

YOUR ENDOWMENT UPDATE



**LAURA A.
VOLPICELLI-
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Associate Professor

UAB Center for
Neurodegenerative
Disease and
Experimental
Therapeutics

Parkinson Association of Alabama Endowed Professorship

Book Value as of February 28, 2025:	\$500,000
Market Value as of February 28, 2025:	\$604,686
Projected Spendable Earnings for fiscal year 24/25:	\$23,908

Thank You Message

I appreciate the Parkinson Association of Alabama's support through the Parkinson Association of Alabama Endowed Professorship. Without help from this fund, my lab would not be able to function. Your investment helped purchase a confocal microscope as National Institutes of Health grants do not allow purchase of large equipment. The microscope is key for analyzing synapses in Parkinson's disease brains and models of disease. We have shown reduced function of synapses, a site of neuron-to-neuron communication. These findings could lead to novel ideas of how to prevent progression of the disease. The funding also helped support Ph.D. students and medical trainees who are internationally recognized for their work and who will be the next generation of Parkinson's disease fighters.

Update

During the 2023-2024 fiscal year, The Volpicelli-Daley Lab published six articles, either directly from the lab or as part of a collaboration, showing that neuronal communication is blocked early after formation of alpha-synuclein aggregates, a hallmark of Parkinson's disease. Initial work supported by Parkinson Association of Alabama Endowed Professorship fund was leveraged to secure additional funding from the Aligning Science Across Parkinson's disease and Michael J. Fox Foundation to continue the work. The lab also showed that the cortex, an area of the brain important for cognition, contains alpha-synuclein aggregates and aggregates of a protein, tau. Although the Parkinson's scientific community thinks that synuclein and tau aggregate together, we showed the aggregates are distinct and could independently interrupt brain circuitry. This publication will help Dr. Luke Fischer, M.D., Ph.D, former UAB Neurology resident, to apply for National Institutes of Health K awards.

During the same fiscal year, the lab had two students earn their Ph.Ds. Nolwazi Gcwensa was the first in her village in South Africa to earn

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this highest academic degree. The other student, Casey Mahoney, was the first in her family to attend college, much less earn a Ph.D.

Biography

Dr. Volpicelli-Daley has two decades of experience researching neurodegenerative diseases, including Alzheimer's disease and Parkinson's disease, in pursuit of treatments to stop the progression of Parkinson's disease and Lewy Body dementias. She and her lab team also study gene mutations that increase susceptibility to cognitive impairments.

Dr. Volpicelli-Daley is dedicated to mentoring the next generation of researchers as associate director of UAB's Neurology Resident Research program and through the Faculty Medical Scientist Training Program at UAB.

Her impact in her field goes beyond campus through her work as an ad hoc reviewer on National Institutes of Health projects and as a member of the U.S. Department of Defense Parkinson's Disease Research Program Panel. She also serves as the associate journal editor for *eNeuro* and *Neurobiology of Disease*.

FOR MORE INFORMATION

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