



# CIRC

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The latest news from the Civitan International Research Center

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## From the Director

Dr. Craig Powell

I always say these are exciting times at your Civitan International Research Center, and it is always the truth, thanks in large part to your ongoing support!

We have established an exciting new forum for the entire Neuroscience research community at UAB called "Neuroscience Works-in-Progress". Every Friday at 9 AM, members of various laboratories across UAB present their ongoing work in an hour-long format that both informs and teaches our faculty, staff, and trainees about the research going on around them. This forum is already working to spark new collaborations among our laboratories, providing critical leverage for team science in

neurodevelopmental disorders and neuroscience in general.

We continue to attract and welcome new researchers to UAB's neuroscience community. This year, we are actively seeking to hire another 3 full-time research scientists, two of whom are already in the written negotiations phase of their offer. These hires will bring in much-needed advanced techniques for studying circuits underlying complex cognitive behaviors, substance use disorders, and how the brain works in health and disease.

CIRC has a new Program Manager, Mrs. Christie Lowe. Christie is a bundle of energy and faces each task as a personal challenge to be solved. Christie looks forward to meeting all of you at the next Civitan International Convention this summer.

Below, is just a small sampling of highlights, accomplishments, and awards for our faculty and trainees since the last reporting period.

Best,



## News & Honors



Summer Thyme, Ph.D. was the recipient of the Director's New Innovator award from the National Institutes of Health. The award is part of the NIH High-Risk, High-Reward Research program, supported by the Common Fund, which has bestowed 103 new research grants to support highly innovative scientists who propose visionary and broadly impactful, meritorious behavioral and biomedical research projects.

**Farah Lubin Ph.D.** received an appointment for the Triton Endowed Professorship (\$1M corpus). She was also appointed to the Molecular and Cellular Cognition Society Council (Board of Directors). In addition, she has also recently received funding from a NIH R01 grant to research the role of lncRNA Neat1 in memory deficits.

**Drs. Jane Allendorfer and Dr. Farah Lubin** were awarded a McKnight Pilot Grant to study Effects of Exercise intervention in human and rodent temporal lobe epilepsy.

The UAB T32 training grant from NIH in the area of Cognition and Cognitive Disorders was officially approved for funding. This large grant award provides stipend and tuition support to four Ph.D. graduate students working in our CIRC faculty laboratories. **Dr. Farah Lubin** will serve as the Principle Investigator leading this effort.

**David G. Standaert, M.D., Ph.D.**, chair of the Department of Neurology at the University of Alabama at Birmingham Marnix E. Heersink School of Medicine, was presented with the Parkinson Association of Alabama Lifetime Achievement Award for his committed efforts in Parkinson's disease research throughout his career.

# Researcher SPOTLIGHT

In December 2022, Dr. Jason Vice got his PhD! Dr. Vice is an Assistant Professor in the Occupational Therapy department and does clinical work with patients with low vision. We are excited that he is staying at UAB and look forward to many collaborations in the future. Dr. Vice's first author paper was published this fall, which examines how eye movements change as people learn to use peripheral vision to compensate for central vision loss. The lab also published another paper about a similar general topic in 2023. Dr. Vice worked in the laboratory of CIRC faculty member Dr. Kristina Visscher.

Dr. Kristina Visscher's latest NIH funded mechanistic clinical trial is now in its recruitment phase, and we are especially recruiting people who have vision loss due to macular degeneration. We are studying how people change the way they process peripheral vision after training to use vision in different ways. If you know people who have vision loss due to macular degeneration and live nearby UAB, please have them fill out the screening form found here <https://sites.uab.edu/kmv/participate/> to identify if they would be eligible for our study (we do give a nominal reimbursement for the time participants spend with us). We treasure the people who choose to give time to volunteering for research - without you none of this would be possible.

The Civitan International Neuroimaging Laboratory continues its fast pace. We have dozens of projects going on at any given time, run by researchers in many departments at UAB and other institutions. We anticipate the arrival of a second scanner as part of the CINL - it is a next generation scanner with some new capabilities with science fiction sounding names like "Air coils." When it arrives hopefully in late 2023, we will expand the resources available to brain imaging researchers. This whirlwind of activity is the direct consequence of investments Civitan has made over the past decade.

In the Fall of 2021, our team of researchers at the [University of Alabama at Birmingham](#) and the [University of Alabama](#) were awarded a 7.1 million dollar grant over 5 years and selected to join a 25-site national consortium to conduct a comprehensive study of risk and protective factors for healthy brain development, called the HEALTHY Brain and Child Development (HBCD) Study. The Civitan International Research Center is playing a key role in this project. Dr. Cassandra,

the Director of the CANDR Core, helped assemble a diverse and multidisciplinary team to apply for this grant and is one of the Principal Investigators for this study. The study enrolled their first pilot participants in in January and will begin recruiting a diverse group of 150 pregnant women this Spring for the larger project.

Here are two link to learn more about the study and its goals.  
<https://heal.nih.gov/research/infants-and-children/healthy-brain> <https://hbcdstudy.org>

The CANDR core is also part of Phase 2 clinical drug trial for a rare genetic disorder, called Pitt Hopkins syndrome (PTHS). PTHS is caused by the loss of one copy or a mutation of the *TCF4* gene on chromosome 18. Children with PTHS have developmental delay with moderate-to-severe intellectual disability and behavioral differences, hyperventilation and/or breath-holding while awake, seizures, gastrointestinal issues, lack of speech, sleep disturbance, stereotypic hand movements and distinctive facial features. Some individuals with PTHS are also diagnosed with autism.

The current trial is sponsored by Neuren Pharmaceuticals and represents the first clinical trial of this type for PTHS. This study investigates an oral medication called "NNZ-2591", which aims to improve the impaired connections and signaling between brain cells that are involved in Pitt Hopkins syndrome. Drs. Cassandra Newsom, Sarah O'Kelley, and Craig Powell have studied this disorder for several years and collaborated with Neuren to select study measures, including developing a new outcome measure designed specifically for this population. Families are traveling to the Civitan International Research Center from across the world to participate in this important trial. The study lasts 19 weeks, with a combination of in-clinic, remote, and telehealth visits. Twenty children ages 3 to 17 will be enrolled across 5 sites. UAB was the first site to screen and enroll a family in this trial. The UAB study team includes geneticists, Drs. Joy Dean and Ali Said Al-Beshri, eye specialists, Drs. Dawn DeCarlo and Robert Tauscher, psychologists, Drs. Newsom and O'Kelley, and CCTS clinical trial specialists, Keenya Matthews and Tamara Howard.

<https://pthsstudy.com>  
<https://www.neurenpharma.com/products/nnz-2591/pitt-hopkins-syndrome>