the Faculty had successfully implemented the recommendations, removed the faculty's conditional standing,[37] and increased the Faculty of Medicine's budget from $394,000 (1956) to $825,000 per year (1959).[38]

One of the solutions hammered out by Dean Scott, the Department Heads, and the General Faculty Council, was an agreement to markedly increase "geographic full timers" or salaried teachers.

Dean, Faculty of Medicine 1959-1974: When Dr. Scott retired as the Dean in 1959, UofA President Robert Newton appointed the first medical Dean Selection Committee. Recently retired Chancellor Dr. E.P. Scarlett was named the Chairman. After interviewing the short list of candidates, the Scarlett Committee recommended Dr. Mackenzie because of:

UofA Deans of Medicine 1920-1959 (LtoR) Drs. J.W. Scott, J.J. Ower, A.C. Rankin, W.C. Mackenzie. Dr. Rankin died two weeks later.

"His single minded interest in the school, thorough knowledge of the faculty, … record in respect to research and graduate work, … national and international reputation, … (but noted he is) … inclined to be arbitrary …has the surgeon temperament and is a bit of a driver."[39]

Dean Mackenzie became the fourth UofA Dean of Medicine, following Deans A.C. Rankin (1920-1945), J.J. Ower (1945-1948), and J.W. Scott (1948-1959). He was the first Dean who was not a McGill graduate. Early in

33. Vant, Ross, Cashman, Tony — *More Than a Hospital*, page 217.
34. Macbeth, Robert A. — *The Department of Surgery of the University of Alberta*, pages 198-199, 2009.
35. Cameron, Donald F. — As quoted in J.C. Callaghan's *30 Years of Open Heart Surgery at the UAH*, pages 62-63, privately printed, 1986.
36. Lampard, Robert — Profile of Dr. John W. Scott.
37. Corbet, Elise A. — *Frontiers of Medicine*, pages 76-79. Dr. Scott referred to the problem in his usual polite and understated fashion, in *History of the Faculty of Medicine of the University of Alberta 1913-1963,* page 25, UofA, 1963.
38. Corbet, Elise A. — *Frontiers of Medicine*, pages 72-79. Dr. Macbeth called 1956-1966 the Golden Age of the Department. The decade was a period of rapid and exciting growth.
39. Corbet, Elise A. — *Frontiers of Medicine*, pages 82-86.

his deanship he was offered the Dean of Medicine position at McGill. He declined for family reasons and because he was uncertain of the impact the quiet revolution would have on medicine at McGill.[40] In 1960, he appointed Dr. Robert A. Macbeth as his Professor and Head of Surgery (1960-1975).[41]

In the late 1940s returning veterans created a backlog of good medical school applicants. By the early 1950s, the surge was over. Full degree granting medical schools had opened in BC and Saskatchewan, and a gradual reduction in the quality of medical school applicants was apparent. The percent of applicants with less than a 65% average in premedical subjects was increasing. Dr. Mackenzie was concerned. He acknowledged "we have been very fortunate in our choice of Deans…Doctor Rankin, Doctor Ower and Doctor Scott" and "We can continue to guide the medical student to graduation in [as] satisfactory a way as he has been guided up to this time,"[42] but quality was an issue. With that he placed his stamp on the Med I Class in 1959, by reducing the class size from 60 to 40 by the end of first year.[43] The class would graduate thirty-nine talented MDs but would be the smallest since the war.

That wasn't his only concern. He felt "the true aim of education is to impart an appreciation of the method rather than a knowledge of facts. Students must therefore be taught how to collect the facts, verify them, assign a value to them, and how to draw conclusions from them and test these conclusions. In short, how to form a judgment." He believed medical applicants should be regarded as "a national resource and should not be sacrificed on the provincial altars of geographic discrimination."

A Tribute from the Class of 1959

Dr. W.C. Mackenzie in his office, circa 1970

Further, he believed we shouldn't "try to sell medicine on the basis of the good we do for humanity, or any other idealistic approach…but should tell the young men or young women that are interested in medicine that it is a satisfying profession and that every day that he or she practices it…in all probability they will be happy, they will be busy, above all they will work with a group of colleagues whom they will enjoy and respect."[44]

Although the teaching faculty at the UAH were all specialists, the number of graduating MD's choosing family practice remained constant at fifty percent. However the graduating total was not enough to meet Alberta's needs. Only fifty-eight percent of the doctors registering in the province were graduates of the UofA.

From 1958 to 1968, the "baby boomers" tripled the size of the UofA. The first-year medical class size rose, but not equivalently, from 54 to 110 where it leveled off. The medical graduating class increased from 55 (1960) to 96 by 1970. At the resident level, the pyramid-shaped hierarchy automatically selected residents on the basis of their competence.

Under Dean Scott the approved residency training programs increased from four (1951) to nineteen (1960), including eight in surgery. By 1969 there were twenty-nine approved programs. The number of residents increased from 44 (1959) to over 225 (circa 1976). The reputation of the program was such that by the 1970s residency applications exceeded the number of positions available tenfold.

40. Mackenzie, Richard Personal Communication, April 23, 2009.
41. Macbeth, Robert A. *The Department of Surgery of the University of Alberta*, pages 240-258.
42. Mackenzie, Walter C. Address by Dr. Walter C. Mackenzie to the Edmonton Academy of Medicine, May 6, 1958, in Harry Lett's The Edmonton Academy of Medicine, a History, Edmonton 1986. Reprinted in the AMB 24(3): 174-175, August 1958.
43. Hislop, Patrick *Iatros* 3(1): 28, Winter 1988/89.
44. Mackenzie, Walter C. Address by Walter C. Mackenzie to the Edmonton Academy of Medicine, page 175.

Accordingly, in the 1950s medical educators began making attempts to apply the tools of educational psychology to the development and testing of curricula and teaching methods. By 1970 roughly half of the medical schools had established units or divisions of research in medical education. The work of George E. Miller and colleagues at the University of Buffalo (later called the State University of New York at Buffalo) and the University of Illinois College of Medicine was especially important to the development of this field.[24]

6-21

From Time to Heal by Kenneth Ludmerer, 1999

1960-1970: In 1961 Dean Mackenzie organized a symposium in Banff on research in medical education and the teaching of undergraduate medical students. The faculty also reviewed the new approach to teach one body system at a time, that had begun at Western Reserve in Cleveland in 1952. The keynote speaker was Dr. George Miller, an advocate for evaluating curriculums and teaching methods. The UofA curriculum had remained relatively unchanged for decades, following the two plus two year approach recommended by Abraham Flexner (1910). The conference began the discussion and careful introduction of body system or integrated medical teaching at the UAH. More importantly it led four years later to the appointment of Dr. J.A.L. Gilbert as the part-time head of medical education research.

In 1962 Assistant Dean Dr. James Thompson, moved to Toronto and Dr. Mackenzie appointed Dr. D.F. (Tim) Cameron to replace him. A clinician/anesthetist, Dr. Cameron had already been working with Dr. Mackenzie in the Dean's office since 1960. Although it was a part-time position, Dr. Mackenzie began the practice of delegating the day to day decisions of the Dean's office to Dr. Cameron. He was careful to retain the authority to make all the final or major decisions. Despite their different personalities, the two were a very effective team, so much so that the faculty often didn't notice when Dr. Mackenzie was away.[45]

Dr. Mackenzie's first extended absence came as the Sims Traveling Fellow in 1962. He traveled around the world for four months visiting medical schools in the British Commonwealth.[46] In September 1963 he organized a Conference to celebrate the 50th Anniversary of the Medical School. Dr. Mackenzie brought world-renowned scholars to teach, speak and be honored, including Drs. Peter Medawar, Rene Dubos, Frank Horsfall and Gordon Douglas.[47]

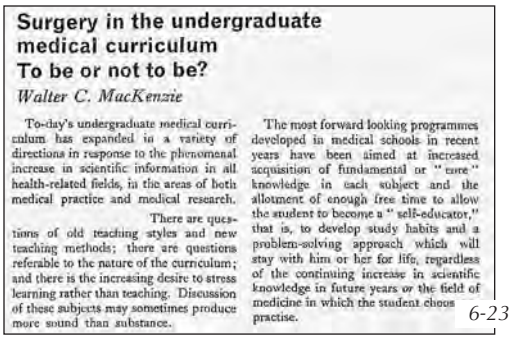
1964 was an accreditation year. The visiting team was impressed by the remarkable progress the faculty had made and concluded "if this Faculty continues to improve at the same rate during the next ten years as it did during the past ten years, it will become the best faculty of medicine in this hemisphere," due entirely, as Dr. Donald Wilson noted a decade later, "to the qualities of leadership displayed by Walter Mackenzie. He allowed $500,000 per year to go unused because he could not obtain the quality of staff he felt he needed to build the first-rate medical school that has been his dream ever since he first became Dean."[48]

Although accredited by the American College of Surgeons since 1924, the first Canadian Royal College site visit did not occur until 1966. During his visit, surveyor Dr. Charles Drake found that teaching on primarily private patients was possible.[49]

6-22

UofA Spring Convocation: 50th Anniversary of the Faculty of Medicine, 1963 (LtoR) President W.H. Johns, Dr. F.L. Horsfall, Dr. P.B. Medawer , Chancellor L.Y. Cairns, Dr. R.J. Dubois, Dr. R.G. Douglas, Dr. W.C. Mackenzie

45. Lampard, Robert — Profile of Dr. Donald Forbes (Tim) Cameron. The Mackenzie and Cameron tenures overlapped for 15 years with Dr. Cameron succeeding Dr. Mackenzie as Dean for another 9 years. The two Dean stories must be read together to better comprehend the contributions to the Faculty of both Deans.
46. Mackenzie, Walter C. — "Report of the Sims Traveling Fellow." Copy in the Mackenzie family archives. Mrs. Mackenzie wrote entertaining letters back to the family describing the social highlights of the trip and signing them "Lady Sims".
47. Mackenzie, Walter C., et al — Program. The Fiftieth Anniversary of the founding of the Medical School, UofA, September 18-21, 1963
48. Wilson, Donald R. — Tribute to Dr. Walter Mackenzie on the occasion of his retirement, June 7, 1974. Copy in the Mackenzie family archives.
49. Macbeth, Robert A. — *The Department of Surgery of the University of Alberta*, pages 282-285.



Surgery in the undergraduate medical curriculum
To be or not to be?

Walter C. MacKenzie

To-day's undergraduate medical curriculum has expanded in a variety of directions in response to the phenomenal increase in scientific information in all health-related fields, in the areas of both medical practice and medical research.

There are questions of old teaching styles and new teaching methods; there are questions referable to the nature of the curriculum; and there is the increasing desire to stress learning rather than teaching. Discussion of these subjects may sometimes produce more sound than substance.

The most forward looking programmes developed in medical schools in recent years have been aimed at increased acquisition of fundamental or "core" knowledge in each subject and the allotment of enough free time to allow the student to become a "self-educator," that is, to develop study habits and a problem-solving approach which will stay with him or her for life, regardless of the continuing increase in scientific knowledge in future years or the field of medicine in which the student choos practise.

6-23

3rd Kenelam Digby Lecture, Univ. of Hong Kong, 1972

After a conference in Manila in late 1966, Dr. Mackenzie was invited to tour the People's Republic of China with two other leading Canadian physicians and their wives. The visit was remarkable because Communist China had been closed to most visitors. It was part of a Dr. Norman Bethune exchange visit. Only a few Canadians and virtually no Americans had been permitted to visit China since 1949. Not only had Dr. Mackenzie known Dr. Bethune, but he was also President of the American College of Surgeons that year. At one city, the three Canadian physicians (Drs. Walter Mackenzie, Arthur Peart, Ken Thomson) were met by 30-40,000 Red Guards chanting "Bethune – Bethune." The reception was repeated at several railway stations heralding the beginning of the Cultural Revolution.[50]

The Canadian delegation visited numerous medical schools and hospitals that taught holistic medicine. When Dr. Mackenzie returned and showed his photographs to his family, they were all photos of people the Mackenzies had met. He could recall them by name, spousal name, and family, but there were no pictures of any historically important places, Chinese architecture or the Great Wall.

By 1966 the faculty had about 400 full and part-time physicians on staff. Dr. Mackenzie found that increasing administrative demands threatened to cut into his teaching and practice time. His solution - "I never send a letter unless I think it's necessary. I'd never be happy as a full-time administrator. I let my department heads pretty well run things. I keep two mornings a week for surgical practice and teaching… and two afternoons for consulting. I guess you could say I keep twenty-five percent of my time for patient care and education."[51]

In 1963 Dr. Mackenzie and three colleagues discussed the future of the University Hospital as part of a Health Science Centre.[52] In 1965 a Health Science Council was formed under the aegis of the university and with the approval by the Board of Governors. It included the Faculties of Medicine, Dentistry, Nursing, Pharmacy and Rehabilitation and the University Hospital.[53] They agreed to cooperate on service, education, research programs and the coordination of common courses. The first test of the concept came when the UAH Board decided to build a 250 seat auditorium in 1965. It could be used by all health-related faculties and serve as the first step towards a health science center.[54] The University Hospital Board approved the concept and the long-term premise that many of the older buildings would be demolished.

Further structural progress occurred when the 1964 Hall Royal Commission predicted a significant doctor shortage in Canada because of the postwar baby boom. The federal Health Research Fund (1965) was established with $500 million to address the problem.

6-24

Drs. A.F.W. Peart (CMA Gen. Sec.), R.K. Thomson and W.C. Mackenzie in Beijing, 1966.

50. Thomson, Kenneth, Mackenzie, Walter C., Peart, A.F.W. "A visit to the People's Republic of China," CMAJ 97: 349-360, August 12, 1967. Their wives joined them.
51. Mackenzie, Walter C. "Research is Background to Good Patient Care." Interview with Don MacLachlan in the Edmonton Journal. Reprinted in the Calgary Herald, March 8, 1966.
52. Snell, Bernard "The Walter C. Mackenzie Health Sciences Center, A Brief History" and a "Chronology of Events" published as part of the Opening of the Walter C. Mackenzie HSC, October 15, 1982. The auditorium was proposed in a TRW Report (1957), which identified it as part of a HSC program. Copy in the Mackenzie family archives.
53. Corbet, Elise A. *Frontiers of Medicine*, pages 80-92. For a breakdown of the size of the seven faculties and schools and the over 1,300 students, see the special issue of the New Trail 26(4): 11, February 1970 entitled "Medicine in the Health Sciences."
54. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 293.

6-25

Hall Royal Commission Report, 1961-1965

In 1965 the UofA began planning for a Clinical Sciences Building to address the rapid expansion of faculty, support staff and clinical investigative programs. The selection of the many new teachers and staff members required by the rapidly growing programs, meant a careful search for each candidate, credential reviews, impact assessments, and acquisition of additional funding. Staff expansion placed considerable pressure on the limited space available. It necessitated preplanned integration within existing departments before a search was undertaken, a problem not resolved until the Clinical Sciences Building opened in 1969.

Educationally, the new (1965) Curriculum Committee (Drs. Gilbert, Cameron, Mackenzie) began meeting regularly. They recommended the introduction of a horizontally integrated anatomy and cell biology course, together with an integrated neurosciences course. More electives were included in the revamped three phase undergraduate curriculum, introduced in the major revisions of 1968/1969. The program changes were so wholesale, grumblings and misgivings were still being recorded four years later.[55]

Concurrently, a new Masters Program began in Health Services Administration (1968). The Royal College's R.S. McLaughlin Research and Examination Center opened under Dr. Donald Wilson (1968), and the first clinical MD/PhD program started in Surgery (1970).[56]

HSC Concept: In January 1966, the hospital began the planning and designing a new Centennial Hospital. It was to be a Specialty Hospital that reflected the rapid sub-specialization occurring within medicine, and the expansion of the residency training programs in the 1950s and the 1960s. Each floor was to contain a related set of specialties. A planning coordinator was retained, Dr. John Read.

Dr. Mackenzie saw the opportunity as one for the medical school to be an integral part of a Health Science Centre, obliged to develop innovative, creative and cost-effective systems for healthcare delivery, and to prepare students in the healthcare delivery systems of the future. He believed "when health science personnel were trained together they will learn each others capabilities and will learn to co-operate and work together." He felt training individual practitioners was becoming increasingly difficult, as community practice was shifting to larger clinics and regional medical centres, that had complex diagnostic facilities, subspecialty services, ICUs, and special rehabilitation programs. The increasing complexity of medical care he felt would require

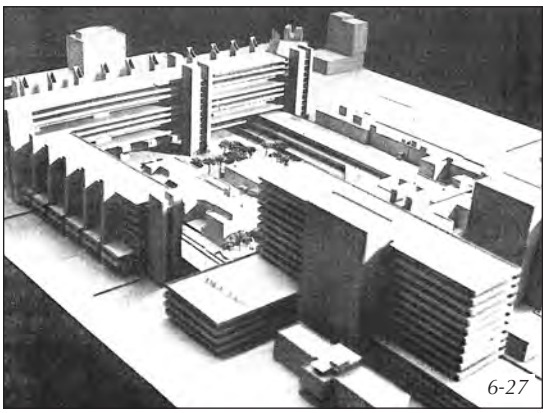
6-26

Edmonton Journal insert by the Edmonton Academy of Medicine, 1966

55. Macbeth, Robert A. *The Department of Surgery of the University of Alberta*, pages 274-278.
56. Mackenzie, Walter C. Annual Reports to the President of the University of Alberta for 1965/66, 1967/68, 1969/70, in the Walter C. Mackenzie Fonds, UAA.

a greater sharing of responsibility among many professionals for the diagnosis, treatment and rehabilitation of patients.[57]

The long term plan for the Centennial Hospital included building a dental wing and a pharmaceutical wing, a concept strikingly similar to the Edmonton Clinic now under construction, except it didn't have an LRT through it. Just as the Centennial hospital was to go to tender and construction in 1971, the project was put on hold by the government because the cost estimates had risen from $42 million to $58 million. The freeze was continued by the Lougheed Conservative government, after it defeated the 36 year old Social Credit government in 1971.



Model of the Centennial Hospital (lower R), Pharmacy/ Dent (middle L), MSB (upper L), CSB (middle R), 1970

Dr. Mackenzie and his colleagues were most disappointed having worked so hard on the hospital plans. His goal didn't change though, and he remained dedicated to providing comprehensive care "so that no one individual works in isolation, but as a member of a team in full knowledge of the patient's total health picture and with each knowing what the other is doing to improve it."[58]

He didn't have to wait long for a revisit to the HSC concept. Planning recommenced in late 1972 with the 18 month appointment of consultant Dr. Graham Clarkson, a Scottish trained epidemiologist.[59] It was a rankorous appointment from the faculty perspective, but set the parameters for any new hospital, including a reduction in the number of beds to 837.[60] Victor Jackson who had project-managed the building of the Faculty of Medicine at the University of Calgary (1970-1973), succeeded Dr. Clarkson in September 1974. He recommended any new hospital should be located between the 13-story Clinical (CSB) and the 1972 completed, 9-story Basic Science (MSB) buildings. The remaining medical faculty moved into the MSB, leaving the original 1921 facility for the faculties of Dentistry and Pharmacy.

The Hall Royal Commission (1964) had recommended new medical schools be started in four Canadian cities: St. Johns, Sherbrooke, Hamilton and Calgary. From 1964-1966 several studies were conducted that supported the initiation of a Faculty of Medicine at the University of Calgary. Approved, the UofC chose not to follow the Flexner 2 plus 2 teaching model, but rather the Systems approach, recommended by Dr. W.A. Cochrane when he became the new UofC Dean (1967). The first UofC medical class began in 1970 and the first MDs graduated from the Calgary program three years later.[61]

Clinical Services Building, opened 1969

Dr. Mackenzie supported a second faculty of medicine in the province, so long as it did not disrupt the Edmonton program. He had already determined that the maximum number of med-

57. Mackenzie, Walter C. *New Trail*, pages 4-5, February 1970.
58. Mackenzie, Walter C. As quoted in "A Center for Total Healthcare" by Ronald Clarke, New Trail, pages 7-10, February 1970.
59. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 322.
60. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, page 330.
61. Cochrane, William A. "Philosophy and Program for Medical Education at the University of Calgary", CMAJ 98: 500-505, 1968. For more on Dr. Cochrane's role, see his profile in R. Lampard's *Alberta's Medical History*, pages 415-431.

Medical Sciences Building, opened 1972

ical students the UofA could accept was 120.[62]

1971-1974: In 1970 Dr. Mackenzie shared another of his concerns with the graduating class, quoting Sir Henry Dale the British physiologist to make his point:

"The course of study required for an effective qualification in medicine is inevitably growing longer; but if a man is to begin his life's work before he enters the period of natural decline, the duration of his formal studies can certainly not be expected, or even be allowed, to increase in direct proportion to the ever more rapid growth of the kind of knowledge with which we ought still to obtain at least a nodding acquaintance, if he is to be provided with an adequate basis for an intelligent conduct of the practice."

Dr. Mackenzie added, "this observation should alert medical schools to reassess their objectives and methods, to ensure that the student will continue to acquire a grasp of what is really essential out of the mounting superabundance of what is known. Medical schools will have to sharpen the student's desire for acquiring knowledge, and stimulate rather than depress initiative and imagination, and will above all other things have to encourage and develop the student in the field of self-learning from day one of his medical school experience. The new look in medical education will be centered on earlier exposure to the clinical sciences with the patient as a model; systems teaching rather than departmental teaching; electives so that the student can study in depth any subject which appeals to him; and finally, a meaningful clinical clerkship where he or she actively participates in patient care during the undergraduate program."[63]

In 1971 Dr. Mackenzie and his wife began a one year sabbatical, traveling around the world and visiting friends in London, Iran, New Zealand and Hong Kong. Not surprisingly, Dr. Mackenzie became impatient, and returned early to begin to resurrect the HSC concept.

The next year (1972) former graduates in General Surgery honored Dr. Mackenzie by forming the Walter C. Mackenzie Surgical Club. They presented him with the first membership, to his great delight.

Dr. Mackenzie's third five-year term was one of consolidation, while awaiting the reviews of Clarkson and Jackson on how to design a new HSC. Time brought new ideas, of which one was the interstitial space concept with a mechanical floor between regular floors. It had been used in building the McMaster and UofC medical schools, leaving its leading proponent Eberhard Zeidler as the architect-in-waiting to design the atrium and open space dominated

Panorama of the Foothills Medical Center, circa 1998

62. Mackenzie, Walter C. Report of Dean W.C. Mackenzie in the Report of the Board of Governors of the UofA, 1962/63, page 67.
63. Mackenzie, Walter C. Letter to the University of Alberta Medical Students, Class of 1970. Published in the Medical Student annual "Speculum '70," page 47, 1970.

W.C. Mackenzie HSC.[64]

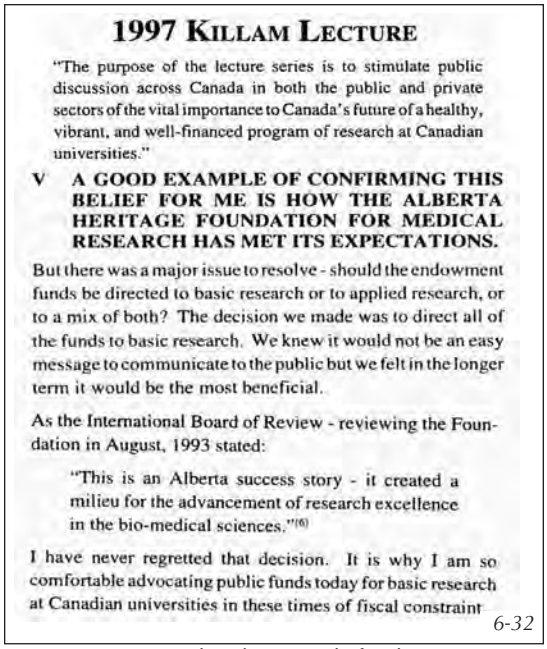
Premier Lougheed acknowledged Dr. Mackenzie as "a key force in our endorsement of the Alberta Health Sciences Center concept."[65] His vision did not become reality until the Progressive Conservative government approved the revised HSC concept in 1975, and the design work recommenced. In 1979 the name of the University of Alberta Hospital was changed to the Walter C. Mackenzie Health Science Center, officially announced by Mr. Lougheed one year after Dr. Mackenzie died.[66] The design and open spaces of the Walter C. Mackenzie Health Science Center were still considered innovative and precedent setting a quarter of a century later.


6-31

Bust of Dr. W.C. Mackenzie in the entranceway to the Walter C. Mackenzie HSC

Despite the construction delays, progress was still being made. Increasing emphasis on outpatient programming occurred in psychiatry. The Aberhart TB Hospital was turned over to the UAH (1972). A neonatal intensive care unit was built. The McLaughlin examination centre under Dr. Donald Wilson, introduced objective multiple choice exam questions. Dr. Mackenzie's retirement coincided with the arrival of the first CAT scanner in 1974. By then the HSC concept was back on the planning boards as an entirely new hospital. Dr. Mackenzie could retire as the future for the faculty had been set.

At the end of Dr. Mackenzie's fifteen years, the Dean's office itself had changed considerably. From Dean Scott he had inherited a spartan cast - one part-time secretary/administrative assistant, Dr. J.S. Thompson, whom Dr. Mackenzie appointed as his Assistant Dean. When Dr. Mackenzie retired at the mandatory age of 65, the office consisted of an Associate Dean (D.F. Cameron), an Assistant Dean of Professional and Community Affairs (L.C. Grisdale) and a Director of Student Affairs (O. Hagen).[67] One close observer, Dr. John Read, viewed Dr. Mackenzie's retirement as representing a fundamental change in the hospital-faculty relationship.



1997 KILLAM LECTURE

"The purpose of the lecture series is to stimulate public discussion across Canada in both the public and private sectors of the vital importance to Canada's future of a healthy, vibrant, and well-financed program of research at Canadian universities."

V A GOOD EXAMPLE OF CONFIRMING THIS BELIEF FOR ME IS HOW THE ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH HAS MET ITS EXPECTATIONS.

But there was a major issue to resolve - should the endowment funds be directed to basic research or to applied research, or to a mix of both? The decision we made was to direct all of the funds to basic research. We knew it would not be an easy message to communicate to the public but we felt in the longer term it would be the most beneficial.

As the International Board of Review - reviewing the Foundation in August, 1993 stated:

"This is an Alberta success story - it created a milieu for the advancement of research excellence in the bio-medical sciences."[6]

I have never regretted that decision. It is why I am so comfortable advocating public funds today for basic research at Canadian universities in these times of fiscal constraint

6-32

Hon. Peter Lougheed's rationale for the AHFMR, Nov. 6, 1997

Medical Research at UofA 1946-1974: When Dr. A.C. Rankin retired as the Dean of Medicine in 1945, the Faculty of Medicine was operating on a budget of $130,000/year (1944) and was receiving NRC/MRC medical research grants of $10,000/year.[68] It was supplemented by seed funding from the UofA Board of Governors (1946), which was disbursed on the recommendation of the faculty's Research allocation committee (Macgregor, Mackenzie, Scott and Shaner).[69]

After becoming the Chairman of the Department of Surgery in 1950, Dr. Mackenzie participated in the negotiations which secured $150,000 from the Alberta Division of the

64. Zeidler, Eberhard *Healing the Hospital*, McMaster Health Science Centre, its conception and evolution, privately published, 1974.
65. Lougheed, Peter "Inspiration and a source of pride," CMAJ 120: 998, April 21, 1979.
66. Corbet, Elise A. *Frontiers of Medicine*, pages 86-92.
67. Mackenzie, Walter C. Annual Report to the President 1969/70.
68. Wilson, Donald R. "The Faculty of Medicine, University of Alberta 1913-1969," in *Medicine in Alberta: Historical Reflections*, page 110, AMF, 1993.
69. Ower, John J. Diary entry for March 5, 1947.

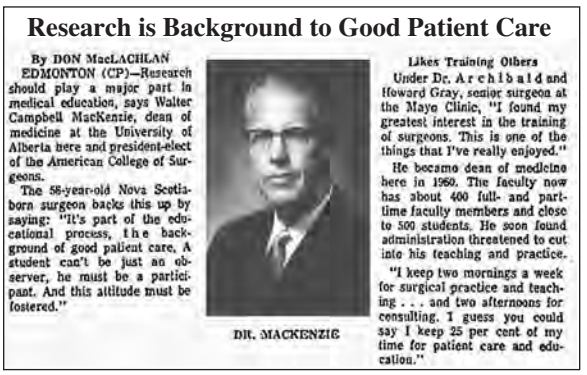
Assoc. Dean D.F. Cameron, Dean W.C. Mackenzie, Asst. Dean L.C. Grisdale, circa 1970

Canadian Cancer Society (CCS) for a medical research laboratory.[70] The laboratory was opened in 1952 and named after Dr. J.S. McEachern, the Calgary general surgeon who had formed the CCS in 1938.[71] In 1953 the Surgical-Medical Research Institute (SMRI) was opened adjacent to it.[72]

Medical research at the UofA received another major boost in 1951, when the $500,000 Rockefeller Grant was transferred to the Faculty of Medicine. One million dollars was added to it by UAH Medical Superintendent Dr. Angus McGugan, from the surpluses the UAH had accumulated in the postwar years. Starting in 1955 the interest income of $50,000/year from the new Special Services and Research program began funding clinical and departmental research projects. Drs. R.E. Bell, W. Mackenzie, A.C. McGugan, Dean J.W. Scott, D.R. Wilson, J.R. Vant, and Administrator R. Adshead were the first trustees.[73]

Research funding allowed the Department of Surgery to initiate a Masters of Science program in 1958. In 1961 the two research laboratories (McEachern, SMRI) were expanded in a 22,000 square foot addition. They markedly improved the faculty's success in obtaining external medical research grants. Researchers from the two research labs published over five hundred papers in the medical literature.[74] The McEachern Laboratory was closed in 1990, while the SMRI has remained in operation.

UofA, 1953-present 6-35



Research is Background to Good Patient Care

By DON MacLACHLAN

EDMONTON (CP)—Research should play a major part in medical education, says Walter Campbell MacKenzie, dean of medicine at the University of Alberta here and president-elect of the American College of Surgeons.

The 58-year-old Nova Scotia-born surgeon backs this up by saying: "It's part of the educational process, the background of good patient care. A student can't be just an observer, he must be a participant. And this attitude must be fostered."

DR. MACKENZIE

Likes Training Others

Under Dr. Archibald and Howard Gray, senior surgeon at the Mayo Clinic, "I found my greatest interest in the training of surgeons. This is one of the things that I've really enjoyed."

He became dean of medicine here in 1960. The faculty now has about 400 full- and part-time faculty members and close to 500 students. He soon found administration threatened to cut into his teaching and practice.

"I keep two mornings a week for surgical practice and teaching . . . and two afternoons for consulting. I guess you could say I keep 25 per cent of my time for patient care and education."

Calgary Herald, March 8, 1966 6-34

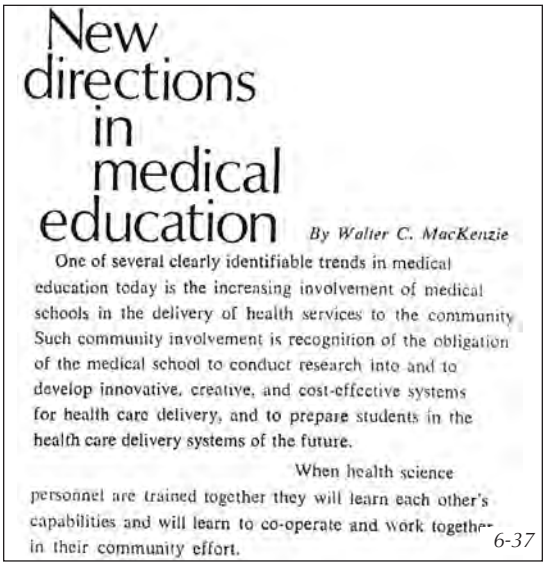
Clinical research was further facilitated by the 1959 Board/Faculty agreement that gave fifty percent of any additional income beyond the negotiated ceiling to the individual, twenty-five percent to the department, and twenty-five percent to a faculty clinical research fund.[75] Being able to perform preliminary research markedly improved the success rate for grants. By 1966 medical research grants to the faculty had increased to $1.4 million per year. They continued to rise to $2 million (1970) and $2.5 million (1974).[76]

70. Macbeth, Robert A. Letter to R. Lampard, October 22, 2004.
71. Lampard, Robert "John Sinclair McEachern" in *Alberta's Medical History, Young and Lusty and Full of Life*, pages 180-214.
72. Corbet, Elise A. *Frontiers of Medicine*, pages 177-180. R. Vant and T. Cashman added some colorful comments on the rationale for a research laboratory being located outside the hospital, in *More Than a Hospital*, pages 218-219.
73. Vant, Ross, Cashman, Tony *More Than a Hospital*, pages 215-217.
74. Corbet, Elise A. *Frontiers of Medicine*, pages 177-185. Research was not limited to the McEachern and Surgical Medical Research (SMRI) labs. By 1958, the UofA had been awarded three $30,000 five-year Markle clinical research scholarships: to Drs. D.R. Wilson (in 1949 to start the endocrine lab), to R.S. Fraser (in 1953 to start the catheterization lab) and to L.E. McLeod (in 1958 to start the metabolism lab and chronic renal dialysis program). Also see "The Alberta Heritage Foundation for Medical Research", in *Alberta's Medical History, Young and Lusty and Full of Life*, pages 664-670.
75. Corbet, Elise A. Frontiers of Medicine, page 74.
76. Lampard, Robert "The Alberta Heritage Foundation for Medical Research: Its formative Years 1975-2005", page 666 in *Alberta's Medical History, Young and Lusty and Full of Life*.


6-36

UofA Faculty of Medicine, 1959.
Drs. W.C. Mackenzie(4th L front), J.W. Scott (5th L front)

Dr. Mackenzie's interest in medical research at the clinical level never diminished. Like Dr. Scott he felt research should play a major part in medical education. "It's part of the educational process, the background of good patient care. A student can't be just an observer, he must be a participant and this attitude must be fostered."[77] He believed that intellectual questioning developed from training in medical research and was of benefit to all post-graduate residents. Over his lifetime Dr. Mackenzie was the author or co-author of at least eighty papers on Surgery and Medical Education alone (see the Mackenzie CV).[78]


New directions in medical education

By Walter C. MacKenzie

One of several clearly identifiable trends in medical education today is the increasing involvement of medical schools in the delivery of health services to the community. Such community involvement is recognition of the obligation of the medical school to conduct research into and to develop innovative, creative, and cost-effective systems for health care delivery, and to prepare students in the health care delivery systems of the future.

When health science personnel are trained together they will learn each other's capabilities and will learn to co-operate and work together in their community effort.

6-37

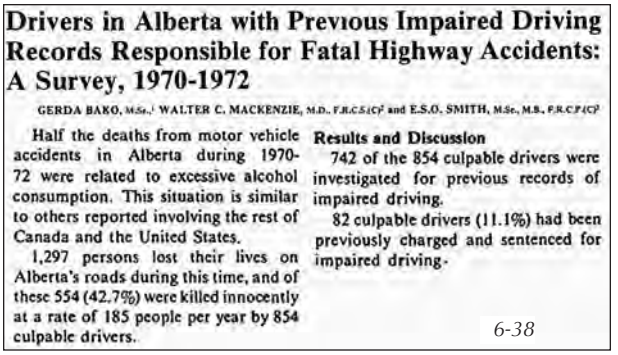
New Trail, February 1970

Despite Dr. Mackenzie's philosophy and commitment to medical research, funding was difficult to secure. After his retirement Dr. Mackenzie participated in the first of two government sponsored dinners, organized by Premier Lougheed on March 20, 1978, to discuss the concept of a provincial medical research fund. In his presentation at the dinner Dr. Mackenzie stressed the need for quality, long term apprenticeships under eminent medical scientists, and the need for basic as well as clinical research under a peer reviewed approval system.[79] Premier Lougheed credited Dr. Mackenzie with encouraging the government "to make haste slowly, [and] not establish priorities too early in medical research,", after the Alberta Heritage Foundation for Medical Research was approved in 1980.[80]

The Post Dean Years 1974-1978: When Dr. Mackenzie retired in June 1974, it was a "night of superlatives."[81] During the evening Dr. Donald Wilson, the Professor and Head of Medicine noted Dr. Mackenzie's frailties – food and drink. "I have it on good authority that he has lost well over a thousand pounds in his lifetime. It is even rumored that he has over four sets of complete wardrobes to fit his various needs. [He] openly boasts that he has only missed two drinks in his lifetime. Once he wasn't asked, and once he wasn't there." Dr. Wilson closed his reflections with the tribute, "A man like Walter Mackenzie comes along only once in a life-time, and we were exceptionally fortunate that he came to us."[82]

By his own admission Dr. Mackenzie left behind a mature medical education program. The faculty reputation was in the top class on the continent. His colleagues created the Walter C. Mackenzie Visiting Professorship Endowment Fund to perpetuate his memory. The

77. Mackenzie, Walter C. As quoted by Don MacLachlan in the Edmonton Journal, March 8, 1966.
78. Mackenzie, Walter C. Curriculum vitae, 1977. Dr. Mackenzie's curriculum vitae listed eighty publications. It was a modest CV that only listed articles on surgery and medical education. It excluded references like Dr. Mackenzie's chapter on "The Relations with Other National Colleges," pages 173-182, in R.B. Salter's *History of the Royal College of Physicians and Surgeons of Canada*, 1979 and his guest editorship of the October 1960 issue of Surgical Clinics of North America. The number of presentations Dr. Mackenzie gave was in the hundreds. Copy deposited in the UAA and Mackenzie family archives and attached on pages 205-208.
79. Mackenzie, Walter C. "Government House presentation," prepared March 16, 1978. Presented March 20, 1978. Four page manuscript in the Mackenzie Family Archives.
80. Lougheed, Peter Alberta Hansard, pages 687-689, April 17, 1978.
81. Remington, B. "A night of superlatives for retiring Dean." Edmonton Journal, Saturday, June 8, 1974. Three hundred guests attended.
82. Wilson, Donald R. Tribute to Dr. Walter Mackenzie, June 7, 1974.



Drivers in Alberta with Previous Impaired Driving Records Responsible for Fatal Highway Accidents: A Survey, 1970-1972

GERDA BAKO, M.Sc.[1] WALTER C. MACKENZIE, M.D., F.R.C.S.(C)[2] and E.S.O. SMITH, M.Sc., M.B., F.R.C.P.(C)[2]

Half the deaths from motor vehicle accidents in Alberta during 1970-72 were related to excessive alcohol consumption. This situation is similar to others reported involving the rest of Canada and the United States.

1,297 persons lost their lives on Alberta's roads during this time, and of these 554 (42.7%) were killed innocently at a rate of 185 people per year by 854 culpable drivers.

Results and Discussion

742 of the 854 culpable drivers were investigated for previous records of impaired driving.

82 culpable drivers (11.1%) had been previously charged and sentenced for impaired driving.

6-38

Canadian Public Health Journal March/April 1977

nursing department created an annual prize for kindness and proficiency in bedside nursing.

By 1974 Dr. Mackenzie had become one of Canada's best known surgeons, respected on five continents and appreciated for his wisdom, judgment, integrity and rich gift of friendship. Dr. Allan Gilbert noted how his career "had been marked by success and hard work. It had not come with any less of integrity or loyalty. Few men who have achieved high office, have maintained their humanity. You have been a tower of strength – mental, mortal and physical – an image that will long endure."(83) Dr. Mackenzie was succeeded by his Associate Dean of twelve years, Dr. D.F. Cameron.

No sooner had he retired than Dr. Mackenzie joined seventy-five colleagues on a Government of Alberta trade mission to Europe. After the trip Premier Lougheed described him as "the natural catalyst between the public and the private sector."(84)

On his return from Europe Dr. Mackenzie was appointed the Chairman of the Alberta Government Task Force on highway accidents. The Task Force found that 53% of the drivers who were killed, had been drinking beforehand. Of the surviving drivers 82% were legally impaired. In the average general hospital one-eighth of the beds were occupied by an accident victim. Of the 78 recommendations one was to make the use of seatbelts mandatory.(85)

A year later, Dr. Mackenzie was appointed the Executive Director of the Alberta Provincial Hospital's Cancer Board. He applied his usual forethought before he accepted the position. Much needed to be done and he approached the task with his hallmark vigor and industry. Under his direction cancer services programs and facilities in Alberta were substantially expanded. That included the building and staffing of the Tom Baker Cancer Center on the Foothills site in Calgary. The Center provided ambulatory cancer services for Southern Albertans beginning in 1979, with a fully opened in-patient service in 1981. He also expanded provincial cancer research programs, accessing funds from the Alberta Heritage Trust Fund.

With a lifetime of experience as a general surgeon and as a colorectal cancer survivor, he gave numerous presentations on the current epidemiological, environmental and therapeutic knowledge of cancer. In the delivery of cancer services the goals he said, were to prevent, cure, provide palliation, and rehabilitate patients through cooperation and teamwork. Improved outcomes he felt would follow. It was

SCOPE, COST AND EFFECTIVENESS OF SURGERY IN CANCER MANAGEMENT

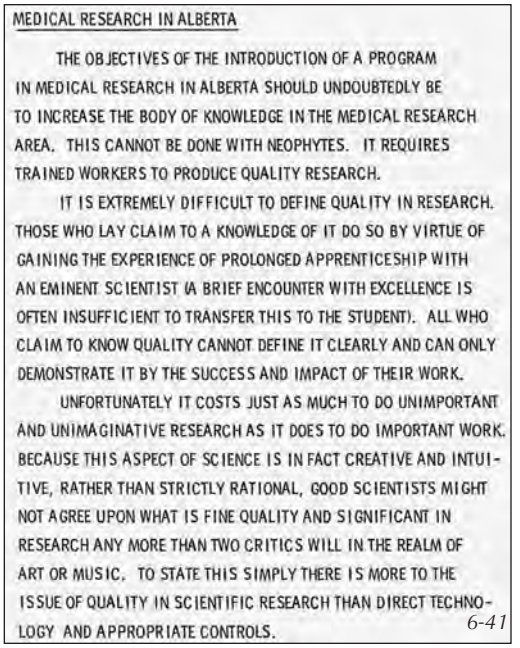
Walter C. MacKenzie, M.D.C.M., F.R.C.S.(C)

Galen about 150 years A.D. describe the "treatment" of tumors by "removal" and mentioned particular the treatment of "cancer" of the breast by excision. He went further and stated "as for cancerous growths in the nose, 'polyps,' we remove them with a narrow knife, and afterwards scrape off their roots with a curette."[1] This is one of the very early references to the place of surgery in the treatment of tumors.

The German surgeon Thiersch and the anatomist Waldeyer after careful microscopic studies claimed that the concept of cancer as multi-centric was erroneous. They were convinced that cancer had its origin in a single primary focus, which when removed completely led to cure.2 Thy postulated that tumor appearing in areas distant from the primary focus was usually the result of metastasis of small groups of cells, dislodged from the primary focus and spread through the lymphatics and blood vessels.

The gradual development of radical surgery in an attempt to cure cancer was a natural sequence to these observations. 6-39

83. Gilbert, Alan — Tribute to Dr. Walter Mackenzie, June 7, 1974. Copy in the Mackenzie family archives.
84. Lougheed, Peter — As quoted in "Walter Campbell Mackenzie Pioneer International Surgical Statesman, Part 2: What Manner of Man?" Annals RCPSC 22(3): 209, May 1989.
85. (Mackenzie, W.C.) — Chairman, Task Force on Highway Accidents. Report to the Minister of Social Services and Community Health, the Honorable Helen Hunley, Alberta Government, 1975. The report resulted in mandatory seat belt legislation in Alberta. The alcohol related findings were summarized in two articles by G. Bako, W.C. Mackenzie and E.S.O. Smith, on a "Survey of impaired drivers, fatally injured or surviving, who caused fatal highway accidents in Alberta in 1970-72"; CMAJ 115: 856-857, November 6, 1976, and in "Drivers in Alberta with Previous Impaired Driving Records Responsible for Fatal Highway Accidents: a Survey, 1970-1972," CPHJ 68: 106-110, March/April 1977.



MEDICAL RESEARCH IN ALBERTA

THE OBJECTIVES OF THE INTRODUCTION OF A PROGRAM IN MEDICAL RESEARCH IN ALBERTA SHOULD UNDOUBTEDLY BE TO INCREASE THE BODY OF KNOWLEDGE IN THE MEDICAL RESEARCH AREA. THIS CANNOT BE DONE WITH NEOPHYTES. IT REQUIRES TRAINED WORKERS TO PRODUCE QUALITY RESEARCH.

IT IS EXTREMELY DIFFICULT TO DEFINE QUALITY IN RESEARCH. THOSE WHO LAY CLAIM TO A KNOWLEDGE OF IT DO SO BY VIRTUE OF GAINING THE EXPERIENCE OF PROLONGED APPRENTICESHIP WITH AN EMINENT SCIENTIST (A BRIEF ENCOUNTER WITH EXCELLENCE IS OFTEN INSUFFICIENT TO TRANSFER THIS TO THE STUDENT). ALL WHO CLAIM TO KNOW QUALITY CANNOT DEFINE IT CLEARLY AND CAN ONLY DEMONSTRATE IT BY THE SUCCESS AND IMPACT OF THEIR WORK.

UNFORTUNATELY IT COSTS JUST AS MUCH TO DO UNIMPORTANT AND UNIMAGINATIVE RESEARCH AS IT DOES TO DO IMPORTANT WORK. BECAUSE THIS ASPECT OF SCIENCE IS IN FACT CREATIVE AND INTUITIVE, RATHER THAN STRICTLY RATIONAL, GOOD SCIENTISTS MIGHT NOT AGREE UPON WHAT IS FINE QUALITY AND SIGNIFICANT IN RESEARCH ANY MORE THAN TWO CRITICS WILL IN THE REALM OF ART OR MUSIC. TO STATE THIS SIMPLY THERE IS MORE TO THE ISSUE OF QUALITY IN SCIENTIFIC RESEARCH THAN DIRECT TECHNOLOGY AND APPROPRIATE CONTROLS.

6-41

WCM Presentation on the formation of the AHFMR 1st Government House Dinner, 1978

important, "to treat the patient as a human being and not as a disease. They are vulnerable and want compassion, understanding and reassurance. Don't abandon them but offer a ray of hope. Never tell the patient one thing and the family another, or give them a rigid prognosis, for one mishandling leads to a fire of criticism."[86]

The change of venue gave Dr. Mackenzie more time to travel, and re-meet friends and colleagues. In his presentations he enjoyed making his points by quoting others with whom he concurred. One favorite quote was from Bob Edwards, "for when people grow too old to set a bad example, they feel obliged to give good advice."

Characteristically Dr. Mackenzie introduced his well researched presentations with a compliment and then spiced his address with quotes from colleagues and predecessors:

A clinician must have coolness and presence of mind under all circumstance … to meet the urgencies of practice with firmness and courage … without hardening the human heart. (W. Osler). A surgeon is nothing if ignorant of medicine (H. Cushing). Discoveries are made by men, not merely by minds (Bronowski). Discovery is the act of finding out what was unknown … by chance, by careful planning or by intuition (A. Blalock), Chance favors only the prepared mind (L. Pasteur) … but only if the importance of it is recognized (A. Fleming). One of the responsibilities of the clinician is to maintain an interest in the search for new knowledge (W. Mackenzie).[87]

Dr. Mackenzie's interests lay not just in academic and international medicine. In a presentation in Medicine Hat he demonstrated a broad understanding of early NWT/Alberta medicine. He reflected in detail on early medical events ranging from the opening of the Medicine Hat Hospital in 1889, to its early surgical successes under Drs. Olver and Calder; Dr. Henry George's attendance at Chief Crowfoot's death, and to the writings of four Alberta physician pioneers and historians - Drs. Gershaw, Jamieson, Learmonth and Stanley.[88]

An abstract of Dr. Mackenzie's last speech was published in the CMAJ in December 1978, the month he died. It contained a warning, as he pondered out loud the erosion of freedom under Medicare. "Can the growing discontent within our profession be blamed on a piece of legislation of good intent?" Dr. Mackenzie's answer was "yes", which he qualified with "The subtleties of the physician-patient relationship cannot be appreciated, even by the

Medicare: an erosion of freedom

6-40

By WALTER MACKENZIE

(An editorial in the Canadian Medical Association Journal)

The Medical Care Act of 1967 was designed to make medical care available, at no direct cost, to all Canadians. The medical profession has no argument with the social intent of this important piece of legislation.

What has changed in recent years? Can the growing discontent within our profession be blamed on a piece of legislation of good intent?

Unfortunately, the answer would appear to be "Yes." In their zeal our legislators did not consider the deleterious effect that was inevitable once an administrative and bureaucratic

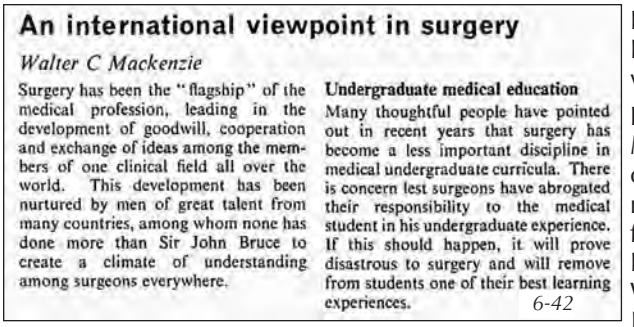
The current frustrations within the medical profession cannot be easily verbalized. Unfortunately, the symptoms of this discontent are made public in a manner that is not helpful to our public image. The public assumes that the medical profession has a morbid preoccupation with material gain and is irrationally opposed to government intervention of any kind. Such is not the case.

The Medical Care Act is not going to be repealed, but it must be changed to restore to the profession a reasonable degree of fiscal professional responsibility. Many physicians in Canada have lost faith in the profession's ability to alter the present situation and, finding their freedom to practise as they wish being eroded, are leaving the country.

If we are not able to restore and maintain an atmosphere of freedom in which physicians can continue to function as professionals, the cost to the profession will be catastrophic.

Edmonton Journal, Dec. 5, 1978

86. Mackenzie, Walter C. Excerpts from addresses on Cancer 1976-1978. Copies in the Mackenzie Family Archives.
87. Mackenzie, Walter C. "Address to the South African College of Medicine." Reprinted in the Transactions of the College of Medicine of South Africa 19(2): 57-59, September 1975.
88. Mackenzie, Walter C. "Medicine Hat – Pioneering Medicine", n.d. (post 1974). Copy deposited in the Mackenzie Family Archives.



An international viewpoint in surgery

Walter C Mackenzie

Surgery has been the "flagship" of the medical profession, leading in the development of goodwill, cooperation and exchange of ideas among the members of one clinical field all over the world. This development has been nurtured by men of great talent from many countries, among whom none has done more than Sir John Bruce to create a climate of understanding among surgeons everywhere.

Undergraduate medical education

Many thoughtful people have pointed out in recent years that surgery has become a less important discipline in medical undergraduate curricula. There is concern lest surgeons have abrogated their responsibility to the medical student in his undergraduate experience. If this should happen, it will prove disastrous to surgery and will remove from students one of their best learning experiences. 6-42

Journal of the RCPS (Edinburgh), 1977

best intentioned of our lay legislators. We should look at why patients are turning away from our services and be prepared to alter our attitudes."[89] His opposition to socialized medicine was because of the unseen hand in the examining room.

An International Statesman: Dr. Mackenzie was frequently requested to give lectures and leadership to the two dozen national and international medical organizations he joined. His medical travels included many visits to the United States and British Isles. As the Sir Arthur Sims Commonwealth Traveling Professor (1962) he visited Nigeria, South Africa, Sudan and the British West Indies.[90] He was invited to China (1966), Poland (1968), Russia (1971), Hong Kong as the Digby Memorial Lecturer (1972), Germany (1972), Spain, Australia, New Zealand, Hong Kong again, and Singapore (1973), and Nigeria and South Africa as the Louis Mirvish Lecturer (1975).

