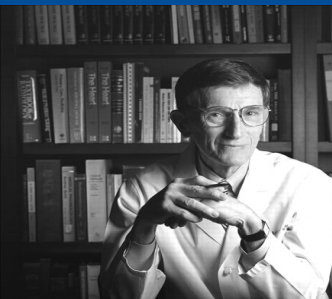


# Volunteer News

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Got an idea for the newsletter? Call 859-323-5550

**Join us live or on-line for the 12th annual Markesbery Symposium on November 19, 2022!**



**Understand the latest discoveries for healthy brain aging and our efforts to move closer to cures for all types of dementia!**

You won't want to miss this year's exciting program! We will once again be hosting the program live at the Central Bank Center in downtown Lexington and also providing an on-line hybrid option using ZOOM for those that do not feel comfortable attending in person. You can join us live for breakfast and the symposium or engage over your smart phone or any device connected to the internet.

Our Keynote Speakers this year include Drs. Ann McKee (Director of the Boston University ADRC and international leader in Chronic Traumatic Encephalopathy (CTE) research) and Josh Grill (Director of Outreach & Recruitment for the University of California, Irvine ADRC and an international leader in research engagement). Dr. McKee's work on CTE is highlighted on page 2, and Dr. Grill's work in research engagement is on page 4 of this newsletter. Of course, we could only scratch the surface, so please come hear them both at the symposium.

The keynote presentation will be followed by an interactive panel discussion, moderated by our own Dr. Donna Wilcock. Panelists include Drs. McKee, Jicha, Whitehurst, and Rhodus. **We hope to see you there to get YOUR questions answered directly by a panel of experts!** A registration link can be found at: <https://medicine.uky.edu/centers/sbcoa>

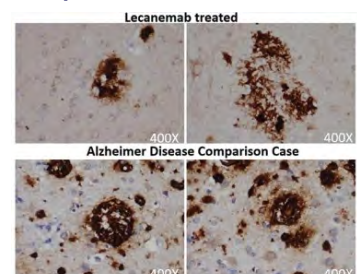


**New Phase 3 Trial results for Lecanumab (BAN2401) make headline news and this new medicine is poised for potential full FDA approval late this winter 2023**

**Its an exciting time as new disease-modifying medicines move forward, closer to our community pharmacies and care centers every day!**

On September 26, 2022, new Phase 3 results of Lecanumab, an antibody that removes Alzheimer plaques from the brain were welcomed by the research community and millions who have MCI and or early AD.

The results lock in the data needed for full FDA approval of the first disease modifying therapy for AD. Of course, it is not the cure we are looking for, but it is a good start! The data highlight the safety of the drug and show that it can slow early AD by 27% over a short 18 month period. This might translate to (cont. on page 2)



## Phase 3 Trial results for Lecanumab (cont from pg 1)



years of quality of life that our currently approved medicines cannot provide. Over an average 6-year time course for MCI and early AD, this could translate to over 18 months before the disease progresses to the more moderate and severe stages.

Of course there may be many hurdles to face on the path to drug approval. We have seen this previously with Biogen's Aducanumab, that ultimately failed to achieve full FDA approval (lacking definitive Phase 3 data) and an additional failure to convince the Centers for Medicare & Medicaid services to cover the costs of this drug. The new results for Lecanumab, may be able to avoid such hurdles as the Phase 3 data appears to be solid in its findings and many scientists and doctors hold high hope that the FDA will approve this drug.



Here at the Sanders-Brown Center on Aging, we have been working with this drug for over 10 years, taking it from Phase 1, through Phase 2, and now through Phase 3. Dozens of Kentuckians have engaged and many have experienced the potential benefits first hand. Of course we are working on the development of dozens of other, newer and potentially safer and more powerful medicines for AD. We promise to not stop until we have the cures we are looking for and you can be part of that discovery!

If you would like to help us find better medicines and one day a cure for Alzheimer's, contact us today at the Sanders-Brown Center on Aging Clinic at (859) 323-5550.

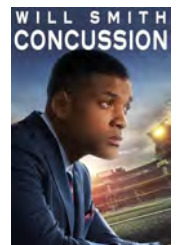
## Dr. Ann McKee's international leadership in the discovery and advancement of our understanding of Chronic Traumatic Encephalopathy (CTE)

### How one woman stood up to and "tackled" the entire NFL...

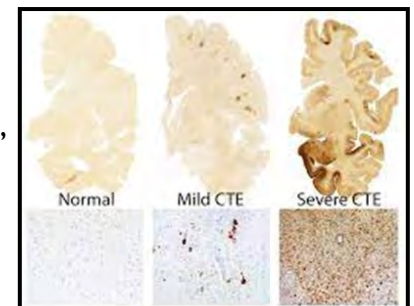


Despite the provocative title, Dr. McKee is not the NFL's enemy, but rather she is the most ardent supporter of NFL players. Her work began decades ago investigating the neuropathology seen in NFL players that had repetitive mild concussions and developed an early onset form of dementia, now recognized as CTE.

