On the presentation of the Friedenwald Award in Ophthalmology to Dr. Marvin L. Sears

It is a privilege to introduce Dr. Marvin L. Sears as the recipient of The Jonas S. Friedenwald Award. Although I have been Dean at Yale for something less than 4 years, I had an earlier opportunity to appreciate his contributions since I had been involved in trying to recruit him to the National Institutes of Health to be director of the National Eye Institute. When he turned that job down to remain at Yale as chairman of a newly created department, I did not realize that I would later be pleased with his decision.

Marvin Lloyd Sears was born in New York City on Sept. 16, 1928. After attending Polytechnic Preparatory School, he entered Princeton University where he received his A.B. degree in 1949. He obtained his M.D. degree from Columbia College of Physicians and Surgeons in 1953. During his fourth year in medical school he spent much of his time in research in immunochemistry in the laboratory of Elvin Kabat, and the first scientific paper that bears his name recorded the product of that effort. He then spent a year as a medical interne on the Columbia University service at Bellevue Hospital under the tutelage of Dickinson Richards. Marvin's appointment as an Assistant Resident at the Wilmer Institute in 1954 had run only a few months when it was interrupted for two years of military service, which he spent in the Air Force at Ellington Field in Texas. He then returned to the Wilmer Institute for another 27 months of residency before he spent a very profitable 18 months as a fellow in the laboratory of Ernst Bárány in Uppsala. He afterward completed his training with a year as Chief Resident at the Wilmer Institute. He notes that he was the last resident at Wilmer to have been appointed by Dr. Alan Woods and, having completed his training under Dr. Edward Maumenee, became the first of the latter's disciples to achieve the status of chairman.

He came to Yale in 1961 as the first full-time head of Ophthalmology, at that time a section in the Department of Surgery. Although at that time he was only an assistant professor, he was very definitely the leader and the first and lone full-time member of the Ophthalmology Section. During the subsequent years he almost single-handedly built ophthalmology at Yale into a highly respected center of vision research and service. He became a full professor in 1969 and was made chairman of the newly created Department of Ophthalmology in 1971.

Although he had had significant exposure to and experience in research while in medical school, his first major effort in this field came with his fellowship with Ernst Bárány. There he became involved in studying the physiology and pharmacology of aqueous humor dynamics, the subject that has been a continuing thread in his investigative work and the field of his most important contributions. Their study of the outflow resistance and its regulation by the sympathetic nervous system provided far more reliable data to document the latter effect than had been previously available and offered the basis for a number of revealing subsequent studies. These were greatly facilitated by the technique they devised for cannulating and perfusing the rabbit eye without immediate breakdown of the blood-aqueous barrier. The lowering of the blood-aqueous barrier was shown more than a decade later, by Dr. Sears...
along with Arthur Neufeld and Lee Jampol, to be attributable to the release of prostaglandins and to be preventable by pretreatment with aspirin.

In the years subsequent to his work in Uppsala, Dr. Sears has carried out a number of further studies of aqueous outflow. He demonstrated the supersensitivity of outflow resistance after sympathetic denervation and provided the first clear evidence for the degeneration release of norepinephrine. A study of the temporal course of the degeneration release of norepinephrine showed that the change in outflow facility coincided with the appearance of norepinephrine in the anterior chamber. He later extended studies of aqueous outflow to several species of lower primates and to enucleated human eyes. His more recent work in this field has related to the mediators of sympathetic transmission and their relationship to outflow facility.

Throughout his time at Yale he not only has remained an active investigator but also has continued as a busy, skillful, and imaginative surgeon responsible for the introduction of new surgical techniques for cyclectomy and the management of black-ball hyphema. The latter technique has now been rendered obsolete by the development of pharmacologic means of inhibiting fibrinolysis.

In his department he has developed basic visual science in parallel with its clinical activities and is equally at home in either. His former residents consider him to be a phenomenal teacher ready to take off from any problem into a wide-ranging relevant discussion of both laboratory and clinical aspects, but always bringing the discussion back to pertinent comments regarding the management of the problem at hand. It is said that he asks a great deal of himself and expects his residents to do the same and does not treat lightly those who fail to do so.

He is said to be a “fantastic natural athlete,” and in connection with his department’s baseball team, it was reported to me that “his ability and his skill on the field were like his ability and skill on the wards—outstanding and a bit on the aggressive side. He showed he expected the best, of himself and those around him.” (I also understand that this diligence and skill were not reflected in the won-lost record.)

His former residents further report that the highlight of their residence was to become “Dr. Sears’ resident,” a 6-month period when all his clinical activity was shared with the resident on the service. This time of a close working relationship was a one-on-one, 24-hours-a-day learning experience. His residents believed that they came out of this with a greatly improved ability to be totally responsible physicians and a strengthened ability to know and rely upon themselves.

I will close with an excerpt from the words of the Nominating Committee for the Friedenwald Award. “Marvin Sears has impressively built his Department of Ophthalmology at Yale Medical School to one of the best. The residency under his direction has earned a reputation for turning out extraordinarily well-trained ophthalmologists, typically endowed with special traits of critical judgment and scientific curiosity, specially suitable to careers in research and academics. Marvin Sears also has attracted many accomplished colleagues to his department, and through his own administrative energies has provided admirable facilities for their work.

“Professor Jonas Friedenwald, we believe, would approve that this award be made to Marvin Sears in recognition of his contributions to areas which were dear to Professor Friedenwald, the laboratory research, the clinical research, the contribution to education and scientific stimulation of younger scientists, and the principle of scientific integrity and critical evaluation.”

It is an honor and a privilege to present Marvin Sears for the 1977 Friedenwald Award.

Robert W. Berliner