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# Reyna, Plymale, and Pruett publish research paper on AR-CURE program

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For immediate release

### Reyna, Plymale and Pruett publish research paper on AR-CURE program

By Kaitlyn Stoddard

December 5, 2022

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

ARKADELPHIA, Ark. – Ouachita Baptist University professors Dr. Nathan Reyna, Dr. Ruth Plymale, and Dr. Christin Pruett collaborated with colleagues at other universities on a research paper that has been published in Biochemistry and Molecular Biology Education, vol. 50, issue 5. Their paper, titled, "From genetics to biotechnology: Synthetic biology as a flexible course-embedded research experience," details the implementation and assessment of the Arkansas Course Embedded Undergraduate Research Experience (AR-CURE) teaching model developed at Ouachita by Reyna and Plymale.

Reyna is professor of biology, Plymale is associate professor of biology and J.D. Patterson Chair of Biology, and Pruett is associate professor of biology. They wrote the paper together with lead author Dr. Kristen Johnson, assistant professor of biotechnology at the University of New Hampshire-Manchester, and co-authors Dr. Jaime Sabel and Dr. Judith Cole, associate professors of biological sciences at the University of Memphis.







Photo 1 Dr. Ruth Plymale



Photo 2 Dr. Cristin Pruett

Reyna first worked with Johnson on the paper. The two had previously worked together to publish a free SynBio Lab manual through the online open educational resource project LibreTexts.

Johnson took the lead on finishing the paper, but all six authors on the project had a role in developing and writing it. They collaborated in-person at the AR-CURE workshops and through Zoom.

"We are very excited about this paper, because it represents our efforts to do high impact, course-based research here at Ouachita and to train others using our model," said Plymale.

She added that AR-CURE was developed with academic accessibility in mind. The goal of the method is to make scientific education more inclusive, allowing every student the opportunity to be involved in authentic research regardless of background or ability.

"Research not only gives students better experience with equipment and access to faculty, but also increases their confidence and persistence in science," Plymale said.

In an effort to share this inclusive approach to science education, Reyna and Plymale began in 2017 to hold workshops focused on training faculty to implement the AR-CURE method used in the genetics courses at Ouachita.

Research universities, liberal arts schools, community colleges and minority-serving institutions from states including Arkansas, Florida, New Hampshire, New York, Texas, Washington, and attended these workshops. Held annually from 2017 to 2020, the workshops were funded by an external grant from the Center for Advanced Surface Engineering (CASE) through the Arkansas Established Program to Stimulate Competitive Research (EPSCoR).

"The Synthetic Biology CURE we developed at Ouachita is now being used throughout the United States," said Reyna. "This is truly amazing, and I have had so much fun watching it grow."

Read "From genetics to biotechnology"

here: <a href="https://iubmb.onlinelibrary.wiley.com/doi/10.1002/bmb.21662">https://iubmb.onlinelibrary.wiley.com/doi/10.1002/bmb.21662</a>. For more information about AR-CURE, contact Dr. Ruth Plymale at <a href="mailto:plymaler@obu.edu">plymaler@obu.edu</a> or at (870) 245-5081.