

ConserV Bioscience in collaboration with WRAIR awarded a grant by CDMRP to evaluate a novel malaria vaccine candidate

LONDON, UNITED KINGDOM, January 16, 2024 /EINPresswire.com/ -- [ConserV Bioscience](#) Limited ("ConserV"), a clinical-stage biotechnology company focused on developing vaccines that protect against endemic and emergent infectious diseases, has been awarded a grant under the Peer Reviewed Medical Research Program (PRMRP) of the Congressionally Directed Medical Research Programs ([CDMRP](#)) for the evaluation of a novel malaria vaccine candidate in collaboration with Walter Reed Army Institute of Research ([WRAIR](#)).

The research will evaluate the pre-clinical efficacy of a multivalent vaccine comprising of mosquito salivary antigens, AGS-v PLUS (ConserV's technology), and pre- erythrocytic antigens, PfCSP and PfCelTOS (WRAIR's technology), to protect against malaria disease. The objective of this research is to evaluate the immunological outcome of combining two vaccine strategies, one that targets mosquito salivary proteins at the mosquito bite site and the other that targets malaria parasite proteins prior to invasion of host liver cells. The collaboration will determine whether an mRNA vaccine will outperform the more traditional peptide/recombinant protein approach to deliver antigens.

Every year, over 200 million cases of malaria occur globally with over half a million deaths, mainly of children. Malaria is a major health risk for billions of people living in Sub-Saharan Africa and Southeast Asia as well as for travelers and military personnel serving in these regions.

The logo for the Walter Reed Army Institute of Research (WRAIR). It features the word "WRAIR" in a large, bold, dark red, sans-serif font.

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The causative agent of malaria is Plasmodium, a protozoan parasite that is transmitted to humans by the bite of an infected Anopheles mosquito during a blood meal. The symptoms of malaria include fever and flu-like illness, although nausea, vomiting, and diarrhea may also occur. The first cycle of infection will take place in the liver followed by infection of red blood cells, resulting in jaundice and anemia. Due to high rates of resistance of Plasmodium parasites to antimalarial drugs, there is an urgent need to develop effective malaria vaccines.

Despite the recent WHO decision to approve GSK's RTS,S/AS01 vaccine for children residing in moderate to high malaria transmission areas, malaria remains a major public health burden. Malaria caused an estimated 241 million cases and 627,000 deaths worldwide in 2020 (WHO World Malaria Report 2021). Although there is evidence of sterile protection in controlled human malaria infection trials, there is currently not a vaccine with a target product profile (TPP) suitable for malaria-naïve populations. Hence, malaria is a significant barrier for military personnel and travelers to malaria-endemic regions.

This work was supported by The Assistant Secretary of Defense for Health Affairs endorsed by the Department of Defense, in the amount of \$2,010,214, through the Peer Reviewed Medical Research Program under Award Number (PR221422P1). Opinions, interpretations, conclusions, and recommendations contained herein are those of the author(s) and are not necessarily endorsed by the Department of Defense. In conducting research using animals, the investigators adhere to the laws of the United States and regulations of the Department of Agriculture.

In the conduct of research involving hazardous organisms or toxins, the investigator(s) adhered to the CDC-NIH Guide for Biosafety in Microbiological and Biomedical Laboratories. The U.S. Army Medical Research Acquisition Activity, 820 Chandler Street, Fort Detrick MD 21702-5014 is the awarding and administering acquisition office.

ConserV is a member of the SEEK group of companies. AGSv-PLUS is owned by Imutex Limited, a member of the SEEK group.

Kimbell Duncan, CEO of ConserV Bioscience, commented: "We are pleased to work with our collaboration partners at WRAIR. They have been at the forefront of research of mosquito borne diseases and we believe that combining approaches, we can develop a superior mode of protecting against malaria infection."

Dr. Olga Pleguezuelos, Chief Science Officer of ConserV, commented: "We are very excited to work with WRAIR on the evaluation of this innovative approach, combining our knowledge and technologies to improve current malaria vaccines. Combination of mosquito salivary antigens with plasmodium-specific antigens could uncover improved therapeutics that prevent malaria transmission specifically by targeting the pathogen at the point of entry and at the pre-erythrocytic life cycle stage."

Dr. Evelina Angov, Microbiologist at WRAIR, commented: "We are excited to evaluate a vaccine

strategy that targets the very early stages of malaria parasite infection. This vaccine approach utilizes an innovative method to block migration and invasion of liver cells following parasite introduction into the skin by a mosquito bite by targeting biological aspects of both the parasitic pathogen and its transmitting vector.”

Ends

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