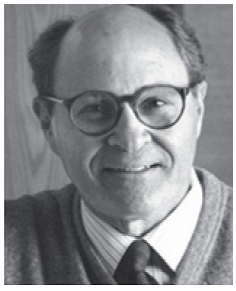

DANIEL NATHANS, M.D.

The Daniel Nathans, M.D., Lecture in Molecular Genetics was established in 2000 to honor his extraordinary contributions to science and to Johns Hopkins University. The lecture provides a forum in which eminent scientists have the opportunity to share their most recent discoveries with the Johns Hopkins community.

Dr. Nathans obtained his bachelors degree from the University of Delaware and his medical degree from Washington University in St. Louis. Following completion of a residency in internal medicine at Columbia-Presbyterian Medical Center and two years as a clinical associate at the National Cancer Institute, he went to Rockefeller University where he began his studies on protein synthesis in the laboratory of Dr. Fritz Lipmann. In 1962, he was recruited to the microbiology department of the Johns Hopkins University School of Medicine by Dr. Barry Wood. Dr. Nathans remained on the faculty at Johns Hopkins until his untimely death in 1999. From 1995 to 1996, he served as interim president of Johns Hopkins University. He was also a Howard Hughes Medical Institute senior investigator.

In the late 1960's, Dr. Nathans switched his research focus to the study of viral tumorigenesis. Using simian virus 40 as a model, he pioneered the use of restriction enzymes to construct physical maps of genes and genetic elements. His work laid the cornerstone for the ensuing revolution in molecular biology. In 1978, he shared the Nobel Prize in physiology or medicine with his colleague Hamilton O. Smith and with Swiss scientist Werner M. Arber. In 1993, Dr. Nathans was awarded the U.S. National Medal of Science.

ALAN G. HINNEBUSCH, PH.D.

Dr. Alan G. Hinnebusch is a pioneer in understanding fundamental molecular mechanisms of eukaryotic gene regulation. His focus has been on *Saccharomyces cerevisiae*, a model organism that allows genetics, biochemistry, and structural biology to be combined to dissect the processes of transcription and translation. Much of Dr. Hinnebusch's work is centered on general amino acid control, wherein amino acid biosynthetic genes in multiple pathways are induced by transcriptional activator GCN4.

Thanks in large part to Dr. Hinnebusch's research, GCN4 is now one of the best-understood transcription factors. He and his colleagues are using this knowledge, combined with the large battery of mutants, plasmids, and antibodies generated over the years, and new technologies based on next-generation sequencing, to dissect numerous aspects of transcriptional control of general importance in eukaryotic cells.

Dr. Hinnebusch received his B.S. in Biology from the University of Dayton, Ohio, in 1975 and his Ph.D. in Biochemistry and Molecular Biology from Harvard University in 1980. He studied as a postdoctoral fellow in the laboratory of Dr. Gerald R. Fink at Cornell University and the Massachusetts Institute of Technology from 1980 to 1983. He joined the NICHD as a Senior Staff Fellow in 1983 and became Chief of the Laboratory of Eukaryotic Gene Regulation in 1995. In 2000, he was appointed as Chief of the Laboratory of Gene Regulation and Development and Head of the Section on Nutrient Control of Gene Regulation. In 2007, he was named Head of the Program in Cellular Regulation and Metabolism. Dr. Hinnebusch is currently a member of the editorial boards of Genes & Development, eLife, and Genetics. He has published more than 220 original research articles in peer-reviewed journals and more than 50 review articles and book chapters. In 1994 he was named Maryland's Outstanding Young Scientist and was elected as a Fellow of the American Academy of Microbiology. In 2009 he was elected as a Fellow of the American Association for the Advancement of Science and as a Fellow of the American Academy of Arts and Sciences, and in 2015 he was elected to the National Academy of Sciences.

The Daniel Nathans Papers are now available on the National Library of Medicine's Profiles in Science site at profiles.nlm.hih.gov