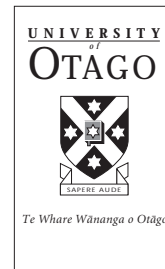




REPORT 2003 / 2004

School of Pharmacy Adams Building, Frederick Street, Dunedin





SCHOOL OF PHARMACY

REPORT
2003 / 2004

REPORT 2003/2004

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INTRODUCTION FROM DEAN

It is my pleasure to present this report on the teaching, research and service activities of the School of Pharmacy for the period 2003 – 2004. This has been a period of high activity for us with rewarding outcomes.

Our new Bachelor of Pharmacy programme was fully implemented in 2003. Rather than moving integrated teaching into the early levels of the programme, we have taken the approach of laying the disciplinary foundations in the first 2.5 years of the BPharm prior to the integrated systems-based teaching in the final 1.5 years of the programme. This means that students acquire the conceptual foundations first and then learn to apply this knowledge, the ultimate aim being to achieve quality use of medicines in the New Zealand community. Our feedback from students is that this approach is very much appreciated and community pharmacists, the employers of many of our graduates, have been very pleased with the result. 2003 was also important because it was the year of our first Accreditation Review by the recently established New Zealand and Australian Pharmacy Schools Accreditation Committee, a subcommittee of the Pharmacy registering authorities of Australia and New Zealand. I am pleased to report that the BPharm programme was accredited for a three year period with a likely extension for a further two years.

The first assessment round of the Performance Based Research Funding (PBRF) scheme was held in 2003. Eligible staff members were assessed by national expert committees based upon their nominated research outputs, their contributions to the research environment and their peer esteem. Although we were pleased with our rating in this exercise, our research outputs have increased since that time as shown by our publications in 2004, so we expect to do even better in the next assessment round in 2006.

The research ethos of the School has continued to grow particularly due to the vibrant group of postgraduate research students. This group comprises our own graduates and also students from many other countries including: China, Croatia, Germany, India, Japan, Malaysia, Thailand. By far the biggest group is from Germany. This is a direct consequence of the Government-to-Government agreement between Germany and New Zealand which allows German students to study in New Zealand and pay New Zealand level fees. Initially students come for a short-term research experience after which several have been attracted back into our PhD programme. The Government's recent decision to reduce the fees paid by international PhD students to the New Zealand-level fee will create exciting opportunities for us to attract greater numbers of high quality international students into our PhD programme and thereby enhance research outcomes.

At the undergraduate level, our aim is to provide a research informed degree programme. In order to achieve this it is not only important that staff are actively involved in research but it is essential that they have opportunity to present their research at international forums and to have opportunity to interact with researchers in other countries. I am therefore delighted that we have been able to support staff to attend international conferences where they have presented the results of their research and in some cases opened opportunities for international collaborations.

In summary, this biennial report details our achievements in our teaching programmes, our research efforts leading to publications in peer reviewed international journals and numerous conference presentations and our contributions to the future of pharmacy and the pharmaceutical sciences through our Master of Clinical Pharmacy, Master of Pharmacy and PhD programmes.

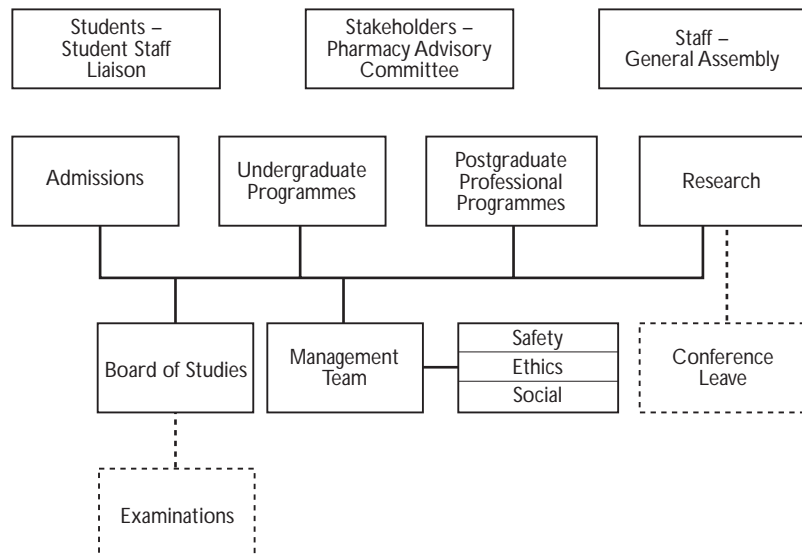
Prof Ian G Tucker
Dean

ORGANISATIONAL STRUCTURE OF THE SCHOOL

Responsibilities within the School are allocated on a functional basis among Associate Deans for Admissions and Undergraduate Programmes, Professional Postgraduate Programmes and Research.

The activities of the School are informed by our stakeholders through the Pharmacy Advisory Committee which has representatives from the various professional bodies, industry, students and staff; the staff/student liaison meetings whereby students can provide feedback through the class representative system; and the staff General Assembly which is one avenue by which staff provide input into the functions of the School.

ORGANISATIONAL STRUCTURE



STAFF

Professor and Dean

Ian Tucker, BPharm (Hons) PhD (Qld) MPS

Professor

Thomas Rades, BSc(Pharm) (Hamburg) PhD (Braunschweig)

Senior Lecturers

Gordon Becket, BPharm (Lond) PhD (CNA) CChem MRSC MRPharmS MPS MIBIOL

Rosemary Beresford, BPharm (Nott) MSc (Glas) PhD (Otago)

Paul Fawcett, BSc PhD (Sheff) CChem FRSC FNZIC

Sarah Hook, BSc (Hons) PhD (Otago) ASI NZFSS

Momir Mikov, MSc MD PhD (Novi Sad)

Pauline Norris, MA (Cant) PhD (Well)

Dorothy Saville, BPharm (Hons) MSc PhD (Syd)

Kath Ryan, BPharm PhD (Otago) IBCLC MPS

Lecturers

Kathryn Bethune, BSc (Hons) (Manc) MSc (Surrey) MRPharmS MPS

Desiree Kunac, DipPharm (CIT) MClinPharm (Otago) MPS

Nataly Martini, BPharm MSc PhD (Pret) MPS

Natalie Medicott, BPharm (Hons) PhD (Otago) MPS

Aarti Patel, MPharm (Durban -W) MPS

June Tordoff, BPharm (Hons) MPharm (Brad) MRPharmS MPS

Joel Tyndall, BSc(Hons) (Monash) PhD (Qld)

Clinical Lecturers

Linda Bryant, BPharm MPharm (Otago) MPS

Keith Crump, DipPharm (CIT)

Alison Davies, DipPharm (CIT) DipHospPharm (Syd) MMedSci (Newcastle)

Sunita Goyal, BSc DipPharm MClinPharm (Otago) MPS

Senior Teaching Fellows

Patti Napier, BPharm (Otago) PGCertTertT (Otago) MPS

Anita Olivier, DipPharm (Natal) PGCertTertT (Otago) MPS

David Schmierer, BAppSci (Swinburne) MAACB CChem MRACI MRSC

David Woods, BSc(Hons) (Manch) MPharm (Otago) MPS

Teacher Practitioners

Graeme Collie

Peter Thomas, MPS MRPharmS

Phil Walsh, MPS

Honorary Professors

John Murphy, BPharm PhD (Florida)

Mike Pepper, BSc PhD (Reading) MA ScD (Cambridge)

Adjunct Professor

Ken Taylor, MPharm (Otago) PhD (Florida)

Research Staff

Anil Anal, PhD, MSc, DVM

Sree Chary, BSc MSc (Kerala) MPhil (Cochin) PGDipPharm (Otago)

Gopinath Devarag, PhD, MPharm, BPharm

Tania Hennessey, BSc (Otago)

Karen Krauel, DipPharm

Warren McBurney, PhD, MSc, BMLSc (Otago)

Anne Saupe, PhD, DipmPharm

Lin Yang, PGDipPharm (Otago)

Hu Zhang, MD (Anhui) PhD (Otago)

CAL Resource Person

Manson Wright

Manager, Administration and Finance

Patricia Murdoch, BA (Massey)

Administrative Staff

Sonya Brensell

Denise Botting

Vanessa Chinula, BCom (Canterbury)

Cara-Jane Smith, BA (Otago)

Leslie Turner

Head Technician

Len Stevenson, NZCS

Technical Staff

Michael Broughton, MSc (Otago)

Kevin Crump, BSc (Otago)

Vicky Luscombe, PharmTech

Rachael Tyrer, BTech

Lisa Reid, Cert Disp Tech (on maternity leave)

Ann Walker, NZCS

Brian Young, NZCE

DR GORDON BECKET

BPharm (Lond) PhD (CNAAB) CChem MRSC MRPharmS MPS MIBIOL

Tel: +64 (03) 479 7132

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Position

Senior Lecturer

Associate Dean, Postgraduate Professional Programmes

Research Interests

- Pharmacy practice, work sampling, prescription intervention
- Thermal analysis (DSC)
- Percutaneous absorption of drugs
- Stability testing in unit dose packaging

Selected Refereed Journal Articles

Songkro, S, Becket, G. and Rades, T. The effects of p-menthane monoterpenes and related compounds on the percutaneous absorption of propranolol hydrochloride across newborn pig skin. *Part III. Correlation between penetration enhancing activity and physico-chemical properties of terpenes determined by principal components analysis. Journal of Drug Delivery Science and Technology*. 14 (3) 223-228 (2004).

Nalori B.N, Chowdary K.P.R., Murthy K.V.R., Satyanarayana V., Hayman A.R., Becket G. Physicochemical characterization and dissolution properties of meloxicam-cyclodextrin binary systems. *Journal of Pharmaceutical and Biomedical Analysis* 35, 75-86 (2004).

Songkro, S, Becket, G. and Rades, T. The effects of p-menthane monoterpenes and related compounds on the percutaneous absorption of propranolol hydrochloride across newborn pig skin. *Part II: Infrared spectroscopic and thermal analytical investigations. S.T.P. Pharma Sciences*. 13 (6) 397-404 (2003).

Songkro, S, Rades, T. and Becket, G. The effects of p-menthane monoterpenes and related compounds on the percutaneous absorption of propranolol hydrochloride across newborn pig skin. *Part I. In vitro skin permeation and retention studies. S.T.P. Pharma Sciences* 13 (5) 349-357 (2003).

Service External to University

Editorial Board, *Asia Pacific Journal of Pharmacology*. (1988-present)

Teaching Involvement

Pharmacy practice and pharmaceutical sciences to undergraduate and postgraduate students.

DR ROSEMARY BERESFORD

BPharm (Nott) MSc (Glas) PhD (Otago)

Tel: +64 (03) 479 7273

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Position

Senior Lecturer

Associate Dean, Admissions and Undergraduate Programmes

Research Interests

- Primary Health Care: Pharmacy Practice (work force investigations)
- Health Education and Promotion/Distance Learning for Health Professionals
- History of Medicine and Pharmacy
- Herbal Medicine usage in the community

Selected Refereed Journal Articles

Beresford, R.A. and Miller, G. Teaching pharmacy history: the antipodean experience. *Pharmaceutical Historian* 32(1):10-11 (2002)

Agatonovic-Kustrin, S., Beresford, R.A., Pauzi, M. and Yusof, A. ANN modelling of the penetration across a polydimethylsiloxane membrane from theoretically derived molecular descriptors. *Journal of Pharmaceutical and Biochemical Analysis* 26(2):241-254 (2001)

Elmey, V. and Beresford, R.A. Work patterns and uptake of continuing education in a two year cohort of New Zealand pharmacy technicians. *International Journal of Pharmacy Practice* 9:53-57 (2001)

Agatonovic-Kustrin, S., Beresford, R.A., Pauzi, M. and Yusof, A. Theoretically derived molecular descriptors important in human intestinal absorption. *Journal of Pharmaceutical and Biomedical Analysis* 25:227-237 (2001)

Service External to University

Public lectures, Auckland Medical History Society: The Sovereign Balm. (2002)

Member, Board of Directors, Asian Association of Schools of Pharmacy

Reviewer, *American Journal of Drug Delivery*, *Journal of Pharmaceutical Sciences*, *International Journal of Pharmacy Practice*

Teaching Involvement

Pharmacy practice to undergraduate and herbal medicines to postgraduate students.