During his twenty-five years as Professor and Head of the Department of Surgery and Dean, twenty-five international medical and surgical societies invited him to join them.[91] He became President of twelve of them.

Dr. Mackenzie earned two surgical Fellowships, one in Canada (FRCPC) and one in the USA (FACS). He was granted another five Honorary Fellowships in the Royal Colleges of England, Edinburgh, Glasgow, Ireland, and West Africa (Nigeria) and two Honorary Memberships in the Colleges of South Africa and West Africa. Dr. Mackenzie was the only Canadian to be President of the Canadian, American and International Colleges of Surgery, until Dr. Charles Drake of London, Ontario was similarly honored.

Life Beyond Medicine: Nearly all of Dr. Mackenzie's time and energies were focused on the practice and teaching of medicine. He did become involved in a few community and business activities. During his first move to Edmonton before World War II, he became president of the Edmonton Athletic Club (1939). It operated the successful Edmonton Canadians Junior Hockey Team.

In 1948 he became one of eleven founding directors and shareholders of the Edmonton Eskimo (Rugby) Football Club. Annis Stukas was named the coach in 1949. The team won its first Grey Cup in 1954. The next year Dr. Mackenzie heard of two excellent UWO Mustang football prospects and referred them to Eskimo GM Al Anderson. Don Getty and Geno Fracas were signed by the Eskimos in 1956 and went on to outstanding football and post-football careers in Alberta.[92] Dr. Mackenzie's role as a talent scout went well beyond medicine.

Drs. T.E. Donald, R.K. Thomson, W.C. Mackenzie, fishing on the Raven.

Dr. Mackenzie maintained a close connection with his Scottish heritage as a member and president of the Edmonton Burns Club. The February annual meetings were not infrequently held inside the Mackenzie home when

89. Mackenzie, Walter C. "Medicare: an erosion of freedom." The CMAJ editorial was reprinted in the Edmonton Journal, December 5, 1978. It was based on a presentation Dr. Mackenzie gave to the John Paul North Surgical Society entitled, "Lessons to the Learned by the United States from other Health Care Systems," October 17, 1978. It would not have surprised Dr. Mackenzie when prize winning journalist Jeffrey Simpson presented the Walter C. Mackenzie Visiting Professor Lecture on "Medicine: Heading for a Crossroads," on October 4, 2001. Faculty of Medicine and Dentistry News 4(2): 4, December 2001.
90. Mackenzie, Walter C. Sims Traveling Professor, Report, 32 pages. Copy in the Mackenzie Family Archives.
91. Mackenzie, Walter C. Curriculum Vitae, pages 2, 3, circa 1977.
92. Mackenzie, Richard Written Communication, April 23, 2009.

6-44

Dr. Mackenzie's STARR Award, 1974

the weather was too inclement to play the bagpipes outside.

Dr. Mackenzie also served as a member of the Edmonton Advisory Committee of Canada Trust. He was recruited by industrialist E.P. Taylor to serve on the Board of Directors of Canadian Breweries in the 1950s. As a strong anti-smoking advocate, he resigned from the board on a matter of principle, when the company was taken over by Rothmans of Pall Mall.

Dr. Mackenzie's life-long love of fishing led to the formation of the Fisherman's club. Drs. Donald, Thomson, Calder, Cameron, Grisdale, Decker, Rostrup and Fred Jenner along with a wide variety of invited guests were regular participants in weekends at the cabin on the Raven River west of Red Deer. Walter was the chief cook and bottle washer. On one occasion Dr. Mackenzie brought Sir John Bruce to the cabin, entertaining him regally with cards, horseshoes and a bagpiper on "the best weekend I ever had."[93] The wives were equally compatible, forming the Fisherman's Wives Investment club which met when the husbands were away fishing.[94]

The Mackenzie Family: Walter and Dorothy (Reiter) were married shortly after Dr. Mackenzie graduated from the Mayo Clinic in 1938, more than ten years after they first met in Halifax. They had two sons Kenneth (1944) a professional urban planning and development consultant, and Richard (1946) a teacher and museum director, and one daughter Sally (1950) a nurse.

Awards and Appointments: Dr. Mackenzie's undergraduate alma mater, Dalhousie, gave him its graduation medal (1933) and the University of Minnesota its Outstanding Achievement Award in 1964. He was President of the Robert Burns Society, and gave a notable speech to the society on January 25, 1956, reminiscing about his childhood.[95] The Royal College elected him President (1964-1966), followed by the American College of Surgeons (1966-1967). In 1967 he received the Centennial Medal. He was appointed Surgeon to the Queen (1966-1968), and made an Officer of the Order of Canada (1971). He received the UofA Alumnus Golden Jubilee Award (1976) and was given the Alberta Achievement Award (1977).

The Canadian Royal College granted him the Duncan Graham Award in 1971 and the CMA its highest award, the STARR Medal in 1974. He became the second Albertan to be so recognized, after Dr. J.S. McEachern in 1938. In 1973 the B'nai B'rith gave Dr. Mackenzie their Humanitarian and Service Award. Three years later the UofA Alumni gave him their Golden Jubilee Award. He was also on the Advisory Committee of the Heart Foundation, the National Research Council and Armed Forces Medical Council.


James IV Association of Surgeons, Inc.

KNOW ALL MEN BY THESE PRESENT THAT WE THE JAMES IV ASSOCIATION OF SURGEONS, INC. DO HEREBY ADMIT

Doctor Walter C. MacKenzie

A MEMBER OF THE ASSOCIATION AS WITNESS OUR SEAL THIS DAY

(November 20, 1972)

6-45

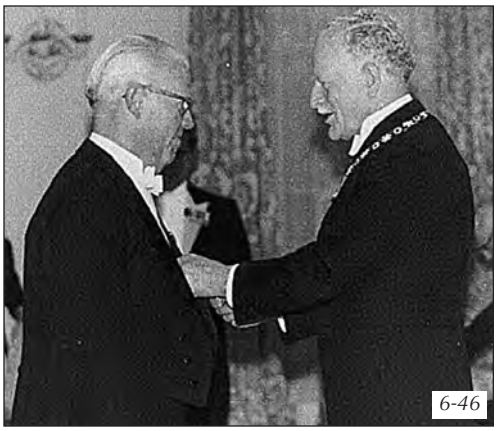
President, James IV Association of Surgeons, 1972

Internationally Dr. Mackenzie was elected President (1972-1975) of the 1951 formed James IV Association of 100 Surgeons, whose members fostered the exchange of surgical knowledge. In 1972 he became the President of the International Federation of Surgical Colleges. In 1974 he was granted emeritus membership in the Association of American Medical Colleges for his contributions to the progress of medical education. Three universities gave Dr. Mackenzie Honorary Doctorates - McGill (1965), Dalhousie (1966), and Winnipeg (1970). He was named the Dalhousie Alumnus of the Year in 1976.

93. Parsons, William B. "Royal treatment on the Raven River." Red Deer Advocate, May 12, 1979.
94. Mackenzie, Kim Written Communication, April 23, 2009.
95. Ower, John J. Ower Diary entry for January 25, 1956.

The Ethicon Suture Company, whom he once addressed on the 6000 year history of suturing, initiated the Mackenzie-Ethicon traveling fellowship in Surgery in 1980. The Medical Students Association donated the Walter C. Mackenzie Award for the graduating student most proficient in the clinical skills exams. In 2005 Dr. Mackenzie was named one of Alberta's 100 Physicians of the Century.

Epitaph: Dr. R.A. Macbeth, who succeeded Dr. Mackenzie as the UofA Professor and Head of Surgery in 1960, described him as a natural leader and an excellent administrator and organizer.[96] He had a remarkable memory for people and details and was a most formidable opponent both intellectually and verbally. When a major decision was to be made, those who were not already in agreement with his point of view usually suffered. His breadth of vision, protean knowledge, wide interest in people, and innate modesty were appreciated by all his friends and colleagues.



Receiving the Order of Canada from Gov. Gen. Roland Michener, 1970

Dr. Mackenzie grew as his knowledge grew. He could embrace and articulate new and innovative ideas. His opinion was highly valued. In return, he demanded excellence. Others called it near-perfection. He did not tolerate

Receiving the Alberta Achievement Award from Premier Lougheed, 1977

mediocrity particularly when it came to medical education. In return, his staff and students gave him exceptional loyalty and support.[97] His patients were no exception.[98]

He always showed great insight and could visualize the simplest way to proceed or the action to take, in order to solve a problem or achieve a goal. He had the ability to get others to work together as a team and to make the necessary commitment to a program or project for it to be successful. In return the success of his teams increased his stature. Although his research accomplishments were modest in terms of new discoveries, he always made his colleagues know how significant their contribution was.

Dr. Mackenzie's colleagues developed as he did – as a department, as a faculty and as part of a worldwide Fellowship of Surgeons.[99] Characteristically Dr. Mackenzie would set goals for himself and then others, usually one notch above what was perceived possible. Then he would help "the team" achieve them. His strategy was always a "Canadian first" one. He believed that by improving surgery in Canada he could improve it in Alberta. He extended that philosophy internationally.[100]

96. Macbeth, Robert A. "Walter Campbell Mackenzie, Part 2," pages 209-212. Dr. John Read, the UAH Medical Director, referred to Dr. Mackenzie as a "kindly dictator".
97. Spencer, M., Dier, K. *Echoes in the Halls*. Medical School Recollections by his colleagues appear on pages 180-186 (Dr. H.T.G. Williams), 250-256 (Dr. R.A. Macbeth), 273-275 (Dr. W. Taylor), 298-316 (Dr. M. McPhee). Association of the Professors Emeriti of the University of Alberta, 1999.
98. Lampard, Robert Personal communication with Miss Isobel Murray, a Red Deer teacher, Christmas, circa 1964.
99. Macbeth, Robert A. As quoted in B. Remington's, "A night of superlatives for retiring Dean," Edmonton Journal, June 8, 1974.
100. Mackenzie, Walter C. "An International Viewpoint in Surgery," Journal of the Royal College of Surgeons of Edinburgh 22: 5-8, January 1977. The editor closed with a tribute to Dr. Mackenzie: "People everywhere rejoice in honoring those who have made positive contributions to friendship, understanding and international cooperation…It is fitting that this

Dr. Mackenzie accomplishments came in part by sheer hard work. When Drs. Mackenzie and Macbeth were writing Chapter 18 in Christopher's Textbook of Surgery (7-9th ed.), their work often did not start until after midnight.

Dr. Macbeth described how Dr. Mackenzie loved people and being with them. Ever thoughtful, he would write non-operable cancer patients personal letters. Not uncommonly it was their last letter.(101)

Dr. R.A. Macbeth, Professor & Head of Surgery, 1960-1974

6-50

On one fishing trip near Edson with an angler-patient, he diagnosed his son Kim with an acute appendix. The 100 mph trip back to Edmonton ended with emergency surgery by Dr. Les Willox, and no fish. Besides his family, he loved camping, fishing and cooking. He was always good company and good fun. In return, Walter and Dorothy were known around the world for their friendship, and the hospitality of their home.

In Memoriam: Dr. Mackenzie died prematurely at the age of sixty-nine on December 15, 1978, from a second colorectal cancer. In his eulogy Premier Lougheed described him as "particularly helpful in our development of medical research…an inspiration and a source of pride…[whose]…contribution has been truly invaluable and will long be remembered by the people of Alberta."(102)

Many of those who knew him felt "very much the better for his having touched our lives."(103) Lord Porritt remembered how "He had a continually fresh outlook on life, a quiet courage and an unrecognized power of his charming personality. He had an unconscious resistance to everything that was evil and a joy of everything beautiful in all his thoughts, words and deeds."(104)

Walter MacKenzie

Dr. MacKenzie sparked a remarkable growth of medical education and research during 15 years as Dean of the Faculty of Medicine at the University of Alberta. It is on this foundation that Edmonton now aspires to become a leading world medical centre in the service of the suffering. Without Walter MacKenzie's lifetime of work, this valued opportunity would not be apparent.

Walter MacKenzie was an intellect revered by his students and colleagues, and a personality cherished by thousands. On the occasion of his retirement as dean in 1974, Dr. L. C. Grisdale said: "It's difficult to imagine any superlative that would be out of place in describing his contributions to medicine." Dr. D. F. Cameron, the present Dean of Medicine at the university, added: "From Peking to Moscow to the Arctic to the jungles of Africa, mention Edmonton and they will say 'I have a good friend there in Walter MacKenize.' "

Walter MacKenize loved his profession and defended its interests with vast energy, but he was always prepared to change with the times. He worried about the doctor-patient relationship and said: "(Doctors) themselves should be taking a more positive, holistic approach. We should look at why patients are turning away from our services and be prepared to alter our attitudes."

6-49

Edmonton Journal, Dec. 9, 1978

Dr. Lloyd Grisdale, who was one of Dr. Mackenzie's Associate Deans and later President of the Canadian Medical Association and Chairman of the CMA Executive Committee,

The Department of Surgery
of the University of Alberta:
The First Half Century,
1922–1975

Robert A. Macbeth, B.A., M.D., M.Sc., D.Sc. (Hon.), FACS, FRCSC

6-48

Dr. Macbeth's note to the author, Sept 18, 2009

issue…honors one who by precept and example was recognized as one of that very distinguished company". Also see R.A. Macbeth's presentation on Walter C. Mackenzie at the May 21, 1983 W.C. Mackenzie Surgical Research Day, page 8. Copy received by the author from Dr. Macbeth.

101. Lampard, Robert — Handwritten letter from Dr. Mackenzie to Miss Isobel Murray, Red Deer, circa 1964. Shown to the author.

102. Lougheed, Peter — "Inspiration and a Source of Pride," page 988.

103. Macbeth, Robert A. — "Memorial to Walter C. MacKenzie Part 2," Canadian Journal of Surgery 22(4): 307, May 11, 1979.

wrote "he was a master - at cards, making friends and cooking. Shakespeare must have had someone like Walter in mind when he had Anthony say of Brutus, his life was gentle, and the elements so mixed in him that nature might stand up and say to all the world, 'This was a man!'"[105] Another colleague turned to Burns for his eulogy: "Few hearts like this, virtue warmed, few heads with knowledge so informed."[106] Dr. Mackenzie modestly referred to himself as just one of the (four) Deans in the photograph that adorned his office.[107]

Placing the glass top on the WCM HSC, circa 1980

Dr. H.G. Mackid predicted Alberta would attract leaders like Dr. Mackenzie, when he answered his own 1912 rhetorical question:

"What is the value of the West to medicine? Does not the answer lie in the words, energy and newness and opportunity. The West is young and lusty, and full of life. It has a love of action, and it has a love of newness. It is unhampered by tradition, whether of conduct or of science. I really do believe that, in medicine as in the rest of human endeavor, the West is going to supply that leaven of originality which, after all, is the one thing needful."[108]

Dr. Mackenzie provided some of that "leaven of originality", during his 1950-1974 years as Professor, Department Chair and Dean. He participated in every major Medical Faculty/UAH building and curriculum decision,[109] all the while maintaining a busy surgical practice.[110]

As the UAH Board Chairman Peter Owen reflected, "To say that Dr. Mackenzie was a truly gifted man is an understatement. Dr. Mackenzie's lifelong efforts contributed significantly to the stature of Edmonton as a leading medical center recognized around the globe."[111]

On the silver anniversary of Dr. Mackenzie's death, Dean Lorne Tyrrell remembered, "Walter Mackenzie was, most of all, a dedicated doctor who worked to integrate medical treatment, education and research into a synergistic whole…This legacy is symbolized in the world-class Walter C. Mackenzie Health Sciences Centre."[112]

Dr. S.M. Hamilton, Dr. Mackenzie's successor as Chairman of the Department of Surgery concurred. "Even though my term as Chair occurred 30 years after he served as Chair of the Department of Surgery, there were doors that were still open because of the tremendous respect with which Dr. Mackenzie's name is still associated with the city of Edmonton and with the University of Alberta. Dr. Mackenzie was truly respected as a clinician. He fostered relationships with clinicians in all of the city's hospitals. His legacy is a Department of Surgery

104. Macbeth, Robert A.	"Memorial to Walter C. MacKenzie, Introduction." The memorial included Tributes from the United States, A Tribute from Scotland, A Tribute from South Africa, A Tribute from Hong Kong, A Tribute from England, and A Tribute from Poland. Canadian Journal of Surgery 22(4): 303-316, July 1979.
105. Grisdale, Lloyd C.	"Walter Mackenzie: A Gift for Friendship", CMAJ 120:985-986, 21 April 1979.
106. Graham, James H.	"Walter Mackenzie: A Proud Scottish Canadian", CMAJ 120:986, 21 April 1979.
107. Corbet, Elise A.	*Frontiers of Medicine*, opposite page 76.
108. Mackid, H.G.	"The President's Address," page 810.
109. McPhedran, N. Tait	*Canadian Medical Schools – Two Centuries of History*, pages 158-160, Harvest House 1993.
110. Lampard, Robert	The author was assigned to Dr. Mackenzie's Surgery A service as an intern, the day Dr. Mackenzie had his first cancer operation in the spring of 1965. He left the service three months later, the day before Dr. Mackenzie returned to practice. For a nursing perspective on his surgical practice, see Amy Wilson's *To Teach this Art*, pages 171-173, AARN, 1975.
111. Owen, Peter	The University of Alberta Folio, 31 May 1979.
112. Tyrrell, D. Lorne	Nomination of Dr. Walter Mackenzie for the 100 Edmontonians of the Century Award, January 24, 2004. Edmonton physicians honored on the list of 100 were Drs. J.C. Callaghan, Helen Hays, Lionel Shapiro and J.B. Collip but surprisingly not Dr. Mackenzie. Copy deposited in the UofA Dean's office. Dr. Mackenzie was recognized as one of 75 Albertans of the first three-quarters of a Century in 1980 and one of the 100 Alberta Physicians of the Century in 2005.


6-52

Drs. H.T.G. Williams and W.C. Mackenzie, circa 1969

and a Faculty of Medicine that are truly in the top tier of such institutions within North America and world wide."[113] Dr. C.R. Hanlon concurred with his colleagues noting:

"Doctor Mackenzie's contributions to the American College of Surgeons and to surgery in the United States, Canada, and the world were immense. Let it be said that no one ever met a finer gentleman, scholar and surgical statesman."[114]


6-54

Dr. Mackenzie receiving the first membership in the Walter C. Mackenzie Surgical Club, from Dr. C.M. Couves, 1972

The naming of the Walter C. Mackenzie Health Sciences Centre in 1979 was but one memorial to a man, whose example, ideals, accomplishments, and personality ought not soon to be forgotten, for:

"[there is] hope a great man's memory may outlive his life half a year." (Hamlet)[115]

Key Words: Surgeon, Military medicine, McEachern Laboratory, Medical research, Walter C. Mackenzie HSC

The ability to reconcile disparate elements in a sensible solution is the hallmark of a skilled politician — to do so with grace and vision is the gift of a statesman.


6-53

Drs. Bryce Weir and W.C. Mackenzie, March 21, 1969

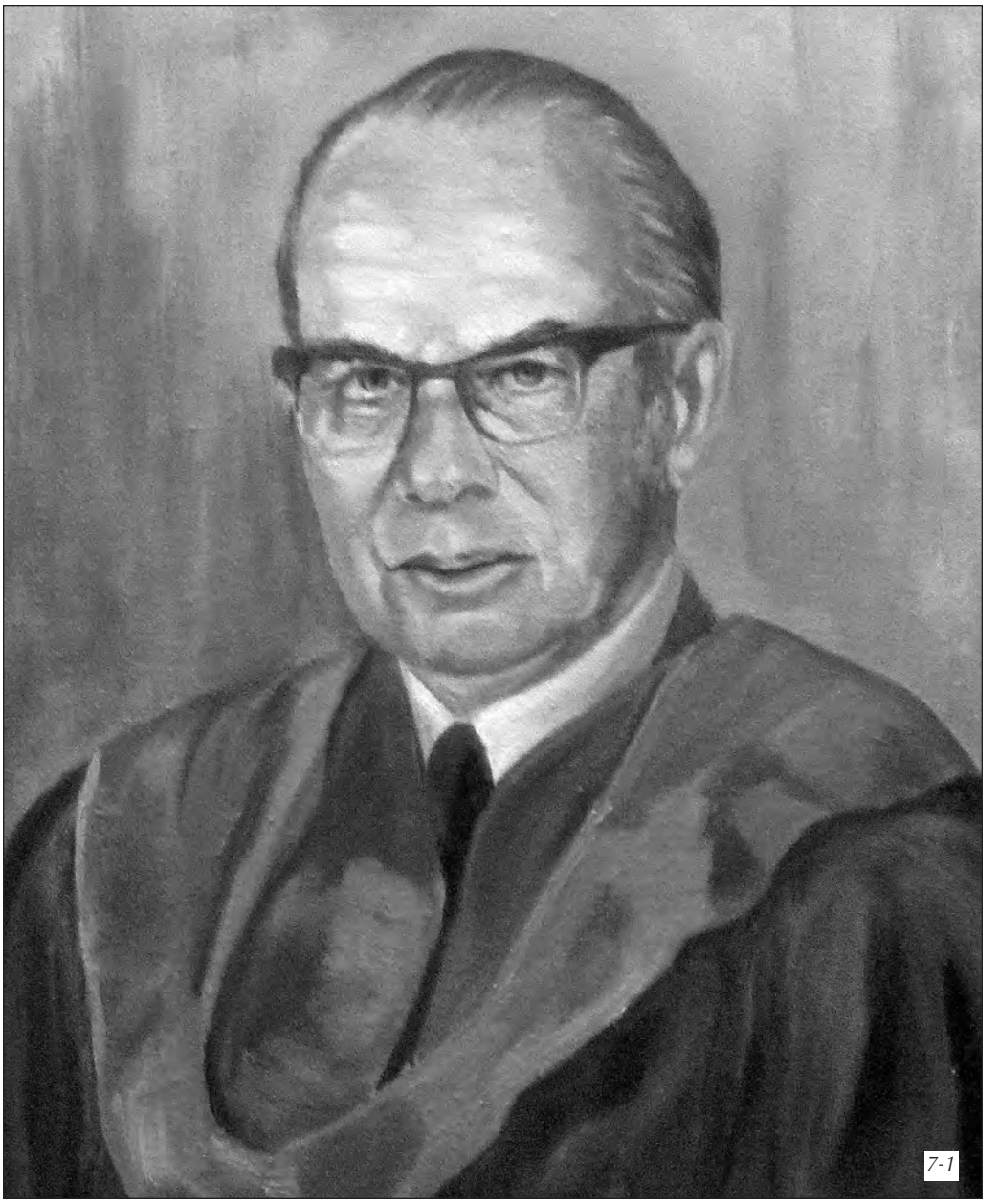

6-55

(L to R) Richard and Maureen, Walter and Dorothy (with Seanna), Sally, Linda and Kim Mackenzie, 1971

113. Hamilton, S.M. Tribute to Dr. W. Mackenzie, attached to his nomination for the 100 Edmontonians of the Century. Dr. Hamilton was the UofA Chairman of Surgery at the time. Hon. Marjorie Bowker wrote the third tribute.

114. Hanlon, C.R. As quoted by Dr. L. Tyrrell in his application for recognition of Dr. Mackenzie as one of the 100 Edmontonians of the Century, page 3.

115. Macbeth, Robert A. *From Shakespeare's Hamlet*, as quoted in Dr. Macbeth's presentation on Dr. Walter C. Mackenzie, at the W.C. Mackenzie Surgical Research Day, 21 May 1983.



Donald Forbes (Tim) Cameron, MBE, MD, FACA, FRCPC
1920-2002

Donald Forbes (Tim) Cameron, MBE, MD, FACA, FRCPC 1920-2002

"Each generation will have its own memories of the challenges and rewards, of the frustrations and success, and of the talents and idiosyncrasies of their colleagues in the development of this vast academic medical center enterprise."[(1)]

Introduction: D.F. (Tim) Cameron was born, raised, educated, and practiced medicine in Edmonton. He grew up in a studious environment. His father was the chief librarian at the UofA. After completing his schooling, Tim Cameron entered the UofA in the fall of 1938. Three years later with a B.Sc. in hand, he interrupted his premedical studies and joined the Canadian Army as 2nd Lieutenant Cameron. Like all the Deans and Dr. Tory before him, wars significantly affected their lives.[(2)]

Dr. D.F. (Tim) Cameron, Dean 1974-1983

Lt. Cameron joined the Calgary Tanks (#14 Canadian Armored Regiment or #14 CAR) in March 1941, and went overseas in July as the regimental Intelligence Officer. The Calgary Tanks were selected as the armored regiment to support the 2nd Canadian Division's assault-in-force on Dieppe on August 19, 1942 - Cameron's 22nd birthday. Captain Cameron befriended the regimental Medical Officer, Captain Laurence Alexander of Calgary, who permitted him to join his medical team on the Dieppe Raid. Their landing craft (LCT #8) suffered many casualties, fatalities and prisoners. Both men were fortunate to return alive and physically intact.

After being promoted to Acting Major in January 1943, Cameron re-embarked from Scotland with the Calgary Tanks, landing in Sicily on July 9, 1943. The Tanks remained on almost continuous duty until January 1945, an unmatched war record. Major Cameron was transferred back to England on January 27, 1944, to attend an officer's training course at the British Professional Staff College. After graduation he was assigned to the 2nd Canadian Armored Brigade from July-September, 1944, finishing the war at the Headquarters of the 1st Canadian Army in France.

Back in Edmonton by September 1945, Tim Cameron was accepted into first year medicine at the UofA. He graduated with an MD (1949), interned at the UAH (1950) and immediately entered the residency training program in Anesthesia under the faculty's Marshall Plan. That same year he began his teaching career as a part-time Instructor. After graduating in 1954 he was appointed to the Departments of Pharmacology and Anesthesia, becoming an Associate Professor in 1964.

Dr. Cameron began working in the Dean's office as early as 1960. He became the Assistant Dean in 1962 and Associate Dean in 1966. In 1971/72 he subtended for Dean W.C. Macken-

Donald Ewing Cameron, Chief Librarian UofA, 1921-1945

1. Cameron, Donald F. From the preface to E.A. Corbet's *Frontiers of Medicine*, page ix, 1990. Dr. Cameron was on the Faculty Committee that peer reviewed Ms. Corbet's 75th anniversary book.
2. Lampard, Robert Also see the profiles of Dr. A.C. Rankin and Dr. E.G. Mason in *Alberta's Medical History, Young and Lusty, and Full of Life*, pages 215-222, 243-255, 2008.

zie, during his sabbatical. Dr. Cameron was selected to succeed Dr. Mackenzie as Dean two years later (1974), continuing the path set by Dr. Mackenzie to plan, design, build and open the 1979 named Walter C. Mackenzie Health Sciences Center (1975-1983).[3]

Dr. Cameron served two terms as the Dean of Medicine, before retiring one year early in 1983 to begin his own sabbatical. His post medical career began as the Chairman of the Board of the Alberta Motor Association (1983/84), where he spent considerable time and effort supporting seat belt legislation.

Tim with Jane Cameron and Mr. and Mrs. D.E. Cameron, 1946

Youth to MD: Tim Cameron was born in Edmonton on August 19, 1920. He had two older sisters, Sheila (born 1912) and Norma (born 1916). His nickname Tim came from the character in a book his mother read to him as a youngster. In his youth he was surrounded by books whether it was in his home, books brought home by his father, or books he read in his father's library at the University.

Tim's father, Donald Ewing Cameron, M.A. (University of Edinburgh), came to Cardston as a Presbyterian minister in 1913, for health reasons.[4] He joined the Army as a chaplain. Later in the war Major Cameron was recruited by Lt. Col. Henry Marshall Tory to help manage the Khaki University in England (1917-1919). Dr. Tory brought him to the UofA after the war, where he joined the extension department in 1919. An opening arose and he was appointed the chief librarian (1921-1945).[5] In 1922 he supervised the move of the medical library to the Faculty's reading room in the new medical school.[6]

D.E. Cameron's standing in the University was such that he was asked to give the Convocation address in 1942, when President Kerr resigned over the Senate's refusal to give an honorary degree to Premier Aberhart.

When the Rutherford Library opened in 1951 the medical library was relocated to it. It was moved to the fifth floor of the new university library, which was named after D.E. Cameron. He had chosen the site for it in 1928.[7] When the library opened in 1964, Mrs. Cameron and her son Tim, cut the ribbon at the opening ceremony.[8] The medical library remained in the Cameron library until it was moved to the new Scott Library in the Walter C. Mackenzie Health Science Centre in 1984.

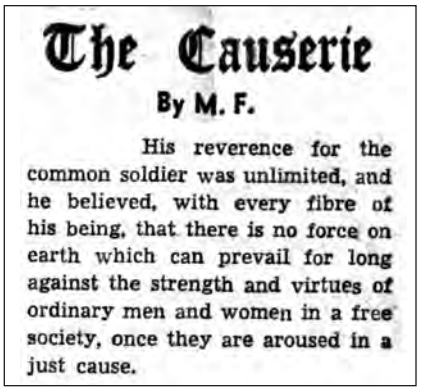
Mrs. D.E. Cameron cutting the ribbon, opening the Cameron Library, 1964

Calgary Tanks and the 1st Canadian Armored Brigade, 1941-1942:[9] While memories of WWI were still fresh and vivid, Tim's father in-

3. Allen, Peter B. Personal communication July 20, 2008.
4. Distad, Merrill *"The University of Alberta Library. The first hundred years, 1908-2008"*, pages 19-20, 2009.
5. Johns, Walter *A History of the University of Alberta 1908-1960*, pages 67, 87, 92, 105, 162-170. For more on D.E. Cameron see Merrill Distad's *The University of Alberta Library*, pages 23-52. D.E. Cameron died in 1946.
6. Cameron, Donald F. "The University of Alberta Medical Library" in the AMB 1(5): 16-17, April 1936.
7. Distad, Merrill *The University of Alberta Library*, pages 29-30.
8. Cameron, Donald F. Letter to UofA Chief Librarian Bruce Peel, June 3, 1964. Cameron fonds, UAA.
9. Maltby, R. (Dick) G. *Onward I*, 50/14 Veterans Association, about 300 pages, May 1989. *Onward II*, about 200 pages, 50/14 Veterans Association, June 1991. These are the two histories of the Calgary Tanks, written by veterans of the Brigade.

stilled in Tim "a reverence for right and wrong and a faith in the strength and virtue of ordinary men and women in a free society, aroused in a just cause."[10]

Tim Cameron's army career began while an undergraduate at the UofA. He joined the Canadian Officers Training Corps (COTC) and was promoted to a Lieutenant, shortly before graduating with his B.Sc.[11] On March 4, 1941 Cameron enlisted as a second Lieutenant with the Calgary Tanks #14 CAR. He joined officers Frank Swanson (the future editor of the Calgary Herald after WWII), Fred Jenner (the future Chairman of the UofA Board of Governors), Laurence Alexander, MD (a Calgarian General Practitioner and WWI veteran), John Cross (son of A.E. Cross, owner of the A-7 Ranch), and 745 others.



The Causerie

By M. F.

His reverence for the common soldier was unlimited, and he believed, with every fibre of his being, that there is no force on earth which can prevail for long against the strength and virtues of ordinary men and women in a free society, once they are aroused in a just cause.

7-6

from an anonymous student of D.E. Cameron's (n.d.)

The Calgary Tanks were the first Tank Regiment in Canada. They were formed as a reserve unit in 1936 from the WWI Calgary based 50th Battalion. Their training began with cardboard and later tin covered "tanks" mounted on a Ford or Chevy chassis. Many of the WWII Calgary Tank members were from Central Alberta, selected because they had experience with big farm machinery. To bring the Tanks up to their full establishment, transfers were accepted from the Seaforth Highlanders of Vancouver, the 40th Regiment of Edmonton, and the Light Horse Brigade of Calgary.

The unit was moved to Camp Borden on March 17, 1941 under the command of Brigadier F.F. Worthington. They were joined by two other armored (tank) regiments, the Trois Riviers (TRRs) and the Ontario Tank Regiment. The three regiments formed the independent 1st Canadian Armored Brigade. The Brigade was not permanently attached to any Allied or Canadian Division or Corps, until all Canadian units were united in Holland in early 1945.

In 1941, training time was short and tanks were in even shorter supply. The Brigade's first tanks were de-gunned WWI Renaults, purchased as scrap at the border from the US Army. The Brigade went overseas in July 1941 with less than four months training. They camped on the Salisbury Plain, where they practiced maneuvers, weaponry handling and target shooting. Initially assigned British Matilda tanks, they were outfitted with new 39 ton, heavily armored but under-gunned Churchill Tanks in early 1942.

7-7

Lt. Tim Cameron training on American decommissioned WWI Renault tank, at Camp Borden 1941

10. (Cameron, Donald F.) Edmonton Journal, n.d. One page article entitled "The Causerie", written by a student and admirer of D.E. Cameron, by M.F. Deposited in the Dr. D.F. Cameron Archives, UAA, Edmonton. D.E. Cameron was a contributor to the Oxford dictionary. He too shunned publicity and self-dramatization. His brother was the head of one of the Colleges at Cambridge, and vice-chancellor of Cambridge during WWII, who admitted the "really able" man of the family was D.E. Cameron.

11. Cameron, Donald F. Officers Declaration Paper dated 3 March 1941, Calgary. His COTC induction medical was completed by Dr. John W. Scott. Like all the Deans who came before him, except Dr. Walter Mackenzie, Cameron was short at 5'6". Although he had passed the two exams to become a COTC Lieutenant (1939, 1940) and the Calvary exams as a "private", he failed the practical exam in May 1940. In the form outlining his Occupational History dated March 31/41, Cameron noted he was competent to operate a mixed farm but didn't wish to return to farming after the war. This may reflect that most of the original Calgary Tank members were from central Alberta farms and could handle big machinery. Dr. Cameron rejoined the COTC (1945-1946) before switching to the Supplementary Reserve in 1952.

Insignia of the Calgary Tanks, 1st Can. Armoured Brigade, 1941

On March 8, Tim was promoted to captain and appointed the regiment's Intelligence Officer. As part of his new duties, he gave the Regiment a lecture on recognizing German uniforms in April 1942. It included dressing several soldiers up in them.[12]

The Dieppe Raid: In the spring of 1942, Britain was under considerable pressure from the United States and Russia to initiate a western front. The goal was to pull German divisions from the Russian sector. The 200,000 strong Canadian Army camped in Britain, was chomping for action. Prime Minister Churchill supported Admiral Lord Louis Mountbatten's request to conduct an enlarged commando raid, termed a reconnaissance-in-force, against one of the French ports across the English channel. It was to test the strength of Hitler's Atlantic wall.[13] Mountbatten had recently been appointed the Chief of Combined (Army, Navy, Air Force) Operations. It was a new post with a new role that depended on the other three services for troops and support.[14]

Dieppe was chosen for the frontal assault in June 1942 (Operation Rutter). It was cancelled at the last moment by General Montgomery because of bad weather. The British High Command resurrected the idea for August 19 (Operation Jubilee). The Calgary Tanks had already been chosen and trained as the only armored unit to support the 5,000, 2nd Canadian Division troops, 1,000 British troops and 50 American Rangers. The British Navy provided transportation, and off-shore camouflage by lobbing smoke bombs onto the beach. The last minute cancellation of any pre-landing naval bombardment, ostensibly to maintain an element of surprise, had serious consequences for the troops that landed. So did inadequate pre-raid intelligence, which underestimated the strength of the German guns and their in-the-cliff-fortifications. Meeting a small German convoy further removed the element of surprise.

Captain Cameron was scheduled for a seven-day leave during the week of August 19, however he asked the unit Medical Officer Captain L. Alexander if he could join his five man medical team. Accepted, Cameron was added as an observer. It was to be a unique celebration of his 22nd birthday. The team was assigned to the Calgary Tanks Headquarters landing craft transport (LCT) #8. On it were 130 soldiers, mostly Royal Canadian Engineers, three Churchill tanks, and Captain Alexander's modified jeep and attached blitz to carry stretcher cases. It was to be part of a first aid station to be established on the beach.

Leaving the Newhaven harbor at 1:00 am on August 19, the Headquarters LCT came under heavy shore shelling, after it penetrated the smokescreen and reached the landing site or

1st Canadian Armoured Division, in the new Churchill Tanks, awaiting inspection by King George VI, Salisbury Plain, England 1942

12. Cameron, Donald F. "War Diary of the Calgary Tanks (#14 CAR)" for April 9, 1942. Copy deposited in the Military Museum, Currie Barracks, Calgary.

13. Whitaker, Denis, Whitaker, Shelagh *Dieppe, Tragedy to Triumph*, McGraw-Hill, 1992. For a more analytical study of the "decision" to undertake the Dieppe raid see Brian Villa's *Unauthorized Action*. For earlier and more pictorial studies and additional references see 1) *The Shame and the Glory – Dieppe by Terence Robertson*, 432 pages, McCelland and Stewart, 1962; 2) *Dieppe – the Dawn of Decision* by Jacques Mordal, 285 pages, Ryerson Press, 1962; 3) *Forgotten Heroes – the Canadians at Dieppe*, by John Mellor, 163 pages, Methuen, 1975; 4) *Storm from the Sea* by Peter Young, 224 pages, Greenhill Books, 2002, and 5) *Dieppe 1942 – Prelude to D-Day by Ken Ford*, 96 pages, Osprey, 2003.

14. Villa, Brian L. *Unauthorized Action. Mountbatten and the Dieppe Raid*, 314 pages, OUP, 1994.

Red Beach in the Dieppe harbor at 6:00 AM. The first tank drove off the LCT's landing ramp, but travelled only 20 yards beyond the shoreline because it couldn't get traction on the baseball-sized pebbles. The engineers tried to lay a carpet for the tank tracks but took several casualties and were forced to return.[15] Blocked from landing more tanks, the LCT raised its front gate to prevent more machine gun casualties and backed out to sea.

On a second attempt to land on the strongly fortified White Beach at 8:35 am, a German shell hit and broke one of the landing ramp chains, dropping the gate into the water. [16] The gate sank into the sand, bringing the LCT to a halt. That was the signal for the second tank belonging to Tank Commanding Officer Lieutenant Colonel J.G. Andrews to exit. As it exited the waterproof tarpaulin covering the tank ripped on the damaged side-gate. The tank dropped into six feet of water and stalled. Lt. Col. Andrews radioed his tank commanders and decided to go ashore with his crew. The craft he transferred to received a direct hit on the way. The occupants were never found.[17]

LCT #8 began pivoting on its wide-open gate.

Upper deck and control tower, LCT #8, early a.m. August 19, 1942

Transferring wounded soldiers to the HMS Arelsford, August 19, 1942

At almost the same time a direct hit destroyed the bridge and control tower, killing the motor. Dr. Alexander went to investigate the damage and found eight of the ten men on the bridge, dead. In the process Alexander was blown off the upper deck - twice. With the bridge control tower out of action the injured Senior Naval Officer ordered the ship to be abandoned. Fortunately one of the two naval officers who followed the order, returned to the craft. With the help of the Royal Canadian Engineers on board, the LCT's motor was restarted. With no rudder control, the craft drifted sideways in between the Andrew's tank and the beach.

Existence on LCT #8 was becoming desperate. Thirty-three shells penetrated the LCT's thick sidewall. The shelling was so intense that Capt. Alexander recorded in his diary, he could bandage one soldier, turn around to help the next one and turn back to the first soldier only to find him dead. Then a hydrogen tank for filling barrage balloons was hit causing many more casualties. Fortunately there was additional medical help on board in the presence of Lt. Col. (Dr.) K.A. Hunter the senior M.O. of the 1st Armored tank brigade and Lt. Col. (Dr.) Morgan Smith the CO of the No. 2 Canadian Light Field Ambulance.[18] They survived but

15. Hunter, K.A. Dr. Hunter said there were 3 Royal Canadian Engineers killed. The Dieppe Diary of Dr. Alexander records that likely 12 died on LTC #8. A total of twenty-seven RCEs died during the raid including their commander Lt. Col. McTavish. Many more became prisoners of war after the raid.

16. Alexander, Laurence Hunter, K.A. Dieppe: Canada's Sacrifice. Timeline of Events August 19, 1942. It gives the second , landing time as 8:35 AM and the first at 7:00 AM. Museum of the Regiments, Calgary. Copy contained in the Dieppe Diary of Dr. Alexander. Lt. Col. K.A. Hunter wrote his 3 page report to the DDMS on August 21, 1942, stating - more likely - the second landing was attempted at 7:00 AM. (ref. RG 24, vol. 10831, File 229C1.7(04) Ex "Jubilee", Library and Archives Canada). Dr. Alexander wrote 6 diaries numbered as #1, Dieppe, no #, #2, #3 and #4, from March 1, 1941 to September 13, 1945. The original and transcribed copies are in the Robert Alexander family archives in Canmore, Alberta and are being considered for donation to the Military Museum in Calgary.

17. Alexander, Laurence G. Dr. Alexander's Dieppe Diary (March 1/1941 – February 5/1943) for August 19, 1942.

18. Hunter, K.A. Medical Observations During Combined Operations in the Attack on Dieppe – 19 August 1942, ref. RG 24, vol. 10831, File 229c1.7 (D4).

The Dieppe Beach, circa August 20, 1942

three of the six Lt. Col.'s on LCT #8 were killed, and Brigadier Lett was injured.

Rudderless, an appeal went out for help as the LCT drifted 50 yards off shore under continuous shelling. A Fighting French torpedo boat came alongside and took off some of the wounded. By then German Stuka dive-bombers were starting to strafe the craft. A short time later a Royal Navy sloop, the HMS Arelsford, arrived in the vicinity to evacuate more injured troops. Drs. Hunter and Smith transferred to it to assist with the treatment of the estimated 100 wounded soldiers transferred from other boats that didn't have M.O.s.[19] When the call came to evacuate the Dieppe beach at 11:00 am, the German Luftwaffe had gained air superiority over the beaches. Dr. Alexander and Capt. Cameron watched as at least five torpedoes passed fore and aft of the LCT, miraculously missing it.

To return to England, the LCT was lashed to a Sloop. Using the motor power of both boats they headed out to sea in the early afternoon. LCT #8 arrived back in Newhaven at 9:30 pm, after stopping 10 miles off the coast for a committal service at sea to bury those who had died. The LCT head count revealed that only 40 of the original 130 soldiers, engineers, sailors and officers on board survived and returned. Eight of the 40 were wounded. One was Dr. Alexander who suffered a shrapnel injury to his leg, which he dug out.[20] Fortunately the injury to his jaw when he was blown off the upper deck walkway did not cause a fracture.[21] There was no record of Captain Cameron being injured, nor did he ever talk about his Dieppe experiences with friends or colleagues after the war.

One in seven Dieppe raiders who landed, returned unscathed. A captured set of British order papers outlined how German prisoners were to be handled – by handcuffing them. It fell into German hands. In retribution the captured Canadian officers were chained for over a year, on orders from Hitler. That would have been the fate of Captains Alexander and Cameron, had they landed their mobile first aid station and been captured.

Back in England the Newhaven hospitals were unprepared and overwhelmed by the Canadian casualties. Approximately 300 of the estimated 600 Dieppe casualties landed there. Ninety-five operations were performed in the next 19.5 hours.[22] The mortality rate was 2.5%.[23]

Capts. Fred Jenner, Laurie Alexander, John Begg, Tim Cameron, 1942

19. Nicholson, G.W.L. *Seventy Years of Service*, pages 153-155, Borealis Press, Ottawa, 1977. The main forms of medical care were dried serum reconstituted with saline for soldiers in shock, sulfanilamide powder for wound irrigations and morphine injections for pain. Cut downs were usually necessary. For more information on the medical plan for Dieppe and the reception of casualties in Newhaven, Portsmouth and Marston Green, see W.R. Feasby's *The Official History of the Medical Service 1933-1945*, Volume 1, pages 108-122, Queens Printer, 1956.

20. Alexander, Laurence G. Dieppe Diary for August 19, 1942. Dr. Alexander was a WWI veteran and the M.O. for the Calgary Tanks from its mobilization in Calgary until March 1, 1944. He was promoted to Major and transferred back to England as the Commanding Officer of the Sixth Field Dressing Station of Montreal. Alexander was 44 during the Dieppe raid. Obituary, Calgary Herald, April 28, 1969.

21. Alexander, Laurence G. Calgary Albertan, September 12, 1942.

22. Nicholson, G.W.L. *Seventy Years of Service*, pages 154-155.

23. Ford, Ken *Dieppe 1942. Prelude to D-Day*, page 91, Ospray Publishing 2003. 6,000 troops participating in the raid. 5,000 were Canadians. 907 Canadians were killed, 1,847 were captured or wounded and taken prisoner, and 586 were wounded and evacuated to England for a total of 3,367. 850 never landed. The British Navy suffered 550 additional casualties and the Royal Air Force lost 120 aircraft and 67 pilots.

Patricia Harrison, 1942

Dr. Cameron's only surviving story about the ordeal was about the bus driver who drove him back to the Seaford base. The driver tried to charge him for the fare. The request was declined.

The Dieppe raid survivors returned to their base to regroup and replace the lost men and officers. Captain Cameron was appointed the #1 Armored Brigade Adjutant. The Brigade's Churchill tanks were replaced with lighter Canadian made Ram tanks.

During one pre-Christmas exercise, a car with Tim and Fred Jenner in it injured a dog that in turn bit its mistress. Tim, "a budding medico", bound the owner's leg up until it looked like a Christmas parcel. That's how Tim Cameron met his future wife, Patricia Harrison. The next Christmas (1942) Tim, with Dr. Alexander and several friends were invited to a second Christmas dinner with the Harrisons.[24]

The Brigade remained at Seaford until the spring of 1943, when they were moved to Scotland. Captain Cameron was appointed the Brigade Intelligence Officer. He was promoted to Acting Major, January 12, 1943 an appointment confirmed on March 23, 1943. At age 22 he was the youngest Brigade Major in the Canadian Army.[25]

The Tanks in Sicily and Italy (1943-1944): Shortly before leaving Scotland the Brigade tanks were upgraded with newer, lighter, and more reliable 30 ton American Sherman Mark IVs. In June the Brigade and its tanks were put afloat, heading for an unknown destination. The Tankers thought it was Burma. After the flotilla passed Gibraltar, there was a brief landing at Malta, where they received orders to land on Sicily July 9, 1943.

After landing the Calgary Tanks were sent to the only flat area in Sicily, the Catania plains. They encountered no enemy action. On August 18, the first anniversary of the Dieppe Raid, Major Cameron attended a church parade to honor comrades who had fallen or were taken as POWs. Shortly afterwards the Tanks were visited by their original pre-Dieppe commander, the now famous African 8th Army General Bernard Montgomery.

The Calgary Tanks transferred to sea again on September 3, and crossed the seven kilometer wide Straights of Messina, landing on the Italian mainland on Day-2 at Reggio. It was the first Allied landing in Europe since Dieppe. The Calgary Tanks participated in both. The southern Italian coast was flat and hard to defend, so the German troops and their remaining Ital-

Advance routes of the Calgary Tanks (white) German defense lines in Italy, (black) 1943-1945

24. Alexander, Laurence G. Diary #1 for December 25, 1941 and Diary #2 for December 29, 1942.

25. Cameron, Donald F. "Cameron Writes from Overseas", Edmonton Journal, March 29, 1943. According to Dr. Vant/Tony Cashman in *More Than a Hospital*, page 118, Dr. Mark (Levey) Marshall also rose from a private to become the youngest Brigade Major, while in the Machine Gun Corps in the Canadian Army in WWI.

ian allies withdrew back up the Italian peninsula to more defensible mountainous positions.

The 1st Canadian Armored Brigade was divided into separate regiments before the Italian mainland landing. The new Calgary Tank commander Lieutenant Colonel Neurotsos, attached the Regiment to the Canadian infantry troops that landed at Reggio. Finding no resistance, the "X" group as they became known, headed towards Taranto on the heel of the Italian peninsula. They quickly covered and captured 150 miles of southern Italian coastline.


7-16

Calgary Tanks capture Potenza, Sept. 20, 1943

On their own initiative, the Tanks ferried across the Straits of Taranto to help the British. Finding the British in control of the town, they reembarked and were ferried 100 miles northward up the eastern coast. They were to land and head inland to relieve the stalled Allied beachhead at Salerno on the western coast, south of Naples. The regiment was successful in reaching the southern Italian railway divisional center of Potenza. Capturing it was crucial.

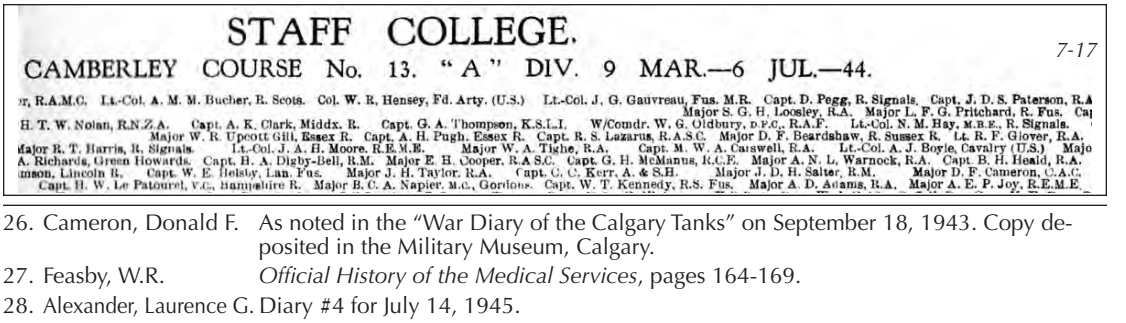
On September 18, Brigadier Wyman and Major Cameron went to the front to take personal command of the offensive.[26] Despite the redeployment of German troops from the Salerno beachhead 40-50 miles away, the Tanks successfully secured the town by September 20, relieving the besieged on-the-beach Allied troops under General Alexander, who acknowledged their accomplishment.

Fighting was becoming more ferocious in the inland mountainous Italian terrain. In preparation the three 1st Canadian Armored Brigade Tank units were reunited within Montgomery's Eighth Army. By then the Germans had extended their Gustav and Hitler defense lines right across Italy, south of Naples and Rome. They would not be broken until May 1944.

In December 1943 the 1st Armored Brigade was assigned to the 1st Canadian Division to assist with the capture the large Foggio airfield on the eastern side of Italy. Once captured the base was used by American airplanes to bomb Germany.

Before Christmas the Tanks headed north to the Sangro River. The Brigade faced formidable, entrenched German troops. In one battle the Calgary Regiment's 50-60 tanks were reduced to 24. By then the unit had lost, repaired or reconditioned 60 tanks, but had knocked out 16 German ones, plus a considerable number of 88 mm self-propelled guns.

The Christmas 1943 Battle of Moro River was designed to relieve the Canadians besieged on the Ortona beach on the eastern side of Italy.[27] During the battle Dr. Alexander's leg was fractured, but it did not stop him from providing care and treatment at the battle front under the most threatening circumstances. Captain Alexander had already earned a Military Cross at Dieppe and was awarded an OBE for his courage and medical care during the Battle. He was later presented his second medal by King George V at Buckingham palace, with Lord Mountbatten, Major Cameron and senior members of the Tanks in attendance.[28] With the arrival of the wet and mud of winter it was almost impossible for the tanks to operate in the mountains, so they were pulled for soldier leaves and tank repairs. Both Captain (now Major) Alexander and Major Cameron were transferred out of the 1st


STAFF COLLEGE.

CAMBERLEY COURSE No. 13. "A" DIV. 9 MAR.—6 JUL.—44.

