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Oxford Vaccine Group begins first trial of new Ebola vaccine

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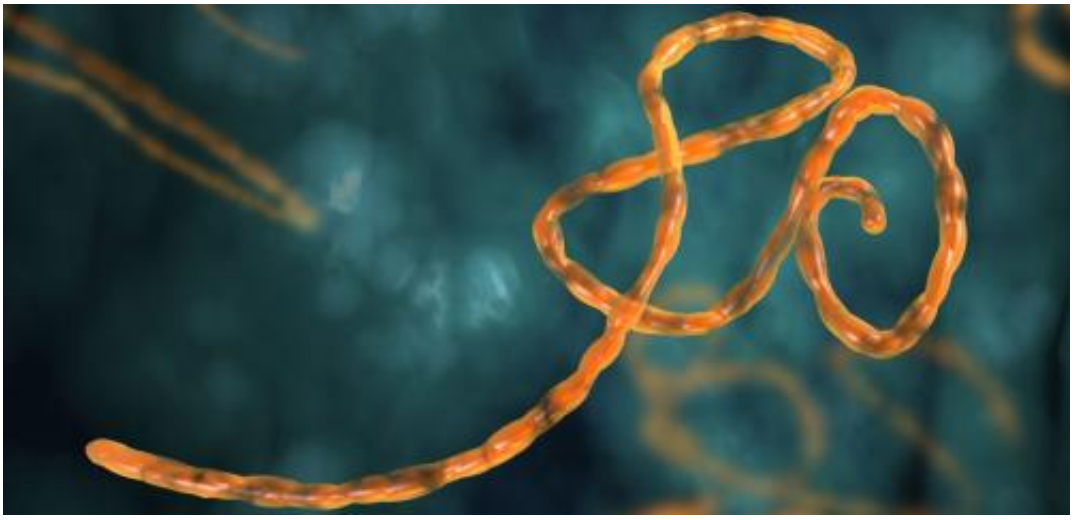

Ebola virus

Oxford University doctors and scientists are starting the first safety trial of an experimental preventative Ebola vaccine regimen being developed by the Janssen Pharmaceutical Companies of Johnson & Johnson (Janssen).

The Oxford Vaccine Group, part of the University of Oxford Department of Paediatrics, aims to have vaccinated all 72 healthy adult volunteers by the end of January.

The development of this prime-boost vaccine regimen has been

accelerated in response to the current outbreak of Ebola virus disease in West Africa, which has claimed over 6,000 lives. An effective vaccine would be an important step in controlling the spread of disease.

Volunteers for the trial, aged 18–50 years, are likely to come largely from the Oxfordshire region, and will be asked to make a maximum of 12 visits to the Oxford Vaccine Group site on the city's Churchill hospital site over a period of a year.

People interested in volunteering can find out more at www.ebolavaccine.org.uk.

'We aim to immunise all participants within a month,' says Dr Matthew Snape of the Oxford Vaccine Group, who will lead the study team. 'The main aim is to understand the safety profile of the vaccines.'

He adds: 'The devastating Ebola epidemic in Guinea, Liberia and Sierra Leone continues to see hundreds of new cases each week and has placed huge burden on these countries' infrastructures. While public health measures are currently still the best way to bring the outbreak under control, if we have a safe and effective vaccine it could begin to have an impact later this year. That is the goal that is seeing manufacturers, public health bodies and research regulators come together to accelerate the first clinical trials of new Ebola vaccines.'

The study involves a prime-boost vaccine regimen, in which patients are first given a prime to the immune system to stimulate an initial immune response, and then a boost intended to further enhance the level of the body's immune response over time.

The vaccine regimen does not contain any replicating virus, so it is not possible to be infected with Ebola.

Pre-clinical studies have demonstrated that the prime-boost regimen, given two months apart, provides non-human primates with complete protection from death due to the Kikwit Zaire strain of Ebola – which is similar to the virus causing the current outbreak in Western Africa.

The trial is being sponsored by Crucell Holland B.V., one of the Janssen Pharmaceutical Companies, which has chosen the Oxford Vaccine Group to carry out the study. Ongoing support from the NIHR Oxford Biomedical Research Centre has also made such a rapid response possible through funding for core research staff at the Oxford Vaccine Group.

This is the second safety trial of an Ebola vaccine to be carried out at the University of Oxford. In September, a separate Oxford University team in the Jenner Institute began a safety trial of a different Ebola vaccine developed by GSK/US National Institutes of Health (NIH). Led by Professor Adrian Hill, the trial vaccinated 60 healthy volunteers and initial results are expected this month.

Those who couldn't take part in the earlier Jenner Institute trial because recruitment was complete can be considered for this new Oxford Vaccine Group trial of an Ebola vaccine.

The primary objective of the Oxford Vaccine Group study is to determine the vaccine regimen's safety profile. It will also test in which order the two vaccine components should be given in a prime-boost regime, and how far apart.

The immune responses that the vaccine generates – both antibodies and T cells – will also be measured over a period of one year.

Further studies of the vaccine regimen are being planned for the United States and in Africa early next year.

As well as the Janssen and GSK/NIH Ebola vaccines, Merck & Co has recently bought the rights to a third Ebola vaccine being developed by the biotech company NewLink Genetics. Other vaccines are also in development in Russia.

Dr Snape says: 'The fact that there are at least three Ebola vaccines entering these early safety trials is good news. We are not playing first past the post here. Having multiple vaccines progressing through clinical trials increases the likelihood of vaccine manufacturers having the capacity to meet production demands should mass immunisation be required. The more vaccines and more manufacturers there are working on this, the better.'

Provided by Oxford University