Anti-Rabies HuMab
Rabies Therapy

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Unmet Need

Rabies is a potentially lethal viral infection transmitted primarily by the bite of an infected animal. While mainly prevented by vaccines in the developed world, rabies is endemic in Asia and Africa. Uncontrolled infections cause brain inflammation and manifestation of symptoms is followed by fatal outcomes. Worldwide rabies caused about 17,400 deaths in 2015, about 40% of which were in children. In India and other parts of Southeast Asia where rabies is endemic, immune equine IgG is administered, but there is a cost-effective need for improved sources of immune IgG to clear infected individuals.

Opportunity

A set of six (6) huMabs were cloned from infected human individuals that recognize rabies and efficiently clear the infection in an animal model. These huMab offer an opportunity for a novel passive vaccine to clear rabies in infected individuals. The main markets are in India, China, Southeast Asia and Africa where passive vaccines from equine sources are used and where the LIMR huMabs offer competitive replacement.

Unique Attributes

The LIMR huMab exhibit high potency and effective viral clearance in animals. Unlike immune equine IgG that is currently used as a passive vaccine, these huMab offer defined structural and biological characteristics and can be propagated indefinitely.

Clinical Applications

Clearance of rabies in an infected patient that may be safer and more cost effective than existing passive vaccines obtained from equine sources.

Stage of Development

The LIMR huMab have been cloned and human hybridomas are stored. IgG genes have been sequenced and are ready for expression in any desired expression system. Preclinical proof of concept for viral clearance in an animal model has been obtained.

Intellectual Property

Pending Patent: U.S. Provisional Patent filed on the huMab IgG sequences and uses.

Collaboration Opportunity

Development of a commercializable passive vaccine based on existing preclinical proof of concept.

References and Publications

Nagarajan T, Rupprecht CE, Dessain SK, Rangarajan PN, Thiagarajan D, Srinivasan VA. (2008). Human monoclonal antibody and vaccine approaches to prevent human rabies. Curr Top Microbiol Immunol. 317:67-101.

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