

# Spanish researchers develop five-strain Ebola vaccine

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Spanish researchers are working on a vaccine against all five strains of the killer Ebola virus in what would be a world first, Madrid's October 12 Hospital said Wednesday.

A prototype vaccine developed by pharmaceutical group Merck is already in use, but acts only against the most virulent, "Zaire" strain.

Despite not having market approval, Merck's rVSV-ZEBOV was administered to people in the Democratic Republic of Congo in May, with UN approval, in a bid to contain an outbreak of the same virus that killed more than 11,300 in three West African countries from 2013-2015, sparking international panic.

For several months, a team from the October 12 Hospital has been working with researchers at two other hospitals in the capital to examine and learn from blood samples taken from three people cured of Ebola in Spain.

Lead researcher Rafael Delgado told reporters the difficulty lay in the fact that the virus protects itself

with proteins that act as a shield, and only exposes its vulnerable zones for short periods of time.

That makes it tough for the body's immune system to fight the [virus](#).

The three Spanish patients had produced "very effective" viral antibodies, though in a "small quantity" and only against the Zaire strain they were contaminated with.

Delgado, head of microbiology at the [hospital](#), said researchers are aiming to reproduce these antibodies on a larger scale, and in a way that would make them efficient against all five [virus strains](#).

US medical giant Johnson & Johnson is separately developing an experimental vaccine against two Ebola [strains](#).

Delgado said researchers hope to get results from mouse experiments within a year.

The Ebola epidemic caused alarm in Spain in 2014 when a nursing assistant, Teresa Romero, became the first person infected outside Africa.

She caught the disease while tending to a Spanish missionary repatriated from Sierra Leone, who died in Spain in September that year.

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