



Alzheimer’s and Cognition Center

UNIVERSITY OF COLORADO **ANSCHUTZ MEDICAL CAMPUS**

“Healthy Brain Aging Starts Here”

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Center Celebrations

Congratulations to Dr. Victoria Pelak on being named a 2023 “Top Doctor” by 5280 Magazine!

Congratulations to Dr. Heidi Chial on her selection to participate in the highly competitive Butler-Williams Scholars Program! This program is sponsored by the National Institute on Aging (NIA) and provides unique opportunities for faculty and researchers to gain insights about research on aging from a number of perspectives.

Congratulations to Dr. Noah Johnson and his team, who received a National Institute on Aging (NIA) award for the project “Investigating and targeting apolipoprotein E4 in Down syndrome-associated Alzheimer’s disease”. This award will provide funding for five years.

In this project, Dr. Johnson’s team will develop multiple new models of Down syndrome-associated Alzheimer’s disease and use them to understand how apolipoprotein E (apoE) drives disease mechanisms as well as to test new inhibitors of apoE identified at the CU Alzheimer’s and Cognition Center (CUACC).

Included on this team are other CUACC faculty, Drs. Huntington Potter, Md. Mahiuddin Ahmed, Heidi Chial, Christina Coughlan, and Stefan Sillau.



From left to right: Sylvia Waller, Jeanette Early, Nadine Cornish, Hattie Reeves, and Dr. Macie Smith discuss their experiences with dementia and caregiving as part of the Dementia Dialogues event.

CUACC Hosts Dementia Dialogues

On October 11th, the CU Alzheimer’s and Cognition Center (CUACC) partnered with the Colorado Chapter of the Alzheimer’s Association for a community event, Dementia Dialogues: Medical and Caregiver Perspectives.

This event brought together CUACC medical providers Dr. Victoria Pelak, Dr. Peter Pressman, and Dr. Austin Momii, caregiver specialist Dr. Macie Smith, and a panel of community members. The community members included members of the African American Alzheimer’s Advisory Council – Jeanette Early, Hattie Reeves, and Sylvia Waller – and Nadine Cornish, the owner of the Caregiver’s Guardian.

Dementia Dialogues was held at the Martin Luther King, Jr Public Library in Aurora, Colorado. It started with the “Other Dementias” panel, where Dr. Pelak, Pressman, and Momii shared information with the community about Posterior Cortical Atrophy (PCA), Frontotemporal Dementia, and Vascular Dementia. The doctors then answered community member questions in a Q&A panel moderated by Dr. Huntington Potter.

Followed by the Other Dementias panel was guest speaker Dr. Macie Smith (<https://drmaciesmith.com/>). Dr. Smith is a licensed gerontology social worker, an assistant professor at Benedict College, and a published author, speaker, and dementia educator. She is nationally known for her work with dementia-competent practices and family caregiving.

Dr. Smith then facilitated a conversation with the community member panelists about their experiences as caregivers. They discussed the challenges they faced with their family members who experienced dementia, such as finding good facilities and medical providers who listened to their concerns, how they handled these challenges, and advice they had for those currently caregiving. It was a great event!



Dr. Pelak presents on PCA at the Dementia Dialogues event.



A Fitness Tracker for Brain Health?

Below is an excerpt from an article written by Kelsea Pieters (CU Communications):

Researchers from the University of Colorado Anschutz Medical Campus and Washington University in St. Louis have identified a way to assess brain activity in sleep that occurs in the earliest stages of Alzheimer's disease, typically many years prior to developing symptoms of dementia.

The digital biomarker uses electroencephalography (EEG) that can be recorded from simple headband devices to detect brain wave patterns related to memory reactivation in sleep, which are part of a system that processes memories in deep sleep.

Study results published in *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* identify a relationship between EEG readings and levels of specific molecular changes indicative of pre-symptomatic Alzheimer's disease. Additional findings further demonstrate that early stages of mild cognitive impairment due to Alzheimer's disease can be detected in the EEG signals.

"This digital biomarker essentially enables any simple EEG headband device to be used as a fitness tracker for brain health," said Brice McConnell, MD, PhD, assistant professor of neurology at the University of Colorado School of Medicine and study senior author. "Demonstrating how we can assess digital biomarkers for early indications of disease using accessible and scalable headband devices in a home setting is a huge advancement in catching and mitigating Alzheimer's disease at the earliest stages."

To read the rest of the article, and listen to Dr. McConnell talk more about his research, visit <https://bit.ly/3rKABkO>.