CTE was first described in 1928, when Dr. Harrison Martland described a group of boxers as having "punch drunk syndrome." Over the next 75 years, several researchers reported similar findings in boxers and other victims of brain trauma, but fewer than 50 cases were confirmed. In 2005, a pathologist named Bennet Omalu published the first evidence of CTE in an American football player: former Pittsburgh Steeler Mike Webster. Dr. Chris Nowinski, envisioned the world's first athlete brain bank, and began reaching out to the families of NFL players and other athletes to arrange brain donations. He and Dr. Robert Cantu soon founded the Concussion Legacy Foundation and partnered with Dr. Ann McKee to create a Brain Bank that has revolutionized how we understand the disease, with more than 1,000 brains donated. The story of CTE was popularized in a 2015 Hollywood blockbuster starring Will Smith, that we think you might enjoy!



Dr. McKee has since fully described the pathology and also has led efforts to develop clinical diagnostic criteria allowing the diagnosis to be made in life. CTE has tangles similar to those found in AD but in different areas of the brain, and does not have the amyloid plaques seen in AD. Persons with CTE can develop symptoms as early as in their 20's that include memory problems, but also severe depression, mood swings, aggression, and suicidality. Increasing awareness of CTE has led to the major NFL concussion settlement that supports players with concussion related disability such as that seen in CTE.

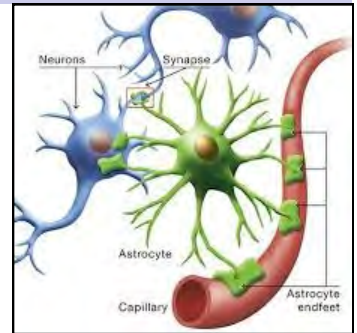


Dr. McKee has now replaced Joe Namath as my favorite NFL superstar! Way to go Dr. McKee!!!



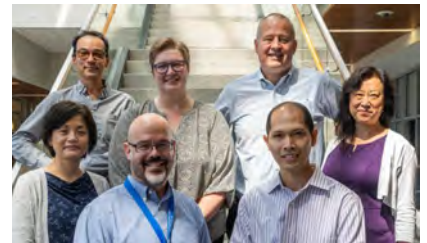
## Astrocytes: the forgotten cell in Alzheimer’s disease?

A team of researchers, led by Dr. Chris Norris at the University of Kentucky’s Sanders-Brown Center on Aging (SBCoA) has been awarded a \$20.5 million grant from the National Institute on Aging (NIA) of the National Institutes of Health (NIH). The large project is named Strategies for Targeting Astrocyte Reactivity in Alzheimer’s Disease and Related Dementias (STAR-ADRD). Norris says the acronym they came up with serves a double meaning as astrocytes — the focus of their project — are star-shaped glial cells.



“Astrocytes are, in some ways, a forgotten cell in neurodegenerative diseases,” said Norris. “For many years they have been thought of solely as support cells for nerve cells called neurons that form memories and are responsible for brain function, and that eventually die with the progression of Alzheimer’s and related dementias.” Norris says astrocytes are critically important as they help maintain the health of neurons and blood vessels in the brain by helping to deliver energy, nutrients and oxygen from blood to neurons. When Alzheimer’s disease was first described, Norris says the pathology shown included reactive astrocytes. He says these cells tended to cluster around areas where there was pathology, like amyloid deposits in the brain — a hallmark of Alzheimer’s disease. “So we have known about reactive astrocytes for more than a century, but we don’t really know what these cells do,” said Norris. Are they responding to Alzheimer injury? Are they driving that damage?

