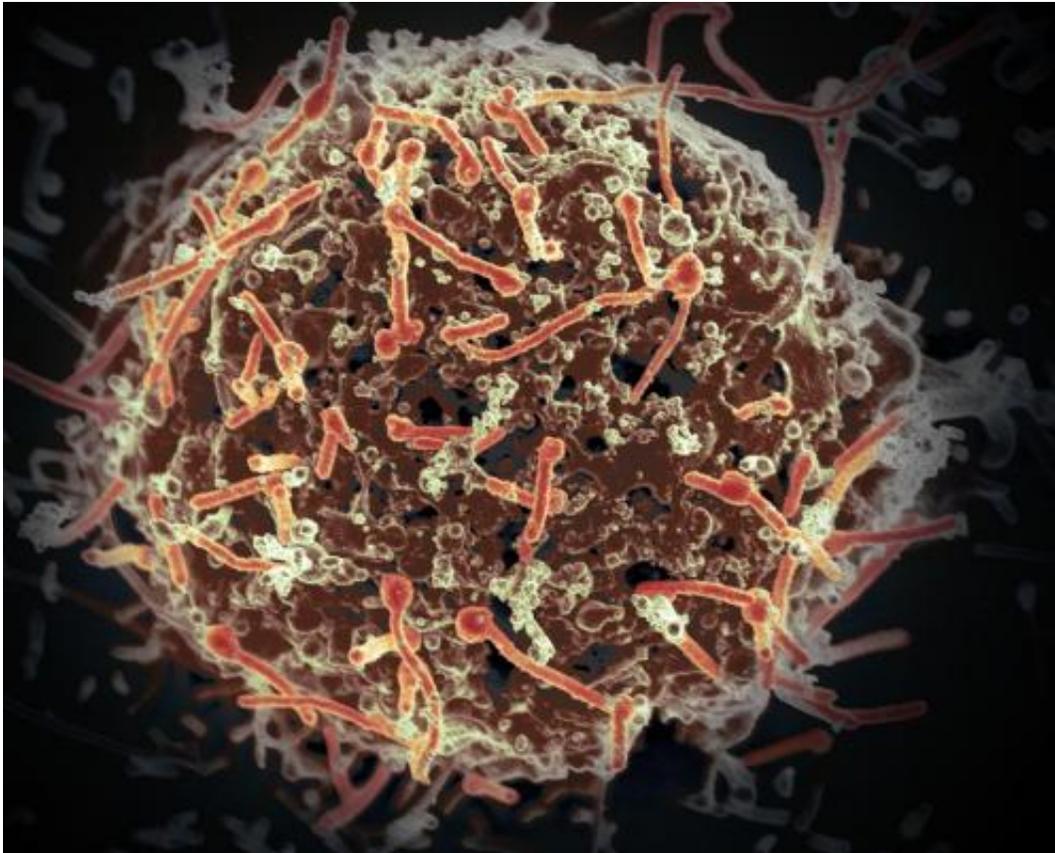


Ebola vaccine trial begins in Senegal

July 15 2015



The Ebola virus, isolated in November 2014 from patient blood samples obtained in Mali. The virus was isolated on Vero cells in a BSL-4 suite at Rocky Mountain Laboratories. Credit: NIAID

A trial to evaluate an Ebola vaccine has begun in Dakar, Senegal, after initial immunisations started at the Jenner Institute, Oxford University. The announcement comes as a conference in Oxford discusses the global

response to Ebola and the implications for future drug and vaccine development.

The first volunteers of the trial at Centre Hospitalier Universitaire le Dantec in Dakar received an initial vaccination at the start of July, with a booster vaccination one week later. While this is a short timescale for immunisation, if proved successful it would provide an option to respond to an Ebola outbreak with a rapid vaccination programme. This new accelerated vaccination approach is now being tested in parallel in the UK and Senegal.

Dr Egeruan Babatunde Imoukhuede, who is coordinating the Senegal trial, said: 'The current Ebola outbreak has reinforced that speed of response is crucial. Outbreak diseases spread quickly, so any vaccination approach must be able to keep up.' There were 30 confirmed cases of Ebola virus disease in West Africa in the week to 5 July 2015 with transmission continuing in Guinea and Sierra Leone, and renewed transmission in Liberia.

The trial uses two vaccines tested first in people at the Jenner Institute at Oxford. The first vaccination, based on a chimpanzee adenovirus (known as ChAd3), is intended to stimulate, or prime, an initial immune response. The second vaccination, using modified vaccinia Ankara (MVA), is designed to boost the level of the body's immune response further. The ChAd3-EBO Z vaccine is being developed further by GlaxoSmithKline (GSK) and partners while the newly available MVA-EBO Z vaccine was manufactured through a collaboration between Oxford University, Emergent Biosolutions and GSK.

Each vaccine is based on genetically modifying safe viruses to carry just one part of the Ebola virus that will stimulate the body's immune system to fight the disease. Neither vaccine component contains any live Ebola virus, so it is not possible to be infected with Ebola.

While the Jenner Institute has trialled similar vaccines, this trial uses a refined booster vaccine, explained Professor Adrian Hill, Director of the Jenner Institute: 'We are using a new MVA, which has two advantages. Firstly, it matches exactly to the ChAd3 insert, which may improve immune responses. Secondly, it was produced on a new cell line that has many advantages for low cost large scale manufacturing. When you consider that Ebola affects some of the world's poorer countries and can spread rapidly, getting the scale of manufacturing up while keeping the cost down is key to delivering an effective response.'

In Senegal, Professor Souleymane Mboup is the Principal Investigator (PI) and Head of the Laboratoire de Bactériologie-Virologie (LBV) conducting the study. He said: 'A dedicated, experienced and seasoned clinical research team led by Dr Pierre Birahim Ndiye has been set in place to work with colleagues at Oxford University for the successful conduct of this Ebola [vaccine](#) trial.'

The trials will see around 38 volunteers given the vaccines in the UK, and a further 40 volunteers in Senegal, initially to check that the vaccines are safe and that they stimulate an [immune response](#). The studies aim to complete enrolment by late August.

Provided by Oxford University

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