

# Connecting Threads



Pat Capps Covey College of Allied Health Professions Research Newsletter

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## Editor's Note

### Stepping through the door

Seasoned researchers already know what it was like to make that first step towards building a successful research program. They are a valuable resource for early stage investigator or those wanting to become more involved in research. While both time and funds are required to build a research program, our college has recently established internal funding mechanisms to support the needs of current and future faculty researchers. They range from the rolling Research Support grants of up to \$1K to the annual Collaborative Research Support (CORS) grants of up to \$5K. Please see the Guest Editorial section on page 3 for Dean Gordon-Hickey's comments. The aspect of time is important, but allocating time for research can become habitual as steps in gathering knowledge and seeking collaborative opportunities lead to overall research development. The proverb goes "Opportunity knocks but once". Answering the door is the first step.

### ResearchGate

This [website](#) links 20 million researchers from 190 countries together. It allows users to connect up with other researchers with similar interests. You can post your research projects, papers, and share information with others. It can also be a good source of technical information. Researchers can post questions on protocols and procedures to receive suggestions from others in their field. Best of all it's free to use.

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**Moulton Tower/University of South Alabama/December 10, 2021.** Department of Physical Therapy faculty from left to right: Richie Cahanin, Heidi McDermott, Blair Saale, Preston Warren, Kelly Jordan, Troy Burley, Laura White (not shown)

The Department of Physical Therapy had an active year in 2021 for scholarship. First, Dr. Richard Cahanin published an original research article in *Physical Therapy in Sport* and co-authored a book chapter about integration of diagnostic imaging into physical therapy practice. Also, Dr. Cahanin was among a few awarded the Pat Capps Covey College of Allied Health Professions' (PCCCAHP) Collaborative Research Support Program for his ongoing research involving leg-length discrepancy. Next, Dr. Blair Saale was involved with multiple presentations related to motor control and learning at professional conferences, including the *World Physiotherapy Congress*, *American Physical Therapy Association's Combined Section Meeting*, and the *Conference on Teaching and Learning*. Next, Dr. Heidi McDermott and her team of students presented their work on mindfulness at the *American Physical Therapy Association's Educational Leadership Conference*. In addition, our faculty have multiple research projects slated for 2022, notably, Dr. Laura White's plan to build upon her research relating to dementia. Click [here](#) to contact us.



## Chair's Corner

### RAD

Creating research opportunities for undergraduate students is challenging. It is even more challenging in a clinical-based program like Radiologic Sciences. Our students are learning to become entry level clinicians in their field and do not have much time to develop research expertise before graduation. Our department creates an opportunity for them to develop the skills needed for clinical research. During their last two semesters students learn research basics, including APA reference style, library search techniques, narrowing down a topic, generating an annotated bibliography, and creation of a literature review. Topics have ranged from; "The Use of Computed Tomography in the Surgical Setting" to 'Pediatric Sickle Cell Strokes in Magnetic Resonance Imaging'. This experience helps to promote the development of a lifelong learner.

### What's Happening in PAS?

Carl Frizell, DMSc, PA-C is lead author of the manuscript "Fewer Words, More Action: Cultivating an Anti-Racist Environment Strategies/Solutions (CARES) Framework for Physician Assistant Education," which is published in the *Journal of Physician Assistant Education*, December 2021 edition. He also presented "Emboldened Voices: Intentional PA Faculty Mentoring of Underrepresented Groups" at the *Physician Assistant Education Association Education Forum 2021*. Erin Lunn, MHS, PA-C is presenting "Trauma Informed Care Best Practices" at both *American Academy Physician Assistants and Society of Army Physician Assistants* in 2022.



### Synergies - EMS

The Department of Emergency Medical Services (EMS) through their performance-based contract with the Alabama Department of Public Health as the Alabama Gulf EMS System (AGEMSS) regional EMS office, is participating in a five-year study regarding the implementation of a statewide system for patients who have suffered a stroke. The research study is entitled, "The Severity Based Stroke Triage" and is co-sponsored by the University of Alabama at Birmingham and the Alabama Department of Public Health. This study is funded by a \$2.5 million, five-year grant to UAB from the National Institute of Neurological Disorders and Stroke, part of National Institutes of Health. A new state program will better identify and route potential patients to these hospitals in a more effective timeline.

### RESEARCH HIGHLIGHTS – BMD



**Pictured (left to right):** BMD research students Kartik Patel, Makenna Howell, Jolie Boullion, Alexondria (Lex) Fay, and Marie Foret. Not pictured: Stephen Azar, Maycie Edmondson, Mark Eggers, Caitlyn Frye, Heather Inman, Lauren Jackson, Meagan Jones, Michael Chris Parker and Emily Quarry

Lauren Jackson, Caitlyn Frye and Ginger Llivina worked in Dr. Mockett's laboratory to study effects of rapamycin on aging in *Drosophila* fruit flies. Contrary to past reports, rapamycin was found to shorten rather than extend life span. A poster was presented at the *USA Undergraduate Research Symposium*.

