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September 10, 2020

Health Sciences Divisional Newsletter

A Publication of a Division of the Council on Undergraduate Research

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The CUR Health Sciences Division is dedicated to advancing undergraduate research within the health sciences. According to the Association of Schools Advancing Health Professions, "Allied Health professionals are involved with the delivery of health or related services pertaining to the identification, evaluation, and prevention of diseases and disorders; dietary and nutrition services; [and] rehabilitation and health systems management, among others."

Chair: [Leann Laubach](#) (University of Central Oklahoma)

Upcoming Events



Councilor Meeting

September 16, 2020 | 1PM ET

Health Sciences Division members interested in becoming CUR Councilors should contact division chair [Leann Laubach](#).

Conversations with Health Sciences Virtual Meeting

October 10, 2020 | 11AM ET

Topic: CUR Health Sciences

[Zoom Meeting](#)

Meeting ID: 868 1592 1210

Password: 5MjnzQ

CUR Events

Please visit CUR's [website](#).

Serve as a SPUR Reviewer

Interested in serving as a reviewer for Scholarship and Practice of Undergraduate Research, CUR's academic journal? Send an email to SPUR@cur.org and indicate areas of expertise/interest (e.g., assessment). Of special interest is experience with qualitative/quantitative methods.

STUDENT SPOTLIGHT



Donnell Perkins (a 2020 biomedical engineering graduate from the New York Institute of Technology) made a poster presentation at the 2020 Sigma Xi Virtual Student Scholars Symposium on May 14, 2020. Perkins utilized his work study hours with mentor Niharika Nath and coauthors Raghul Elangovan and Amit Hiremath, both master's-level computer science students. He examined how to use morphology and texture features to detect precancerous cervical cells from pap-smear images containing mostly normal cells and very few abnormal cells. He generated algorithms that used gray level co-matrix features of texture such as homogeneity, correlation, and energy to examine a simulated mixed images of normal and abnormal cells, applying the results to pap-smear images from the hospital dataset. From the simulated and hospital data, he found that one distinctive gray level co-matrix texture feature could discriminate an abnormal cell among a population of normal cells. This cross-disciplinary research project pursued by Perkins provided another method of image-based analysis for the detection of cervical cancer.

On June 1, 2020, Perkins joined the company MirrorMe3D as a biomedical engineer I.

MENTOR SPOTLIGHT



Leann Laubach is an associate professor at the University of Central Oklahoma, teaching undergraduate and graduate research in the Department of Nursing and coordinating the undergraduate nursing program. She became a CUR Councilor for the Health Sciences Division in 2018 and division chair in 2019. She was recently elected as secretary for the Sigma Theta Tau Beta Delta At-Large Chapter.

Laubach has conducted research on co-bedding twins in the neonatal intensive care unit, student learning in simulation and instructor engagement, and student perception of simulation as a capstone project. She is currently working on a research project on admission factors and success in the nursing program. Laubach is a strong advocate for student-led research both at the graduate and undergraduate level and has been the faculty co-principal investigator on several student-led projects. Her students have consistently been invited to participate in NCUR.

Laubach's awards include the Sigma Theta Tau Outstanding Educator Award in 2009 and the March of Dimes Nurse of the Year for Education in 2018.

PROGRAM SPOTLIGHT



The **Undergraduate Research and Honors Programs** at the University of Alabama at Birmingham's School of Health Professions provides a centralized focal point to connect undergraduates majoring in biomedical sciences or health care management with research experiences. In addition to the responsible conduct of research training and courses that offer credit hours for research participation, students can earn certificates in undergraduate research. For example, the research technician certificate emphasizes individual research

conducted under the supervision of a faculty mentor, and the undergraduate team research certificate is geared toward students conducting a research project as a team.

The institution also offers a signature team-based research honors program. This program places biomedical sciences and health care management students into permanent teams who work together over three semesters to conduct faculty-mentored research in the allied health disciplines that involves a community partner. Along with the research, the students complete didactic coursework on leadership as well as learn about teamwork and team dynamics in the context of health care. The development of this program was reported in the *Journal of Allied Health*, 2020, 49(1): e57–e62.

The SHP undergraduate research projects draw faculty mentors from across the five School of Health Professions departments. Research topics that span disciplines in allied health have included the following:

- Diet quality in early care and education centers
- Resiliency and sustainability in health-care organizations and health professionals
 - Notch signaling pathway regulation of fat depots during caloric restriction
 - Assessing the impact of occupational therapy in underserved populations
- Health-care services for people who are homeless or face housing insecurities
- Use of table-top simulation to educate health providers about the opioid epidemic

Check out further information about the Undergraduate and Honors Programs of the UAB School of Health Professions.

Undergraduate Research Club in the Health Sciences at Georgia College & State University

Kelly P. Massey, associate professor of exercise science at Georgia College & State University, created an undergraduate research club within the university's School of Health and Human Performance. The Scholars (SHHPS) Program involves students from all years of study who are interested in health sciences research. Weekly meetings highlight and detail each stage of the research process and allow the students to generate project

Consider Participation in a Survey of Activities That Compose Undergraduate Research Experiences

A research group at the University of Alabama at Birmingham's School of Health Professions is conducting a study to identify the diversity of thought surrounding the activities that constitute research experiences for undergraduates. As part of the study, the group is conducting a broad survey of perspectives on this matter.

ideas to complete, from start to finish, with the help of volunteer mentors. As this is a “not for credit” program, the dedication of the participants has been truly inspiring.

The survey should take a maximum of five minutes. Answers will be kept completely confidential. **Take the survey >>**

Questions may be addressed to **Samantha Giordano-Mooga** or **Christine Loyd**,
Department of Clinical and Diagnostic Science,
UAB School of Health Professions.

**Know of a student project or study that needs assistance with subject participants?
Contact [Leann Laubach](#) to list the project or study in the *CUR Health Sciences
Divisional Newsletter*.**

2020 Posters on the Hill

Unlike prior years, the 2020 CUR Posters on the Hill event was held virtually via Twitter (#POH2020) on April 21. There were quite a few benefits in hosting the event online, and a lot of positive feedback was received. **View the Event Program >>**

The following are details on the health sciences-related submissions:

- Number of submitted applications: 38
- Number of selected applications: 5 (*average is congruent to 4.4/5*)
- Number of Honorable Mentions: 3 (*average is congruent to 4.8/5*)

Balancing Clinical/Observation Hours and Student Research: How Can Students Be Assisted?

Question: How can students be assisted when their programs require clinical/observation hours that limit their overall availability for research?

Time is incredibly important to everyone, especially an undergraduate with much-required coursework. If time is an issue, try to work on a case study within the clinical/observation hours. After obtaining the appropriate approval to work with an individual in this manner, it can be helpful to consult Saša Baškarada’s elaboration of Yin’s six-stage method of a qualitative **case study**.

2020 NCUR Student Award Winners, CUR Health Sciences Division

- Kyoko Hamagata (University of Kentucky; mentor Esther Dupont-Versteegden)
- Ashlee Mitchison (Northern Arizona University; mentor Kristen Konkel)
- Jennie Nelson (Idaho State University; mentor Jason Pilarski)
- Sheridan Sargent (Salisbury University; mentor Jessica Clark)



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