

MVI-IDRI Collaboration Aims to “Boost” Malaria Vaccine Development

Applying Adjuvant Technologies to Malaria Vaccine Development

The PATH Malaria Vaccine Initiative (MVI) and the Infectious Disease Research Institute (IDRI) are collaborating to apply adjuvant technologies to promising malaria vaccine candidates.

Under the new MVI-IDRI collaboration, MVI will identify projects within its portfolio, as well as provide input on other promising vaccine targets that could benefit from IDRI’s adjuvant technology. By bringing together MVI’s unique expertise in malaria vaccine development and IDRI’s adjuvant formulation know-how, this collaboration has the potential to be the critical ‘boost’ that will move promising vaccine candidates even faster along the development pathway.

Boosting Vaccine Development

Malaria is one of the world’s leading killer diseases, taking the lives of almost one million people every year, most of them children under the age of five.

Significant progress has been made in recent years in the fight against malaria, with the development of better drugs and the introduction of insecticide-treated bed nets. However, a safe and effective vaccine would add greatly to existing anti-malarial measures.

The malaria parasite has a complex life cycle that involves subtle mechanisms to evade the body’s immune system, and the disease has, for decades, challenged scientists seeking a malaria vaccine. However, these years of research have allowed a better understanding of the immune pathways a malaria vaccine should target to elicit high levels of protection.

Adjuvants: A critical component in protein-based malaria vaccines

Many current malaria vaccine candidates are made from proteins against which the immune system must develop a protective response. Due to their high level of purity, these proteins may be insufficiently potent to mobilize the desired immune response. Adjuvants (from the Latin word *adjuvare*, meaning to help) must be added to these proteins to both kick-start and direct the desired immune response.

While aluminum salts have been used in vaccines for almost 80 years, stronger adjuvants are required against challenging diseases like malaria, where classical vaccine approaches have been insufficient to provide protection. Most of these new adjuvants are owned by large pharmaceutical companies and are not easily accessible to academics and not-for-profit organizations.

Based on the conviction that the world's poorest people deserve the best technologies to fight infectious diseases, IDRI, a Seattle-based, not-for-profit organization, is taking the lead in providing the public sector with safe, effective, low-cost adjuvants to tackle diseases once thought to be beyond the reach of vaccination.

In October 2007, IDRI received a five-year, \$29.9 million grant from the Bill & Melinda Gates Foundation for the development of adjuvants to be used in malaria vaccine candidates.

IDRI is a Seattle-based not-for-profit organization committed to applying innovative science to the research and development of products to prevent, detect and treat infectious diseases of poverty. By integrating capabilities, IDRI strives to create an efficient pathway bringing scientific innovation from the lab to the people who need it most. For more information, go to www.idri.org.

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.

PATH is an international, nonprofit organization that creates sustainable, culturally relevant solutions that enable 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.