

OBITUARY

Obituary: In Memory of Michael Jonathan Zigmond, Ph.D., September 1, 1941–August 28, 2023

Dr. Michael Jonathan Zigmond died on August 28, 2023, in East Falmouth, Massachusetts at the age of 81 (Fig. 1). He was the son of the late Kate (Levy) and Rabbi Maurice Zigmond and was born in Waterbury, Connecticut. He earned his BS in chemical engineering at Carnegie Institute of Technology (currently, Carnegie-Mellon University) in 1963 and obtained a PhD in Biopsychology at the University of Chicago in 1968. After completion of postdoctoral training at Massachusetts Institute of Technology, he joined the faculty at the University of Pittsburgh in 1970. He became a Professor Emeritus of Neurology at the University of Pittsburgh in 2017. Since 2011, he also served as a Distinguished International Professor at Fudan University in China.

Over the course of his tenure at the University of Pittsburgh, Dr. Zigmond worked hard to nurture and develop the Neuroscience graduate training program. He was an experienced teacher of the neurobiology of disease and responsible for several career advice training courses. He was the leader of a research program on “Neurobiology of the Brain in Health and Disease” sponsored by the National Institutes of Health (NIH) and the Department of Defense, until his retirement in 2017. In 1985, he began to run the “Survival Skills and Ethics Program” workshops on professional skills, which were offered to both faculty and students, and included training in the responsible conduct of research at the University of Pittsburgh.

Dr. Zigmond was the senior editor of the textbooks *Fundamental Neuroscience* (since 1979) and *Neurobiology of Neurological and Psychiatric Disorders* (since 2014). From 2000 to 2018, he served as Editor-in-Chief for the journal *Progress in Neurobiology*. He served as an advisor to the *National Academy of Sciences*. He was also president of the *Association of Neuroscience Departments and Programs* in 1991 and received its Award in Education in 1999. He was elected

fellow of the *American Association for the Advancement of Science* in 2009. Dr. Zigmond was also a member of a *US Institute of Medicine Taskforce* on research integrity. He chaired the first committee in publishing the *Guidelines for Responsible Conduct Regarding Scientific Communication*. He was the secretary of the *Society for Neuroscience* from 1994 to 1995. In an effort to promote diversity, he chaired the Program Advisory Committee for the NIH-sponsored program at Universidad Central del Caribe in Puerto Rico. Moreover, he served on the Roundtable Committee of Social Issues (1996–2002), the committee of Minority Education, Training, and Professional Advancement (1997–2000), and the Society for Neuroscience Committee on Women (1999–2003).

Dr. Zigmond made many remarkable contributions to our understanding of basic neuroscience. His main research interests focused on neuronal dysfunction and cell death in neurodegenerative diseases such as Parkinson’s disease. His laboratory worked on three main topics: (1) aging-related behavioral deficits and the potential benefits of exercise and trophic factors; (2) the loss of dopamine neurons and their compensatory



FIG. 1. Dr. Zigmond as a Professor of Neurology, Psychiatry, and Pharmacology at the University of Pittsburgh (1970–2017), where he conducted research in aging and Parkinson’s disease. [Color figure can be viewed at wileyonlinelibrary.com]

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mechanisms in early to mid-stage Parkinson's disease; and (3) the impact of chronic stress on the brain. His research spanned in vivo and in vitro models, including rats, mice, dissociated primary neurons, and organotypic cultures. His lab pioneered the use of in vivo microdialysis and high-performance liquid chromatography to measure alterations in catecholamines in the brains of rodents. Dr. Zigmond achieved an H-index of 86 and published ~200 articles in peer-reviewed journals. His articles have been cited nearly 30,000 times according to Google Scholar. Three manuscripts of his were cited greater than 1000 times.

The main achievements of Dr. Zigmond's include:

- Behavioral and neurochemical characterization of the 6-hydroxydopamine model of Parkinson's disease.
- Compensatory biochemical mechanisms that are naturally engaged after lesions of dopaminergic neurons.
- Evaluation of the effects of acute and chronic stress on the in vivo release of dopamine in forebrain structures.
- Neuroprotective effects of trophic factors and forced limb use against experimental Parkinson's disease.
- Assisting trainees from numerous labs in ethics training and survival skills.

Dr. Zigmond was kind and sensitive and had a great sense of humor. He was incredibly generous with his

time, mentoring over 50 scientists. He was a clear thinker and helped his trainees think about the big picture while also being aware of all the "small" details. Dr. Zigmond and his wife Naomi often hosted dinners at their home for his trainees and colleagues, during which he shared his passion for classical music and art, including African art.

We are saddened by the loss of an outstanding mentor and scientist. Dr. Zigmond is survived by his wife Naomi (Kershman) Zigmond and their children, Leah and Dan; his brother Richard; his four grandchildren; and numerous trainees, colleagues, and collaborators worldwide.

Data Availability Statement

Data openly available in a public repository that issues datasets with DOIs.

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