Nicholas K. Gonatas, MD Receives the ASIP 2009 Gold Headed Cane Award

Dr. Nicholas Gonatas, Professor of Pathology and Laboratory Medicine at the University of Pennsylvania School of Medicine, has been selected to receive the ASIP Gold-Headed Cane Award. This is the ultimate honor granted to an ASIP member in recognition of long-term contributions to pathology, including outstanding research and teaching and overall excellence in the field.

Dr. Gonatas' major research contributions have been on the structure and function of the Golgi apparatus, first defining its structure during mitosis and its interdependence with microtubules. He then defined the role of the trans-Golgi network in the retrograde transport of ligands from the plasma membrane to the organelle. These studies also first demonstrated the value of lectin-peroxidase conjugates in studies of neuroanatomic pathways, now a widely used technique. Dr. Gonatas is now utilizing modern biochemical and molecular tools in his research and has demonstrated a novel protein associated with the Golgi, as well as fragmentation of the Golgi, perhaps linked to the pathogenesis of amyotrophic lateral sclerosis (ALS).

Among his accomplishments, he has made numerous other fundamental observations to human neurological disease. Dr. Leonard Jarett writes that his "work has always revolved around the Golgi apparatus and he has made significant contributions to our understanding of the trafficking to and from that area of the cell and its role in ALS as well as Alzheimer's disease." He was the first to relate congenital myopathies to mitochondrial lesions.

His studies of experimental allergic encephalomyelitis, which may be relevant to multiple sclerosis and other human neuropathies, first demonstrated the pathogenic role of T lymphocytes as well as the genetic control of susceptibility. All told, his findings have marked a career of major and continuing contributions to the structure and function of neural cells and the mechanisms underlying their diseases.

Dr. Gonatas led the Neuropathology section of the Department of Pathology and Laboratory Medicine at the University of Pennsylvania from 1964 to 2000, providing outstanding diagnostic service and working effectively with neurologists and neurosurgeons in the care of patients with neurological disease. The Neuropathology Training Program he established and directed at the University of Pennsylvania has attracted the most promising individuals in this discipline for well over 25 years, including such well-known neuroscientists as Gambetti, Trojanowski, Messing, Oberholzer, Levy, and Hickey. He has organized and led the teaching of fundamental neuropathology and related neurobiology to medical students throughout his time, and has trained numerous pathology residents and fellows who have gone on to leadership roles in academic medicine and other institutions.

In describing Dr. Gonatas, Dr. William F. Hickey, M.D. of Dartmouth Medical School, a former mentee, says he is "most complex". Explaining, "He is charming, witty, gregarious and animated. He loves to joke and tease, and can balance joviality with seriousness and compassion. He cares deeply about people and takes a personal interest in the success and well-being of those who work with and for him. Yet, at the most fundamental level his most penetrating
traits are an insatiable curiosity and an inquisitive mind." He goes on to say, "These have permeated every aspect of his career. His quest to understand the function of the neuronal Golgi apparatus and its role in neurological disease is an effort spanning decades. He has gained successes in persistent enigmas, rather than applying the technology du jour to random or trivial questions. He is a superb scientist and a critical intellect."

Dr. Gonatas earned his B.A. from Anatolia College, Thessaloniki, Greece and his M.D. from Thessaloniki University Medical School. He completed an internship in Internal Medicine at the Jersey City Medical Center and completed his residency in Pathology at the Montefiore Hospital in New York. Among his many honors, he was awarded the ASIP Rous-Whipple Award in 1994.

Dr. Gonatas received the Gold-Headed Cane, a mahogany cane topped with a 14-karat gold head and engraved band, at the ASIP Annual Meeting in New Orleans on April 20, 2009.