KATHRYN BETHUNE

BSc (Hons) (Manc) MSc (Surrey) MRPharmS MPS

Tel: +64 (03) 479 7240

Email: kathryn.bethune@stonebow.otago.ac.nz

Position

Lecturer with 15% commitment at HealthCare Otago

Research Interests

- Parenteral Nutrition
- Training in Aseptic Techniques
- Use of HMG-CoA Reductase inhibitors

Selected Refereed Journal Articles

Bethune, K. and Duncombe, R. The use of automated compounding devices. *Hospital Pharmacy Europe Summer* 2002 39-40 (2002)

Ball, P.A., Bethune, K., Fox, J., Ledger, R. and Barnett, M. Particulate Contamination in Parenteral Nutrition Solutions: Still a Cause for Concern? *Nutrition* 17:926-929 (2001)

Bethune, K., Duncombe, R. and Forbes, B. Assessment of particulate contamination in paediatric parenteral nutrition solutions. *Clinical Nutrition* 20(S3):29 (2001)

Bethune, K.M., Allwood, M., Barnett, M., Granger, C. and Wormleighton, C. The use of filters during the preparation and administration of parenteral nutrition: position paper and guidelines prepared by a British pharmaceutical nutrition group working party. *Nutrition* 17:403-408 (2001)

Teaching Involvement

Clinical pharmacy to undergraduate students.



DR PAUL FAWCETT

BSc PhD (Lond) ARCS MNZIC



Tel: +64 (03) 479 7290
Email: paul.fawcett@stonebow.otago.ac.nz

Position
Senior Lecturer

Research Interests

- Pharmaceutical Analysis, Drug Development
- Pharmacokinetics, Drug Metabolism
- Drugs of Abuse, Chiral Drugs
- Extemporaneous Formulation, Drug Stability

Selected Refereed Journal Articles

Gu, Y.C., Wang, G.J., Pan, G.Y., Fawcett, J.P., A, J.Y. and Sun, J.G. Transport and bioavailability studies of Astrogalaside IV, an active ingredient in *Radix Astragali*. *Basic & Clinical Pharmacology & Toxicology* 95: 295-298 (2004)

Shi, X.G., Zhang, S.Q., Fawcett, J.P. and Zhong, D.F. Acid catalysed degradation of some spiramycin derivatives found in the antibiotic bitespiramycin. *Journal of Pharmaceutical and Biomedical Analysis* 36: 593-600 (2004)

Fawcett, J.P., Ravindran, V., Morel, P.C.H., Zhang, M., Ciofalo, V.B., Sprainhour, C.B. and Aberg, G. Influence of salbutamol administered as the single active enantiomer (R-salbutamol) on the growth performance and carcass characteristics of broiler chickens. *Animal Science* 78: 23-30 (2004)

Davey, A.K., Fawcett, J.P., Lee, S.E., Chan, K.K. and Schofield, J.C. Decrease in hepatic drug-metabolising enzyme activities after removal of rats from pine bedding. *Comparative Medicine* 53: 299-302 (2003)

Service External to University

Dunedin Intravenous Organisation (DIVO), Trustee, (1992- present), Trust Chairperson, (1996-1999)

Teaching Involvement

Pharmaceutical analysis and medicinal chemistry to undergraduate and postgraduate students.

DR SARAH HOOK

BSc (Hons) PhD (Otago) ASI, APSA



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Position

Senior Lecturer

Research Interests

- Cellular immunology and molecular biology
 - T-cell immune responses and how it is possible to modulate these responses
 - Role of T-cells in modulating immune responses to infections and autoimmune diseases such as diabetes and in inflammatory diseases such as asthma
 - Development of specific vaccines and drugs to target cells at certain sites or perhaps to certain subsets of cells

Selected Refereed Journal Articles

White K, Kearns P, I Toth I, Hook S. Increased adjuvant activity of minimal CD8 T cell peptides incorporated into lipid-core-peptides. *Immunol Cell Biol*, 82, 517-522. (2004)

Demana P, Fehske C, White K, Rades T, Hook S Effect of incorporation of the adjuvant Quil A on structure and immune stimulatory capacity of liposomes. *Immunol Cell Biol*, 82, 547-554. (2004)

Marsland B, Harris N, Camberis M, Kopf M, Hook S, Le Gros G. Bystander suppression of allergic airway inflammation by lung resident memory CD8+ T cells. *PNAS*, 101: 6116-6121. (2004)

Hook S, Camberis M, Prout M, Le Gros. Absence of Preproenkephalin increases the threshold for T cell activation. *J Neuroimmunol*, 140: 61-68. (2003)

Service External to University

New Zealand Councillor for the Australasian Society for Immunology (2002-present)

School of Pharmacy Representative to the Animal Users Advisory Group (2002-present)

Teaching Involvement

Immunology and infectious diseases to undergraduate and postgraduate students.

DESIREE KUNAC

DipPharm (CIT) MCLinPharm (Otago) MPS



Tel: +64 (03) 479 7195

Email: desiree.kunac@stonebow.otago.ac.nz

Position

Lecturer with 15% commitment at HealthCare Otago

Research Interest

- Optimal use of medications in children
 - Unapproved medicine use, paediatric formulations, optimal drug delivery
- Adverse Drug Events
 - Adverse drug reactions and medication errors
- Safe medication practices
 - Prevention strategies to improve medication safety

Selected Refereed Journal Articles

Kunac, D.L. and Turner, S.T. Initial Experience with a Paediatric Pharmacy E-Mail Network. *Australian Journal of Hospital Pharmacy* 31(2): 139-142 (2001)

Kunac, D.L., Ball, P.A. and Broadbent, R.S. Study of the use of in-line intravenous filtration in neonates: Help or hindrance? *Australian Journal of Hospital Pharmacy* 29(6): 321-327 (1999)

Service External to University

Convenor of the Pharmacist Subcommittee of the Paediatric Society of NZ (2000 to 2003)

Member of the Drug & Therapeutics Subcommittee, Paediatric Society of NZ (2000 to present)

Moderator, Paedpharm email network (2000 to present)

Teaching Involvement

Undergraduate and Postgraduate Pharmacy Programmes

DR NATALY MARTINI*

BPharm MSc PhD (Pret) MPS

Tel: +64 (03) 479 7295

Email: nataly.martini@stonebow.otago.ac.nz

Position

Lecturer

Research Interest

- Complementary and alternative medicine
 - Social and educational perspectives in New Zealand
- Clinical Pharmacy
 - Palliative care
 - Herbal Medicines

Selected Refereed Journal Articles

Snyman JR, Sommers De K, Van Wyk M, Bloma MW, Martini ND, Steinmann MA. (2001) Short course, low-dose betamethasone therapy causes only marginal and transient hypothalamic-pituitary-adrenal axis suppression. *Drug Investigation* 21(7): 499-504

N. Martini, J.N. Eloff, (1998) The preliminary isolation of several antibacterial compounds from *Combretum erythrophyllum* (Combretaceae), *Journal of Ethnopharmacology* 62 (3) pp. 255-263.

Service External to University

Zenith Ethics Committee Member

OSMRS Editorial Committee Member

Teaching Involvement

Clinical pharmacy and pharmacy practice to undergraduate students.

* current address School of Pharmacy, University of Auckland

DR NATALIE MEDLICOTT

BPharm PhD (Otago)



Tel: +64 (03) 479 5919

Email: natalie.medlicott@stonebow.otago.ac.nz

Position

Lecturer

Research Interest

- Formulation and drug delivery
 - Formulation of proteins and peptides
 - Local delivery to the periodontal pocket
- Delivery systems including implants, subcutaneous injections, microspheres
- Assessment of irritancy by cell culture

Selected Refereed Journal Articles

Medlicott, N.J., Waldron, N.A. and Foster T.P. Sustained release veterinary parenteral products. *Advanced Drug Delivery Reviews*, 56 1345-1365. (2004)

Pongjanyakul, T., Medlicott, N. and Tucker, I.G. Melted glyceryl palmitostearate (GPS) pellets for protein delivery. *International Journal of Pharmaceutics* 271, 53-62 (2004)

Slobbe, L., Medlicott, M., Lockhart, E., Davies, N.M., Tucker, I.G., Razzak, M. and Buchan, G. A prolonged immune response to antigen in poly (ε-caprolactone) microparticles. *Immunology and Cell Biology* 81: 185-191 (2003)

Service External to University

Referee of articles in the pharmaceutical sciences.

Teaching Involvement

Biopharmaceutics, drug delivery and clinical pharmaceutics to undergraduate and postgraduate students.

DR MOMIR MIKOV

M.D., Clin Pharmacol. Spec, MSci, PhD (Novi Sad)

Tel: +64 (03) 479 7241

Email: momir.mikov@stonebow.otago.ac.nz

Position

Senior Lecturer

Research Interests

- Research on drug metabolism in vivo and in vitro
- Development of analytical methods for metabolic studies
- Design and clinical investigation (bioequivalence and controlled clinical trials)

Selected Refereed Journal Articles

Mikov M, Kevresan S, Kuhajda K, Jakovljevic V, Vasovic V. 3 α ,7 α -dihydroxy-12-oxo-5 β -cholanate as blood-brain barrier permeator. *Pol. J. Pharmacol.*, 2004, 56:367-371

Raskovic A, Jakovljevic V, Mikov M, Gavrilovic M. Joint effect of commercial preparations of Stevia rebaudiana Bertoni and sodium monoketocholate on glycaemia in mice. *Eur. J. Drug. Metab. Pharmacokinet.* 2004, 29(2): 83-86

Mikov M, Kuhajda K, Kandrak J. Current aspects of pharmacologic use of bile acids. *Medicinski pregled* 2003 56 (5-6): 237-242

Mikov I, Milosevic M, Mikov A, Mikov M. Increased urinary excretion of thioethers as a marker for detecting exposure to herbicide containing 2,4 dichlorophenoxyacetic acid dimethylamine - experimental study on mice. *Ann Agric Environ Med* 7, 61-63 (2000)

Service External to University

Member of the Examining Committee for Emergency Medicine Specialization Medical faculty
Novi Sad 1995- present

Member and Head of the Examining Committee for Clinical Pharmacology Specialization Medical Faculty
Novi Sad (Yu.) and Banja Luka (Bosnia and Herzegovina) 1996- present

Chairman of Poison Legislation, Serbian Ministry of Ecology and Science 2002-2004,

Expert in Adverse Reaction Committee (Serbia) 2000-2004

Member of the Board of the Serbian Pharmacology Society 1993-2004

Member of the Board of the Serbian Toxicology Society 1991-2004

Organization of regional information on drugs and poisons in Novi Sad 1991-2004

Member of the editorial board of *Medicinski Pregled* (Medical Reviews) 2000-2004

Member of the editorial board of *Pharmaca Yugoslavica* 1994- present

Co-editor of *Archives of Toxicology, Kinetics and Xenobiotic Metabolism* (Yug.) 1993- present

Teaching Involvement

Teaching in the field of Pharmacokinetics and Clinical Pharmacy



DR PAULINE NORRIS

MA (Cant) PhD (Well)



Tel: +64 (03) 479 7359
Email: pauline.norris@stonebow.otago.ac.nz

Position
Senior Lecturer

Research Interests

- Health Services Research
- Pharmacy Practice Research
- Qualitative and quantitative methods

Selected Refereed Journal Articles

Norris, P. Purchasing Restricted medicines in New Zealand Pharmacies. *Pharmacy, World and Science* 22 (4):140-146 (2002)

Norris, P. Which sorts of pharmacies provide more patient counselling? *Journal of Health Services Research and Policy*, 7, Suppl 1:23-28 (2002)

Ryan, K., Becket, G., and Norris, P. Who goes where and why? The patronage of community pharmacies in New Zealand. *Australian Pharmacist* 21(1):46-51 (2002)

Norris, P., Bird, K., Kirifi, J. and Simpson, T. Talking the Talk. *Prescriber Update* 23 (1):10-11 (2002)

Norris, P. and Roberts, E. Growth in prescribing of new anti-depressants in New Zealand 1993-1997, including comparisons with the Nordic countries. *Journal of Social and Administrative Pharmacy*, 19(1):8-14 (2002)

Service External to University

Member of a Public Health Assessing Committee, Health Research Council, (2002-present)

Editorship of Health, Risk and Society, International Editorial Advisor, (1999-present)

Teaching Involvement

Pharmacy practice, sociology and research methods to undergraduate and postgraduate students.

