Robert Burton Nussenblatt, MD, MPH (1948–2016), Physician-Scientist, Leading Ophthalmologist and Exemplary Teacher

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ROBERT BURTON NUSSENBLATT was born in 1948 in New York City and grew up in Astoria, in the borough of Queens. He attended elementary and junior high schools in Astoria, skipping 1 grade in each school, and then he was admitted to the magnet Stuyvesant High School in Manhattan. Before attending college, he spent 1 year in Dijon, France, where he was immersed in French culture. He received his Cum Laude Bachelor degree in science at the City University of New York and chose a career in medicine. SUNY Downstate Medical School (1968–1972) was the first component of his medical education and was followed by an internship and residency in internal medicine at Bellevue Hospital, followed by a residency in ophthalmology at NYU Medical Center.

In 1977, he joined the National Eye Institute (NEI), National Institutes of Health (NIH), where he could unite his interest in clinical practice and basic research. At that time, the clinical staff at NEI included Dr. David G. Cogan, a giant in ophthalmology, and Dr. Nussenblatt made him his role model, intellectually and how he treated his patients. Dr. Nussenblatt's first position at the NEI was of a Clinical Associate, but his outstanding leadership capacities were rapidly recognized and he was later recruited to serve in numerous supervisory positions at the Institute, including Deputy Clinical Director, Clinical Director, and Director of Intramural Research (Scientific Director).

In addition, Dr. Nussenblatt was selected to serve on NIH-wide positions, including Senior Advisor to the Deputy Director of Intramural Research, and Director, Office of Protocol Services, Clinical Center, NIH, as well as the Acting Director of Intramural Research of the National Center for Complementary and Alternative Medicine. In parallel to these functions, Dr. Nussenblatt founded in 1983 the Laboratory of Immunology, NEI, where he had carried out his translational basic scientific studies. The laboratory had been gradually extended to include additional scientists and had become a world renowned center for research on the involvement of the immune system in eye diseases.

Dr. Nussenblatt had always been eager to learn, in both formal and informal environments. While a student at Downstate Medical School, he took time off to study the History of Medicine at the University of Edinburgh, Scotland, and to complete a Summer Fellowship in Neurophysiology at the Karolinska Institute, Stockholm, Sweden. Later, he returned to full-time schooling for several months at the Harvard Business School's Advanced Management Program (1998) and in 2007 he received a Masters of Public Health (MPH) degree from the Johns Hopkins School of Public Health, Emphasis on Epidemiology/Clinical Trials.

Outside the classroom, Dr. Nussenblatt was a Renaissance man, with thorough knowledge of literature, history, Judaism, art, and music. He was fluent in French and could communicate in Russian and Hebrew.

Dr. Nussenblatt had chosen to pursue a career as a clinician-scientist. He was devoted to his mission of treating patients, while staying active in conducting basic research for more than 3 decades. His achievements in ophthalmology included the introduction of new treatments for uveitis and other inflammatory eye diseases. Of particular importance had been introduction of cyclosporine, an anti-inflammatory compound that has become a standard treatment for uveitis, and of daclizumab (anti-CD25), a powerful biological immunosuppressive agent. Another major contribution had been his analysis of ocular involvement in AIDS and the development of treatments for AIDS-related eye disease. Most recently, Dr. Nussenblatt had focused on studying the immunological aspects of age-related macular degeneration and he pioneered the use of immunosuppressive treatment for this major eye condition. Overall, his clinical research has been based on the bench-to-bedside concept, whereby treatments are developed in the laboratory and then applied to clinical use.

Dr. Nussenblatt authored several books, including a very successful book on uveitis, which is now in its fourth edition. Data collected through his clinical and basic research are summarized in more than 600 scientific articles,

published in prestigious journals such as the *New England Journal of Medicine*, *Lancet*, *Science*, and the *Proceedings of the National Academy of Science*.

Dr. Nussenblatt was a world renowned expert on inflammatory eye diseases and had been selected to serve on numerous international committees dealing with this group of diseases. His list of invited professorships and lectureships covers nearly 4 pages of his curriculum vitae and includes major institutions in the United States and abroad. His capacities as a clinician–scientist had been acknowledged by his peers in scientific organization, who had elected him to serve as the President of the Association for Research on Vision and Ophthalmology (ARVO), the President of the American Uveitis Society, the President of the International Uveitis Study Group, the President of The Federation of Clinical Immunology Societies (FOCIS), as well as a long list of other leadership positions.

In addition, Dr. Nussenblatt's achievements had been recognized in the form of major awards and prizes that include the Alcon Research Award, the Proctor Award by ARVO, a Meritorious Award Medal from the Public Health Service, the Gold Medal for Excellence in Ocular Inflammatory Disease by the International Uveitis Study Group, the NIH Director Award, and the NIH Distinguished Investigatorship. He was a Visiting Professor in the University of Bristol, United Kingdom, an Honorary Professor at the University College, London, United Kingdom, and Doctor of Philosophy, Honoris Causa, at Bar-Ilan University in Israel and University of Paris. He was also listed among the "Best Doctors in America" and the "Top Ophthalmologists in the United States."

One of Dr. Nussenblatt's favorite activities had been teaching. He enjoyed guiding college and medical students who joined his laboratory for short periods and he was particularly enthusiastic about training clinical fellows who

came to join the NEI Program on Uveitis, which he established. He appreciated sharing with the fellows his vast knowledge on uveitis and related conditions during their time in the clinic and during the lunch in his office, which had become a "must-do" tradition. Many of the fellows have since assumed professorial and chairmanship positions and had kept in close contact with the teacher they admired. To keep the contact active, the fellows and students had established an Alumni organization that meets biannually, with the Nussenblatt Lecture delivered by an alumnus as a centerpiece of these meetings. This tradition would be continued for years to come.

In more recent years, Dr. Nussenblatt had played major roles in founding and establishing 2 successful organizations, "CHI" and "UNITE." CHI, the Center for Immunology, Autoimmunity and Inflammation at NIH, promotes cooperative research based on advanced technologies to efficiently translate enhanced understanding of immune function and pathophysiology to the clinic. UNITE is a consortium of scientists from the United Kingdom, China, and the United States, working together to improve our understanding and treating of immune-related eye diseases.

Dr. Nussenblatt, "Bob" to all of us, succumbed to cancer on April 17, 2016. We miss him dearly.

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