Professor of Pathology Nicholas K. Gonatas Graduated from Aristotelion University of Thessaloniki



It is with great sadness that we announce on October 7, 2014 the death of Dr. Nicholas K. Gonatas, Professor of Pathology & Laboratory Medicine, luminary neuropathologist, world-class researcher, founder of the Division of Neuropathology at Penn and outstanding teacher and mentor to scores of pathology fellows, residents, graduate students and postdoctoral fellows.

Dr. Gonatas had been a faculty member at Penn for 50 years and he was a legend amongst Pathologists, Cell Biologists and Neuroscientists. His family originated from Asia Minor, the land of the lonians and of the first scientists and settled in Thessaloniki, the capital of the province of Macedonia in mainland Greece. Dr. Gonatas survived the Nazi occupation, graduated from the Aristotelian University and came to the US where he trained in neuropathology, experimental pathology and cell biology at Albert Einstein College of Medicine in New York with legendary physicians and scientists: Lucien Rubinstein, Harry Zimmerman, Bob Terry, Saul Korey. In 1964 Dr. Gonatas was recruited to Penn where he built one of the finest neuropathology divisions in the country.

During his remarkable scientific and clinical career Dr. Gonatas published more than 220 manuscripts many of them in journals such as *Nature, Science, Journal of Cell Biology, American Journal of Pathology, Journal of Neuroscience, PNAS*. In cell biology his work on mitosis, which

resulted in a citation classic publication, was the first to describe in detail the ultrastructure of mitosis. His work on axonal transport, again another citation classic, was the first to describe retrograde axonal transport, receptor-mediated endocytosis and Golgi trafficking. In clinical neuropathology he described four myopathies: myotubular (centronuclear) myopathy, nemaline myopathy, mitochondrial myopathy and oculopharyngeal muscular dystrophy. He introduced the concept of organelle pathology as key underlying factor in the pathogenesis of many inherited neurological diseases, paving the way to better classification of these disorders (such as lysosomal or mitochondrial diseases) and to better understanding of their etiology and pathogenesis. In experimental neuropathology and following closely his work in cell biology, he discovered that disruption of the Golgi apparatus is an early and hallmark lesion of motor neuron degeneration. He also described synaptic alterations as an early manifestation of neurodegeneration in Alzheimer's Disease. And the list goes on and on. His NIH grant support, which included two Senator Jacob Javits awards, had been one of the longest that any individual scientist had in the history of the NIH.

Dr. Gonatas received numerous fellowships and awards including fellowships from the Guggenheim and Josiah Macy Foundations, the Rous-Whipple award and the Gold Headed Cane award from the American Society for Investigative Pathology, the Meritorious Award for Contributions to Neuropathology from the American Association of Neuropathologists (AANP) and numerous teaching awards. He served as AANP president and in 1984 he was elected corresponding member of the Academy of Athens.

Dr. Gonatas established a distinguished national and international neuropathology training program in the USA and built a Division populated by faculty with very strong experimental programs. He trained more than 30 Neuropathology Fellows; many of them continue in his mold, as physician-scientists combining basic or translational science with clinical neuropathology.

Dr. Nicholas Gonatas is survived by Jackie, his loving wife and lifelong scientific collaborator, their children Marina and Dinos and their familes.

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