ANITA OLIVIER

DipPharm (Natal) PGCertTerT (Otago) MPS

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Position

Senior Teaching Fellow and community pharmacist

Service External to University

Intern Mentor for Otago-Southland branch of Pharmaceutical Society of New Zealand

Teaching Involvement

Pharmacy practice to undergraduate students.



AARTI PATEL

MPharm (Durban-W) MPS

Tel: +64 (03) 479 7133

Email: aarti.patel@stonebow.otago.ac.nz

Position

Lecturer

Research Interests

- Access to essential medicines
 - Drug supply management
 - Pricing of essential medicines
 - Rational use and quality

Selected Refereed Journal Articles

Krishuna, A. Drug Pricing Survey in KwaZulu-Natal. *Essential Drugs Monitor* (World Health Organisation, Essential Drugs Programme), No.32, 2003, pp. 4 -5.

Krishuna, A. Assessing Pharmaceutical Services at Primary Care Clinics in KwaZulu-Natal, an indicator-based approach. *Int J Pharm Pract* 1999;7:143-8

Service External to University

Board member of Health Action International - Africa

Teaching Involvement

Pharmacy practice to undergraduate students



PROFESSOR THOMAS RADES

BSc(Pharm)(Hamburg)PhD (Braunschweig)



Tel: +64(03) 479 5410

Email: thomas.rades@stonebow.otago.ac.nz

Position

Associate Dean, Research

Research Interests

- Formulation and drug delivery
- Physical characterisation of the solid and liquid crystalline state of matter
- Colloidal delivery systems for bioactives
- The solid state of drugs and dosage forms

Selected Refereed Journal Articles

Demana PH, Vosgerau U, Davies NM, Rades T, Pseudo ternary phase diagrams of aqueous systems of Quil A, cholesterol and phospholipid for immune stimulating complex (ISCOMs). *Int. J. Pharm.* 270: 229-239 (2004).

Liesebach J, Lim M, Rades T, Determination of the unfrozen matrix concentration of simple carbohydrate solutions and their mixtures using stepwise DSC. *Thermochimica Acta* 411: 43-51 (2004).

Strachan C, Lee C, Rades T, Partial characterisation of different mixtures of solids by measuring the optical nonlinear response. *J. Pharm. Sci.* 93: 733-742 (2004).

Sertsou G, Butler J, Hempenstall J, Rades T, Physical stability and enthalpy relaxation of drug-hydroxypropyl methylcellulose phthalate solvent change co-precipitates. *J. Pharm. Pharmacol.* 55: 35-41 (2003).

Service External to University

Vice President of the New Zealand Chapter of the Controlled Release Society, (2000-present)

Member of the Executive Committee of the Australasian Pharmaceutical Science Association (APSA) (2000-present)

Member of the Editorial Board of *Die Pharmazie*, (2003 – present)

Member of the Organizing Committee and Symposium organizer of the Annual Conference of the Australasian Pharmaceutical Science Association (APSA), Bondi Beach, 2003

Member of the OMRF Scientific Committee

Reviewer for international pharmaceutical science journals

Referee, Marsden and Shorland Medals, NZ Association of Scientists (2002)

Referee, Cancer Council Victoria Australia (2002)

Teaching Involvement

Pharmaceutics, pharmaceutical technology, formulation and drug delivery to undergraduate and postgraduate students

DR KATH RYAN

BPharm PhD (Otago) IBCLC MPS



Tel: +64 (03) 479 7325

Email: kath.ryan@stonebow.otago.ac.nz

Position

Senior Lecturer

Research Interest

- Social pharmacy
 - Consumer perspectives
 - Ethnomedicine and complementary/herbal medicine
 - Teaching sociology to undergraduate pharmacy students
- Health care ethics
 - The business professional interface
 - Pharmacogenetics and ethics
- Pharmacy practice
 - Geographic transfer of prescriptions
 - Communicating with patients
- Qualitative health research
 - Theoretical perspectives and methodologies

Selected Refereed Journal Articles

Ryan, K., Becket, G. and Norris, P. Who goes where and why? – The patronage of community pharmacies in New Zealand. *Australian Pharmacist* 21:1 46-51 (2002)

Ryan, K.M. and Grace V.M. Medicalisation and women's knowledge: the construction of understandings of infant feeding experiences in Post-WWII New Zealand. *Health Care for Women International* 22: 483-500 (2001)

Ryan, K. and Carryer J. The discursive construction of obesity. *New Zealand Women's Studies Journal* 16:32-48 (2000)

Service External to University

Reviewer, International Journal of Pharmacy Practice, Social Science and Medicine, Australian Pharmacist
Member Otago Polytechnic School of Midwifery Permanent External Advisory Committee (2000-present)
Member of Board of Consultants, La Leche League New Zealand (2000-present)

Teaching Involvement

Pharmacy practice, sociology, healthcare ethics and qualitative research methods to undergraduate and postgraduate students.

DR DOROTHY SAVILLE

BPharm (Hons) MSc PhD (Syd)



Tel: +64 (03) 479 7255

Email: dorothy.saville@stonebow.otago.ac.nz

Position

Senior Lecturer

Research Interests

- Solid state pharmaceuticals
- Formulation and drug delivery
- Pharmacokinetics and drug metabolism

Selected Refereed Journal Articles

Gardiner SJ, Kirkpatrick CMI, Begg EJ, Zhang M, Moore MP, Saville DJ Transfer of metformin into human milk. *Clinical Pharmacology & Therapeutics* 73, 71-77 (2003)

Saville, D.J. Influence of storage on in-vitro release of ibuprofen from sugar coated tablets. *International Journal of Pharmaceutics* 224: 39-49 (2001)

Ho PC, Saville DJ, Wanwimolruk S. Inhibition of human CYP3A4 activity by grapefruit flavonoids, furanocoumarins and related compounds. *Journal of Pharmacy and Pharmaceutical Sciences* Sep-Dec;4(3):217-27.(2001)

Agatonovic-Kustrin S, Rades T, Wu V, Saville D, Tucker IG, The qualitative and quantitative analysis of Ranitidine-HCl polymorphic mixtures by DRIFTS and XRPD. *J. Pharm. Biomed. Anal* 25 (5-6): 741 - 750 (2001)

Service External to University

Review of papers for publication *International Journal of Pharmaceutics* (1998-present)

Teaching Involvement

Pharmacokinetics and pharmaceuticals to undergraduate and postgraduate students.

DAVID SCHMIERER

BAppSci (Swinburne) MAACB CChem MRACI MRSC



Tel: +64 (03) 479 7289

Email: david.schmierer@stonebow.otago.ac.nz

Position

Senior Teaching Fellow

Research Interests

- Synthetic organic chemistry
- Antimicrobials
- Plant drug analysis
- Plant hormone analysis
- Bioactivity screening

Selected Refereed Journal Articles

Clarke, S.F., Guy, P.L., Jameson, P.E., Schmierer, D.M. and Burritt, D.J. Influence of White Clover Mosaic Potexvirus on Endogenous Levels of Jasmonic Acid and Related Compounds in *Phaseolus vulgaris* L. Seedlings, *Journal of Plant Physiology*, 156(4): 433-438 (2000)

Agatonovic-Kustrin, S., Tucker, I.G. and Schmierer, D.M. Solid state assay of ranitidine HCL as a bulk drug and as an active ingredient in tablets using DRIFT spectroscopy with artificial neural networks, *Pharmaceutical Research*, 16(9): 1479-1484 (1999)

Forster, A., Gordon, K., Schmierer, D., Soper, N., Wu, V. and Rades, T. Characterisation of two polymorphic forms of ranitidine-HCl, *Internet Journal of Vibrational Spectroscopy*, volume 2, edition 2, section 2 (1998)

Zheng, Y., Laverty, R. and Schmierer, D.M. Effects of aminorex and related compounds on brain monoamines and metabolites in CBA mice. *Journal of Pharmacy and Pharmacology* 49(1): 89-96 (1997)

Teaching Involvement

Pharmaceutical analysis and medicinal chemistry to undergraduate and postgraduate students.

JUNE TORDOFF

BPharm (Hons) MPharm (Brad) MRPharmS MPS

Tel: +64 (03) 474 0999 ex 8192
Email: june.tordoff@stonebow.otago.ac.nz

Position
Lecturer with 15% commitment at HealthCare Otago.

Research Interests

- Pharmacy/medicines health policy
- Quality use of medicines
- Pharmacoeconomics
- Access to medicines for adults and children
- Hospital pharmacy workforce issues
- Primary and secondary-care interface issues

Selected Refereed Journal Articles

Chui J, Tordoff J, Kennedy J, Reith D. Trends in accessibility to medicines for children in New Zealand: 1998-2002. *British Journal of Clinical Pharmacology* 2004; 57 (3): 322-327

Tordoff J, Norris P, Kennedy J, Reith D. Processes for the assessment and introduction of new medicines in New Zealand hospitals. *Journal of Pharmacy Practice and Research*. 2004; 24 (4): 267-271

Tordoff J M and Wright D. Analysis of the impact of Community Pharmacists providing formulary development advice to GPs. *Pharmaceutical Journal* 1999 (262); 166-168

Service External to University

Member of Best Practice Advocacy Centre (BPAC) Incorporated Society
Member of Otago District Health Board Medicines Review Group 2000-2002

Teaching involvement

Clinical pharmacy to undergraduate students



PROFESSOR IAN TUCKER

BPharm (Hons) PhD (Qld) MPS



Tel: +64 (03) 479 7296

Email: ian.tucker@stonebow.otago.ac.nz

Position

Professor (Pharmaceutical Sciences)

Dean

Research Interests

- Formulation and delivery of bioactives for human and veterinary applications
 - Controlled release technologies; delivery systems for vaccines; ocular drug delivery; oral delivery of peptides and proteins; polymeric matrix systems; particulate systems including microspheres and microcapsules, nanoparticles, microemulsions; stability of bioactive compounds
- Physicochemical principles underpinning design and behaviour of formulations and delivery systems
- Modelling, parameter estimation, research design and statistics

Selected Refereed Journal Articles

Sari, P., Razzak, M. and Tucker, I.G. Isotropic medium chain mono-diglyceride/oil/water formulations for solubilization of lipophilic and hydrophilic drugs. *International Journal of Pharmaceutics* 270, 287-296 (2004)

Krajacic, A., Tucker, I.G. Matrix formation in sustained release tablets: possible mechanism of dose dumping. *International Journal of Pharmaceutics* 251: 67-78 (2003)

Mukhopadhyay, D and Tucker, IG. Design and Evaluation of an early stage drug release apparatus. *International Journal of Pharmaceutics* 265: 47-54 (2003)

Wen, J-Y., Ledger, R., McLeod, B.J., Davies, N.M., Butt, A.G. and Tucker, I.G. Enzymatic degradation of Luteinizing Hormone Releasing Hormone (LHRH) by mucosal homogenates from the intestine of brushtail possum. *Life Sciences* 71 (25): 3019-3030 (2002)

Service External to University

Standing Committee on Therapeutic Trials (SCOTT) (1992-present)

Director, Otago Innovation Ltd (2002-present)

Editorial Board, *Journal of Microencapsulation* (1993-present), *International Journal of Pharmaceutics* (2001-present), *STP Pharma* (2001-present)

Reviewer for international journals.

