Vaccine for Rift Valley Fever

The CSIC, through INIA-CSIC and its Animal Health Research Center, has developed a live attenuated vaccine for Rift Valley Fever, an emerging zoonotic viral disease of great economic impact on animal health that can also affect humans. There is not a treatment or vaccine on the market, so this vaccine can be used to develop safe and effective control strategies, both for animal and human use.

We are looking for companies in the biopharmaceutical sector interested in the development of vaccines, both for the animal health sector and for human medicine.

An offer for Patent Licensing

First attenuated virus based vaccine against Rift Valley Fever

Live attenuated vaccines induce long-lasting and broadly protective immunity after a single dose administration in both animals and humans. They are called live vaccines because they contain the infecting organism in a live or viable form, but with a greatly reduced (attenuated) virulence. This makes them an excellent basis for developing a successful immunization program in affected countries or for implementing preventive control measures in countries with a higher risk of introducing or spreading the disease.

It´s been characterized a variant of the RVF virus obtained in the laboratory by serial passages in the presence of a mutagenic agent, favipiravir. This variant, called 40F-p8, was highly attenuated in immunodeficient mice extremely sensitive to viral infections, without altering its ability to induce a protective immune response in immunocompetent mice. Furthermore, they have identified a number of specific mutations throughout the viral genome that can be potential virulence determinants.

The vaccine can be administered to domestic (cows, sheep, goats, camels) and wild (buffalo) ruminants, as well as humans.

Main innovations and advantages

- The main problem of live attenuated virus-based vaccines is associated with the residual virulence of the formulations used. This virus variant could be the basis of a new vaccine strain with safety parameters not previously described.
- A pharmaceutical or veterinary composition is provided comprising the VFVR variant. It can be administered to domestic (cows, sheep, goats, camels) and wild (buffalo) ruminants, as well as humans.

Patent Status

Priority patent application filed suitable for international extension

For more information, please contact:

Rosa Rodríguez Díaz

OTRI del INIA-CSIC

Spanish National Research Council (CSIC)

Tel.: 34 91 347 3965

E-mail: rosa.rodriguez@inia.csic.es
comercializacion@csic.es