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Medical News

VACCINE CANDIDATE OFFERS PROTECTION FROM ZIKA VIRUS IN ANIMAL TESTS

A newly developed vaccine against Zika virus induces a rapid and long-lived immune response in mice and non-human primates, a Nature paper reports. Although further tests are needed to assess the vaccine's effects on pregnant animals and unborn fetuses, it remains a promising candidate for further development in the global fight against Zika virus.

Drew Weissman and colleagues devised a novel vaccine based on a modified messenger RNA that encodes two different Zika virus proteins. Mice and rhesus macaques given a single, low dose of the vaccine developed neutralizing antibodies against Zika virus within 2 weeks. Critically, the immunity persisted when vaccinated animals were challenged with Zika virus. Mice and macaques remained protected at 5 months and 5 weeks post-vaccination, respectively.

The new vaccine has several potential advantages over previously described alternatives. Delivered by lipid nanoparticles by injection just below the skin, it is easy to administer. Moreover, while some other vaccines require two immunizations with large doses, a single low dose of the new vaccine offers lasting immunity in animal models, potentially making it more cost-effective and scalable (just a single contact with healthcare workers would be needed). Made from mRNA, the vaccine is also non-replicating and cannot integrate into the host genome, easing safety concerns.

Courtesy: medicalnewstoday.com