Mark Eggers, Alexondria (Lex) Fay, and Makenna Howell (Dr. Ravine's lab) participated in the recent *USA Undergraduate Research Symposium*. Collectively, their posters involved quantifying biocide activity, using reflectance to measure bacterial pigment amounts, and antimicrobial testing of metallic nanoparticles.

Kartik Patel (SURF\* 2020) and Jolie Boullion (Honors) are investigating the link between epigenetic modifications of AGTR1 and NFkB genes and increased susceptibility to high blood pressure (Dr. Nancy Rice lab) in cohort of Kenyans exposed to high levels of ambient air pollution.

SURF\* recipient, Michael Chris Parker (Dr. Thulasiraman's lab) studied the role of an olive oil compound on Estrogen Receptor expression. Marie Foret in Dr. Thulasiraman's lab explored how the metabolic pathway impacts chemoresistance. Findings were presented at the *USA Undergraduate Research Symposium*.

Heather Inman (Dr. Gorelik's lab) is investigating the link between glycosylation by OGT and the mTOR pathway in human T cells from donors. This link may influence the T cell impairment in systemic lupus erythematosus. Results will be presented at a national scientific meeting.

\* Summer Undergraduate Research Fellowship

## Perspectives

### OT

**Pelvic floor dysfunction (PFD)** is often associated with other medical issues and can affect women of all ages. Areas of dysfunction can include urinary issues (leaking, urgency, hesitation, retention, frequency), bowel issues (constipation, rectal pain or incontinence), and sexual issues (painful sex) (Sapsford, 2004). Weakness, overuse, or lack of coordination in the muscles of the pelvic floor, low abdominals, and lumbar spine can often lead to these pelvic floor symptoms. Dysfunction in these parts of the body often take an emotional toll on the individual and can lead to depression, anxiety, and difficulty with intimacy and relationships (Khan, et al., 2013). Occupational therapists are an important part of the team of health care professionals who work to promote pelvic health. In this regard, our newest faculty member, Dr. Catherine Brock, is an expert in the area of pelvic floor dysfunction. She has completed extensive continuing education and has years of experience in this area. Occupational Therapy students here at USA will be able to benefit from her knowledge and skill set.

## PEER REVIEW

### SPA

**Listening while Balancing:** How Age and Listening in Noisy Environments Affects Postural Control

A new research area in audiology is developing with investigators looking into the dynamic relationship between maintaining balancing and listening-in-noise. Using dual-task paradigms, Helfer and colleagues (2020) and Carr and colleagues (2020) have investigated how listening effort is manipulated in young, middle-aged, and older adults as they maintain balance.

These listening-while-balancing tasks present a unique opportunity to assess age-related changes in how cognitive resources are allocated while a person is simultaneously maintaining balance and completing a speech understanding task.

Results from these studies indicate that listening in challenging environments negatively impacts postural control which is further exacerbated with increased age. These findings suggest that the allocation of cognitive resources is more towards the listening task instead of maintaining balance.



## Guest Editorial

Dr. Susan Gordon-Hickey  
Interim Dean  
Pat Capps Covey College of Allied Health Professions

It is a pleasure to provide a guest editorial for our College's inaugural Research Newsletter, *Connecting Threads*. The scholarly work of faculty is a top priority and fundamental to all that we do in academia and in health care. Faculty engagement in research provides new evidence for the science, practice, and advancement of our professions. It strengthens our commitment to evidence-based practice. It also provides students a great benefit as they learn from leading experts and deepen their understanding of the scientific process. And perhaps most importantly, it is fun! I encourage all faculty in the CAHP, regardless of rank/track, to engage in research and scholarly activities. No matter how small or how large the project is, no matter how new or experienced you are in engaging in research activities, I am committed to supporting you to ensure your success. Reach out if you need support such as connecting with other researchers with shared interests, discussing and developing project design or methodology, or reviewing a manuscript prior to submission. For those of you with a strong track record of research, please consider mentoring faculty who are new to research. Be on the lookout for ongoing professional development opportunities and grant announcements for our College. I look forward to continuing our work together.

## CALENDAR OF EVENTS

### Summer Undergraduate Research Fellowship

**Feb 28** - SURF submission deadline  
Click [here](#) for more information

### RESPONSIBLE CONDUCT OF RESEARCH (RCR) TRAINING

**MAR 3** - Overview of Scholarly Driven Research  
**MAR 10** - Overview of Data Driven Research  
Click [here](#) for training session schedule and to register.

### HEALTH POLICY RESEARCH SCHOLARSHIP

**Mar 16** - Submission deadline is 3:00pm ET  
Click [here](#) for more information

### Collaborative Research Support (CORS)

**Apr 15** - Submission deadline at InfoReady  
Click [here](#) for more information