Bahr Lab Overview

Bahr’s Research
- Developing strategies to enhance a protein clearance pathway that is vital to reduce protein accumulation events linked to Alzheimer’s pathology.

- The Bahr Clearance Strategy significantly reduces Aβ42, 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 an estimated 450 million baby boomers worldwide, Alzheimer’s disease is an impending epidemic with the critical need of preventative approaches. Alzheimer-type pathogenesis is due to suspected imbalances between protein production and protein clearance, and Professor Bahr has identified a lysosomal regulation pathway that can be manipulated to prevent age-related deficits in proteolytic clearance linked to dementia. Professor Bahr received his Ph.D. in chemistry from University of California-Santa Barbara. After being a faculty member at the University of Connecticut for nearly 12 years, he was appointed as the William C. Friday Chair and Distinguished Professor in 2009 at the Pembroke campus of the University of North Carolina – the oldest public university in the nation. Professor Bahr has presented his research in 15 countries, has more than 130 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 Lysosomal Storage Diseases. UNCP is the first recipient in the Carolinas of a Coin’s for Alzheimer’s Research Trust award (CART, 2014-2016), in company with Harvard Medical School, Washington University, and other institutions. Professor Bahr also received North Carolina’s Governor James E. Holshouser, Jr. Award for Excellence in Public Service, in 2013, for Alzheimer’s disease awareness.

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