Teaching Involvement

Pharmaceutics, formulation, drug delivery, modelling and parameter estimation to undergraduate and postgraduate students.

DR NICOLA TYERS*

BSc Hons, PhD MRPharmS MPSI MPS PGCertTertT



Tel: +64 (03) 479 7293

Email: nicola.tyers@stonebow.otago.ac.nz

Position

Lecturer

Research Interest

Angiogenesis in the areas of cancer therapy, wound healing and recurrent varicose veins. This research covers the areas of:

- Novel inhibitors in established models.
- Promoting angiogenesis in wound healing.
- Genetic manipulation and understanding the p53/angiogenesis switch.

Selected Refereed Journal Articles

Kennedy, J.M., Tyers, N.M. and Davey, A.K. The influence of morphine on the absorption of paracetamol from various formulations in subjects in the supine position, as assessed by TDx measurement of salivary paracetamol concentrations. *Journal of Pharmacy and Pharmacology* 55(10): pp1345-1350 (2003)

Tyers, N.M., Lloyd, A.W., James, S.L. and Gard, P.R. Abnormal metabolism of gamma-linolenic acid by human breast epithelial cells. *Journal of Pharmacy and Pharmacology* (Suppl. 4) 49: 1 (1997)

Tyers, N.M., Lloyd, A.W., James, S.L. and Gard, P.R. Differential metabolism of g-linolenic acid and the components of evening primrose oil by MCF7 human breast epithelial cells in vitro. *British Journal of Pharmacology* 120 :321(1997)

Tyers, N.M., Allen, M.C. and Gard, P.R. The effects of g-linolenic acid and evening primrose on electrophysiological parameters in NG108-15 cells and MCF-7 cells. *Pharmaceutical Sciences* 1: 487-489 (1995)

Service External to University

Committee Member of the Otago/Southland Branch of the Pharmaceutical Society (2003-present)

Committee Member and Secretary of the Otago Medical School Research Society (2002-present)

Member of the ethics committee for Zenith Technology Corporation Ltd. Dunedin (2003-Present)

Member of the Dunedin Vascular Research Group (1999-present)

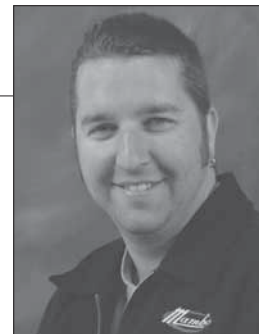
Teaching Involvement

Pharmacy practice and clinical pharmacy to undergraduate students.

* current address School of Pharmacy, University of Auckland

DR JOEL TYNDALL

BSc(Hons) (Monash), PhD (University of Queensland)



Tel: +64 (03) 479 7293

Email: joel.tyndall@stonebow.otago.ac.nz

Position

Lecturer

Research Interests

the investigation of interactions between drug like molecules and their target proteins

Selected Refereed Journal Articles

Nall TA, Chappell KJ, Stoermer MJ, Fang NX, Tyndall JD, Young PR, Fairlie DP. Enzymatic characterisation and homology model of a catalytically active recombinant West Nile virus NS3 protease. *J Biol Chem.* 279: 48535 – 48542 (2004)

Duterte S, Nicke A, Tyndall JD, Lewis RJ. Determination of alpha-conotoxin binding modes on neuronal nicotinic acetylcholine receptors. *J Mol Recognit.* 17(4):339-47 (2004)

March DR, Proctor LM, Stoermer MJ, Sbaglia R, Abbenante G, Reid RC, Woodruff TM, Wadi K, Paczkowski N, Tyndall JD, Taylor SM, Fairlie DP. Potent cyclic antagonists of the complement C5a receptor on human polymorphonuclear leukocytes. Relationships between structures and activity. *Mol Pharmacol.* 65(4):868-79 (2004)

Reid RC, Pattenden LK, Tyndall JD, Martin JL, Walsh T, Fairlie DP. Countering cooperative effects in protease inhibitors using constrained beta-strand-mimicking templates in focused combinatorial libraries. *J Med Chem.* 47(7):1641-51 (2004)

Teaching Involvement

Medicinal Chemistry

DAVID WOODS

BSc (Manch) MPharm (Otago) MPS



Tel: +64 (03) 479 5052
Email: david.woods@stonebow.otago.ac.nz

Position
Senior Teaching Fellow

Research Interests

- Web-assisted learning and continuing professional development
- International collaboration and coordination of drug information activities
- Stability and formulation of oral liquid preparations for paediatric use
- Teaching and learning methods
- Adverse drug reaction report

Selected Refereed Journal Articles

Woods, D.J. Formulation in Pharmacy Practice. 2nd Edition. *Pharminfotech* (CD-ROM) ISBN 0-473-07577-6 (2001)

Fawcett, J.P., Morgan, N.C. and Woods, D.J. Formulation and stability of naltrexone oral liquid for rapid withdrawal from methadone. *Ann Pharmacother* 31:1291-1295 (1997)

Woods, D.J. Extemporaneous Formulations - Problems and Solutions. *Paediatric and Perinatal Drug Therapy* 25-29 (1997)

Service External to University

Member, International Editorial Board, *Drugs and Therapy Perspectives* (2002-present)
Editorial Advisory Board, *International Journal of Pharmaceutical Compounding* (1997-present)
Editorial Board, *Journal of Paediatric Pharmacology and Therapeutics* (1997-present)
International Editorial Board, *Paediatric and Perinatal Drug Therapy* (1997-present)
Editorial Advisory Board, *Journal of Pharmacy Practice and Research* (1995-present)
Assistant Editor, *Drugdex CD-ROM* (Micromedex Inc) (1995-present)

Teaching Involvement

Medicines information and medicines management to undergraduate and postgraduate students.

TEACHING PROGRAMMES 2004

BACHELOR OF PHARMACY DEGREE (BPHARM) 2004

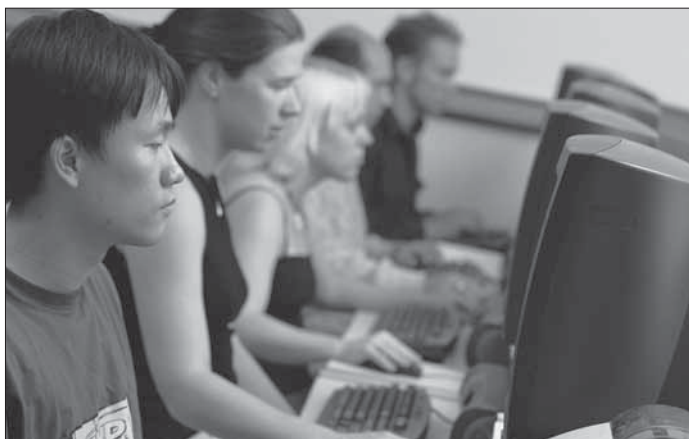
Associate Dean, Undergraduate Programmes
Dr Rosemary Beresford

First Year: Common Health Sciences Year
Pre-Qum Coordinator: Dorothy Saville
QUM Coordinator: David Schmierer

SCHEDULE

Level	Paper	Short Title	Points
First Year	BIOC111	Foundations of Biochemistry	6
	BIOL111	Biology of Cells	6
	BIOL115	Biology for Health Sciences	6
	CHEM112	Chemistry: Molecular Reactivity	6
	ENGL124	Effective Communication	6
	PHSL110	Introduction to Physics	6
	STAT115	Introduction to Biostatistics	6
Second Year	PHCY215	Physiology for Pharmacy Dr Chris Bolter (Department of Physiology)	10
	PHCY218	Introductory Microbiology (for BPharm) Dr Ralph Jack (Department of Microbiology)	5
	PHCY230	Biochemistry (for BPharm) Dr Alan Carne (Department of Biochemistry)	5
	PHCY254	Physical Pharmacy A Dr Thomas Rades	5
	PHCY255	Physical Pharmacy B Dr Thomas Rades	5
	PHCY256	Biopharmaceutical Chemistry A Mr David Schmierer	5
	PHCY257	Biopharmaceutical Chemistry B Dr Paul Fawcett	5
	PHCY261	Principles of Pharmacy Practice A Dr Rosemary Beresford	5
	PHCY262	Principles of Pharmacy Practice B Dr Pauline Norris	5
	Third Year	PHCY315	Human Disease Prof Robin Olds (Department of Pathology)
PHCY341		Foundations of Pharmacology for Pharmacy Dr Nerida Smith (Department of Pharmacology)	5
PHCY342		Drug Delivery Systems Dr Natalie Medicott	5
PHCY343		Drug Disposition and Pharmacokinetics Dr Dorothy Saville	5
PHCY344		Professional Pharmacy Practice A Dr Kath Ryan	5

	PHCY345	Quality Use of Medicines A Gastrointestinal Module Endocrine Module Cardiovascular Module Respiratory Module Infectious Diseases Module	Dr Gordon Becket Dr Paul Fawcett Mr David Schmierer Dr Rosemary Beresford Dr Sarah Hook	21
	PHCY346	Professional Pharmacy Practice B Dr Kath Ryan		4
Fourth Year	PHCY470	Elective Study Dr Kath Ryan		5
	PHCY471	Quality Use of Medicines B Musculoskeletal Disorders Reproduction Module Oncology Module Haematology Module	Dr Nataly Martini Dr Kath Ryan Dr Sarah Hook Mrs June Tordoff	19
	PHCY472	Professional Pharmacy Practice C Mrs Aarti Patel		7
	PHCY473	Quality Use of Medicines C Medicines Management Central Nervous System Disorders Dermatology Module Special Populations	Dr Rosemary Beresford Dr Dorothy Saville Prof Thomas Rades Ms Kathryn Bethune	19



POSTGRADUATE PROFESSIONAL PROGRAMMES

Associate Dean, Postgraduate Professional Programmes
 Dr Gordon Becket

Master of Clinical Pharmacy (MClinPharm)

The degree may be achieved by passing either PHCX506, or any two of HASC411, HASC412 and HASC413, passing PHCX512, and submitting a research dissertation (PHCX590).

