



Alzheimer's Disease and Dementia Research Center (ADRC)

2023-2024 Impact Report



Emma Eccles Jones College of Education & Human Services
Alzheimer's Disease & Dementia Research Center
UtahStateUniversity.

The Purpose and Mission of the ADRC

The Alzheimer's Disease and Dementia Research Center (ADRC) at Utah State University is a state-funded center committed to research and support for the rapidly growing number of adults in Utah who are diagnosed with Alzheimer's disease and other forms of dementia and those who care for them. The ADRC's mission is to build a collaborative research infrastructure where individuals throughout the State of Utah can be involved and informed in dementia research, learn more about best practices in dementia care, and find resources for emotional and practical support. The center engages with multiple research institutions across the state and is guided by the principles and needs outlined in the *Utah Alzheimer's Disease and Related Dementias State Plan*.

A Message from ADRC Director Beth Fauth

Our second year at the Alzheimer's Disease and Dementia Research Center has come and gone, and it was a year of exponential growth. We made continued progress on many active projects stemming from our Year 1 funding, and we initiated many more research projects that are connecting new faculty and students. This year, we secured legal contracts to extend our pilot grant funding to researchers at other universities in Utah. In alignment with the *Utah Alzheimer's Disease and Related Dementias State Plan*, we are building an infrastructure of scientific experts, clinicians, and students across the state who are passionate about preventing or treating dementia and improving the lives of people who live with these conditions. We also increased our community outreach efforts through presentations, community events, and health fairs to provide education and resources to our statewide community while simultaneously inviting Utahns to join our active research studies and research registry. We remain deeply appreciative of the support we receive from the State of Utah to continue this impactful work.



A handwritten signature in black ink, appearing to read 'E. Fauth', written in a cursive style.

Elizabeth Fauth, Director

Funding & Research Developments

July 1, 2023 - June 30, 2024

The ADRC has supported dementia research funding:

- **5 new pilot studies** conducted at Utah State University
 - Examining biomarkers of Alzheimer's disease and neurodegeneration
 - Identifying physical activity profiles of people living with Alzheimer's disease
 - Studying e-cigarette impacts on aspects of dementia
 - Analyzing relationships between demographics, neighborhood characteristics, and dementia risk
 - Determining the feasibility and acceptability of an online, single-session mental health intervention for adults with dementia
- **4 new pilot studies** conducted at University of Utah
 - Determining cognitive outcomes after cochlear implantation in older adults
 - Detecting early vascular changes in the brain through MRI
 - Utilizing a novel behavioral and in-vivo imaging approach to understand Alzheimer's disease
 - Improving motor function for Alzheimer's patients in early stages
- **1 new pilot study** conducted at Brigham Young University
 - Developing a blood test to detect brain degeneration
- The ADRC has supported dementia research by **funding assistantships and research support** for undergraduate and graduate students, a faculty statistician, and laboratory processing. The ADRC has also **purchased two pieces of laboratory equipment**.

Faculty affiliates of the ADRC have pursued federal grant funding:

- **Received: 3** significant federal grants related to Parkinson's disease and developing an early dementia detection test
- **Under review: 8**

Additional Research Developments by the ADRC:

- **Research presentations** increased from **10 to 42**
- **Faculty affiliates** increased from **15 to 33**
- **Articles published** by faculty affiliates in scientific journals increased from **7 to 28**
- **One service contract** was awarded to help develop an Alzheimer's disease and related dementias **training program for community health workers**

ADRC Helps Secure Federal Funding for Small Business to Develop Early Dementia Screening Test

In September 2023, ADRC Director Beth Fauth collaborated with Neuroessments LLC to secure small business funding from the National Institutes of Health. Neuroessments is aiming to improve early dementia detection via a low-cost noninvasive motor test that was developed by researcher Sydney Shaefer at Arizona State University. The test has been shown in laboratory settings to detect neuropathology and neurodegeneration in older adults who exhibit little to no symptoms of dementia. In other words, poorer performance on the motor test helps identify whether or not cognitive decline is present in older adults earlier than standard cognitive tests do. The test is also much less expensive than existing biomarker assessments, such as neuroimaging or blood tests.

