



MACH-1™ Epidermally Delivered Powdered Vaccine Platform

ON TARGET, ON TIME

MACH-1™ Dry Vaccines Pneumatically Delivered into Epidermis

**ACHIEVES T CELL AND
MUCOSAL IMMUNITY**

**DOSE LOCALIZATION,
SAFETY AND EFFICACY**

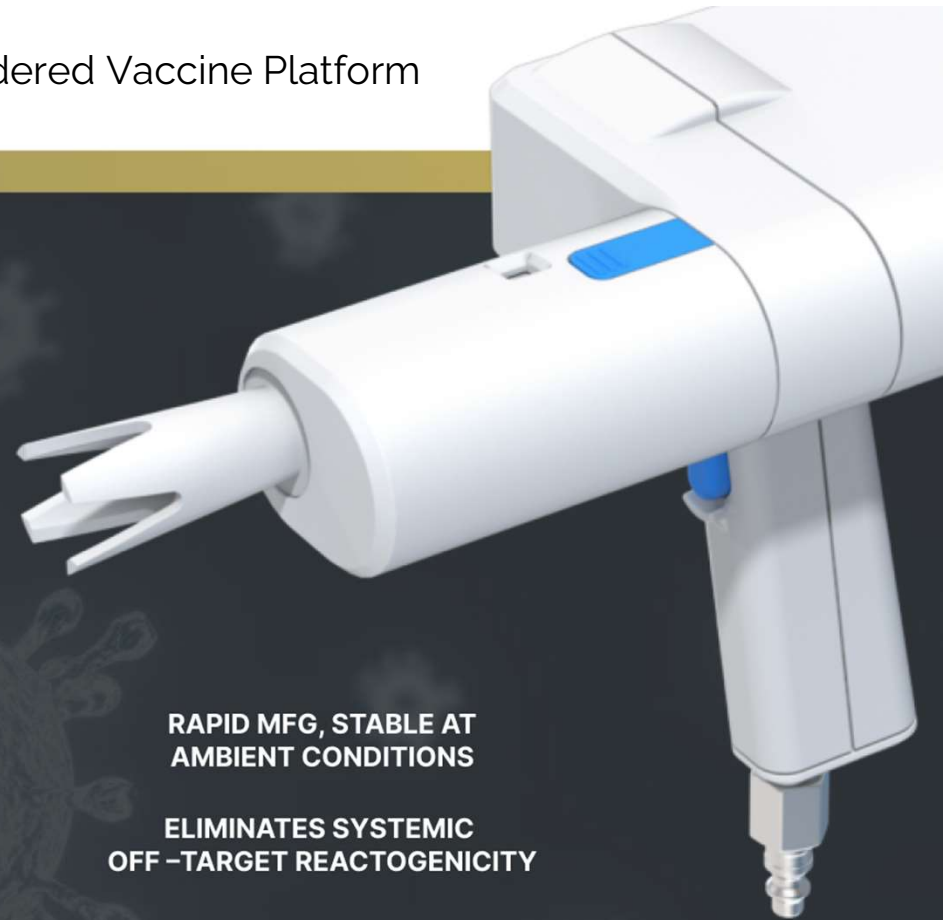
**NEEDLE AND PAIN FREE,
IMMEDIATE FULL DOSE DELIVERY**

**RAPID MFG, STABLE AT
AMBIENT CONDITIONS**

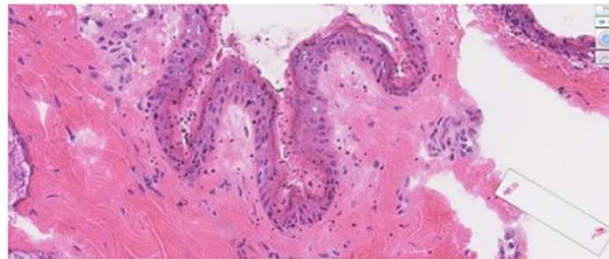
**ELIMINATES SYSTEMIC
OFF-TARGET REACTOGENICITY**

Exclusive pneumatic, needle-free delivery of powdered DNA and RNA* vaccines into the epidermis directly transfects cells and bridges current safety, efficacy and distribution gaps