PHCX506	Research Methods Dr Pauline Norris	10
PHCX512	Advanced Clinical Pharmacy	10
PHCX590	Dissertation Dr Gordon Becket	20
HASC412	Survey and Qualitative Methods Dr Robin Gauld (Department of Preventive & Social Medicine)	5
HASC413	Biostatistics Dr James Lewsey (Department of Preventive & Social Medicine)	5

Postgraduate Diploma in Clinical Pharmacy (PGDipClinPharm)

The diploma may be achieved by passing four of the six papers: PHCX521, PHCX522, PHCX523, PHCX524, PHCX541 and PHCX542.

PHCX521	Pharmaceutical Principles in Clinical Pharmacy	10
PHCX522	Applied Clinical Pharmacy 1 Ms Linda Bryant	10
PHCX523	Applied Clinical Pharmacy 2 Professor John Murphy	10
PHCX524	Pharmacoeconomics and Drug Evaluation Ms Alison Davies	10
PHCX541	Medicines Information Mr David Woods	10
PHCX542	Medicines Management Mr David Woods	10

Postgraduate Certificate in Pharmacy (PGCertPharm)

The programme shall consist of an approved paper or papers to the value of 20 points, which must be as specified in the Schedule of endorsed options if the certificate is to be endorsed in an area of specialisation.

Endorsed Option Medicines Management

PHCX541	Medicines Information Mr David Woods	10
PHCX542	Medicines Management Mr David Woods	10

Endorsed Option Herbal Medicine

PHCX543	Herbal Medicines: Principles Dr Rosemary Beresford	10
PHCX544	Herbal Medicines: Application Dr Rosemary Beresford	10

A non-endorsed option has been undertaken by at least 10 German graduate students per year who complete a 20 point research dissertation (PHCY590) for the award of PGCertPharm.

Coordinator
Professor Thomas Rades



RESEARCH-BASED DEGREE PROGRAMMES

Associate Dean, Research
Professor Thomas Rades

PhD

Master of Pharmacy

The degree may be awarded in any branch of Pharmacy.

The degree may be achieved by passing PHCY501-504, and submitting a thesis (PHCY5). In place of one of the papers PHCY501-504, candidates may take either PHCX506 or any two of HASC411, HASC412 and HASC413.

Postgraduate Diploma in Pharmacy

The degree may be awarded in any branch of Pharmacy.

The degree may be achieved by passing PHCY501-504. In place of one of the papers, candidates may take either PHCY506 or any two of HASC411, HASC412 and HASC413.

PHCY501	Elective Studies Dr Paul Fawcett	10
PHCY502	Elective Studies Dr Paul Fawcett	10
PHCY503	Elective Studies Dr Paul Fawcett	10
PHCY504	Elective Studies Dr Paul Fawcett	10
PHCY506	Research Methods Dr Pauline Norris	10
HASC411	Research Design and Evaluation Dr John Dockerty (Department of Preventive & Social Medicine)	5
HASC412	Survey and Qualitative Methods Dr Robin Gauld (Department of Preventive & Social Medicine)	5
HASC413	Biostatistics Dr James Lewsey (Department of Preventive & Social Medicine)	5

ENROLMENTS IN 2003/2004

UNDERGRADUATE

	2003	2004
Year 1	not applicable *	not applicable *
Year 2	131	118
Year 3	119	121
Year 4	117	111

* Selection into the BPharm programme occurs at the end of the first year.

POSTGRADUATE

	2003	2004
Postgraduate Certificate		
Medicines Management	20	22
Herbal Medicines	3	7
Research (German Student programme)	15	14
Postgraduate Diploma in Clinical Pharmacy	17	17
Master of Clinical Pharmacy	8	10
Postgraduate Diploma in Pharmacy	2	5
Master of Pharmacy	1	2
PhD	20	14



GRADUATES IN 2003/2004

BACHELOR OF PHARMACY (BPHARM) 117 - 2003
111 - 2004

DOCTOR OF PHILOSOPHY (PHD)

Melissa Copland
Sarunyoo Songkro
Mei Zhang
Patrick Demana
Aleksandra Dumicic
James Patterson

MASTER OF PHARMACY (MPHARM)

Spomenka Milak
Fang Tian

POSTGRADUATE DIPLOMA IN PHARMACY (PGDIPPHARM)

Leikha Venkata
Yang Lin
Norman Chieng (credit)
Nitin Joshi
Vishal Trivedi
Yun Ju

POSTGRADUATE CERTIFICATE IN PHARMACY (RESEARCH)

Brill Lena
Born Silke
Bunjes Vanessa
Campe Sarah
Funke Silvia
Graf Anja
Hartmann Knut
Juse Ulrike
Maisel Peter
Micklinghoff Julia
Myschik Julia

MASTER OF CLINICAL PHARMACY (MCLINPHARM)

Marilyn Crawley
Marilyn Tucker
Carolyn Woolerton
Rachael Cooke

POSTGRADUATE DIPLOMA IN CLINICAL PHARMACY (PGDIPCLINPHARM)

Asa Jenny Carlsson
Kamal Deo
Kathleen Downey
Jotishna Gounder
Nicole Manley
David Ryan
Mary Stephen
Robert Buckham (distinction)
Lorraine Welman (distinction)
Muniamma Gounder
Alison Johnston (credit)
Radhika Somasundaram
Joanna Williams

POSTGRADUATE CERTIFICATE IN PHARMACY (PGCERTPHARM)

Caroline Austin (endorsed in Medicines Management)
Dianna Hurne (endorsed in Medicines Management)
Gene Pateman (endorsed in Medicines Management)
Rakhee Raghunandan (endorsed in Medicines Management)
Diane Redding (endorsed in Medicines Management)
Amy Webster (endorsed in Medicines Management)
Lorraine Welman (endorsed in Medicines Management)
Deborah Wilkie (endorsed in Medicines Management)
Nerida Smith (endorsed in Herbal Medicines)
Salina Tsui (endorsed in Herbal Medicines)
Yek Kek Twu (endorsed in Herbal Medicines)
Wendy Garland (endorsed in Herbal Medicines)
Cynthia Lee (endorsed in Herbal Medicines)
Sarita Von Afehl (endorsed in Herbal Medicines)
Jane Abel (endorsed in Medicines Management)
Vivienne Bath (endorsed in Medicines Management)
Fiona Corbin (endorsed in Medicines Management)
Anna Cunliffe (endorsed in Medicines Management)
Christine Jorgensen (endorsed in Medicines Management)
Perna Sehgal (endorsed in Medicines Management)
Joseph Van Loggerenberg (endorsed in Medicines Management)
Patricia Vorstemans (endorsed in Medicines Management)
Jane Webb (endorsed in Medicines Management)
Vicky Wilson (endorsed in Medicines Management)

RESEARCH IN THE SCHOOL OF PHARMACY

The research performance in New Zealand's National School of Pharmacy University of Otago® in 2003/2004 has been very good with 48 publications in international peer reviewed journals and 100 conference contributions to national and international conferences. Five PhD students have successfully graduated in 2003/2004. These very encouraging results have been achieved because members of our staff have attracted almost on million dollars in research funding from a long list of funding bodies.

The School of Pharmacy has demonstrated over the last two years that it remains New Zealand's foremost pharmaceutical research institution. In the last PBRF round, it became obvious that the New Zealand National School of Pharmacy is the only pharmaceutical research institution in the country, having "A-rated" staff members.

Even more encouraging is that the research outputs have engaged in research in many areas of pharmacy and we can look confident into the future, especially having made several key appointments:

- Dr Pauline Norris has been appointed "leader of the Pharmacy Practice Group"
- Dr Joel Tyndall has been appointed to strengthen the medicinal chemistry group
- Dr Momir Mikov has been appointed to strengthen the pharmacokinetic and metabolism research in the School
- Dr Sarah Hook has already made most valuable contributions to our colloidal drug delivery research.

The School continues to be attractive to overseas PhD student candidates and in the future we will see a strong increase in their numbers.

With the main work in changing the pharmacy curriculum to a modern problem based course on a solid knowledge base having been completed, staff can now more than ever concentrate on their research. The School of Pharmacy has put many encouraging mechanisms in place to foster research, including:

- PhD student stipends
- School of Pharmacy start up grants
- School of Pharmacy research grants
- School of Pharmacy conference leave grants

We are predicting a further significant increase in the research outputs of the academic staff members of the School in the future.

Professor Thomas Rades
Associate Dean, Research

RESEARCH STATISTICS

Publications	2002	2003	2004
Book Chapters	0	0	0
Refereed Articles	29	16	32
Major Reviews	5	0	0
Non-refereed Articles	5	15	4
Conference Publications			
– Full Refereed	10	14	20
– Extract of Papers	28	29	37
Research Funding	2002	2003	2004
Total (approximately)	\$524,142	\$312,462	\$647,796
Postgraduate Degrees	2002	2003	2004
Doctor of Philosophy	2	3	3
Master of Pharmacy	1	1	1
Master of Clinical Pharmacy	6	3	1
Postgraduate Certificate in Pharmacy	15	19	16
Postgraduate Diploma in Pharmacy	5	1	5
Postgraduate Diploma in Clinical Pharmacy	4	7	6

POSTGRADUATE RESEARCH STUDENTS

Student	Supervisors	Topic
PHD		
Braund Rhiannon	Dr Natalie Medicott Professor Ian Tucker	Angiogenic factors and wound healing
Demana Patrick	Dr Thomas Rades Dr Sarah Hook Dr Nigel Davies	ISCOMs and related colloidal particles prepared by the Lipid Film Hydration Method for antigen delivery
Dumicic Aleksandra	Prof Ian Tucker Dr Zahir Khan	Mechanisms of polymer matrix formation in sustained release tablets
Krauel Karen	Dr Thomas Rades Dr Sarah Hook Dr Nigel Davies	Formulation, characterisation & stabilisation of nanocapsule from biocompatible microemulsions
Kunac Desiree	Dr Julia Kennedy Dr Barry Taylor Dr David Reith	Quality use of medicines in neonates
Lendemans Dirk	Dr Sarah Hook Dr Thomas Rades	Novel immunostimulating complex formulations as vaccines
Li Yan	Prof Ian Tucker Dr Paul Fawcett Dr Hu Zhang	Pre-clinic assessment of oral absorption of MitoQ10 and its analogues in the human intestinal Caco-2 cell monolayer and in rat
McDowell Arlene	Prof Ian Tucker Dr Nigel Davies Dr Bernie McLeod	Oral delivery of bioactives to brushtail possums
Mukhopadhyay Debashis	Prof Ian Tucker Dr Dorothy Saville	Taste masking of pharmaceutical (technology and evaluation)
Numata Mihoko	Dr Paul Fawcett Dr Dorothy Saville	Environmental pollution and cytochrome P450 and activity in wild birds
Patterson James	Dr Thomas Rades Dr James Butler Dr John Hempenstall	The influence of different preparative techniques on the formation of glass solutions
Sari Peyami	Prof Ian Tucker Dr Majid Razzak	Microemulsion systems for use in the formulation of subcutaneous injections
Strachan Clare	Dr Thomas Rades Prof Keith Gordon	Physicochemical characterisation of solid drug delivery systems containing drugs with polymorphism in the amorphous state

