

FOR IMMEDIATE RELEASE

New collaboration builds on recent malaria antigen discovery

BETHESDA, Maryland, February 26, 2009 – In a bid to further diversify the range of options available to malaria vaccine scientists, the PATH Malaria Vaccine Initiative (MVI) and the Seattle Biomedical Research Institute (SBRI) today announced a collaboration that will place previously unused parts of the malaria parasite in the hands of vaccine developers.

Building on SBRI's work with its long-term research partner the US Military Malaria Vaccine Program at the Walter Reed Army Institute of Research (WRAIR), scientists will assess the potential of two dozen recently discovered malaria antigens. They will then select several of those antigens that show the greatest potential to stimulate immune responses that effectively target the malaria parasite.

“Supporting this project is part of MVI's strategy to advance a variety of vaccine candidates that have the potential to either halt the malaria parasite prior to clinical disease or greatly reduce the severity of infection,” said MVI Director, Dr. Christian Loucq. “We believe this project will bring us closer, more quickly, to delivering a safe and highly effective children's vaccine for at-risk communities in Africa.”

Most malaria vaccine approaches rely on stimulating immunity to a handful of known targets on the parasite. However, with more than 5,000 genes and thousands of potential antigenic targets for a vaccine, the malaria parasite poses a particular challenge. Therefore, scientists must use the best available knowledge and technologies to rapidly and economically determine which antigens hold the greatest promise of protection.

To this end, MVI will provide an initial \$2.3 million to SBRI to support prioritization of approximately 25 novel antigens that are expressed by the malaria parasite early in its infection of a person's liver cells. Scientists believe that use of early, liver-stage antigens in a vaccine will provide maximum opportunity for immune cells to identify and stop the parasite before its disease-causing foray into human red blood cells.

This project builds on previous antigen-discovery by SBRI and WRAIR. The new antigens emerged from a multi-laboratory effort that spanned several years, with funding from the Bill & Melinda Gates Foundation, the US Department of Defense, and the Foundation for the National Institutes of Health/Grand Challenges in Global Health initiative.

Lt. Col. Mark Polhemus, Director of the Division of Malaria Vaccine Development at WRAIR, is optimistic about the continued collaboration. “The partnership approach is the key to future success,” he said.

MVI and SBRI will now advance the work on antigen discovery, by establishing criteria for selecting which antigens should be evaluated further as vaccine ingredients. “Malaria vaccine developers need more antigens to work with; and we know from many vaccine trials that antigens that are expressed soon after the parasite enters a person can be effective for reducing malaria,” said Dr. Patrick Duffy, Director of SBRI’s Malaria Program.

Working with WRAIR and other partners—including the University of Washington in Seattle and the Tanzanian Ministry of Health—SBRI will use vaccine development criteria to prioritize several antigens that show the best potential for vaccine development. MVI will then feed these prioritized antigens into its portfolio and work with others to advance their development as vaccine candidates.

“Honing in on those genes that are expressed and immunogenic during the malaria parasite’s initial infection in the human host has been greatly advanced by new technologies that accelerate identification of promising antigens,” noted Dr. David Koelle of the University of Washington. “We must determine which of these antigens can be protective. In this study, we hope to do this in both natural history studies using field samples from persons exposed to malaria, and in animal studies using the relevant antigens from malarial pathogens that can infect mice.”

Given the complexity of *Plasmodium falciparum*, the deadliest malaria parasite, vaccine developers must pursue a diversity of approaches and vaccine concepts to achieve the goal of developing a highly efficacious vaccine to combat a disease that kills close to one million people every year.

“Our common goal, and the goal of the entire malaria vaccine community, is to have a vaccine with at least 80 percent efficacy against clinical malaria,” said MVI Director, Dr. Christian Loucq. “These new antigens will allow us to take a strategic, multi-antigen approach to malaria vaccine development—an approach that will give us a better chance of achieving our goal.”

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The PATH Malaria Vaccine Initiative (MVI) is a global program established at PATH through an initial grant of \$50 million from the Bill & Melinda Gates Foundation. MVI’s mission is to accelerate the development of malaria vaccines and ensure their availability and accessibility in the developing world. MVI’s vision is a world free from malaria. For more information, please visit www.malariavaccine.org.

Founded in 1977, **PATH** is an international, nonprofit organization that creates sustainable, culturally relevant solutions, enabling communities worldwide to break longstanding cycles of poor health. By collaborating with diverse public- and private-sector partners, PATH helps provide appropriate health technologies and vital strategies that change the way people think and act. PATH’s work improves global health and well-being. For more information, please visit www.path.org.