MEMORIAL RESOLUTION OF THE FACULTY OF THE UNIVERSITY OF WISCONSIN-MADISON

ON THE DEATH OF PROFESSOR ANN E. KELLEY

Ann E. Kelley, Wisconsin distinguished neuroscience professor in the Department of Psychiatry, died at her home on August 5, 2007. She was born on February 5, 1954 in Milton, Massachusetts to Elizabeth and Francis Kelley. It was a trip to Harvard University during her high school years at The Winsor School, a private girls' school in Boston, that sparked her interest in neuroscience. She continued her education at the University of Pennsylvania where she received her bachelor's degree in 1976. She was the first graduate of the Biological Basis of Behavior major, a major she helped create, and was the captain of both the lacrosse and field hockey teams. As an All-American lacrosse player, Ann won the prestigious Class of 1946 Award at graduation from Penn as the highest achieving student athlete.

Ann traveled to Cambridge University, England, in the mid-1970s on a prestigious Thouron scholarship, as a graduate student with Susan Iversen, a world-renowned neuropharmacologist. She was in one of the first classes of women to be admitted to Trinity College – an achievement that made her both proud and amused. Her work with Dr. Iversen led to the important discovery of the role of Substance P inputs to the dopamine cells of the ventral tegmental area and, more generally, provided the novel insight that brain peptides could control the ascending dopamine systems. Part of this work was published in *Nature*. She graduated with her Ph.D. in 1979 and moved back to the United States to complete her post-doctoral work.

Ann's postdoc work took her back to the place where her interest in neuroscience began, Harvard University, where she worked with celebrated neuroanatomist, Walle Nauta. Ann's observation of anatomical connectivity between the basolateral amygdala and the nucleus accumbens was one of her most-cited contributions. The concept that the accumbens was an anatomical interface between motivation and action was a conceptual touchstone for her subsequent research career and literally revolutionized the field. Personal circumstances then led her to return to Europe from 1982-1986, gaining tenure at the well-known Inserm in Bordeaux, France, where she worked with Louis Stinus while becoming fluent in French.

Returning once more to the U.S., Ann became an assistant professor in psychology at Harvard University and subsequently took an associate professorship at Northeastern University. She joined the faculty in the Department of Psychiatry at the University of Wisconsin-Madison in 1993. Ann quickly earned the rank of full professor and, in 2006, was awarded the title of Wisconsin distinguished neuroscience professor, an endowed professorship. At Northeastern and then Wisconsin, her research interests returned to the functional analyses of the striatum via collaborations with a succession of gifted students and post-doctoral fellows that enabled the mapping of the dorsal and ventral striatum for motor and motivational elements of appetitive behaviors. She was one of the first to analyze the functional implications of the recently identified subdivisions of the core and shell subregions of the nucleus accumbens, a seminal contribution that has prompted over a decade of research in the field. By systematically delineating the neuroanatomical, neurochemical, and behavioral mechanisms that enable organisms to learn about rewarding stimuli, Dr. Kelley showed that similar substrates mediate the reinforcing effects of drugs of abuse and highly palatable, high-fat (junk) food. Highlights of her research career at Wisconsin were her demonstration of a role of NMDA receptors in appetitive instrumental conditioning (1997) published in the *Proceedings of the National Academy of Sciences* and receiving a National Institute for Drug Abuse Merit Award (2003).

Perhaps Ann's most significant contribution was the selective coding of consummatory behavior in terms of opioid modulation of neural circuitry, including the shell region of the accumbens and the lateral hypothalamus. This research related the new approaches to the neural basis of motivation, which she had

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partly instigated, back to classical concepts of hypothalamic control, nurtured by her original undergraduate mentors, including Eliot Stellar and Alan Epstein. She became a key figure in the revival of interest in the neural control of feeding behavior and obesity. This work received attention in the popular press, including segments on the BBC and the CBS Evening News. She was also invited to give a lecture on this work at the Nobel Institute in Stockholm, Sweden in 2005. Her work is widely recognized for advancing our understanding of the neurobiology of reward, motivation and addiction.

In addition to her outstanding research, Ann was deeply committed to developing the next generation of neuroscientists. She served as chair of the Neuroscience Training Program, the Ph.D. program in neuroscience at UW-Madison, from 2000-2005. Under her stewardship, the program successfully renewed its NIH training grant, expanded the number of students, and participated in the Carnegie Initiative on the Doctorate, a national cross-disciplinary study focused on improving the status of Ph.D. training in the United States. Her laboratory was known as a successful training ground for future behavioral neuroscientists. The many graduate students and postdoctoral fellows she trained have gone on to successful careers. Recognized as a role model at balancing motherhood and her career, she generously mentored female scientists at all levels from undergraduates to faculty colleagues.

She recently reached the pinnacle of a distinguished professional career by being appointed as editor-in-chief of *Behavioral Neuroscience*, the leading journal of the field, and receiving the accolade of the Society for Neuroscience Mika Salpeter Lifetime Achievement Award in 2006. At the 2007 meeting of the Society for Neuroscience, the Association for Neuroscience Departments and Programs awarded her the 2007 Special Achievement Award posthumously in recognition of her contributions and long-standing commitment to neuroscience education.

At the time of her premature death from colon cancer, Ann Kelley was one of the leading behavioral neuroscientists in the world. Her reputation as an eminent researcher and educator was enhanced by her zestful and eloquent talks at conferences and by a stream of beautifully written articles, reviews, and chapters that reflected her keen scientific mind and her vibrant and irresistible personality. Her loss will be especially felt here at the University of Wisconsin-Madison, but resonates throughout the places she worked and with the friends she made, in what was truly an international career.

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