Researchers work on PCA assessment tool

CUACC faculty members Victoria Pelak, MD and Samantha Holden, MD recently published a paper as part of an international working group, led by Dr. Pelak, to report on the use of clinical assessment tools and give formal recommendations for clinical assessment tools for the Posterior Cortical Atrophy (PCA) syndrome.

PCA is a syndrome characterized by degeneration of the parts of the brain involved with vision and visual processing. The overwhelming majority of people with PCA have Alzheimer's disease, and instead of presenting with memory loss, they present with visual problems. The syndrome can be caused by other diseases such as dementia with Lewy bodies or corticobasal degeneration. It commonly presents first as having difficulty seeing without any explanation that can be found in the eyes. As disease progresses, symptoms can include difficulty with depth perception, problems finding objects in plain view, difficulty reading, trouble driving, and problems recognizing faces. There can also be challenges with remembering visual information.

A clinical diagnosis of PCA can be challenging, and patients often go months or years without a clear explanation for the symptoms after many visits to the doctor. Part of this is because the current tools used to assess cognitive difficulties are not sensitive to the types of visual brain challenges observed in patients with PCA, and tools that are available are not widely known to the medical community.

Therefore, the Atypical Alzheimer's Disease Professional Interest Area (Atypical AD PIA) of the Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART), which includes Dr. Pelak and Dr. Holden, surveyed its members to understand how experts assess for features of PCA. The PCA Assessment Work Group then gathered and reviewed the data and created a consensus regarding recommendations for assessment tools that can be used in the office setting, during a neuropsychological evaluation, and in research. Their goal was to create a common starting point regarding better recognition and assessment of PCA and to stimulate research on the development of validated tools for PCA diagnosis, PCA staging, and PCA outcome measures that can be used in treatment trials.

Based on the survey results and further consensus, the group provided several recommendations for assessment, including a rapid screening battery for use in eye clinics, because many patients with the PCA form of Alzheimer's disease first present to their eye doctor under the assumption that something is wrong with their eyes.

Further steps are to share the recommendations made by the Atypical AD PIA ISTAART members and continue to raise awareness of the rapid screening battery for eye clinics, which is now available. A novel PCA testing toolkit is being developed by one of the members of the group, and specifically here at CU Anschutz, Dr. Pelak plans to begin a study to help validate the assessment tools. To read the published paper, visit <https://bit.ly/3QDy3P6>.



Fellow Spotlight: Morgan Farley, MD



The CUACC is excited to welcome a new fellow this year, Dr. Morgan Farley! Morgan Farley, MD, is completing her fellowship in Behavioral Neurology and Neuropsychiatry at the University of Colorado – Anschutz Medical Campus. She spends the majority of her time seeing patients in our Memory Disorders Clinic, Neuropsychiatry clinic, and the Marcus Institute for Brain Health.

Dr. Farley's interest in medicine was sparked early - for her it was the perfect combination of personhood and science. She was further interested in behavioral neurology because the brain came naturally to her, and she found it to be very rewarding working with neurology patients and their families.

Behavioral neurology requires an intimate grasp of the essential elements of personhood and life story, and Dr. Farley enjoys being able to learn these things about her patients as she works with them through their diagnosis and disease progression. She greatly enjoys working with patients with a variety of different neurodegenerative diseases, including Lewy Body disease and Alzheimer's disease.

In addition to working in the clinic, Dr. Farley currently works on a clinical re-

search project that aims to examine in-home cognitive and behavioral assessment, to potentially be used as a way to close the gaps between traditional medical care in the doctor's office and the home setting.

The study's goal is to increase the capacity for comprehensive care visits in clinic, evaluate the impact of in-home assessment on the quality of life of patients and their caregivers, and reduce healthcare costs in patients with dementia by avoiding unnecessary, unwanted medical care and hospital admissions.

A major motivation for Dr. Farley is her compassion for the body, mind, and spirit as parts of a whole. She believes her job is not always to fight for physical health and survival, but to accomplish the more daunting task of enabling well-being in the face of a life-limiting illness. She is thrilled to be completing her fellowship at the CU Anschutz Medical Campus with the CUACC, because she feels the program here encompasses strong clinical and academic experiences, with accomplished faculty and staff who are passionate about, and dedicated to, education.

Dr. Farley looks forward to the opportunity for ongoing exposure to a wide range of patient and disease presentations at the Memory Disorders Clinic, cultivating her curiosity and promoting lifelong learning. She wants to apply her knowledge, skill, drive, and genuine human interest to enable her patients to live their best possible life, while working to better understand the presentation, progression, and treatment of neurodegenerative diseases. We are very glad to have her on the team for the next year!



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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