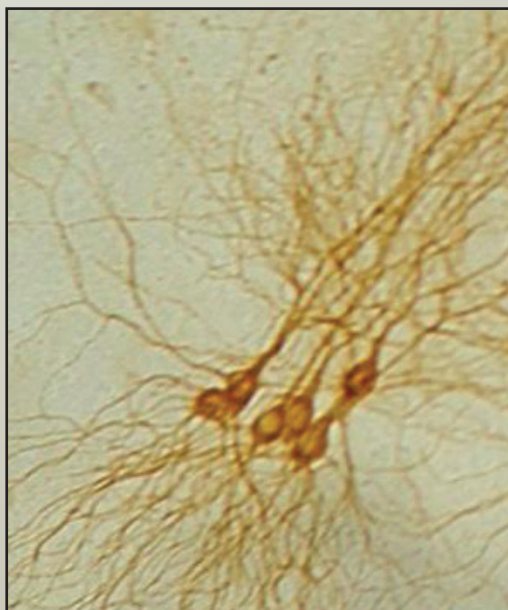


# Alzheimer's Research at The University of North Carolina Pembroke

## Bahr Lab Overview

### Bahr's Research

- Developing strategies to enhance protein clearance pathways that are vital to reduce protein accumulation events linked to Alzheimer's pathology, TBI, and stroke.
- The Bahr Clearance Strategy significantly reduces A $\beta$ 42, APP CTFs, and pathogenic tau in models of Alzheimer's, as well as ameliorates synaptic and behavioral deficits.
- Studying how protein clearance improves synaptic integrity, memory processes, and the maintenance of specialized axons and dendrites of neurons in the brain (below).
- Drug discovery efforts may also lead to protective clearance in early dementia, Parkinson's disease, mild cognitive impairment, traumatic brain injury, and macular degeneration.

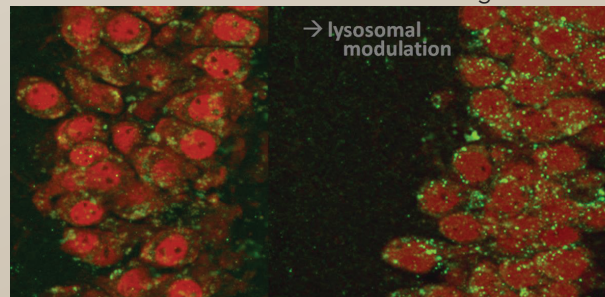


## Dedication to Alzheimer's Disease Research & Knowledge

With the aging of 450 million baby boomers worldwide, Alzheimer's disease is an impending epidemic with a critical need for preventative approaches. Alzheimer-type pathology involves protein accumulation events, and the Bahr Lab has identified avenues for enhancing protein clearing pathways to prevent age-related deficits in proteolytic clearance. Professor Bahr's Ph.D. in chemistry (University of California-Santa Barbara, 1989) identified a target for early AD diagnosis. He was a member of the Pharmaceutical Sciences faculty at the University of Connecticut for 11 years, then was appointed as the William C. Friday Chair & Distinguished Professor at the Pembroke campus of the University of North Carolina in 2009. Professor Bahr has presented his research in 16 countries, has more than 150 publications, and has patents associated with first-in-class drugs for neurodegenerative diseases. He is a member of UNCP's Biotechnology Center and the European Task Force on Brain and Neurodegenerative Diseases. UNCP is the first recipient in the Carolinas of a Coin's for Alzheimer's Research Trust award (CART). Professor Bahr received North Carolina's Governor James E. Holshouser, Jr. Award for Excellence in Public Service, for Alzheimer's disease awareness. He was also the recipient of the 2017 O. Max Gardner Award, the highest faculty honor in the UNC 17-campus system.

## PADK Initiative

Pembroke for Alzheimer's Disease Knowledge



## The Bahr group works with the NIH RISE Program at UNCP

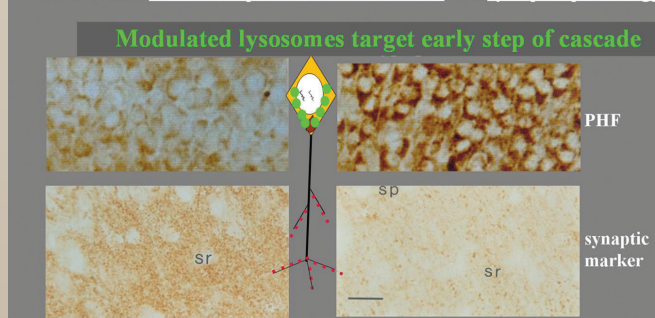


**UNCP-RISE** is a program for students interested in preparing for careers in biomedical or behavioral research.

Our goal is to contribute to the creation of a more diverse scientific workforce by:

- Providing students with opportunities to explore their interest in research
- Enabling students' academic success through special instructional activities
- Enhancing undergraduate research in the sciences at UNCP

Link between **abnormal protein accumulation** and **synaptic pathology**





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**Or call UNCP Office of Advancement:**

Contact Betty Johnson at 910.521.6213

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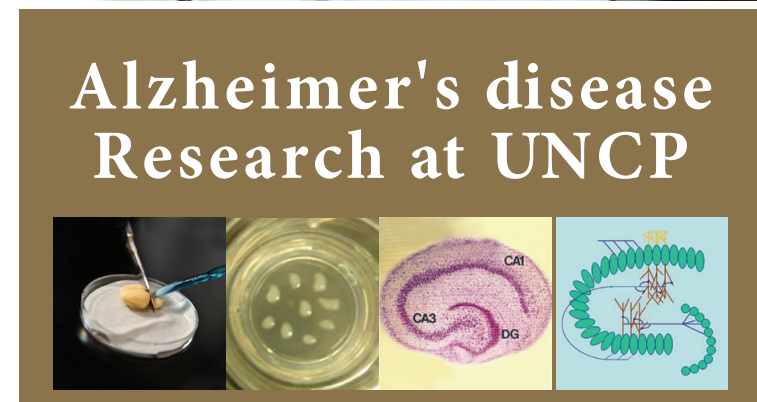
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UNIVERSITY of NORTH CAROLINA  
**PEMBROKE**



**Alzheimer's disease Research at UNCP**

**In the  
William C. Friday Laboratory  
Directed by**  
Professor Ben A. Bahr  
William C. Friday Chair