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NEWS

For immediate release

Hamilton awarded \$297,000 Arkansas IDeA Networks of Biomedical Research Excellence grant



By Mandy Halbert

November 10, 2020

For more information, contact OBU's new bureau at newsbureau@obu.edu or (870) 245-5208

ARKADELPHIA, Ark. – Ouachita Baptist University's Dr. Sharon Hamilton, assistant professor of chemistry, has been awarded \$297,431 in funding over the next two and a half years by the Arkansas IDeA Networks of Biomedical Research Excellence (INBRE) to support her research of incorporating proteins into novel modern wound dressings. Hamilton, who joined the Ouachita faculty in 2018, is working in collaboration with Dr. Suresh Thallapuranam, chair of bioinformatics research and professor at the University of Arkansas.

Hamilton's research with Thallapuranam aims to accelerate the wound healing process by exploring the cellular responses to fiber mats and its release of larger molecules that aid in the healing process. She also will work alongside Ouachita students in the Department of Chemistry to conduct research during the academic year.

“This grant ensures that I am able to conduct high quality undergraduate research here at Ouachita,” Hamilton said. “It will allow me to provide our undergraduate researchers with projects that could significantly impact the fields of biomaterials, biomedical research and wound healing.”

Hamilton and Thallapuram will work together in respect to their labs’ strengths; Thallapuram’s lab will synthesize proteins, which will then be delivered to cells using nanofiber mats built in Hamilton’s lab at Ouachita.

“The mats we make in our lab contain materials that are designed to mimic features in the extracellular matrix in our bodies to encourage wound healing and cell growth,” Hamilton explained. “Overall, the goal of this proposal is to develop protein-loaded biomimetic fiber mats that promote positive cellular responses.”



“Dr. Hamilton jumped right in upon arrival at Ouachita and quickly established her research area,” said Dr. Tim Knight, dean of the J.D. Patterson School of Natural Sciences and professor of biology. “Students were quickly drawn to her research because it is so unique. Her research is pertinent for our pre-health profession students and I expect will be very popular.”

The application for Arkansas INBRE Research Development Grants is very competitive. According to the INBRE, only about 36 percent of applicants receive funding for their proposals.

“I was elated to learn that my proposal had been selected – and also quite relieved,” Hamilton said. “It takes a lot of time and effort to write and edit grants, so to have secured funding for the next two and a half years meant that I had a little bit of breathing space.”

“It’s nice knowing that I have money to support my projects, and it allows me to take my time and explore other funding opportunities and agencies, as well as future project ideas,” she added.

Hamilton joined the faculty at Ouachita in 2018 and teaches several chemistry and CORE classes. In 2019, she received an Arkansas INBRE Summer Research Grant and an Arkansas Space Consortium Research Infrastructure Grant to support her development of a variety of synthetic polymers that mimic biopolymers found in the human body.

Hamilton earned her Bachelor of Science degree from Auburn University in 2004 and her Ph.D. from Vanderbilt University in 2009.

According to its website, the Arkansas INBRE program was “created to expand the distribution of National Institutes of Health funding for behavioral and biomedical research.” It builds upon the Arkansas Biomedical Research Infrastructure Network (BRIN), which “established a statewide network that links Arkansas institutions of higher education in support of a growing effort to build a biomedical research capacity in Arkansas.”

For more information about the J.D. Patterson School of Natural Sciences, visit obu.edu/natsci. For more information about the INBRE grant, visit www.inbre.uams.edu or contact Dr. Sharon Hamilton at hamiltons@obu.edu or (870) 245-5092.

PHOTOS AVAILABLE FOR DOWNLOAD <https://obu.edu/stories/news/2020/11/hamilton-awarded-297000-arkansas-idea-networks-of-biomedical-research-excellence-grant.php>