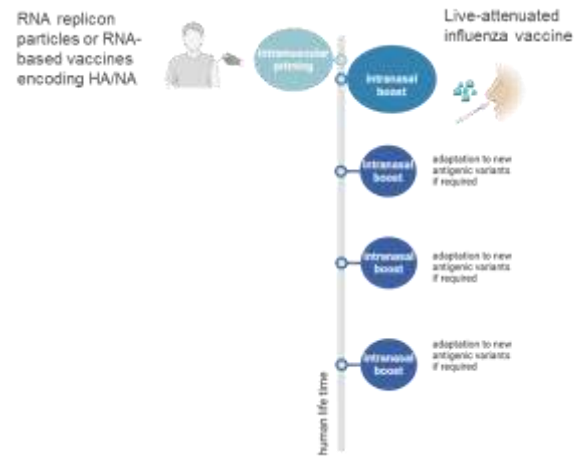


Technology Opportunity, Ref. No. UB-25/253

A safe and efficacious prime/boost vaccination strategy for seasonal influenza

Current seasonal influenza vaccines are mostly based on inactivated split influenza viruses, which are updated every year to match the antigenic drift of influenza viruses. Efficacy of current vaccines can be quite low in the elderly, and protection is often non-durable. Inactivated influenza vaccines do not elicit mucosal immune responses and thus do not prevent influenza virus replication and shedding from the upper respiratory tract.

- Strong systemic and mucosal immunity
- High efficacy in preventing infection and transmission
- Broader antigenic cross-reactivity by providing immunity to HA and NA
- Excellent safety profile
- High yield vaccine production on established cell cultures



Invention We developed a new, two-step vaccination strategy that pairs intramuscular injection of recombinant RNA replicon particles with nasal spray administration of a novel attenuated live flu virus. When evaluated in the pig animal model, this novel vaccination strategy demonstrated superior features compared to the immunization with the individual vaccine components.

Keywords Seasonal Influenza, Flu, Influence Vaccine

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References Avanthay, R. et al (2024) Evaluation of a novel intramuscular prime/intranasal boost vaccination strategy against influenza in the pig model. PLoS Pathogens 20(8):e1012393.
<https://doi.org/10.1371/journal.ppat.1012393>

Patent Status Patent application filed

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