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Taiwan & US to develop coronavirus, influenza combo patch vaccine

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Vaxess Technologies, an innovative biotechnology company in the US developing the MIMIX smart release patch, has formed a partnership with Taiwanese pharmaceutical company, Medigen Vaccine Biologics Corp. (MVC), to develop a combined COVID-19 and quadrivalent seasonal influenza vaccine (QIV), delivered via the novel MIMIX patch system.

The vaccine in development uses a stabilized form of the spike protein (S-2P) from the SARS-CoV-2 virus. This immunogen was co-developed by researchers at the Vaccine Research Center of the National Institute of Allergy and Infectious Diseases, part of the U.S. National Institutes of Health, and at the University of Texas at Austin.

The modified spike sequence provides a more stabilized version of the spike protein compared to wild-type sequences, and has shown a strong immunogenicity profile in preclinical trials. MVC aims to enter phase I clinical trials in September of 2020, with an adjuvanted intramuscular injection of the vaccine. In parallel, Vaxess will initiate a U.S. clinical trial using the company's MIMIX™ platform technology.

The MIMIX patch is unique in its capacity to enhance vaccine efficacy as well as ease administration and global distribution. The MIMIX platform utilizes sustained release technology to stimulate a more powerful and durable immune response to fight infections.

Vaxess is combining the novel COVID-19 vaccine with a broadly protective seasonal influenza vaccine into one convenient patch. This will allow for a seasonal protection vaccine in a single-dose, shelf-stable, simple-to-apply presentation, contributing to addressing an endemic COVID.