

# 3rd Human Challenge Trials in Vaccine Development

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## Biosketch



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Trained as medical specialist in clinical microbiology and immunology, I have a vested interest in translational research, more specifically the clinical development of Plasmodium falciparum malaria vaccines. For this purpose we improved, standardized and expanded the portfolio of the Controlled Human Malaria Infection (CHMI) models (Sauerwein, NRI 2011, Reuling eLife 2018) and studied immune responses after CHMI showing long lasting (semi-innate) T- and B cell responses (Teirlinck, PLoS Pathog 2013, Walk Nat Com 2019). In addition, we developed an immunization regime so called CPS, that induces complete protection in the CHMI model with unprecedented potency and longevity (Roestenberg, Lancet 2011). We have been able to generate a large bio-bank of valuable blood samples and clinical data in more than 10 years of CHMI and CPS studies. Stringent CHMI protocols have been developed (Bijker, E Soc Stud Sci 2016) and CHMI was improved by modeling parasitaemia and by the use of qPCR for parasite detection (Coffeng, Plos Comp Biol 2017; Roestenberg, JID 2012; Hermsen AJTMH 2004). A panel of P. falciparum clones from different genetic and geographic background has been developed for use in CHMI (Teirlinck, JID 2013; McCall, Sc Transl Med 2017, Langenberg AJTMH 2018). The combined activities have strengthened the CHMI as a strong model for understanding of malaria immunity with a well-accepted role on the critical path of clinical malaria vaccine and drug development.



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