

Gerald D. Fischbach, M.D.

Bio Sketch

Gerald D. Fischbach is Executive Vice President for Health and Biomedical Sciences; Dean of the Faculties of Columbia University Medical Center and Dean of the Faculty of Medicine at the College of Physicians and Surgeons of Columbia University. Dr. Fischbach received his M.D. degree in 1965 from Cornell University Medical School and interned at the University of Washington Hospital in Seattle. He began his research career at the National Institutes of Health, serving from 1966 - 1973. He subsequently served on the faculty of Harvard Medical School, first as Associate Professor of Pharmacology from 1973 - 1978 and then as Professor until 1981. From 1981 - 1990, Dr. Fischbach was the Edison Professor of Neurobiology and Head of the Department of Anatomy and Neurobiology at Washington University School of Medicine. In 1990, he returned to Harvard Medical School where he was the Nathan Marsh Pusey Professor of Neurobiology and Chairman of the Neurobiology Departments of Harvard Medical School and Massachusetts General Hospital until 1998. He served as Director of the National Institute of Neurological Disorders and Stroke, National Institutes of Health from 1998 - 2001.

Dr. Fischbach is a past-President of the Society of Neuroscience and he now serves on several medical and scientific advisory boards. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences and the Institute of Medicine, and he is a fellow of the American Association for the Advancement of Science and a non-resident Fellow of the Salk Institute. He is the Scientific Director of the Simons Foundation Autism Project.

Throughout his career, Dr. Fischbach has studied the formation and maintenance of synapses, the contacts between nerve cells and their targets through which information is transferred. He pioneered the use of nerve cell cultures to study the electrophysiology, morphology,

and biochemistry of developing nerve – muscle and inter-neuronal synapses. Beginning in the 1970's, Dr. Fischbach embarked on a search for proteins released from motor nerve terminals that regulate the number of acetylcholine receptors and other components of the postsynaptic membrane in target muscle cells. This work culminated, in 1993, with the purification of ARIA (Acetylcholine Receptor-Inducing Activity), a protein that stimulates the synthesis of acetylcholine receptors by skeletal muscle cells. This molecule was subsequently shown to be a member of a large family of proteins now called neuregulins that have numerous trophic actions on neurons and glia in the brain. His current research is focused on roles that members of the of neuregulins family play in determination of neural precursor fate, synapse formation, and neuronal survival.