

UAMS News Bureau

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**UAMS Cancer Researchers Receive NIH Grant
to Develop New Cancer Therapies**

LITTLE ROCK — Researchers at the University of Arkansas for Medical Sciences (UAMS) have received a \$604,208 grant to study how an abnormal protein found in ovarian cancer and some brain tumors helps tumors grow.

The National Institutes of Health (NIH) awarded the three-year grant to Karen Abbott, Ph.D., assistant professor in the UAMS College of Medicine's Department of Biochemistry and Molecular Biology, and Analiz Rodriguez, M.D., Ph.D., assistant professor in the UAMS College of Medicine's Department of Neurosurgery. Abbott is principal investigator for the grant, and Rodriguez is co-investigator.

The pair are researching glycosylation changes, which are found in both ovarian cancer and glioblastoma, an aggressive brain tumor. Glycosylation is the enzymatic process that attaches glycans (a series of carbohydrates, including the sugars) to proteins, or other organic molecules.

In her previous research, Abbott developed an antibody that targets glycosylation on proteins covering the surface of ovarian cancer cells. The new project involves adapting that protein into a new type of therapy for the disease and examining if it also could serve as an effective therapy for glioblastoma, which shares the same type of glycosylation.

“This research can help us understand the proteins that carry this glycosylation change and how this change promotes signals to keep cancer cells alive. Studying those pathways may lead to new methods to kill the cancer cells but leave the normal ones alone,” said Rodriguez, a neurosurgeon and researcher.

“With this grant, we will be developing a new type of therapeutic by modifying the current antibody to allow destruction of the cancer cells,” Abbott said.

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In their work, Rodriguez's lab, which focuses on glioblastoma, will provide tumor samples from patients to test this novel therapy.

Rodriguez and Abbott, whose labs are next door to each other, decided to team up after learning of each other's research and discovering it intersected.

"We decided it would be a good idea to join forces and work on something together," Rodriguez said.

UAMS is the state's only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; hospital; northwest Arkansas regional campus; statewide network of regional centers; and six institutes: the Winthrop P. Rockefeller Cancer Institute, Jackson T. Stephens Spine & Neurosciences Institute, Harvey & Bernice Jones Eye Institute, Psychiatric Research Institute, Donald W. Reynolds Institute on Aging and Translational Research Institute. It is the only adult Level 1 trauma center in the state. UAMS has 2,727 students, 870 medical residents and five dental residents. It is the state's largest public employer with more than 10,000 employees, including 1,200 physicians who provide care to patients at UAMS, its regional campuses throughout the state, Arkansas Children's Hospital, the VA Medical Center and Baptist Health. Visit www.uams.edu or www.uamshealth.com. Find us on [Facebook](#), [Twitter](#), [YouTube](#) or [Instagram](#).

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