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Developing human and human-like antibodies for diagnostics and therapy of viruses

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Abstract

Venezuelan equine encephalitis virus (VEEV) and Western equine encephalitis virus (WEEV) belongs to to the Alphavirus genus within the Togaviridae family.These virus species are classified as Bioterrorism Agent Category B by the Center of Disease Control (CDC). In this work, we present the development of human and human-like antibodies using antibody phage display against these viruses for diagnostic and therapeutic purposes. Additionally, the identification of a new epitope for HIV-neutralizing antibodies from an elite controler in the gp41 using phage display will be shown.

Biography:

Michael Hust studied biology at the Carl von Ossietzky Universität in Oldenburg, Germany, from 1993-1999. He got his PhD at the Leibniz Universität in Hannover, Germany, in 2002. Since end of 2002 he is working as group leader at the Technische Universität Braunschweig, Germany, in the department of biotechnology headed by Stefan Dübel who co-invented antibody phage display. In 2011 he finished his professorial dissertation (Habilitation, venia legendi for Biotechnology) and was appointed as Privatdozent (PD). He published more than 70 articles (including book chapters) on antibody engineering and phage display. He cofounded the mAb-Factory GmbH in 2007 and the Yumab GmbH in 2012. He is working on the development of human and human-like antibodies for proteome research, diagnostics and therapy. Another field of work is the identification of immunogenic proteins of pathogens using phage display.