



Alzheimer's and Cognition Center

UNIVERSITY OF COLORADO **ANSCHUTZ MEDICAL CAMPUS**

“Healthy Brain Aging Starts Here”

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Bettcher and Team Get CU ASPIRE Award



Congratulations to Dr. Brianne Bettcher and her team who were awarded the CU ASPIRE award, which will provide them funding for two years for their project to use neuroimaging (MRIs of the brain) to understand the role of immunity in Alzheimer's disease. Specifically, by using cutting edge neuroimaging techniques, the team hopes to better understand how immune dysfunction and Alzheimer's disease-related pathology might impact cognitive decline in late life.

The CU ASPIRE Program was created to promote collaborative research groups from different research fields to work on projects that require a multidisciplinary team to solve. The team for this project includes Drs. Bettcher, Brice McConnell, Ashesh Thaker, Huntington Potter, and Nichole Carlson, who bring expertise from the fields of neuropsychology, immunity, neurology, Alzheimer's disease biomarkers, neuroimaging, and biostatistics to the project.

To learn more about the CU ASPIRE program and the project Dr. Bettcher and her team will be working on, visit <https://bit.ly/CU-ASPIRE>.

McConnell Awarded Grant for Sleep Study

Congratulations to Dr. Brice McConnell, who was awarded an R03 grant for a new study looking at the relationship between sleep and Alzheimer's disease (AD)! The two-year award will fund a new study that will use surface electroencephalography, which measures electrical activity in different parts of the brain, to study this relationship.

The study is based on preliminary data that suggest that components of sleep's role in memory processing indicates risk of cognitive decline among aging adults, and may be a key connection between sleep and AD. This project will further examine relationships between changes in brain activity during sleep's memory processing with cognitive changes among aging adults. To learn more about Dr. McConnell's sleep research program, visit <https://bit.ly/CUACC-SRP>.



New Clinic Director Dr. Delia Bakeman

We are excited to announce that our Memory Disorders Clinic has a new director starting July 1, Dr. Delia Bakeman! Delia Bakeman, DO is an Assistant Professor in the Behavioral Neurology Department at CU Anschutz, and is dual trained in both neurology and psychiatry from UMass in Worcester, MA. To learn more about Dr. Bakeman, visit our website at <https://bit.ly/CU-Bakeman>.

Dr. Samantha Holden, the former director of the clinic, has taken a new role as director of all outpatient neurology services for the CU Anschutz campus. She will be staying on as associate clinic director to support Dr. Bakeman in her new role, and continue seeing patients in our Memory Disorders Clinic.



Investigator Spotlight: Noah Johnson, PhD



Noah Johnson, PhD is a biomedical researcher at the CU Alzheimer's and Cognition Center and an assistant professor in the Department of Neurology. He leads three biomedical research programs, as well as oversees novel therapeutic development efforts in Dr. Potter's research laboratory.

Dr. Johnson has always been fascinated by the human brain, and early on in his education was overwhelmed by the seemingly limitless complexity of a career in neuroscience, so became a biomedical engineer.

However, after getting his doctorate in biomedical engineering at the University of Pittsburgh, he was offered

a postdoctoral appointment at the University of California San Francisco's Institute for Neurodegenerative Diseases. Taking this appointment changed everything, as he pushed his boundaries and had his first 'aha' moment in the lab. He was immediately hooked on neurodegenerative disease research and never looked back.

After he completed his doctoral research, Dr. Johnson worked with Stan Prusiner, MD for his postdoc, where he studied Frontotemporal Lobar Degeneration (FTLD), which is caused by the tau protein.

He wanted to extend his research into Alzheimer's disease and realized there were differences between the way tau behaves in FTLD and Alzheimer's disease and that there were other opportunities for potential therapeutics in amyloid and neuroinflammation. When given the chance, he couldn't pass up the opportunity to learn from Dr. Potter and his extensive work in Alzheimer's biology and genetics.

One of the projects Dr. Johnson focuses on in Dr. Potter's lab identifies drugs already approved by the Food and Drug Administration for treating other conditions that may be repurposed as new treatments for Alzheimer's disease.

