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Ã¢â?¬Ë?Indian firm's Zika virus vaccine 100% efficient in animal trials'

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The Hyderabad-based Bharat Biotech's 'killed Zika virus vaccine' using an African strain has shown 100% efficacy against mortality and disease in animal studies, a study has shown. A 'killed virus vaccine' or 'inactivated vaccine' contains virus that has been grown in culture and then killed using physical or chemical processes.

The results of the study has been published in the Nature group journal Scientific Reports. Two doses (5 and 10 microgram) of the vaccine given through intramuscular route on days 0 and 21 to mice were found to protect the animals against Zika virus seven days after the second vaccination.

The vaccine was found to confer 100% protection against infection caused by an Asian Zika virus strain as well as by the African Zika virus strain.

All the animals that were not vaccinated died eight days after infection by the African strain and 12 days after infection by the Asian strain.

While all the animals that received the vaccine exhibited "undetectable" viral load, the amount of virus present in animals that did not receive the vaccine peaked four days after being infected with either the African or Asian Zika virus strain.

"The vaccine was developed using the African strain of the virus. It is important to prove that the vaccine developed with the African strain also protects against Zika infection caused by the contemporary Asian strains of Zika virus.

Importing the contemporary Asian strains into the country was difficult, and hence the vaccine challenge studies with Asian strain had to be outsourced to a contact research organisation in the U.S.," says K. Sumathy from Bharat Biotech and the first author of the paper. A particular kind of mouse — AG129 — which is highly immunocompromised and hence highly susceptible to virus infection was used for the study.