

### 1994 SSR DISTINGUISHED SERVICE AWARD SHELDEN J. SEGAL



The SSR Distinguished Service Award is sponsored by Serono Symposia, Inc. It recognizes an individual who has provided outstanding and unselfish service and leadership to the field of reproductive biology. The Distinguished Service Award for 1994 is presented by the

membership of the Society for the Study of Reproduction to Dr. Sheldon J. Segal.

Dr. Segal received the BA degree from Dartmouth College in 1947 and headed to Europe under the auspices of the GI Bill for graduate studies at the University of Geneva. It was there that he met Professor Emil Witschi for the first time. Witschi was about to establish a new program in embryology at the University of Iowa. Segal was intrigued with Witschi's research and moved with him to Iowa where he completed a Ph.D. degree in Embryology and Biochemistry in 1952. He remained at Iowa as a Research Scientist in the Department of Urology. This brought him into close association with clinical medicine in a department that had already begun to emphasize the then emerging field of andrology. He was appointed Research Assistant Professor in Urology at Iowa where his work caught the attention of Warren O. Nelson, the first Director of the Biomedical Division at the Population Council in New York City. He moved to New York as Assistant Director and began his pioneering research in reproductive biology and medicine. The mission of the Population Council was to foster the development of new methods of family planning as well as to focus national/international attention on the importance of reproductive biology and contraceptive research. At the Population Council Dr. Segal instituted a program for research training with emphasis on providing an interface between basic reproductive biology and its clinical counterparts. In 1962-1963, he took a leave of absence to serve as Visiting Professor at the All-India Institute of Medical Sciences. Dr. Segal exercised truly effective leadership in India and in the short span of two years established a program in population research. The program at the All-India Institute

was an immediate success and served to focus the attention of the Indian government on the importance of reproductive research and family planning. It continues to have a major impact on population policies in India to this day. In recognition of his efforts, Dr. Segal was made an honorary lifetime member of the India Society for the Scientific Study of Reproduction. In 1979, he was presented with a citation by the President of India in recognition of his contributions. The special relationship he established with Indian science is illustrated by this quote from the citation, "We pay tribute to a man of science with numerous scientific and professional contributions to his credit. His leadership has helped to bring the field of contraceptive research onto the center-stage of science and into the spotlight of public approval. He came to India as a friend, lived amongst us as a brother, and remains always a part of the Indian Family."

In 1963, Dr. Segal was appointed Director of the Biomedical Division of the Population Council. He expanded significantly the training program for investigators from both the United States and abroad. Well over two hundred fellowships were awarded to promising young scientists to work at the Population Council and in laboratories elsewhere. Many "Pop" Council fellows have since attained positions of national prominence and have exercised both scientific and political leadership in their home countries. The international scope of this program has greatly influenced the development of population programs throughout the world.

In 1978, Dr. Segal accepted a newly created position at the Rockefeller Foundation as Director of Population Sciences. There he continued his lifelong interest in training, and the concept of Rockefeller Foundation individual traineeships was developed further. At the Rockefeller Foundation, he continued to encourage the development of programs in reproductive biology and was often called upon to consult as new national and international programs were being considered. Consistently, he came down forcefully in favor of the expanding role of basic research in reproductive biology and medicine. His impact on the international scene is exemplified by his numerous leadership roles in the World Health Organization, the United Nations Industrial Development Organizations,

and the United Nations Office of Science and Technology.

While still at the Population Council, Segal established The International Committee for Contraceptive Research (ICCR), a group of colleagues from the United States and abroad whose mission it was to encourage technology transfer in contraceptive development. The ICCR brought Norplant, the only new advance to contraception in nearly thirty years, to the point of clinical applicability. It was Sheldon Segal who, in 1966, conceived the idea that steroids might be released slowly from a silastic capsule to provide continuous delivery for contraception. After initial laboratory observations, he spearheaded the effort to bring this concept to the point of clinical application and thereafter doggedly pursued the possibility as clinical trials were organized. It is not without justification that Dr. Segal has been referred to as "the father of Norplant." Judging from the length of time that it took for this to finally be accepted in the United States, he might more appropriately be referred to as "the grandfather of Norplant."

In 1988, Dr. Segal established a new and innovative program, referred to as the "South to South Program," to encourage contraceptive research and development in the developing countries themselves. With headquarters in Bahia, Brazil, this group of scientists and clinicians has already initiated a number of promising programs.

Dr. Segal's efforts have been recognized by a number of academic institutions and agencies. He is the recipient of honorary M.D. degrees from both the University of Uppsala in Sweden and the University of Tampere in Finland. The Finns also gave him recognition as a member of the "Order of the Commander of the Lion." Segal is a member of the Institute of Medicine of the National Academy of Sciences as well as an Honorary Member of the Mexican National Academy of Medicine. He was appointed an Honorary Professor of the Chinese Academy of Sciences and also of the Peking Union Medical College. He received a Citation for Distinguished Service from the Latin American Association for Reproductive Health, was awarded the Axel Munthe Foundation Prize for Humanism in Medicine, and was the recipient in 1984 of the United National Population Award. At home, he received the Scroll of Merit of the National

Medical Association and was named Honorary Vice President of the American Fertility Society.

Early in his career, Sheldon Segal established a relationship with Marine Biological Laboratories in Woods Hole which continues to this day. Year after year the summer laboratory at the MBL, to which Segal brought the excitement and thrill of daily discovery, has provided encouragement for numbers of young investigators on whom the Woods Hole experience has left a lasting impact. Segal served as a trustee of the Marine Biological Laboratories from 1983 to 1991 and in 1991 was appointed Chairman of the Board. The laboratory flourished under his leadership and was established as a major center for scientific inquiry into the next century.

Sheldon Segal's career continues to be characterized by truly effective leadership in the field of reproductive biology both in the United States and abroad. He has chaired important committees for the World Health Organization and most recently chaired the Review Committee for its technical and scientific activities. He has focused attention on AIDS and the safe motherhood initiative and has participated actively in W.H.O.'s Special Programme of Research in Human Reproduction. For the United Nations, he has served as consultant for the Office of Science and Technology and the Industrial Development Organization as well as consultant for the World Bank Mission.

Segal's contributions to the scientific literature have been legion. He has authored more than 250 publications in the fields of endocrinology, embryology, fertility, family planning, and population. He has also contributed chapters to more than 20 books and has edited or co-edited a long list of books on subjects ranging from demographic and programmatic consequences of contraceptive innovations through the role of DNA in reproduction and development. He has been particularly effective in promoting the science of reproductive biology in the public forum and his advocacy is often reflected in the national press and on television. He has been an eloquent spokesperson indeed as he continues his strong commitment to research and advocacy in reproductive biology and medicine.