

Milton W. Taylor

Professor of Biology; Senior Fellow in the Indiana Molecular Biology Institute

Milton Taylor was born in Glasgow, Scotland, and educated in a Scottish grammar school. But he dropped out early and went to live in a commune in the south of England. In 1951 he immigrated to Israel where he spent five years, two and a half of them in the Israeli army, mostly on a kibbutz. He married his wife Mimi in 1957 and then moved to New York City, taking evening classes at the City College of New York while working various jobs during the day. He then transferred to Cornell University and received an undergraduate degree in agriculture. He did his graduate work at Stanford University, in the laboratory of Professor Charles Yanofsky, where he studied the viruses that infect bacteria. Ph.D. in biology in hand, Milton then went as a postdoctoral fellow to the laboratory of Professor John Holland at the University of California at Irvine to pursue his growing interest in the study of animal viruses. He became an assistant professor of microbiology at Indiana University in 1967 and a full professor in 1976.

Milton Taylor has had an enormous influence at Indiana University, both as a teacher and a world-renowned research scientist. His research has continued to be productive and internationally recognized. Milton's dedication to teaching and research has affected the lives of many students, both undergraduates and graduate students, both those who were majoring in biology and those who were majoring in other areas. Milton started a virology program for seniors and graduate students, but he also reached out to undergraduate students who were not biology majors by designing a course on the relationship between human history and viruses.

When Milton came to Indiana University, he began to research nucleic acid chemistry as well as viruses. Milton and his students discovered that certain viruses could wipe out cancers in mice. Many years later this approach is being pursued industrially as a possible treatment for human cancers. Milton also pursued the study of mammalian cell genetics and gene therapy. Other areas of Milton's influential research include the investigation of a biological chemical called interferon as an antiviral and anticancer agent. More recently Milton has been involved in clinical studies on hepatitis C, following treatment with interferon. This project has attempted to discover the basis for racial differences in treatment as well as why only 50 percent of those treated respond.

On a personal level Milton's philosophy has been to recognize gifted students, even those who might not appear to be acceptable to a graduate program. These include international students with difficulties in English or with backgrounds very different from the average U.S. student. Milton's willingness to work with such students has produced a large number of both master's students (approximately 10) and—more remarkably, given his relatively late start in academia—Ph.D. students (about 25). Many of these are now professors at major universities or have made successful careers in industry. Despite their often very varied backgrounds, they all shared one commonality: they were unlikely

heroes. One of them, Larry Blatt, vice president for research at Intermune, has recognized this by setting up a Taylor fellowship in virology for graduate students in the department. As another former student, Pete Jozsi, writes:

"I had an amazing experience during my years as a Hoosier both in and outside the classroom, but working in Dr. Taylor's lab was probably the single most important. It provided me with invaluable insights into the practical methods used in research, but more importantly, it helped me refine analytical skills that would prove critical in every position I held after graduation. It was the practical experience (tissue culture specifically) I gained from working in the Taylor Lab that landed me my first jobs, but it was the less tangible skills that proved invaluable throughout my career. Recently the opportunity presented itself to collaborate with Milton on investigating the impact interferons have on miRNA expression. It was great to see him so excited about this emerging field and I was elated I could help in some way. Milton gave me so much. I just wish I could have given back more than just the opportunity to work more!"

One measure of the success of Milton's research is that his laboratory has been funded continuously for 40 years! The funding has come mostly from the National Institutes of Health but also from the American Cancer Society, the Damon Runyon Fund, and from biotech and pharmaceutical industries, including Amgen, National Genetics Institute, Intermune, and Schering Plough.

As one might expect from Milton's active career in research, he has a long list of fellowships and awards, including two Fogarty International fellowships, visiting fellowships at the University of Rome, the Myerhoff Fellowship from the Weizmann Institute of Science, and the "Sword of Hope Award" from the American Cancer Society. He has published 182 papers over a period of 40 years, edited a volume on purine metabolism, and is preparing three more papers that will be submitted shortly. He was elected to the American Academy of Microbiology in 1997. He has not slowed down at all! The biology department at IU and the students who have graduated from that department have been very fortunate that Milton Taylor decided to come here and remain here. We all thank Milton for his dedication and most importantly for his friendship.

David White and Juan Alfonzo