

## Measles vector vaccine platform as an effective tool to prevent chikungunya virus infection

Matthias Müllner, Katrin Ramsauer, Andrea Pfeiffer, Raimund Vielnascher, Christa Firbas and Erich Tauber  
Themis Bioscience GmbH, Austria

Themis' is developing a safe, effective and affordable preventive vaccine platform against priority pathogen diseases that have the potential to cause epidemics such as Chikungunya or Zika virus infection by using a "plug-and-play" vaccine technology. This technology is based on a measles vaccine vector (MV) that can be easily genetically modified to express immunoprotective proteins for designated emerging infectious pathogens. This delivery platform technology has already demonstrated proof of principle in humans through a Phase 1 clinical trial in 42 healthy volunteers with a recombinant measles vaccine against Chikungunya virus (MV-CHIK). We showed that the vaccine was well tolerated. One immunization induced functional, neutralizing antibodies in up to 90% of immunized subjects, a second immunization induced 100% seroconversion. Importantly, immunogenicity was independent of pre-existing anti-vector (measles) immunity. We show here a Phase 2 clinical trial to demonstrate the vaccine vector safety and immunogenicity in up to 300 subjects. Preliminary findings point at excellent safety and immunogenicity profile in the two doses tested. Data are currently under final evaluation and auditing, and will be presented here.

## Biography

Matthias Müllner holds a Master's degree in Molecular Biology from the University of Vienna and completed his Doctoral studies in 2010 at the Department of Virology and Biomedicine at the Veterinarian University of Vienna. He joined Themis Bioscience in 2011 and in his function as Head of CMC, he was responsible for the development of a stable and robust manufacturing process for Themis' Measles based live virus vaccine platform technology. The respective process was successfully used to manufacture phase 1 and/or phase 2 clinical batches for vaccines against Chikungunya Virus (MV CHIK), Dengue Virus (MV DEN) and Zika Virus (MV ZIKA). Currently, the process is optimized for commercial vaccine production.

Matthias.Muellner@themisbio.com

 Notes: