AI IS A FORCE MULTIPLIER FOR NEUROPATHOLOGY AT UC DAVIS

DEMENTIA RESEARCH IS SUPPORTED BY A GIFT FROM
THE SUSAN AND CHARLES BERGHOFF FOUNDATION

PRESS RELEASE

MORGAN HILL, Calif., June 9, 2026 /PRNewswire — At the University of California, Davis, collaborative dementia research between the School of Medicine and the College of Engineering is being funded by a $420,500 gift from the Susan and Charles Berghoff Foundation with major support from William Ballhaus (UC Davis '89) and Darrin Mollett.

AggieBrain: AI for Next-Generation Digital Neuropathology*

This initiative leverages Artificial Intelligence to:

- enhance neuropathology research,
- improve understanding of neurodegenerative diseases, and
- support progress toward precision medicine for dementia.

The aim is to assist medical researchers in identifying the biological underpinnings of dementia in order to improve diagnosis and treatment of this complex and devastating brain disorder.

Dementia is a Public Health Crisis

More than 7 million Americans are living with dementia today and their numbers are expected to reach 15 million by 2050. There is no cure yet for neurodegenerative diseases—the primary cause of the most common types of dementia including: Alzheimer's, Lewy body, and vascular diseases; Frontotemporal degeneration; and Mixed-etiology dementia.

AggieBrain leverages machine learning (ML) tools to help analyze massive amounts of brain autopsy data from brain tissue slides generated by whole slide imaging systems. This greatly reduces the traditionally long and laborious process of manual evaluation.

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The AggieBrain Research Team

AggieBrain is led by UC Davis Professors Chen-Nee Chuah, PhD (College of Engineering) and Brittany Dugger, PhD (School of Medicine).

Chen-Nee Chuah: "We are grateful to the Susan and Charles Berghoff Foundation for supporting our vision. By creating a one-stop research workflow and a centralized collection of carefully labeled brain tissue data, we provide a trusted reference that scientists and AI users can access and analyze in one place." Chuah is Child Family Professor in Engineering and Co-Director of the UC Davis AI Center in Engineering.

Brittany Dugger: "The ultimate goal is to make these tools freely available to researchers worldwide, ensuring that no scientist is limited by computational resources or dataset constraints. We hope this interdisciplinary research leads to new opportunities for precision medicine for dementia so patients can receive the right diagnosis and treatment at the right time." Dugger serves as leader of the UC Davis Neuropathology Core and Associate Professor at UC Davis Health.

Dementia is an umbrella term for a progressive decline in cognitive abilities—such as memory, reasoning, and language—that is severe enough to interfere with daily life. It is not a disease per se, but a clinical syndrome caused by underlying conditions that damage brain cells.**

"It's important to understand that people can have different or multiple types of dementia, and the ability to identify and confirm informs the prognosis and recommended course of treatment," said Dugger.

Donors to AggieBrain Research

Chuck Berghoff: "A dementia patient's clinical symptoms and emerging biomarkers may guide treatment during life, but the neuropathologist's post-mortem brain tissue analysis remains the only way to confirm specific diseases and mixed co-pathologies that caused the dementia. AggieBrain aims to enhance the impact of neuropathology."

Berghoff co-founded the Susan and Charles Berghoff Foundation with his wife Sue. He was her devoted caregiver during her difficult journey with dementia. Sue proactively sought a diagnosis soon after she began experiencing cognitive changes, and became a powerful advocate and philanthropist for dementia research until her passing in May 2025. He serves as the foundation's Chairman.

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William "Bill" Ballhaus: "Convening the knowledge, skills and experience in neuropathology and AI/Machine Learning at UC Davis makes good sense. Providing an accessible framework and tools for researchers to share deep knowledge and large data sets from brain banks is critical to progress in solving the dementia challenge."

Ballhaus is the eldest son of the late Sue Berghoff, a UC Davis College of Engineering alum, and a respected technology executive. He and his wife, Darrin Mollett, both lost a beloved parent to dementia. The couple joins the Berghoff Foundation in finding reason for hope through support for the AggieBrain Initiative.

About the Susan and Charles Berghoff Foundation

We envision a dementia-free world. To make this vision a reality we support dementia research, education programs, and caregiving services. We achieve this through collaboration with research centers, public health agencies and community organizations aimed at improving dementia awareness, diagnosis, treatment and care while promoting brain health and dementia prevention. Visit **www.berghoff-foundation.org/**.

*The term "Aggie" originates from the 1920s when UC Davis was an agricultural and veterinary extension school for the University of California, Berkeley.

** Source: **Cleveland Clinic**.

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