Tordoff June	Dr Julia Kennedy Dr David Reith	Impact of a National Hospital Pharmaceutical Strategy on access to medicines, and use of medicines in New Zealand Hospitals
White Karen	Dr Sarah Hook Dr Thomas Rades	Surface modified liposomes as adjuvants
Wu Zimei	Dr Natalie Medicott Prof Ian Tucker	Formulation approaches to minimise injection site reactions
Zeitler Axel	Prof Thomas Rades Assoc Prof Keith Gordon	Investigation of Terahertz spectroscopy - use in pharmaceutical systems
MPHARM		
Tian Fang	Dr Dorothy Saville Professor Thomas Rades	Application of Raman spectroscopy on suspension
Milak Spomenka	Prof Ian Tucker	Solid lipid microparticles for taste-masking prepared by Micromixer
MCLINPHARM		
Cooke Rachael	Dr Gordon Becket	Medication histories and the identification of adverse drug event-related hospital admissions
Nand Sanjoy	Dr Nicola Tyers Dr Natalie Medicott	Characterisation of two <i>in vitro</i> angiogenesis models
PGCERTPHARM (RESEARCH PROJECT)		
Brill Lena	Dr Nataly Martini	As assessment of pharmacists' and health shop assistants' knowledge of complementary and alternative medicines (CAM) and the usage in and around Dunedin
Born Silke	Prof Thomas Rades Dr Sarah Hook	Immunological effects of incorporated Quil A in FITC-OVA-loaded nanocapsules
Bunjes Vanessa	Prof Thomas Rades	Factor influencing the formation of nanoparticles - A factorial study
Campe Sarah	Dr Sarah Hook	Role of pharmacists in community based immunisation schemes
Funke Silvia	Dr Pauline Norris	Antibiotic dispensing in New Zealand
Graf Anja	Prof Thomas Rades	Characterisation of water-free microemulsions

Hartmann Knut	Prof Thomas Rades Dr Sarah Hook	Development of a method for the preparation of immune stimulating complexes (ISCOMs) utilizing synthetic saponin derivatives
Juse Ulrike	Prof Thomas Rades Arlene McDowell	In vitro stability of insulin-loaded poly (ethyl 2 cyanoacrylate) nanoparticles in the presence of enzyme solutions from the common brushtail possum
Maisel Peter	Prof Thomas Rades	The influence of different polymers on the solubility of four BCS Class 2 compounds and the effects of different preparative techniques on their dissolution behaviour
Micklinghoff Julia	Kathryn Bethune	Development of a web-based resource for people with cardiovascular disease
Myschik Julia	Prof Thomas Rades	Formulation of ISCOMs (immunostimulating complexes) by ethanol injection



QUALITY RESEARCH AND BEAUTY ATTRACT GERMANS TO OTAGO

The ability to undertake high quality research at the Dunedin School of Pharmacy is proving a strong drawcard for German pharmacy students.

Since 2001 the School has offered a Postgraduate Certificate in Pharmacy which consists of a six-month research project in a particular area of the pharmaceutical sciences.

The programme is open to all pharmacy graduates but is proving to be particularly interesting for German pharmacy students as they are able to enrol in the course as part of their internship. The programme also takes advantage of the government to government agreement between New Zealand and Germany which allows students to pay domestic fees for postgraduate study in the partner country.

Dr Thomas Rades, the senior lecturer at the school who helped launch the certificate course, is originally from Germany. About 40 students have taken part in the certificate thus far.

One of the students, Karen Krauel, says she was attracted to New Zealand because of the beauty of the country and the opportunity to undertake high-quality research. Now having completed her PGCert, Ms Krauel along with fellow German student Dirk Lendemans have started their PhD studies at the school.

“In Germany you would meet your supervisor every two to three months, [at Otago] we can meet them every two to three weeks or knock on their door if we need any help”.

An exchange programme has also been set up between the school and the Technical University of Braunschweig. This allows NZ pharmacy graduates to undertake a six-month research project to earn the PGCert. It also satisfies the requirements for direct entry to the PhD programmes at both Otago and Braunschweig.



Some of the current German postgraduate students.

SUMMER STUDENTSHIPS

When the School phased out its Honours programme several years ago, we implemented a summer research studentship programme to ensure interested undergraduates had opportunity for a research experience. Each year staff offer 10-week research projects for up to 10 students, depending upon the funding available. The School has been grateful for support for this programme from a range of funders as shown below.

Students from the 2nd and 3rd year of the undergraduate pharmacy programme apply for the studentships on offer and selection is based upon academic performance and research preferences. In 2003 and 2004 students undertook summer research projects. Importantly, the University PhD Committee recognises two coherent summer studentships together with a strong undergraduate academic record, for entry into the PhD programme at Otago.

2003

Student	Supervisor	Funded By	Project Name
Abdul Muhsin, Noora	June Tordoff	New Zealand Pharmacy Education Research Foundation	Audit of discharge information supplied to GPs for patients initiated on proton pump inhibitors in hospital
Anderson, Renee	Pauline Norris	School of Pharmacy	Web page evaluation
Boustead, Andrea	Natalie Medlicott	Formulation and Drug Delivery	Lecithin and Protein interactions in formulations
Coulter, Carolyn	Desiree Kunac	Douglas Pharmaceuticals Ltd	Evaluation of neonatal medications for safe naming, labelling and packaging, and storage for the prevention of medication errors
De Silva, Sulakshi	Gordon Becket Kath Ryan	Pharmacy Guild of New Zealand (Inc)	Pre-testing of pictograms used in medicines dispensed in Missions of Humanitarian Relief
Gordon, Sarah	Sarah Hook	Formulation and Drug Delivery	Investigation of immunostimulatory capacity of novel colloidal vaccine formulations
Grieve, Joanne	June Tordoff Pauline Norris	New Zealand Pharmacy Education Research Foundation	Effects of US legislation on children's access to medicines in other countries
Ho, Louise	Thomas Rades	Formulation and Drug Delivery	Quantification of drugs by DRIFTS, Raman and Chemometrics

Lim, Hok	Rosemary Beresford	Fred Fastier Scholarship	Recreational use of Herbal based products in New Zealand
Lin, Yang	Ian Tucker	Formulation and Drug Delivery	Cyclodextrin MitoQ complexation statins
Lord, Louise	Kathryn Bethune	New Zealand Pharmacy Education Research Foundation	The teaching of aseptic dispensing in the United Kingdom, United States of America, Australia and New Zealand
Lu, Emily	Natalie Medlicott	Formulation and Drug Delivery	Protein-Polyethylene glycol systems
Payne, Keith	Thomas Rades	Formulation and Drug Delivery	Characterisation of the non-linear optical response of ranitidine polymorphs using scattered second harmonic radiation

2004

Student	Supervisor	Funded By	Project Name
Komathi Balakrishnan	June Tordoff Pauline Norris	New Zealand Pharmacy Education Research Foundation	Changes in availability of medicines for children in the United Kingdom 1998 to 30 June 2002
Scott Brydon	Joel Tyndall Nigel Perry	Formulation and Drug Delivery	Molecular modelling and structure-activity relationship studies on a set of anti-inflammatory compounds produced by TerraMarine Pharmaceuticals
Hsin-Ning Chau	Thomas Rades	Formulation and Drug Delivery	The use of modulated DSC to investigate amorphous forms of drugs
Amy Dunn	Alex McLellan Frank Aldwell	Formulation and Drug Delivery	Leukocyte infiltration and structural changes in the draining lymph node following successful oral vaccination
Annette Hy	Dorothy Saville	Formulation and Drug Delivery	Factors influencing the in vitro release of carbamazepine (CBZ) from tablets: focus on storage history and solid state characteristics

Toonyawit Fly Ing-Aram	Kath Ryan	New Zealand Pharmacy Education Research Foundation	Personal Genetic Testing Kits in NZ: What is the role of community pharmacy
Ying (Cherry) Jin	Dorothy Saville Thomas Rades	Formulation and Drug Delivery	Conversion of ranitidine hydrochloride polymorphs via ball-milling
Lorealle Lam	Kath Ryan	New Zealand Pharmacy Education Research Foundation	Personal Genetic Testing Kits in NZ: What is the role of community pharmacy
Hong Anh Nguyen	Pauline Norris	Health Research Council	Antibiotic use in Samoa
Radhika Sandilya	Joel Tyndall	Fred Fastier Scholarship	Molecular modelling and structure David Clark activity relationship (SAR) of drugs with associated myopathy
Meghna Talekar	Thomas Rades	Formulation and Drug Delivery	The use of milling to prepare amorphous forms of drugs
Chee Peng Tong	Sarah Hook	Immunet Research Theme	Incorporation of Streptococcal superantigens (SAg) into liposomes as a novel vaccine delivery



Dr Pauline Norris and Ms Renee Anderson

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Ryan, K, and Bissell, P. What is pharmacy practice? What is social pharmacy? What is the difference between the two? Paper read at *13th International Social Pharmacy Workshop, “Exploring Theoretical and Cultural Perspectives”*, at Malta. (2004).

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- Tordoff J. Quality use of medicines in New Zealand Hospitals *Proceedings of the New Zealand Health Care Pharmacists Association Annual Conference*, Auckland, NZHPA (2003):49. (Plenary session)
- Tordoff J, Norris P, Kennedy J, Reith D. Processes for the assessment of new medicines in New Zealand hospitals. *Proceedings of the Australian Society of Clinical and Experimental Pharmacology*, Sydney (2003) 16.
- Tordoff J, Norris P, Reith D. Impact of the first year of "Price Management" for hospital pharmaceuticals in New Zealand. *Proceedings of the New Zealand Health Care Pharmacists Association Annual Conference*, New Plymouth, NZHPA (2004):51
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- White KL, Gordon S, Rades T, Hook S. Immunogenicity of lipid core peptide and Quil A containing liposomes, *Abstracts of the 8th International Conference on Human Leukocyte Differentiation Antigens (HLDA) and the 34th Annual Scientific Meeting of the Australasian Society for Immunology (ASI)*, Adelaide, Australia, (2004) 123.
- White K, Toth I, Kearns P, Rades T, Hook S. A Formulation Approach to Improving Vaccine Immunogenicity. *Oral and poster presentation at Keystone Symposium 'Rational Design of Vaccines and Immunotherapeutics'*, Keystone, USA, 2004.
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2003 / 2004 GRANTS

RESEARCH GRANTS

Thomas Rades

- 2003 Foundation for Research, Science and Technology NERF-Grant, Carbohydrate nanotechnology. \$1.19 Mio. *p.a.* for five years (2003-2007). TR is *Objective Leader* of Objective 2 "ISCOMs" (\$ 399.000 *p.a.* for five years) of this research theme.
- 2003 Bayer, Leverkusen, Germany (industrial grant), Physico-chemical investigations on a suspension formulation. Euro 15,000 (approx. \$30,000)
- 2003 F. Hoffmann-La Roche, Basel, Switzerland (industrial grant), Physico-chemical investigations on solids. SFr 100,000 (approx. \$130,000)
- 2003 NZPERF Grant, Formulation of colloidal carriers for proteins using methods that could be used in a hospital pharmacy, \$9,300
- 2003 Committee for the Advancement of Learning and Teaching, Computer-aided learning package for principal components analysis, \$7,971
- 2004 Easy Life Management Pty Ltd, Development and characterisation of oral formulations containing lauric acid. \$50,000.
- 2004 The Laurenson Award, Immunostimulatory lipid implants for the delivery of cancer vaccines. \$10,048.
- 2004 Otago Research Grant, Using second harmonic generation to quantify polymorphism and crystallinity of pharmaceuticals,
- 2004 School of Pharmacy Research Grant, Preparation of modified nanoparticulate systems as vaccine delivery system
- 2004 NZPERF Grant, New methods to analyse solid drugs & dosage forms, \$8,000.
- 2004 University of Adelaide Faculty of Health Sciences Research Development Award, Effects of the fatty acid, lauric acid, on energy intake and gastrointestinal motor and hormonal function. \$Aus 9,000 (approx. \$10,000).
- 2004 Royal Adelaide Hospital Research Committee Project Grant, Preliminary studies to evaluate the satiating potency of the free fatty acid, lauric acid, in healthy subjects. \$Aus 18,000 (approx. \$20,250).

