UAMS Researchers Awarded $11.4 Million Grant to Continue Study of Cancer Therapy Side Effects

LITTLE ROCK — Led by Marjan Boerma, Ph.D., a team of University of Arkansas for Medical Sciences (UAMS) researchers has received a five-year $11.4 million grant to continue research into the side effects of cancer therapies, including radiation and chemotherapies.

The Centers for Biomedical Research Excellence (COBRE), a program of the National Institute of General Medical Sciences, awarded the grant. The COBRE researchers at UAMS work in the Center for Studies of Host Response to Cancer Therapy. Boerma is the center’s director and director of the Division of Radiation Health in the College of Pharmacy Department of Pharmaceutical Sciences.

The first of its type in the United States, the center was established in 2015 under the leadership of Martin Hauer-Jensen, M.D., Ph.D., with a $10.5 million COBRE grant. The center is administered within the College of Pharmacy.

“We are grateful for the renewed funding from COBRE at a higher level than even five years ago,” said UAMS College of Pharmacy Dean Cindy Stowe, Pharm.D. “The center is one of the very few research centers studying the side effects of cancer therapies like chemo and radiation and looking for ways to minimize or eliminate those side effects. This grant is confirmation to us that NIH also sees the value in the work being done by the center.”

The center’s primary objectives are to study how and why side effects occur and to develop prevention strategies. These objectives are accomplished by established center investigators but also by supporting junior scientists to establish themselves as independent scientists in this research area.

Six junior investigators who did research in the first phase of research since 2015 are now independent but remain part of the center. The four new investigators in the second phase are: Brendan Frett, Ph.D., assistant professor in the UAMS College of Pharmacy Department of Pharmaceutical Sciences;
Ping-Ching Hsu, Ph.D., assistant professor in the UAMS College of Public Health; Caroline Schinke, M.D., assistant professor in the UAMS College of Medicine Department of Internal Medicine’s Division of Hematology and Oncology; and Amanda Stolarz, Pharm.D., Ph.D., assistant professor in the UAMS College of Pharmacy Department of Pharmaceutical Sciences.

- Schinke will use innovative genomic technologies to understand how chemotherapeutic agents adversely affect the bone marrow during myeloma treatment.
- Frett will test a newly designed molecule that has the potential to reduce injury in the lungs from radiation therapy.
- Stolarz will study novel interventions in lymphedema induced by doxorubicin, a chemotherapy drug.
- Hsu will perform studies to identify metabolic biomarkers that can predict which breast cancer patients will develop heart disease from doxorubicin treatment.

“In preparation for Phase 2, we have recruited four promising new independent investigators,” Boerma said. “To increase the likelihood that project leaders successfully will secure independent funding, each of them will have mentors and a plan for their development as faculty.”

The center will integrate its research efforts into the other research programs on campus, including the programs of the Winthrop P. Rockefeller Cancer Institute, the Translational Research Institute, and other COBRE centers.

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. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS’ clinical enterprise including its hospital, regional clinics and clinics it operates or staffs in cooperation with other providers. UAMS is the only adult Level 1 trauma center in the state. U.S. News & World Report named UAMS Medical Center the state’s Best Hospital; ranked its ear, nose and throat program among the top 50 nationwide; and named six areas as high performing — cancer, colon cancer surgery, heart failure, hip replacement, knee replacement and lung cancer surgery. 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.