MEMORIAL RESOLUTION

JUDITH GRAHAM POOL
(1919 – 1975)

Judith Graham Pool was born in New York City on June 1, 1919, and died at Stanford on July 13, 1975, aged 56. She received her B.S. at the University of Chicago in 1939, majoring in physiology, and she received her Ph.D. in the same field in 1946, also at the University of Chicago. During her professional life she held the following positions:

Assistant in Physiology, University of Chicago, 1940-42
Instructor in Physics and English, Hobart and William Smith College, 1943-45
Research Associate at the Stanford Research Institute, 1950-53
Research Fellow in Hematology at the Stanford University School of Medicine, 1953-56
Research Associate at Stanford, 1956-60
Senior Scientist at Stanford, 1960-72
Professor of Medicine since 1972

It is not given to many scientists to make major contributions in two fields as did Dr. Pool. It was only a short three years from her first paper on the response of frog striated muscle to calcium chloride written in 1939, to her landmark paper on measurements of membrane potential in a single muscle fiber, written in 1942 with Dr. Ralph W. Gerard of the University of Chicago, the supervisor of her thesis on the same subject in 1946. This work represented the first measurement of membrane potential behavior in single cells, and has remained a major contribution in the field of physiology. Her second major area of successful endeavor was in the field of the coagulation of the blood, and her first paper in that field, published in 1954, was an attempt to determine the site of manufacture of factor VIII, the hemophilic factor, by selective poisoning of the liver in the rat. Her subsequent scientific papers ranged through the whole field of blood coagulation, culminating in her last review of factor VIII, subtitled 'Perils of a Protein,' which formed the Fifth Annual Paul M. Aggeler Memorial Lecture delivered in 1974. Her many papers in the field of coagulation include contributions on assays of coagulation factors, *in vitro* synthesis of coagulation factors, studies of the anticoagulant, coumadin, and antibody inhibitors of factor viii.

Her major observation, that factor VIII can be cold-precipitated from normal donor plasma and administered to hemophilics who lack the protein, has revolutionized the care of the hemophilic patient. Cold-precipitated factor VIII, she found, can be simply and cheaply prepared from human plasma, and can be easily and safely given to hemophilic patients. The material can be used to terminate bleeding in the hemophilic, or to preoperatively prepare the hemophilic, so that necessary surgical procedures are now possible in this group of patients. Her preparation of factor VIII has also been given three times a week to the hemophilic in order to prevent bleeding into joints, a complication which used to make these unfortunate persons cripples at a very early age. In addition to devising and introducing into clinical medicine a preparation containing the lacking protein in the hemophilic, she also made a number of contributions on the extraction, preservation, and survival of this protein.

It is no surprise then that she was highly regarded nationally and internationally in hematological circles and was asked to assume many positions of trust and administrative responsibility. She was a member of the Advisory Committee of the National Blood Resource

Program, the Medical and Scientific Advisory Committee of the American National Red Cross Blood Program, the Medical and Scientific Advisory Committee of the National Hemophilia Foundation, the Medical and Scientific Advisory Committee of the World Federation of Hemophilia, and the editorial boards of Transfusion and the American Journal of Hematology. She received a number of special awards, including a Bank of America-Giannini Foundation Post-Doctoral Fellowship in 1953-56, a Fulbright Research Fellowship, spent in Oslo, Norway in 1958-59, the Murray Thelin Award of the National Hemophilia Foundation in 1968, the Elizabeth Blackwell Award of Hobart and William Smith Colleges in 1973, and the Paul M. Aggeler Memorial Lectureship in 1974. Perhaps the most fitting and touching honor bestowed upon her was contained in a letter dated April 16, 1975, from a group of professors of Medicine and Hematology at the University Hospital, Wilhelmina Gasthuis, in Amsterdam, and representing in part the Dutch Society of Hemophiliac Patients, in which they asked if they could name a new clinical care and research institute in the field of hemostasis 'The Judith Pool Institute for Hematology.'

Many scientists make solid contributions to their field of endeavor, but aside from what they put into print, they do this in a private way. Judith Pool had not only the clearest of minds, but she was a willing and stimulating scientific conversationalist. She inspired many of her colleagues and students of medicine with her ability to pose a question, design the right experiment to answer the question, criticize the results, draw only the most appropriate conclusions, and do all of this in a gentle, unassertive, but at the same time leader-like way which will be truly missed. In addition to her superb qualities in informal scientific conversations, she was also the most lucid of writers and lecturers.

In recent years, Dr. Pool turned increasingly to working for improvements in the role of women in science. She devoted herself to this just as keenly as she did the scientific questions with which she liked to wrestle, and she exerted herself publicly on behalf of women's roles in science with the same quiet, tough effectiveness which characterized her scientific work. She was a founder and Chairwoman of the Professional Women of Stanford Medical School, 1970-71; a member of the Board of Trustees of the Association of Women in Science Educational Foundation, and co-president from 1971-72; and a founder and member of the Steering Committee of the Association of Women in Science from 1972-73. She was also Chairperson of the Faculty Affirmative Action Committee at Stanford in 1975.

Dr. Pool is survived by two sons, Jonathan Robert and Jeremy David Pool, and by a daughter, Loma Graham Pool. She also leaves behind at least two major scientific contributions, one of which has allowed the hemophilic subject to live a nearly normal life. She leaves to us, her colleagues, memories of an unusual paradigm: a scientist who was creative, cheerful, tolerant, and gentle yet effective in debate. Nor did she forget the plight of many of the women in American science, and a good deal of her last few years was spent working to improve their lot. She might indeed have lived longer, but in our judgment she could not have lived better than the woman and the scientist she was.

William P. Creger, Chairman
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