

Obituary for Dr. Nancy Zahniser



Dr. Nancy Rutledge Zahniser, Ph.D., passed away peacefully at her home in Denver Colorado on May 5, 2016 after being diagnosed with neuroglioblastoma in December 2014. After she received her B.A. in Chemistry from the College of Wooster in Ohio in 1970, Dr. Zahniser spent a year teaching high school at the Woodstock School in Mussoorie in India. She returned to the U.S. for her graduate studies under Dr. Israel Hanin at the University of Pittsburgh, where she received a Ph.D. in Pharmacology in 1977. Dr. Zahniser did her post-doctoral training in the lab of Dr. Perry Molinoff at the Department of Pharmacology in the School of Medicine at the University of Colorado Health Sciences Center in Denver, CO. Subsequently, she was hired by that department and rose quickly through the ranks to become Full Professor with tenure in 1991.

Dr. Zahniser's research focused on better understanding the brain neurotransmitter dopamine (DA) and the addictive drugs that alter its function. She was the first to demonstrate that DA receptor binding is influenced by guanine nucleotides and that release-regulating presynaptic D2 DA autoreceptors exist on rat striatal neurons. She was a major contributor to the literature describing how these DA autoreceptors and the DA transporter (DAT) were altered by repeated cocaine exposure. She and her lab developed a novel rat model based on differential locomotor responsiveness to cocaine which indicated that lower initial cocaine sensitivity was explained by a higher basal number of DATs. She also helped to characterize a tagged-DAT knock-in mouse that provides a major advance by allowing DAT trafficking and regulation studies to be conducted in brain tissue, as opposed to model cell expression systems. Her results further supported the idea that rather than being statically expressed at the cell surface, DAT levels are dynamically responsive and help to sculpt DA neurotransmission, particularly after repeated exposure to cocaine.

Dr. Zahniser was thoroughly committed to helping both graduate student and postdoctoral trainees advance their own careers, mentoring the research projects of 9 thesis students and 22 postdoctoral fellows in her lab. Many of her graduate students and post-doctoral trainees now run their own independent neuroscience laboratories. In addition to serving as vice-chair and acting chair of the Department of Pharmacology from 2003-2006, Dr. Zahniser was also the CU School of Medicine Associate Dean for Research Education from 2007-2012, serving as a resource for persons applying for training grants, fellowships and career awards. She directed an NIAAA-supported postdoctoral training grant, NIGMS-funded predoctoral pharmacology training grant and ASPET-supported Summer Undergraduate Research Fellowship program for under-represented students. She served as a regular member of two NIH study sections, the NIDA National Advisory Council and the NIDA Intramural Research Program Board of Scientific Counselors as well as an *ad hoc* member of numerous other NSF and NIH review panels

Dr. Zahniser was an avid member of the Society for Neurosciences and the American Society for Pharmacology and Experimental Therapeutics (ASPET) in the Neuropharmacology Division. She received both the 1984 and 2014 Award in Excellence in Pharmacology/Toxicology from the PhRMA Foundation honoring her career achievements in the field of dopamine regulation in drug addiction. She served as ASPET secretary-treasurer in 2001-2002 and was selected as a fellow in the prestigious Executive Leadership in Academic Medicine (ELAM) program for women in 2005-2006. She routinely participated in Catecholamine Society events.