

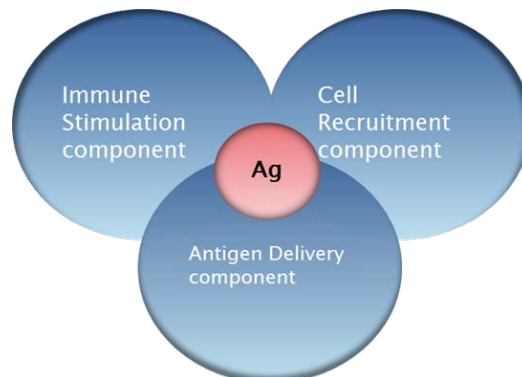


## Technology Licensing Opportunity: Novel Adjuvant

### Non-Confidential Summary

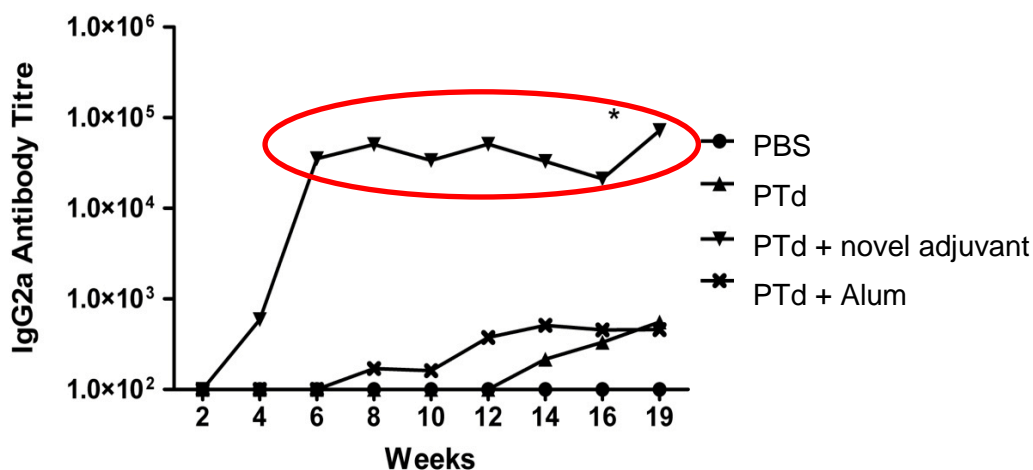
#### Background

One of the challenges with vaccine development is the proper formulation to target the appropriate immune response. VIDO-InterVac and partners, under the Bill and Melinda Gates Grand Challenges in Global Health, has developed a novel adjuvant. The adjuvant consists of three components which function collectively to increase the immune responses to multiple antigens. It is in commercial development for humans and is scheduled to enter clinical trials in 2015.



#### Development Stage: Mid

Immunogenicity and efficacy data are available for a variety of viruses and bacteria including pertussis (toxoid, filamentous hemagglutinin, and pertactin), RSV F protein, Influenza and Actinobacillus pleuropneumoniae. Studies for PRRSV, PEDV, SIV, Mycoplasma bovis, bovine RSV, and inclusion body hepatitis (poultry) are ongoing. The adjuvant can increase the immune by several logarithms (Figure). It is able to induce substantial extended duration of immunity. It is effective in multiple routes of administration including intranasal delivery. The safety profile is good. It is inexpensive to produce.



#### Intellectual Property

The following provisional patent application is published:

- Combination adjuvant formulation; Patent Application 20100239611



## ***Publications***

Garg R et al., Induction of mucosal immunity and protection by intranasal immunization with a respiratory syncytial virus subunit vaccine formulation. *J Gen Virol.* 2014 Feb;95(Pt 2):301-6.

Polewicz M., et al. Novel vaccine formulations against pertussis offer earlier onset of immunity and provide protection in the presence of maternal antibodies. *Vaccine.* 2013 Jun 28;31(31):3148-55.

Garlapati S., et al. Enhanced immune responses and protection by vaccination with respiratory syncytial virus fusion protein formulated with CpG oligodeoxynucleotide and innate defense regulator peptide in polyphosphazene microparticles. *Vaccine.* 2012 Jul 27;30(35):5206-14.

Polewicz M., et al. Influence of maternal antibodies on active pertussis toxoid immunization of neonatal mice and piglets. *Vaccine.* 2011 Oct 13;29(44):7718-26. .

Gracia A., et al. Antibody responses in adult and neonatal BALB/c mice to immunization with novel Bordetella pertussis vaccine formulations. *Vaccine.* 2011 Feb 11;29(8):1595-604.

For additional information:

Paul Hodgson  
Associate Director – Business Development  
[paul.hodgson@usask.ca](mailto:paul.hodgson@usask.ca)  
306-966-7465