The funding allowed Neuroessments co-owner Jill Love to test the product in an ethnically diverse sample in the Los Angeles area. This provided data to determine if a shorter two-minute clinical test predicts cognitive ability similarly to the original seven-minute laboratory version. Fauth's role in the project was to test the reliability of the motor task outside the laboratory setting. She and her team recruited nursing students from USU and individuals from the community working in healthcare settings to simulate test delivery with older adult participants. The study aims to determine if a new digital scoring system will be easy for medical technicians to navigate and still provide the same early detection capabilities of the laboratory version of the test. The project highlights the ways in which research and small businesses collaborate to rigorously test products and procedures in early cognitive screening and accelerate access of these products to the public.



Service Impact

Dementia Caregiver Clinic Now Seeing Clients at USU and via Telehealth

In August 2024, experts from the Sorenson Legacy Foundation Center for Clinical Excellence (SCCE) and the ADRC began providing clinical services to people with dementia and their family caregivers. Funded by a contract from the Utah Department of Health and Human Services, USU's new Dementia Caregiver Clinic is available free of charge to Utah residents. It includes both the person with impairment and their caregivers, and is offered in-person and via telehealth.

In the consultation, clients have access to the expertise of an interdisciplinary team of professionals from the ADRC and each of the service areas provided by the SCCE—mental health, audiology, speech and language pathology, behavior support, and financial counseling. Clients are provided education, resources, and referrals, as well as opportunities for ongoing discussions to schedule additional clinical services.



Alzheimer's Disease and Dementia Prevention Health Fair at Utah State University

USU's first annual Alzheimer's Disease and Dementia Prevention Health Fair was held in June 2024. Joann Tschanz, clinical neuropsychologist and professor of psychology, was the primary organizer. USU faculty with expertise in psychology, aging, neuroscience and more, along with experts from the ADRC, joined Tschanz in running the fair for Northern Utah's older adults and their families.

At the fair, attendees had the option to participate in a one-day research study—Prevent Alzheimer's for Life (PALS)—conducted by a team of USU researchers, with Tschanz as principal investigator. In addition to completing questionnaires about diet, general health history, and overall physical activity levels, study participants received a cognition test, hearing screening, carotendoid scan, and a timed walking test. They also received assessments on grip strength, balance and coordination, stress levels, and sleep patterns.



Blue Plate Research at USU

Blue Plate Research brings together state and community decision-makers with premier researchers to explore the health and well-being challenges facing Utah. The event includes a research presentation followed by a question-and-answer session with Utah's health advocates, statewide stakeholders, and the general public.

- ADRC Director Beth Fauth presented her research on caregiver support and the ADRC (September 2023).
- ADRC affiliate Stephanie Borrie presented her research on how neurological conditions impact conversation and the strategies necessary to improve communication (April 2024).



JoAnn Tschanz Named Endowed Chair of Human Services

Dementia researcher JoAnn Tschanz was recently named the Emma Eccles Jones Endowed Chair of Human Services in the Emma Eccles Jones College of Education and Human Services (CEHS) at Utah State University. The endowment is provided by the Emma Eccles Jones Foundation and is awarded to nationally recognized scholars to amplify their productivity and impact, foster a vibrant and expanding scholarly culture within the college, and bring national attention to CEHS.

Get Involved with the ADRC

cehs.usu.edu/adrc • adrc@usu.edu • 435-797-1772

Join the ADRC in its ongoing mission to research dementia and related disorders, provide services with community partners, and train a dementia-informed workforce. Its primary goals are to provide additional resources for caregivers and support through research opportunities.

- To participate in research or volunteer with the center, please email us at adrc@usu.edu.
- To stay current with the latest news from the ADRC, visit the ADRC website and subscribe to the monthly newsletter.
- To make a financial contribution to the ADRC's outreach and research mission, visit the ADRC website and select "Give."
- If you or your loved one have been impacted by Alzheimer's disease or dementia, we want to hear from you. Send your story to adrc@usu.edu.



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