7-17

r, R.A.M.C. Lt.-Col. A. M. M. Bucher, R. Scots. Col. W. R. Hensey, Fd. Arty. (U.S.) Lt.-Col. J. G. Gauvreau, Fus. M.R. Capt. D. Pegg, R. Signals. Capt. J. D. S. Paterson, R.A
Major S. G. H. Loosley, R.A. Major L. F. G. Pritchard, R. Fus. Ca
H. T. W. Nolan, R.N.Z.A. Capt. A. K. Clark, Middx. R. Capt. G. A. Thompson, K.S.L.I. W/Comdr. W. G. Oldbury, D.F.C., R.A.F. Lt.-Col. N. M. Hay, M.B.E., R. Signals.
Major W. R. Upcott Gill, Essex R. Capt. A. H. Pugh, Essex R. Capt. R. S. Lazarus, R.A.S.C. Major D. F. Beardshaw, R. Sussex R. Lt. R. F. Glover, R.A.
Major R. T. Harris, R. Signals. Lt.-Col. J. A. H. Moore, R.E.M.E. Major W. A. Tighe, R.A. Capt. M. W. A. Carswell, R.A. Lt.-Col. A. J. Boyle, Cavalry (U.S.) Majo
A. Richards, Green Howards. Capt. H. A. Digby-Bell, R.M. Major E. H. Cooper, R.A.S.C. Capt. G. H. McManus, R.C.E. Major A. N. L. Warnock, R.A. Capt. B. H. Heald, R.A.
mson, Lincoln R. Capt. W. E. Heisby, Lan. Fus. Major J. H. Taylor, R.A. Capt. C. C. Kerr, A. & S.H. Major J. D. H. Salter, R.M. Major D. F. Cameron, C.A.C.
Capt. H. W. Le Patourel, V.C., Hampshire R. Major B. C. A. Napier, M.C., Gordons. Capt. W. T. Kennedy, R.S. Fus. Major A. D. Adams, R.A. Major A. E. P. Joy, R.E.M.E.

26. Cameron, Donald F. As noted in the "War Diary of the Calgary Tanks" on September 18, 1943. Copy deposited in the Military Museum, Calgary.
27. Feasby, W.R. *Official History of the Medical Services*, pages 164-169.
28. Alexander, Laurence G. Diary #4 for July 14, 1945.

Major and Mrs. D.F. (Tim) Cameron, May 20, 1944

Canadian Armored Brigade, and sent back to England in January 1944.

The Calgary Tanks remained in Italy for another year. During the Italian campaign the number of Calgary Tanks destroyed or disabled exceeded 2,000, as they faced mines, strategically hidden anti-tank guns and the almost invincible German Tiger tanks.[29]

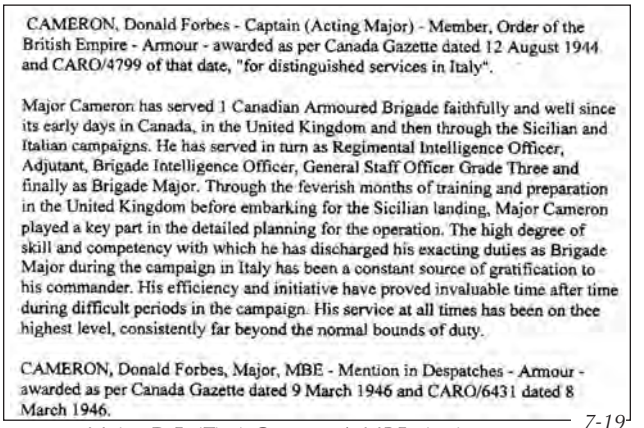
Back in England and France (1944-1945): Major Cameron, along with 90 other officers, enrolled on March 9, 1944 in the British Professional Staff Colleges' thirteenth course in Camberly, England. Cameron took advantage of his new posting to renew his friendship with nurse Patricia Harrison, whom he had met in 1941 at Seaford. The relationship blossomed and the Camerons were married on May 20, 1944 in London, shortly before D-Day on June 6. Major Alexander took leave from his new command of the 6th Field Dressing Unit, to attend the wedding along with several Calgary tankers.[30]

For their honeymoon the Camerons travelled to Oxford where Tim's uncle was the associate Chancellor. After completing his officer's course in July 1944, Major Cameron was assigned to the 2nd Canadian Armored Brigade in France as the Brigade Major. In September 1944 he was transferred to the #1 Canadian Army Headquarters, where he remained until returning to Canada on September 9, 1945 to enter the first year of the medical program at the UofA. He had spent 51 of the last 55 months, in the Army overseas.

On August 12, 1944 Major Cameron was awarded an MBE (Member, Order of the British Empire) "for distinguished services in Italy." The award acknowledged the high degree of skill and competency he demonstrated in planning for the Sicilian and Italian landings and in planning movements and battle plans during his nine months with the Tanks in Italy.[31]

In addition to his MBE, Major Cameron was awarded the 1939-45 Star, the Italy, France-Germany Star, the War Medal, the Canadian Volunteer Service Medal with Clasp for overseas service and the Dieppe Bar, and the Defense Medal with mention in dispatches leaf. In 1959 he received the Canadian Forces Decoration for more than 12 years of service.

Although proud of his wartime service, he called the experience "a bloody mess – a balls up." Cameron limited his postwar references in his 1974 curriculum vitae to his MBE, m.i.d. (mentioned in dispatches) and p.s.c. (professional staff college) designations. He gave no interviews nor recorded any memories for the history of the Medical Officers of the Army, Navy and Air Force (MOANA) written in 1986.[32] He almost felt guilty about the war,



CAMERON, Donald Forbes - Captain (Acting Major) - Member, Order of the British Empire - Armour - awarded as per Canada Gazette dated 12 August 1944 and CARO/4799 of that date, "for distinguished services in Italy".

Major Cameron has served 1 Canadian Armoured Brigade faithfully and well since its early days in Canada, in the United Kingdom and then through the Sicilian and Italian campaigns. He has served in turn as Regimental Intelligence Officer, Adjutant, Brigade Intelligence Officer, General Staff Officer Grade Three and finally as Brigade Major. Through the feverish months of training and preparation in the United Kingdom before embarking for the Sicilian landing, Major Cameron played a key part in the detailed planning for the operation. The high degree of skill and competency with which he has discharged his exacting duties as Brigade Major during the campaign in Italy has been a constant source of gratification to his commander. His efficiency and initiative have proved invaluable time after time during difficult periods in the campaign. His service at all times has been on thee highest level, consistently far beyond the normal bounds of duty.

CAMERON, Donald Forbes, Major, MBE - Mention in Despatches - Armour - awarded as per Canada Gazette dated 9 March 1946 and CARO/6431 dated 8 March 1946.

Major D.F. (Tim) Cameron's MBE citation.

29. Zuehlke, Mark *The Liri Valley, Canada's World War II Breakthrough to Rome*, pages 147-149, Douglas and McIntyre, 2001.
30. Alexander, Laurence G. Diary #2 for May 20, 1944 and Diary #3 for May 21, 1944.
31. Cameron Donald F. Citation for Major Cameron's MBE. Canadian Army War Records. Canadian Gazette for 12 August 1944. As the Regimental and Brigade Intelligence Officer he would have been responsible for interviewing captured prisoners, getting feedback from tankers in the field, integrating orders and directives with enemy and allied troop movements, submitting reports on the results of sorties and combat operations, etc.
32. Swindlehurst, Catherine MOANA. Medical Officers of the Army, Navy and Air Force, 114 pages, 1995. Dr. Cameron's Canadian Army Regimental Number was 14-CAR-028.


7-20

Major D.F. (Tim) Cameron's medals: 1939-45 Star, Italy, France, Germany Stars, the War medal, CVSM with Clasp and Dieppe Bar, Defense Medal, Canadian Forces Decoration

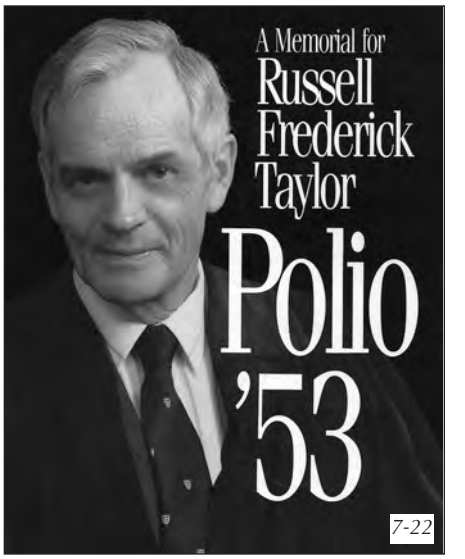
and did not view it with joy or pleasure. In talking about the Dieppe raid, he would switch the conversation to talking about the weather that day.

After the war Major Cameron transferred to the Supplementary Reserve (1952). In 1954 he was promoted to a Lt. Col. and from 1956-1959 was the Commanding officer of the Edmonton based 19th Alberta Dragoons. He was also appointed the Director of Civil Defense for Edmonton.

Cameron's Student and Resident Years: On his return to the UofA in September 1945, Tim Cameron applied to Dean Ower for a discharge letter, so he could join five other veterans and enter the first year of the medical program.[33] He also joined the Zeta Phi Fraternity. Four years later Dr. Cameron graduated with his MD (1949), interned at the UAH (1949/50), and earned his LMCC (1950). On graduation he received the Harrison (no relation) prize in Surgery, the Conn medal in O&G, the Taylor prize in Medicine and was President of his graduating class.[34]


7-21

General C. Vokes and Lt. Col. Cameron, Officers Dinner circa 1958



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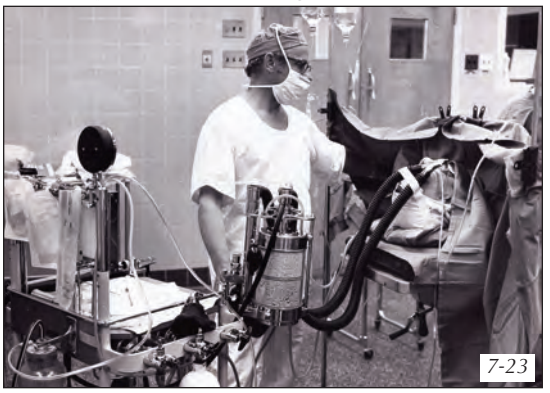
Dr. Cameron continued his postgraduate training at the UofA. In 1954 he was awarded his specialist certificate in Anesthesia, and in 1955 received an American Fellowship in Anesthesia. Dr. Cameron was the second graduate in Anesthesia under the Faculty's Marshall Plan, following Dr. Ted Gain who became the UofA's Professor and Head of Anesthesia from 1952-1975.[35] In 1972 Dr. Cameron's Canadian Certification was elevated to a Fellowship or a FRCPC, as it was for all Canadian specialists.[36]

Life as a Professor of Anesthesia: Besides giving all the anesthetics at the UAH, the Anesthetia Department provided ventilatory assistance for the respiratory failures amongst the 1,458 cases diagnosed during the 1953/54 polio epidemic and transferred to the UAH. In March 1953, 19 iron lung/respirator cases were transferred from the RAH. A canvass of western Canada increased the iron lungs at the UAH to 33. That move anticipated the building of the 260 bed UAH polio/pediatric rehabilitation wing, which opened in 1956.[37] That year the respiratory world took a major step forward with the introduction of the new patient acti-

33. Ower, John J. Ower Diary entry for September 14, 1945. UAA 72-73.
34. Cameron, Donald F. Curriculum Vitae of Donald Forbes Cameron, page 1, c1973, UAA.
35. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, pages 156-157, UAH, 1986.
36. Cameron, Donald F. Curriculum vitae, page 1.

vated intermittent positive pressure breathing (IPPB) machines. They were accompanied by the widespread use of muscle relaxants (1950s), non-explosive gases (1960s) and continuous patient monitoring (1970s).



Cardiopulmonary bypass Anesthetist, Dr. Tim Cameron, circa 1960

In 1956, the Anesthetia department began providing anesthetics for the extracorporeal or open-heart surgical bypass operations performed by Dr. John Callaghan. Dr. Callaghan referred to Dr. Cameron as "one of the UAH's most competent anesthetists venturing into the unknown, with brave and courageous patients with him."[38] Dr. Cameron later spoke of his experience to the Western Division of the Canadian Anesthetia Society, on the Pulmonary Aspects of Extracorporeal Circulation in 1961.

The Division of Anesthesia became an independent one in 1960, spun off from the Department of Medicine. Operations were becoming longer and more complicated. The average operating time increased from 60 to 80 minutes in 1961 alone. More anesthetists were required, but Dr. Cameron's interests were beginning to extend beyond anesthesia.

Academically Dr. Cameron rose from being a part-time instructor and lecturer in 1951 to an Assistant Professor and Associate Professor by 1964. He became chairman of the Alberta Section of the Canadian Anesthetists Society from 1957-59 and gave courses on general anesthesia. Dr. Cameron also began to research electrical anesthesia (1962) and the pharmacological effects of anesthetic drugs during electrical anesthesia (1963). His research with Dr. J.W.R. McIntyre involved applying an electrical current as the anesthetic in animals. Immediate recovery followed when the electrical anesthetic was discontinued. The practice had already been tried on a dozen patients in the USA.[39]

Dr. Cameron's sense of humor was never far away, even when he was lecturing students. Presenting the stages of ether anesthesia to the class of 1964, he talked while dripping (pouring) ether on a mask covering a colleague. The patient slowly stopped breathing - to the concern of the more perceptive class members. Finally one blurted out he's not breathing – he's dead! That was the cue for the "patient" to sit up.

In the OR Dr. Cameron could multitask - teach, sketch floor plans for faculty renovations, monitor the anesthetized patient and respond to the surgeon's need for more succinylcholine relaxant, simultaneously.[40] He continued as an Anesthetist and member of the UAH Anesthetic group on a full-time basis. In 1967 he was elected head of the Anesthetic Department's private group anesthetic services, and was President of the UAH Medical Staff. He was also asked to be a candidate for the Dean of Medicine's position at the UofS, but declined.[41] By 1971 he had retired from Anesthesia to work full-time in the Dean's office.

Assistant and Associate Dean (1962-1974): Dr. Mackenzie appointed Dr. Cameron as his part-time Assistant Dean in 1962. The appointment marked a fundamental change in the ori-

37. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, pages 169-175. For more on the care and treatment of the bulbar or respiratory polio victims see Russ Taylor's *Polio*, 1953, UAP, 1990. Future Health Minister J. Donovon Ross participated in the voluntary physician roster for the RAH Isolation Ward, organized by the Edmonton Academy of Medicine. Dr. Scott toured Premier Manning threw the isolation unit. The Premier did what he could to help, and eventually approved the building of the UAH polio wing.
38. Callaghan, John C. — *30 Years of Open Heart Surgery at the University of Alberta Hospitals*, pages 18, 62. Privately published, 1986.
39. Cameron, Donald F. — Winnipeg Free Press, April 12, 1962. His research was also referenced in his 1974 CV, pages 4, 5, UAA. He gave several presentations on it. The research was published in the Canadian Anesthetic Society Journal 10(5): 516-518, September 1963. For Dr. Cameron's presentations and publications see pages 208-209.
40. Lampard, Robert — Personal recollections of Dr. Cameron as a teacher, 1961-64.
41. Begg, Robert W. — Letter to Dr. D.F. Cameron, Associate Dean of Medicine, dated February 22, 1967. U of S Dean Begg thought Dr. Cameron had done a good job at the UofA and "had the potential to be a good Dean". Letter in the Cameron fonds, UAA.

entation of the Dean's office. Dr. Cameron was a clinician and succeeded Dr. J.S. Thompson who was an anatomist. The change gave greater emphasis to the clinical criteria for selecting medical students. In 1966 Dr. Cameron became the Associate Dean and Dr. Lloyd Grisdale the Assistant Dean and Director of Ambulatory and Emergency Services.

Dr. Cameron's focus in the Dean's office quickly shifted to the medical school's undergraduate program. He was appointed to the CMA's Committee on Approval of the Training of Junior Interns (1962). He presented papers on Doctors of Tomorrow, the Hall Report and its implications on medical school teaching (1964), predicting physician success (1964), medical education in the USSR (1964), selecting physicians (1966), medical education today (1966), health services and the future of medical education, evaluation in medical colleges and problem solving theory (1966).[42] At the same time Dr. Cameron and several colleagues published an article on Ethanol and Amphetamines in human experiments (1966).

7-25

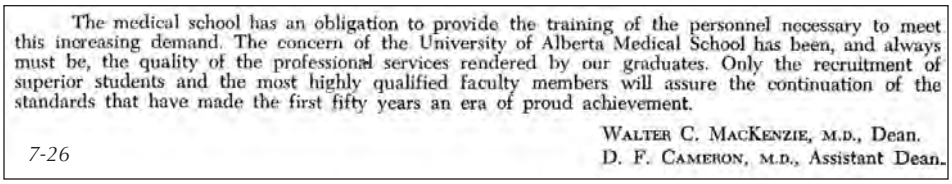
UofA's Cameron Library, opened 1964

7-24

Dr. Tim Cameron, Hon. President, Class of 1965

In the late 1960s Dr. Cameron gave presentations on the UofA Family Clinic, the evaluation of medical education (circa 1968), the UofA Health Sciences Center (1968), the crisis in medical education and manpower, and the role of electives in the undergraduate curriculum (1970).[43]

From 1965-1968 the UofA medical curriculum committee (Cameron, Gilbert, Mackenzie) worked diligently to design and introduce a new three-phase undergraduate program.[44] The proposed changes addressed the criticism from the students that the teaching program had become too repetitive in the second, third and fourth years. Students were becoming bored and the quality of the teaching was variable. Although the new three phase medical undergraduate curriculum was to be implemented in 1968, there was a delay because of the time demands on the staff of the Department of Medicine for repetitive small group teaching. The number of teaching hours by the department increased from 72 to over 700 in the



The medical school has an obligation to provide the training of the personnel necessary to meet this increasing demand. The concern of the University of Alberta Medical School has been, and always must be, the quality of the professional services rendered by our graduates. Only the recruitment of superior students and the most highly qualified faculty members will assure the continuation of the standards that have made the first fifty years an era of proud achievement.

WALTER C. MACKENZIE, M.D., Dean.
D. F. CAMERON, M.D., Assistant Dean.

7-26

Faculty of Medicine 50th Anniversary celebrations, September 1963

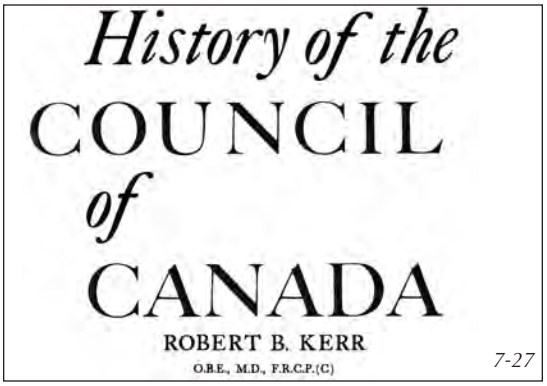
42. Cameron, Donald F. See Dr. Cameron's 1973 CV. Deposited at UAA. No copies of his speeches except the HSC and Alberta Medical History ones have survived.
43. Cameron, Donald F. Dr. D.F. Cameron's 1973 CV.
44. Corbet, Elise A. *Frontiers of Medicine*, pages 158-160, UAP, 1990. A surgical view on the curriculum changes is provided by Dr. R.A. Macbeth in *The Department of Surgery of the University Hospital, The First Half Century 1922-1975*, pages 272-278, Department of Surgery, 2009.

Phase II (Mechanism of Disease) course.

When it wasn't started, the students became upset and demanded that it be introduced. So it was in September 1969, after the minimum group size was doubled from 14 to 28 and 75% of the cardiology teaching, including heart sounds, was computerized. No other program in Internal Medicine took the same approach.[45]

The three phases in the new curriculum were: I) an introduction to medicine and community medicine; II) the mechanism of disease, integrated neurosciences, and a new behavioral science social medicine program; and III) a clinical program of 86 continuous weeks.

More student criticism surfaced after the introduction. There were no electives in Phase 2 and Phases 1 and 2 were rigid. The weakest skill set in the 1969 curriculum was found to be taking histories and performing physicals, which became fragmented. The criticism led to more integrated blocks of teaching within medicine, particularly in neurology and neuroanatomy. Additional courses were introduced covering geriatrics, allergies, nutrition and immunology.



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Although the LMCC marks did go up after the new program was introduced, there would not be another major curriculum review until 1984/85.

The UofA Medical Student Class Sizes: Since 1936 the benchmark criteria for being accepted into medicine had been a premedical average of 65%. To fill classes in the 1950s, applicants with averages under 65% had been accepted, but the failure rate in this group increased to 18%.

In 1960 medical school applicants with averages over 65% exceeded the first year class size of 60 for the first time, allowing the class size to increase. It continued to increase to 94 by 1963. In 1968, 49 acceptable Alberta applicants were rejected. Dr. Cameron supported the position that Alberta students should have priority, although that stance was at odds with university officials. UofA class sizes were capped and remained at the 104-125 level until 1995, while the University of Calgary Medical undergraduate program opened (1970).

Consideration of all of these problems concerning the system of examinations led to the appointment of a committee under the chairmanship of Dr. Donald F. Cameron of the University of Alberta. This committee studied, very extensively, alternative methods of examination, and consulted with Dr. John P. Hubbard and others from the National Board of Medical Examiners in Philadelphia. 7-28

History of the Medical Council of Canada, 1979

Notwithstanding, applications continued to increase exponentially, as they did across Canada. By 1979 there were 704 applicants for 118 positions. Ninety-four percent of those accepted were Albertans. Minimum Stanine marks (out of 9.0) were increased from 5.5 or 65%, to 6.5 (1977) and to 7.0 (1980). The Stanine was dropped in favor of the Grade Point Assessment (GPA) in 1980. MCATS were made optional in 1961.

Medical Examinations: During the 1960s multiple choice questions were introduced into the undergraduate and postgraduate examination process, following on the work of Dr. Donald Wilson to standardize postgraduate and undergraduate medical examinations for the Royal College. The burden of marking undergraduate essay type exams each year was researched by the MCC under Dr. Cameron's Timing and Methods of Examination committee. It recommended the progressive introduction of objective, machine-marked exams in 1967.

In 1968 Dr. Wilson was appointed the MCC's consultant in Examinations, responsible for developing the Royal College's R.S. McLaughlin Examination and Research Centre in Edmon-

THE UNIVERSITY OF ALBERTA
HEALTH SCIENCES CENTRE 7-29

However, the importance of the project is not to be found in the bricks and mortar of which it is made, nor in the archetectural designs, but in the basic concepts which have lead to its development.

Dr. Tim Cameron speaking on the HSC concept, 1968

45. Rossall, Richard Personal communication, July 28, 2008.

ton.[46] The Centre reached maturity with 3,500 questions in its databank by 1971. Multiple choice questions on the undergraduate final exams had been pre-tested as early as 1963. They were formally introduced in 1970 and computerized c1973. The western Canadian medical faculties were exchanging multiple choice questions by 1973. Dr. Wilson continued as the Director until 1977. Dr. Cameron provided the link as the McLaughlin Board chair. It kept the Centre based in Edmonton until 1986.

Dr. Cameron had joined the Medical Council of Canada (MCC) Board in 1965. In 1971 he chaired the Medical Council of Canada's annual meeting program, becoming the MCC Vice-President and Chairman of the Qualifications Committee (1972/73) and the President (1973/74). In 1975, after two years of study by a committee under Dr. Cameron, the original 1912 MCC objectives contained in the Canada Medical Act, were revised and registered by the MCC under the Canada Corporation's Act.[47]

Medicare: Drs. Mackenzie and Cameron had been closely following the 1964 Hall Royal Commission's primary recommendation to implement a universal, tax funded medical insurance program. Dr. Cameron had presented his views on its impact on undergraduate programs in 1964. The brief was concerned with maintaining open access to private patients for teaching purposes, a tradition in western Canada that had never been questioned. Dr. Cameron was also concerned over the continuation of the 1960 built Outpatient clinic, which wouldn't be needed if everyone had a Medicare number and the physician was paid the same for each patient visit.

The third concern was over the funding of part-time teaching staff, whose academic appointment and reputation allowed them, as Dr. Cameron explained, "to give the faculty a half day a week and compensate himself by charging patients, Robin Hood style. But as time went on this became a very expensive contribution only a wealthy man could make."[48]

The UAH and the Faculty of Medicine, west of 112th Street, 1974

The government never became the paymaster or the enemy. Once Medicare became inevitable Dr. Cameron helped make it work.[49]

The Royal College: The Royal Canadian College of Physicians and Surgeons adopted the two (basic) plus two (less structured) clinical years for the postgraduate or residency training program in the 1960s. When the responsibility for postgraduate teaching was transferred from teaching hospitals to the universities, the position of Associate Dean - postgraduate education was established, and filled by Dr. R.E. Rossall in 1969. A Residency training committee was formed in each department with a postgraduate program by 1971/72. Subspecialty program accreditations by the Royal College began by 1973. The number of residents increased significantly. The government began to take indirect control of the number of residents starting in 1968, by capping the number of positions they would fund.

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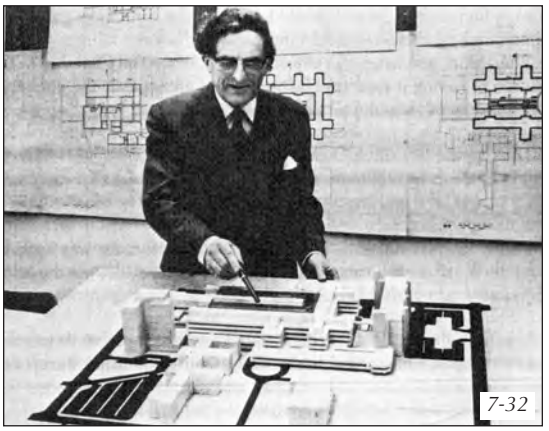
46. Kerr, Robert B. — *The History of the Medical Council of Canada*, pages 57-58, MCC 1979. Further descriptions of the evolution and work of the McLaughlin Centre are recorded in David Shepherd's *The Royal College of Physicians and Surgeons of Canada*, 1960-1980, pages 276-304, Ottawa, 1985 and R. Lampard's prolife of Dr. Donald Wilson in *Alberta's Medical History*, pages 388-400.
47. Kerr, Robert B. — *The History of the Medical Council of Canada*, pages 48-52, MCC, 1979.
48. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, page 196.
49. le Riche, Roy — Personal communication, December 12, 2008.

Assoc. Dean D.F. (Tim) Cameron presenting a certificate to retired Dean J.W. Scott, March 21, 1969

The Centennial Hospital and the Walter C. Mackenzie Health Sciences Center (HSC): Through the 1960s many medical leaders including Drs. Mackenzie and Cameron, became interested in the concept of having all health science faculties unite to share resources, teachers and class space, and to interrelate as a group. Under the Health Sciences Center (HSC) concept the healthcare faculties were to be physically and functionally incorporated or linked with the primary teaching hospital.[50] Dr. Cameron represented the University when the first step was taken to create a HSC – the building of an auditorium in 1965, to be available to all healthcare faculties.[51]

In his 1968 HSC presentation Dr. Cameron noted that of 1,000 citizens, 750 seek health assistance per month, 250 turn to a physician, 10 are admitted to hospital and one would be admitted to a university hospital – as a teaching patient. "This is rather like trying to teach forestry in a lumber yard." Using the OR analogy, in 1968 he foresaw "another change which will help to meet the needs of the future will be the development of a true healthcare team. This team concept must be expanded to all areas of medicine, both inside and outside the hospital."[52] "Medical schools can never hope to keep up with the demand for doctors. We will have to solve the doctor shortage by developing a health team approach, and using more auxiliary medical personnel."[53]



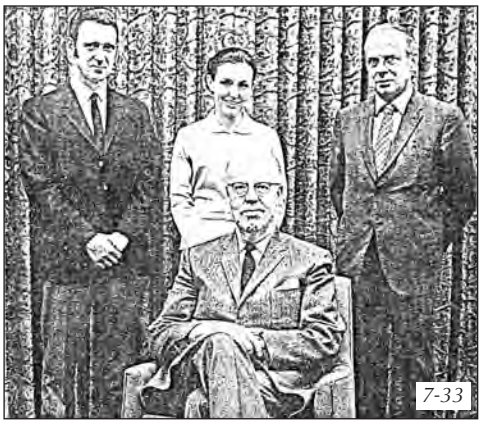
Victor Jackson, proposing the (WCM) HSC between the CSB and MSB buildings, circa 1974

In the 1950s the UAH provided no academic space for teachers or teaching. Space became a major problem with the appointment of full-time professors in the late 1950s and early 1960s. Following the release of the Hall Commission report (1964), funding was sought from the 1965 created federal Health Resources Fund, to build the 13-storey Clinical Sciences Building. It opened immediately southwest of the UAH in 1969 and provided much needed medical and nursing offices along with investigative and clinical research space. It was followed by the 9-story Medical Sciences building opened on the site in 1972. From 1966-1971 plans were developed and approved, to rebuild the UAH as the Centennial Hospital. The project was frozen for five years in 1971, as the Foothills Hospital was opened in Calgary and a second medical school was built in Alberta.

By 1975 the vision for the hospital had begun to change from a specialty hospital to an increasingly integrated health science centered one, still consistent with the concept Dr. W.C. Mackenzie had articulated for the Centennial hospital a decade earlier.[54] The site had changed too, and was now flanked to the

50. Corbet, Elise A. Frontiers of Medicine, pages 80-92.
51. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, pages 293-299, UAH, 1986. Also see Elise Corbet's *Frontiers of Medicine*, pages 88-92, for a more detailed discussion of the evolution of the HSC concept.
52. Cameron, Donald F. "The University of Alberta Health Sciences Center", page 4, n.d. circa 1968. Copy of the speech in the Cameron fonds, UAA.
53. Cameron, Donald F. Edmonton Journal, October 9, 1968. He was about 50 years ahead of his time. The current thrust to accelerate the changes to primary care to include more teamwork only started after the millennium.
54. Lougheed, Peter "Inspirations and a source of pride," CMAJ 120: 998, April 21, 1979.

north and south, by the medical science and clinical science buildings. Approval for a new hospital was announced in December 1975. Coordinators in each department were appointed to work with project manager Victor Jackson. Eberhard Zeidler was appointed the consulting architect in 1977. He had designed the Eaton Centre (Toronto), and later Canada Place (Vancouver), and wrote a book on his design of the McMaster Medical School (Hamilton) and the use of the interstitial space between floors, as the Calgary medical school had done.[55]



Chairman of Graduate Training Dr. R. Rossall, Director of Student Affairs Dr. Odette Hagen, Assoc. Dean D.F. Cameron. (seated) Dean W.C. Mackenzie, circa 1970/71

Through the HSC design and construction period (1975-1986), there were no renovations and few dollars for repairs to the original UAH. Attention was diverted from science, teaching and research, to planning.[56] After 17 years of designing and building the Walter Mackenzie HSC Centre, as it was named in 1979, the Centre was opened from 1983 (Phase I) through 1986 (Phase II). The new hospital bed total was reduced by 156 to 837. The site bed total including the 1972 acquired Aberhart TB hospital and the Mewburn Pavilion, had been 1232. Space allocation was frozen at the 1974 Clarkson recommended square footage. The offices for academic professors were only 12 ft square (144 sq ft). Some departments got less space than they needed.

The fast-track process shortened the design and construction period but meant all contract changes were charged on a triple net basis. Inflation at over 10% per year compounded the cost increases. The eventual cost was $415 million although some estimates were as high as $550 million, compared with less than $100 million for the combined Foothills Hospital and UofC medical school, built in Calgary a decade before. UofA medical students were excited by the new centre and raised $15,000 for a new grand piano (1983) for noontime concerts.

The Cameron Deanship, 1974-1983: Dr. Cameron's deanship actually began on an acting basis in 1971/72, when Dr. Mackenzie took his sabbatical. The originally planned one year absence was hardly noticed, particularly after it was shortened to seven months. As Dr. Mackenzie often said when asked who was the Dean when he was away, "the same person who is the Dean when I'm here, Dr. Cameron."[57] The year was marked by the freeze on the construction of the Centennial Hospital, the election of the Lougheed government and its continuation of the freeze on the proposed Hospital.

The Walter Mackenzie HSC, named in 1979, designed and constructed 1973-1982, opened 1983-1986

Although Dr. Cameron and Dr. Mackenzie had worked together harmoniously since 1960, they were very different personalities. In prac-

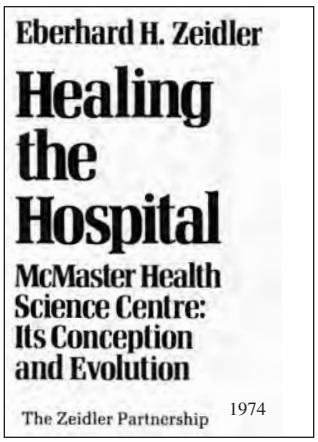
55. Zeidler, Eberhard — *Healing the Hospital*, McMaster Health Sciences Centre, its conception and evolution. Privately published, 1974. Professor Ann Marie Adams of the McGill Centre for Architecture referred to the Mackenzie HSC as "recognized internationally as a major architectural landmark" because of its patient-centered design, as quoted by Robb Beattie in "The architecture of healing" in Patient 2010 1(1): 18-21, January 2003.

56. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, page 350.

57. McPherson, Alex — Personal communication, November 20, 2008.

tice, their distinctive competencies complemented each other. Many of Dr. Mackenzie's commitments were made verbally, with Dr. Cameron having to finesse their implementation. Dr. Cameron knew the job well, having represented the faculty and Dr. Mackenzie for almost fifteen years. That made his ascendancy to the Dean's position easier. Moreover, Dean Mackenzie wanted it that way. The 12 member selection committee confirmed Dr. Mackenzie's preference, and Dr. Cameron became the Dean in September 1974.

At the time Dr. Cameron became the Dean, there were two Assistant Deans (Hagen, Rossall) and one Associate Dean (Grisdale). Dr. Cameron appointed Dr. Grisdale as the faculty's representative to the project management team to fast-track the design of the HSC. To run the internal affairs of the Dean's office, the 10 or more faculty committees were continued. There was a subtle change however, from the direct approach of Dr. Mackenzie, to a more cooperative sharing of information and the participative discussion one of Dr. Cameron.



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Dr. John Read saw the switch-over as the end of an era of kindly dictatorship. Dr. Garner King compared the change-over to a father interpreting Nelson's statue in Trafalgar Square, that has two dozen figures at the base "You see son, there are no great men anymore, just great committees."[58] Communication with the 350-400 Faculty members continued through two meetings a year.

Dr. Cameron's 1974 deanship did not start without challenges. On December 27, 1974 his son Peter Cameron was killed in an MVA, by an inebriated driver. At the same time Dr. Mackenzie was working on his Task Force Report on Highway Accidents in Alberta, focusing on the role of alcohol. Dr. Cameron already had a longstanding concern over the problem, through his work on the Boards of the Alberta Motor Association.

At the medical school the uncertainty over the rebuilding of the UAH Hospital continued. So did the freeze on undergraduate enrollment. The direction of the Royal College, that universities conduct all postgraduate teaching and not the hospitals, needed to be implemented to meet the new accreditation standards. In 1974 the UAH lost its approval to train interns. In response the family practice program was moved to the RAH (1974). Rotating internships were replaced with 18 straight and mixed internships, until they were discontinued in 1979.

In 1977 the curtailment of postgraduate residency positions that had allowed the UofC programs to expand, was lifted allowing the Department of Medicine to appoint a Chief Resident. In 1978 Drs. McLeod (the UofC Dean) and Cameron agreed to sit on the College of Physicians and Surgeons (CPSA) Board. Together with Registrar Dr. Roy le Riche, they supported the implementation of a two year internship before granting a license to practice in the province. It was a Canadian precedent.

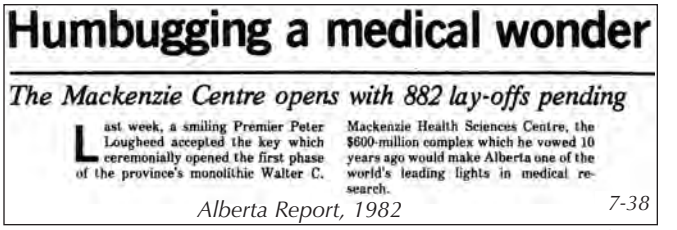
Another challenge that dogged Dr. Cameron was the Children's Hospital controversy - should it be a separate hospital as in Calgary, and where should the Neonatal ICU be located? No consensus was reached although Dr. Cameron tried. Not until 1992 did the government intervene, and decide not to build a separate Children's Hospital in Edmonton.

7-36

Premier Lougheed and Mrs. W.C. Mackenzie opening the WCM HSC, Oct 1982

58. Vant, J. Ross, Cashman, Tony *More Than a Hospital*, pages 327, 350.

Joint appointments between the hospital and the university were another challenge. Hospitals were able to secure more funding than the Faculty. As a result appointments were made with little or no faculty contribution, resulting in a nominal appointment and no commitment, causing friction within the faculty. Attempts to rationalize the payments were time consuming.



Humbugging a medical wonder

The Mackenzie Centre opens with 882 lay-offs pending

Last week, a smiling Premier Peter Lougheed accepted the key which ceremonially opened the first phase of the province's monolithic Walter C. Mackenzie Health Sciences Centre, the $600-million complex which he vowed 10 years ago would make Alberta one of the world's leading lights in medical research.

Alberta Report, 1982 7-38

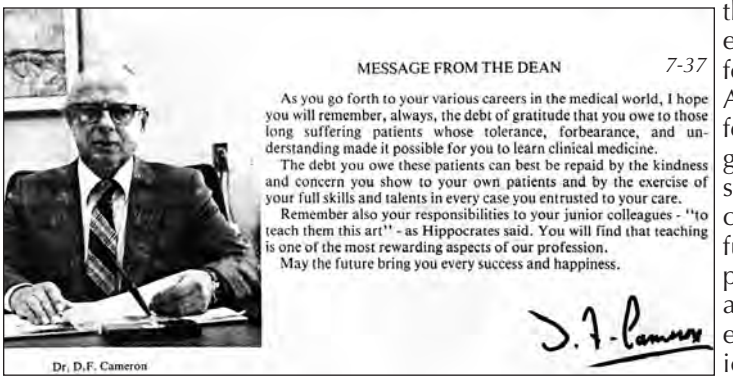
Dr. Cameron compared the 90% of his time spent on hospital affairs or for its Board, with the Deans of Law or Education, who had no court, or school to operate.[59] Dr. Bernard Snell called the hospital/university relationship an in-dissolvable marriage.[60] Dr. Cameron called it one of dynamic dislocation. The problem would haunt Dr. Cameron throughout his deanship. Retrospectively, Dr. le Riche thought Dean Cameron should have been tougher on his Department Heads, to address and resolve the differences of opinion that arose. "Perhaps he was too much of a conciliator."[61]

Cameron's final challenge came in 1982. With the official opening of the HSC in November, the announcement was made that it would be reduced by 165 beds. Over 800 staff layoffs followed, along with major adjustments in the allocation of clinical teaching beds for each department.[62]

Medical Research and the AHFMR (1974-1980): Material progress in increasing medical research was made during Dr. Cameron's deanship. In October 1974, the Dean announced the protein structure group at UofA had received a $3.0 million research grant, the largest yet. It was a prelude to what would follow. Dr. Cameron's role in the etiology of the AHFMR began in 1975. That year an informal approach by Drs. McLeod, Cameron and Bryce Weir was made to Premier Lougheed to establish a Heritage Health Research Fund, separate from the Alberta Heritage Trust Fund. The reply was that any proposal must be a joint one from both Faculties of Medicine.

The first proposal was drafted by Drs. Bill Tatton (UofC) and Neil Madson (UofA) and submitted through the Deans to the Premier in 1976. It was not refused out of hand, but rather turned over to a Study Committee chaired by Dr. John Bradley. With the proposal refined into a Foundation, Premier Lougheed appointed Dr. Bradley as his Scientific Advisor for Medical Research to investigate the best framework for it.

After five years of searching, revising and authenticating the proposal, including presentations at two Government House dinners in 1978 and 1979, the AHFMR was formed and funded by the government with $300 million.[63] In 1980 the first funds started to flow to the two Faculties of Medicine, even before the Foundation was formally proclaimed. The AHFMR provided studentships, fellowships and five year salary guarantees, at which time the researcher was expected to be successful in his MRC or other funding grant applications. The provincial funding amounted to almost $30 million per year for each of the two Faculties of Medicine. The Mackenzie HSC had virtually no research space in it,



MESSAGE FROM THE DEAN 7-37

As you go forth to your various careers in the medical world, I hope you will remember, always, the debt of gratitude that you owe to those long suffering patients whose tolerance, forbearance, and understanding made it possible for you to learn clinical medicine.

The debt you owe these patients can best be repaid by the kindness and concern you show to your own patients and by the exercise of your full skills and talents in every case you entrusted to your care.

Remember also your responsibilities to your junior colleagues - "to teach them this art" - as Hippocrates said. You will find that teaching is one of the most rewarding aspects of our profession.

May the future bring you every success and happiness.

D.F. Cameron

Dr. D.F. Cameron

Message to the class of 1982

59. Vant, J. Ross, Cashman, Tony — *More Than a Hospital*, page 356.
60. Vant, J. Ross, Cashman, Tony — More Than a Hospital, page 386.
61. le Riche, Roy — Personal Communication, December 12, 2008.
62. Dean, Philleppa — "Humbugging a medical wonder." Alberta Report, page 48, October 25, 1982.
63. Lampard, Robert — "The Alberta Heritage Foundation for Medical Research: Its Formative Years 1975-2005", in *Alberta's Medical History, Young and Lusty, and Full of Life*, pages 663-678.

requiring the AHFMR to commission two research buildings in 1983, which were completed in 1988 in Calgary and Edmonton.

Retirement: In 1983 Dr. Cameron was eligible to take a one year sabbatical and then retire without losing any pension benefits. When he was asked again at a Dean's meeting about faculty requests to change the contributions they made to the Faculty's Practice Plan, Dr. Cameron felt it was time to retire. Ironically, over time staff contributions to the practice plan have diminished and now total 2% of GFT income over $150,000, a relatively insignificant amount (2009).

7-39

Dr. Roy le Riche, CPSA Registrar 1971-1989

Dr. Cameron was philosophical and said his greatest satisfaction was "dealing with students and their enthusiasm. I was always very impressed by the great motivation, and the highest ideals they had." He did not consider himself to be outstanding. "I always felt one tried to do the job as best one could."[64] Or more humorously, "Old Deans never die, they just lose their Faculties."[65]

As he moved into retirement Dr. Cameron was elected President of the College of Physicians and Surgeons of Alberta (1983/84). Registrar Roy le Riche remembered him best as a member of the CPSA's Discipline Committee. "He always had a unique and valid point of view on difficult discipline cases. His experience in life was broad. He knew men and knew them under stress. He viewed drug abuse as a disease and not a reflection on a man of poor fiber."[66]

7-40

Acting Dean Robert S. Fraser, 1983/84

In 1983 Dr. R.S. Fraser was appointed the Acting Dean, while a search for the new Dean was undertaken. Dr. Fraser, a cardiologist,[67] had been the Professor and Head of Medicine (1969-1974),[68] and the Associate Dean for Faculty Affairs (1978-1983). Of quiet temperament and noted as a good administrator, he completed the faculty self-study assessment and guided the faculty through the 1983/84 LCME accreditation site visit. The Faculty passed the survey but with a three-year approval, not a maximum five year one.

Associations, Awards and Appointments: Dr. Cameron had been a Director of the Edmonton AMA Board since 1967. As Edmonton board chair he said, "If we are going to drive like fools, chances are we'll meet a fool's fate."[69] Edmonton was having an epidemic of poor driving habits. Dr. Cameron entered the seatbelt controversy noting that there were too many motor vehicle accidents. He said the results strained hospital bed capacity by filling one-half of the Royal Alexander Hospital beds and resulting in 20-40 patients per day visiting the emergency department. Dr. Cameron noted there were 20 times as many Albertans killed on highways in Canada as there were on highways in Ireland, and there were more deaths on a busy weekend in Canada than on WWII's D-Day.[70]

64. Cameron, Donald F. Edmonton Journal, December 6, 1984.
65. Tyrrell, D. Lorne A quote of Dr. Cameron's recalled by Dr. Tyrrell. Personal Communication, February 12, 2009.
66. le Riche, Roy Personal communication, December 12, 2008.
67. Fraser, Robert S. *Cardiology at the University of Alberta 1922-1969*, 1992.
68. Gilchrist, Dawna *The History of the Department of Medicine at the University of Alberta*, pages 23-27, 2004.
69. Cameron, Donald F. Edmonton Journal, October 28, 1981.
70. Cameron, Donald F. Alberta Report, page 20, November 6, 1981.

Dr. Cameron rose from Secretary to Vice-President and President of the Alberta Motor Association, with the encouragement of his friend and wartime colleague Fred Jenner.[71] During his presidency (1983/84) the AMA was restructured and the former President (Dr. Cameron) became the Chairman of the Board, while the longstanding CEO (George Macdonald) became the President. Macdonald remembered how smoothly the changes were made and how "Dr. Cameron could charm anyone and settle any disharmony. He always had something good to say about those he knew or worked with."[72]

In addition to his military medals, stars and honors, Dr. Cameron was made a member of the AOA (1967). He was appointed to the Alberta Cancer Society Board (1968) and became the Chairman of the Alberta Division of the Canadian Cancer Society's Medical Advisory Board (1974).

Anesthetically he was Chairman of the Alberta Section of the Canadian Anesthetists Society (1957-1959), and a member of the Canadian Anesthetists Society Board. Later he was President of the UAH Medical Staff (1967). A recipient of the Queens Jubilee Medal (1978), he was President of the CPSA (1982/83), and received the Edmonton Academy of Medicine's Outstanding Physician Award (1984). He was Chairman of the Edmonton Area Hospital Planning Council, the R.S. McLaughlin Examination Centre for the RCPSC, the AMA Committee on OR and Anesthetic deaths, and was President of the MCC (1973/74) and the Alberta Motor Association (1983/84).

Persona: Dr. Cameron's hallmark was his extemporaneous humor. The article he wrote to present to the Edmonton Academy on Alberta's medical history was factual and chronological. A physician in the audience, Dr. Harry Letts, recalled the presentation as one of the most humorous he had ever heard. Cameron's humor was spontaneous but his stories were often sprinkled with wisdom not just wit.[73] He could make any solemn occasion humorous and any humorous occasion solemn.[74]


Mr. Peter M. Owen
Chairman


Mrs. Margaret Andrekson


Mr. William Astle


Mr. J.B. (Jock) Bell


Dr. D.F. (Tim) Cameron


Mr. Ian G. Finlay


Mrs. Dorothy V. Horton

(Pt.) WCM HSC Board, 1983 7-42

INTRODUCTION OF BILLS

Bill 62
The Alberta Heritage Foundation for Medical Research Act

MR. LOUGHEED: Mr. Speaker, I request leave to introduce Bill 62, The Alberta Heritage Foundation for Medical Research Act. This being a money Bill, His Honour the Honourable the Lieutenant-Governor, having been informed of the contents of this Bill, recommends the same to the Assembly.

Mr. Speaker, the purpose of this Bill is to establish the Alberta Heritage Foundation for Medical Research. The objects of the foundation are to establish and support a balanced long-term program of medical research based in Alberta, directed to the discovery of new knowledge and the application of that knowledge to improve health and quality of health services in Alberta; in particular, to stimulate research in the medical sciences, to implement effective means of using in Alberta the scientific resources available in medical sciences, to support medical research laboratories and related facilities in Alberta, to promote co-operation in research in medical sciences in order to minimize duplication in and promote concentration of effort in that research, and to encourage young Albertans to pur... careers in research in medical sciences.

7-41

Alberta Hansard October 26, 1979

One day when Dr. Cameron was walking down the Urology corridor, he noticed two much taller surgeons bantering at each other across the hallway. Short in stature Dr. Cameron took off his OR cap, stuck it up in the air with his finger and paused long enough to announce his presence with, "Excuse me gentlemen, may I pass this way", and did.[75]

On another occasion while out fishing at the physician frequented Raven River cabin south of Rocky Mountain House, the catch was limited and small. Cameron's comment to the

71. le Riche, Roy — Personal communication, December 12, 2008. Fred Jenner also encouraged the author's father to become President of the AMA in 1965-1967.
72. MacDonald, George — Personal communication, March 17, 2008.
73. le Riche, Roy — Personal communication, December 12, 2008.
74. le Riche, Roy — Personal communication, December 12, 2008.
75. Anholt, Lee — Interview with Robert Lampard, July 31, 2008.


7-43

Dr. and Mrs. D.F. Cameron, circa 1990

TO RECORD the full story of the hundreds of faculty and staff, the thousands of students and the hundreds of thousands of patients, each of whom played a part in the development of this major academic medical centre, is a formidable task. Many of the anecdotes of the early efforts to establish a first class medical school, remote from the world's major medical centres, will, of necessity, live on only in the memories of those associated with the institution in its formative years. Each generation will have its own memories of the challenges and rewards, of the frustrations and successes, and of the talents and idiosyncrasies of their colleagues in the development of this vast enterprise.

It is also important, however, to examine that record and draw from it the provincial themes that will provide a comprehensive understanding of the Faculty of Medicine's evolution at the University of Alberta. Current and future members of the faculty, as well as people more generally interested in the development of modern health care, will profit from attention to its historical roots. Here, then, will be found the highlights and the long term trends in a fascinating story of the efforts of dedicated and compassionate professionals of many disciplines working together toward a common goal — the pursuit of excellence in patient care, research and the ''provision of doctors for tomorrow.''

Dr. Cameron's Preface to E.A. Corbet's Frontiers of Medicine, 1990 7-44

only colleague who caught a fish was, "my God, you've caught next year's crop."

Colleagues recalled how he gave 100% to any task he undertook. He was a good organizer and administrator and could handle a great deal of detail. He spoke if needed, but never dominated a meeting. As a chair he was efficient. "You could disagree with him fiercely but never felt degraded. He was good at convincing people of their foolishness in a quiet way." That said, "he didn't suffer fools gladly or easily. Still, he underestimated himself and found it hard to sell himself. Perhaps that's why he didn't go into general practice. The worried well would have bothered him or at least irritated him by the time they consumed." He preferred dealing with the sick people, or an anesthetized one who couldn't talk back.[76]

Dr. Yakimets recalled the biggest difference between Dr. Cameron and Dr. Mackenzie was that Dr. Dr. Cameron would say "how would you like to do this" and Dr. Mackenzie would say "I would like you to do this."[77] Dr. Neil Duncan, a classmate, remembered him "as a kind, capable, exceedingly bright but self-effacing student. Not many really got to know him."[78]

Family: In 1974 his son Peter (born 1951), was killed in a car accident.[79] It devastated the Camerons. Jane Batty (born 1946) became an Edmonton City councilor. Michael Cameron (born 1948) is an oil field driller living in Jasper. Judy Cameron (born 1953) became a professor in the Faculty of Education. Patricia (Harrison) Cameron died in 2001. Dr. Cameron died on June 1, 2002 in Edmonton.

Keywords: Cameron Library, WWII: Calgary Tanks (#14 CAR), Dieppe Raid, the Italian Campaign, Intelligence Officer, Youngest Brigade Major, MBE, Anesthetist, Associate Dean, Dean 1974-1983, Alberta Motor Association.

A meeting is the gathering of people who assemble to learn better how to do things they already know how to do but don't have enough time to do because they are too busy attending meetings. 7-45

MEDICAL EDUCATION IN THE SOVIET UNION

by D. F. Cameron, M.D.*

The Russian ratio of 198 practicing physicians per 100,000 population is short of their stated goal of 210 physicians per 100,000 population. In Alberta the ratio is about 96 physicians per 100,000 population and in the United States 132 physicians per 100,000 population.

