

Tomoko Ohnishi, Biochemistry and Biophysics

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Tomoko Ohnishi, professor of biochemistry and biophysics who taught at the University of Pennsylvania for more than 52 years, died peacefully at her home in Radnor, Pennsylvania, on March 17. She was 88.

Dr. Ohnishi was born in Kobe, Japan. In her youth, she was a competitive figure skater and downhill slalom skier in Japan. She earned her bachelor's in chemistry in 1956 and master's in biochemistry in 1958, both from Kyoto University, and she received her PhD in biochemistry in 1962 from Nagoya University, where she first developed her passion for understanding cellular respiration.

Tomoko Ohnishi

After a postdoc in Osaka with Dr. Hagihara and time in both Sweden and Germany, Dr. Ohnishi came to the University of Pennsylvania in 1967 as a visiting assistant professor in biophysics and to work as a postdoctoral fellow within the Johnson Research Foundation under the guidance of Director Britton Chance, founder of what is now the department of biochemistry and biophysics (formerly physical biochemistry). Dr. Ohnishi stayed at Penn's Perelman School of Medicine, rising through the ranks, becoming a full professor in the department of biochemistry and biophysics in 1996. She remained an active faculty member until her death.

According to Kristen Lynch, Benjamin Rush Professor and current chair of the department of biochemistry and biophysics, "Tomoko was a tenacious and dedicated scientist, whose work influenced countless colleagues and younger scientists." While at Penn, Dr. Ohnishi built a world-class research laboratory, funded by the National Science Foundation and National Institutes of Health for decades, and produced over 200 research publications. Dr. Lynch noted that Dr. Ohnishi was "a true pioneer in understanding the inner workings of the respiratory electron transport chain that couples oxidation to the production of ATP.... Tomoko's work also provided a map with which to locate dysfunction of Complex I in neurodegenerative diseases, neuromuscular diseases and aging. She appreciated before most, that understanding the inner workings of Complex I is crucial for the future of medicine, and devoted her life's work and passion to deciphering the mysteries of how this key component of the respiratory chain supports life. As an expert practitioner of electron paramagnetic resonance spectroscopy and a thought leader in this field, few have contributed more than Tomoko to the story of Complex I as an exquisite enzyme. Without a doubt, as this story is exploited for developing new medicines, Tomoko's contributions will continue to appreciate in both value and impact."

She is survived by her children, Hiroshi (Bonnie) and Noriko Lovasz (John); and grandchildren Megumi, Lorelei, Akira and Gavin.

Those wishing to send memorial contributions may send them to: The Penn Fund, University of Pennsylvania, Suite 300, 2929 Walnut Street, Philadelphia, PA 19104-5099 (put "Dr. Tomoko Ohnishi" in the memo).