Sarah Hook

- 2003 NZPERF, Formulation of colloidal carriers for proteins using methods that could be used in a hospital pharmacy. \$9 000, July 2003 – July 2004
- 2003 NZPERF, Using CpG modified cationic immune stimulating complexes (ISCs) to deliver peptide vaccines to dendritic cells. \$6 391, July 2003 – July 2004
- 2004 Laurenson Award, Immunostimulatory lipid implants for the delivery of cancer vaccines. \$10, 048, January 2005-December 2005

- 2004 University of Otago Research Grant, Superantigen modified particulate vaccine delivery systems. \$17,798, January 2005-December 2005
- 2004 Cancer Society, A formulation approach to improving the immune stimulating capacity of peptide cancer vaccines. \$215,995, July 2004 – July 2007

Ian Tucker

- 2003 - 2004 Antipodean Biotechnologies Ltd – Tech NZ Grant: Development of Mitoquinone as a treatment for Friedreich's Ataxia and Huntington's Disease. \$Confidential, (Joint PI).
- 2003 - 2004 AgResearch – funding for a postdoc for drug delivery research and development.
- 2003 - 2004 NIWA subcontract for preclinical assessment on new chemical entities \$30,000pa
- 2003 - 2004 AgResearch subcontract for formulation of a protein product \$80,000 p.a.

Gordon Becket

- 2003 Canadian Army (DART), Evaluation of pictograms. \$10,000. 1.3.02-31.12.03, G.Becket & K. Ryan.
- 2004 Canadian Army (DART), Evaluation of pictograms. \$5,000. G.Becket & K. Ryan.
- 2004 School of Pharmacy Grant. Percutaneous delivery of drugs using liposome technology. \$18,500.

Paul Fawcett

- 2004 Stirling Products Ltd, Perth, Australia; Dose ranging study of R-salbutamol as a repartitioning agent in Ross broiler chickens
- 2004 School of Pharmacy Research Grant; The metabolism of 3,7 -dihydroxy-12-oxo-5 -cholanate in diabetic rats, \$20,000, 1.1.05-1.7.05, Dr M. Mikov
- 2004 National Heart Foundation Small Project Grant; Effect of CYP2D6 genotype on final tolerated dose, plasma concentrations and outcomes with carvedilol in patients with systolic heart failure, Sharon Gardiner (Christchurch)
- 2004 New Zealand Pharmacy Education and Research Foundation; Cytochrome P4502D6 metaboliser status and its effect on final tolerated dose of metoprolol in patients with heart failure, Caroline Sharp (Christchurch)

Key

- NZPERF - New Zealand Pharmacy Education and Research Foundation
 LHRG - Lottery Health Research Grant
 UORG - University of Otago Research Grant
 GOT - Genesis Oncology Trust
 OMRF - Otago Medical Research Foundation
 NERF - New Economic Research Fund

CONFERENCE LEAVE

The School is pleased to be able to support staff and postgraduate students to attend national and international conferences. This is essential to ensure that the academic staff are abreast of developments in their field, to allow them to network with potential international collaborators and to provide opportunity to present research data where it can be peer-reviewed and critically assessed.

PhD students are given a grant-in-aid to attend a local (Australasian) conference in the second year of their PhD and a second grant-in-aid to attend an international conference to present their PhD research in the final year of their programme.

CONFERENCES ATTENDED BY STAFF AND POSTGRADUATE STUDENTS IN 2003

Staff	Conference Name	Date	Destination
R. Beresford	Wellcome History	19-21 June	London
T. Rades	Controlled Release Society	19-23 July	Glasgow
K. Ryan	HSR and PPC	14-15 April	Belfast
G. Becket	British Pharmacy Conference and Gordon Conference	Aug/Sept	Dublin / USA
S. Hook	Modern Vaccine Asj and Delivery Systems	4-6 June	Dublin
S. Hook	Australasian Society for Immunology	8-11 Dec	Perth
G. Becket	New Zealand Pharmacy Conference	9-11 May	Christchurch
P. Napier	New Zealand Pharmacy Conference	9-11 May	Christchurch
P. Norris	New Zealand Pharmacy Conference	9-11 May	Christchurch
R. Beresford	New Zealand Pharmacy Conference	9-11 May	Christchurch
N. Medicott	Controlled Release Society	19-23 July	Glasgow
J. Patterson	American Association Pharmaceutical Scientists	26-30 Oct	Salt Lake City
J. Tordoff	New Zealand Healthcare Pharmacists Association	8-10 Aug	Auckland
P. Norris	PHA	2-4 July	Ngaruawahia
R. Ledger	Controlled Release Society	19-23 July	Glasgow
D. Woods	CPA	8-21 Aug	Jamaica
D. Woods	New Zealand Healthcare Pharmacists Association	8-10 Aug	Auckland
K. Bethune	New Zealand Healthcare Pharmacists Association	8-10 Aug	Auckland
K. Bethune	ASHPMM	7-11 Dec	New Orleans
D. Kunac	Paediatric Society	26-29 Aug	Queenstown
D. Kunac	SHPA	13-16 Nov	Canberra
C. Strachan	Advanced Vibrational Spec	26-29 Aug	Nottingham
J. Patterson	Australasian Pharmaceutical Science Association	2-5 Dec	Sydney

I. Tucker	Australasian Pharmaceutical Science Association And Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists	1-5 Dec	Sydney
J. Tordoff	Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists	30 Nov – 3 Dec	Sydney
P. Norris	Australasian Pharmaceutical Science Association	2-5 Dec	Sydney
T. Rades	Australasian Pharmaceutical Science Association	2-5 Dec	Sydney
A. Dumicic	Australasian Pharmaceutical Science Association	2-5 Dec	Sydney
D. Mukhopadyay	Australasian Pharmaceutical Science Association	2-5 Dec	Sydney
C. Strachan	Australasian Pharmaceutical Science Association	2-5 Dec	Sydney
P. Demana	Australasian Pharmaceutical Science Association	2-5 Dec	Sydney
A. Patel	Strategy for Enhancing Access to Medicines	10-12 Dec	Dar es Salaam
M. Numata	International Wildlife Management Conference And Society of Environmental Toxicology and Chemistry	Oct & Dec	Christchurch

CONFERENCES ATTENDED BY STAFF AND POSTGRADUATE STUDENTS IN 2004

Staff	Conference Name	Date	Destination
S. Hook	Rational Design of Vaccines	6-11 Jan	Colorado
J. Patterson	Pharmaceutics, Biopharmaceutics and Pharmacy Technology	15-18 Mar	Nuremberg
C. Strachan	Pharmaceutics, Biopharmaceutics and Pharmacy Technology	15-18 Mar	Nuremberg
G. Becket	Perspectives in Percutaneous Penetration	13-17 Apr	La Grand Motte
G. Becket	ESCP-ACCP International Congress on Clinical Pharmacy	28-30 Apr	Paris
T. Rades	Pharmaceutics, Biopharmaceutics and Pharmacy Technology	15-18 Mar	Nuremberg
K. Ryan	International Society of Pharmacy workshop and National Medical Symposium	19-30 Jul	Malta & Brisbane
R. Beresford	Monash Pharmacy Practice Symposium		Melbourne
K. White	Controlled Release Society	12-16 Jun	Hawaii
A. McDowell	Controlled Release Society	12-16 Jun	Hawaii
K. Krauel	Controlled Release Society	12-16 Jun	Hawaii
A. Dumicic	Controlled Release Society	12-16 Jun	Hawaii
C. Strachan	Controlled Release Society	12-16 Jun	Hawaii
P. Norris	International Society of Pharmacy workshop and National Medical Symposium	19-30 Jul	Malta & Brisbane

H. Zhang	Pharmaceutical Science WC and Global Pharmaceutical Education Network	26 May – 6 Jun	Japan
K. Bethune	Federation International Pharmaceutique	4-9 Sept	New Orleans
C. Strachan	Globalisation of Pharmaceutic Education Networks	26-28 May	Kyoto
I. Tucker	New Zealand Pharmacy Conference	15-18 Apr	Palmerston North
I. Tucker	Pharmaceutical Science WC	29 May – 3 Jun	Kyoto
I. Tucker	Globalisation of Pharmaceutic Education Networks	26-28 May	Kyoto
P. Napier	New Zealand Pharmacy Conference	15-18 Apr	Palmerston North
D. Mukhopadyay	Globalisation of Pharmaceutic Education Networks	26-28 May	Kyoto
J. Tordoff	National Medical Symposium	28-30 Jul	Brisbane
R. Beresford	Inaugural Asian Association of School of Pharmacy Conference	4-7 Jun	Beijing
M. Mikov	6th Xenobiotic Meeting and Toxicology workshop	16-18 Jun	Bosnia
M. Mikov	8th World Congress on Clinical Pharmacy And Therapeutics	2-6 Aug	Brisbane
P. Norris	Ind Consumer Health Information Conference	20-21 May	Christchurch
T. Rades	Controlled Release Society	12-16 Jun	Hawaii
T. Rades	Ian Wark Research Institute Conference	23-27 May	Barossa Valley
K. Ryan	Ind Consumer Health Information Conference	20-21 May	Christchurch
A. Patel	Health Action International Africa	1-3 July	Nairobi
J. Tordoff	New Zealand Healthcare Pharmacists Association	10-12 Sept	New Plymouth
P. Fawcett	American Association of Pharmaceutical Scientists	7-11 Nov	Baltimore
N. Medicott	American Association of Pharmaceutical Scientists	7-11 Nov	Baltimore
Z. Wu	American Association of Pharmaceutical Scientists	7-11 Nov	Baltimore
D. Mukhopadyay	American Association of Pharmaceutical Scientists	7-11 Nov	Baltimore
A. McDowell	Australasian Pharmaceutical Science Association	4-7 Dec	Melbourne
R. Braund	Australasian Pharmaceutical Science Association	4-7 Dec	Melbourne
N. Medicott	Australasian Pharmaceutical Science Association	4-7 Dec	Melbourne
H. Zhang	Australasian Pharmaceutical Science Association	4-7 Dec	Melbourne
D. Saville	Australasian Pharmaceutical Science Association	4-7 Dec	Melbourne
Y. Li	Australasian Pharmaceutical Science Association	4-7 Dec	Melbourne
P. Fawcett	Australasian Pharmaceutical Science Association	4-7 Dec	Melbourne
D. Lendemans	Australasian Pharmaceutical Science Association and Australasian Society for Immunology	4-16 Dec	Melbourne

K. White	Australasian Pharmaceutical Science Association and Australasian Society for Immunology	4-16 Dec	Melbourne
S. Hook	Australasian Pharmaceutical Science Association and Australasian Society for Immunology	4-16 Dec	Melbourne
T. Rades	Australasian Pharmaceutical Science Association and Australasian Society for Immunology	4-16 Dec	Melbourne
T. Rades	International Conference on Raman Spectroscopy	9-13 Aug	Brisbane
D. Woods	Caribbean Association of Pharmacists	15-22 Aug	Belize

SCHOOL OF PHARMACY SEMINAR PROGRAMME

2003

20 February

Dr Susan Jick, Co-Director of the Boston Collaborative Drug Surveillance Program *Oral Contraceptive Usage, Pregnancies and Pregnancy Terminations Following the October 1995 Warning about Third Generation Oral Contraceptives*

27 February

Arlene McDowell (PhD student, School of Pharmacy) *Oral delivery of bioactives to the common brushtail possum*