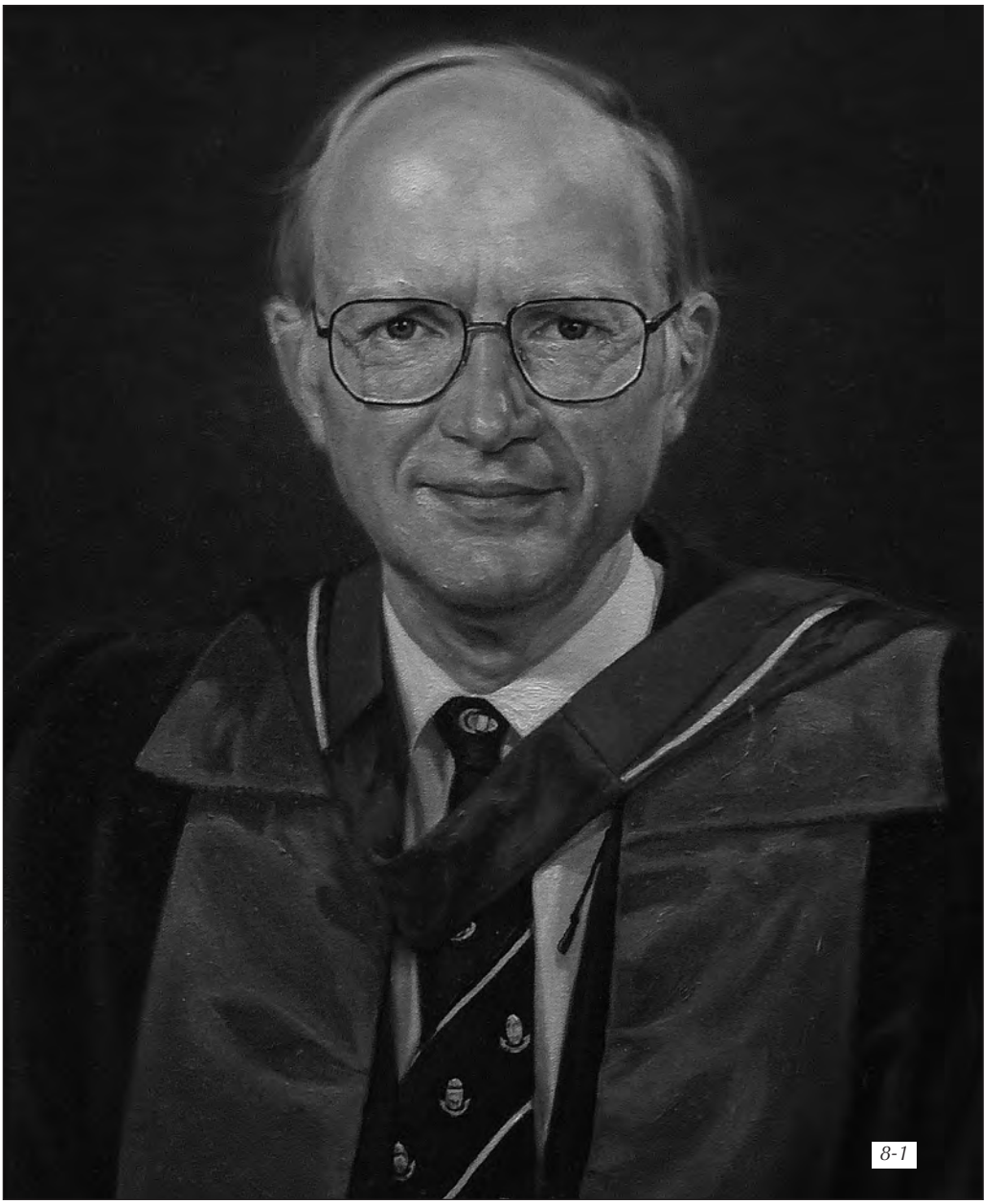
There are no tuition fees for undergraduate medical students and about ¾ of all medical students receive stipends.

There are approximately 180,000 medical students in the Soviet Union as compared to 31,500 in the United States and 3,700 in Canada.[a] Until recently approximately 75% of Russian medical students were females but this has now declined to approximately 60%. In the United States 8.5% of medical students are females, in Britian 24% and in Canada 12%.

7-46

Alberta Medical Bulletin, November, 1964

76. le Riche, Roy — Personal communication, December 12, 2008.
77. Yakimets, Walter — Personal communication, November 20, 2008.
78. Duncan, Neil — Personal communication, November 20, 2008.
79. Cameron, Michael — He died December 27, 1974, struck by an inebriated driver, while waiting to drive his car onto Highway #2 at Ponoka. Dr. Mackenzie had already accepted the chair of the Alberta Highway Accident Commission, and tabled his report highlighting the high rate of alcohol involvement in highway deaths in 1975.



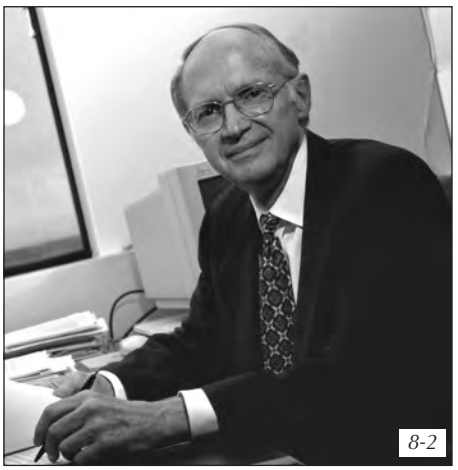
Douglas Roy Wilson, MD, FRCPC, FACP, FCAHS
1935-

Douglas Roy Wilson, MD, FRCPC, FACP, FCAHS
1935-

"The practice of medicine is an art based on science. You have to be critical of what you are doing and have an open mind to look at new approaches. You have to be interested in learning for the rest of your life."[1]

Introduction: Born in north Toronto after the Depression, Douglas Roy Wilson excelled at school and entered the six-year course in medicine at UofT in 1953. Married after his fifth year, he graduated as the top overall student. Choosing Internal Medicine as a career he came under the tutorship of Dr. Edmund Yendt, starting just as the first intermittent renal dialysis treatments were introduced for patients with chronic renal failure.

After five years of fellowship and three years of post-fellowship training he joined the UofT staff, as the nephrologist, responsible for starting the renal transplantation program. Clinically he developed a busy practice that included many patients with recurrent kidney stones. In 1968 he launched the nephrology residency-training program and managed the TGH, tri-hospital, then citywide nephrology service.



Dr. Douglas R. Wilson, Dean 1984-1994

Dr. Wilson's research focused on the mechanisms of altered kidney function in experimental renal disease, particularly chronic urinary tract obstruction, and the role of the terminal collecting ducts of the kidney in diuretic states.

Offered the Dean of Medicine position at the UofA in 1984, he was excited by the opportunities afforded by the new AHFMR (1980), the opening of the Walter Mackenzie HSC (1983-86), the need to recruit many new department chairmen, and the commencement of interdisciplinary research groups.

During his decade as Dean, full accreditation was achieved in undergraduate and postgraduate programs (1992). High student marks kept the school in the top three in the MCC exams. An aboriginal medical student program was started, eventually the largest in Canada. Five million dollars was raised in the first faculty fundraising campaign to celebrate the school's 75th anniversary. The Heritage Medical Research Centers (East and West) were opened. Medical research grants reached $48 million per year by the end of Dean Wilson's two-term deanship in 1994.

It was a dynamic decade which Dr. Wilson closed with the encouraging words "keep well the road to excellence; I will be cheering you on and enjoying the trip", as he refocused his career on health promotion and population health, and later the launching of a School of Public Health at the UofA.[2]

Douglas Wilson, canoeing in Algonquin Park

1. Wilson, Douglas Roy Paraphrased from a thoughtful presentation given to the Edmonton Academy of Medicine on "Two Hemispheres and the Medical Connection", December 1990. Copy in the Wilson Family Archives.
2. Wilson, Douglas Roy Retirement speech at his farewell dinner, September 23, 1994. Copy in the Wilson Family Archives.

From Youth to MD:[3] Dr. Wilson's father, Roy Wilson, grew up on a farm near Orangeville in southern Ontario. He enlisted underage in the Princess Patricia's Light Infantry, first saw action at Passchendaele, and was seriously wounded on the final day of the war, requiring innovative tendon surgery by Dr. William Gallie to save his left arm. He built a successful independent investment business firm despite the Depression. Dr. Wilson's mother, Dorothy Holme, was raised by her mother, her father having died in the 1918 flu epidemic. While working in the bank she met and married Roy Wilson in 1931.

Douglas Roy Wilson was born on February 19, 1935. Along with his older brother Bill (born 1933), he grew up in north Toronto where he enjoyed baseball, football and hockey as the seasons changed. He attended the University of Toronto Schools (UTS), a high school for academically qualified boys. At UTS he made many lifelong friends and experienced outstanding teachers. In his graduating year he was elected School Captain.

Dr. Wilson's only serious career interest was medicine. His father's great admiration for the physicians and surgeons who had looked after him, coupled with a remarkable science teacher at the UTS, were strong influences. He was fortunate to enter the six-year premedical and medical program at the University of Toronto with six other friends. His years in medical school included playing and coaching the Faculty football team, competing on the closely-knit water polo team, and attending Dixieland dances and moonlit New Year's Eve skating parties. Summer jobs included working as a dining car waiter on the transcontinental trains to Winnipeg, and cleaning beer vats at a downtown brewery.

Just before completing his fifth year of medical school Dr. Wilson married his high school sweetheart. After a cautionary meeting with the Dean, the couple moved into an apartment near the campus and the Toronto General Hospital. In his final summer Dr. Wilson worked for two kidney pathologists who were pioneers in renal electron microscopy. He co-authored his first scientific paper in the Canadian Medical Association Journal.

In his graduating year he was elected President of the Medical Society. On the fun side, he organized the 'theft' of the legendary School of Engineering cannon. It was auctioned off to support the United Way on campus. In retaliation he was kidnapped by the Engineering Student Association and deposited one dark night many miles from Toronto.


8-4

Douglas and Jane Wilson, married in 1958

From MD to Fellowship and Renal Research, 1959-1967: Dr. Wilson graduated from the Faculty of Medicine, University of Toronto in 1959, receiving several scholarships and the H.A. Cody Gold Medal for the highest academic standing during his undergraduate years. He also received a University of Toronto Student Association Honor Award for his contributions to the undergraduate life of the University as a whole. After an internship at the Toronto General Hospital, he moved to Vancouver for a senior intern year at the Shaughnessy Military Hospital. Dr. Wilson returned to


8-5

Dr. Edmund Yendt, circa 1960

3. Wilson, Douglas Roy Based on "Highlights from the life of Dr. Douglas Wilson," a manuscript dictated June 22, 2007 (12 pages), on "The Wilson Research path," and a manuscript dictated May 25, 2009 (3 pages). Copies deposited in the Wilson Family Archives.

the Toronto General Hospital (TGH) in 1961 as a clinical research fellow in renal, endocrine, and metabolic diseases under Dr. Ed Yendt.

While attending the annual North American clinical research meeting in Atlantic City, he listened attentively to a dramatic presentation, confirming that patients with end-stage kidney failure could survive and be returned to a reasonable quality of life with intermittent dialysis treatments. During the next two years, first as a senior intern in medicine and then as chief medical resident at the TGH, Dr. Wilson's interest in kidney disease grew, as he cared for patients dying with chronic renal failure.

In 1964 Dr. Wilson received a three-year American College of Physicians Research Fellowship. He chose Boston and nephrology at the Peter Bent Brigham Hospital and Harvard Medical School. There he was trained in the specialized care of patients with renal disease including kidney transplants, and conducted laboratory research on acute renal failure under Drs. John Merrill and Donald Oken. The other Fellows working at 'the Brigham' came from all over the United States, Canada, Switzerland, United Kingdom, and Argentina and formed a group of lifelong friends. Dr. Wilson's research focused on the mechanism of acute renal failure (or sudden kidney shut down) using micropuncture in rats. It was presented at the annual national research meetings in Atlantic City.


8-6

UofT Medical School

During his first year in Boston, Dr. Wilson passed the written and oral examinations in Internal Medicine and became a Fellow of the Royal College of Physicians and Surgeons of Canada. Following his two clinical research years at 'the Brigham', the Wilsons moved to London, England and the Royal Postgraduate School and Hammersmith Hospital for a third year of medical research year (1966/67) under Professor Oliver Wrong. He studied electrolytes in the colons of patients with kidney disease. His research in Boston and London led to nine publications in peer reviewed journals.[4]

The Wilsons returned to Toronto in July 1967, where Dr. Wilson was appointed an Assistant Professor in the Department of Medicine of the University of Toronto and Staff Physician at the TGH.

Academic Nephrology at the UofT and TGH, 1967 to 1984: Dr. Wilson's initial responsibility at the TGH was to start the kidney transplantation program, in collaboration with his surgical colleagues in urology. The first donor-derived kidney transplant occurred following an automobile collision in December 1967. The recipient was the father of a young family and was already on dialysis. He lived with his new kidney for almost twenty-five years, an experience which was unfortunately not repeated in the majority of patients. However the transplant team's success was as good as or better than most established centres. The program continued to expand through kidney donors from other centres and the development of newer and better anti-rejection regimes.

8-7

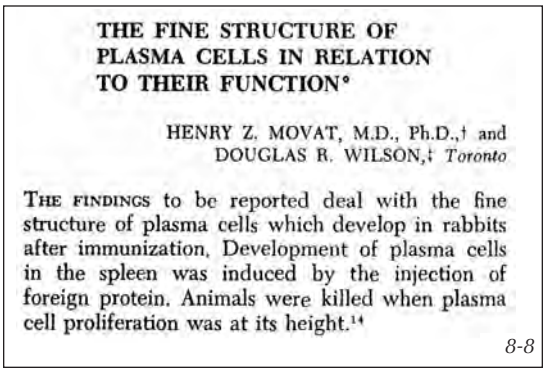
Dr. Wilson and co-workers celebrating the first renal transplant, December 1967

Clinically, Dr. Wilson developed a large consulting practice, treating patients with renal disease and particularly recurrent kidney stones, a painful problem that afflicts almost ten percent of the male population. He enjoyed the teaching that went along with it, particularly the challenge of making the complex subject easier to understand, and the appropriate treatments easier to use. Several of his residents ultimately chose careers in nephrology, returning to the staff of the University and

4. Wilson, Douglas Roy See the Dr. Douglas R. Wilson CV, references 4-9 for five of them, pages 209-212.

TGH, where they have made outstanding contributions in kidney transplantation, treatment of various types of nephritis, and hypertension.

Dr. Wilson became Director of the Division of Nephrology at the TGH in 1972, and established the Tri-Hospital Nephrology Service in 1974, with the Mt. Sinai and Women's College hospitals. Later he was appointed the Coordinator for the Toronto citywide Nephrology Program involving five teaching hospitals. He was promoted to the rank of Associate Professor in 1971 and Professor of Medicine in 1977. By 1984 he had participated in the publication of 120 scientific papers and book chapters on clinical and experimental kidney disease.



THE FINE STRUCTURE OF PLASMA CELLS IN RELATION TO THEIR FUNCTION*

HENRY Z. MOVAT, M.D., Ph.D.,† and DOUGLAS R. WILSON,† *Toronto*

THE FINDINGS to be reported deal with the fine structure of plasma cells which develop in rabbits after immunization. Development of plasma cells in the spleen was induced by the injection of foreign protein. Animals were killed when plasma cell proliferation was at its height.[14]

8-8

Dr. Wilson's first publication, CMAJ 81: 154-159, 1959

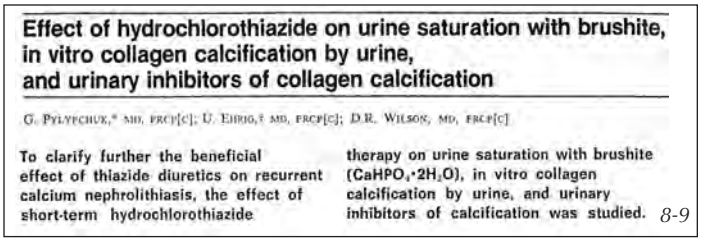
When he left Toronto Dr. Wilson was chairman of the Royal College of Physicians and Surgeons of Canada's Specialty committee on Nephrology and had been for six years. He was also beginning a five-year MRC grant (1983) and was receiving $66,000 per year for studies of obstructive nephropathy, acute renal failure, and collecting duct function.[5]

Medical Research and Publications: Dr. Wilson's research path began in medical school. His first involvement in laboratory research was as a summer student after third year medicine. He was working with two experimental pathologists who were applying early electron microscopy to study immune reactions, as well as the structure of the kidneys. This work resulted in his first scientific paper, published in the CMAJ entitled "The Fine Structure of Plasma Cells in Relation to their Function" – their function being the production of antibodies.[6]

Opportunities for clinical research involving the study of interesting patients, began during residency training in internal medicine, particularly as a research fellow with Dr. Yendt at the TGH. Patients with unusual renal tubular defects and metabolic bone disease (rickets, osteomalacia) were studied and successfully treated with novel oral phosphate therapy.[7] Dr. Wilson developed an interest in the causes and treatment of recurrent kidney stones (renal calculi). He demonstrated the successful use of thiazide diuretics to reduce stone recurrences.

Working with several research fellows, Dr. Wilson studied the mechanisms responsible for increased urine calcium and crystal formation in patients with recurrent renal calculi.[8] At the same time he managed a large number of these patients in the clinic. Parallel studies on altered calcium metabolism and metabolic bone disease (hypercalcemia, hyperparathyroidism, Paget's disease) were also published.[9] The launching of the kidney transplantation program in 1967 at the TGH, resulted in several more clinical papers.[10]

In the early 1970s it became apparent that a disturbingly high number of patients presenting with chronic renal failure in Australia and Europe, had a history of many years of excessive use of analgesic mixtures containing phenacetin. With Dr. Henry Gault and members of the Canadian Society of Nephrology, Dr. Wilson demonstrated this association in a significant number of Canadian patients with chronic renal failure. He worked with Health Canada to remove phenacetin from analgesic



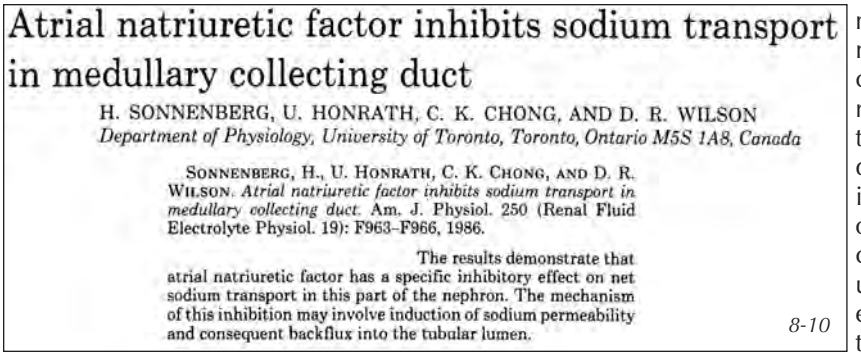
Effect of hydrochlorothiazide on urine saturation with brushite, in vitro collagen calcification by urine, and urinary inhibitors of collagen calcification

G. PYLYPCHUK,* MD, FRCP[C]; U. EHRIG,† MD, FRCP[C]; D.R. WILSON, MD, FRCP[C]

To clarify further the beneficial effect of thiazide diuretics on recurrent calcium nephrolithiasis, the effect of short-term hydrochlorothiazide therapy on urine saturation with brushite ($CaHPO_4 \cdot 2H_2O$), in vitro collagen calcification by urine, and urinary inhibitors of calcification was studied. 8-9

CMAJ , 1978

5. Editor — Folio, the UofA Faculty magazine, page 1, January 12, 1984.
6. Movat, H., Wilson, D.R. — "The fine structure of plasma cells in relation to their function", CMAJ 81: 154-159, 1959.
7. Wilson, Douglas Roy — Selected publications of Dr. Douglas Wilson, page 209. See references 2, 3.
8. Wilson, Douglas Roy — Selected publications of Dr. Douglas Wilson, pages 209-210. See references 15, 20, 23, 28, 30, 43, 35, 57.
9. Wilson, Douglas Roy — Selected publications of Dr. Douglas Wilson, pages 210-211. See references 26, 39, 40, 46.
10. Wilson, Douglas Roy — Selected publications of Dr. Douglas Wilson, pages 209-210. See references 13, 14, 36, 40.



Atrial natriuretic factor inhibits sodium transport in medullary collecting duct

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SONNENBERG, H., U. HONRATH, C. K. CHONG, AND D. R. WILSON. *Atrial natriuretic factor inhibits sodium transport in medullary collecting duct.* Am. J. Physiol. 250 (Renal Fluid Electrolyte Physiol. 19): F963–F966, 1986.

The results demonstrate that atrial natriuretic factor has a specific inhibitory effect on net sodium transport in this part of the nephron. The mechanism of this inhibition may involve induction of sodium permeability and consequent backflux into the tubular lumen.

8-10

mixtures. Ten years later the incidence of analgesic nephropathy-related renal failure had declined.[11]

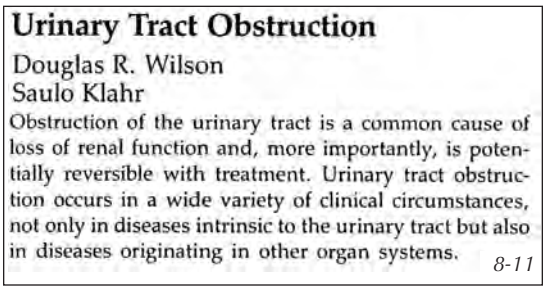
As a research fellow at the Peter Bent Brigham Hospital in Boston, Dr. Wilson had begun his laboratory research in animal (rat) models on experimental acute renal failure, using micropuncture of individual nephrons on the kidney surface, with measurements of tubular pressure and analysis of nanoliter samples of fluid. This original work on the mechanisms of acute renal failure was recognized by the Royal College, who gave him their annual Medal in Medicine in 1967.[12]

After he returned to join the staff at the University of Toronto, Dr. Wilson set up his own laboratory in the aging Banting Institute across from the TGH, and began micropuncture studies of another common kidney disease – chronic obstructive nephropathy resulting from partial obstruction of the urinary tract. The resulting series of papers showed for the first time how kidney function was altered at the individual nephron level, by chronic lower urinary tract obstruction, and clarified the mechanism of post-obstructive diuresis, specifically the important role of the terminal collecting ducts.[13] Dr. Wilson was also asked to write several reviews and chapters in nephrology textbooks on obstructive nephropathy.[14]

In 1976, Dr. Wilson began a productive collaboration with Dr. Harald Sonnenberg in the Department of Physiology. For many years he was assisted by Ursula Honrath, a skilled German-Canadian technologist. The team conducted a large series of studies of the terminal collecting ducts, a previously inaccessible portion of the nephron, including studies of urea, ammonia and electrolyte handling, the action of common diuretics, and the effect of kidney injury. Dr. Wilson continued to contribute to these studies for several years after moving to Edmonton, jointly publishing 12 papers from 1984-94.

Following his decade as Dean at the UofA, Dr. Wilson's scholarly work shifted to health promotion and primary care services, particularly for vulnerable populations. He coauthored twenty-one articles with graduate students in health promotion, public health, nursing and family medicine.[15]

Dean, Faculty of Medicine, University of Alberta, 1984-1994: On a beautiful summer evening in 1983 Dr. Wilson met with a large and enthusiastic 20-member search and selection committee. He was struck by the opportunities provided by the three year old Alberta Heritage Foundation for Medical Research (AHFMR), led by an old friend and nephrologist Dr. Lionel McLeod. The dramatic W.C. Mackenzie Health Sciences Centre was beginning to open in stages, with a beautiful new library, connected in the north to the Medical



Urinary Tract Obstruction

Douglas R. Wilson

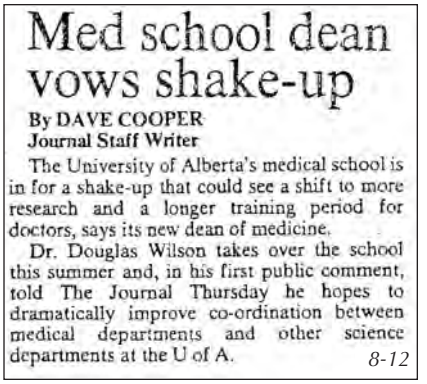
Saulo Klahr

Obstruction of the urinary tract is a common cause of loss of renal function and, more importantly, is potentially reversible with treatment. Urinary tract obstruction occurs in a wide variety of clinical circumstances, not only in diseases intrinsic to the urinary tract but also in diseases originating in other organ systems.

8-11

A chapter in Diseases of the Kidney, 1993

11. Wilson, Douglas Roy Selected publications of Dr. Douglas Wilson, pages 210-211. See references 29, 47.
12. Wilson, Douglas Roy See the Dr. Douglas Wilson CV, references, 4-6, 8, 9, 11. For an awardee list see D.E. Shepherd's *The Royal College of Physicians and Surgeons of Canada 1960-1980*, Appendix 13, pages 465-466, RCPSC, 1985.
13. Wilson, Douglas Roy Selected publications of Dr. Douglas Wilson, pages 209-211. See references 11, 12, 16, 17-19, 21, 22, 25, 32, 53.
14. Wilson, Douglas Roy Selected publications of Dr. Douglas Wilson, pages 210-211. See references 27, 41, 59, 61.
15. Wilson, Douglas Roy Selected publications of Dr. Douglas Wilson, pages 211-212. See references 67-76. The remainder are listed in the full length (147 references) Wilson cv. Copy in the Wilson Family Archives.



Med school dean vows shake-up

By DAVE COOPER
Journal Staff Writer

The University of Alberta's medical school is in for a shake-up that could see a shift to more research and a longer training period for doctors, says its new dean of medicine.

Dr. Douglas Wilson takes over the school this summer and, in his first public comment, told The Journal Thursday he hopes to dramatically improve co-ordination between medical departments and other science departments at the U of A. 8-12

Edmonton Journal, 16 March 1984

Sciences building (MSB), and in the south to the Clinical Sciences building (CSB). There was an aura of excitement about the potential for advancing the educational and research programs of the Faculty of Medicine. On January 6, Dr. Wilson was offered the position of Dean, effective July 1, 1984. He was the first Dean of Medicine to be appointed from outside the Faculty of Medicine in its 71-year history.

Goals, Strategies and Priorities: In his pre-arrival size up Dr. Wilson outlined six goals.[16] They were to 1) dramatically improve coordination between the medical basic science and other science departments at the UofA; 2) begin to realize the growth potential for medical research propelled by the new AHFMR; 3) extend the premedical program to three years; 4) build the Cross Cancer Center's research reputation as one of the three best in Canada; 5) expand immunology research, the study of genetic defects and research into nutrition and diabetes; and 6) improve the ratio of full-time staff to students to closer approximate the ratio at the UofC in Calgary. It was an ambitious program especially since there had been a freeze on hiring at the UofA, instituted in November 1983, for the still expanding university and its 23,286 full-time students.[17]

Dr. Wilson distilled his goals down to five priorities. They were to: 1) review and recruit new department chairmen; 2) recruit an Associate Dean-Research and help him develop, foster and accelerate the expansion of the research program including planning for the Heritage Medical Research building; 3) complete the curriculum review which had been underway since the spring of 1984, and focus on the admissions criteria and the initiation of student counseling services; 4) address the provisional approval ratings by the RCPSC by strengthening the PGME committee and its policies; and 5) improve the faculty and teaching hospital relations by developing a good working relationship between the Faculty, the hospitals, the Academy of Medicine and the specialists societies in Edmonton, through new affiliation agreements. The thorny issue of clinical practice plans and group practice arrangements was addressed, and a faculty-wide ethics review process for all clinical research projects was initiated.[18]

Sod turning race for the 1st Heritage Medical Research building in 1984. (L to R) Lionel E. McLeod, John Schlosser, Tevi Miller (Chancellor), Myer Horowitz, Eric Geddes

Dr. Wilson's strategy was straightforward. "I believe we need a bias for action – that is a preference for doing something rather than sending a question through cycles and cycles of committee reports. Creativity or imagination results in new ideas, and these are relatively easy to generate; innovation requires a new idea plus the necessary action to test or develop it. It is innovation, that is ideas plus action that we must be fostering."[19]

Dr. Wilson began a practice of chairing all search and selection committees for department chairs and found that he did not have difficulty attracting strong candidates. After national and international searches, outstanding individuals were appointed as chairs in seven clinical departments: Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Pathology, Radiology and Diagnostic Imaging, and

16. Cooper, Dave "Medical School Dean vows shake-up", Edmonton Journal, March 16, 1984.
17. Watson, Neal Gateway, January 17, 1984.
18. Wilson, Douglas Roy Annual Report for Period July 1 – December 31, 1984 submitted to Dr. Peter Meekison, VP (Academic), UofA, February 25, 1985.
19. Wilson, Douglas Roy Report to 2nd Faculty Council meeting on November 23, 1984.

Dean Wilson's Assistant and Associate Deans, 1984

for three basic science departments: Physiology, Anatomy (now including Cell Biology), and the new Department of Medical Microbiology and Infectious Diseases.

A new team was created in the Dean's office including Dr. Mark Poznansky (Research), Dr. Adrian Jones (Clinical Affairs), Dr. Chuck Harley (Undergraduate Education), and Dr. George Goldsand (Postgraduate Education), as Associate Deans Dr. Chris Cheeseman Ph.D. (Student Affairs), Dr. Donald Fennar Ph.D. (Planning).[20] Interviews were introduced as an essential part of the admissions process. The Dean arranged a monthly luncheon with the Medical Students Association (MSA) who contributed to a comprehensive 'survivor' manual for new medical students.

1985: Dr. Wilson's initiatives included better coordination of the four hospital internships, a review of the allocation of residents to postgraduate programs, alignment of students with the manpower requirements of the province and country, establishment of the new faculty division of neurosciences, and appointment of an international health advisory committee.

As Dr. Wilson geared up for 1985, he took two weeks to join an eight member provincial delegation to 'sister provinces' in Asia, visiting Sapporo Medical College (Hokkaido province, Japan), Harbin Medical College (Heilongjang province northern China), and the Hallym Medical College (Chunchon province, South Korea). While in China Drs. Wilson and Mo Watanabe (UofC Dean of Medicine) were made Honorary Professors in Harbin, where Chinese medical leaders were anxious to catch up on foreign medicine after the disruption of the cultural revolution. In Japan, they enjoyed gift exchanges with numerous speeches and toasts, and initiated a faculty exchange agreement.[21]

After nine months Dr. Wilson reported to the Board of Governors on March 1, 1985, that he considered the strengths of the faculty were in clinical teaching, certain areas of basic science research, research funding and physical facilities. Areas requiring improvement were undergraduate self-learning, clinical research, interdepartmental and interfaculty collaboration. The monitoring tools would be the accreditation reports, departmental reviews by the President's Advisory Committee on Campus Reviews (PACCRs) and the ranking of students on their MCC exams. Dr. Wilson's guiding principle was, "We judge ourselves by what we intend to do; we are judged by others by what we have done."[22]

By September, a new mission statement had been developed for the faculty of medicine. Its focus was on excellence in education (undergraduate, postgraduate, graduate, continuing), research (basic and clinical), and leadership in patient care, with the provision of appropriate services to the public and institutions in the community.[23] In an editorial in the new faculty of medicine newsletter, Dr. Wilson broadened the mission statement to include

Jane and Douglas Wilson in China, 1985

20. Wilson, Douglas Roy Faculty of Medicine Review submitted to the Board of the University of Alberta Hospitals, page 2, September 4, 1985.
21. Wilson, Douglas Roy Letter to Dr. Wilson's mother (5 pages) recording details of the two week trip to Japan, Korea and China. Copy in the Wilson Family Archives.
22. Wilson, Douglas Roy Presentation to Faculty Council, page 2, November 23, 1984. Copy in the Wilson Family Archives.
23. Wilson, Douglas Roy Missions of the Faculty of Medicine outlined in the Faculty of Medicine Review for the Board of the University of Alberta Hospitals, September 4, 1985.

contributing to the improvement of health through understanding disease, promoting good health and preventing disease.[24]

1986: Dr Wilson had begun monthly meetings and an annual retreat on-campus, with the departmental chairs. At the retreat he reminded his colleagues they were the leaders and role models for the faculty. He emphasized that "Leadership is in the power to convey values. High standards are the first quality. Vision is the second – broad, open, coordinated, collaborative, willing to be discussed; and the third is determination. Most initiatives are not fully formed in the beginning but must be identified, modified, and strengthened to become effective, that is doing the right thing; and to be efficient or by doing things right."[25]

One example was the response to the Royal College's threatened withdrawal of accreditation approval for the general internal medicine program. In the spring of 1986, a committee under Dr. Tyrrell recommended that the very few (4) general internist-teachers in the University of Alberta Hospital, be aligned with one or two subspecialties units. With the appointment of Dr. E.G. King as the chairman of the Department of Medicine (1986), a new Clinical Teaching Unit was put in place, modified slightly by the physical layout of the new Walter Mackenzie Centre.[26]

The first issue of the new student journal Iatros was released in the fall of 1986. In his opening

Inaugural issue of the Medical Student Journal, Iatros, Fall/Winter, 1986

editorial Dr. Wilson wrote of his excitement in participating in the project, one close to his heart in terms of its potential benefits. He saw the journal as an opportunity to improve communication, not just to physicians but to the public, government and media. He expected students to describe not just their scholarly work but their views on a broad range of current issues. The second benefit was to develop a communication channel with the faculty's alumni and provide them with an opportunity to be made aware of the achievements and activities of their colleagues. He encouraged the editors and the future editors to "build on strength" and rely on the talents and enthusiasm of undergraduates, and the loyalty and interest of the alumni.[27]


FACULTY OF MEDICINE BULLETIN

Fall 1985 8-16

Message from the Dean

The Faculty of Medicine at the University of Alberta is an exciting place. In the pages of our new Bulletin we wish to communicate to you, our colleagues and friends, some of the enthusiasm we feel regarding the development of our Faculty.

The Faculty of Medicine has a broad mission in education at the undergraduate, postgraduate, and graduate levels, including the provision of programs in continuing medical education for practising physicians in Northern and Central Alberta. We have similar major commitments to advance knowledge through basic and clinical research and to play a leadership role in providing the highest quality of patient-care and service to the community-at-large.

The Bulletin will reflect these three broad areas of our mission in education, research, and service. It will provide you with a sampling of our varied activities, new initiatives, and departmental news. We shall include profiles of people who make the Faculty a productive and enjoyable place of work and one with which we are proud to be associated. By sharing news with you twice a year through the Bulletin, I hope you will feel that you are part of our new developments and share our excitement. We welcome your views on the Bulletin and look forward to continued communication with you.

Douglas R. Wilson, M.D.
Dean

Inaugral issue of the Faculty of Medicine Bulletin, Fall 1985

1987: There were important accreditations scheduled in early 1987. The undergraduate program, which had received a critical survey and three year accreditation in 1983, received many favorable comments from the Canadian-US team, on the curriculum review and upgrades, the new leadership in the departments, and the favorable responses from the students. It resulted in a full five year approval. In the Royal College accreditation one month later, 27 of the 32 specialty training programs were fully approved for five years. The remainder were provisionally approved. The accreditation of the CME program was completed

24. Wilson, Douglas Roy Dean's Letter, *Iatros* 3(2): 2, Spring/Summer 1989.
25. Wilson, Douglas Roy "Leadership and Role Models". Presentation to the Chairman's Retreat, September 10, 1985. Copy in the Wilson Family Archives.
26. Wilson, Douglas Roy "The Life and Times of a Clinical Teaching Unit", Iatros 2(2): 17, Spring 1988.
27. Wilson, Douglas Roy Dean's Letter, *Iatros* 1(1): 4, Fall/Winter 1986.

First HMRC research buildings 1984-88

later, although uncertainty over its funding was an issue. This was subsequently resolved.

During 1987 the Royal College decided to transfer the R.S. McLaughlin Examination Centre, founded by Dr. Donald R. Wilson (a third Dr. D.R. Wilson) in 1967, to Ottawa. With support from the Dean the staff were kept and the Division of Studies in Medical Education was launched to support teaching and evaluation in the Faculty.

Another key initiative was the launching of the aboriginal healthcare careers program. The Faculty designated two additional positions for aboriginal students in each entry class and appointed a full-time coordinator to recruit and support aboriginal students from Alberta and across Canada. The program would become one of the two largest (with Manitoba) and most successful ones in Canada, with more than thirty medical graduates (to 2009).

The ability and responsiveness of the staff and residents was tested by the touchdown of a tornado on July 31, 1987 in Leduc, Beaumont and Millwoods in southeast Edmonton. It cut a two block wide, 30-kilometer long path. Twenty-three of the 55 patients brought to the UAH emergency department were admitted. One death occurred.

A major goal of the Faculty that year was to obtain highly competitive salary awards for young clinician-scientists and basic scientists. Access to AHFMR funding allowed growth in many departments, and a faculty-wide Research Advisory Committee was established to review priorities and candidates. The Department of Biochemistry, led by Dr. John Colter, was already a nationally recognized research powerhouse and helped to set a high standard for recruitment of new faculty.

Laboratory research space was rapidly becoming in short supply. The AHFMR came to the aid of the University by providing support for a new research building, with the understanding that it would be used for new faculty members recruited into interdisciplinary research groups.

Building on existing strengths, the Faculty established the three new research groups in lipid and lipid protein metabolism, rehabilitation neuroscience, and cardiovascular research. The futuristic Heritage Medical Research Centre (HMRC) on 87th Avenue, was opened. It was designed for more than fifty independent investigators.

A Clinical Wing was added to the HMRC with support from the Heath Science Centre Project Board, to include perinatal research, burn research, and diabetes. While working in an exciting interdisciplinary research environment, faculty members maintained their teaching and related responsibilities in their home departments. Thus the Heritage Medical Research Centre did not become a separate research institute within the Faculty of Medicine.[28] A secondary benefit was the involvement of over one hundred undergraduate students in summer research programs.

1988: The Faculty celebrated its 75th anniversary. Dr. Wilson, with the support of alumni, faculty, and students, undertook the first major fund development campaign for the Faculty called 'Physicians for the Future', chaired by

75th Anniversary Donor Board, WCM HSC, 1988

28. Wilson, Douglas Roy "Fostering interdisciplinary research in a Faculty of Medicine: An integrated model." *Clinical and Investigative Medicine* 13: 367-369, 1990.

former Board of Governors Chairman, Dr. John Bradley.[29] Alumni leaders were contacted, along with individual donors, private foundations, and healthcare and pharmaceutical corporations, resulting in a much greater awareness of the Faculty of Medicine, and very substantial donations, many of which were matched by the Government of Alberta. President Horowitz emphasized how important fundraising was, to provide the "essential extras for excellence at a national level." A large donor wall with space for additions was created in the Mackenzie HSC. It recognized the $5 million raised during the campaign.

The fundraising proceeds allowed a number of endowed chairs to be established including the Walter Stirling Anderson Chair in Surgery, the Firefighters Chair in Burn Research, the Muttart Chair in Clinical Immunology and Autoimmunity, the Henry Toupin Chair in Neuroscience, and the J. Alan Gilbert Chair in Medical Education. It also funded the 75th anniversary graduate scholarships and undergraduate student bursaries.

The Faculty of Medicine held an open house in March. Over 1,000 visitors participated in the 40 different activities in the laboratories, classrooms and clinics, organized with considerable help from the Medical Student's Association.[30]

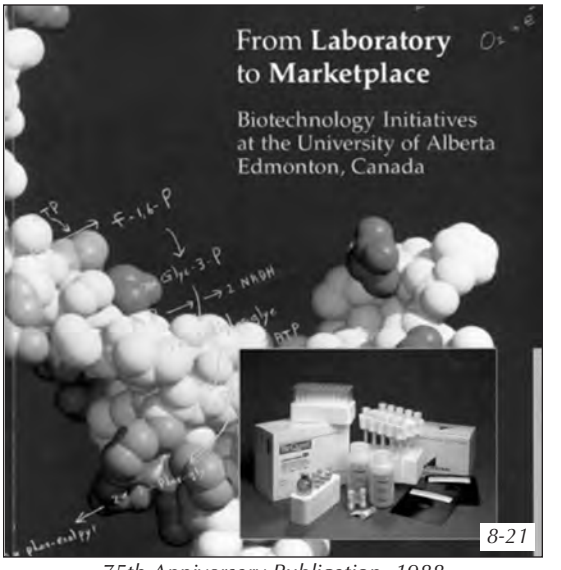
In his Iatros editorial Dean Wilson wrote about Quecumque Vera or 'whatsoever things are true', with three of his own truths. First, the medical school has shown great ability to adapt and grow over its 75 year history. Secondly, much of the school's vitality and strength came from its undergraduate students, and thirdly, alumni support and involvement were absolutely essential for the adaptation, growth and movement forward of the faculty.[31]

At a special convocation on June 2, Dr. Lionel McLeod and Dr. Robert Macbeth were given honorary degrees from the University of Alberta. In a separate celebration Dr. Joseph Martin, Professor of Medicine and Neurology at Harvard University, was recognized as the 75th anniversary distinguished scientist; Dr.

Dr. Johnny Brisbois receiving his "Tailfeathers" blanket

Tak Mak from the University of Toronto was recognized as the distinguished Ph.D. graduate; and Drs. Cyril Kay and Larry Smillie of the Department of Biochemistry were recognized as the most distinguished faculty researchers for their leadership of the MRC Research Group in Protein Structure and Function.

In his University convocation address Dr. Wilson highlighted challenges for the Faculty. They were to integrate the rapid increase in new knowledge and new technology, adapt to new ethical issues, contain costs, continue to evaluate the quality of care, plan for the in-



75th Anniversary Publication, 1988

29. Wilson, Douglas Roy Dean's Letter, "What is the Mission of our Medical School and how does it relate to our 75th anniversary", in *Iatros* 3(2): 2, Spring/Summer 1989 (75th anniversary fundraiser).

30. Cheeseman, Chris "From Bench to Bedside. Faculty of Medicine 75th Anniversary", Faculty of Medicine Open House, March 19, 1988. *Iatros* 2(2): 35-36, Spring/Summer 1988. Also see Dr. Wilson's cover page letter to the readers of the Faculty of Medicine Bulletin, No. 6, page 1, Spring 1988.

31. Wilson, Douglas Roy "The Faculty of Medicine, University of Alberta on its 75th anniversary", Dean's Letter, *Iatros* 2(2): 1, Spring/summer 1988.


8-22

1988 Outstanding Alumnus award recipient Dr. Joseph Martin. Congratulated by Drs. L.E. McLeod (L) and Dean Wilson (R)

creasing number of elderly, and focus on the preventative issues of health promotion and disease prevention. He concluded "that on this happy occasion we are proud of our past, we are enthusiastic about the present and we are determined to realize our vision of the future."[32]

Dr. Wilson predicted that on the faculty's 100th anniversary that "the 1980s and 1990s will emerge as the era in which the faculty became recognized nationally and internationally for its broadly based contributions to biomedical research."[33]

To cement the Faculty story, the 75th anniversary committee commissioned Elise Corbet to write a history – Frontiers of Medicine: A History of Medical Education and Research at the University of Alberta, which expanded on the 50th anniversary booklet by Dr. John Scott (1963) and Dr. Robert Fraser's History of Cardiology to 1969.[34] In addition, a monograph was released entitled From Laboratory to Market Place: Biotechnology Initiatives at the University of Alberta.[35]

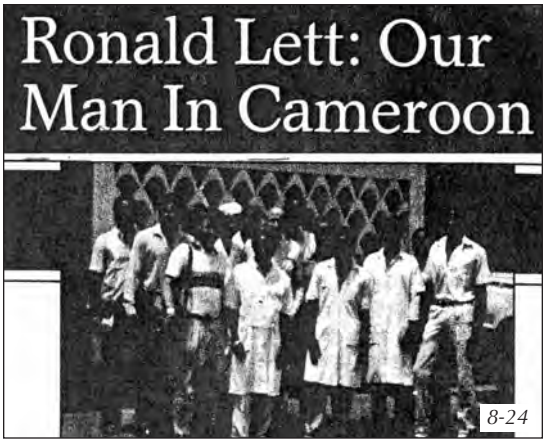
8-23

On the international health scene, the faculty's first CIDA grant was received. It gave the faculty almost $700,000 over four years, to work with the health sciences center at the University of Yaounde in the Cameroon. The focus was to be on postgraduate education in surgery and primary healthcare education and research. The rural program was centered in western Cameroon at the suggestion of Dr. Deiter Lemke. Dr. Ron Letts went for two years to improve the surgical training program and Dr John Taylor went to teach emergency medicine. Dr. Wilson also visited the medical school for a week.[36]

1989: Dr. Wilson was reappointed Dean for a second five-year term. In accepting the appointment Dean Wilson reiterated "how pleased and honored he was to help make the medical school a place where it's fun to go to work – fun because of the people involved, fun because of the efforts for continuous improvement and fun because of the obvious results of these efforts." He said he would continue his five year plan to establish a tradition of excellence by national standards, work on continuing to improve the curriculum, decrease the didactic lecture content and increase the emphasis on concepts and principles.[37]

In a presentation to the Royal College meeting in Edmonton on "Specialists for the 21st Century: will we still be healers", Dr. Wilson recognized how medicine had remained a doctor

32. Wilson, Douglas Roy Report to the University on the Special Convocation, page 6, June 2, 1988. Copy in the Wilson Family Archives.
33. Wilson, Douglas Roy Dean's Letter, *Iatros* 3(1): 1, Winter 1989/90.
34. Corbet, Elise A. *Frontiers of Medicine*, 250 pages, UAP, 1990. Dr. John W. Scott's *History of the Faculty of Medicine 1913-1963*, on its 50th anniversary, UAP, 1963 and Dr. Robert S. Fraser's *History of Cardiology* to 1969, UAP, 1992.
35. 75th Anniversary Committee *From Laboratory to Market Place*, 48 pages, 1988. Copy in the Wilson Family Archives.
36. Bulletin Editor "CIDA and the Alberta – Cameroon Health Project", Faculty of Medicine Newsletter, page 25, Spring 1988.
37. Wilson, Douglas Roy Dean's letter on "Challenges and Plans for the Next Five Years" in Iatros 4(1): 2, Fall/Winter 1989. Further elaborated upon in Dr. Wilson's Report to the Search Committee for the Dean, Faculty of Medicine, University of Alberta, 9 pages, January 1989. Copy in the Wilson Family Archives. Confirmation that the details had been worked out to commence the one month (undergraduate) rotation and three month (second year FP residency experience) in a smaller community, were provided in Dr. Wilson's Dean of Medicine's Annual Report for 1991. They were designed to increase physician retention outside Calgary and Edmonton. Copy in the Wilson Family Archives.



Iatros, Fall/Winter 1986

centered profession, through technological advances in diagnosis and treatment, instead of a more patient-centered one.

The distinction between disease and illness Dr. Wilson said was critical. "Our efforts to diagnosis and treat are not sufficient often to fully treat the patient's illness…The patient's illness incorporates his or her personal expectations, feelings and fears about their disease…Medicine has functioned in the tradition of Hippocrates for 2,000 years before it could offer any scientific help to patients, because sick people needed first of all, attention. In the transformed clinical method (McQuinny) it means open discussion with the patient regarding his expectations, feelings, fears or the personal experience of his illness, as part of the process of evaluation and treatment. Quiet neutrality and doing no harm are insufficient."[38]

During the year Dr. Wilson met again with each of the 18 department heads, reviewed their five years plans, attended monthly meetings with them and chaired the two-day fall retreat. Alberta Health funding through the teaching hospitals provided new GFTs in family medicine and anesthesia, radiology and ophthalmology. He was reassured by the UofA's MRC funding which was up 43% since 1987/88, compared with the national average of 13%.

A Students' International Health Association (SIHA) began in Sept/89.[39] Dean Wilson suggested they establish their own mission and objectives, which became 1) to raise international awareness of international health issues through seminars; 2) to create awareness through education and networking and projects like collecting eye glasses; 3) to serve as a focal point for dialogue and action. This included helping with the intercity project at the Boyle-McAuley clinic, a food bank project, and contributions to the Guyana project. 5) The final objective was to promote the international health experience in the Canadian context.

By year-end budgetary clouds were beginning to appear on the horizon. The government was under-funding the university by about one percent per year, which in medicine amounted to more than one million dollars in five years. Notwithstanding, educational programs were enhanced and total research funding increased by 60%, including a growing contribution from industry.

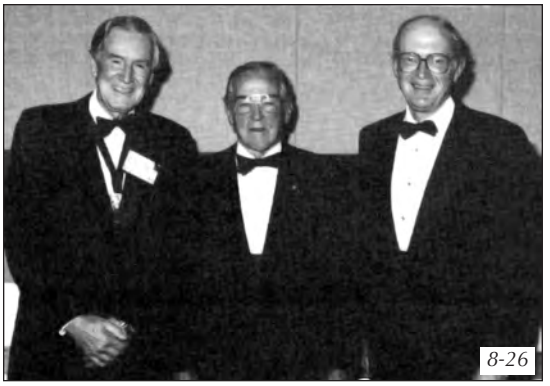
1990: In an editorial on "Our medical school and the Community beyond it" Dr. Wilson used the Edinburgh declaration (1988) as his theme. "The aim of medical education is to produce doctors who will promote the health of all people." A one-month experience in family medicine was introduced into the student internship program. That year assessment was initiated to determine the current and future health needs of the Blood Indian tribe, to gain a greater appreciation for their healthcare needs and aspirations.[40]

Jane and Douglas Wilson yachting with Dr. E.G. King, Vancouver, August 1988

38. Wilson, Douglas Roy "Specialists for the 21st Century: Will we still be leaders". Presentation to the Royal College of Physicians and Surgeons, September 1989, 10 pages, Edmonton, Alberta. Published in the *Annals of the Royal College of Physicians and Surgeons of Canada* 23: 145-146, 1990.

39. Russell, Barbara "The Students International Health Association", *Iatros* 4(2): 38-39, Spring 1990.

40. Wilson, Douglas Roy Editorial entitled "Our Medical School and the Community Beyond", Iatros 4(2): 2, Spring 1990.



The three Drs. Wilson, Donald R., Donald Robert and Douglas Roy, at the 1989 Convocation ceremony.

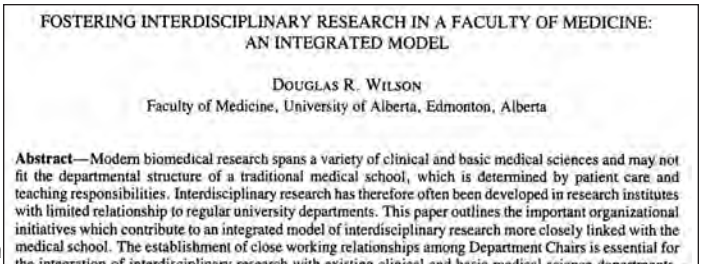
In a presentation on "Fostering Interdisciplinary Research in a Faculty of Medicine: An integrated model", Dr. Wilson identified the principles he had followed in creating the model at the UofA. The integrated model, as compared with the research institute model, aimed for closer integration of research groups within the medical school. It was facilitated by the physical proximity of the AHFMR supported clinical and heritage medical research buildings and the Mackenzie Health Science Centre.

