Dr. Ben Bahr of the University of North Carolina – Pembroke, is the recipient of one of the four CART Fund Research Grants awarded for 2014. [The 4 grants in 2014 totaled $500,000.]

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Alzheimer's Patent Pending, UNCP Scientist Looking to Clinical Trials (Fall 2013)

The following is a UNCP Newswire article, courtesy of Scott Bigelow:

Dr. Ben Bahr is transforming himself from scientist to entrepreneur as he pushes his discoveries on age-related neuro-degeneration closer to an effective treatment for Alzheimer's disease.

The UNC Pembroke scientist is cultivating drug companies to take his research into clinical trials. From a single focus on Alzheimer's disease, he is casting a wider net for all possible applications of his age-defying research. Dr. Bahr's and his attorneys obtained provisional patent No. 61/836,216 (submitted June 18), and with clinical trials costing in the tens of millions of dollars or more, he is searching for funding worldwide.

UNCP's William C. Friday Distinguished Professor of Molecular Biology presented his work on October 11, 2013 in Malta to the 23rd Alzheimer Europe Conference. The theme of the conference was "Living well in a dementia-friendly society."

Dr. Bahr said there is a shift in public perception about dementia and a growing commitment by policy makers to give dementia the attention it so rightly deserves. He said he made progress while in Malta. "I had valuable interactions with scientists and caregiver advisors from dozens of countries, together working towards a dementia-friendly outlook for our aging population, especially to eliminate the stigma for those who are the true experts on dementia - the people living with it," Dr. Bahr said. "Our findings from UNCP were presented with excited feedback. Scientists are looking forward to our future publications."

Leading up to the international conference, Dr. Bahr met with foundations, non-profits, scientists at other universities and business people to learn more about how he should proceed with his intellectual property. “I presented my research to representatives of a number of major funding agencies - the Michael J. Fox Foundation, the Bill and Melinda Gates Foundation and the Alzheimer’s Association,” he said. “They were excited about the research and its future prospects. However, they made it clear that in order to get our ideas to be clinically relevant, we need to get the big pharmaceutical companies interested, because only by partnering with large companies can the expensive clinical trials be conducted. Thus, the strong advice we received was to get our data in a patent application, to secure UNCP’s intellectual property.

“It was our wake up call,” he said in an interview this fall. “This is all new for UNCP, so I have been bending ears and begging for advice from entrepreneurs and patent experts, as well as the people involved in clinical trials in Wilmington, NC. “They have educated me in the intellectual property and partnering world,” he continued. “I have gotten a wealth of information.”

His work in the lab is focused on preventing and/or removing the accumulation of toxic proteins that disrupt the pathways of memory and other transmissions across synapses. The demands of this marketplace are transforming the project. When Dr. Bahr sent his preliminary draft to the patent attorneys, he was advised to put as many options in the application as possible. “This summer, I put our team of undergraduate students to work looking for publications that indicate other diseases that may be helped by our protein clearance strategy,” he said. “We had an interesting summer.”

Mild cognitive impairment, Parkinson’s disease, heart diseases, traumatic brain injury, macular degeneration and more came up on the radar. Dr. Bahr offered 15-20 potential patent claims to the attorneys to cover his lab’s initial application. When the attorneys finished the application, there were 128 claims.

Dr. Bahr’s breakthrough works at the cellular level to stimulate lysosomal activity to “take out the garbage” or the harmful protein accumulations that may affect cells everywhere in the body, not just in the brain. “If youth is defined by more protein growth, aging is about reduced protein clearance,” he said. “We want to turn up the volume of the garbage disposal function of lysosomes in order to get rid of toxic protein species.”

“It is now thought that changes are occurring in Alzheimer’s brains 10-20 years before the disease can be diagnosed,” he said. “Treating those at risk is the goal, and to accomplish that, it’s clear we need to identify Alzheimer’s earlier, perhaps at the mild cognitive impairment stage. In fact, there was a news report last week saying that a simple eye exam may one day detect telltale proteins years before Alzheimer’s disease shows up.”

For more information, Dr. Bahr may be contacted in UNCP’s Biotechnology Research and Training Center at 910.775.4424 or email ben.bahr@uncp.edu.