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### **Ouachita receives part of \$6.1 million grant establishing institute focused on virus research**

Ouachita News Bureau

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**OUACHITA**  
BAPTIST UNIVERSITY



**NEWS**

For immediate release

**Ouachita receives part of \$6.1 million grant establishing institute focused on virus research**



August 17, 2021

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

ARKADELPHIA, Ark. – Ouachita Baptist University is one of five partner institutions benefiting from a \$6.1 million grant from the National Science Foundation to fund the study of viruses and viral ecology. The University of Arkansas leads the effort.

The grant will establish a Host-Virus Evolutionary Dynamics Institute (HVEDI) at UA with an HVEDI hub site at Ouachita. Nathan Reyna, associate professor of biology, serves as a co-principal investigator on the primary award and as the lead on the sub-award to Ouachita. Ruth Plymale, associate professor of biology and holder of the J.D. Patterson Chair of Biology at Ouachita, serves as campus lead investigator.

Reyna and Plymale will work alongside principal investigator Ruben Michael Ceballos of the UA biological sciences department, as well as HVEDI collaborators Michelle Evans-White, UA biological sciences professor, and Qingyang Zhang, associate mathematics professor at UA; Anissa Buckner, professor and chair of the biology department at the University of Arkansas at Pine Bluff; E. Han Tan, assistant professor in the School of Biology and Ecology at the University of Maine at Orono; and Elizabeth Padilla, assistant professor at La Universidad Interamericana in Aguadilla, Puerto Rico.

By investigating distinct virus systems across all three domains of life, HVEDI scientists hope to establish “rules of life”—biological laws or principles describing an organism’s characteristics or patterns of behavior—that apply to all viruses. Research will include characterizing virus-host interactions, integrating data that apply to organisms of all sizes and developing biosystems models that will allow for a better understanding of viruses: their ability to cause disease, how to render them harmless, how and why they’re likely to jump species, transmission rates and severity of pandemics, how virus activity impacts natural systems and more.

“This grant helps us continue to build the kind of program that students want to be a part of,” said Tim Knight, dean of Ouachita’s Patterson School of Natural Sciences. “It’s a great opportunity for them.”

During the next five years, the NSF grant will provide Ouachita with \$500,000 to support the research of students working with Reyna and Plymale to examine bacteriophages—viruses that infect bacteria—and how they interact with hosts. Research that Plymale has incorporated into her freshman-level bacteriophage lab played a key role in Ouachita being invited to join Ceballos and the other partner universities in applying for the NSF grant.

“We’re pleased that Dr. Reyna and Dr. Plymale are being recognized for their work,” Knight added. “They’ve worked hard to build this, and we’re proud of their efforts.”

Reyna and Plymale will also serve the HVEDI team by lending general expertise in the field of molecular biology and by leading the institute’s outreach component. This includes working with the Dawson Education Services Cooperative in Arkadelphia, the Little Rock-based EAST Initiative and Ozark Catholic Academy in Northwest Arkansas to deliver curricular supplements, host teach-to-teacher workshops and build understanding of topics in virology and virus ecology at K-12 institutions within Arkansas and other places in the world where the NSF has an Established Program to Stimulate Competitive Research (EPSCoR).

Ouachita Baptist University, a private liberal arts university in Arkadelphia, Ark., is in its 135<sup>th</sup> year as a Christ-centered learning community and is ranked the No. 2 “Regional College in the South” by U.S. News & World Report. In fall 2020, Ouachita recorded its highest enrollment in 25 years and its highest-ever four-year graduation rate with the class of 2020. For more information about Ouachita’s Host-Virus Evolutionary Dynamics Institute hub, contact Dr. Nathan Reyna at [reynan@obu.edu](mailto:reynan@obu.edu) or (870) 245-5240.