The integrated model allowed the Faculty to 1) establish a close working relationship with department chairs, 2) identify priority research areas, 3) establish guidelines for research groups with 4-8 Ph.D. and MD scientists, 4) provide physical proximity for the research group, 5) meet with the directors of the research groups regularly, and 6) review the research progress and plans every 3-5 years. Members maintained their individual department affiliations. Administrative oversight remained in the Dean's office through allocation of new faculty members, space, and future development.[41]

In his Iatros editorial (Fall, 1990) on "Medical Education – a lifelong learning process", Wilson reflected on how Dr. Osler continued to learn from each patient throughout his life. The importance of medical education he said "stemmed from the fact that medical learning is fundamentally an active process. It requires learning to solve problems or at least partially solve them. It spans many disciplines and has a huge information base requiring skills to access the computer and the motivation to do so. This in turn requires critical appraisal skills and the need to be comfortable with uncertainty as well as being aware of the limitations of our knowledge. Communication skills are essential, as is an understanding of healing or humanistic functions, all of which are geared to establishing an effective and therapeutic relationship with patients."[42]

At the 23rd annual student research day in October, Dean Wilson emphasized the importance of basic and clinical research in medicine. Twenty-one of 70 competing students made research day presentations. Their projects were funded by grants from the AHFMR, MRC, other agencies, and the Faculty of Medicine. In 1990 undergraduate students finished first on the national exams amongst the 16 medical schools. The didactic lectures continued to decrease, being replaced by small group teaching, more electives and selectives. The Division of Studies in Medical Education examined the introduction of problem-based learning. A Rural Physician Action Plan (RPAP) was developed by the two Alberta medical schools with new funding from Alberta Health.[43]

Of the 14 approved networks for the National Centres of Excellence (NCEs), six were in biological sciences and three had important



FOSTERING INTERDISCIPLINARY RESEARCH IN A FACULTY OF MEDICINE: AN INTEGRATED MODEL

DOUGLAS R. WILSON
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Abstract—Modern biomedical research spans a variety of clinical and basic medical sciences and may not fit the departmental structure of a traditional medical school, which is determined by patient care and teaching responsibilities. Interdisciplinary research has therefore often been developed in research institutes with limited relationship to regular university departments. This paper outlines the important organizational initiatives which contribute to an integrated model of interdisciplinary research more closely linked with the medical school. The establishment of close working relationships among Department Chairs is essential for the integration of interdisciplinary research with existing clinical and basic medical science departments. Department Chairs must see the development of interdisciplinary research groups as a means of enhancing research related to their disciplines. It is important to identify priority research areas using broad-based interdisciplinary committees (for example in neuroscience), and to establish guidelines for recruitment of selected research groups which include both Ph.D. and M.D. scientists who maintain appointments in a regular department for teaching and other academic functions. Physical proximity for the group may require reorganization of departmental research space which is maintained under the overall control of the Dean. The ability to maintain and renew interdisciplinary research groups, or to phase them out if necessary, can also be strengthened by using this integrated model.

8-27

Journal of Clinical Investigation, 13(6): 367-369, 1990

41. Wilson, Douglas Roy "Fostering Interdisciplinary Research in a Faculty of Medicine – an Integrated Model". *Journal of Clinical Investigation* 13(6): 367-369, 1990.
42. Wilson, Douglas Roy Editorial entitled "Medical Education – a Lifelong Learning Process", *Iatros* 5(1): 2, Fall/Winter 1990.
43. Wilson, Donald Roy Dean's Report to Faculty Council, 1989/90, 5 pages, September 1990. Copy in the Wilson Family Archives.


8-28

Al Oeming and his cheetah, Louis Franciscutti and Dean Wilson

nodes at the faculty of medicine: the protein engineering network, neuroscience network and bacterial disease network. The Epicore Center for clinical trials and population-based research on heart disease was opened in the HMRC clinical wing in June. Total MRC grants awarded left the UofA fourth out of 16 medical schools.

On the negative side, animal services and facilities were deemed non-compliant in an accreditation visit. The Department of Advanced Education was persuaded to provide $8.5 million in capital funds to renovate the animal holding area in the basement of the MSB and HMRC.

Still more fiscal clouds were appearing. The university applied a 2.5% stringency tax on all faculties to cover its deficit. This represented a $500,000 reduction to the Faculty of Medicine budget. Notwithstanding, the number of FTEs increased by 29 to 311, largely through external research salary awards. New faculty divisions were created in bioethics and in emergency medicine, and departmental status was proposed for oncology and medical genetics.

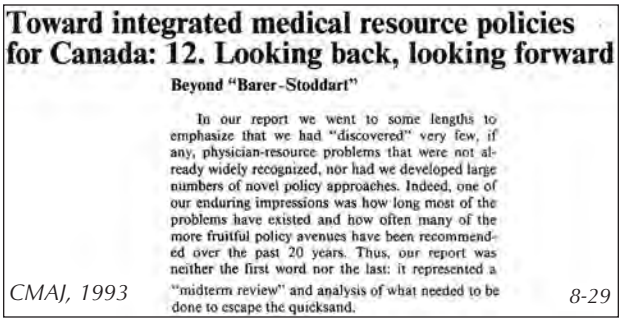
1991: Early in 1991 Dean Wilson participated in two Dean's Council retreats, led by President Paul Davenport. They were to address the university's fiscal under-funding. In response, the Faculty's Department of Applied Sciences was downsized by 40%. Nationally, the review by the Deputy Ministers of Health of undergraduate and postgraduate training at academic health centers, better known as the Barer-Stoddart Report, was tabled in June.[44]

The provincial government announced in April there would not be a freestanding Children's Hospital in the foreseeable future. The Children's Board was directed to consolidate pediatric services on no more than two major sites and manage a budget in association with the Edmonton region health facilities planning council.

The 12-month undergraduate pre-accreditation, self-study and action plan began in preparation for the visit in April 1992, and involved many staff, students and alumni. Two pre-licensure years of training before entering family practice became mandatory, with the MCC introducing a clinical skills exam after 12 months of postgraduate training. A new format for careers day was introduced. The graduating class of 1991 presented the Dean with white gloves for achieving a 100% pass rate, while leading the country for the second year in a row.

Forty students participated in the new rural RPAP program for at least one month. Led by Dr. David Moores as the new chair of Family Medicine, residents began to spend at least three months in about 20 rural practice settings. A grant from the Max Bell Foundation established primary care research units at UofA and UofC. Dr. Fanning presented the faculty's report to the president's Commission on Equality and Respect. A faculty code of conduct was drafted. The AHFMR provided a five-year grant for clinical evaluative research, to conduct trials and assess healthcare outcomes and new technology, in the newly completed Clinical Wing of the Heritage Medical Research Centre (HMRC).

In his Iatros editorial (Summer, 1991) Dr. Wilson focused on "Women in Medicine."[45] From virtually none at the beginning of the 20th century, they now made up 45% of all UofA


Toward integrated medical resource policies for Canada: 12. Looking back, looking forward

Beyond "Barer-Stoddart"

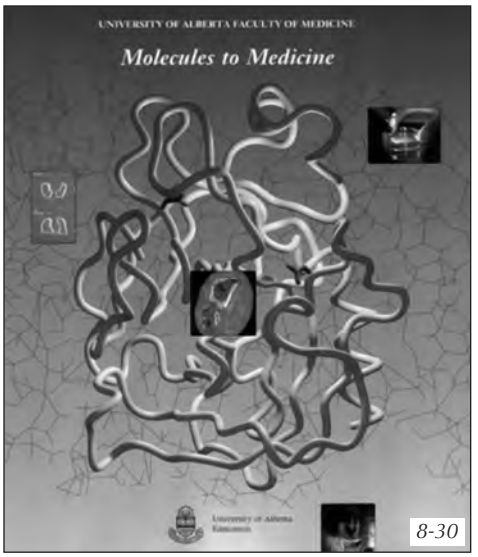
In our report we went to some lengths to emphasize that we had "discovered" very few, if any, physician-resource problems that were not already widely recognized, nor had we developed large numbers of novel policy approaches. Indeed, one of our enduring impressions was how long most of the problems have existed and how often many of the more fruitful policy avenues have been recommended over the past 20 years. Thus, our report was neither the first word nor the last: it represented a "midterm review" and analysis of what needed to be done to escape the quicksand.

CMAJ, 1993 8-29

44. Barer, Morrish L., Stoddart, Greg L. Highlighted as "Toward Integrated medical resource policies for Canada", Twelve reports were published in the CMAJ from February 1, 1992 to January 1, 1993.

45. Wilson, Douglas Roy Editorial entitled "Women in Medicine", *Iatros* 5(2): 2, 3, Spring/Summer 1991. Tasneen Lalani, in "Perspectives on Women in Medicine" (page 5-6), highlighted a March 14, 1991 speech by Federation of Medical Women President Dr. Mary Donlevy, who rhetorically asked "Do we have it all".

medical students. The first UofA woman student was admitted in the second class in 1914. The top student in the first MD graduating class of 1925 was the only female Leone McGregor. Women he said, have tended to choose careers in family medicine and the specialties of obstetrics, pediatrics, internal medicine or psychiatry. They comprise 32% of the assistant professors but only 7.5% of full professors.



80th Anniversary, Faculty of Medicine 1993

1992: Many members of the Dean's research office helped develop a strategic plan to broaden the mandate of the MRC and AHFMR. The publication Molecules to Medicine was released highlighting selected research initiatives.[46] One of the six North American Excellence grants, was received from the Juvenile Diabetes Foundation International, to further strengthen the contributions of the interdisciplinary research team led by Dr. Ray Rajotte, in advancing islet cell transplantation.

The fiscal clouds were now heralding a storm, with the university required to present budget scenarios for a possible 5 or 10% reductions over the next two years. The eventual reduction was 2% to the faculty of medicine, similar to reductions in other faculties.

The government decided the principal site for the Children's Health Center of Northern Alberta, later named the Stollery Centre, would be the Walter Mackenzie HSC. It was to have

Drs. D.R. Wilson, D. Smith, R. Swallow, A. Gilbert

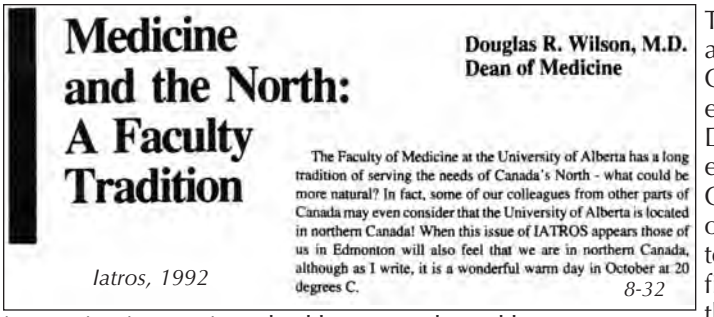
satellite sites at Caritas and the RAH, and would have a separate budget and its own medical staff organization.

In his Iatros editorial (Spring/Summer 1992) Dean Wilson focused on "The relationships with government, university teaching hospitals and the medical school, which he said were complex but the central goals must still be to meet the future health needs of Albertans. The social contract must change progressively as the needs for health and healthcare change."[47]

At the national level the Ministers of Health endorsed a 10% reduction in postgraduate and undergraduate training positions, as proposed in the Barer-Stoddard report. The report was reviewed by the MSA. It agreed with the view of health in a societal context, and the need for more training outside the urban tertiary care environment. A national database on residency opportunities was deemed helpful, as was the recommendation for sufficient training positions nationally to accommodate all medical graduates. The MSA pointed out the report ignored the explosion in the elderly population.[48]

In his Iatros editorial (Fall/Winter, 1992) Dean Wilson wrote about the faculty's tradition in providing medical care in the north, where Dr. Otto Shaffer had been a pioneer physician for over 25 years in the North West Territories. Part of the faculty's social contract was to connect northern physicians to medical information services and provide consultations within 24 hours. There was a weekly teleconference program with physicians in small northern communities. Studies on nutrition, and large scale

46. (Wilson, Douglas Roy) *Molecules to Medicine*, Faculty of Medicine, 62 pages, 1993.
47. Wilson, Douglas Roy Editorial entitled "The Government and the Faculty of Medicine", *Iatros* 6(1): 2, Spring/Summer 1992.
48. Straathof, Danny The Barer-Stoddart Report: Student Response in *Iatros* 6(1): 8, Spring/Summer 1992.



Medicine and the North: A Faculty Tradition

Douglas R. Wilson, M.D.
Dean of Medicine

The Faculty of Medicine at the University of Alberta has a long tradition of serving the needs of Canada's North - what could be more natural? In fact, some of our colleagues from other parts of Canada may even consider that the University of Alberta is located in northern Canada! When this issue of IATROS appears those of us in Edmonton will also feel that we are in northern Canada, although as I write, it is a wonderful warm day in October at 20 degrees C.

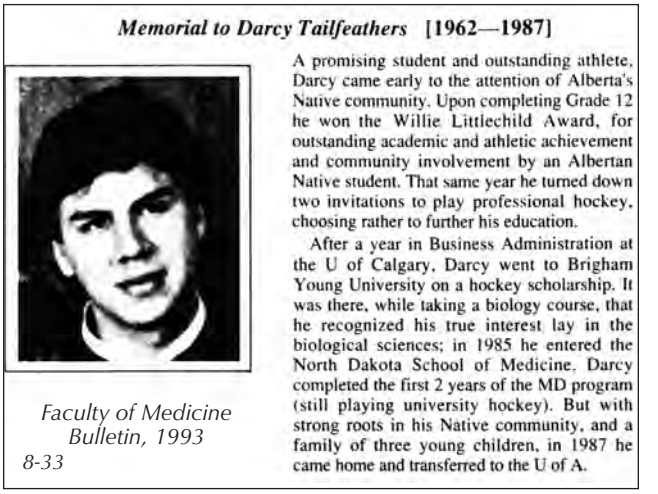
Iatros, 1992 *8-32*

immunization projects had been conducted by Drs. J. Godel and H. Pabst, complementing other studies on hepatitis carriers (B. Larke), the Coppermine tuberculosis epidemic (W. Vanast) and the Franklin expedition (R. Amy).[49]

All the undergraduate students passed the national exam, resulting in another pair of white gloves for the Dean. More than 50% of the senior students spent at least one month in rural practice. The Glaxo Heritage Research Institute led by Dr. Lorne Tyrrell, was approved to study viral pathogenesis, with an investment of up to $15 million over the next 10 years, and the completion of a 6,000 square foot isolation unit in the Heritage Medical Research Centre. The prospect of Alternative Funding Plans (AFPs) for academic medical and clinical staff came from a Barer-Stoddart report recommendation. Dr. Wilson was appointed the chair of the advisory committee on AFPs.

In his second three year term on the Medical Research Council, Dr. Wilson was actively involved on the MRC executive, to help initiate a national strategic plan, under its new president Dr. Henry Friesen. Workshops were undertaken across Canada under the MRC's rubric of Investing in Canada's Health. The ACMC appointed Dr. Wilson chair of the committee on accreditation of Canadian medical schools, having previously been the Canadian representative on the American Liaison Committee, on Medical Education, a joint Committee of the Association of the American Medical Colleges and the American Medical Association. Site visits would require considerable time on his part.

The February 25, 1976 affiliation agreement between the Provincial Cancer Hospital's Board and Governors of the UofA, drawn up by Dr. Mackenzie when he was the executive director of the Provincial Cancer Board, was revised as part of the proposal to raise Oncology to departmental status. The benefits Dr. Wilson said would enhance the three cornerstones of academic medicine, service, education and research, related to cancer. It would enhance recruitment, promote multidisciplinary research, expand linkages with the UofC, and strengthen the faculty's role as a center of excellence. The new Department of Oncology received University approval the following year.[50]



***Memorial to Darcy Tailfeathers* [1962—1987]**

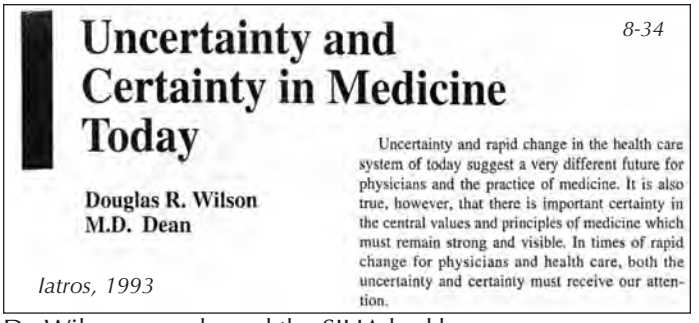
A promising student and outstanding athlete, Darcy came early to the attention of Alberta's Native community. Upon completing Grade 12 he won the Willie Littlechild Award, for outstanding academic and athletic achievement and community involvement by an Albertan Native student. That same year he turned down two invitations to play professional hockey, choosing rather to further his education.

After a year in Business Administration at the U of Calgary, Darcy went to Brigham Young University on a hockey scholarship. It was there, while taking a biology course, that he recognized his true interest lay in the biological sciences; in 1985 he entered the North Dakota School of Medicine. Darcy completed the first 2 years of the MD program (still playing university hockey). But with strong roots in his Native community, and a family of three young children, in 1987 he came home and transferred to the U of A.

Faculty of Medicine Bulletin, 1993
8-33

1993: In January 1993 the Royal College gave the faculty full approval for 33 of the 38 programs, but asked the faculty to make significant efforts to address the relationship between teaching staff and residents. The ACMC-LCME accreditation review of the undergraduate program resulted in the Faculty receiving its first seven-year approval, with only the need to provide a progress report in 1994.[51] Curriculum changes were minimal. A problem-based learning block in cardiovascular and pulmonary disease, was introduced. In his 1993 annual report Dr. Wilson congratulated the first aboriginal medical student graduate, Dr. Johnny Brisebois, a Mohawk from Kahnawake. "He has great leadership characteristics."

49. Wilson, Douglas Roy Editorial entitled "Medicine and the North: A Faculty Tradition", *Iatros* 6(2): 2, Fall/Winter 1992.
50. Wilson, Douglas Roy "Directions of the Faculty of Medicine in Relation to the Formation of the University's Department of Oncology: Cross Cancer Institute", presentation at the AGM, March 1, 1993. Copy in the Wilson family archives.
51. Wilson, Douglas Roy Dean's Letter in the first Faculty Newsletter, September 20, 1993.



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Uncertainty and Certainty in Medicine Today

Douglas R. Wilson
M.D. Dean

Uncertainty and rapid change in the health care system of today suggest a very different future for physicians and the practice of medicine. It is also true, however, that there is important certainty in the central values and principles of medicine which must remain strong and visible. In times of rapid change for physicians and health care, both the uncertainty and certainty must receive our attention.

Iatros, 1993

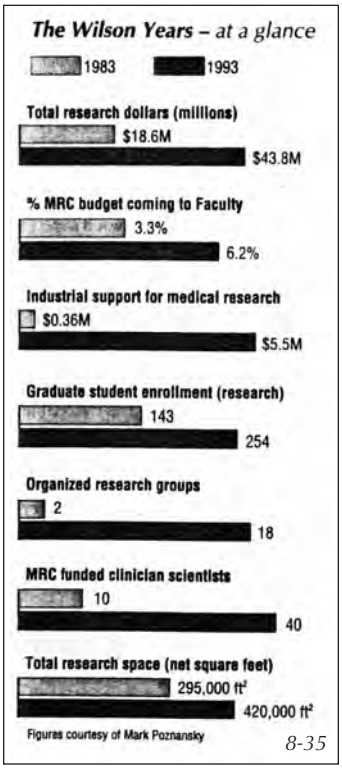
Dr. Wilson was pleased the SIHA had become a major organization among health science students and had undertaken a health initiative in Guyana. The program had supported 10-15 students, spending two months in South America during the previous three years. Another 65 students spent one month in 18 different small communities outside Alberta.

In his Iatros editorial (Fall, 1993), Dr. Wilson addressed the challenge of Uncertainty and Certainty in Medicine. Uncertainty he said "will come from changes in licensure requirements, the necessity for earlier career choices, reduced postgraduate education options, high public expectations, dramatic increases in therapeutic options, increased concern about the cost effectiveness of services, and the evolving roles of other health professionals. What is required will be collaboration, innovation, new skills and closer partnership with the public. Our patients will continue to trust and rely on us in proportion to the time we give them. We must minimize our self-interest, emphasize objective assessment and promote self-learning. We must take a positive and active role in defining the direction of the changes which are occurring."

"To maintain our core values and effective relationships with our patients (the certainty), while leading and collaborating the changes in the healthcare system (the uncertainty), this is the challenge which must be met by current and future physicians."[52]

As the year closed major collaborative planning by the Edmonton Regional Health Facility's planning council became necessary, as budget reductions (30% for acute care hospitals) were revealed. On a more positive note the three federal grant councils awarded the first Eco Research chair in environmental risk management to Dr. Steve Hrudey of the Department of Public Health Sciences, with funding totaling $1.5 million over five years.

1994: As the year progressed, it became clear that the newly elected Premier Klein was determined to balance the Alberta budget and wipe out the provincial deficit, caused by low oil prices. The faculty needed to plan for a 12% reduction, not including the proposed 5% roll back in salaries and benefits for academic and support staff. The changes began with a 5-6% reduction in the University operating budget in 1994/95. This included the planned closure of the Faculty of Dentistry and a downsizing of the Faculty of Education. On the service side a regional board was being established for all the Edmonton hospitals.



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Starting in 1985 Dr. Wilson had reorganized and chaired informal meetings of the health sciences deans to develop coordinated approaches to shared issues. This Coordinating Committee of Health Science Deans later became formalized, and by 1994 was officially established as the Health Sciences Council. It consisted of six deans and provided the opportunity for more collaborative responses to University budget reductions. Representatives of the Health Science Coordinating Committee met, chaired by Dr. Ruth Collins-Nakai, to examine internal reorganizations amongst the faculties. A public affairs committee was struck. Its first task was to invite new federal and provincial government representatives to visit the faculty.

Despite the cutbacks, funding was needed to complete the unfinished laboratory space in the HMRC's second and sixth floors. A total of

52. Wilson, Douglas Roy Editorial entitled "Uncertainty and Certainty in Medicine Today", *Iatros* 7(1): 2, 3, Fall 1993.

Drs. Paul Armstrong, Douglas Wilson, Steve Hamilton, Wilson Farewell Dinner, 1994

$1.6 million was needed to finish the Perinatal Research Center space and develop the Department of Medical Genetics. Plans to expand academic programs in the rapidly growing field of human genetics, with participation of both clinical and basic scientists, were finalized by the Faculty and approved by the University Board of Governors.

Retirement and Farewell: In his farewell dinner on September 23, 1994 Dr. Wilson said "it's been a great 10 years and we have accomplished much together. I realized in the beginning that three ingredients would be necessary to succeed - broad vision, high standards and positive persistence. The faculty had a great opportunity in 1984 and showed it was ready for a change, by putting a stranger from Central Canada in charge."[53]

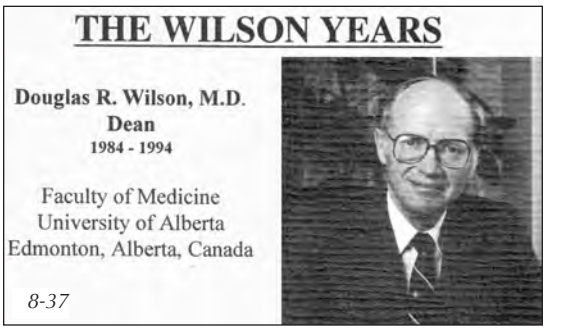
Despite the cutbacks that began at the end of a decade of dramatic research growth and academic successes, Dr. Wilson was optimistic and saw positive changes coming from the greater emphasis on health promotion and the prevention of disease and injury. Other positive changes he saw were increased collaboration and teamwork and an improved ability to provide services in the home setting. In closing, he was delighted Dr. Lorne Tyrrell had been chosen to be the next Dean.

In a parting brochure entitled The Wilson Years,[54] his former Associate Dean-Research, Dr. Mark Poznansky, Ph.D. recalled, when Dr. Wilson arrived in Edmonton "it was not a center for developing new approaches. DRW represented a hope albeit he was a little short on administrative experience. If you convinced him that you had an excellent idea or an opportunity to recruit an excellent scientist he would let you proceed and then give you encouragement. He believed full-time clinical staff should have a strong grounding in research and often said clinicians who did not have a strong interest in investigative medicine had little place in the medical school. Put simply, have a vision."

He marshaled his resources and went to work to change things setting new standards of performance well above the "okay." He brought in 130 new investigators, represented the faculty well to the MRC and the accreditation bodies, established closer ties with the UofC, increased funding from non-traditional resources likes industry. His mantra was "go out and be excellent and I'll support you. He left the faculty of medicine as a major force in academic medicine in Canada and the leading faculty at the University of Alberta."

Bill Bridger, acting Vice-President Research, who later became the first CEO of the Alberta Ingenuity Fund, thought a statue should be erected to Dr. Wilson "for his role in strengthening research on the campus. He did it by challenging and by having fun, trying to get traditionally established departments with research programs, working together in an interdisciplinary way. He recognized Dr. Wilson's deep concern for staff and students as people."

Founding Director, Centre for Health Promotion Studies, 1994-1997:[55] During his ten years as Dean, Dr. Wilson gradually developed



Farewell Dinner, 1994

53. Wilson, Douglas Roy Presentation at the Farewell Dinner for Dr. Douglas Wilson, 14 pages, September 23, 1994.

54. Poznansky, Mark "The Wilson Years", privately printed brochure, 7 pages, September 1994. Copy in the Wilson Family Archives.

55. Wilson, Douglas Roy "Highlights in the life of Dr. Douglas Wilson". Manuscript dictated June 22, 2007, 12 pages. Copy in the Wilson Family Archives. Also see the selected publications of Dr. Douglas Wilson, page 211, reference 69.

new interests in population health, particularly the social and environmental determinants of health, stimulated by the work of Dr. Fraser Mustard and the population health program of the Canadian Institute of Advanced Research. These determinants of health, such as socioeconomic status, act upstream to influence mortality and the development of many chronic diseases. Health promotion is a set of action strategies that enable people to increase control over and improve their health at the individual, community, or population level.

Dr. Wilson took a one-year special leave to visit well established centres for health promotion and population health at the University of British Columbia and University of Toronto, the Manitoba Centre for Health Policy and Evaluation, and the Schools of Public Health at Harvard and Johns Hopkins University. The visits were followed by a lengthier time at the University of Newcastle in Australia, where an interdisciplinary Master's Degree program in Health Promotion was already operating successfully.

Center for Health Promotion graduates, circa 2000
Dr. D. Wilson (back, second L)

The health sciences deans and interested faculty members had identified the need for a new interdisciplinary graduate program in health promotion studies, circa 1994. Dr. Wilson was asked to undertake the development of a Centre for Health Promotion Studies (CHPS) on their behalf. CHPS did not fit within one faculty and was organized to report to the Health Sciences Council. Its graduate courses were to be offered from several faculties, and the new faculty members (a director and three others) needed to be recruited. They would have academic appointments in different faculties.

The Wilson's on Sabbatical in Australia 1994/95

With Dr. Wilson as the interim founding director, and with support from the health science deans, the plan to establish CHPS progressed rapidly through the University approval process. The new Centre received modest new funding from Alberta Advanced Education.

The first CHPS Masters students began their program in September 1996. By 2006 over 150 students had completed their Master's degree, including many taking their courses online using the internet. These graduates are already making substantial contributions to health promotion and population health programs in Alberta and beyond.

To develop a research program, three new faculty members were recruited. They were successful in obtaining national or provincial research scholarships to study the socio-behavioral determinants of health in populations, focusing on substance abuse and addictions, nutrition and obesity, and physical activity. Dr. Miriam Stewart, a leading national researcher in the area of social support was recruited as Director of the Centre in 1997.

Dr. Wilson supervised more than ten Masters students through their thesis work and journal publications.

From Public Health Sciences to a School of Public Health, 1997-2007: The year 2000 marked the official university retirement date for Dr. Wilson. He discontinued his involvement with patients and residents in the nephrology teaching clinic, but continued his busy academic office in the Department of Public Health Sciences of the Faculty of Medicine and Dentistry.

Although "retired" Dr. Wilson continued his involvement in graduate student supervision, collaborative research in primary care, evalua-

tion of new models of health service delivery, and evaluation of the effectiveness of health promotion programs. He was a Royal College Visiting Professor at the University of Toronto and McMaster University, speaking on the use of health promotion strategies to address the upstream prevention of diabetes and chronic renal disease. He also enjoyed being a member of the Institute Advisory Board for the new CIHR Institute for Gender and Health.

In 2005 the Provost asked Dr. Wilson to chair a task force to consider the development of a new faculty (school) of public health at the University of Alberta, the first such faculty in Canada since the closure of the School of Hygiene in Toronto in 1972. With support from Dean Tom Marrie, the Health Sciences Council, other deans and Capital Health, the Task Force recommended a new faculty. In March 2006, the Board of Governors of the University approved the School of Public Health as an independent faculty, with the understanding that it would proceed forward to become accredited, as were schools in the USA.

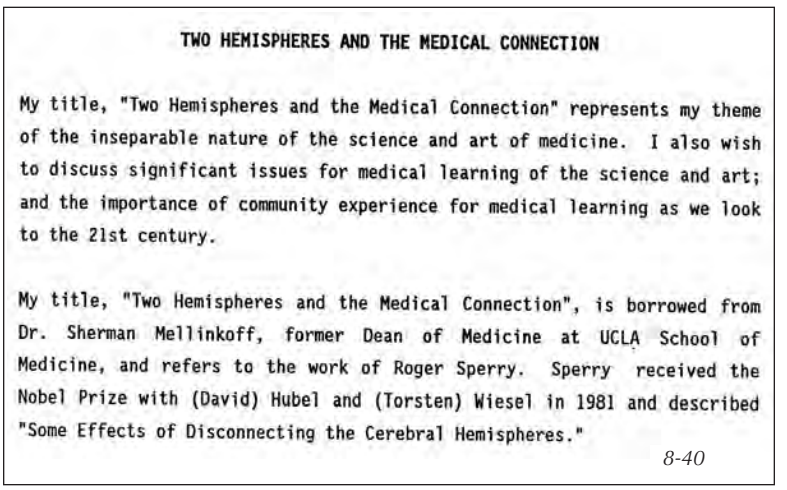
Dr. Wilson continued as the Senior Advisor to the interim Dean, Dr. Roger Palmer, while the faculty implemented a new Master's of Public Health (MPH) professional degree program with seven specialty streams, and an expanded Ph.D. program. The Centre for Health Promotion Studies became part of the new school, along with the Department of Public Health Sciences and the Alberta Centre for Injury Control and Research. Most recently Dr. Wilson has been an advisor to the new Dean of the School, Dr. Sylvie Stachenko.

Appointments and Awards: In addition to his awards as an undergraduate, graduate and postgraduate physician, and appointments at the UofT, Dr. Wilson was elected President of the Canadian Society of Nephrology (1975/76) and the Clinical Research Society of Toronto (1982/83). He received the John Alexander Stuart Fellowship (1967/68) and the Shering Travelling Fellowship (1982). Dr. Wilson was a member of the Health Research Advisory Committee for the AHFMR and also chaired the Health Research Fund. He served for ten years on the Council of the College of Physicians and Surgeons of Alberta, and for two years on the Board of the Alberta Medical Association. He was actively involved in the development of the Community-University Partnership for the study of children, youth, and families (CUP) as a member of its steering committee. Dr. Wilson was a board member of the United Way for the Alberta Capital region and the Leadership Council of Vibrant Communities in Edmonton. He currently serves as chair of the M.S.I Foundation board.

At the completion of his term as Dean, the Faculty of Medicine established the Douglas R. Wilson Lectureship. In 1996/97 Dr. Wilson was appointed the interim director of the Centre for Population Studies, and made a Professor in the Department of Public Health Sciences. In recognition of his contributions to the promotion of public health, the Canadian Public Health Association gave him its Honorary Life Membership Award in 2002 and its Certificate of Merit in 2006. The Royal College 0f Physicians and Surgeons recognized him with the KJR Wightman Visiting Professorship in 2004. He was elected to the charter group of Fellows of the Canadian Academy of Health Sciences (FCAHS) and received the Alberta Centennial Medal in 2005.

T**he Wilson Family:** Dr. Wilson attributed much of his success to the great support of Jane, who has been his high school and university sweetheart and marriage partner for more than fifty years. Her outgoing and enthusiastic manner was a great help in convincing potential newcomers, that Edmonton is indeed a well kept secret as a place to live.

The Wilsons have four children: Karen (born 1959) is a minister in Edmonton, Keith (born



TWO HEMISPHERES AND THE MEDICAL CONNECTION

My title, "Two Hemispheres and the Medical Connection" represents my theme of the inseparable nature of the science and art of medicine. I also wish to discuss significant issues for medical learning of the science and art; and the importance of community experience for medical learning as we look to the 21st century.

My title, "Two Hemispheres and the Medical Connection", is borrowed from Dr. Sherman Mellinkoff, former Dean of Medicine at UCLA School of Medicine, and refers to the work of Roger Sperry. Sperry received the Nobel Prize with (David) Hubel and (Torsten) Wiesel in 1981 and described "Some Effects of Disconnecting the Cerebral Hemispheres."

8-40

Presentation to the Academy of Medicine, December 1990

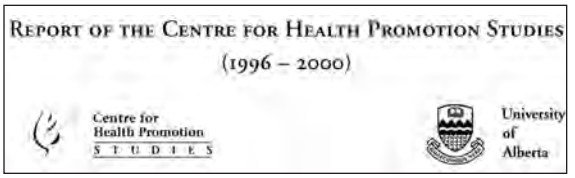
(L to R) Steve and Karen Wilk, Doug and Jane Wilson and 3 grand-daughters, April 1996

1961) is a lawyer in Montreal, Bruce (born 1963) was a teacher who died in 1996, and Brenda (born 1967) received her MA in Film and Media Studies and works in Vancouver.

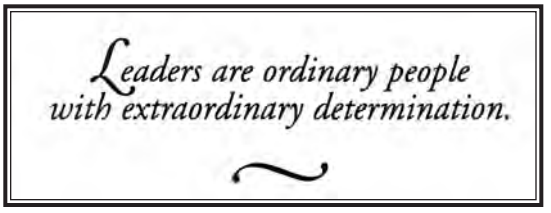
Key Words: Toronto Nephrology program, UofT Transplantation nephrologist, Obstructive nephropathy, UofA Dean 1984-1994, Iatros, Medical Staff Newsletter, Heritage Medical Research Centre, 75th Anniversary, Frontiers of Medicine, Provincial and Federal fiscal cut-backs, Barer-Stoddard, Faculty of Public Health.

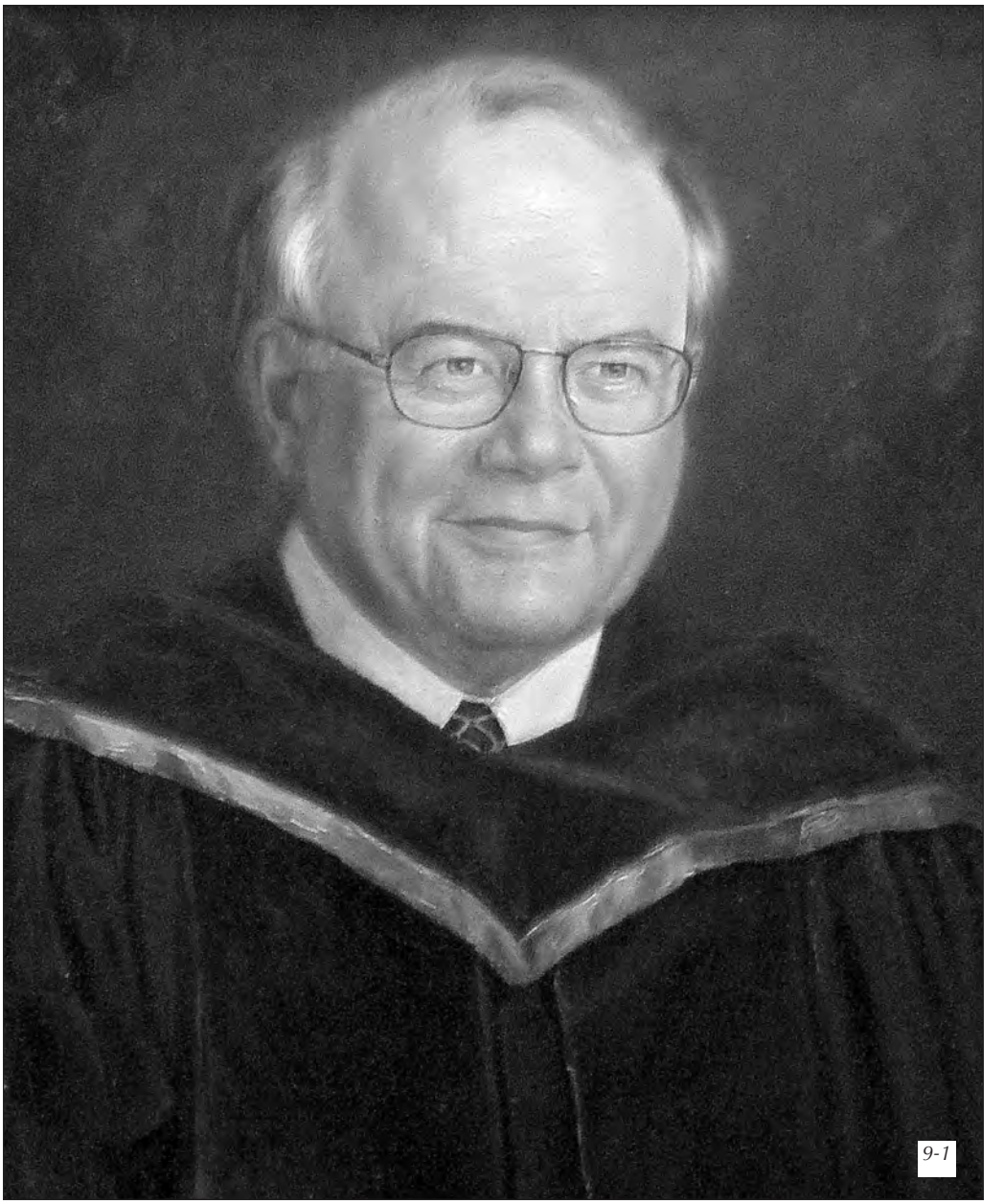
Receiving the Alberta Centennial medal from Health Minister Dave Hancock, 2005

Dr. Wilson receiving the CPHA Award from Christine Mills, Yellowknife, July 2002



Rural Physician Action Plan, begun 1990





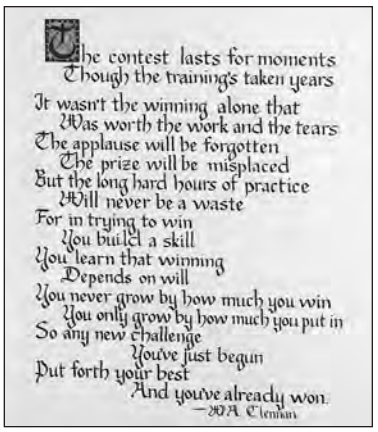
DAVID LORNE TYRRELL, OC, MD, PhD, FRCPC, FRSC
1943-

DAVID LORNE TYRRELL, OC, MD, PhD, FRCPC, FRSC
1943-

"If life is a set of opportunities for which decisions need to be made and goals revised, then one is to recognize an opportunity and the next is to pursue it."[1]

Introduction: The Tyrrell profile differs from most others because it highlights a life of bench-to-bedside medical research, overlapped by a career in clinical medicine (Infectious Disease), a ten-year medical deanship, and a post-deanship biotechnology career that is still unfolding.

Dr. Tyrrell's medical career changed dramatically when chance struck his prepared mind.[2] Tyrrell surmised in 1986 that the Pekin Duck carried a human-like Hepatitis-B virus (HBV) and the duck could be used as a model to test compounds that might have treatment possibilities for humans. The only protection against Hepatitis B prior to 1980 was to prevent exposure, or after 1980, to vaccinate. There was no treatment for those who could not shed the HBV virus and so carriers remained, transmitting it to others. Until the early 1980s, the only known animals in which the HBV replicated were expensive models: humans and chimpanzees.


The contest lasts for moments
Though the training's taken years
It wasn't the winning alone that
Was worth the work and the tears
The applause will be forgotten
The prize will be misplaced
But the long hard hours of practice
Will never be a waste
For in trying to win
You build a skill
You learn that winning
Depends on will
You never grow by how much you win
You only grow by how much you put in
So any new challenge
You've just begun
Put forth your best
And you've already won.
—MA Clemens

Dr. Tyrrell's guiding philosophy

Viral Hepatitis was first described in the 1700s.[3] In 1947 two forms were identified: infectious hepatitis (Hepatitis A) and serum hepatitis (Hepatitis B). The distribution of the virus was worldwide. Hepatitis B was the tenth commonest cause of death in the world (between one and two million per year). Death usually occurred from cirrhosis or cancer of the liver. In recent years new forms of viral hepatitis have been identified: C, delta, E and G. Currently (2005) there are an estimated 360 million human HBV carriers worldwide including 250,000 Canadians.

With the application of due diligence and hard work, coupled with a measure of good luck, Dr. Tyrrell and his team discovered (1987) a new series of anti-viral compounds (nucleosides) that had great therapeutic potential in the treatment of HBV and related chronic viral infections. One compound (Lamivudine) became the first oral anti-HBV drug for the treatment of HBV carriers. The discovery of Lamivudine was a breakthrough in HBV therapy.

In early drug trials (1989), Lamivudine decreased the viral count in the circulating blood by over 99%. It was licensed as Heptovir in Canada in 1998, twelve years after Dr. Tyrrell discovered its antiviral properties. It has been shown to forestall HBV's life-shortening complications, transmission, and reinfection after liver transplantation. For carriers who develop resistance to it, newer second and third generation oral HBV antiviral agents with lower mutation rates have been licensed (2004, 2006).

9-2

Overlapping Dr. Tyrrell's Infectious Disease career was a decade as the UofA Dean of Medicine (1994-2004). It was not an easy time. No

1. Waldman, Debby — Dr. Tyrrell quoted in, "Reconnecting with his roots," in the New Trail 59(3): 44, 2004.
2. Lampard, Robert — Pasteur's dictum. Invention occurs when accident or chance strikes a prepared mind.
   In the past, the path to discovery may have been the result of serendipity, or the pursuit of a curious observation, or just plain luck. Those paths have been replaced with more basic elements of hard work, perseverance, drive, ability, adequate resources, growth in knowledge and experience, collaboration, the freedom of intellectual pursuit, and an environment that encourages bench-to-bedside introduction of new knowledge.
   As Sir Isaac Newton said to Robert Hook in 1675: "If I have seen further [than you or Descartes] it is by standing on the shoulders of giants," quoted in Allen B. Weisse's *Medical Odysseys*, pages 1-3. Rutgers, 1991.
3. Hollinger, Blaine — "Hepatitis B," in Bernard N. Field's textbook of *Virology*, pages 2739-2807, 3rd Edition 1996. An earlier version of this article was published in *Alberta's Medical History*, pages 446-471 in 2008.

dean, since Dean A.C. Rankin weathered the Depression and World War II contraction and growth cycles a half a century before, has faced similar challenges. The contraction of the Alberta economy (1994-1996), followed by a gradual, then accelerating recovery (1996-2004) required tough decisions to be made, clear goals and objectives to be set, and opportunities pursued. Leadership required vision, courage and conviction, to capitalize on the opportunities and foster growth and development before and after the millennium. Dr. Tyrrell provided that leadership, stability, the faculty and maintaining its reputation not only as an exemplary teaching centre, but as an outstanding medical research institution with a world-wide reputation.

Dr. Tyrrell's retirement as Dean in 2004 brought a plethora of requests to join boards and corporate organizations in the biotechnology field. He chose those that had promising clinical potential; or could improve the quality of medical care in Alberta.

From Youth to Medical School (1943-1968): David Lorne John Tyrrell was born in Edmonton on February 10th, 1943. He grew up on the eighty-year-old family farm near Duffield, 40 miles west of Edmonton, where the Tyrrell family immigrated in June 1905. The fourth of a Scottish/Swedish family of six, Lorne Tyrrell graduated from the Stony Plain Memorial High School in 1961. That fall he started his university career at the UofA in the Faculty of Science. He planned to enter Medicine after two years of premedical studies.

Tyrrell had already been accepted into his first year of Medicine, when the plan was almost bulldozed. His father and brother bought a Caterpillar tractor and contracted to build a road on a nearby aboriginal reserve. Thrown the Caterpillar keys by his father, twenty year old Lorne was told to complete the job. He had never driven a TD9 Caterpillar before. The anticipated contract for the road arrived four months late, during the first week of medical school classes in September 1963. Lorne had a dilemma.[4] The faculty's letter of acceptance had stated, if you do not register your position will be filled by a student on the waiting list.

The first car down the unfinished road was a Yellow Cab carrying a telegram from Assistant Dean D.F. (Tim) Cameron. "Your position is still being held. Please call." As often was the case, the telephones in his rural area were not working. Lorne drove to Stony Plain to call Dr. Cameron and explain that he needed to finish the road, to have the finances to return to University. Dr. Cameron offered financial assistance, but leaving the road unfinished would have left Lorne's father unable to complete the job before winter. Lorne decided to finish the road and returned to UofA later in September to complete his three-year B.Sc. degree in Chemistry.

In the spring of 1964 Lorne Tyrrell was awarded the Gold Medal in Science. For a short time he considered becoming a chemistry teacher or a veterinarian. Then he reapplied to enter medicine. The extra year was fortuitous. It opened the door for a career in medical research. As he would discover, the road of life has many unexpected detours.

From MD to PhD/FRCPC, 1964-1975: Tyrrell started his medical training at the UofA in September 1964. At the end of his first year the competence of this quiet, affable student was evident. Each year the North American Life Insurance Company offered twenty-two medical students in North America a combined MD/PhD scholarship. Lorne applied and was accepted. For the next two summers he worked as a medical student researching the role of vitamin K in blood coagulation. In liver perfusion studies he demonstrated Vitamin K could reverse long prothrombin times within one hour. In 1966 he was invited to join the Alpha Omega Alpha Honor Society and became the Alberta Chapter President in 1967.[5] In his graduating MD year (1967/1968), Dr. Tyrrell received the Douglas Leitch Gold

Drs. John Elliott and Lorne Tyrrell "at work" circa 1989

4. Editor "Keepers of the Promise: Blazing a Trail." AHFMR Triennial Report, pages 6-8, 1993.
5. Wilson, Donald R. "The Alpha Omega Alpha Honor Medical Society," in *Medicine in Alberta: Historical Reflections*, pages 292-295. AMF, 1993.

Medal in Pediatrics. He contemplated a career in Pediatrics, but not for long. There was an internship at the UofA (1968/1969) to take as well as a PhD and Fellowship in Medicine to complete.

After interning, Dr. Tyrrell moved to Queens University, Kingston. From 1969-1972 he studied Pharmacology under the supervision of Dr. Gerry Marks. His Ph.D. thesis at Queens was on drug metabolism and the porphyrin biosynthetic pathway. It was an active field of research.[6] The focus was to better understand how drugs interacted with and influenced metabolism.[7] Working with Dr. Marks at Queens was a rewarding research experience. Marks was an enthusiastic, knowledgeable, well read, and motivating teacher. The three years at Queens also gave Dr. Tyrrell an opportunity to hone his teaching skills as a Lecturer in Pharmacology. In 1972 he completed his Ph.D. on porphyin biosynthesis.[8]

In late 1972, Dr. Tyrrell returned to the UofA to begin specialty training in his next field of choice, Obstetrics and Gynecology. After the death of biochemist Dr. Chris Smith in a mountain climbing accident late in 1972, Dr. Tyrrell was asked to give Smith's lectures on nucleic acid and protein synthesis to the first year medical students. Then he was asked to lecture on renal and cardiovascular pharmacology to the second year medical students. He found that his clinical experience as a rotating intern gave him practical examples to validate his lectures. It was a form of early systems teaching at UofA. From 1973 through 1976 Dr. Tyrrell was named Teacher of the Year by first, second, and third year medical students on several occasions.[9]

UofA Research Group (1987) Dr. L. Tyrrell (standing on L), Dr. M. Robbins (standing fourth from L)

In 1973/74 Dr. Tyrrell switched his fellowship studies, this time to Internal Medicine, where his real interests lay. While he enjoyed the obstetrical experience, the study of antenatal diagnoses was in its infancy and was not being actively pursued. In eleven years, he had completed his MD, internship, PhD and FRCPC. By 1975 his interest in Internal Medicine was beginning to focus on biological research and the clinical specialty of Infectious Diseases. In his first year of Infectious Disease practice (1975-76) he came under the influence of Department Director Dr. George Goldsand. The meeting was a turning point, as his interests narrowed further to the intriguing field of molecular biology, viral infections, vaccines, and antiviral therapies. Dr. Goldsand's influence gave direction and specificity to Tyrrell's postdoctoral studies.

The Search for a Clinical Research niche, 1976-1986: In 1976, Dr. Tyrrell was awarded a MRC Centennial Fellowship. He chose to return to his Swedish roots and spend two years at the Karolinska Institute with Dr. Erling Norrby. His work focused on the measles virus and its possible link to multiple sclerosis.[10] In

6. Tyrrell, D. Lorne, Marks, Gerry S. "Drug-induced porphyrin biosynthesis-V. The effect of protohemin on the transcriptional and post-transcriptional phases of delta-aminolevulinic acid synthetase induction." Biochemical Pharmacology 21: 2077-2093, 1971.
7. Schneck, D.W., Tyrrell, D. Lorne, Marks, Gerry S. "Drug-induced porphyrin biosynthesis-III. Inhibition of drug-induced porphyrin by protohemin." Biochemical Pharmacology 20: 2999, 1971.
8. Tyrrell, D. Lorne "Drug-Induced Porphyrin Biosynthesis: Effects of Protohemin on the Transcriptional and Post-Transcriptional Phases of Induction," Ph.D. thesis. Queens University, 1971.
9. Tyrrell, D. Lorne Dr. Tyrrell received the Outstanding Resident Award (1973) and was named the Teacher of the Year in Phase I (Basic Science - Biochemistry, 1972 and 1973); in Phase II (Clinical Teaching, 1974 and 1976); and in Phase III (Bedside Teaching, 1974 and 1976).
10. Tyrrell, D. Lorne, Norrby, Erling Structural polypeptides of measles virus. Journal of General Virology 39: 219-229, 1978. Dr. Tyrrell co-authored two other articles, as part of his research in Sweden: one by A. Fragraeus, D.L.J. Tyrrell, R. Norberg, and E. Norrby on "Actin filaments in paramyxovirus-infected human fibroblasts studied by indirect immunofluorescence" in the Archives of Virology 57: 291-296, 1978; and a second one with M.L. Weil, D.L.J. Tyrrell and E. Norrby, entitled "Electrophoresis of immunoglobulin G. Facilitated migration of minute amounts in agarose," in the Journal of Immunological Methods 24: 99-110, 1978. Most of the research work was done in English, but the Tyrrell family did learn Swedish.

In introducing Dr Tyrrell, John McConnell, Vice-President (Development and Community Affairs), said, "Students flock to his courses in virology. During one class, when he was following the textbook and explaining the current assumptions about Hepatitis B, he suddenly realized that the traditional explanations did not make sense. He stopped, told his students he thought the textbook explanation was faulty, headed for his laboratory after class, and eventually proved that his hunch was correct. That hunch has led to his developing an anti-viral therapy for Hepatitis B."

Dr Tyrrell is a self-effacing individual who, while comfortable in the limelight, would just as soon see others in it or else sharing it with him. *9-5*

On the Discovery of Hepatitis B antiviral therapy

1978 Dr. Tyrrell returned to the UofA as an Associate Professor of Medicine in Infectious Diseases and Biochemistry. Four years later in 1982, Dr. Tyrrell succeeded Dr. Goldsand as the Director of Infectious Diseases. In 1986 he became the Chairman of the Department of Medical Microbiology and Infectious Diseases, a position he held from 1986-1994.

