

Fall Newsletter

AGING BRAIN COHORT

Fall 2024



Study Updates

The Aging Brain Cohort (ABC) study's mission is to discover how brain health is related to the problems that coincide with aging. With the help of our participants, we hope to identify risk factors for a host of age-related problems including cognitive decline, Alzheimer's disease, and stroke.

The Year 5 Follow-up of ABC is wrapping up! 48 out of ABC's first 65 participants have successfully completed their Year-5 follow-up. Thank you to our wonderful participants for dedicating their time to ABC! We will continue to invite back our participants in the age range of 60-80 to complete a follow-up.

In this newsletter you can expect:

Study Updates

Research Events

Recent Publications

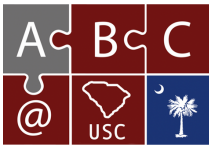
Collaborator Highlight

ABC Team Spotlight

ABC Educational Post-It

In the News: USC Brain Health Network

We are excited to share the launch of the USC Brain Health Network (BHN), a state-funded initiative where physicians and researchers will work collaboratively to reduce disparities in cognitive health care. The BHN will reach across communities in South Carolina, providing residents with greater access to screening, clinical diagnosis, care, and treatment. You can read more about the [BHN here](#).



ABC Lab at USC

Research Events



The annual Center for the Study of Aphasia Recovery Retreat was held in August. Team members from ABC and the Aphasia Lab, friends, and family, gathered for a day of research presentations and team-building activities.



Conference Presence

Part of our team of SLPs, researchers, and students had the opportunity to attend and present at the South Carolina Speech Language Hearing Association (SCSHA) annual convention.

Sarah Newman-Norlund, Sarah Wilson, Allison Mehler, and Samaneh Nemati presented "Sensory Loss, Communication, and Cognition in Aging: A Path to Brain Health in South Carolina."



Recent Publications



JSLHR

Research Article

Age-Related Hearing Loss, Cognitive Decline, and Social Interaction: Testing a Framework

Meisam K. Arjmandi,^{a,b} Jean Neils-Strunjas,^a Samaneh Nemati,^a Julius Fridriksson,^{a,b} Sarah Newman-Norlund,^a Roger Newman-Norlund,^{a,b} and Leonardo Bonilha^a



Contents lists available at ScienceDirect

Neurobiology of Aging

journal homepage: www.elsevier.com/locate/neuaging.org

Brief communication

Lower socioeconomic status is associated with premature brain aging

Natalie Busby^{a,*,1}, Sarah Newman-Norlund^a, Sara Sayers^a, Roger Newman-Norlund^b, Janina Wilmskoetter^c, Chris Rorden^b, Samaneh Nemati^a, Sarah Wilson^a, Nicholas Riccardi^b, Rebecca Roth^d, Lisa Johnson^a, Dirk B. den Ouden^a, Julius Fridriksson^a, Leonardo Bonilha^d

JOURNAL OF
NEUROIMAGING
THE OFFICIAL JOURNAL OF THE AMERICAN SOCIETY OF NEUROIMAGING



CLINICAL INVESTIGATIVE STUDY | [Open Access](#) |

Cerebral blood flow in patients recovered from mild COVID-19

Souvik Sen[✉], Roger Newman-Norlund, Nicholas Riccardi, Christopher Rorden, Sarah Newman-Norlund, Sara Sayers, Julius Fridriksson, Makenzie Logue



AJSLP

Research Article

Story Recall in Peer Conflict Resolution Discourse Task to Identify Older Adults Testing Within Range of Cognitive Impairment

Sarah C. Wilson,^{a,b} Alex Teghipco,^c Sara Sayers,^b Roger Newman-Norlund,^c Sarah Newman-Norlund,^b and Julius Fridriksson^b

HUMAN BRAIN MAPPING

Influence Series

RESEARCH ARTICLE | [Open Access](#) |

The Influence of Structural Brain Changes on Cognition in the Context of Healthy Aging: Exploring Mediation Effects Through gBAT—The Graphical Brain Association Tool

Ida Rangus[✉], Alex Teghipco, Sarah Newman-Norlund, Roger Newman-Norlund, Chris Rorden, Nicholas Riccardi, Sarah Wilson, Natalie Busby, Janina Wilmskoetter ... [See all authors](#) ▾

Collaborator Highlight



Carolyn Banister

Dr. Carolyn Banister is a Clinical Assistant Professor at the USC College of Pharmacy in Columbia, SC. Dr. Banister's journey in academia began with a Ph.D. from the USC School of Medicine, where her research focused on understanding the genetics of HPV viral persistence in college-aged women.

Following her doctoral studies, Dr. Banister continued to excel in her field, undertaking postdoctoral research at the Alpert School of Medicine at Brown University. There, she uncovered critical insights into the epigenetic profiles associated with intrauterine dysregulated growth in newborn infants at Women and Infants Hospital.

Returning to USC, Dr. Banister's expertise has greatly enriched the College of Pharmacy. In a pivotal move during the summer of 2020, she leveraged her clinical experience to establish the Diagnostic Genomics Laboratory. This facility played a crucial role in providing essential SARS-CoV-2 testing services to faculty, staff, and students across the USC university system and its associated campuses statewide, ensuring the safe continuation of educational operations during the pandemic.

Building on her pandemic response efforts, Dr. Banister has embarked on innovative research to identify salivary biomarkers predictive of concussions. This promising work has the potential to significantly enhance concussion and post-concussion care, particularly for our student-athletes, by aiding in determining safe return-to-play protocols.

Currently, Dr. Banister is engaged in analyzing methylation data for the ABC Genetics study to uncover molecular based mechanisms of healthy brain aging. She is passionate in advancing scientific knowledge to improving healthcare outcomes.

