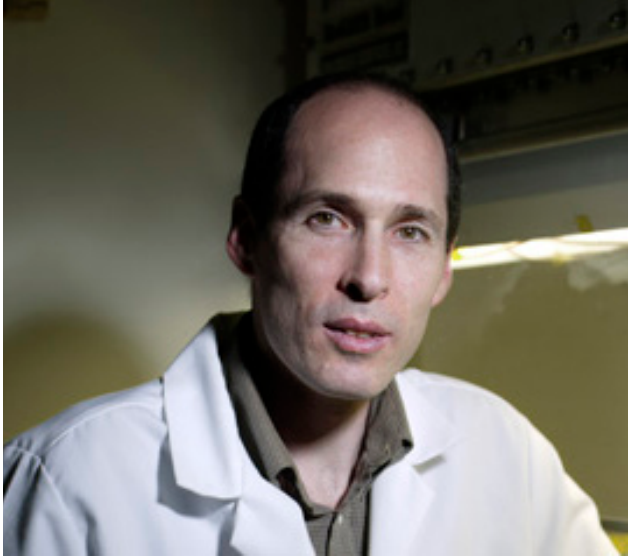


Lasker Lessons in Leadership

Jeremy Nathans, MD, PhD

Professor, Johns Hopkins University School of Medicine

Investigator, Howard Hughes Medical Institute



Jeremy Nathans was born in New York City in 1958 and grew up in Baltimore where he was educated in the public schools. He received B.S. degrees in Chemistry and Life Sciences from MIT, and a Ph.D. in Biochemistry (working with David Hogness) and an M.D. as a trainee in the Medical Scientist Training Program at Stanford Medical School. His interest in vision research began while at Stanford, where he was strongly influenced by Professors Denis Baylor and Lubert Stryer. Nathans spent one year as a postdoctoral fellow with Axel Ullrich at Genentech. In 1988, he joined the faculty in the Departments of Molecular Biology and Genetics, Neuroscience, and Ophthalmology at the Johns Hopkins Medical School. Since 1988, he has also been an Investigator of the Howard Hughes Medical Institute.

At Stanford, Nathans and Hogness isolated the first DNA sequences coding for a G-protein-coupled receptor and for a eukaryotic sensory receptor (rhodopsin), identified and sequenced the genes for the three visual pigments responsible for human color vision, and defined the molecular basis for the most common forms of inherited color vision deficiency in humans. At Johns Hopkins, Nathans' research interests expanded to encompass inherited retinal disease, retinal development and evolution, and photoreceptor biochemistry and cell biology. His most recent contributions are in the areas of retinal vascular biology and vascular disease. His laboratory has pioneered the study of the Frizzled family of receptors, which play a central role in controlling cell proliferation, pattern formation, and homeostasis in a wide variety of organ systems.

Nathans has a long-standing interest in educating graduate and medical students. At Johns Hopkins, his teaching includes genetics, neuroscience, psychiatry, and infectious disease. His course for graduate students – “Great Experiments in Biology” – is one of the most heavily subscribed courses on campus. Nathans has recorded freely available web-based lectures for high school and college students under the aegis of iBioSeminars, iBio101, and the HHMI Holiday Lectures. Nathans' contributions to education have been recognized with all three of Johns Hopkins' major teaching awards (the Teacher of the Year from the Graduate Student Association; the Professor's Award for Distinction in Teaching in the Basic Sciences; and the Golden Apple Award for Teaching Excellence from the American Medical Student Association).

Nathans currently serves on the Scientific Advisory Board of the Foundation Fighting Blindness; the grant review panels for the Life Sciences Research Foundation, and the Klingenstein/Simons Foundation; the Editorial Boards of eLife and the Proceedings of the National Academy of Sciences; and the jury for the Lasker Prizes.

Nathans' contributions to basic and clinical vision sciences have been recognized by numerous honors, including the Champalimaud Award for Vision Research (shared with King-Wai Yau), the Edward Scolnick Prize in Neuroscience from the McGovern Institute at MIT, and the Lifetime Achievement award in Biomedical Science from Stanford Medical School. Nathans is an elected member of the National Academy of Sciences, the National Academy of Medicine, and the American Academy of Arts and Sciences.