While managing the department, he continued to supervise students, conduct research, teach, admit and treat patients, participate in the on-call roster, and answer Infectious Diseases consults. Dr. Tyrrell was starting to develop a lifestyle of performing several full-time tasks at once: reading to keep current, lecturing, researching to uncover clues that would unlock the mysteries of viral diseases, and publishing his findings.

Dr. Tyrrell had a longstanding interest in HBV research and had considered going to the National Institutes of Health in Bethesda, Maryland in 1976 to work on HBV with Dr. Robert Purcell. Purcell discouraged him. Any researcher needed access to a chimpanzee colony because the Hepatitis B virus only replicated in humans and chimpanzees and their liver cell cultures. Dr. Purcell predicted that an HBV vaccine would soon be available and the disease would disappear. He was partially correct. The first vaccine for HBV was licensed in 1980. It was effective in producing immunity; however, it did not treat the 360 million chronic carriers of the HBV virus.

Discovery of the Duck Testing Model (1986): While preparing a 1986 lecture on Hepatitis B for graduate students in Biochemistry, Dr. Tyrrell was fascinated to read that Drs. Jesse Summers and Bill Mason at the Fox Chase Center in Philadelphia had discovered the unique HBV replication cycle. HBV was the only DNA virus to replicate through an RNA intermediate, and then back to DNA. Summers and Mason had used liver cells from ducklings infected with the duck hepatitis B virus (DHBV) for their research.[11]

Dr. Tyrrell surmised that the duck liver cell culture system could be the first inexpensive model for studying new compounds that could interrupt the human HBV-like virus replication cycle. It would work if the DHBV virus was similar to the human virus, and compounds with antiviral activity against DHBV were also effective against the human virus. Since DHBV replicated using RNA and DNA, the building blocks of DNA, he postulated that nucleosides might be found that would inhibit HBV replication at the RNA polymerization stage. If this were possible, the nucleoside analogues would not damage or kill human cells.

Dr. Tyrrell had met Dr. Morris Robins, a professor in the UofA Department of Chemistry in November 1986. Dr. Robins was one of the world's experts in the synthesis of nucleosides and nucleotides, the building blocks of DNA. His original research in 1964 on the synthesis of nucleoside analogues, had been published as a possible form of cancer therapy. Because both cancer cells and human cells used the same DNA polymerizing enzymes, the most active nucleosides had the undesirable side effect of stopping normal tissue growth as well as cancer cell growth. Dr. Robins did not patent his findings.

Dr. Tyrrell arranged to meet with Dr. Robins at the UofA Faculty Club. During lunch he drew the hepatitis B viral replication cycle on a napkin. The two scientists hypothesized that the HBV replication cycle could be interrupted using nucleoside analogues. If so, a new form of antivirals could be developed for treating HBV carriers. The model for testing the idea would be duck liver cells (hepatocytes) infected with Duck HBV.

Generously, Dr. Robins forwarded a number of his original pyrimidine and purine nucleoside analogues to Dr. Tyrrell's laboratory for evaluation. A literature search confirmed no one had tested these compounds against DHBV or HBV.

11. Summers J., Mason, W.S. "Replication of the genome of a hepatitis B-like virus by reverse transcription of an RNA intermediate," Cell 29(2): 403-15, June 1982.

> The group discovered that lamivudine has a different mechanism of action than ddG. Instead of blocking viral DNA synthesis before it gets started, it gets incorporated by the viral polymerase into the DNA chain after it has already been growing. Lamivudine has a sulfur atom at the 3' position of the sugar instead of a hydroxy group, so the chain can't elongate any further. While there is enough "sloppiness" in the viral polymerase that it doesn't recognize lamivudine as foreign, human DNA polymerase is more selective. As a result, the drug inhibits viral replication without interfering significantly with human DNA synthesis.

Prix Galien Research Award citation, 1998

At the same time Dr. Tyrrell sent his AHFMR supported postdoctoral fellow, Dr. Satoru Sazuki to Dr. Jesse Summers' laboratory in the FoxChase Cancer Research Centre, to learn how to perfuse duck livers and grow duck liver cells infected with DHBV. The infected duck liver cells could then be used to test nucleoside compounds to determine their potential to inhibit duck hepatitis B virus replication.[12] To the Tyrrell team's surprise, the purine (not pyrimidine) dideoxynucleosides were ten thousand times more active in inhibiting DHBV replication than the pyrimidine dideoxynucleosides.

At a laboratory team meeting shortly afterwards, Dr. Tyrrell's AHFMR Heritage research student Weixing Luo, made the observation that the nucleoside guanidine, which started the DNA synthesis at the purine-rich portion of the negative strands of DNA, might be the site of the inhibition by the most potent purine dideoxynucleoside, dideoxyguanosine (ddG). If replication of the viral DNA synthesis was blocked without blocking the replication of the host cells' own DNA, this could lead to the discovery of a highly selective antiviral agent for treating HBV. The hypothesis formulated in 1987 was tested and proven to be correct.[13]

It is now known that duck and human Hepatitis B viruses have a similar mechanism for initiating viral DNA synthesis and replication.[14] The DNA synthesis is primed by the binding of the terminal end of the polymerase to the first nucleotide dGTP. Because of the bonding of the free OH group (at the 3,5 site) with another OH radical, the free OH group was lost and does not attach the substituted nucleoside to the next nucleoside. This led to the termination of the DHBV viral DNA replication process. Human cell DNA does not have a comparable protein priming mechanism for its DNA synthesis.

Since the site of action was unique to the HBV, any compound that blocked the HBV DNA replication would not inhibit or damage human DNA synthesis. Optimistic, Drs. Tyrrell, Suzuki, and Robins rushed to file the first patent in August of 1987.[15] Normally the filing of patents was time consuming and often delayed the first publications – one that concerned trainees, graduate students, and postdoctoral fellows. Fortunately there were no delays in securing the patent, or in the early publications.

9-6

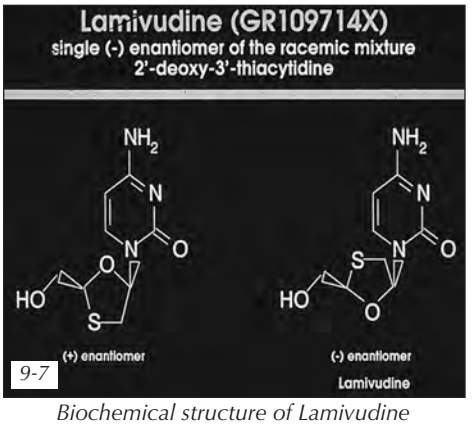
Dr. Tyrrell' with two Pekin Ducks, 2006

12. Suzuki, S., Misra, H.K., Wiebe, L.I., Knaus, E.E., E.E., Tyrrell, D.L. "A proposed mechanism for the selective inhibition of human cytomegalovirus replication by l-(2'-deoxy-2-fluoro- -D-arabinofuranosyl)-5-fluorouracil." Molecular Pharmacology 31: 301-306, 1987.
13. Lee, B., Luo, W., Suzuki, S., Robins, M.J., Tyrrell, D.L. "In vitro and in vivo Comparison of the Abilities of Purine and Pyrimidine 2',3'-dideoxynucleosides to Inhibit Duck Hepadnavirus." Antimicrobial Agents and Chemotherapy 33(3): 336-339, 1989.
14. Editor Prix Galien Research Award, 1998. Prix Galien, pages 10, 11, 17-22, June 1998.
15. Tyrrell, D. Lorne Antiviral Therapy for Hepatitis B, patent #5039667 (USA) August 13, 1991. Joint Inventors: Tyrrell, D.L.T., Robins, M., Suzuki, S., Lorne Tyrrell Curriculum Vitae, page 9, 2006.

The Tyrrell team found that the precursor compound (ddDAPR) of the most active nucleoside (ddG) was much easier to make. ddDAPR was rapidly converted into ddG after injection into animals. In 1988, an Alberta Heritage Foundation for Medical Research (AHFMR) grant enabled Raylo Chemicals of Edmonton, formed by Nobel recipient Ray Lemieux, Ph.D. to synthesize enough ddDAPR, to begin to treat ducks infected with the duck hepatitis B virus.

Unexpectedly, a problem arose with Dr. Tyrrell's source of Pekin ducks. They came from duck eggs imported from a small town in Pennsylvania. It was the same source of supply used by Dr. Jesse Summers. When fire destroyed the source, Dr. Tyrrell found another supplier in Gonzales, California. Crossing the border became a problem when a carton of 60 duck eggs arrived in Edmonton sticky and smelly. Forty-nine were broken by the time they arrived at the Post Office in Edmonton.[16] Agriculture Canada notified Dr. Tyrrell that importing the eggs was illegal. The solution was to raise the ducks on the Tyrrell family farm. Lorne's family were co-opted to feed and raise the ducks. Family Saturdays were spent cleaning poultry barns on the farm for a year, before the incubation system was transferred to the UofA's South Edmonton poultry barn.

The Next Step – Testing ddG in Live Pekin Ducks (1988-1989): The next research question was: could the DHBV replication cycle, which could now be blocked in the duck liver cell cultures, block DHBV replication without killing the ducks? The ducks were divided into three groups. Four ducks received a placebo (solvent), four received ddA a moderately active nucleoside, and four received ddDAPR, the prodrug of the very active compound ddG. Ducks treated with ddDAPR showed a 10,000 fold decrease in a week in the virus circulating in the blood. No compound rivaled it. Just as importantly there was no evidence of drug toxicity in the ducklings. Unlike most antivirals, the blocking of the viral DNA synthesis was very specific, with little or no effect on the DNA synthesis in the host duck liver cells.



Biochemical structure of Lamivudine

With these observations, Drs. Tyrrell and Robins were thankful they had patented the nucleoside compounds a year earlier. Without the patent, they would never be able to seek a major partner to develop and mass produce the drug to treat patients who carried the HBV.

The Tyrrell team's initial observations of the potent antiviral activity of purine dideoxynucleosides were submitted to the journal Nature. To their surprise the paper was returned without even being peer reviewed. The editors wrote "it was not of sufficient interest for readers of Nature." The rejection was unexpected, as Nature had published many articles on HIV including antiviral therapy for HIV. At the time, there were less than 10 million people infected with HIV compared with over 360 million infected with HBV. The papers were submitted to other journals and published in 1989.[17]

Not deterred, Drs. Tyrrell and Robins continued to work on the premise that the active nucleoside compounds had potential as antiviral therapy for the treatment of HBV carriers. First, they needed to form a corporate biotechnology company and raise funds or license the compounds to a major pharmaceutical company. They approached Vencap, an Alberta Venture Capital company that had received funding from the Alberta government. Their overtures were unsuccessful. Then four major pharmaceutical firms were approached. Eli Lilly felt the patent position was not strong enough. Dr. Morris Hillerman at Merck thought nucleoside analogues were too toxic. Wellcome felt they had the expertise in house to look at anti-HBV compounds. Dr. Ron Keeney of Glaxo USA, had done some research with Dr. Tyrrell on the anti-herpes drug acyclovir. He expressed a strong interest in the Tyrrell research findings.

16. Tyrrell, D. Lorne — The forty-nine broken eggs were returned along with eleven replacement eggs bought at a local grocery store. Personal communication, December 9, 2005.

17. Lee, B., et al — "In vitro and in vivo Comparison of the Abilities of Purine and Pyrimidine 2',3'-dideoxynucleosides to Inhibit Duck Hepadnavirus." Antimicrobial Agents and Chemotherapy 33(3): 336-339, 1989.

Dr Lorne Tyrrell, chairman of the university's department of Medical, Microbiology and Infectious Diseases and one of the country's leading researchers, will become the inaugural director of what will be the province's only laboratory designed to study the AIDS and hepatitis B viruses at basic and applied levels.

"The creation of the institute is the culmination of a dream and the beginning of a vision to improve the health of people worldwide," he said at a ceremony to unveil a plaque which heralds the start of construction.

Jacques Lapointe, President Glaxo Canada, 1993

Drs. Robins and Tyrrell went to Research Triangle Park in North Carolina in November 1987 to present their work to a small group of Glaxo scientists assembled by Dr. Keeney. The scientists were enthused and brought in their president, Dr. Saunders. He indicated that Glaxo would be willing to work with Tyrrell and Robins on developing an antiviral therapy for HBV. Saunders contacted Jacques Lapointe, the President of Glaxo Canada, to have the collaborative agreement drafted and the funds flow through Glaxo Canada. That way Glaxo Canada could obtain research credit under the newly passed Canadian bill, C-22. It extended patent protection from 7 to 18 years, but required companies to invest 10% of their revenues in Canadian medical research.

Glaxo Comes Onboard: In 1987, Dr. Tyrrell received a $70,000 per year multi-year grant from the Medical Research Council of Canada, to work on antivirals for the treatment of chronic HBV. The grant was insufficient to fund the necessary pre-clinical studies. Glaxo offered $350,000/year for three years starting in 1988. As part of the funding agreement, Glaxo Inc. was given an exclusive license by the UofA, which held the Tyrrell/Robins patent. In return, a large number of nucleoside analogues that Glaxo had synthesized in house or were licensed to Glaxo, were made available to the Tyrrell laboratory to be tested in the duck model. While attending the Gordon Conference on Nucleosides and Nucleotides in 1988, Drs. Tyrrell and Robins suggested to Glaxo that a unique nucleoside analogue, 3′ thio 2′ deoxycytidine (3TC), which was active against HIV would be worth testing in the DHBV cell culture screening system. On testing, they found it to be very active. 3TC had already been through toxicity studies and was remarkably non-toxic for humans. It was the most powerful viral DNA replication blocker yet discovered by the Tyrrell team.

UofA/Glaxo Level III containment laboratory, opened in 1995

Lamivudine (3TC): 3TC, now known as Lamivudine, had a unique Canadian history. It was first synthesized by Dr. Bernard Belleau a chemist at McGill. Drs. Belleau and Francisco Bellini formed a McGill spin-off company Biochem Pharma to hold the 3TC license. Glaxo purchased the patent for a 12-13% royalty. Glaxo had already agreed to a 5-8% royalty fee for ddDAPR.

After the Tyrrell team showed that 3TC was a potent inhibitor of DHBV replication in duck cell cultures, they tested its activity in a new tumor cell line, 2.2.1.5, which carried the human HBV. The cells were developed by Dr. George Aces in New York. The tests demonstrated that human HBV was inhibited by 3TC.

3TC was originally synthesized as a mixture of D and L isomers (the left and right hands of a glove). Working with Dr. Wendy Gati in the UofA Pharmacology Department, the Tyrrell team demonstrated the D isomer was toxic to cells, but its mirror, the L isomer was not. More importantly, Dr. Tyrrell's lab showed the L isomer inhibited both DHBV and HBV replication, but the D isomer had little or no antiviral activity.[18]

The Lamivudine Chimpanzee Trials (1988-1989): Dr. Keeney of Glaxo informed Dr. Tyrrell of a primate colony in New Iberia,

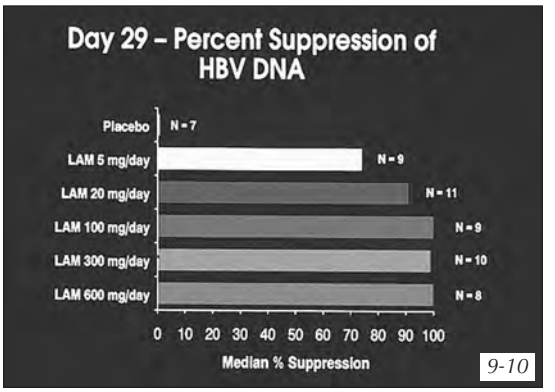
18. Suzuki, S., Lee, B., Luo W., Tovell, D., Robins, M.J., Tyrrell, D.L.J. "Inhibition of Duck Hepatitis B Virus Replication by Purine 2′,3′-dideoxynucleosides." Biochem and Biophysical Res Comm; 156: 1144-1151, 1988.

A chimp participating in the Tang experiment, 1988/89

Louisiana. It had the chimpanzees used in Dr. Robert Purcell's original Hepatitis B vaccine studies. Some of the chimpanzees had received a placebo before being given human HBV. Once infected with HBV, some chimps did not shed the virus and instead became chronic carriers just like human HBV carriers.

In the spring of 1989, Dr. Tyrrell approached the veterinarian caring for the chimpanzees. He wanted to study the effect of oral 3TC on the HBV-DNA levels in their blood. The custodian was very protective of his chimps and wanted to be assured that 3TC was safe. He asked if the 3TC had been given to humans. This seemed a bit unusual, but Dr. Tyrrell convinced him the compound had been through toxicity studies and appeared very safe.

Dr. Karl Fischer from Tyrrell's laboratory screened the chimps for hepatitis B surface antigen to identify the HBV carriers. Several young chimpanzees were carriers. The chimpanzees were given Tang spiked with 3TC. They suffered no ill effects. More importantly there was an immediate and dramatic 99.9% fall in their HBV-DNA levels. The results were reported by Fischer at a Viral Hepatitis Meeting in Japan.[19] Encouraged by the chimpanzee studies, Glaxo renewed the contract with Drs. Tyrrell and Robins at $700,000/year for three years starting in 1991.



% Suppression of HBV DNA with different doses of Lamivudine, 1993

Level III Laboratory: In 1993, Glaxo went one step further and agreed to contribute to the building of a Level III containment laboratory to work with highly infectious viruses (HIV, hepatitis C, and human hepatitis B). Two years later Glaxo and the Alberta government funded a Research Chair in Virology ($3 million).[20] When the laboratory was opened in 1995, Dr. Paul Lucas, the President of Glaxo Canada commented, "the Tyrrell collaboration was our largest, longest, and most productive collaboration for us."[21]

The Lamivudine (3TC) Human Trials (1993):

A PRELIMINARY TRIAL OF LAMIVUDINE FOR CHRONIC HEPATITIS B INFECTION

Abstract *Background.* Better treatments for chronic hepatitis B are needed. Lamivudine, the (−)enantiomer of 3'-thiacytidine, is a potent inhibitor of hepatitis B virus (HBV).

Methods. In a double-blind trial, we randomly assigned 32 patients with chronic hepatitis B (including 17 who had no response to earlier treatment with interferon) to receive 25, 100, or 300 mg of oral lamivudine daily for 12 weeks. The patients were then followed for 24 additional weeks. All the patients had hepatitis B e antigen in serum.

Conclusions. In a preliminary trial, 12 weeks of lamivudine therapy was well tolerated, and daily doses of 100 mg and 300 mg reduced HBV DNA to undetectable levels. (N Engl J Med 1995;333:1657-61.)

The next step was to undertake a human trial of Lamivudine in chronic HBV carriers. A five-centre Phase II study included the University of Alberta (Tyrrell), Johns Hopkins (Mitchell) and three European sites (London, Belgium, and the Netherlands). Seventy-six patients were randomly assigned to the treatment groups and treated for 28 days. Six patient groups received either a placebo, or Lamivudine at doses of 5, 20; 100; 300 or 600 mg/day. There was a fall

19. Tyrrell, D. Lorne, Fischer, Karl, Sayani, K., et al "Treatment of Chimpanzees and Ducks with Lamivudine, 2'3' Dideoxy 3' Thiacytidine Results in a Rapid Suppression of Hepadnaviral DNA," in Sera. International Congress of Virology. Glasgow. August 8-13, 1993.
20. Editor (Robb, M.) "Glaxo Wellcome and Province back creation of endowed chair." Faculty of Medicine and Dentistry News 2(4): 14, June 2000.
21. Lucas, Paul In Prix Galien 1998, page 20, June 1998.

of more than a 3 logs (99.9%) in the titres of HBV-DNA in the sera of patients that received 100 mg or more per day. None of the higher-dosed patients reported any side effects.

The results of the Phase II Trial were presented by Dr. Tyrrell at the American Association for the Study of Liver Diseases in Chicago in November 1993.[22] It was a qualified success as Lamivudine suppressed the replication of HBV but did not completely eradicate HBV from all the liver cells. When the compound was stopped, the HBV-DNA titres returned to pre-treatment levels in about two weeks. Longer studies were needed. But the real success was the confirmation that Lamivudine was the first oral antiviral agent to have a major impact on reducing HBV-DNA circulating virus levels in chronic human carriers.[23]

Drs. Lorne Tyrrell and Morris Robbins with the first liver transplantation patient treated with Lamivudine, 1994

Additional Phase III clinical studies from 1994-1996 were performed by numerous investigators in clinics worldwide. Dr. Tyrrell submitted his series of 62 patients to the New England Journal of Medicine. The article was declined because it lacked liver biopsies on each patient. Six or seven months later, the NEJM accepted a paper from the Boston-based Dienstag group on 32 patients. It too lacked liver biopsies.[24] The Tyrrell group results were not published. In December 1998, Lamivudine was licensed for the treatment of chronic HBV carriers in Canada with the new name Heptovir, and in January 1999 as Epivir in the USA.

Lamivudine Reinstated the Liver Transplant Programs for Chronic Hepatitis B Carriers: In the late 1980s and early 1990s, most liver transplant centres stopped transplanting patients with end-stage liver disease from HBV. The problem stemmed from newly-transplanted livers that were quickly re-infected with HBV and developed an aggressive form of HBV-induced hepatitis. Dr. Tyrrell had been following one UAH patient for a number of years in his clinic. In 1994 the 41-year-old patient of Asian descent was in the intensive care unit. He was bleeding from several sites, heavily jaundiced, had developed ascites and was unconscious.

Dr. Tyrrell obtained permission from Glaxo Canada and the UofA Medical Ethics Committee chair, Dr. Brian Sproule, to give the patient Lamivudine. The protocol started with the administration of 100 mg of Lamivudine through a nasogastric tube for 10 days prior to surgery. Dr. Norm Kneteman performed the transplantation on May 1, 1994 at the University of Alberta Hospital in the Walter C. Mackenzie Health Sciences Centre. The patient was the first in the world to receive this treatment.

The transplantation surgery was successful. The drug was continued in perpetuity after the liver transplantation. The transplanted liver remained free of HBV for nine years, while the patient remained on Lamivudine. Liver biopsies confirmed the liver remained free of HBV.[25] After nine years the patient was lost to follow-up and stopped taking his Lamivudine. Within a few weeks he returned to the hospital with an acute hepatitis from the loss of HBV suppression. He was in liver failure and died.

22. Tyrrell, D. Lorne, Mitchell, M.C., DeMan, R.A., et al — "Phase II Trial of Lamivudine for Chronic Hepatitis B." American Association of Liver Disease. Chicago. November 4-7, 1993. Published as an abstract of a presentation in Hepatology 18(4), pt.2: 112A, (abstract #224), 1993.

23. Editor (Robb, M.) — Tyrrell plays leading role in discovery of therapy for Hepatitis B. Faculty News 1(2): 5, 1997/99.

24. Dienstag, J.L., Perillo, R.P., Schiff, E.R., Bartholomew, M., Vicary, C., Rubin, M.A. — "A preliminary trial of Lamivudine for chronic viral hepatitis B infection." New England Journal of Medicine 333: 1657-1661, 1995. Dr. Tyrrell had joined Dr. Dienstag on a flight to England to meet with Glaxo officials. Glaxo wanted to expand the number of trial sites using Lamivudine and include Dr. Dienstag's group in Boston. Dr. Tyrrell introduced Dr. Dienstag to the potential value of Lamivudine.

25. Bain, V.G., Kneteman, N.M., Tyrrell, D.L., et al — "Efficacy of Lamivudine in Chronic Hepatitis B Patients With Active Viral Replication and Decompensated Cirrhosis Undergoing Liver Transplantation." Transplantation 62: 1456-1462, 1996.

The dramatic end-stage HBV carrier transplantation resulted in the Edmonton team transplanting six patients in 1995. Liver-transplant programs for HBV patients worldwide were reopened.[26]

The discovery of the effectiveness of Lamivudine as the treatment of first choice for HBV carriers, opened the door to the search for similar new antiviral nucleosides. For the 360 million carriers it gave new hope for treating their liver complications and extending their life expectancy.

Long-term patients who have received Lamivudine, have remained remarkably free of side effects. Recent research has confirmed that long term Lamivudine therapy reduced the occurrence of liver cancer and delayed the onset of cirrhosis.[27]

Lamivudine Resistance from HBV Mutation: In 1993, Drs. Tyrrell and Fischer predicted a resistance problem would develop. They surmized a single nucleotide change in the genetic code for the enzyme replicating the viral DNA could produce resistance in the duck virus. Within a few months of the Tyrrell/Fischer prediction, the first Lamivudine-resistant mutation was seen in ducks. Three months later it was found in patients.[28] The mutation in one of the over 3000 nucleotides of the HBV genome, was exactly at the site predicted. Changing the Methionine amino acid to Valine, resulted in resistance. The use of Lamivudine as a single antiviral agent for HBV led to the appearance of Lamivudine-resistant mutants in 14% of the patients after the first year and in 60% of patients after four years.

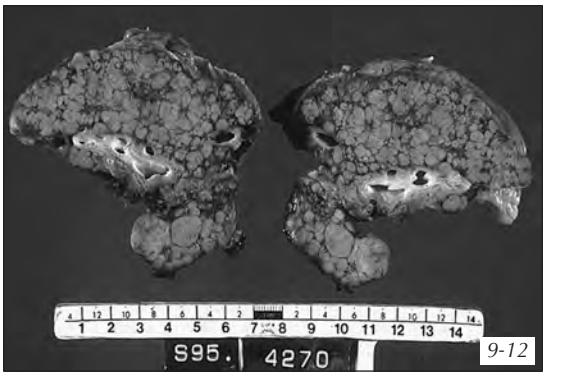
Lamivudine was the first generation of oral antivirals for HBV, which blocked replication of the viral DNA chain. Newer second-generation nucleosides, with the ability to treat the Lamivudine resistant virus were discovered. Adefovir was licensed in 2004[29] and Entecavir was licensed in 2006 in the USA. The Adefovir mutation rate was 14% after three years. The Entecavir mutation rate was 9% after three years, in Lamivudine resistant patients.

"Further evidence of the value of this research program can be found in the discovery by Dr. Tyrrell of two anti-HBV compounds that act by different mechanisms. This opens the door to combination chemotherapy for chronic hepatitis B infections, resulting in more effective treatment and delayed resistance. Dr. Tyrrell's laboratory was also the first to predict, based on knowledge of viral polymerase, the development of resistance to lamivudine. In 1995, the first lamivudine-resistant mutant was identified in humans."

Dr. Jacques Gagné, President, Prix Galien Canada, 1998

The Hepatitis C "KMT" Mouse Testing Model: Many transfused patients in the late 1980s developed hepatitis. On testing it was neither Hepatitis A nor Hepatitis B, hence the name "Non A non B Hepatitis". In 1989 a group of scientists led by Dr. Michael Houghton were able to clone the gene code for the viral protein from the blood of a chimpanzee infected with serum from a patient with Non-A Non-B Hepatitis. This discovery led to the identification of a new positive strand RNA virus that caused hepatitis. It was named the Hepatitis C virus (HCV).

The study of HCV was severely hampered by the inability to grow the virus in cell cultures



Chimeric mouse liver

26. Bain, Vincent, et al "Efficacy of Lamivudine in Chronic Hepatitis B," in Transplantation 62: 1456-1462, 1996.

27. Liaw, Yun-Fan, et al "Lamivudine for Patients with Chronic Hepatitis B and Advanced Liver Diseases," in the NEJ Medicine 315(15): 1521-1530, October 7, 2004. Liaw's research does reference the work of Dienstag (1999) but makes no reference to the discovery of Lamivudine as a new antiviral treatment for Hepatitis B, ten years earlier by Tyrrell and Robbins.

28. Fischer, Karl P., Tyrrell, D. Lorne "Generation of duck hepatitis B virus polymerase mutants through site-directed mutagenesis which demonstrate resistance to Lamivudine ((-) beta-L-2',3'-dideoxy-3'-thiacytidine) in vitro." Antimicrobial Agents and Chemotherapy 10: 1957-1960, 1996.

29. Costan, Georges "Dr. Lorne D. Tyrrell: a leading contributor in Virology," in L'actualite medicali, January 9, 2005; and Ed Susman, in "Studies back long-term use of antiretrovirals for HIV." Medical Post 40(30): 1, August 10, 2004.

and by the lack of an experimental animal model to test it. HCV, like HBV, only infected humans and chimpanzees. Chimpanzees were rare and very expensive.

In 1999 Drs. Tyrrell and Kneteman with David Mercer, Dr. Kneteman's graduate student, attempted to grow human hepatocytes in Systemic Combined Immune Deficiency (SCID) mice. The mice were immunodeficient and accepted tissue from humans. When fresh human hepatocytes were injected into the spleen of very young SCID mice, the hepatocytes migrated to the liver and established very weak colonies in the mouse liver. In a meeting with Mercer, Dr. Tyrrell suggested that the mouse liver cells were simply too well established and if the research was to be successful, the mouse liver cells had to be "weakened" to allow the human liver cells to flourish in the mouse's liver.

Acetaminophen was contemplated to poison the mouse liver and allow transplanted human hepatocytes to rescue the mouse. Then Karl Fischer Ph.D. brought to Dr. Tyrrell's attention, a paper describing the development of a mouse with a transgene. It expressed excessive amounts of urokinase in liver cells, that destroyed the mouse liver cells shortly after birth. Mercer pursued the idea and crossed the mice carrying the transgene with SCID/beige mice. This allowed the transplantation of human hepatocytes into immuno-compromised mice carrying a gene that destroyed their own liver. The experiment worked beautifully.

By 2001 the Kneteman/Tyrrell team had crossed a mouse, with a chimeric mouse liver that would support human HCV replication. The creation of the mouse model to test anti HCV compounds was considered a major breakthrough in HCV research. It removed a giant roadblock in the investigation of new compounds to treat the estimated 175 million people worldwide that have Hepatitis C. Researchers had been seeking this breakthrough. It was analogous to discovering the Pekin Duck model for researching hundreds of compounds to treat Hepatitis B.[30]

Scientists Kneteman, Mercer, Tyrrell, Fischer and Elliott, incorporated KMT-Heptech, a small biotechnology company at the University of Alberta, to test biologicals and antivirals active against HCV in this animal model. In 2006 the NIH gave KMT-Heptech an $8.5 million/year, five year contract to test antivirals for HCV in the "KMT" mouse.

Finding the Seventh Dean of Medicine at the UofA (1994): One year before Dr. Douglas R. Wilson completed his ten years as Dean on July 1, 1994, the University of Alberta began the search for a new Dean of Medicine. Dr. Tyrrell was appointed to the search and selection committee. It soon became clear that finding a new dean was going to be a difficult process.

A new UofA president was being recruited. Rod Fraser PhD would not be appointed President until January 1, 1995. Healthcare reform had been declared a priority in Alberta in late 1993. The four Edmonton hospital boards were consolidated into a new Capital Health Authority (CHA) in January, 1994. Later CHA added nine more perepheral Edmonton hospitals to the region. No doctors or nurses nor the Dean of Medicine were allowed to sit on the Board. Although Dean Wilson offered the services of the faculty to help with the restructuring process, no meeting was held to consider how the restructuring might affect the Faculty.

UofA Deans of Medicine Tom Marrie, Lorne Tyrrell and Douglas Wilson with portraits of Deans Walter Mackenzie and D.F. (Tim) Cameron, 2006

Just as swiftly the government initiated a series of deficit fighting cuts because of low oil prices. It announced a three year 22% rollback in university and healthcare funding. This meant huge cutbacks in every Faculty.

Several candidates came to look at the deanship. Dr. Robert Haslam, the Pediatrician-In-Chief at the Sick Children's Hospital came

30. Mercer, D., Schiller, D.E., Tyrrell, D. Lorne et al "Hepatitis C virus replication in mice with "chimeric" human livers." Nature Medicine 7(8): 927-933, 2001. Further described in, "New animal model will enable researchers to test Hepatitis C drugs," in the Faculty News 4(1): 4, December 2001.

unofficially. During his tour he noted Dr. Tyrrell's evident pride in the university. As they discussed the uncertainties, Dr. Haslam said that he thought Dr. Tyrrell should take on the job.[31] After the Haslam tour, Dr. Tyrrell made a list of the reasons why he should consider applying and why he should not. The reasons for applying far outnumbered the reasons for not considering the deanship. Dr. Tyrrell's major concerns were over the potential loss of good staff in the Faculty of Medicine. Stability was needed. In September 1994 Dr. Tyrrell offered his name as a candidate and on October 1, 1994, he was appointed the Faculty's seventh dean.[32]

Dental Faculty Retained

[In the early 1990s the University had debated the possible closure or transfer of the program.] "Dean Lorne Tyrrell was instrumental in the retention of the dental program at the University of Alberta. At the request of the University, Dr. Tyrrell was asked to consider whether or not the Faculty of Dentistry could be amalgamated with the Faculty of Medicine. Dr. Tyrrell took less than half an hour to decide that this would be a valuable structure for not only the Faculty of Dentistry, but also the Faculty of Medicine. As a result the Dentistry program became part of the Faculty of Medicine and Dentistry and completed the loop which began in 1917."

Dr. Gordon Thompson DDS, Faculty News, June 2004

Downsizing Health and Education, 1994 to 1996: On October 3, 1994 two days after Dr. Tyrrell became dean, the Capital Health Authority (CHA) announced their rollback plan. The CHA budget was to be reduced from over $1 billion to $724 million per year over the next three years. Many were surprised at the extent of the rollbacks.

The rollbacks to the Faculty were 5% and 6% in the first two years. The cuts were the same for all educational institutions including Universities. Many physicians began leaving Alberta for the U.S.A. University cutbacks resulted in forty-seven geographic full-time (GFT) positions being lost through attrition, redundancy or early retirement. Over eighty support staff were let go from the Faculty of Medicine. The workload increase placed an additional strain on the UofA volunteer teaching staff. They were not easy times to start a new deanship. Though the challenges were difficult ones, Dr. Tyrrell identified some opportunities.

Merging Medicine and Dentistry, 1995: After Dr. Rod Fraser was appointed the President of the University of Alberta on January 1, 1995, he asked Dr. Tyrrell to consider amalgamating the Faculty of Dentistry with the Faculty of Medicine. The alternative was to close the Faculty of Dentistry. Members of the UofA Board and senior administration wanted the Province of Alberta to retain the Faculty of Dentistry. The Faculty of Medicine agreed to the merger. Dr. Wayne Raborn DDS, along with Dr. Ruth Collins-Naki, Associate Dean of Medicine, organized the merger effort. The initial step was to teach the first two years of medicine and dentistry in a common format. It became the wave of the future for dental schools in North America and was followed at Western, McGill and in some American universities.[33]

Turning the Cutback Corner: In 1996 Alberta appointed Jane Fulton as the new Deputy Minister. Medical Genetics was one service of importance to the Faculty. It had been discussed with her. At a public meeting with the Capital Health Authority (CHA), Ms. Fulton spoke of the significance of Medical Genetics. In the question period, Dean Tyrrell said that he was delighted to hear of her support but leaders in

Dr. Gordon Thompson DDS, Faculty News, June 2004

31. (Tyrrell, D. Lorne) Dr. Tyrrell had already received encouragement to apply for the position from a number of department chairs, including Paul Armstrong (Medicine), Stewart Hamilton (Surgery), Phil Gordon (Pathology), and key individuals such as Martha Piper (Vice-President, Research), Dr. MacDonald (Acting President), and Aaron Shtabsky (Hospital Board Foundation), but had declined to submit his name.

32. (Tyrrell, D. Lorne) The Deans of the UofA Faculty of Medicine prior to Dr. Tyrrell were Alan C. Rankin (1920-1945); J.J. Ower; 1946-1948); J.W. Scott (1948-1959); Walter C. Mackenzie (1959-1974); D.F. (Tim) Cameron (1975-1983); Douglas Wilson (1984-1994), and D. Lorne Tyrrell (1994-2004). Dr. Tyrrell was followed by Dr. Tom Marrie (2004-2009).

33. Raborn, Wayne Faculty of Medicine executive appointments, Faculty News 1(1): 10, 1997/98.

Medical Genetics needed research space to attract a leader. Ms. Fulton asked Dean Tyrrell, "How much do you need?" He said he would require at least $3 million. She replied "You've got it!" Dean Tyrrell thanked her very much, and went back to his office to dictate a letter confirming her commitment.

A few weeks later deputy ministers Jack Davis and Bob King paid Dr. Tyrrell a visit. They indicated this was not the way government funding was normally obtained, but agreed that the promise would be honored. With partnering, the Faculty raised nearly $5.8 million to carry out renovations for Perinatal Research, Medical Microbiology and Immunology, and Medical Genetics. It required expansion and restructuring of the 8th floor of the Medical Sciences Building (Medical Genetics), the 2nd Floor of the Heritage Building (Perinatal Research), and the 6th Floor (Medical Microbiology and Immunology).[34]

Funding and Retention of Medical Faculty

a) Academic Enhancement Fund: The 1994/95 university funding rollbacks hit the Faculty very hard. The decreased funding put heavy strains on the departmental Practice Plans, particularly in the Department of Medicine. Many faculty lost secretarial support. After Dr. Tyrrell became the chairman of the Association of Academic Health Centres in Alberta, he urged representatives from Capital Health, the Calgary Regional Health Authority, the two Faculties of Medicine (UofA, UofC), the Alberta Cancer Board and the Provincial Mental Health Board, to convince the Minister of Health Shirley McClellan to study the recruitment and retention of clinical faculty. The study resulted in $6 million being provided to each academic health centre for additional staff. It was a very helpful injection of funding at a critical time.

> He was a creative problem solver, thinking ahead of the curve and receptive to bold new ideas and strategies, which he sought from all sources. No one worked harder, with more tenacity and a generosity of spirit on behalf of the Faculty. Doing so while maintaining enthusiasm for research and teaching—not by talking the talk but by walking the walk—was remarkable to behold and an inspiration to all of us. Without his help the financial footings of the Department of Medicine would have collapsed: together we were able to get government support for the faculty and the beginning underpinnings of the Alterative Payment Plan that Tom Marrie in collaboration with others has so successfully implemented today.

Dr. Paul Armstrong, Faculty News, June 2004

b) Canada Research Chairs (CRC) Program, 1998: The federal initiative (1998) to create Canadian Research Chairs, and the Canadian Institute of Health Research (CIHR) to parallel the NIH Health Research program in the USA, was opportune. The CIHR was based on three pillars: Biomedical research and Clinical research, Health Outcomes research and Epidemiology or Population Health research. The funding of 2,000 Chairs across Canada gave a huge boost to staff recruitment and retention.[35] The University of Alberta was designated for about 120 chairs. Forty-three were in the Faculty of Medicine, of which twenty-three were senior Chairs (Tier I) and twenty-three were junior Chairs (Tier II). This designation provided stability to senior faculty who otherwise might be looking for a new position elsewhere and facilitated key recruitment initiatives at both junior and senior levels.

c) Alberta Heritage Medical Research Funding of Research (AHFMR) Prizes: With the advent of the Canada Research Chairs program, many universities in Canada began to target some of the excellent researchers that had been recruited to Alberta through the AHFMR. In order to prevent the loss of AHFMR scientists and scholars, President Dr. Matt Spence introduced research salary prizes for scientists and scholars.[36]

d) Alternative Funding Plans: The creation of Alternate Funding Plans (AFP) was another important initiative for the faculty. They started in 2002 in the Department of Medicine under the leadership of Dr. Tom Marrie, and in Pediatrics under Dr. Terry Klassen. These two AFPs

34. Editor (Robb, M.) Faculty Milestone: John Forbes first graduate of Medical Genetics. Faculty of Medicine and Dentistry News 2(3): 12, March 2000.

35. Editor (Robb, M.) Three of Faculty's top researchers named Canada Research Chairs. Faculty News 5(2): 5, December 2002.

36. Spence, Matthew President and Chief Executive Officer, AHFMR (1991-2004). The prizes were $10,000/year for junior scientists and $20,000/year for senior scientists. One hundred prizes were given out per year, starting in 1999.

funded considerable expansion in the clinical faculty, which in turn enhanced patient care, the quality of teaching, and the research dollars received by these departments. AFPs in other departments were slower to develop.[37]

A New Curriculum: In the 1994 annual curriculum review, the faculty found students arrived very enthusiastic, but their enthusiasm progressively diminished through long hours of lectures, particularly in the second year and the early part of the third. Dr. Tyrrell undertook a major restructuring of the curriculum, led by Drs. Chris Cheeseman, Anil Walji, David Cook, and countless others. The objective was to include more small group teaching and self-directed learning.[38]

The new curriculum was well accepted by the students. They retained much more enthusiasm and suffered less "burn-out". One challenge remained for all medical students - to decide what residency program to take before their clinical clerkship year.

Faculty of Medicine Executive, 2005
Deans Marrie and Tyrrell are in the front row
(8th and 9th from L)

In 2000 an accreditation team from the Association of Canadian Medical Colleges (ACMC) viewed the major curriculum changes with some trepidation. But the UofA pattern of success on the national examinations did not change. It remained in the top five medical schools in Canada, sometimes finishing first, second, or third. In 2002 all 103 students successfully sat the national LMCC examinations, earning the Dean a pair of white gloves. Still some curriculum deficits existed in the teaching of the legal, ethical and the organizational aspects of medicine and population health.

New Department Heads, Associate and Assistant Deans: One primary role of every dean was to find good Chairs for key departments in the Faculty. Some outstanding Department Chairs were recruited. During Dean Tyrrell's tenure twenty-two department chairs were appointed to head twenty departments. All the chairs provided strong support to Dr. Tyrrell during his two terms as Dean.[39]

Dr. Tyrrell received exceptional assistance from his executive of Associate and Assistant Deans.[40] Dr. Joel Weiner, the Associate Dean of Research and a recognized leader in medical research in Canada, played a pivotal role in many provincial and national research initiatives. He gave MRC Chair Dr. Henry Friesen

37. Editor (Robb, M.) "Government funding plan announced for academic physicians in medicine." Faculty News 5(1): 5, October 2002.

38. Editor (Robb, M.) "UofA's team-centered learning in health sciences turns heads." Faculty News 1(4): 7, 1997/99. Dr. Tyrrell reported the changes have worked, in a four-year progress report in the Faculty News 5(3): 2, April 2003. The UofA placed second in the Medical Council of Canada national examinations. One hundred percent of the Class of 2003 passed the LMCC examinations. Faculty News 6(1): 2, October 2003.

39. Tyrrell, D. Lorne Dean's message. Faculty News 3(4): 2, June 2001. It applied to teaching staff too. In 2000 the Faculty recruited sixty new people and lost about twenty. The Department Chairmen who were recruited during Dr. Tyrrell's deanship were: in Medicine, Paul Armstrong, Tom Marrie, and Jon Meddings; in Pediatrics, Fran Harley and Terry Klassen; in Pathology, Phil Gordon and Victor Tron; in Cell Biology, Rick Rachubinski; in Oncology, Carol Cass; in Public Health Sciences, Tom Noseworthy and Nicole Cherry; in Physiology, Es Sanders; in Pharmacology, Sandy Clanachan; in Medical Microbiology and Immunology, James Smiley and David Evans; in Medical Genetics, Diane Cox; in Biochemistry, Brian Sykes; in Anesthesiology, Brendan Finucane and Barry Finegan; in Ophthalmology, Ian MacDonald; and in Biomedical Engineering, Peter Allen and Robert Burrell.

40. Tyrrell, D. Lorne Dr. Phil Gordon was appointed Vice Dean and dealt very effectively with many difficult faculty decisions between the University and Capital Health. Dr. George Goldsand in the early years and Dr. George Elleter in later years provided leadership in postgraduate Medical Education. Dr. Chris Cheeseman was a superb Associate Dean of Undergraduate Medical Education. Dr. Paul Davis provided strong leadership as the Associate Dean of Continuing Medical Education. Dr. Tyrrell created a new Associate Dean position in cooperation with Capital Health - and two individuals, Drs. Bob Bear and Tom Feasby, provided the necessary leadership in their roles as Associate Deans of Clinical Affairs.

Honor Wall, Faculty of Medicine, Dr. Tyrrell (LL), 2007

key advice on many aspects of the transformation of the Medical Research Council into to the Canadian Institute of Health Research (CIHR). A new associate dean position was created in 2002 to address Gender and Equity issues. Dr. Lil Miedzinski was appointed the Associate Dean to lead this new portfolio.[41]

Chairs, Institutes and Foundations: In 2002 the province designated two new Institutes, the Alberta Heart Institute for Edmonton and the Alberta Bone and Joint Institute for Calgary.[42] Their creation came about through the lobbying of both academic centres. Mr. Bud McCaig, the Chair of the Calgary Regional Health Authority suffered from very severe arthritis. His donation to the UofC medical school created a Centre for Arthritis Research. At the same time, Dennis Modry, Arvind Koshal, Michele Lahey, and CHA CEO Sheila Weatherill sought to have the creation of a Cardiac Institute in Edmonton. Premier Klein announced the creation of both institutes in one of his fireside chats.

As the finances of the province improved there were more initiatives. In 2000 the Alberta Heritage Foundation for Science and Engineering Research (AHFSER or Ingenuity Fund) was formed with $500 million in assets. It was augmented by another $100 million per year for four years starting in 2005.[43] Funding for the Alberta Heritage Foundation for Medical Research was similarly increased by $500 million starting in 2005.

More Aboriginal Physicians (1991-2004):[44] An Affirmative Action Program to educate more aboriginal physicians was initiated during Dr. Wilson's deanship. The five-year, $50,000 per year grant from the Muttart Foundation and the federal government's Department of Indian Affairs expired in 1996. That year the first graduates completed their four-year program. The Muttart Foundation and the Medical Services Branch of Indian Affairs did not renew their grants. The program director Anne-Marie Hodes, felt the program was already showing signs of success. Students were being recruited from across the country. There was a very low attrition rate. The Faculty agreed to provide endowment support to bridge the funding gap. In 1999 Syncrude came to the rescue and provided $50,000 per year in critical funding to stabilize the program.

In 1995 the Tailfeathers family offered to present traditional blankets to aboriginal students

Mazankowski Heart Institute, opened 2007-2009

41. Editor (Robb, M.) "Miedzinski Woman of the Year." Faculty News 6(4): 6, June 2004.

42. Editor (Robb, M.) "An eight-year-old heart transplant recipient steals the show, at the ground breaking for the newly created $142 million Alberta Heart Institute." Faculty News 6(2): 6, December 2003. A second Institute for Bone and Joint Diseases was commissioned at the Foothills Hospital site, University of Calgary.

43. Lampard, Robert "The Alberta Heritage Foundation for Medical Research: Its Formative Years 1975-2005," in Part 2. Dr. Bill Bridger became founding President and CEO of the AHFSER or the Alberta Ingenuity Fund in 2001. The academic positions he held at the UofA and UWO prior to his appointment were outlined in the Faculty News 8(2): 5, December 2005.

44. Editor (Robb, M.) "Tops in Canada, a profile of Nancy Robson, an aboriginal medical student and mother." Faculty News 1(6): 9, 1997/99. For a review of Dr. Malcolm King's challenges and contributions, see the Faculty News 1(3): 10 and 2(4): 6 June 2000 (King), 1997/99. John Bell, an aboriginal leader stressed how outstanding the Alberta program was, but how much more needed to be done. Faculty News 1(2): 3, 1997/99. The federal government announced a $100 million grant over five years to address this major issue. CMAJ 171(9): 1028, October 26, 2004.

The Plain Need for Native Doctors

"In Alberta's case there are four aboriginal physicians among the approximately 4,000 currently practising ones. Since aboriginal people make up five percent of Alberta's population, there should be an additional 196 aboriginal physicians in order to achieve parity in numbers in Alberta alone.

In 1987, independent of the Health Canada initiative, the Faculty's first aboriginal student enrolled in the M.D. program. Darcy Tailfeathers, a Blackfoot student from the Blood Tribe in southern Alberta, was a third year transfer student from the University of North Dakota. With a family of three young children, he wanted to return to Alberta to be closer to his home community. Darcy was a charismatic, talented student, a gifted athlete, a winner of numerous academic and athletic scholarships, and was also considered an outstanding role model for Alberta's aboriginal youth.

Three months later he died suddenly in an automobile accident returning from a hunting trip with a Faculty member. In 1989, the Faculty endowed a scholarship for aboriginal M.D. students in his memory. This award has grown to two annual awards, both worth $1,000 each."

Program Director Anne-Marie Hodes, in Iatros, Spring 1997

at the graduating students' luncheon, in honor of their medical student son Darcy, who had died in a car accident. It became a colorful addition to the tradition. One year, elder Bobby Cardinal came to make the presentations. He had attended school in Duffield and had played hockey and baseball with Dr. Tyrrell forty years earlier.

The UofA medical faculty already had one aboriginal teacher on staff, Professor of Pulmonary Medicine Dr. Malcolm King. His encouragement created the first two undergraduate aboriginal positions over the MD quota. In 2002, the Program had nine outstanding applicants for the three positions. Dean Tyrrell appealed to Minister of Health Gary Mar to provide additional funding for one year. Six students were admitted that year. In 2004, the provincial government made a commitment to fund the aboriginal program with $200,000/year.

Through the efforts of Dr. King and the Association of Faculties of Medicine of Canada (ACMC), faculties of medicine training aboriginal students increased from 4 to 16 by 2002. The goal was to graduate fifty aboriginal MDs per year, a marked increase from a total of fifty aboriginal doctors in Canada in 1989. By the end of Dr. Tyrrell's deanship, UofA had graduated 33 aboriginal MDs, and would reach 67 by 2009. Twenty more were in the UofA's four-year program. Together with Manitoba, the two faculties were graduating more aboriginal MDs than the rest of Canada combined. Roughly one half of the graduates returned to their communities of origin.

Memorial Service for Donated Bodies (1994/95): In Dr. Tyrrell's first year as dean, a group of medical students asked for a memorial service for the family and friends of individuals who had donated their bodies to the Faculty of Medicine and Dentistry for teaching and research purposes. The students wanted the service to close the circle, a respectful gesture for this ultimate donation. With some trepidation Dr. Tyrrell agreed. The service was a memorable one. The UofA Pastor, Dr. Tyrrell, and the students all spoke. The Medical Student Chorus sang, accompanied by students playing their own instruments. The Bernard Snell Theatre was packed with 450 friends, relatives, and loved ones, who came from across Canada to attend the service.

At the close of the service, family members were given a rose in memory of their loved ones. All the families expressed their gratitude. Many commented on how meaningful the service was. It became an annual service regularly attended by Lois Hole when she was Chancellor of the University and Lieutenant Governor, and by her successor Chancellor John Ferguson and his wife, Bunny. They were all impressed with the maturity, sensitivity, and tremendous talent demonstrated by the medical students, and their strong expression of compassion and gratitude during the service.

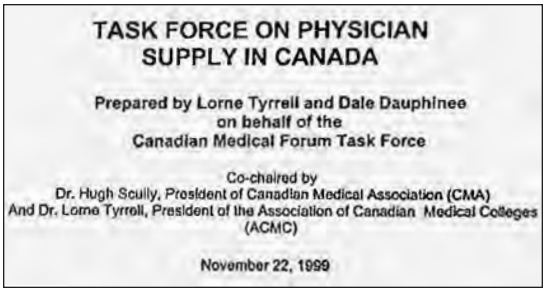
Gifts of a Lifetime

"On May 17, 1996, the Faculty of Medicine and Oral Health Sciences held its first ever commemorative service for the people who donated to the Anatomical Gifts Program. The ceremony went far beyond simple donor recognition. It provided an opportunity for staff and students to say thank you to the people whose bodies helped them teach and learn the fundamentals of medicine. The invitation was also extended to the friends and families of the deceased, so they could say good-bye to their loved ones a final time.