Meet Our New Research Program Manager!

Celestine is the new Research Program Manager for the Aging Brain Cohort. She graduated with a BS in Psychology from Augusta University. She then went on to complete her MS in Experimental Psychology, after which she worked at the Georgia Prevention Institute at Augusta University on various studies involving exercise intervention and childhood academic performance in overweight/obese and ADHD children, Vitamin K supplementation in adults and children, and blood pressure effects on cognition and epigenetics in adults with a history of hypertension and in twins. Most recently, she completed a second MS, in Epidemiology, and for fun, she sings in three community choirs, reads, and plays video games.



Celestine Williams

ABC Team Spotlight

Congratulations to Dr. Samaneh Nemati!

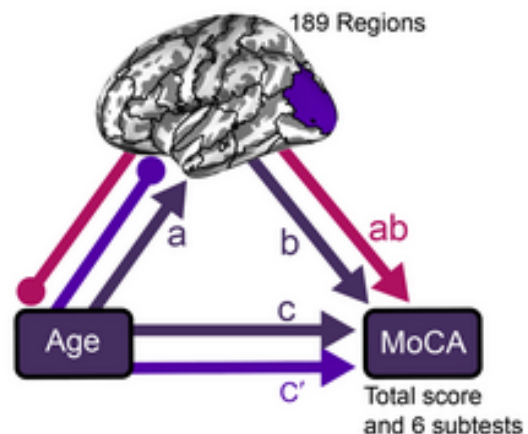
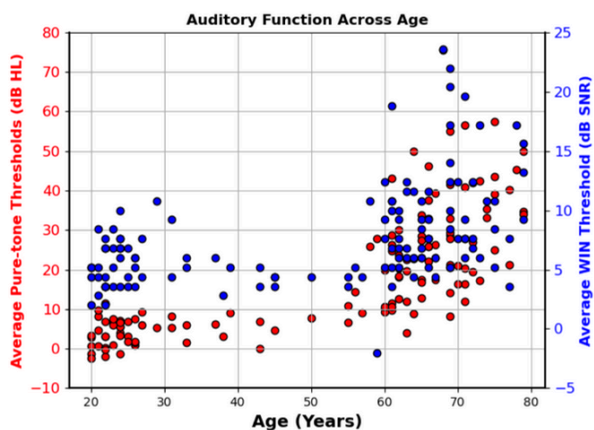


Samaneh Nemati

Samaneh Nemati successfully defended her dissertation! Read about her research below:

Hearing loss is very prevalent among older adults, with almost two-thirds of individuals aged 70 and older experiencing meaningful hearing impairment. This is concerning not only because hearing loss adversely affects individuals' ability to communicate, but also because it is a leading risk factor for other health conditions that can affect the overall well-being of older adults. My dissertation focused on enhancing our understanding of the relationship between hearing loss and cognitive decline as we age.

By examining brain structures through advanced imaging techniques, we have demonstrated that hearing impairments are associated with changes in the structural integrity of both auditory and non-auditory regions, which are involved in broader cognitive processing. We have also shown that hearing loss is linked to accelerated aging in specific brain areas, which may subsequently affect cognitive processing in older adults. These findings highlight that hearing loss is not just an issue of the ears but involves complex brain processes that affect overall cognitive health and quality of life. This can help in understanding the potential wide-ranging impacts of hearing impairments and underscore the importance of early intervention to mitigate these effects.



 *Stay Connected!*

We encourage you to stay connected and informed. We update our Social Media on a weekly basis with important information, Opportunities, How we are using the data, and key partners. It also helps to stay connected socially during this time.

 ABC – Aging Brain Cohort at USC

 abcstudy_usc

ABC is recruiting!

- 20-80 years old
- No prior stroke or neurological condition
- Must have access to a computer with internet and audio/webcam capabilities



<https://abc.sc.edu>



Other Research Opportunities

Research Participants Needed!



Purpose

The Language and Cognition aLab at USC is investigating how people communicate during dialogue.

What to Expect

- 2 sessions in-person on campus at USC Columbia
- 1 hour of your time
- \$20 or Research credit for participation (Psychology SONA participants receive 2 research credits)

Eligibility

- 18-30 years old
- Native English speaker
- Normal or corrected vision and normal hearing
- No diagnosed neuropsychological disorders

More Information

Contact: Sarah Wilson
scw10@email.sc.edu

PARTICIPANTS NEEDED FOR A PILOT STUDY



RESEARCH ON THE HEALTH CARE NEEDS OF UNPAID CAREGIVERS OF INDIVIDUALS WITH ALZHEIMER'S DISEASE & RELATED DEMENTIAS (ADRD)

We are looking for volunteers to take part in a study of the health and wellbeing of unpaid caregivers who care for someone with Alzheimer's disease or dementia related diseases. To participate in the study, individuals must be:

- (1) An unpaid family/friend caregiver to someone with ADRD
- (2) Self-report an average of 2 or more hours of unpaid caregiving per day
- (3) 18 years of age or older
- (4) Medically stable with or without medication

If you are interested and agree to participate, you will be asked to: complete 2 in-person surveys, one at the beginning and one at the end of the study along with an end of study interview. You will also be asked to wear an AppleWatch and use an iPhone for 20 days and respond to brief daily questions (e-surveys) about your physical and emotional health, your caregiving activities, and use of resources to support your caregiving role. If you don't have an AppleWatch or iPhone you will be provided with one for the duration of the study.

Your participation would involve two 90-minute sessions at the College of Nursing at USC (Columbia) and brief morning and evening e-surveys for 20 days and you will be compensated \$100 at the end of the study, with the potential for an additional \$50.

For more information, or to volunteer for this study, please contact:

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