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NEWS NEWS NEWS NEWS

$1.7 Million Grant Awarded to Faculty of Medicine Researcher to Fight Bioterrorism

Microbiologist awarded grant to develop and test vaccines against agents of bioterrorism

The National Institute of Allergy and Infectious Diseases, part of the U.S. National Institutes of Health (NIH) has awarded Donald Woods, PhD, of the Faculty of Medicine, University of Calgary, $1.7 million for research into vaccines against agents of bioterrorism.

Woods, who is part of the Calvin, Phoebe and Joan Snyder Institute of Infection, Immunity and Inflammation, is studying and testing vaccine preparations for the prevention of glanders and melioidosis. Glanders is a widespread bacterial disease primarily found in horses that can be transmitted to humans. It has a history of use in biological warfare. Melioidosis, which affects people in Southeast Asia, is also caused by a bacterial agent. The disease can result in pneumonia, septicemia, and if left untreated can become chronic.

The bacteria that cause these diseases are on the U.S. Centers for Disease Control and Prevention's (CDC) category B list of potential bioterrorism agents. Glanders is caused by *B. mallei*, melioidosis is caused by the closely related organism, *B. pseudomallei*. These diseases are considered to be emerging infectious diseases worldwide, and have a high death rate.

"It is important to develop a vaccine against both of these organisms because they are very difficult to treat with antibiotics and even with appropriate antibiotic treatment, mortality is still high," says Donald Woods.

The microbes that Woods studies are potentially dangerous, so he conducts his work in a biosafety level three containment laboratory. That means every time scientists go into the lab they must take special safety and security precautions to protect laboratory personnel and the public against exposure to these agents.

Woods is working in collaboration with investigators at the U.S. Army Medical Research Institute for Infectious Diseases, the University of Georgia, the University of Toledo Health Sciences Center, Cangene Corporation and the Faculty of Veterinary Medicine, University of Calgary.

Donald Woods, PhD, is the Canada Research Chair in Microbiology, receiving funding support from the Canadian Institutes of Health (CIHR) and a Fellow of the Canadian Academy of Health Sciences.

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