

George Miller Lifetime Achievement Award introduction

Dan DiMaio, January 7, 2019

I am pleased to announce that the winner of the 2018 Yale Cancer Center Lifetime Achievement Award is George Miller, the John F Enders Professor of Pediatrics. George has been Chief of the Section of Pediatric Infectious Diseases at Yale for several decades, and a member of the Yale Cancer Center for almost 50 years. He is a consummate physician scientist: he cares for patients and makes discoveries in the lab.

George caught the research bug while a student at Harvard Medical School, when he fell under the spell of John Enders. Enders had just won the Nobel Prize for discovering how to grow poliovirus in the lab, which led directly to the development of the Salk polio vaccine. Enders' research also led to the development of measles vaccine. In an early position after leaving Harvard, George was an epidemiologic intelligence service officer for the CDC traveling the world administering the measles vaccine in far-away places.

George was recruited to Yale in 1969 to the Departments of Pediatrics and Epidemiology, where he was greatly influenced by Dorothy Horstmann. Horstmann also made seminal contributions to poliovirus research and, incidentally, was the first woman appointed full professor at Yale School of Medicine.

In his own lab, George turned his attention to a new virus isolated from an obscure tumor in Africa, Burkitt Lymphoma. It became known as Epstein Barr virus, and George performed seminal experiments during the early days of EBV research. He injected the virus into marmosets and showed it caused lymphomas in these animals. This was the first time that anyone showed that a human virus could cause a tumor in primates. Of course, we now know that about 15% of all human cancers are caused by virus infection, including EBV, and George's work was an important early, very influential breakthrough. He continued to study EBV and later the related Kaposi Sarcoma herpesvirus and made many important discoveries including the development of the best diagnostic test for active EBV infection, the identification of EBV viral genes required for virus replication, the discovery of the molecular switch from a latent form of infection to an active infection that produced infectious virus, and with Joan Steitz the discovery of viral small non-coding RNAs. His career, which started out in epidemiology and classic virology has morphed into modern molecular biology and cell biology.

In honor of his scientific contributions, George has received many honors including election into the Institute of Medicine – now the National Academy of Medicine, a Scholar Award from the American Cancer Society, and an unprecedented three NIH MERIT awards.

Despite his important scientific contributions, I suspect that George is most proud of his mentoring record, which is exceptional. I would like to give a few examples:

Kelsey Martin, now Dean of the UCLA school of Medicine, began her scientific career as a technician with George

Ren Sun, also at UCLA, is Professor of Molecular and Medical Pharmacology, Senior Associate Dean for Graduate Studies

Tricia Serio, Professor of Biochemistry and Molecular Biology at UMass and Dean of the College of Natural Sciences

Cliona Rooney, Professor at Baylor, who developed the first successful adoptive T cell therapy in humans.

Naomi Taylor, Director of the Basic to Translational Oncology program at the Pediatric Oncology Branch of the NIH

Rob Orłowski, Chairman of the Department of Lymphoma/Myeloma at MD Anderson Cancer Center

And the list can go on, including several of our own faculty, such as YCC members Ayman El-Guindy and Elijah Paintsil. And if that wasn't enough, in 2006, George won the teacher of the year award from our medical students.

I have no doubt that George's success in science and mentoring has much to owe to the training and mentoring he received from John Enders and Dorothy Horstmann, and it is clear that he has passed these values and rigorous standards on to the next generation of scientists.

In recognition of this extraordinary career, which shows no sign of slowing down, we are thrilled to award George Miller the YCC Lifetime Achievement Award, in George's case this is the award that keeps on giving through his lifetime of discoveries and trainees.