Recombinant Raccoon Pox Vaccine Against Highly Pathogenic Avian Influenza

INVENTORS • Jorge Osorio, Keith Iams, Brock Bakke, Shi-Hsia Hwa

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OVERVIEW

The H5N1 influenza A virus subtype is highly contagious among birds and can be deadly to them but does not usually infect people. However, infections with H5N1 have occurred in humans and of the few avian influenza viruses that have crossed the species barrier to infect humans, H5N1 is responsible for the largest number of detected cases of severe disease and death in people.

An effective vaccine against the H5N1 influenza virus that could be used to vaccinate domestic animals and avians would be one step towards preventing a pandemic threat and controlling the spread of H5N1.

THE INVENTION

UW–Madison researchers have constructed vaccines comprising live recombinant raccoon pox viruses that express antigens from pathogens such as highly pathogenic avian influenza virus. When administered to a host animal, the vaccines elicit neutralizing antibodies and/or a cytotoxic T cell response.

APPLICATIONS

• Prevention or treatment of pathogen infection, including infection with the H5N1 influenza virus, in domestic animals and fowl

KEY BENEFITS

• Provides an easy, scalable way to produce influenza vaccines for avians and domestic animals
- Triggers a broader humoral and cellular response than currently available vaccines
- Suitable for pathogens in addition to avian influenza
- Viral vectors can be used alone or in combination with one another.
- Raccoon pox virus provides high levels of antigen expression, is able to tolerate inserts up to 27 kilobases long and has low seroprevalence in domestic animals.
- Raccoon pox virus enables DIVA (differentiate infected from vaccinated animals) surveillance.
- Raccoon pox virus does not cross react with fowlpox virus and has been shown to be a safe and effective vaccine in mice, rabbits, piglets and cats.

**ADDITIONAL INFORMATION**

**Publications**

**Tech Fields**
Pharmaceuticals & Vitamin D - Vaccines

**CONTACT INFORMATION**

For current licensing status, please contact Emily Bauer at emily@warf.org or (608) 262-8638.