1st Annual Arthur Guyton Lectureship
H. Lee Sweeney, Ph.D.
William Maul Measey Professor and Chairman
University of Pennsylvania School of Medicine

"Characterization of Myosin Superfamily and Pharmacological Strategies for the Treatment of Duchenne Muscular Dystrophy"

H. Lee Sweeney joined the Department of Physiology at the University of Pennsylvania School of Medicine as an Assistant Professor in 1989. He became chairman of the department in 1999. Dr. Sweeney received his undergraduate education at M.I.T., and received his Ph.D. in Physiology from Harvard University.

Dr. Sweeney's research program has both basic research and translational research components. The translational work is focused on the muscular dystrophies involving the dystrophin-glycoprotein complex. His recent efforts have focused on the development of pharmacological strategies for the treatment of Duchenne muscular dystrophy. Dr. Sweeney's basic research efforts address the structure and function of members of the myosin superfamily of molecular motors. Recent efforts have mostly focused on the unconventional myosins, myosin V and myosin VI.

Summary of presentation: Discussion of two research projects initiated in 1998, just prior to becoming chairman of department represent the two extremes of his research program. Speaking about his efforts to find and characterize a member of the myosin superfamily that moves in the reverse on actin, and his work to create a therapy for patients with genetic diseases in which the disease-causing mutation is a point mutation that results in a premature stop codon.