Oddly enough, this kind of service is relatively rare. The University of Alberta is one of three medical schools in Canada that have similar services. The ceremony was held in a very fitting place – Bernard Snell Hall – where 220 hours of anatomy lectures were held during the previous nine months. The service was going to be simple. Flowers, music, prayer and a list of fifty-four names …"

Darren Nichols, Medical Student, in Iatros, Spring 1997

President of the ACMC (1996-1999) and the Task Force I Report (1998-2000): Due to the illness of his predecessor, Dr. Tyrrell was asked to accept the two-year presidency of the Association of Canadian Medical Colleges (ACMC), one year early, in 1996.


TASK FORCE ON PHYSICIAN SUPPLY IN CANADA

Prepared by Lorne Tyrrell and Dale Dauphinee on behalf of the Canadian Medical Forum Task Force

Co-chaired by
Dr. Hugh Scully, President of Canadian Medical Association (CMA)
And Dr. Lorne Tyrrell, President of the Association of Canadian Medical Colleges (ACMC)

November 22, 1999

Task Force I Report, November 22, 1999

Two major challenges arose at the ACMC, now renamed the Association of Faculties of Medicine of Canada (AFMC). President Dr. Henry Friesen wanted to create the new Canadian Institutes of Health Research (CIHR) and expand the four pillar mandate of the Medical Research Council (MRC), but needed broad support to convince the federal government to agree to it. The AFMC under Dr. Tyrrell strongly supported the MRC initiative. Dr. Friesen often commented on how important the AFMC was and how much he appreciated Dr. Tyrrell's personal support for the creation of the CIHR, as it evolved through the study, advisory, and transition committee stages.[45]

The second challenge arose at the annual Canadian Medical Forum, where nine different national medical organizations headquartered in Ottawa met. It was Dr. Tyrrell's second meeting. The recurring refrain focused on the declining physician enrollment. First-year enrollment had started to drop from a peak of 1,829 in 1989, ostensibly to address the perceived oversupply of physicians. By 1994 the decrease reached 10%.

By 1999, there were about 1,480 Canadian MDs graduating per year. With 56,000 physicians in Canada and 3.5% retiring, dying, or leaving practice each year, Canada needed 1,960 doctors to maintain the current complement. Compounding the problem was the annual population growth of 300,000 per year. Using the ratio of 1.8 physicians per 1000 Canadians, an additional 540 physician graduates were required each year. Those calculations did not include the additional medical load from aging Canadians, end of life diseases or the reduced working hours of female physicians. In total, well over 2,500 doctors per year were needed.

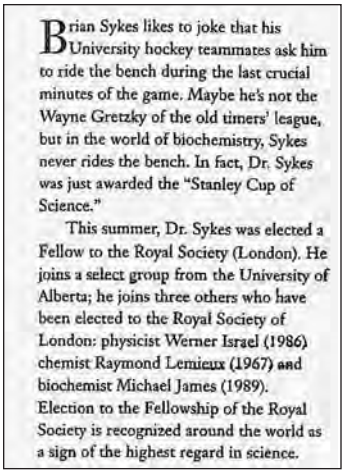
Dr. Dale Dauphinee the Director of the Medical Council of Canada and Dr. Tyrrell agreed to study the problem, for CMA President Hugh Scully and the AFMC. The Task Force I report was presented to the Minister of Health Allan Rock and provincial health representatives on November 22, 1999.[46] The recommendations were to increase the medical school enrollment to 2,500/year and the number of residency program positions to 120 for every 100 medical students who had graduated. The recommendations were included almost verbatim by the Kirby Report (Dec. 2001), but were omitted by the Romanow Report (Feb. 2002). With political support and a consistently repeated message, medical school enrollment began to increase, starting in Alberta and Quebec, followed by Ontario and BC.

By 2005 Canadian Faculties of Medicine met the first-year medical student enrollment target of 2,500 students through additional funding from provincial governments. As it takes six years to graduate a family practitioner and eight years to graduate a specialist. The physician deficit created in the 1990s will not begin to be addressed until sometime after 2010. In the interim the reliance will remain on foreign medical graduates to fill the shortfall.

Medical Research Highlights (1994-2004):
1) The NMR Centre: In 1995, Dr. Brian Sykes and many members of his protein research group received an offer to move to the Carnegie Mellon University in Pittsburgh. Dr. Sykes did not want to go, but wondered if Canada was going to maintain the ability to compete on an international level. To compete, he asked for a new Nuclear Magnetic Resonance (NMR) facility, now called the NANUC. Dr. Tyrrell acted as the catalyst in appeals to the Alberta and Canadian governments. Productive meetings were held with the Ministers of Innovation and Science (Lorne Taylor), Infrastructure (Ty Lund), Health

45. Friesen, Henry, Tyrrell, D. Lorne — Personal communication, August 25, 2006. For a case study of the evolution of the MRC into the CIHR see "Transforming Health Research in Canada: The Making of the Canadian Institute of Health Research." Eighty pages at http:/www/policy.ca/policy-directory/Detailed/1152.html by Robert Plamondon. A brief overview of the impact of the change was highlighted by Alan Bernstein, in "Research, an Agent of change in the 21st century," in Hospital News, page 10, December 2001. Also see Dean Tyrrell's message in the Faculty News 1(7): 2, 1997/99.

46. Tyrrell, D. Lorne — Dean's Messages in the Faculty News 1(4): 2 and 2(3): 2, March 2000. Dr. Tyrrell asserted that the final editor of the twenty-four page report was his wife Lee Ann.



Brian Sykes likes to joke that his University hockey teammates ask him to ride the bench during the last crucial minutes of the game. Maybe he's not the Wayne Gretzky of the old timers' league, but in the world of biochemistry, Sykes never rides the bench. In fact, Dr. Sykes was just awarded the "Stanley Cup of Science."

This summer, Dr. Sykes was elected a Fellow to the Royal Society (London). He joins a select group from the University of Alberta; he joins three others who have been elected to the Royal Society of London: physicist Werner Israel (1986) chemist Raymond Lemieux (1967) and biochemist Michael James (1989). Election to the Fellowship of the Royal Society is recognized around the world as a sign of the highest regard in science.

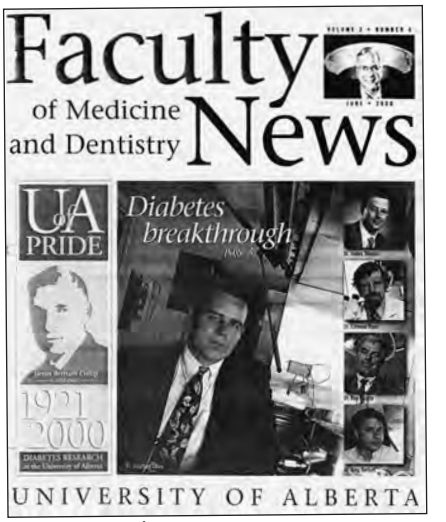
Faculty News, September 2000

(Shirley McClellan), and representatives of the Federal Minster of Health (Allan Rock). The result was the creation of a $10-20 million National Centre for NMR Studies of Small Molecules. It quickly became an important national centre. NMR Centre successes have included defining the structure of muscle proteins in Congestive Heart Failure, Muscular Dystrophy and Multiple Sclerosis.[47]

2) The Edmonton Protocol: In 1995, the Diabetes research group lost most of their research grants. There were questions about islet cell transplants. Could they ever be used to treat patients with Type I (juvenile) Diabetes. A meeting with Dr. Ray Rajotte and Stewart Hamilton convinced Dean Tyrrell to temporarily fund ($100,000) the islet cell transplant program to keep the team together and give them a chance to renew their grants. The team's major grant was renewed within six months.

After twenty-five years of research by Drs. Warner, Rajotte, Shapiro, Lakey, Ryan, Warnock, Kneteman and Korbutt, the Edmonton Protocol was announced in 2000.[48] The first eight transplants with Type 1 Diabetes survived the functioning insulin-producing islet cell infusion and the anti-rejection drug regime, and remained free of injectable insulin for at least one year. On June 7, 2000 James Shapiro and his team published the Edmonton Protocol, in a major paper in the New England Journal of Medicine.[49] The announcement boosted diabetic research funding from the Canadian Diabetes Association, the Juvenile Diabetes Foundation, the National Institute of Health (NIH), and the CIHR. To date (2006), 1760 Type-1 diabetic candidates have been serotyped and 600 transplanted, world wide. The 85 transplants at the UofA have had an 80-90% success rate.

The Edmonton protocol took a further step forward when a compatible live donor transplant was performed in the Kyoto University Hospital in Japan (2004). In 2004/2005 the NIH approved a $75 million grant to five centres including the UofA, to address islet cell transplant questions: 1) why do cells die? 2) what is the best protocol? and 3) what are the safest



Faculty News, June 2000

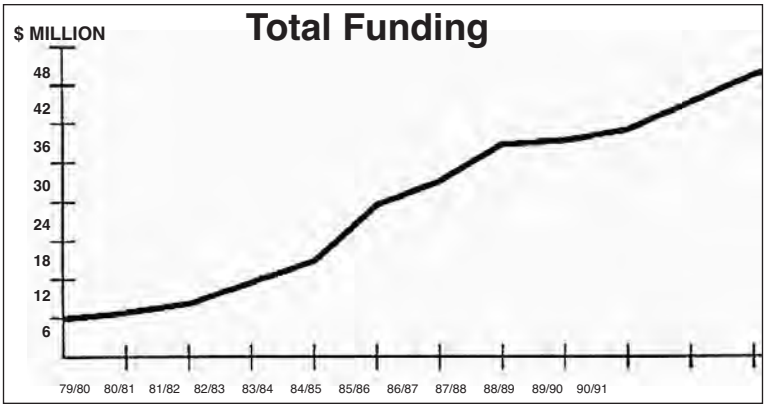
47. Editor (Robb, M.) "Nuclear Magnetic Resonance Centre gets the go-ahead from CFI," Faculty News 1(6): 3, 1997/99. The team leader Dr. B. Sykes was awarded a Fellowship in the Royal Society for his work. Faculty News 3(1): 3, September 2000.

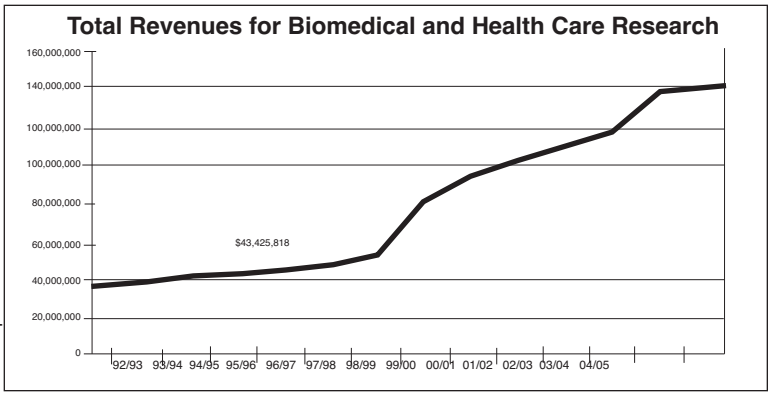
48. Editor (Robb, M.) For highlights of the twenty-five years of research required to create the Edmonton Protocol, see the Faculty News 1(2): 5 1997/99 (First patient); 2(4): 4, June 2000 (Edmonton Protocol); 5(2): 3 December 2002 (First successful auto-islet transplant following a pancreatectomy); 5(4): 4 June 2003 (Edmonton protocol replicated elsewhere); and 7(1): 12 September 2004 (Mouse cells produce insulin); 8(1): 9 September 2005 (preserving islet cells). The new Diabetes Institute is located on the corner of 114th St. and 87th Avenue.

49. Shapiro, A.M. James, et al "Islet Transplants in Seven Patients with Type I Diabetes Mellitus using glucocorticoid suppression regime," NEJM 343(4): 230-238, July 27, 2000. According to Dr. Tyrrell, the Alberta Diabetes Foundation and the University Hospital Foundation deserved additional credit for maintaining research funding at a time when other agencies were diminishing their support.

ways to prevent immunorejection? The most recent UofA research has focused on transplanting pig islet cells that produce insulin, a modern twist on the original Banting, Best and Collip isolation of insulin and the mass production of it using bovine sources.[50]

3) Cancer Cells and Letter Bombs: Less spectacular research in the Faculty contributed to the understanding of how the immune system works or breaks down in cancer cells. Dr. Chris Bleackley discovered that the portal for granzyme b, the letter bomb which triggers cancer cell death when the immune system t-cells deliver it to the target cells, was closed. The admitting receptors were absent from the surface of cancer cells. As a consequence the killer t-cells have no place to deliver their bombs.[51]





UofA Research Funding, 1979-2005 *9-18*

Research Awards: Many research awards have been received by the medical faculty for Teaching, Research, and Clinical Care. Forty-three Canadian Research Chairs have been awarded. Numerous Fellowships in the Royal Society of Canada have been granted. Another example of the international recognition of UofA medical researchers occurred when four of the nine infrequently-offered Howard Hughes Awards were awarded to UofA researchers in 1996: Chris Bleakley, Rick Rachabinski, Randy Reid, and Tim Mosmann.[52]

Medical Research Funding (1994-2004): When Dr. Tyrrell became dean in 1994, medical research grants received by the faculty members were approximately $45 million per year. By 2004, research grants totaled about $141 million per year, or 40-45% of the UofA research budget. By comparison the amount was four times the size of the academic budget

50. Semmens, Grady "Diabetic breakthrough discovery could have an enormous impact...There is a huge international push to find a human pancreatic cell source." Interview with Dr. Lee Behil, in UofC's On Campus 3(17): 3, March 17, 2006. For the contribution of Dr. John Elliott and UofA researchers to the sequencing of diabetic genes, see the Faculty News 6(4): 12, June 2004. Dr. Rajotte and his UofA team have had preliminary success injecting baby pig islet cells into diabetic monkeys with insulin-free survival of up to a year, as outlined in Nature Medicine 12(3): 304-306, 2006. For more information on the original insulin research of Dr. Collip, see the profile of Dr. James Bertram Collip, The Alberta Years 1915-1928, in *Alberta's Medical History*, pages 311-323.

51. Editor (Robb, M.) Biochemist Dr. Chris Bleackley published his important work in Cell, as noted in the Faculty News 3(2): 3, December 2000. For more progress reports see the Faculty New 4(1): 3, 6 (Bleackley awarded the Robert L. Noble prize by the NCIC), and 4(4): 6 (Cancer cells do not have a surface molecule to bind with the granzyme b letter bomb).

52. Tyrrell, D. Lorne Dr. Tyrrell was always timely, courteous, and never forgetful when it came to acknowledging and highlighting the accomplishments of his colleagues at UofA. See the Dean's message in the Faculty News 5(2): 2, December 2002 for examples (Bleackley, Cass, Rachubinski). For an earlier more detailed history of medical research at the UofA, see Elise Corbet's *Frontiers of Medicine*, pages 169-190, UofA 1990, and for the AHFMR, see Robert Lampard's "The Alberta Heritage Foundation for Medical Research: Its Formative Years 1975-2005," in *Alberta's Medical History*, pages 363-378.

Ledcor/Zeidler Clinical Teaching and Gastroenterology Center

of the Faculty.[53] The increase came from additional funds from the Alberta Heritage Foundation for Medical Research ($20 million/year); the CIHR (MRC) ($20 million/year), partnering or matching grants with the Canadian Foundation for Innovation, the Canadian Research Chairs Program, Genome Canada, the Heart, Stroke, Diabetes and Cancer Funds, etc.

Slowly the difference in medical research spending between Canada and the United States has been addressed. In 1995, Canada spent $9 per capita and Alberta spent over $40 per capita while the United States spent $75 per capita on research. The brain drain was beginning to slow, as the Canada/USA differential was narrowed by CIF, CRC, Genome Canada, the AHFMR and Alberta Ingenuity grants.[54] Currently the NIH (USA) grants total $24 billion/year including salaries, while the CIHR (Canada) grants total $818 million (2006), excluding salaries.

Additional Medical Research Space (1994-2004):[55] The biggest challenge Dr. Tyrrell took on as Dean was to create new research space. The first two Heritage medical research centres were built in Edmonton and Calgary between 1986 and 1988. Success in securing medical research grants created another space shortage. In 2000 the AHFMR offered up to $40 million in a challenge offer to create more research space. Two more research towers followed. Funding and building the HRIF (Health Research Innovation Facility) in Edmonton and the HRIC (Health Research Innovation Centre in Calgary involved many meetings with Cabinet Ministers Ty Lund, Ed Stelmach, Lyle Oberg, Shirley McClellan, Premier Klein and the two Faculties of Medicine.

Planning began in 2000 for the UofA HRIF East and HRIF West, on the corners of 112th and 114th Streets facing 87th Avenue. Construction was delayed by the cost of fighting forest fires in Alberta (2001) and then the severe agricultural drought (2002). A potential third delay, the Mad Cow crisis, came in May 2003, but was avoided because construction tenders had just been released.

These two buildings along with the $167 million Heart Institute added 66,000 and 34,000 square meters of new basic and clinical research space to the Mackenzie HSC. The UofA plan was to concentrate transplantation and Diabetes research in HRIF West, and integrate Clinical Medicine with Systems Biology, Health outcomes research and Functional Genomics in HRIF East. Once fully operational, 150 new faculty members and approximately

Health Sciences Ambulatory Learning Centre, now known as the Edmonton Clinic North. Construction of Phase I began in 2007.

53. Tyrrell, D. Lorne — Dean's Message, Faculty News 6(3): 2, April 2004. Annual figures vary somewhat because of different accounting and accrual periods. The UofA Faculty of Medicine received 43 of the 120 CRC research chairs funded by the federal government at UofA through the Canadian Institute of Health Research. Faculty News 1(7): 2, 1997/99; 6(2): 8, December 2003; 6(3): 6, April 2004.

54. Quinn, Mark — Northern Lights, in Prix Galien, pages 4-8, September 1998.

55. Editor (Robb, M.) — Planning and construction of Medical research space during the Tyrrell deanship, increased the total space from 800,000 sq feet (1994) to 1,500,000 (2004). With the construction of the East and West Heritage Research Innovation Facilities were added, as reported in the Faculty News 4(4): 2 (2002) and 5(4): 3 (2002). Construction of the Alberta Heart Institute, started in 2004, Faculty News 5(2): 6 and 6(2): 6. The Zeidler GI Centre, and the Ledcor Clinical Training Centre for practical teaching of physical examinations using recorded videos started in 2004. (Faculty News 6(2): 7) For further details (in meters) on the construction of WCM HSE and adjacent site buildings, see Appendix 9, page 196.

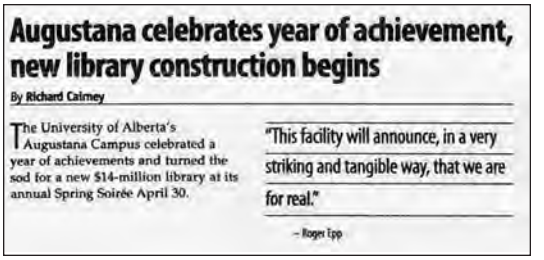
300-400 new graduate students and postdoctoral trainees were added to the 300 graduate and post-doctoral enrollment and the Faculty base of 550. The additional researchers and space will allow funding grants to the university to increase by approximately $100 million/year when these research teams are in place.

There were smaller successful capital projects. Additional funds were attracted to create an Institute for Biomedical Design and Cybercell Centre ($24M), a Diabetes Research Centre ($29M), a Viral Hepatitis Institute ($8M), a Cardiovascular Research Centre ($16M), the PET/MRI/JR equipment facilities ($25M), the NANUC Centre ($10M), the Ziedler Gastroenterology Institute and the Ledcor Clinical Training Centre ($6.8M).

More Teaching Space:[56] The largest addition of space will come from the planned $450 million Clinical Learning Centre, across 114th Street to the west of the Walter C. Mackenzie Health Sciences Centre. Modeled on the Mayo concept that flows inpatients to outpatients, it will be known as the Edmonton Clinic North and South. They will house medical clinics from the Mackenzie and Stollery Children's Hospitals. The LRT extension will connect the Clinic and the HSC, to the university and city. Once completed, the new buildings will add over 100,000 square meters of inter-disciplinary healthcare, administrative, clinical and teaching space. It will allow the removal of clinics and office spaces from the Walter C. Mackenzie HSC to the new facility and will have the potential to increase student teaching in all health disciplines to 3,000 students. This increase in space has the potential to expand the medical student enrollment to 255-260/year.

The center was the product of a cooperative, forward thinking relationship between the Faculty of Medicine and Capital Health that evolved under the stressful and trying times of the mid 1990s.

Philanthropy: Private fundraising was not a course offered in medical school, but in today's world it is an indispensable quality for any successful Dean. Dr. Tyrrell deemed saying "thank you" as one of the most enjoyable aspects of his job. In one year he had nine million reasons to say it and reaffirm how important it was for medical schools to secure matching grants, start new initiatives, and provide bridge funding. Without this philanthropic gifting he felt the vitality and importance of the medical school would be diminished.[57] He called it critical to the faculty's success.



Augustana celebrates year of achievement, new library construction begins

By Richard Cairney

The University of Alberta's Augustana Campus celebrated a year of achievements and turned the sod for a new $14-million library at its annual Spring Soirée April 30.

"This facility will announce, in a very striking and tangible way, that we are for real."

– Roger Epp

Augustanna's new Library and Forum announcements, Folio, May 2007

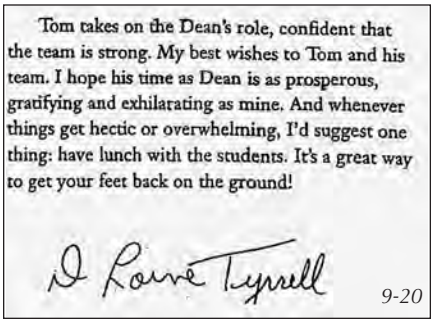
Affiliation of Augustana College (Camrose) with the UofA (2002-2004): In 2002 President Richard Husfloen of Augustana College in Camrose asked Dr. Tyrrell to serve on the Augustana College Board. During a board dinner meeting one student asked Dr. Tyrrell, "Is a B.Sc. from Augustana as good as a B.Sc. from the University of Alberta?" With intimate knowledge of both B.Sc. programs, Dr. Tyrrell answered that it was not. However, he saw great value in Augustana College, particularly for rural students having come directly out of high school who might feel intimidated by the environment of the University of Alberta.

That evening, the question of a partnership between Augustana College and the University of Alberta was raised by Dr. Tyrrell. The President was open to the suggestion. Many meetings followed with Lyle Oberg, Minister of Learning, LeRoy Johnson, MLA for Camrose, and later with President Rod Fraser, Vice-President and Provost Doug Owram, University of Alberta Chancellor/Chairman John Ferguson, and Jim Edwards.[58] Everyone agreed the union could be a win-win situation. After one and a half years of deliberations, Augustana became a part of the University of Alberta family in 2004. The affiliation agreement immediately increased its provincial subsidy per student by 50%, giving Augustana additional resources to grow. UofA gained an affiliated rural campus with easier transfer to its baccalaureate programs.

56. Editor (Robb, M.) More teaching space will come from the commissioning of the Learning Centre, renamed the Edmonton Clinic, west of the Mackenzie HSC across 114th Street. (Faculty News 6(4): 2, June 2004).

57. Tyrrell, D. Lorne "Dean's message" in the Faculty News, 4(2): 2, December 2001 and 4(3): 2, February 2002.

58. Owram, Doug Vice President, UofA, personal communication by E. mail, November 22, 2006.


Tom takes on the Dean's role, confident that the team is strong. My best wishes to Tom and his team. I hope his time as Dean is as prosperous, gratifying and exhilarating as mine. And whenever things get hectic or overwhelming, I'd suggest one thing: have lunch with the students. It's a great way to get your feet back on the ground!

D Lorne Tyrrell

9-20

Parting message for the UofA incoming Dean of Medicine, Dr. Tom Marrie, 2004

A Decade of Deanship in Retrospect (1994 to 2004): Dr. Tyrrell seriously considered taking a third term as Dean to see the completion of the projects he had started. His wife put it in perspective: "Just think of the buildings as trees that you have planted. They will grow and provide shade for others."

The changes during the decade were dramatic. Not since Dean Rankin (1920-1945) faced such a contraction (Depression) and expansion (World War II) had such retrenchment been followed by opportunity. The Golden Years of expansion forty years before at the UofA (1955-1965) had returned. The strength of the foundations laid almost a half century before had a new importance.[59]

In the face of the daunting challenges of 1994, Dr. Tyrrell emerged a decade later with the Faculties of Medicine and Dentistry merged, medical student enrollment increased from 102 back to 125/year, the medical curriculum overhauled, the Tyrrell stamp on a team approach to teaching and training, an ex officio membership on the CHR Board, the senior CHA management team located in the Walter C. Mackenzie HSC and soon to move across 114th Street, and health service-education-research better integrated; a process that will continue to unfold with the opening of the Edmonton Clinic (north and south), and a doubling of the medical research space.

During his ten years as Dean, Dr. Tyrrell made forty-five presentations on his Hepatitis-B research and wrote or participated in another forty-five papers. Like Dr. Walter Mackenzie, he never relinquished his involvement in clinical medicine, through his one day per week commitment to the Infectious Disease Service and the Virology Research Laboratory. His passion for research and for supporting and encouraging his team members remained undiminished.

In a 2002 issue of the quarterly Faculty News, a journal he had started in 1995, Dr. Tyrrell highlighted the accomplishments of Dr. D.F. (Tim) Cameron the UofA's fifth Dean of Medicine, who had died. Every era he said had its champions, and people with visionary dreams. Leaders like Dr. Cameron, he said, serve "as important models for the next generation." demonstrating how they made a difference by "supporting institutions they believe in."[60]

9-21

Dr. Tyrrell with the ViRexx American Stock listing, 2006

After Dr. Tyrrell's Retirement as Dean (2004): At his retirement as Dean on June 14, 2004 Dr. Tyrrell commented on how being the dean of a medical school was a tough job but it had many, many rewards.[61] It was a tremendous privilege to have been the Dean of the Faculty for ten years and have the support and friendship of so many people who were dedicated to building not only an outstanding research centre, but a truly outstanding hospital, clinical service, and program to educate the physicians of the future.

Colleagues like Dr. Kneteman reflected on Tyrrell's depth of knowledge, commitment to research, brilliant insight, contacts, sound judgment, integrity, compassion, humor, cama-

59. Lampard, Robert Profile of Dr. W.C. Mackenzie.

60. Tyrrell, D. Lorne Dean's message, Faculty News 5(1): 2, October 2002.

61. Tyrrell, D. Lorne "Celebrating a Decade of Progress." Special issue of the Faculty News to commemorate Dr. Tyrrell's retirement as Dean of Medicine on June 30, 2004, twelve pages, June 2004.

Ringing the gong announcing the American Stock listing of ViRexx, 2006

raderie, and common touch. Dr. Louis Franciscutti noted how proud Dr. Tyrrell was of the faculty, how he motivated others to "get behind this man and root for the cause", while taking the faculty to a higher level. Dr. Bill McLain spoke of Dr. Tyrrell's role as one, which varied from being a good dean to a bad actor. Typecasting Dr. Tyrrell he said was easy: hard working, full of character, credible, with genuine integrity.(62)

Retired Chancellor James Edwards remembered Dr. Tyrrell's persistent advocacy, clear vision, and relentless pursuit of excellence: "He was an uncomplicated man, and was most at peace driving a tractor on his family's century-old farm. His career was remarkably productive, during which he became a globally-known researcher."(63)

Dr. Tyrrell closed the retirement program recognizing his own role models: Ralph Shaner and Gerry Marks; and thanking his mentors Cyril Kay, George Goldsand and John Coulter, and his research collaborators Morris Robins and Norm Kneteman.

Post-Deanship Activities: After stepping down, Dr. Tyrrell accepted numerous Board appointments. They included the appointment as the Chair of the Institute of Health Economics, succeeding Hon. Don Mazankowski, and the Chair of the Health Quality Council of Alberta. He accepted memberships on the Boards of the Canadian Medical Hall of Fame, the Safety Institute, the Canadian Institute for Advanced Research and Health Canada's Science Advisory Council. Dr. Tyrrell continued as a Board member of the Alberta Science and Research Authority, the Canadian Institute of Academic Research, the Prix Galien, became the chair of the Alberta Committee for Life Sciences Innovation and the Chair of the Gairdner Foundation.

In 2004 Dr. Tyrrell became the first occupant of the CIHR/GSK Chair in Virology.

Retirement gave Dr. Tyrrell more time to continue his involvement in the scientific activities of the biotechnology companies. One was ViRexx which he co-founded in 2000 to develop vaccines for Hepatitis B and C. He became its CEO in November 2005 and rang the bell when it was listed on the American SE. Another venture was KMT Hepatech Inc. where the T stands for Tyrrell. It held the patent for the mouse model and received an $8.5M grant from NIH to test hepatitis C compounds.(64)

In 2010 he secured a $28M donation for the Li Ka Shing Institute of Virology. It was the largest single gift ever awarded to the University of Alberta.

Grants and Awards: During his career Dr. Tyrrell was personally awarded twenty-four competition grants totaling over $1 million. Research contracts totaled $10 million and successful research funding grants exceeded another $11 million. In his lab he taught over nineteen graduate students, thirteen post doctoral fellows and approximately twenty-five summer students. Together with other laboratory colleagues he applied for and received twenty-five patents. His bibliography reached 143 peer reviewed publications (2009). Jointly or singly he authored nineteen book chapters, 275 abstracts, and gave in excess of 100 in-

Dr. Tyrrell receiving the Order of Canada from Gov. Gen. Adrienne Clarkson, 2002

62. (Tyrrell, D. Lorne) Presentations at the retirement dinner honouring Dr. Tyrrell. Macdonald Hotel, June 17, 2004.

63. Edwards, James Personal communication, July 2004.

64. Mercer, Dave Schiller, D.D., et al "Hepatitis C virus replication in mice with "chimeric" human livers." Nature Medicine 7(8): 927-933, 2001.

Dr. Tyrrell and his family, 2007

vited presentations on Hepatitis antiviral therapy alone.[65]

Invited presentations on other topics were wide ranging. They extended, from fostering Academic Surgery during Healthcare Reform, to the Role of Medical Schools in Planning the Medical Workplace; from Academic Medicine in the 21st Century, to Innovative Thinking on the Future of Canadian Health Care, Medicine and Medical Educators in the Post-Genomic Era; to Solving the Physician Staffing Crises in Canada; to Alberta's Opportunity in the Next Economic Wave; and Factors that Will Affect Leadership in the Next Decade.

Dr. Tyrrell's contributions to medicine were recognized in the awards he received. Local recognition came as the recipient of the AS Tech Award for Innovation in Science (Alberta, 1993), the Triple Crown consisting of the UofA Rutherford Award for Undergraduate Teaching (1991), the Kaplan Award for Research (1998) and the University Cup for combined teaching and research excellence at the University of Alberta (1991)[66], and the Alberta Order of Excellence (2000). National recognition came through the Gold Medal of the Canadian Liver Foundation (2000), the National Merit Award from the Ottawa Life Science Council (2001), the Queen Elizabeth II 50th Anniversary Jubilee Medal (2002) and the CHA President's Award (2002). In 2002 he was appointed an Officer of the Order of Canada (2002). In 2004 Dr. Tyrrell was made a Fellow of the Royal Society of Canada. That year he became the third Albertan to receive the STARR Award from the CMA, after Drs. J.S. McEachern (1938) and W.C. Mackenzie (1974). He received an Honorary membership in the Alberta Dental Association and College (2004), and garnered the Principal Award from the Manning Foundation (2005). The same year (2005) he was named one of the 100 Alberta Doctors of the Century.

In 2003 the Lorne Tyrrell Lectureship in Infectious Disease and Immunity was established. Dr. Tyrrell gave the first annual lecture, appropriately entitled "From Farm to Big Pharma: Animal Models and New Drugs for Viral Hepatitis."[67]

The Tyrrell Family: One of the keys to Dr. Tyrrell's success, he always said was his marriage to LeeAnn Weaver in 1967. "LeeAnn has been a tremendous support at every stage, helping raise the ducks, developing the antiviral therapy for hepatitis B, proofreading important documents, or playing a very supportive role as the wife of the Dean of Medicine and Dentistry."[68] Lorne and LeeAnn have three children: Kim (Bruce Campbell) is a teacher in Vancouver and has three children; Ben (Christine McGee) is a cardiologist and has three children living in Edmonton; and Kathleen is an undergraduate student pursuing an Arts degree in Edmonton.

Key Words: Infections Diseases, Hepatitis B and C, Pekin Ducks, Lamivudine, Level III laboratory, Dean of Medicine 1994-2004, ACMC – Task Force I, Augustana College, ViRexx, STARR Award, Li Ka Shing Institute of Virology.

The best executive is the one who has sense enough to pick good men to do what needs to be done, and the self restraint to keep from meddling with them while they do it.

The Lorne Tyrrell retirement issue, UofA, Faculty News, June 2004

65. Tyrrell, D. Lorne — Curriculum vitae, 40 pages, dated 2006. Also see the attached selected list of Tyrrell publications, pages 212-217.
66. Stickney-Lee, Jean — Iatros, the UofA medical student magazine, page 19, fall 1998.
67. Tyrrell, D. Lorne — The first Tyrrell lecture was given October 29, 2003 by Dr. Tyrrell.
68. Lampard, Robert — Personal Communication, 2007.

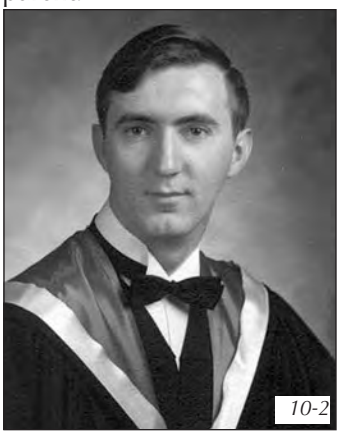
Dr. Thomas James Marrie, MD, FRCPC, FACP
1944-

Dr. Thomas James Marrie, MD, FRCPC, FACP*
1944-

"Patients at low risk for mortality, who were admitted to hospital for treatment of their pneumonia, required a considerably longer time to return to work or to usual activities than those with a similar degree of illness who were treated at home. Indeed the difference was 18 days."[1]

"You can take the boy from the Rock, but you can't take the Rock from the boy." Tom Marrie often made this comment about his Newfoundland origins, and his attachment to the sea.

The East Coast bookends his life, both personally and professionally. Along the way, Dr. Marrie has become known and "respected as a consummate leader – accessible, consultative, and transparent."[2]



Dr. Thomas J. Marrie, 1970

The Early Years: Tom Marrie was born in St. John's, Newfoundland in 1944. Attending medical school in Dalhousie, he graduated in 1970. Over the next seven years, aided by both a Killam and a MRC Fellowship, he acquired clinical and research training in internal medicine, specializing in infectious diseases, culminating in a Fellowship from the Royal College of Physicians and Surgeons of Canada. In 1980 he passed his American Board of Internal Medicine Diploma in Infectious Diseases and became a Fellow of the American College of Physicians. A Certificate of Special Competence in Infectious Diseases from the Royal College of Physicians and Surgeons of Canada followed in 1983.

In 1977 Dr. Marrie was appointed Director of the Anaerobic Lab at the Victoria General Hospital, Halifax, as well as Program Director of Infectious Diseases. Shortly after, he became Assistant Professor of Medicine and Microbiology at Dalhousie.

Between 1978 and 1999, Dr. Marrie thrived at Dalhousie, progressing to a full Professor of Medicine in less than 10 years. He garnered many awards for his clinical work, education and research, identifying himself as that rarest of academic physicians – one who excels at all tasks.

He also gained experience in medical administration. From 1986-91, he was Head of the Division of Infectious Diseases at Dalhousie. From 1990-93, he was Deputy Head and then Head of Medicine (1993-1994) at the Victoria General Hospital, before resigning to do more research.

The Dalhousie Medical School (L) and IWK Children's Hospital (R)

Chair of the Department of Medicine, 1999-2004: In 1999, Dr. Marrie was recruited from Dalhousie to become the Professor and Chair, Department of Medicine, University of Alberta, and Site Chief of Medicine at University of Alberta Hospital. The Department, together with the entire Faculty was just beginning to get on its feet again, after the Alberta government's healthcare cutbacks and regionalization of healthcare beginning in 1994.

Unfortunately, the Department of Medicine Practice Plan was virtually broke. Designed to

**adapted by Drs. Dawna Gilchrist and Robert Lampard from Dr. Gilchrist's book titled The History of the Department of Medicine at the University of Alberta, 2004, Medicine and the Headlines, Faculty of Medicine, 2008.*

1. Marrie, Tom J. Written communication to Dr. R. Lampard, September 17, 2008.
2. Samarasekera, Indira V. President of the UofA. Letter to Tom Marrie, read at the retirement dinner in honor of Dr. Marrie, June 26, 2009.

Dr. Donna Gilchrist 10-4

redistribute funds within the Department, under former chair Dr. E. Garner King, the Plan suffered from a payment scheme that was based solely on clinical work. In the plan, there was little remuneration for the very significant time that Department members spent on medical administration, education and research.

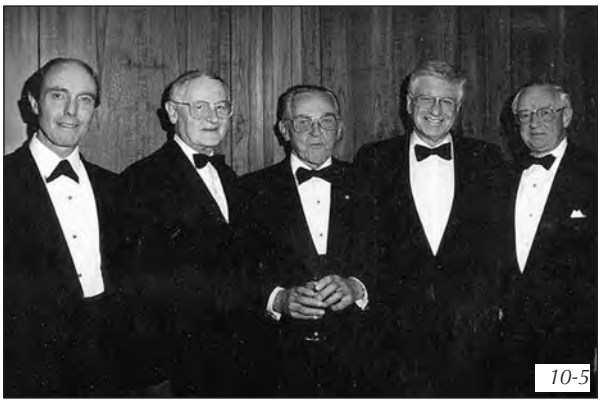
One of Dr. Marrie's earliest needs was to put the Department on some other form of funding. With a committee headed by Dr. Richard Lewanczuk, the Department developed an Alternate Funding Plan (AFP). The partnership of the Department with Capital Health, the Alberta Medical Association and Alberta Health and Wellness, recognized that the members of the Department should be remunerated for all their various roles.

The AFP allowed the Department to recruit extensively, increasing the academic staff by a net gain of 65 faculty between 1999-2004.[3] In addition, it allowed hiring of contributory PhDs and Advanced Nurse Practitioners.

Following the initiative created by Dr. Paul Armstrong the previous Chair of the Department, Dr. Marrie continued to have yearly 'Advances' which rotated on the themes of Research, Education and Patient Care. Out of the first Research Advance came the Health Outcomes Research Group. Utilizing the skills of such rising stars as Drs. Finley McAlister, Me2 Majumdar and Ross Tsuyuki, this Group was soon being awarded significant grants.

From the first Education Advance came a commitment to promote education as an academic endeavour in the Department. Through the efforts of many department members, exemplified by Drs. Laurie Mereu, Bruce Fisher and Peter Hamilton, the Department's profile in both undergraduate and residency training was enhanced. On the graduate student front, abetted by the efforts of Dr. Dick Jones and Sharon Campbell, the Department attained stand-alone status for its PhD program.

Based on the Clinical Advance, job descriptions were solidified for various categories of clinician-teachers and clinician-researchers. A new program in Women's Health was developed at the Royal Alexandra Hospital. Dr. Brian O'Brien was recruited from Dalhousie to head up Internal Medicine at the Royal Alex. The Career Development program, under the direction of Dr. Lil Miedzinski, created promotion workshops and leadership development programs for divisional directors. The mentorship program thrived with formal linkage of new staff with experienced staff.



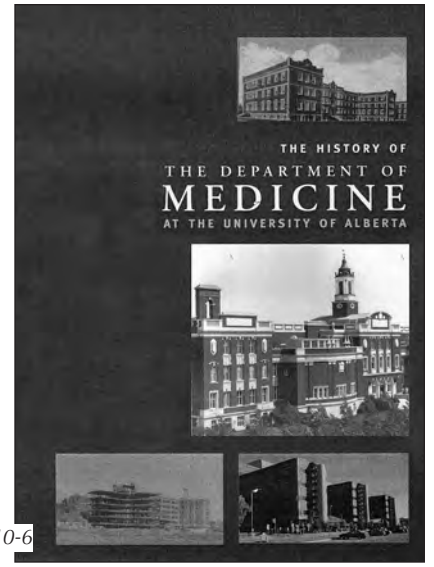
Professors and Heads of Medicine 1954-1992. Drs. E.G. King, G. Molnar, Donald Wilson, B.J. Sproule, R.S. Fraser

As a specialist in Infectious Diseases, Dr. Marrie continued to contribute clinical service and scholarly work, particularly in the area of Community Acquired Pneumonia (CAP). He implemented a scoring system for CAP for the Emergency Rooms of the Capital Region that assisted in decision making regarding the need for admission.

Throughout his five years as Chair, Dr. Marrie relied on a dedicated team of administrators. Dr. Jody Ginsberg served as deputy Chair. Chuck Morrison, the Administrative Professional Officer, continued to provide his accumulated knowledge of almost 30 years within the Department. Typical of Dr. Marrie, he always gave credit to everyone who contributed, whatever their job description or seniority.

Dean of the Faculty of Medicine and Dentistry (FoMD) 2004-2009: Tom had said several

3. Gilchrist, Dawna, M. Notes from the chair on Dr. Thomas J. Marrie, pages 53-57, in *The History of the Department of Medicine at the University of Alberta*, 2004.



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Dr. Dawna Gilchrist's Dept. of Medicine History, 2004

times that he promised his wife, Kathie, they would spend only five years at U of A and then return to the Maritimes. When Lorne Tyrrell made it known that he was stepping down as Dean a lot of persuasion was needed to induce him to stay and apply.

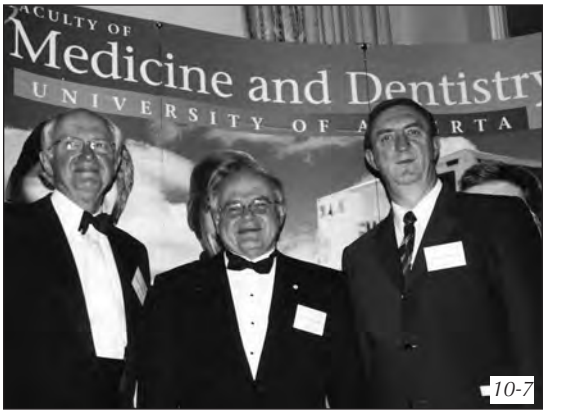
Fortunately, Dr. Marrie accepted the position of Dean and moved a few metres down the hall to his new office in July of 2004. Typically self-effacing, his first thoughts were "How would I ever be able to live up to the standards that Lorne Tyrrell had set?"[4] Dr. Marrie immediately recruited Dr. Jody Ginsberg as vice Dean, recreating their productive relationship in the Department of Medicine. Strong administrators such as Vivien Wulff and Kendra Brunt, as well as his assistant Kathy Jansen, kept the Deanery running smoothly. He counted 800 full-time faculty, 1100 part-time faculty and over 3,000 support staff as his partners. Lorne Tyrrell, UofA Provost Carl Amrhein and Dr. Paul Armstrong were particularly helpful mentors.

Building on his experience with the Department of Medicine's AFP, Dr. Marrie immediately went to work on developing further Alternate Relationship Plans. ARPs now cover the Departments of Medicine, Pediatrics and Family Medicine with a variation in the Division of Neurosurgery. Partly due to ARPs, the faculty grew by 66% over five years.

With the boom in the oil patch, and Alberta's population growing, there was pressing need to provide more healthcare. New programs such as TeleHealth were developed to allow provision of medical advice to patients where they lived, allowing savings in travel expenses, and more timely care. Hospitalist and advanced nurse practitioner numbers expanded in teaching hospitals to provide 'on-call' hours no longer covered by residents under the new resident contracts.

Unfortunately, rural centres still suffered from a shortage of physicians. In 2005, the Faculty of Medicine and Dentistry (FoMD), with support from the Rural Physician Action Plan, hired an Associate Dean for Rural and Regional Affairs, to specifically encourage more medical students and residents to plan for careers in community settings.

With medical school enrolment increasing and postgraduate programs expanding, the Faculty struggled to find sufficient space and teachers to do the teaching. By 2008, the Faculty had about 1200 undergraduate students, 150 post graduate students and 580 residents. In 2008, the entry class of medical students was 155, and dental students was 34.



10-7

Deans Wilson, Tyrrell and Marrie, June 2004

One teaching innovation, named the Gilbert Scholars' Program after the legendary teacher-clinician Dr. Alan Gilbert, increased emphasis on clinical skills training. Under the direction of Dr. Steve Aaron, and with the commitment of several exceptional teachers, hours of interaction with undergraduate medical students were organized. Teaching of clinical skills were standardized. The Gilbert Scholars' Program introduced undergraduate students not only to specialists, but many family medicine practitioners.

Challenges: Responsibility for a large medical school was not without its challenges. In the

4. Marrie, Tom J. Personal communication to Dr. Lampard, August 3, 2009.

History of the Med Show

The predecessor of the Med Show was "Med Nite" which started on January 11, 1918. It featured two original plays, the "Doctor's Ghost" and "Medical Extravaganza" with staff and students playing to a capacity audience in Convocation Hall.

The Med Nite became an annual campus event usually featuring burlesque and risque skits. It evolved slowly through the early twenties, until notice was taken by some "high brow (tight-assed)" critics, which caused its extinction in 1927.

In 1950, a stage show resumed named "The Merry Meds", and was written and directed by Dick MacDonald with a cast of more than 75 meds and nurses - life was obviously not so harsh back then. Since then, the Med Show has been a yearly event.

Years of note were:

1953: featuring the hit song "Don't Wait Up For the Shrimp Boats Mommy, Daddy's Come Home With the Crab."
1955: Due to pressure from the all-too-boring moral minority, the world's first and last clean Med Show was presented - it was a resounding flop.
1960: Presented "Peri Stalsis, Start of a Movement"
1961: "A Glans into Space"
1967: "Phallus in Wonderland", and "Camalot".
1971: "The Erection of Troy"
1982: "Star Trek- the Vulcan Giggalo"

The Med Show has changed little since 1950 and still continues to play to sell-out crowds. Obviously, we have a hit on our hands. Have a decadent Med Show, don't get gonged, and see you at the cast parties Friday and Saturday nights.

Nick Shwerak, Med Show Director

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spring of 2005, the annual Med Show raised concerns of a particularly serious nature. The Med Show had been put on for decades and had always been politically incorrect. Nonetheless, it was felt that the Show allowed stressed medical students to vent. The production in 2005, however, went beyond any reasonable limits. A song that denigrated nurses became known not only locally, but nationally and internationally. There was a general outcry from the public, university officials and nurses. Dean Marrie made it clear that the UofA medical school did not sanction such opinions and behaviour. Apologies were made and the Med Show underwent a major change, instituting oversight from senior faculty.

The next major medical school challenge - the formal accreditation of 2006 - must be considered an exceedingly stressful event. The medical school had been periodically evaluated by Canadian and American accreditation bodies in medical education since 1918. On several occasions, the accreditation recommendations had been used by the Faculty to negotiate for increased resources from the University and the Government of Alberta. Since 1987, full accreditation had been granted and was expected again in 2006.

But even though the intent of the 1998 curriculum change had been to provide more self-directed learning, the accreditation in 2006 deemed the implementation lacking. The Faculty of Medicine and Dentistry (FoMD) was found to have not complied with 12 of the then 129 (now 132) standards. Notice of intent from the Liaison Committee on Medical Education to place the undergraduate medical program on probationary status, was a huge blow to the reputation of the Medical School.[5] The 12 standards were vigorously addressed. Based on the favourable recommendation for full accreditation from the Committee on Accreditation of Canadian Medical Schools, and the faculty's own self assessment, the FoMD appealed and won full accreditation from both the Canadian and American bodies by 2008.

U.S. review group grants full accreditation to Faculty of Medicine & Dentistry

By Julia Necheff
July 25, 2008

Edmonton – A U.S. based review group has granted the University of Alberta's medical school full accreditation.

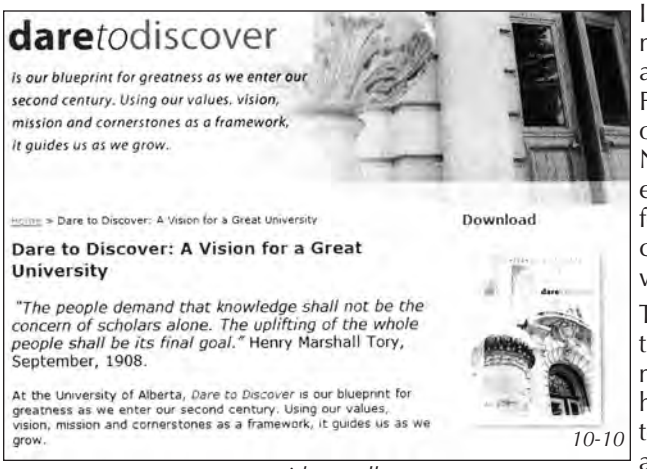
The U.S. Liaison Committee on Medical Education (LCME) says concerns it expressed earlier with certain accreditation standards in the undergraduate program are resolved. The news is affirmation of enhancements made at the Faculty of Medicine & Dentistry, which remains one of Canada's top medical schools.

10-9

www.expressnews.ualberta.ca (Feb 3, 2010)

This painful episode triggered yet another curriculum review. Starting with the 2007-2008 academic year, hours of didactic teaching were curtailed again with increased emphasis on self-directed Discovery Learning – so named to echo the 'Dare to Discover, Dare to Deliver, Dare to Dream', vision articulated by UofA President, Dr. Indira Samarasekera.[6] Dr. Rob Hayward, Assistant Dean of Health Informatics, created HOMER – a comprehensive web-based learning tool that significantly supplemented in-person teaching and learning. The changes wrought by this reorganization re-

5. Editor The Edmonton Journal, November 11, 2006.
6. Samarasekera, Indira V. Dare to Discover, A Vision for a Great University, 2007. See www.president.ualberta.ca/daretodiscover.cfm. One strategy Dr. Marrie used to reach the goal of President Samarasekera was to recruit and retain staff through endowed chairs like the Shriners endowed chair in Pediatric Scoliosis Research. Acknowledged in the Marrie speech to the Al-Shamal Shriners, on the receipt of the endowment for the chair, September 11, 2007. Copy in the Marrie archives in the Dean's office, UofA.



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www.president.ualberta.ca

quired the wholesale commitment and thousands of hours of faculty time – a 'buy-in' that was nothing short of amazing in terms of drawing many faculty members, willingly into cooperative teams of educators.

Vindication and Progress: Almost as a vindication of the quality of teaching at the medical school, University of Alberta medical students took top spot in the Medical Council of Canada licensing exams in 2007.[7] Another indication of the quality of FoMD's students came when three were awarded Rhodes scholarships between 2004-2009.


Medical students urged to take up courses in the arts

The Arts and Humanities in Medicine and Health program, launched Monday, is designed to make students engage in more than just a quest for top marks, said Verna Yiu, co-director of the program.

"In medical school you often recognize the students with the academic record," said Yiu. "But the reality for patients is it was much more important for them that they be able to develop relationships and that the relationships be caring and compassionate."

10-11

Edmonton Journal, May 15, 2006

In yet another educational enhancement, Sundance Chief Clifford Cardinal, a traditional healer, was recruited to the Faculty to increase students' knowledge of traditional healing and to establish a National Centre for Traditional Knowledge. It was another part of the faculty's focus on patient-centered care to "be culturally sensitive and understand the whole person."[8]

The FoMD brought medical education to the public with the creation of the mini-medical school. This six week program has up to 400 members of the public attending medical lectures for three hours a week. As a consequence, many more members of the public understand how medicine in the 21st century works.