He and his research team do this

through an extensive series of drug screens to ensure they meet a series of qualifications that would mark it as a potential treatment for AD. Recently, they found two potential drugs that they are now testing further in the lab to prepare for possible human clinical trials.

Dr. Johnson also mentors three graduate students and is working on multiple grant applications and papers to share results of prior work, so he spends a lot of time reading, writing, and brainstorming.

As his career as a researcher professor evolves, he finds he has less time to spend in the lab, but he still loves to peer through a microscope and make a new scientific discovery. He is deeply thankful for the ability to explore new frontiers of science and medicine and make discoveries that will improve the lives of others every day with his work in the lab.

When he is not in the lab, Dr. Johnson is an avid mountaineer, rock climber, backcountry skier, mountain biker, and world traveler. He spends his free time with his wife educating and entertaining their two endlessly curious young daughters and looks forward to when he can share his passion for exploration and the great outdoors with them.

Register Now: Vision in Lewy Body Dementia Webinar

Join us on August 16th from 10 am to 12 pm MT for our Vision in Lewy Body Dementia webinar, presented by the Lewy Body Dementia Association. Learn about vision changes that are common in people with Lewy Body Dementia. The webinar will feature four specialists and a Q&A session on the following presentation topics:

- **Introduction and Overview of Lewy Terminology**, Samantha Holden, MD, MS
- **Vision in Lewy Body Dementia: Looking from the Brain**, Victoria Pelak, MD
- **Vision in Lewy Body Dementia: Looking from the Eye**, Erin Van Dok, OD
- **Visual Occupational Therapy for Lewy Body Dementia: Function and Safety**, Karen Hookstadt, OTR/L

Register at <https://bit.ly/CU-LBDA-vision> today!



Q&A with CUACC researchers

The following is an excerpt from a larger article by the CU Anschutz communications team interviewing Dr. Huntington Potter, PhD and Dr. Brienne Bettcher, PhD of the CUACC. To see the full article, please visit <https://bit.ly/3O3ktDr>.

What makes you get out of bed each morning to continue working on our understanding of Alzheimer's disease and possible treatments?

Potter: Well, if we don't get out of bed and fight the good fight, it will beat us and that is an outcome that none of us want. One of the strengths of the CU Alzheimer's and Cognition Center is that we study not only Alzheimer's, which is a disease, but we also study normal cognitive aging. Understanding how the brain ages and how the body ages with the brain are essential to developing a better understanding of how we can begin to bring the brain back to normal, healthy aging when things go wrong. At the Alzheimer's and Cognition Center, we have experts with completely different training backgrounds and specialties – we bring the right people together to solve this very complex problem.

Bettcher: The sincere concern I hear in a patient's voice and the gravity of that unknown future is something that weighs on me, and on all of us, as providers and researchers. At the end of the day, we want to change the landscape of how we age.

When looking at the landscape of Alzheimer's drug discovery research and healthy brain aging, what stands out to you?

Potter: When I first started working in the field of Alzheimer's disease in 1985, many predicted that we would be able to announce the development of a treatment or drug that would either halt or, even better, reverse Alzheimer's disease in five to 10 years. It's been decades and we still don't have a treatment, much less a cure. We absolutely have to solve this problem. The Alzheimer's and Cognition Center has grown over the last 10 years to really address our lack of understanding of Alzheimer's disease and our need to develop new treatments and new diagnostics. The dedication of all Center researchers is to solve this problem in collaboration with each other on campus and with our colleagues around the world.

Bettcher: As a neuropsychologist I am clinically trained as a psychologist, but I specialize in the evaluation of brain changes and how they impact thinking, memory and the ability to function. I'm most interested in finding out who's at greater risk for developing Alzheimer's disease and why. For example, why are some aging adults able to stave off memory decline even when they have evidence of Alzheimer's disease in the brain? I think a central piece of research needs to focus on the role of the immune system and how that impacts the onset of Alzheimer's disease.

HEALTHY
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Give to Research

If you are interested in making a donation to the CUACC, please contact Marti Laule at 720-202-7845 or marti.laule@cuanschutz.edu.



Interested in a Research Study?

Contact Neurology Research Partners at 303-724-4644 or fill out a research inquiry form at www.cumemoryresearch.org to learn more about our ongoing research studies!

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