

NEED FOR AN EBOLA VACCINE

Ebolavirus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness in humans.

People become infected with Ebola either through contact with infected animals (usually following butchering, cooking or eating) or bodily fluids of infected humans.

EVD has occurred in numerous sporadic outbreaks since it was discovered in 1976. In 2014 a severe Ebola outbreak spread to six countries of West Africa - Guinea, Liberia, Nigeria, Senegal, Mali and Sierra Leone. To date, this outbreak is the largest EVD epidemic, with more than 27,000 cases, including 11,294 deaths, in West Africa (WHO, Ebola situation report—July 29, 2015).

Although the total number of cases to date remains relatively few, the extremely high mortality and ease of transmission results in a high level of global concern around the disease.

Currently no specific treatments exists for EVD, and no licensed vaccine is available.

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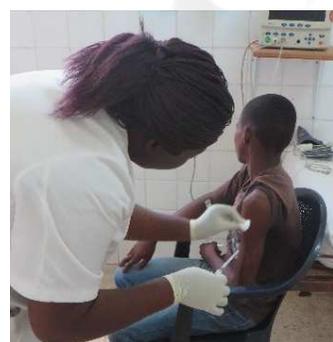


VSV
EBOVAC

**VACCINE SAFETY AND
IMMUNOGENICITY SIGNATURES OF
HUMAN RESPONSES
TO rVSV-ZEBOV**

VSV-EBOVAC PROJECT

VSV-EBOVAC - Vaccine safety and immunogenicity signatures of human responses to rVSV-ZEBOV - is a collaborative research programme aimed to characterize the immune response elicited in humans by the Vesicular Stomatitis Virus (VSV)-vectored Zaire Ebola vaccine (rVSV-ZEBOV).



rVSV-ZEBOV was selected by the World Health Organization (WHO) as one of the most promising vaccine candidates for further development. Preliminary results have documented that rVSV-ZEBOV is highly efficacious in preventing Ebola virus disease.

VSV-EBOVAC offers an ambitious program of performing in depth characterization of clinical samples collected longitudinally before and after rVSV-ZEBOV immunization from about 200 volunteers in Switzerland, Gabon and Kenya.

With an emphasis on systems analysis, the VSV-EBOVAC project harnesses state-of-the-art technologies that illuminate mechanisms behind the observed immunogenicity and reactogenicity of the rVSV-ZEBOV vaccine and ensures that such information is shared among stakeholders.



VSV-EBOVAC OBJECTIVES

The specific objectives of the VSV-EBOVAC project are to:

- Build on and extend up to 12 months the Phase I/II dose-finding randomized, single-center, double-blind, placebo controlled safety and immunogenicity trials of the rVSV-ZEBOV vaccine in healthy adults in Switzerland, Gabon and Kenya
- Characterize the innate and adaptive immune responses elicited by various doses of rVSV-ZEBOV and define how they contribute to vaccine reactogenicity, antibody responses and viral control
- Characterize rVSV-ZEBOV induced humoral immune response
- Perform a direct comparison of the long-term immunity (antibodies, memory B cells, memory CD8 and CD4 T cells) generated in volunteers vaccinated with the rVSV-ZEBOV vaccine compared to individuals that have survived Ebola infection
- Determine the dynamic transcriptomic and metabolomic profiles of the human immune response to VSV-ZEBOV vaccination at multiple time points

VSV-EBOVAC FACTS:

Total cost: €8 million

IMI2 contribution: €3.9 million

Duration: 3 years (1st March 2015-28th February 2018)

Project Coordinator: Donata Medaglini, Sclavo Vaccines Association and University of Siena

Scientific Coordinator: Claire-Anne Siegrist, University of Geneva

Partners: 12 from 7 countries

VSV-EBOVAC PARTNERSHIP

VSV-EBOVAC is a public-private consortium of 12 partners from Europe, USA and Africa, involving experts from academic institutions, scientists from the 3 main clinical sites (Switzerland, Gabon, Kenya), the vaccine manufacturer, a small and medium-sized enterprise (SME) and research institutes.

The VSV-EBOVAC project is coordinated by the non-profit organization Sclavo Vaccines Association (www.sclavo.org).

VSV-EBOVAC Partners

- Sclavo Vaccines Association (IT)
- University of Geneva (CH)
- BioProtection Systems (US)
- Academisch Ziekenhuis Leiden (NL)
- University of Gothenburg (SE)
- University of Siena (IT)
- Emory University (US)
- The Chancellor, Masters and Scholars of the University of Oxford (UK) – KEMRI/Wellcome Trust Laboratories (GA)
- Eberhard Karls Universitaet Tuebingen (DE) - Centre de Recherches Médicales de Lambaréné (KE)
- MICROBIOTEC srl (IT)
- Spiez Laboratory, Federal Office for Civil Protection (CH)
- Department of Health, Medicines and Healthcare Products Regulatory Agency -National Institute for Biological Standards and Control (UK)

More information: www.vsv-ebovac.eu