

A new vaccine formulation to prevent Enterovirus 71 infection

TECHNOLOGY DESCRIPTION

This technology is created by fusing recombinant peptides of Enterovirus 71, which is the causative agent for hand, foot and mouth disease (HFMD), to a carrier molecule that improves their solubility.

TECHNOLOGY FEATURES

This technology is a soluble protein which has more immunogenic and it capable of inducing neutralizing antibodies. It is an improved vaccine for enterovirus associated with many human and mammalian diseases. This technology is able to overcome the challenge in prior technologies where the virus vaccine has problems such as under attenuation, mutation which can lead to reversion of the virulent type and viruses being contaminated during propagation.

ADVANTAGES

- Soluble protein
- Improved vaccine for enterovirus

INDUSTRY OVERVIEW

Prospect Industry: Pharmaceutical/Medical

Hand, foot, and mouth disease (HFMD) is a common childhood illness caused by serotypes of the Enterovirus A species in the genus Enterovirus of the Picornaviridae family. The disease has had a substantial burden throughout East and Southeast Asia over the past 15 years. China reported 9 million cases of HFMD between 2008 and 2013. According to Sinovac projection, market for human vaccine is China alone is \$5.2 billion in 2016. Main market for the product is China due to its high cases of Enterovirus 71 (EV71) and HFMD. A new Transparency Market Research report states that the global foot and mouth disease (FMD) vaccines market was valued at US\$0.51 billion in 2013 and is predicted to reach US\$0.95 billion by 2020. The market is projected to expand at a CAGR of 8.80% from 2014 to 2019. In the near future, the inactivated EV71 vaccine is expected to become available on the market in China. Since EV71 is a major cause of HFMD, the vaccine is expected to significantly reduce the number of cases, as well as the detrimental economic effect of the disease. The global vaccines market is expected to reach 48.03 billion by 2021 from USD 32.24 billion in 2016 at a CAGR of 8.3%. Potential prospects are HFMD patients, medical doctors and pharmaceutical company. It can be distributed via several channels based on the target customers. The product can be distributed directly to the patient via registered pharmacy. Personal selling methods can also be done with hospitals and pharmaceutical companies by contacting them directly with the sample.



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