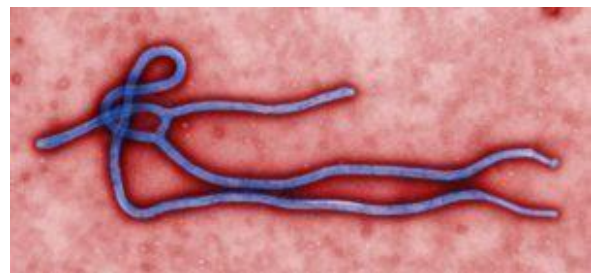
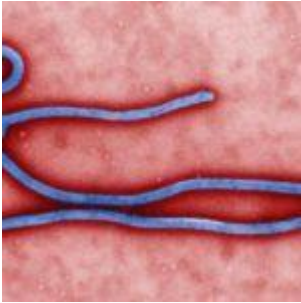


Ebola vaccine confirmed to be highly effective



Ebola virus virion (Public Health Image Library, CDC, Image ID:10816)

Scientists from Canada's National Microbiology laboratory have reported the successful results of the rVSV-ZEBOV vaccine trial conducted in Guinea. They found that the vaccine was highly effective in the prevention of Ebola disease. This gives hope that no further major outbreaks will occur as they can now be more easily contained with the vaccine.

2014 saw the biggest recorded Ebola outbreak which resulted in over 11 000 deaths. The mortality rate for this strain was between 50-80%. This caused global concern and a rush for the development of an effective Ebola vaccine.

rVSV-ZEBOV vaccine is a recombinant vaccine with contains replication competent vesicular stomatitis virus and the surface glycoprotein of the Zaire strain of the Ebola virus. The team tested how effective the vaccine was at preventing Ebola infection. They used an open-label, cluster-randomised

ring strategy for the trial. In a ring strategy, a ring of people who are physically close to the infected individuals are vaccinated and subsequently monitored.

Initially, the vaccine was administered to participants immediately or after 3 weeks. The 3 week group acted as a control in the study. There were no cases of Ebola infection in the group who got the vaccine immediately while in the control group there were 23 infections. After these promising preliminary results, the vaccine was administered to all participants immediately upon recruitment.

Out of over 5000 individuals who received the vaccine immediately upon recruitment through the intra-muscular route, after 10 days or more post-vaccination none of them had contracted Ebola. This means the vaccine had a 100% protection rate. The vaccine mostly had mild adverse effects such as headaches and fatigue.

It is still not known how long-lasting the vaccine is and how many doses would be needed for lasting protection and therefore more research is needed before this vaccine can be licensed. In summary, this study has shown that the rVSV-ZEBOV vaccine is highly effective in preventing Ebola. It, therefore, has the potential to be used to control future outbreaks.

Journal Article: [Henao-Restrepo et al., 2016. Efficacy and effectiveness of an rVSV-vectored vaccine in preventing Ebola virus disease: final results from the Guinea ring vaccination, open-label, cluster-randomised trial \(Ebola Ça Suffit!\). *The Lancet*](#)

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