

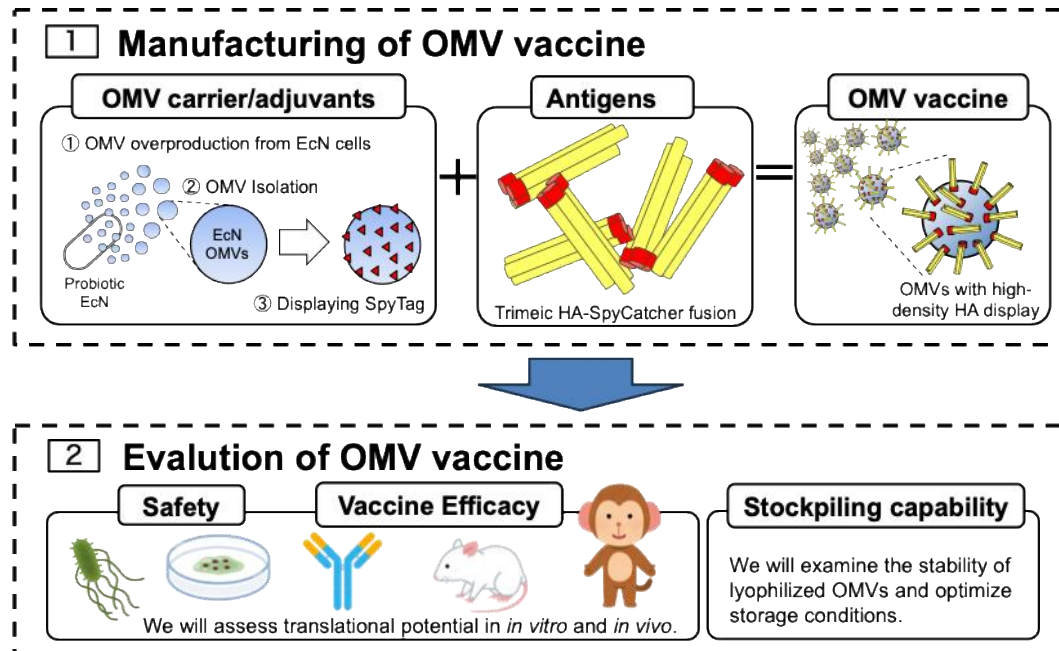
Probiotic OMV-Based Influenza Vaccine

Researcher Profile



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Research overview



Background & key challenges

- Establishment of outer membrane vesicle (OMV) vaccine platform using a genetically detoxified probiotic *E. coli* strain Nissle 1917 (EcN)

Key features of our vaccine modality

- Tag/Catcher system-based bioconjugation enables 5-min coupling between OMV carrier/adjuvant and whatever antigen is targeted.
- R&D of an OMV vaccine against influenza is ongoing.
- Lyophilized OMVs are expected to maintain high stability under ambient conditions for years.
- Rapid OMV vaccine manufacturing workflows (within 100 days) may also contribute to pandemic preparedness against emerging pathogens

Present status & future plans

- The current project is supported by the AMED SCARDA program on “R&D of new generation vaccine including new modality application”.
- We aim to enter Ph I after non-clinical POC studies in FY2027 or later.
- IP: JP Patent No. 7279274; JP Patent Application No. 2025-143488
- We are seeking pharmaceutical and CDMO partners for collaborative R&D for our EcN OMV-based vaccines.