Technology Licensing Opportunity

Non-Confidential Summary

PHAGE LAMBDA DISPLAY CONSTRUCTS

ROI# 06-020

Opportunity:
The invention is a bacteriophage-based method to prepare particles with utility in various fields, such as affinity agents for biotechnology, as neutralizing agents, and in clinical (human or veterinary) applications such as vaccine preparation and delivery. It includes provisions for environmental safety, prevention of reverse engineering, and specificity for tissues or cell types (e.g. for targeted delivery of genes or vaccines). For clinical applications, this technology offers alternative dosage forms and routes of administration.

Background:
An example of the use of this technology for the production of a vaccine to porcine *Circovirus* 2 (PCV2) is described in Vaccine (2009) 27: 6595-6604.

Invention:
The invention enables the preparation of three types of engineered and modified bacteriophage particles, referred to as LDP, LDNAP, and L2DP:

LDP (lambda display particles) are surface display vehicles with potential use as vaccines, antibody substitutes (e.g. as antidotes, antitoxins and antisera,), anti-microbial agents, and other uses.

LDNAP (lambda DNA particles) are DNA vaccines delivered by a phage particle that is not coated with a fusion protein.

L2DP (lambda display-DNA particles) combine the features of LDP and LDNAP: for instance, this could take the form of a DNA vaccine delivered by surface-display phage particle with cell-targeting ability.

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Patent Status:
International Patent Application serial no. PCT/CA2009/000603.

Development Stage:
A proof-of-principle for vaccine applications has been completed (swine model).

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