Four separate projects make up the overall venture and are being led by worldwide leaders in their respective fields including Donna Wilcock, Ph.D., Pete Nelson, M.D., Ph.D., Olivier Thibault, Ph.D., and Chris Norris, Ph.D. Dr. Norris says that “SBCoA is uniquely situated for a project like this. The center is world-renowned for its brain bank as well as its team of researchers and research volunteers. Our research volunteers have gone above and beyond to participate in our studies and donate brain tissue, blood, and even spinal fluid to help us figure out what causes dementia,” said Norris. “For each of the studies that we will do in animal models, we have parallel studies on human brain or on human tissue samples from our brain and biofluids bank. So, we can look at Alzheimer’s pathology and cerebrovascular pathology and then investigate how astrocyte signaling differs across these different disease states. Then we can go into the animal models and target these astrocyte pathways to see if brain function is improved or not.” Such approaches may lead to new medicines that can slow or stop Alzheimer’s and related dementias.



This major project is just one more way that your research participation is leading to major discoveries that with each passing day, bring us closer to the new medicines and potential cures we are looking for.

Thank you for your continued research engagement that makes such discoveries possible!

### Word scramble for brain health! Put your mind to the test!

The following word scrambles use uncommon words found throughout this newsletter!

STTAYOERC      01 02 03 04 05 06 07 08 09

ENPCTYOHHPLAEA      10 11 12 13 14 15 16 17 18 19 20 21 22 23

AMUAEBCLN      23 25 26 27 28 29 30 31 32

IGALL      33 34 35 36 37

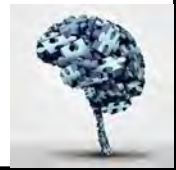


Test your prowess by solving the final puzzle below using the letters you have unscrambled!

**We’re going to cure Alzheimer’s disease by...**

09 28 33 20 33 35 11 33

21 05 33 13 21 15 25 04 !

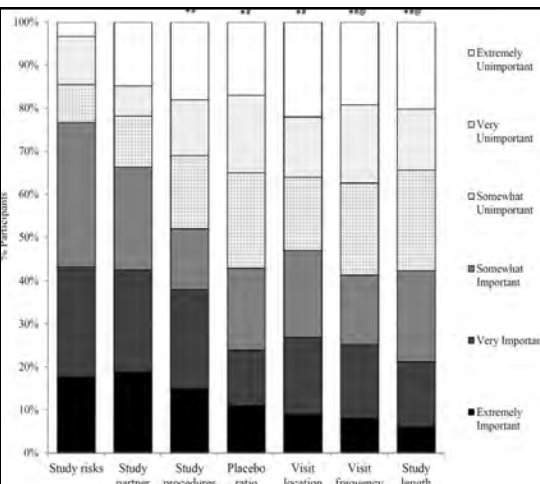
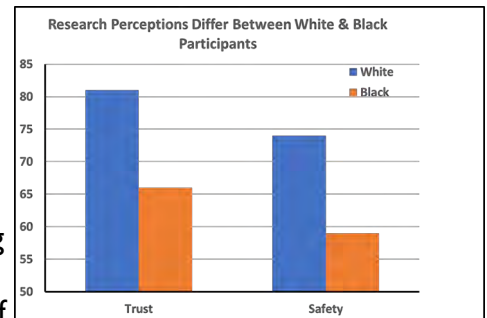




**Dr. Josh Grill focuses his research on the science of recruitment and ethics to make sure everyone has the opportunity to benefit!**

Delays in research recruitment can cost years in our struggle to find new medicines for Alzheimer’s and related dementias. Failures in engaging minorities and underrepresented persons are a major challenge for us in ensuring that everyone will benefit from our scientific and medical advancements. These are major challenges in the field and we are thankful that Dr. Josh Grill is leading the way to overcome these barriers.

Dr. Grill’s research has provided critical insights into barriers for research advancement that are both specific to specific under-represented groups and at times are also general barriers to research engagement that delay our search for new medicines for Alzheimer’s and related dementias. This research has shown us that such barriers are real, with 81% of Whites, but only 66% of Blacks expressing trust in medical researchers, and with 74% of Whites, but only 59% of Blacks believing that research participation is generally safe. We clearly need to find new ways to build trust and engage persons from all racial and ethnic groups if we hope to ensure that the new medicines and cures we develop are tested and safe as well as effective for everyone. Dr. Grill is a leading force nationally and internationally that is making this goal a reality!



Dr. Grill has also worked extensively on new safer and better ways to provide biomarker results for those that have normal memory and thinking, but are developing early brain changes of AD that we are trying to prevent and or reverse. His work has shown that most of you want to know the results of your testing and that such knowledge can be an important factor in deciding whether to engage or not in research opportunities. We agree with you and are working hard to make sure we can maximally inform you of your research results.

Please join us for the Markesbery Symposium on November 19th where you can learn much more from Dr. Grill about the work he is doing, much of it with us, here at the Sanders-Brown Center on Aging!

