



Release No. 21-01-28

Jan. 28, 2021

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DoD Researchers Earn Prestigious Tech Transfer Award

Bethesda, Md. – Uniformed Services University (USU) researchers working on a new gamma radiation vaccine development platform have been recognized for their efforts, earning the prestigious 2021 Federal Laboratory Consortium's (FLC) Award for Technology Transfer.

The FLC is the congressionally-mandated organization that educates, promotes, and facilitates federal technology transfer. The Excellence in Technology Transfer Award is presented annually to lab employees, representing more than 300 federal labs supported by the FLC, who have accomplished outstanding work in the process of transferring federally-developed technology.

Dr. Michael J. Daly, professor of Pathology at USU, was recently selected for the FLC Tech Transfer Award for his work "Novel Vaccine Production Using Unique Technology Derived from Radiation-resistant Bacteria." As part of this research, in collaboration with BMI, Inc., Daly and his colleagues were able to successfully apply a powerful manganese (Mn) antioxidant that they developed from the phenomenally radiation-resistant bacterium *Deinococcus radiodurans*. The *Deinococcus* Mn antioxidant was used in preparing an inactivated vaccine against the multidrug-resistant bacterium *Acinetobacter baumannii*, known to cause a range of life-threatening illnesses, such as pneumonia, septicemia, and wound infections.

The World Health Organization lists *A. baumannii* in their highest category of pathogens posing an imminent threat to human health. Through the Daly team's efforts, a protective vaccine has been developed that could potentially prevent battlefield infections, as well as hospital-acquired infections in patients going in for routine surgery. This platform has recently also been used to develop vaccines against RNA viruses, such as the Venezuelan Equine Encephalitis Virus, Chikungunya virus, and Sabin polioviruses.

This is not the first time USU researchers have earned this prestigious award. For six consecutive years (2013-2019), the university's School of Medicine faculty, in conjunction with the USU and Henry M. Jackson Foundation for the Advancement of Military Medicine (HJF) Joint Office of Technology Transfer team, were selected as recipients of the FLC's Tech Transfer Award. Most recently, in 2019, Dr. Chris Broder, professor and chair of USU's Microbiology and Immunology Department, earned the Tech Transfer Award for his work related to vaccine development to combat two potentially fatal viruses, Hendra and Nipah, that can be transmitted from livestock to humans. In 2020, Broder received the FLC's Impact Award for this work and its impact on the world's population.

Daly will be honored at a ceremony April 7 during the FLC National Meeting to be held virtually this year.

“The Deinococcus Group at USU is thrilled and honored,” Daly said. “The award recognizes the importance of fundamental research in radiobiology to military medicine and how commercial partnerships can rapidly advance a field. This is a special day.”

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About the Uniformed Services University of the Health Sciences: The Uniformed Services University of the Health Sciences, founded by an act of Congress in 1972, is the nation’s federal health sciences university and the academic heart of the Military Health System. USU students are primarily active duty uniformed officers in the Army, Navy, Air Force and Public Health Service who receive specialized education in tropical and infectious diseases, TBI and PTSD, disaster response and humanitarian assistance, global health, and acute trauma care. USU also has graduate programs in oral biology, biomedical sciences and public health committed to excellence in research. The University's research program covers a wide range of areas important to both the military and public health. For more information about USU and its programs, visit www.usuhs.edu.