Under Dr. Chris de Gara, Continuing Medical Education morphed into Continuing Professional Learning with a much broader scope of responsibility. In conjunction with the Faculty of Education, a Master's degree in Health Sciences Education was developed, with the first students starting in September, 2009.

A major university innovation, energized by Dean Marrie and guided by former Dean Wilson, was the establishment of a new health science faculty, the School (Faculty) of Public Health, approved by the University Board in March 2006 – a first in Canada. The Department of Public Health Sciences and the Centre for Health Promotion Studies (from the Health Sciences Council) became the core of this small new faculty. Strong links with the FoMD remained.

In the continuing theme of increased humanism in medicine, the FoMD also made a significant commitment to the humanities in Medicine.[9] In the fall of 2004, the History of Medicine Program was created. The Arts and Humanities in Health and Medicine program followed in 2006. At the launching of the program Dr. Marrie emphasized that "to provide the best environment for continuous learning and inquiry and create an environment which promotes respect, creativity and recognition requires exposure to the arts and humanities,

7. Editor — The Edmonton Journal, December 14, 2007.
8. Marrie, Tom J. — Speech at Aboriginal Health Day, September 17, 2008. As of June 2008 the faculty had graduated 51 aboriginal MDs, 14 dental hygienists and 14 DDS.
9. Marrie, Tom J. — Dr. Marrie continued the tradition established by Dr. Tyrrell of having a memorial service to acknowledge families who had made an anatomical donation to the faculty. In his thank you speech he noted how "the human body is the most precious source of knowledge for all of medical science. An understanding of body structures is the physician's most important tool." Copy in the Dean's office.


10-12

Dr. Thomas Marrie with 100th Anniversary UofA guest lecturer, Dr. Michael Bliss, 2008

reflection and life-long learning and development."[10]

In 2009, the FoMD created a free standing Faculty Division of Community Engagement and Social Responsiveness (CESR) under the direction of Dr. Lorraine Breault, Associate Dean. CESR brought together many of the 'orphan' groups in the FoMD – History of Medicine, Arts and Humanities, Aboriginal Health, Global Health,[11] the John Dossetor Bioethics Centre, Health Law and Faculty Development and Professionalism. The CESR is a unique Faculty Division in Canada. There has already been interest in recreating Dr. Marrie's vision at other Medical Faculties.

Dr. Marrie's Medical Research: Dr. Marrie became interested in infectious diseases in his days as a resident. In 1977 he was appointed the Head of the Division of Diseases at Dalhousie. His formal interest in community-acquired pneumonia (CAP) began in November 1981 with a comprehensive study on its origin and epidemiology. It evolved into a five year prospective study of 719 patients, which defined the etiology of CAP and the concept of a separate and distinct nursing home acquired pneumonia.[12]

An unexpected finding was the existence of a Q fever (coxiella burnetii) caused pneumonia in Nova Scotia, discovered after examining outbreaks involved entire families. The risk factors were studied. One was found to be female cats from whose uteri the organism could be cultured.[13]

A prospective CAP study found, that by using a critical pathway, the bed days per admitted patient could be reduced, and the admission of low risk patients.[14] Using a critical path and a scoring system to identify low risk patients, intravenous antibiotic times were shortened and antibiotic use standardized.[15] Hospital stays for community-acquired pneumonia, were reduced by 30% and admissions by 18%. After moving to Edmonton in 1999, Dr. Marrie's CAP research focused on clinical pneumonia

A Controlled Trial of a Critical Pathway for Treatment of Community-Acquired Pneumonia

Thomas J. Marrie, MD; Catherine Y. Lau, PhD; Susan L. Wheeler, RN; Cindy J. Wong, MSc; Margaret K. Vandervoort, MSc; Brian G. Feagan, MD; for the CAPITAL Study Investigators.

Pathway use was associated with a 1.7-day reduction in BDPM (4.4 vs 6.1 days; P = .04) and an 18% decrease in the admission of low-risk patients (31% vs 49%; P = .01).

JAMA 283:749-755, 2000 10-13

10. Marrie, Tom J. Speech at the launch of the program in Arts and Humanities in Health and Medicine, May 8, 2006. Copy in the Dean's office.
11. Marrie, Tom J. One key element in this program was the sponsoring of electives for students in developing countries as emphasized in a presentation by Dr. Marrie entitled Earth, Fire and Water, January 8, 2008. Another was the organization of on-campus lectures by internationally recognized physicians and healthcare professionals. A third was the initiation of a History of Medicine program by Drs. Tyrrell and Marrie. The first program director was Dr. Dawna Gilchrist (2004).
12. Marrie, Tom J., Durrant, H., Yates, L. "Community-acquired pneumonia requiring hospitalization: 5 year prospective study." *Review of Infectious Disease* 11: 586-599, 1989.
13. Marrie, Tom J., et al "Exposure to parturient cats is a risk factor for acquisition of Q fever in Maritime Canada." Journal of Infectious Disease 158: 101-108, 1988, and Langley J.M., Marrie, T.J., et al in Poker Players Pneumonia – an urban outbreak of Q fever following exposure to a parturient cat. *NEJM* 319: 354-356, 1988.
14. Marrie, Tom J., et al "A controlled trial of a critical pathway for treatment of community-acquired pneumonia." *JAMA* 283: 749-755, 2000.
15. Fine, M.J., et al A prediction rule to identify low risk patients with community-acquired pneumonia. *NEJM* 336: 243-250, 1997.

as defined in practice by the clinician.[16]

Medical Research at the UofA: Research at the UofA has continued to grow with extremely wide-based support. In addition to traditional granting bodies such as the CIHR and the AHFMR, Capital Health and the Province of Alberta became major sources of funding. Since 2005, 39 more Research Chairs were partially funded through the Government of Alberta's Access to the Future Fund. The intent was to build for the future by appointing junior and mid-career researchers to these positions.

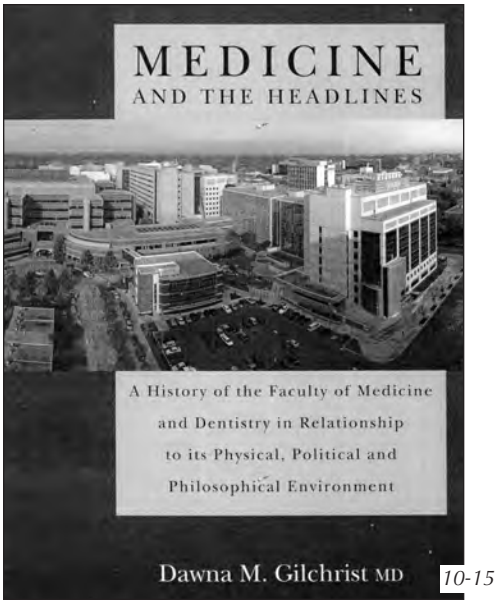
In 2007-2008, the FoMD attracted $221.5 million in research funding – 45% of the University of Alberta total, and a 51% increase over faculty research funding in 2002-2003.

Over the past five years, several prestigious awards have been won by FoMD researchers – ten J. Gordon Kaplan Awardees for Excellence in Research, four Howard Hughes Scholars, twenty-one Fellows of the Royal Society of Canada, and thirteen ASTech winners. Funding and awards are expected to continue to increase through team grants under the Associate Dean for Research.

To date (2007), thirteen FoMD members have been recipients of the Order of Canada.[17]

Dr. Marrie hosting the Medical Alumni Award recipients from the class of 1965: Drs. G. Gall, T. Marrie, Diane Dawson RN, Guy Gokiert, David Dawson

Two new research buildings, begun during Dr. Tyrrell's deanship, and worth over $600 million, were completed. Known as the Health Research Innovation Facilities, and located on the corner of 87th Avenue and 114th Streets, west of the Heritage Medical Research Centre and north of the Katz Rexall Group Building, the Alberta Diabetes Institute was moved into it.



Dr. Dawna Gilchrist's history of Medicine and the Faculty of Medicine, 2008

Additional space for the medical school was built into the Katz Center, including a Tim Horton's outlet. Ground was broken for The Edmonton Clinic on October 1st, 2007. After many delays, the Mazankowski Alberta Heart Institute opened for patient care in mid-2009.

A very significant problem arose unexpectedly in early 2009, when the Government announced the Alberta Heritage Foundation for Medical Research would cease to exist. It was really difficult to understand this development, as the FoMD's record in national and international competitions was clearly impressive. Over 100 faculty members were in danger, as their entire careers and livelihoods depended on the AHFMR. Through significant efforts of Dean Marrie, UofA Provost Carl Amrhein and others, alternate arrangements were developed.

16. Basi, S.K., Marrie, Tom J., Huang, J.Q, Majumdar, S.R. "Patients admitted to hospital with suspected pneumonia and normal chest radiographs: epidemiology, microbiology, and outcomes." *AJM* 117(5): 305-311, September 1, 2004.
17. Faculty of Medicine Orders of Canada Drs. D.R. Wilson, W.C. Mackenzie, J.C. Callaghan, J.B. Dosseter, B.J. Sproule, J.A.L. Gilbert, D.L. Tyrrell, B. Weir, A. Koshal, R. Rajotte, P. Halloran, S.H.K. Aung, Z.M. Lakhani (2008).

(L to R) The Katz Group Center for Pharmacy and Health Research, and Medical Sciences Buildings. Corner 87th Avenue and 114th Street.

As of 2008:[18] The size and complexity of the FoMD has increased dramatically since 1922 when the number of full-time staff was six.

The faculty organization now consists of 15 Standing Committees, 13 Research Groups, 27 Institutes and Centres, eight national Centres of Excellence in seven Faculty Groups, containing 20 Departments with 77 Divisions, located in 13 buildings on four sites. There are 826 full-time faculty and 1,100 clinical faculty, teaching 668 undergraduate medical and dental students, 491 graduate students, 722 residents (in 54 RCPSC accredited programs) and 68 Fellows.

The goal of the University and the Faculty continues to aspire to be in the top 20 in the world by 2020, under the Dare to Deliver initiative of the UofA President Indira Samarasekera.

Provincial Healthcare Changes: Many changes to the healthcare system started to occur in 2008, when the Alberta government amalgamated all the regions into a single entity as the Alberta Health Services (AHS). The downturn in the economy in the fall of 2008 created a significant budget shortfall for the AHS, the ramifications of which were just starting to affect the FoMD during the last year of Dr. Marrie's tenure.

Awards & Appointments: Dr. Marrie's medical life has been highlighted by many awards and honours. In 1968 he was inducted into the Alpha Omega Alpha (AOA) Society. He received the Ileitis-Colitis Foundation Young Investigator Award (1981), the Lea Steeves Award for Continuing Medical Education (1990), the Medical Staff Distinguished Achievement Award-Victoria General Hospital (1993), the Canadian Infectious Disease Society Ortho Distinguished Service Award (1995), the Dalhousie Department of Medicine Excellence in Undergraduate and Postgraduate Teaching Awards (4 times), and the Postgraduate Research Award (8 times). Following his arrival in Edmonton he received the REACH Award from Capital Health (2004), the Ronald Christie Award from the Professors of Medicine in Canada (2006), a Mastership in the American College of Physicians (2007), an Hon LL.D. from the University of the Mediterranean, Marseille, France, and the honorary name "Eagle Feather", from the Aboriginal MD students.

Dr. and Mrs. Marrie, 2009

In addition to his academic appointments at Dalhousie and the UofA, Dr. Marrie has been a Governor of the American College of Physicians and President of the Canadian Infectious Disease Society. He has been on the professional and advisory boards of the Journals of Geriatric Care, Canadian In-

Dr. Marrie and 7 members of the Class of 2009. (LtoR) Back: Mike Kapusta, Dr. Marrie, Pen Li. Front: Sarah Ilnitsky, Lili Zhang, Sana Ghaznavi, Clarissa Agusto, Anita Dey.

18. Marrie, Tom J. University of Alberta Faculty of Medicine and Dentistry Academic Unit Review Self-study Report, 62 pages, FoMD, September 2008.

fectious Diseases, Emerging Infectious Diseases, Pulmonary Infections, the CMAJ, Epidemiology and Infection, and Clinical and Investigative Medicine. His individual research grants exceed $3,200,000 and the grants received by teams of researchers with whom he has worked, another $9,800,000. His CV (2007/08) totals 365 papers, plus 248 invited lectures and 82 authored or coauthored chapters in books. He has edited one book on his area of specialization, Community Acquired Pneumonias (2001). Dr. Marrie's non peer-reviewed publications total another 59 and abstracts 258.

Chairs (Deans) that have been in the position for many years need to understand that there is a time to reap and a time to sow. If one leaves too early, he lives to regret it, and if he leaves too late, others live to regret it.

In the Future: By the last year of Dr. Marrie's UofA Deanship, it became obvious that he was going to honour the promise he made to Kathie to return to the Maritimes. They built a home on the south shore of Nova Scotia, east of Halifax. But at the age of 65, Tom Marrie was not yet ready to retire. He was appointed Dean at Dalhousie effective July 2009, a date brought forward to address Dalhousie's major accreditation and financial challenges. In less than two years he had successfully addressed both. He continues to lead the Dalhousie faculty as a clinician, teacher, researcher and administrator.

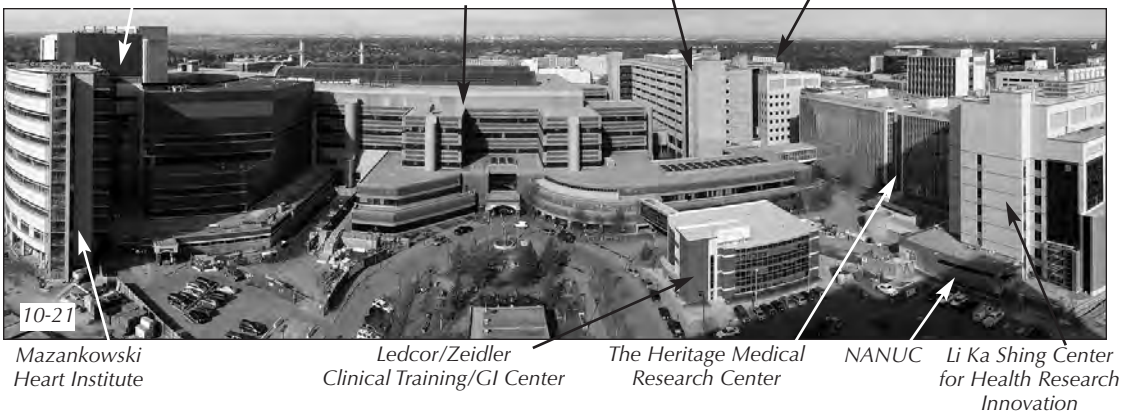
The Marrie Family: The Marrie's were married August 16, 1969. They have four children whose career choices closely reflect the choices of their parents - Dr. Marrie in medicine and Kathie Marrie in law. Ruth Ann (born 1971) is a Ph.D./FRCP neurologist who manages the Multiple Sclerosis clinic at the University of Manitoba in Winnipeg. Laurence (born 1972) is a lawyer in Sydney, Australia. Stephanie (born 1975) is a lawyer specializing in international arbitration and litigation in New York, and Megan (born 1979) is a lawyer in Toronto.

Keywords: Infectious Diseases, Community Acquired Pneumonia, Chief of Medicine - Dalhousie, Chairman and Professor of Medicine at the UofA, Dean of Medicine and Dentistry at the UofA 2004-2009

Our Faculty of Medicine and Dentistry is recognized as one of the outstanding leaders internationally for the quality of our research; our researchers routinely publish in the most important scientific journals in the world, and our research has led to remarkable breakthroughs in the treatment of disease. The world's most outstanding graduate students come to study here with leading researchers.

Thomas Marrie
Dean, Faculty of Medicine and Dentistry 10-20

From Campaign 2004-2008. Celebrate One Century. Build the Next, Faculty of Medicine, 2004.



Walter C. Mackenzie Health Sciences Center panorama, 2010

Appendix 1
Number of Graduating MDs

Year	Number of Graduates	Spring or Fall Class
1913	27	1st year premed class (fall)
1914	24	1st year premed class (fall)
1916	20	3rd year class (fall)
1917	11	3rd year class (fall)
1919	14	3rd year class (fall)
1920	20	3rd year class (fall)
1925	11	1st class of MDs (spring)
1930	19	MD Graduates (spring)
1935	29	MD Graduates (spring)
1940	36	MD Graduates (spring)
1945	33	MD Graduates (spring)
1950	42	MD Graduates (spring)
1955	55	MD Graduates (spring)

Year	Number of Graduates	Spring or Fall Class
1960	55	MD Graduates (spring)
1965	57	MD Graduates (spring)
1970	96	MD Graduates (spring)
1975	108	MD Graduates (spring)
1980	111	MD Graduates (spring)
1985	109	MD Graduates (spring)
1990	115	MD Graduates (spring)
1995	110	MD Graduates (spring)
2000	106	MD Graduates (spring)
2005	134	MD Graduates (spring)
2008	126	MD Graduates (spring)
2009	150	MD Graduates (spring)
2010	139	MD Graduates (spring)

Current Dental class size is 35 (class of 2009-2012)
Source: Graduating class photos, 2nd Floor, Medical Science Building; Dean's office, March 17, 2009

Appendix 2
Number of Faculty

Year	Full Time	Part Time	Total
1914	3	7-8	
1925*	16	39	55
1950			70
1959	22	147	169
1966			400
1970	96	403	499

Year	Full Time	Part Time	Total
1973	140	384	524
1984	200	450	650
1986	290	560	850
1994	350	600	950
2004	520	700	1220
2009	621	1110	1731
2010	748	1449	2070

** Included Basic Medical Science Departments & Dentistry*
1st Clinical GFT – Dr. Donald R. Wilson appointed in 1954

Appendix 3
Number of Residents in Certification or Fellowship Programs

	Residents in the Program
1946	Residency Training Started
1955/56	19
1956/57	15 (total grads 28)
1957/58	15 (total grads 37)
1957/60	34 (total grads 49, 23 have returned to AB)
1960/61	39 (total grads 56, 18 on UAH medical staff)
1962/63	45 (total grads 67, 50 returned to AB, 20 on UAH staff)
1965/6	70 (total grads 105)

	Residents in the Program
1967/68	130
1985	442
1990	438 (including 29 Fellows)
1995	476 (including 24 Fellows)
2000	509 (including 41 Fellows)
2005	664 (including 70 Fellows)
2009	830 (including 98 Fellows)
2010	850 (including 100 Fellows)

Appendix 4
Number of Royal College Approved Residency Training Programs

Year	No. of Programs
1946*	Partial Program
1949	2 or 3
1951	4
1960	18
1970	19
1975	24
1980	26

Year	No. of Programs
1985	30
1990	32
1995	40
2000	41
2005	50
2008	51
2010	54

* *Residency training programs officially started in 1946. Dr. Mark Marshall designed each one and submitted them to the RCPSC for approval. Most residents completed their program elsewhere, until full 4 year UofA programs were in place in General Surgery (1949), Ophthalmology (1949), O&G (1951) and Medicine (1957). Source: Dean's Office, 2008. Annual Dean reports.*

Appendix 5
Number of Articles Published in the Medical Literature

Year	Number
1915-1920	1-2/year
1921-1928*	10-12/year
1930s	2-4/year
1943/44	13
1947/48	24
1948/49**	12
1948/50	17
1950/51	26
1951/52	21
1952/53	38
1953/54	29
1954/55	38
1955/56	47
1956/57	53

Year	Number
1957/58	66
1958/59	118
1959/60	91
1960/61	140
1961/62	138
1962/63	166
1984	159
1985	199
1986	258
1990	325
1995	395 (Medline)
2000	1,388 (Pubmed)
2002	1,332 (Pubmed)
2005	2,094 (Pubmed)
2010	2,610 Deans office (2010)

* J.B. Collip averaged 8/year

** From the Dean's annual report for 1948/49. Four were clinical papers, eight were basic medical science papers.

Appendix 6
Number of MSc and PhD Students

1947	M.Sc. & Ph.D. programs approved
1948	M.Sc. & Ph.D. programs started
1950/51	12 in the program
1955/56*	8 in the program
1960/61	24 in the program
1961/62	26 in the program
1962/63**	33 in the program
1967/68	67 in the program
1976/77	71 in the program
1970	87 in the program

1983	143 in the program
1984/85	160 in the program
1990	202 in the program
1993	254 in the program
1995	301 in the program
2000	450 in the program
2004	509 in the program
2009***	518 in the program (256 M.Sc.s, 262 Ph.D.s)
2010	539 in the program (265 M.Sc.s, 274 Ph.D.s)

* 1st Ph.D. graduated in biochemistry (1954)
** Total M.Sc. & Ph.D. graduates to date 1962/63 was 82
*** Public Health became an independent faculty in 2007

Appendix 7
Medical Research Grants (received)

Year	Dollars
1944	$10,000
1948	$18,000
1958	$158,065
1959	$239,820
1961	$417,341
1962	$781,470
1963	$920,000
1966	$1,393,470
1968	$2,300,000

Year	Dollars
1975	$2,400,000
1980	$6,000,000
1985	$25,000,000
1990	$78,000,000
1995	$43,000,000
2000	$98,000,000
2005	$144,000,000
2008	$211,000,000*
2010	$111,000,000

* Included $41M in capital grants for the Heritage Medical Research building
Source: Deans Annual Reports 1937-1970, Faculty Development office and Deans office.

Appendix 8
Faculty of Medicine Budget (excludes Research Grants)

Year	Dollars/Year	Qualifications
1923*	$47,800	
1930s**	$60,000	
1944	$130,000	
1956	$394,000	
1959	$840,000	
1970	$3 million	

Year	Dollars/Year	Qualifications
1985	$18 million	
1995	$22 million	Plus $6.7M for Dentistry
2000	$23 million	Plus $6.7M for Dentistry
2004	$29 million	Plus $6.8M for Dentistry
2007	$44 million	Plus $7.2M for Dentistry
2009	$48 million	Plus $8.5M for Dentistry
2010	$45 million	Plus $8.0M for Dentistry

* Plus the Provincial Lab budget of $22,800
** Offset by Rockefeller Interest of $25,000/year and fees of $24,000/year

Appendix 9
Faculty of Medicine Buildings

Start/Finish	Building	Size
1966-1969	Clinical Sciences Building (13 stories)	30,000 sq m
1968-1972	Medical Sciences Building (9 stories)	33,500 sq m
1975-1983-1986	Walter C. Mackenzie HSC (5 stories)	167,000 sq m
1984-1989	Heritage Medical Research Centre (7 stories)	36,300 sq m
2000-2005	Zeidler/Ledcor Center	3,500 sq m
2002-2008	Katz Group Center for Pharmacy and Health Research (7 stories) (including the HRIF West)	34,000 sq m
2000-2010	Li Ka Shing Centre for Health Research Innovation (7 stories)	29,800 sq m
2002-2009	Mazankowski Alberta Heart Institute (8 stories)	34,000 sq m
2003-2012	Edmonton Clinic North (6 stories)	53,000 sq m
2006-2012	Alberta Health Services (AHS) (8 stories) (The Faculty of Medicine will occupy 6000 sq m)	62,300 sq m

There are a total of 17 medical research locations scattered throughout the UofA (2009). See the Marrie profile and back cover for a panoramic photo of the Walter C. Mackenzie HSC block.

University of Alberta Deans of Medicine Milestones

Year	Comment
1821	First University in Canada incorporated as McGill University in Montreal.
1822	First Medical school in Canada established in Montreal.
1829	The Montreal Medical School merged with McGill University.
1834	First Montreal Medical school graduate was registered to practice, in Canada (Quebec).
1854	First Dean of Medicine appointed, Dr. Andrew Holmes (McGill).
1867	Healthcare was enshrined in the BNA Act as a provincial responsibility.
1874	Dr. William Osler appointed the first full-time basic medical scientist and teacher at McGill.
1883	The Manitoba Medical College began in Winnipeg. It merged with the University of Manitoba into the Faculty of Medicine in 1919.
1885	North West (Riel) Rebellion. The Deputy (Field) Surgeon-General was Dr. Thomas Roddick of McGill.
1885	First NWT Ordinance passed to register physicians.
1887	Donald Smith and George Stephen donated $1.0 million to build the Royal Victoria Hospital in Montreal – McGill's second teaching hospital. Commemorated the 50th Anniversary of the reign of Queen Victoria.
1888	Second NWT Ordinance passed creating the College of Physicians and Surgeons of the NWT. The College was empowered to assess and register physicians.
1889	First CMA annual meeting held west of Toronto, in Banff.
1893	Lord Strathcona and Lord Mount Stephen endowed McGill Faculty of Medicine, with the first medical department head chairs in Pathology and Medicine and Hygiene with $100,000.
1895	Edmonton General Hospital opened by the Grey Nuns.
1902	Northern Alberta later renamed Edmonton Academy of Medicine started.
1905	NWT divided into two new provinces: Alberta and Saskatchewan. Manitoba had become a province in 1870.
1906	Alberta Medical Association (AMA), College of Physicians and Surgeons of Alberta (CPSA), and Alberta Dental Association and College established by Acts passed by the Alberta Legislature.
1906	First Act to incorporate the UofA, passed by the Alberta legislature.
1907	Alberta Public Health Act passed. First provincial laboratory opened in Edmonton. Dr. D.G. Revell appointed the Director.
	First UofA Act passed. 100 of the 364 members of the first UofA convocation were physicians.
1908	McGill's Dr. Henry Marshall Tory, D.Sc. arrived January 1, as the first President of the University of Alberta (1908-1928).
	The Alberta Medical Association discussed a possible Faculty of Medicine. Deemed it too early to start one.
1910	The Flexner (Carnegie Institute) report was released. It strongly supported university based or controlled Faculties of Medicine.
1911	The Provincial Lab was moved to Athabasca Hall on the UofA campus and placed under the control of the University.

1912	Royal Alexandra Hospital opened. It was a merger of the Public and Alexandra Hospitals.
1912	The High Level Bridge was completed.
	The second CMA annual meeting (1889, 1912) was held in Alberta (Edmonton). The Chairman of the Proceedings was Dr. Tory. The Senate appointed the examiners for the CPSA's provincial registration exams.
	25 students petitioned the Senate to establish a Faculty of Medicine.
	The Canada Medical Act was passed, establishing the Medical Council of Canada. It set the first national medical examinations for licensure and registration (1913). Writing the examination was voluntary.
1913	Edmonton and Strathcona became one city, population 22,000. UofA medical school was approved by the Senate. It was a three year program with one year of premedical studies and two years of medical basic science courses, starting in September. The program was co-educational, accepting female students in the first class. The new 90 bed Strathcona Hospital was opened on the UofA campus. Lord Strathcona donated $25,000 toward its construction.
	The UofA program became the only full MD program (1921) started in Canada from 1883 to 1945.
1913-1920	UofA President Dr. H.M. Tory, D.Sc., administered the 3 year medical program.
1914	The second and third years of the medical curriculum were drafted in an hour and a half by Dr. Tory. The program was based on the Model Medical Curriculum created by 100 medical educators from Canada and the USA.
	The first teachers were Drs. Revell (FT), Moshier (FT), Rankin (short term FT) and 7 or 8 part-time instructors.
	The UofA took over the management and operation of the 1913 opened Strathcona Hospital.
1914-1918	World War I. Dr. Rankin made significant contributions to the diagnosis and treatment of meningitis, typhoid, trench fever and malaria.
1914	The School of Pharmacy began as a one year pharmacy program in Arts and Sciences, directed by Dr. Moshier.
1915	Professor J.B. Collip arrived to teach zoology. In 1916 he taught the courses of Dr. Moshier, when he went overseas with the 11th Field (Universities) Ambulance in 1916.
	John Scott began his first premedical year. In 1948 he became the third Dean of Medicine.
1916-1922	The Strathcona Hospital was taken over by the Military Hospitals Commission/Soldiers Civil Rehabilitation Commission.
	A three year dental program was approved by the Senate, as a sub-department of medicine.
1917	The School of Pharmacy expanded to two years in 1917 under Professor H.H. Gaetz.
1917	Dr. Tory wrote a proposal for the YWCA for a Canadian Khaki (Army) University, in England. Accepted, it ran for twenty months under Dr. Tory.
1918	The American Medical Association accredited the UofA program and did again in 1919. Its 1920 report contained many recommendations already implemented by Dr. Tory.
	Influenza epidemic killed 3,800 Albertans. The University was closed for 3 weeks.
	The first dental class enrolled in the dental program.
1919	Dr. Tory returned from overseas from operating the Khaki University in England (July). Dr. Rankin returned as the Director of the Provincial Laboratory (October).
	Dr. J.J. Ower arrived as the provincial pathologist (September), followed by Drs. H.A. Orr (1919), R.M. Shaw (1920, and Vango (1924).
	The first full-time Professor and Head of Medicine position was endowed at the UofT, by Sir John and Lady Eaton. Sir William Osler, the Regius Professor of Medicine at Oxford died.
1919-1921	Dr. Tory convinced the government to build a new health sciences building. It opened in 1921.
1919-1920	The Rockefeller Foundation set aside $5M to improve the quality of medical education and teaching in Canada. The UofA applied for and received a conditional approval for a $500,000 grant (1920). It required the university to complete a four year undergraduate medical teaching program and grant MDs.

1920-1945	Dr. A.C. Rankin was appointed the first Dean of Medicine. He continued as the Dean for twenty-five years except for his WWII services (1939-1943).
1921	The medical school accepted its first students into the four year MD program.
	The Provincial Lab moved from Athabasca Hall to the basement of the medical school, where it remained until 1950.
	Senior matriculation (Grade 12) was required and premedical training was extended from one to two years.
	Professor Collip started his 18 month round the world sabbatical in Toronto. He isolated insulin in December 1921. It was injected into the first patient in January 1922.
	The United Farmers of Alberta (UFA) government elected. Remained the party in power from 1921-1935.
1921-1922	A mini-depression occurred in Alberta.
1922	The UofA, though the city of Edmonton, bought back the Strathcona Hospital for $150,000. It opened as the University of Alberta Hospital. Medical appointments and privileges were granted by invitation, to specialist only. The President and Dean of Medicine were appointed to the five member Board, with the President as the Chairman.
	Drs. Mewburn, Pope and Conn were appointed the first three clinical professors in Surgery, Medicine and Obst-Gyne. All three like most were McGill graduates. The American Medical Association's Committee on Education accredited the medical program and granted it Class A status.
	Hon George Hoadley appointed the Minister of Health, from 1923-1935.
1923	The Rockefeller grant was released.
	The dental program accepted its first students in a four year DDS program. Dr. H.E. Bulyea, DDS, was appointed the Director.
	Dr. Tory was appointed chairman (part-time) of the National Research Council.
	Dr. John Scott joined Professor J.B. Collip on the Faculty of Medicine staff.
1925	Professor Collip isolated parathyroid hormone. He was awarded a D.Sc. and earned an MD a year later (1926).
	The first class of MDs (11) graduated. Up to that time 150 students had completed the two year basic science program and graduated from McGill or UofT with their MDs.
1926	A credential assessment system was established by the UofA Senate, using the Faculty of Medicine to assess and grant diploma to specialist MDs. The minimum qualifications were an internship plus 2.5 years of postgraduate training. It lasted until 1944.
	The first graduating class attempted the LMCC. Five of seven pass it.
1927	Dr. M.R. Bow the MOH of Regina appointed Deputy Minister from 1927 to 1952. The first class of DDS graduated.
1927-1928	Polio epidemic. Polio pavilion opened.
1928	Dr. Collip left the UofA Faculty of Medicine. Dr. Scott was named his temporary (one year) replacement.
1929	Royal College of Physicians and Surgeons established.
1929	The Government of Alberta appointed three of the UAH's eight Board members.
1929-1939	The Depression: Medical class intake sizes dropped by one half to 15 (1933) before they started increasing in 1935. One dental student graduated in 1932/33.
1930	A B.Sc. (medicine) program was approved. The first student took the one year program in 1939.
1931	The first residency training program in Canada started at the UofT (Gallie Course).
1932	The Continuing Medical Education program was started. It continues to the present time.
1935	25% of the University salaries were paid for in script.
	The UofA MD class obtained the highest class average in Canada on the MCC exams.
1936	Quota set at 40 MD entrants.
1938	Faculty of Pharmacy transferred from Arts and Science to the Faculty of Medicine.

	Medical Research Council established as a subdivision of the National Research Council First Director, Dr. F.G. Banting.
1939-1945	WWII. Dr. Rankin joined the Army as the Director of Hygiene. Dr. Ower was appointed the Acting Dean while he was away (1939-1943).
1939-1945	Approximately 375 Alberta physicians enlisted of the 560, 1939 registered doctors - the highest in Canada.
1941	Surgeon Lt Cmdr W.C. Mackenzie was the surgeon in charge of the HMCS Avalon hospital surgical unit when naval personnel were burned or trapped in a hostel fire - 99 died, 109 were burned with 48 admitted to the Avalon hospital.
1941-1942	UofA Board chair H.H. Parlee and a government/university committee developed a long term building and development plan for the UofA. Much of the medical plan was begun in place or being planned within a decade: the Mewburn Pavilion (1945), the west (1946) and east (1948) wing additions to Medical school and the Provincial Laboratory (1950).
1942	Captain Tim Cameron landed on the Dieppe Beach with the Calgary Tanks on his 22nd birthday - August 19, 1942.
1943	Association of Canadian Medical Colleges (ACMC) is formed.
1944	School of Dentistry became a separate faculty.
1945	Mewburn Pavilion opened with 240 beds.
1945-1948	Dr. J.J. Ower was appointed the second Dean of Medicine. Surge of post-WWII veterans apply for medicine.
1946	A postgraduate medical training program was initiated. Dr. Mark Marshall was appointed the Program Coordinator and organized a Royal College acceptable program for each resident.
1946	President Newton appointed the first Committee to allocate medical research funds.
1947	The first M.Sc. and Ph.D. programs in the basic medical sciences were approved and started (1948).
1948-1949	East and West wings of the medical school extended.
1948-1959	Dr. John Scott was appointed the third Dean of Medicine at the UofA.
1948	First of three Markle fellowships awarded to Dr. D.R. Wilson (endocrinology), Dr. R.S. Fraser (1953, cardiology) and Dr. L.E. McLeod (1958, metabolic and renal diseases).
1949	The first four year postgraduate programs were started (Surgery, Ophthalmology). Most residents still completed their postgraduate training at other centres.
	The first full-time Dean of Medicine in Canada was appointed at the UofT, Dr. J.A. Macfarlane.
	Faculty of Medicine medical research grants totaled $10,000, mostly from the 1938 incorporated MRC.
1950	BC began its undergraduate medical teaching program.
1950	Provincial Laboratory opened.
1956	There was considerable expansion of the UAH and the specialties within the Departments of Medicine and Surgery.
1952	The McEachern Lab was opened as the first medical research (cancer) facility at the UofA. It occupied space formerly used by the Provincial Lab. The SMRI research lab opened next to it in 1953.
1953	Saskatchewan began the last two years of its undergraduate medical teaching program. Last major polio epidemic - 1,453 cases, 111 die.
1954	The first geographic full-time UofA (GFT) professor was appointed, Dr. D.R. Wilson – in Medicine.
1955	Dr. J.C. Callaghan arrived to start the open heart surgical program. The first bypass operation was performed in 1956.
1955	School of Pharmacy become an autonomous Faculty.
1955	The UAH Research and Special Services Fund was established. It provided $50,000 per year for research.
1956	American Medical Association placed the UofA program on a “confidential probation” bases, for lack of full-time staff.

1956-1959	Faculty of Medicine funding increased from $340,000 to $840,000/year.
1957	The Canadian government introduced the Hospital Insurance and Diagnostic Services Act and agreed to fund these services on a 50/50 Federal/Provincial basis.
1959-1974	Dr. W.C. Mackenzie was appointed the fourth Dean of Medicine.
1961	School of Dental Hygiene established.
1962	Chronic Renal Dialysis program began.
1963	Faculty of Medicine celebrated its 50th anniversary. The D.E. Cameron library was opened.
1964-1968	Hall Royal Commission recommended the formation of a Health Resources Fund (1965, with $500 million) and Medicare (1968).
1966	The Foothills Hospital was opened in Calgary. Planning for the Centennial Hospital started. It was cancelled in 1971.
1967	The UofC Dean of Medicine was appointed – Dr. William Cochrane. The first undergraduate class began at the UofC in 1970 and graduated in 1973.
	The 1,000th open heart operation was performed. First renal transplant performed.
1968	The RS McLaughlin Examination Center was established under Dr. D.R. Wilson, to create a computerized data bank of graduate and undergraduate examination questions. It was moved to Ottawa in 1986.
1968	W.W. Cross Cancer Institute opens.
1969	The Clinical Sciences building (13 stories) was opened.
1970	UofC medical school accepts its first class. It is a 3 year continuous program.
1971	The Royal College of Physicians and Surgeons required that all accredited programs be managed by the Faculty of Medicine, not the hospital.
1972	The Medical Sciences building (9 stories) was opened. Remaining faculty members were moved from the original medical school into it. Faculties of Pharmacy and Dentistry took over the original Medical Building.
1974-1983	Dr. D.F. Cameron was appointed the fifth Dean of Medicine.
1975	The Heritage Trust Fund was started.
1975	The Walter C. Mackenzie Health Sciences Centre was approved. It took from 1976-1983 to be constructed and three years to fully open and was named after Dr. Mackenzie in 1979. The Centre contained the John W. Scott Library.
1945	The first discussions with Hon Peter Lougheed that lead to the establishment of the AHFMR commenced.
1980	The AHFMR Act was passed and funded with $300 million.
1983/84	Dr. R.S. Fraser was appointed Acting Dean (1983/84).
1983-1986	Walter Mackenzie HSC opens.
1984	Canada Health Act passed. It prohibited extra billing by doctors.
1984-1994	Dr. Douglas Wilson was appointed the sixth Dean of Medicine.
1984-1988	The first medical Heritage Research buildings were planned, built and opened in Calgary and Edmonton.
1988	The Faculty of Medicine celebrated its 75th anniversary.
1989	The first aboriginal medical student was accepted into the UofA program. (Johnny Brisebois)
1991	Alberta Government declined to build a separate Children's Hospital. It approved a plan to base the Stollery Centre at the W.C. Mackenzie HSC with satellite centres at the RAH and Caritas Hospitals, with a separate budget.
1991-1992	The Barer-Stoddard report was released. The Ministers of Health recommended medical school enrollment be reduced by another 10%.
1994-2004	Dr. Lorne Tyrrell was appointed the seventh Dean of Medicine at the UofA.
1994	Regionalization of hospitals under one Board was introduced in Alberta. The Edmonton region became the Capital Health Authority.
1994-1996	The Faculty of Dentistry was remerged with the Faculty of Medicine and renamed the Faculty of Medicine and Dentistry.

1994-1996	A three year 11% cost reduction program was introduced by the provincial government, precipitated by low oil prices. Acute care hospital budgets were reduced by 30%.
1992	Medical School enrollment in Canada by 10%. First year quotes decreased from 1850 to 1577.
1999	Task Force I report co-authored by Dr. L. Tyrrell addressed the declining medical enrollment in Canada to 1,550/year and recommended it be increased to 2,500/year (2005).
2000	MRC transformed into the Canadian Institutes of Health Research. Edmonton protocol for islet cell transplants published in the NEJM.
2002	Alternative Funding Plans in Medicine & Pediatrics were introduced. Psychiatry and Neurosciences would follow.
2003-200_	Alberta Health Research Innovation Faculty (east and west), was approved, planned, built and opened.
	Alberta Diabetes Research Institute incorporated in the west facility.
2003-2009	The Mazankowski Heart Institute (UofA) was planned, built and opened.
2003-2009	The McCaig Bone and Joint Center (Foothills) was planned, built and opened.
2004-2011	The Edmonton Clinic was approved. Construction of Phase I started (2007), to provide ambulatory care services and teaching for the five healthcare faculties (Medicine, Nursing, Dentistry, Pharmacy and Rehabilitation Medicine) across 114th Street from the Mackenzie HSC.
2004-2009	Dr. Thomas Marrie was appointed the eighth Dean of Medicine.
2005	Zeidler - Ledcor GI and Physical Examination center opened.
2005-2006	UofA medical research income reached $144 million.
2006	Faculty of Public Health established as an independent faculty.
2007-2008	Medical research and capital income reached $221 million.
2007-2012	Construction of the Alberta Health Services Headquarters, across 114th Street from the W.C. Mackenzie's HSC.
2008	100th Anniversary of the University of Alberta.
2009	First year medical school enrollment was increased to 188 per year at the UofA and 180 at the UofC (2009).
2009	Healthcare premiums were discontinued by the Alberta Government. The healthcare budget was reduced by over $1.0 billion.
2009	AHFMR and Ingenuity Fund Acts were repealed by the Government.
2009	Dr. Philip Baker appointed the ninth Dean of Medicine.
2013	100th Anniversary of the UofA Faculty of Medicine.

Selected Publications of the UofA Deans

Preliminary List of Publications of Dr. A.C. Rankin

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2. Rankin, Allan C., The effect of Anaesthesia on the Opsonic Index. Montreal Medical Journal 37(1): 40-42, 1908.
3. Rankin, Allan C., The Von Pirquet Tuberculin Reaction. Montreal Med. Jour. 38(Oct.): 666, 1909.
4. Rankin, Allan C., The Germicidal Action of Metals and its relation to the production of Peroxide of Hydrogen. Proceedings of the Royal Society 82 B: 78-87, 1910.
5. Klotz, Oscar, Rankin, Allan C., The reaction of various bacteria upon Aesculin Agar. Journal of Infectious Diseases 7: 67-72, 1910, Chicago.
6. Highet, Campbell C., Studies on Beri-Beri and its Prevention in Siam Colonial Medical Report No. 20 – Siam. Being a Report upon certain investigations on Beriberi carried out in Siam by the Medical Officers of the Health Department of the Ministry of Local Government by H. Campbell Highet, M.D., D.P.H. Principal Medical Officer of Health, Bangkok, Siam. Based partly on research by Dr. A.C. Rankin and published in the Journal of Tropical Medicine and Hygiene 16: 48-61, June 16, 1913.
7. Hunt, G.H., Rankin, A.C., "Intermittent fever of obscure origin, occurring among British Soldiers in France. The so-called Trench Fever", in the Lancet 189: 1133-1136, 1915.
8. Hunt, G.H., Rankin, Allan C., Letter to the Editor of the Lancet dated November 20, 1915, and published in the Lancet 186: 1368-1369, December 18, 1915.
9. Rankin, A.C., Simple Tertian Malaria in French Flanders. Lancet 190: 1079-1080, May 27, 1916.
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16. Branch, Arnold, B.C.G. To Date, CMAJ 26: 584-585, May 1932.
17. Rankin, Allan C., Report of the Alberta Committee on Tuberculosis Research Appendix B, Proceedings of a meeting of the Research Directors of the Associate Committee on Tuberculosis Research, National Research Council, Ottawa, March 1933.
18. Rankin, Allan C., Ower, J.J., Shaw, R.M., Talbot, P.R., Report of the Alberta Committee on Tuberculosis Research, Appendix D of the Proceedings of the Seventh Meeting of the Associate Committee on Tuberculosis, National Research Council of Canada, Ottawa, June 17, 1936.
19. Rankin, Allan C., Report of the Alberta Committee of Tuberculosis Research to the National Research Council of Canada, June 27, 1938.
20. Rankin, Allan C., Talbot, P.R., Ower, J.J., Shaw, R.M., The Immunizing Properties of BCG Vaccine in Bovines. Report to the American Association for the Advancement of Science, Ottawa, June 1938.
21. Rankin, Allan C., Fever Bark Tree – The History of Quinine. Unpublished manuscript, March 1947.

Preliminary List of Publications of Dr. J.J. Ower

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3. Ower, John J., George, N.B., Infectious Jaundice, Lancet, September 1915.
4. Ower, John J., Campbell, R.P., Report – Unattached Mass found in Abdominal Cavity of a Male. American Journal of Medical Science, September 1914.
5. (Ower, et al), Proceedings of the Clinical Meetings during the winter of the Clinical Society of 1 Canadian General Hospital, were published in the Bulletin of the Canadian Army Medical Corps, Vol 1: 14, 26. Office of the DGMS, OMFC, 1917. The agendas of the November and December

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8. Rankin, Allan C., Ower, John J., Shaw, Robert M., Talbot, Percy R., The Immunizing Properties of BCG Vaccine in Bovines. Report to the American Association for the Advancement of Science, Ottawa, June 1938.
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10. Cameron, Kenneth, History of 1 Canadian General Hospital, 667 pages. Multiple contributors including Dr. Ower. Tribune Press, Sackville, NB, 1938.
11. Ower, John J., Pictures on Memory's Walls. Some of the Polychromasia of a Pathologist's Life and Times. Part I, CACHB 19(1): 1-22, May 1954 and Part II, CACHB 19(2): 35-62, August 1954.
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Preliminary List of Publications of Dr. John W. Scott

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3. Scott, John W., A Case of Addison's Disease with Suprarenal Atrophy, CMAJ 24: 548-551, 1931.
4. Scott, John W., Eunuchoidism Associated with Emaciation, Endocrinology 15(2): 146-150, March-April 1931.
5. Cantor, M.M., Scott, John W., Substitution Therapy in Addison's Disease. CMAJ 26: 330-333, 1932.
6. Jamieson, H.C., Scott, John W., Functional Albuminuria, CMAJ 28: 169-172, 1933.
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8. Scott, John W., Spontaneous Hyperventilation Tetany, American Journal of the Medical Sciences 186(4): 509-513, October 1933.
9. Cantor, Max M., Scott, John W., Treatment of Addison's Disease with an Extract of Adrenal Gland, Endocrinology 18(3): 341-349, May-June 1934.
10. Jamieson, Heber C., Scott, John W., Spontaneous Subarachnoid Hemorrhage Simulating Diabetic Coma, with a Report of Two Cases, CMAJ 32: 540-542, 1935.
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14. Cantor, Max M., Scott, John W., Agranulocytic Anemia effectively treated with Intravenous Pyridoxine (Vitamin B6), CMAJ 52: 368-371, 1945.
15. Scott, John W., Gastrointestinal Symptoms in Cardiovascular Disease, CMAJ 52: 128-130, February 1945.
16. Scott, John W., Macbeth, R.A.L., Tularemia (with a Report of Nine Cases), CMAJ 55: 564-566, December 1946.
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19. Scott, John W., Somner Memorial Lectures (The Iron Deficiency Anemias, Functional Dyspepsia, Mechanisms and Treatment of Congestive Heart Failures), University of Oregon, May 1948. Published in the University of Oregon Medical Alumni Journal, June and July, 1948.

20. Scott, John W., Non-Bacterial Infections, AMB 14(2): 19-21, July 1949.
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30. Scott, John W., The Department of Medicine 1944-1954. Written in 1979. Deposited in the Department of Medicine. An abridged summary appeared in the *History of the Department of Medicine at the University of Alberta*, pages 9-16, by Dawna Gilchrist, UofA, 2004.

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3. Sprague, P.H., Mackenzie, Walter C., A case of temporal arteritis (Horton-Magrath syndrome). CMAJ 43: 562-564, 1940.
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7. Mackenzie, Walter C, Breckenbridge, W.C., Traumatic arterial spasm (report of a case). CMAJ 53: 130, 1945.
8. Bean, David M., Mackenzie, Walter C., The use of penicillin in Ludwig's angina. CMAJ 52: 568-71, June 1945.
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10. Mackenzie, Walter C., Small, James, Primary idiopathic segmental infarction of the greater omentum. CMAJ 55: 144-145, 1946.
11. Mackenzie, Walter C., Surgical treatment of chronic ulcerative colitis. CMAJ 64: 200-204, 1951.
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17. Mackenzie, Walter C., Macgregor, J.W., Papillary adenocarcinoma of the thyroid. Proceedings of the Royal College of Canada.
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27. Mackenzie, Walter C., Willox, G. Leslie, Harrison, R. Cameron, Norvell Jr., Stevens T., The choice of operation in the treatment of peptic ulcer. Surgical Clinics of North America, October 1958.
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32. Friedman, M.H.W., Mackenzie, Walter C., Simple ulcer of the colon: Report of four cases. Canadian Journal of Surgery 2: 179-186, April 1959.
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37. Mackenzie, Walter C., Macbeth, Robert A., The abdominal wall and peritoneum. Christopher Textbook of Surgery – Chapter 18, Seventh Edition, 1959. Edited and revised in the 8th and 9th editions.
38. Friedman, Morris H.W., Mackenzie, Walter C., A foreign body in the appendix: A report on an unusual case. Canadian Journal of Surgery 3: 98-100, October 1959.
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Publications & Major Addresses to 1974 of Dr. D.F. (Tim) Cameron

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2. Cameron, D.F., "New Concepts in General Anaesthesia", Medical Staff, University Hospital, 1961.
3. Cameron, D.F., "Electrical Anaesthesia – Report of Preliminary Trials." Western Division, Canadian Anaesthetists Society, 1962.
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13. Cameron, D.F., Wilson, L., "The Combined Effects of Ethanol and Amphetamine Sulfate on Performance of Human Subjects", CMAJ 94: 478-484, March 1966.
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15. Cameron, D.F., "Symposium Chairman: Evaluation in Medical Education." Association of Canadian Medical Colleges, Saskatoon 1966.
16. Cameron, D.F., "Problem Solving Theory." Western Conference on Medical Education, Vancouver, December 1966.
17. Cameron, D.F., "Examinations and Licensure." Guest Lecturer, Queens University, April 1967.

18. Cameron, D.F., "Medical Practice Tomorrow." Institute of Man and Science Symposium, New York, October 1967.
19. Cameron, D.F., "The University of Alberta Family Clinic." Medical staff, Misericordia Hospital, October 1967.
20. Cameron, D.F., "Evaluation and Medical Education." Federation of Provincial Medical Licensing Authorities, Edmonton, June 1968.
21. Cameron, D.F., Graduating Address. University Hospital School of Nursing. April 1968.
22. Cameron, D.F., "The Crisis in Medical Education and Medical Manpower." Western Division Canadian Anaesthesia Society, Vancouver 1968.
23. Cameron, D.F., "Planning the University of Alberta Health Sciences Centre". D.N.H.W. Symposium, Ottawa 1968.
24. Cameron, D.F., "Electives in the Undergraduate Curriculum." Association of Canadian Medical Colleges, Winnipeg 1970.
25. Cameron, D.F., Participant – 4th World congress on Medical Education, Copenhagen 1972.

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Dr. Wilson's full cv (to 2009) includes 14 Awards and Honors; the supervision of 15 graduates in health promotion and four postdoctoral fellows in clinical nephrology; 148 publications and abstracts; reviewer for seven journals; 10 chapters in books. Dr. Wilson has been a partner or recipient of $4.375M in competitive research grants and contracts.

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Dr. Tyrrell's full bibliography (to 2010) includes 29 Awards and Honors, the supervision of 22 graduate and postdoctoral fellows, 25 jointly held patents, 143 peer reviewed publications, one special report (Task Force on Physician

Supply in Canada), 72 invited presentations on Hepatitis antiviral therapy and 12 other invited presentations, 19 chapters in books, and 275 abstracts. Dr. Tyrrell has secured $9.0M in competitive research grants, $4.2M in peer reviewed research contracts, and $30M in capital grants from Glaxo and CFI. Recently (2010) he secured a $28M donation for the establishment of the Li Ka Shing Institute of Virology, of which Dr. Tyrrell is the founding director.

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Dr. Marrie's full bibliography (to 2009) includes 21 Awards and Honors, participation in 15 editorial and advisory boards, 378 publications, 59 non-peer reviewed publications, 91 chapters in books, the editing of one book on CAP, and 273 invited lectures. Dr. Marrie has secured, received or partnered in $12,600,000 worth of research grants and contracts.

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