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Kaitlyn Stoddard

Ouachita News Bureau

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For immediate release

## **Hamilton, Hubbard use INBRE grant to bring new instruments to Ouachita chemistry program**

*By Kaitlyn Stoddard*

October 31, 2022

For more information, contact Ouachita's news bureau at [newsbureau@obu.edu](mailto:newsbureau@obu.edu) or (870) 245-5208.

ARKADELPHIA, Ark. – Ouachita Baptist University chemistry instructors Dr. Sharon Hamilton and Dr. Sara Hubbard were awarded a \$14,135 small instrument grant by the Arkansas Idea Network of Biomedical Research Excellence (INBRE), which they used to purchase a spectrophotometer and a fluorometer for use by students in Ouachita's Department of Chemistry. The grant was made possible by the National Institute of General Medical Sciences in the National Institutes of Health.

Hubbard, associate professor and Nell I. Mondy Chair of Chemistry, and Hamilton, associate professor of chemistry, were notified of their award in January. They collaborated with Dr. Christen Pruetz and Dr. Ruth Plymale, associate professors of biology at Ouachita, to bring the instruments to campus.

They purchased two pieces of equipment for the Department of Chemistry: a Thermo Scientific NanoDrop OneC Microvolume UV-Vis Spectrophotometer and an Invitrogen Qubit 4 Fluorometer.

According to Hamilton, both instruments can analyze samples up to 1,000 times smaller than their larger counterparts can.

“Minimizing the need for large sample volumes allows us to do small-scale experiments,” she said, “which saves money and is considered greener by using fewer reagents.”

Both instruments will be used in Ouachita’s chemistry and biology classes to provide expanded hands-on experience with field-related equipment for students – an advantage, Hamilton said, that is not typically offered at small, liberal-arts colleges and universities.

“We strive to expose our students to instrumentation they may see in their workplace or graduate labs,” she added. “These updated, small-volume instruments are exactly the type they will see in their future careers.”

As for the faculty’s benefit, Hamilton said, “This new instrumentation will allow Ouachita chemistry and biology faculty to expand their research and laboratory teaching topics to include the synthesis and isolation of a variety of drug molecules, pigments, proteins, DNA and antibodies.”

Both Hamilton and Hubbard will use the microvolume spectrophotometer and fluorometer bundle in their classes, enhancing their curriculum.

“I’m most excited about pairing these new instruments with existing techniques in Quantitative Analysis,” said Dr. Hubbard. “Students will be able to compare the performance of the new instrumentation with the tools we already have in the lab, performing statistical analysis to see which method is most precise and accurate. This experience will add new techniques to the students’ repertoire and elevate their critical thinking skills, which are both helpful for future career prospects.”

Hamilton said she is excited to use the spectrophotometer with her Organic Chemistry II students as they develop potential treatments for neurological diseases. “This will be a new project for the class to further emphasize the techniques they learned in Organic Chemistry I and apply them to a real-world problem.”

The instruments will be used in other chemistry and biology courses including Organic Chemistry Lab II, Quantitative Analysis, Instrumental Analysis, and Experimental Techniques of Chemistry I and II, Biology Freshman Research Experience, Microbiology Laboratory and Applied Microbiology.

To learn more about Ouachita’s Department of Chemistry, contact Dr. Sharon Hamilton at (870) 245-5092 or at [hamiltons@obu.edu](mailto:hamiltons@obu.edu).