

## IN MEMORIAM

## IN MEMORIAM—Norton Herbert Neff, Ph.D. (1935–2022)

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With sorrow, we announce that Norton Herbert Neff, ACNP Fellow Emeritus, died on September 5th, 2022, at the age of 87. He was elected to ACNP Membership in 1977 and became a Lifetime Fellow in 2003.

Born in Philadelphia, Norton completed his undergraduate and graduate studies in Pharmacology and Chemistry at the Philadelphia College of Pharmacy and Science. He did his postdoctoral research under Bernard Beryl Brodie at the Laboratory of Chemical Pharmacology, National Heart Institute (1963–1965), and Erminio Costa at Columbia University (1965–1968).

In 1968, Norton joined Costa in the newly established NIMH Laboratory of Preclinical Pharmacology at Saint Elizabeth's Hospital and became Chief Section of Biochemical Pharmacology in 1970. In 1984 he moved to academia to lead the Department of Pharmacology at the Ohio State University College of Medicine (1984–2000), where he was a Professor of Pharmacology, Neuroscience and Psychiatry. He served as Assistant Dean for Graduate Student Education (2004–2007), and Director for Medical Student Research Education (2007–2010).

Over his 42-year career, Norton made groundbreaking contributions to the field of neuropsychopharmacology. His pioneer-

ing work expanded our knowledge of brain biogenic amine systems and helped to establish the neurochemical bases of neuropsychiatric disorders and drug treatments as we know them today. By developing the techniques to measure monoamine metabolism, he contributed critically to our modern understanding of dopamine synthesis and turnover, demonstrating light-stimulated activity of tyrosine hydroxylase in the retina, and providing the first evidence for the regulation of aromatic L-amino acid decarboxylase, an enzyme involved in the treatment of Parkinson's Disease. His characterization of monoamine oxidases demonstrated their role in biogenic amine metabolism and provided the foundational evidence for the use of MAO inhibitors as antidepressants. In other early work, he described the presence of angiotensin-converting enzyme in the brain, its role in regulating neuropeptide signaling and investigated GABAB, muscarinic, and adenosine receptor signaling. During his tenure at OSU, he teamed with his wife and longtime research colleague, Dr Maria Hadjiconstantinou to publish seminal research on the regulation of L-DOPA decarboxylase in the striatum, the neurotrophic effects of GM1 ganglioside, and the contribution of opioid peptides to nicotine's action in the brain.

Norton further distinguished himself as an academic and educator, tirelessly working with dedication and enthusiasm for his students. Admired and cherished by all, he promoted graduate student education, advocated for research education, and established a fund to support the research training of medical students. He was a wise and patient mentor and a caring teacher beloved by many. As an active and highly respected member of the OSU and Neuroscience community, he served in a number of committee and editorial posts, was elected to the OSU Senate, sat on the OSU Foundation Board of Directors and Executive Committee.

Norton was more than a gifted academician and scientist. He was humble, with a quiet demeanor that radiated wisdom, thoughtfulness, kindness and generosity. He was a devoted husband, a loving father, a loyal friend, art enthusiast, and talented artist. He is survived by his wife Maria, sons Stephen and Erik, daughters Beth-Ellen and Lisa, seven grandchildren and four great grandchildren. He touched many lives and will be missed.

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