6 March

Summer student reports:

Sarah Gordon: *Lipopeptide cancer vaccines*

John Thrupp: *FTIR to study interactions between phospholipids and macromolecules*

Renee Anderson: *Maori people's experiences of medicines and pharmacy*

Louise Lord: *Investigation of lipid materials as the basis of a delivery system for factors affecting angiogenesis*

13 March

Chris Bloore, Dairy Industry systems consultant *Delivering the goods: preparing drugs for delivery*

20 March

Len Stevenson, School of Pharmacy, *Transitional Facility Training*

27 March

Summer student reports:

Sulakshi de Silva: *Pretesting of pictograms used in medicines dispensed in missions of humanitarian relief*

Toni Campbell: *Patient information leaflets - what do people understand and remember from them?*

Andrea Boustead: *Lay perspectives on universal electronic medical records*

3 April

Maureen Brown, School of Pharmacy, *Non-viral Gene Delivery*

14 April

Alison Jones, Consultant Physician and Clinical Toxicologist, National Poisons Information Service, Guy's and St Thomas' Hospital, London *What's new in paracetamol poisoning,*

1 May

Prof. Rainer Mueller, School of Pharmacy, Free University Berlin *Nanocrystals of poorly soluble drugs - from the academic idea to industrial realisation.*

6 May

Dr Ian Smith, University of Otago *PBRF*

15 May

Prof Thomas Rades, School of Pharmacy *Degree of crystallinity and nature of the amorphous phase induced by co-milling of drug-excipient mixtures*

19 May

Jane Vella Brincat, Clinical Pharmacist Nurse Maude Hospice, Christchurch Palliative Care: *the role of the pharmacist*

22 May

Prof Thomas Rades, School of Pharmacy *Liquid Crystalline Drugs*

27 May

Dr Rod Ellis Pegler, Infections Disease Physician, Auckland Hospital, Associate Professor, Division of Molecular Medicine, Faculty of Medical and Health Sciences, University of Auckland, *Medicines for HIV infection*

5 June

Jan Leunisson, *Wee bits of Gold and Bytes of Silver - Perspectives in ImmunoCytoChemistry*

26 June

Paul Fawcett, School of Pharmacy *Report on 8th European ISSX Conference*

17 July

Dr Nigel Perry, Crop & Food Research, University of Otago, *"Medicines from Manuka"*
(joint seminar with Department of Pharmacology)

24 July

Professor John Murphy, College of Pharmacy, University of Arizona, (William Evans Visiting Fellow, School of Pharmacy), *'Presentation Skills: Don't let this happen to you!'*

7 August

Dr Sally McCormick, Biochemistry Department University of Otago, *"Peptide inhibitors of Lp(a) assembly"*,
(joint seminar with Department of Pharmacology)

14 August

Kazuki Takamine, School of Pharmacy CAL Person, *Blackboard Overview and Blackboard Basic Operations I*

21 August

Professor John Murphy, College of Pharmacy, University of Arizona, (William Evans Visiting Fellow, School of Pharmacy), *'Medication Errors'*

5 September

Dr Rob Ledger, School of Pharmacy *"Who put the E in antibiotics?"*

11 Sept

Chris Heath, HEDC

25 Sept

Kathryn Bethune, School of Pharmacy *'Use of Statins in New Zealand'*

2 October

Wale Tobata, Pacific Health Trust, *The Role of Director of Pharmacy in the Solomon Islands*

16 October

June Tordoff, School of Pharmacy *'What's all this about PHARMAC controlling hospital medicines use?'*

6 Nov

David Woods, School of Pharmacy *Research activities in the developing world*

18 December

Professor Michael Pepper FRS, Head Semiconductor Group, Cavendish Laboratories, Cambridge University, UK and Scientific Director, TeraView Ltd Science Park, Cambridge, UK *Terahertz spectroscopy: Principles and Pharmaceutical Applications*,

2004

4 March

Michael Coughlin President & CEO ScriptPro, USA *The potential for robotic-assisted*

18 March

Prof Kumud Kafle Institute of Medicine, Tribhuvan University Kathmandu, Nepal *Using simulated clients to study pharmacy services*

25 March

Assoc Prof Julia Kennedy College of Cork *Pharmacy in Ireland – Quo Vadis*

1 April

Len Stevenson, School of Pharmacy, *PC2*

16 April

Dr David Boulton Bristol Myers Squibb Pharmaceutical Research Institute Princeton, New Jersey USA *Exploration Drug Development at Bristol-Myers Squibb*

17 June

Dr Joel Tyndall, School of Pharmacy, *Computer Modelling: From Protein to Drug*

1 July

Dr James O'Malley Principal Scientist Department of Cardiovascular & Metabolic Diseases Pfizer Inc Groton CT, USA, *Rule of 5 & other considerations. A brief overview of the process of drugs discovery*

15 July

Aleksandra Dumicic PhD candidate, School of Pharmacy, *Mechanisms of polymer matrix formation in sustained release tablets*

22 July

Patrick Demana PhD candidate, School of Pharmacy *Iscoms and Related Colloidal Particles prepared by the hydration method for Antigen Delivery*

29 July

Dr Momir Mikov, School of Pharmacy, *Therapeutic perspectives of bile acids*

5 August

PhD students:

Axel Zeitler: *Investigation of terahertz spectroscopy use in pharmaceutical systems*

Dirk Lendemans : *ISCOMS –the next generation Episode 1: Planet PLUScom*

12 August

Aarti Patel, School of Pharmacy, *Medicines Quality Issues in Developing Countries*

19 August

Prof Thomas Rades, School of Pharmacy, *Amorphous solid dispersions – suitability of drug & excipient mixtures*

26 August

Kathryn Bethune, School of Pharmacy, *Review of training in aseptic dispensing techniques provided at Schools of Pharmacy in four countries*

6 September

Assoc Prof Uday Kompella Dept. of Pharmaceutical Sciences UNMC College of Pharmacy Nebraska Medical Centre Omaha USA, *Super critical fluid technology for respiratory drug delivery systems*

9 September

Dr Sarah Hook, School of Pharmacy, *Pharmacist immunization – the next frontier*

16 September

Dr Kath Ryan, Dr Pauline Norris, Mr David Woods, School of Pharmacy, *Latest developments in International Pharmacy Practice Research*

23 September

Prof Claire Anderson Director of Centre for Pharmacy Health & Society University of Nottingham, *Pharmacy Health and Society*

27 September

Dr Roshan Perera (Health Services Research Centre Wellington), *PHOs: Idealism vs Reality: Are we closing the gap?*

30 September

Prof Claire Anderson Director of Centre for Pharmacy Health & Society University of Nottingham, *The Community Pharmacy Medicines Management Project AND Demonstration of Virtual School of Pharmacy Practice*

5 October

Dr Michele Coleman Research & Development Manager Health Sciences Division University of Otago, *PBRF*

1 November

Dr Jennifer Sorensen Oregon State University, *The role of regulated absorption of plant secondary metabolites in plant-herbivore interactions*

9 November

Prof Les Toop & Dr Derelie Richards Dept. General Practice & Public Health Christchurch Medical School, *Direct to Consumer Advertising (DTCA) and Consumer Health Information*

18 November

Dr Sue Dovey, School of Pharmacy, *Potential for pharmacy practice research collaboration with the GP Research Unit*

23 November

Prof Dr Werner Weitschies University of Griefswald Germany, *High resolution monitoring of the in vivo behaviour of oral drug dosage forms by magnetic imaging methods*

24 November

Ann Lewis Secretary & Registrar of the Royal Pharmaceutical Society of Great Britain, *Direction of Pharmacy in the UK*

SERVICE EXTERNAL TO UNIVERSITY

Gordon Becket

Editorial Board, Asia Pacific Journal of Pharmacology, (1988-present)

Reviewer International Journal of Pharmaceutics, UK, (1998-present)

Rosemary Beresford

Public lectures. Auckland Medical History Society: The Sovereign Balm (2002)

Member of Board of Directors, Asian Association of Schools of Pharmacy

Reviewer for international scientific journals (American Journal of Drug Delivery, Journal of Pharmaceutical Sciences, Pharmacokinetics, International Journal of Pharmacy Practice)

Kathryn Bethune

District Member on the Council of Guild of Healthcare Pharmacists (1998-2002)

Professional Development Officer of the British Pharmaceutical Nutrition Group (1998-2002)

Paul Fawcett

New Zealand Institute of Chemistry (Otago Branch), Committee Member and Branch Editor, 1997-2001, Branch Secretary (2002 to present)

Dunedin Intravenous Organisation (DIVO), Trustee, (1992- present), Trust Chairperson, (1996-1999)

Desiree Kunac

Member of Drug and Therapeutics Subcommittee of Paediatric Society of NZ (2000-present)

Chair of Pharmacist Subcommittee of Paediatric Society of NZ (2000-present)

Pauline Norris

Member of a Public Health Assessing Committee, Health Research Council 2002-3

Editorship of Health, Risk and Society, International Editorial Advisor, (1999-present)

Reviewer for international journals Social Science and Medicine, Journal of Social and Administrative Pharmacy

Anita Olivier

Intern Mentor Otago Southland Branch of the Pharmaceutical Society of New Zealand

Thomas Rades

Vice President of the New Zealand Chapter of the International Controlled Release Society, (2000 – present)

Member of the Executive Committee of the Australasian Pharmaceutical Science Association (APSA), (2000 – present)

Member of the Editorial Board of the Journal of Pharmacy and Pharmacology (2002 – present)

Member of the OMRF Scientific Committee

Reviewer for international scientific pharmaceutical journals (Int. J Pharm., J. Pharm. Pharmacol., J. Pharm. Sci., Europ. J. Pharm. Sci., Europ. J. Pharm. Biopharm., Pharmazie, Pharm. Res., J. Controlled Release).

Referee for the NZ Association of Scientists Marsden and Shorland Medals (2002).

Referee for the Cancer Council Victoria, Australia (2002).

Kath Ryan

Editorial Board, Journal of Evaluation in Clinical Practice (1996-2002)

Member Otago Polytechnic School of Midwifery Permanent External Advisory Committee (2000-present)

Member of Board of Consultants, La Leche League New Zealand (2000-present)

Research Librarian, La Leche League New Zealand (1989-present)

Dorothy Saville

Member of “Friends of Chaplaincy” – attendance/assistance at graduation services (1997 - 2003)

Reviewer International Journal of Pharmaceutics, (1998 – 2003)

Reviewer Journal of Pharmacy and Pharmacology & Journal of Pharmaceutical Science

Committee Member, Otago Medical School Research Society (-2002)

Ian Tucker

Standing Committee on Therapeutic Trials (SCOTT), Member (1992-present)

Director, Otago Innovation Ltd (2002-present)

Member, Editorial Board of the Journal of Microencapsulation (1993-present)

Member, Editorial Board of International Journal of Pharmaceutics (2001-present)

Member, Editorial Board of STP Pharma (2001-present)

David Woods

Member, International Editorial Board, Drugs and Therapy Perspectives (2002-present)

Editorial Advisory Board, International Journal of Pharmaceutical Compounding (1997-present)

Editorial Board, Journal of Paediatric Pharmacology and Therapeutics (1997-present)

International Editorial Board, Paediatric and Perinatal Drug Therapy (1997-present)

Editorial Advisory Board, Journal of Pharmacy Practice and Research (1995-present)

(formerly Australian Journal of Hospital Pharmacy)

Assistant Editor, Drugdex CD-ROM (Micromedex Inc) (1995-present)

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