

UAMS News Bureau

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**UAMS Researcher Awarded \$1.75 Million Grant to Study
New Therapies for Metastatic Melanoma**

LITTLE ROCK — Alan Tackett, Ph.D., a cancer researcher at the University of Arkansas for Medical Sciences (UAMS), has received a five-year \$1.75 million grant from the National Cancer Institute (NCI) to identify new tumor targets in the treatment of metastatic melanoma.

Tackett is a professor in the UAMS College of Medicine Department of Biochemistry and Molecular Biology and serves as associate director of basic research in the UAMS Winthrop P. Rockefeller Cancer Institute.

Although melanoma is less common than other forms of skin cancer, it is the most deadly form of the disease. About 96,480 Americans – including 760 Arkansans – are estimated to be diagnosed with melanoma of the skin in 2019. While not all of these cases will metastasize, or move to other areas of the body, for those that do, treatment options are limited and often unsuccessful.

In recent years, a type of immunotherapy known as immune checkpoint inhibition has shown unprecedented success in the treatment of metastatic melanoma. Immunotherapy harnesses the body's natural immune system to seek and destroy cancer.

However, while immunotherapies, such as the drugs Keytruda and Opdivo, are successful for many patients, others fail to receive the same positive outcome.

“While these new therapies show great promise for many people, approximately half of metastatic melanoma patients do not respond to immune checkpoint inhibitors. My laboratory is focused on understanding why some patients do not respond to these immunotherapies, so we can use that information to turn these patients into responders” said Tackett, who holds the Scharlau Family Endowed Chair for Cancer Research at UAMS.

To accomplish this task, Tackett uses a sophisticated approach called proteomics that allows his team to measure molecular changes in melanoma cells at the atomic level.

In 2016, Tackett received funding from the National Institutes of Health to implement a National Resource for Proteomics at UAMS, which provides a biomarker discovery platform to researchers at UAMS, as well as those in 23 other states and Puerto Rico.

“By defining pathways active in certain types of melanomas, we can identify new targets for drug development that could increase responsiveness to immune checkpoint inhibitors and thereby save the lives of thousands of patients each year,” said Tackett, whose research has been highly funded by the National Institutes of Health for his entire career.

To accomplish its research, Tackett’s team works closely with UAMS surgeons, oncologists and pathologists to obtain fresh tumor samples removed during surgery at UAMS Medical Center.

“Getting fresh tissue out of surgery and into our lab very quickly is key. This gives us the ability to sort it into individual cell populations and analyze it in ways that are difficult to do with older, fixated tissue samples,” he said.

New patients at the UAMS Winthrop P. Rockefeller Cancer Institute are asked in the early stages of treatment about their interest in donating a portion of their surgically removed tumor, or other specimen such as blood or urine, to benefit research.

The procurement of donated tumor tissue does not require any type of additional procedure, but makes use of a portion of the tissue that was removed during the normal surgical process.

“The research environment at UAMS is ideal for these types of studies as basic scientists work seamlessly with clinicians to move research from the lab to the clinic as quickly as possible,” said Tackett.

This federal grant will bolster the Cancer Institute’s ongoing efforts to receive National Cancer Institute Designation, which requires the institution achieve at least \$20 million in annual direct cost research funding from an approved list of funding agencies.

To achieve designation, cancer centers undergo a highly competitive assessment process that demonstrates an outstanding depth and breadth of research in three areas: basic laboratory, patient/clinical and population-based. The designation brings with it many benefits, including expanded access to federal funding for researchers and improved access to clinical trials for patients.

UAMS is the state’s only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; hospital; a main campus in Little Rock; a Northwest Arkansas regional campus in Fayetteville; a statewide network of regional campuses; and seven 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, Translational Research Institute and Institute for Digital Health & Innovation. 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, 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](#).