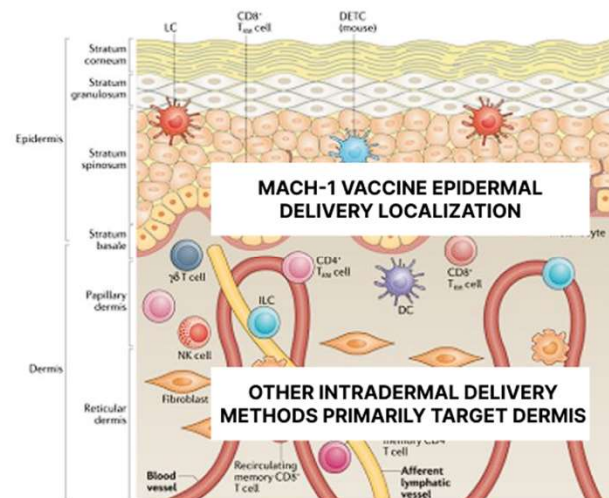
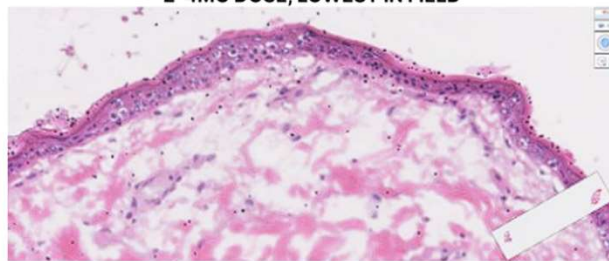
*suitable and demonstrated with pDNA, synthetic DNA, mRNA, and repRNA vaccine formulations



MACH-1 Dose Localization and Direct Transfection

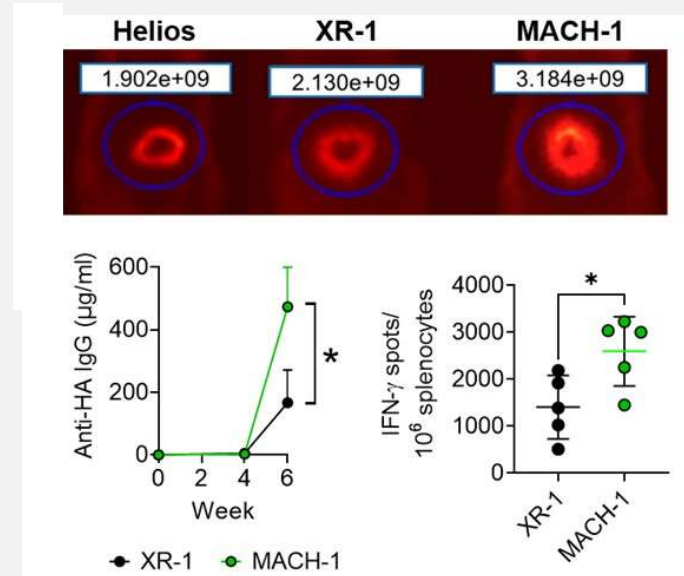


2-4MG DOSE, LOWEST IN FIELD

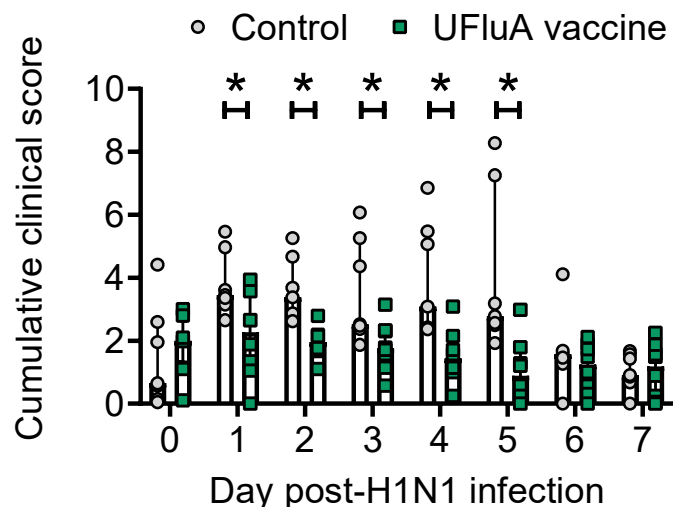
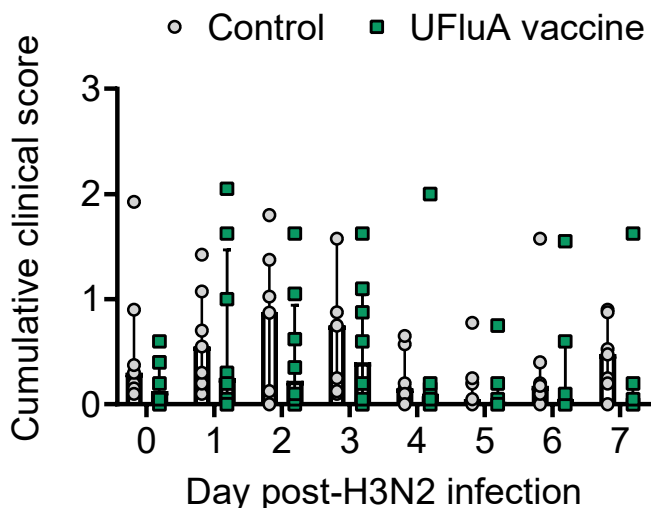


Only intradermal (ID) delivery method to concentrate delivery into highly immunogenic epidermis and directly transfect cells

Improved gene expression and immunogenicity

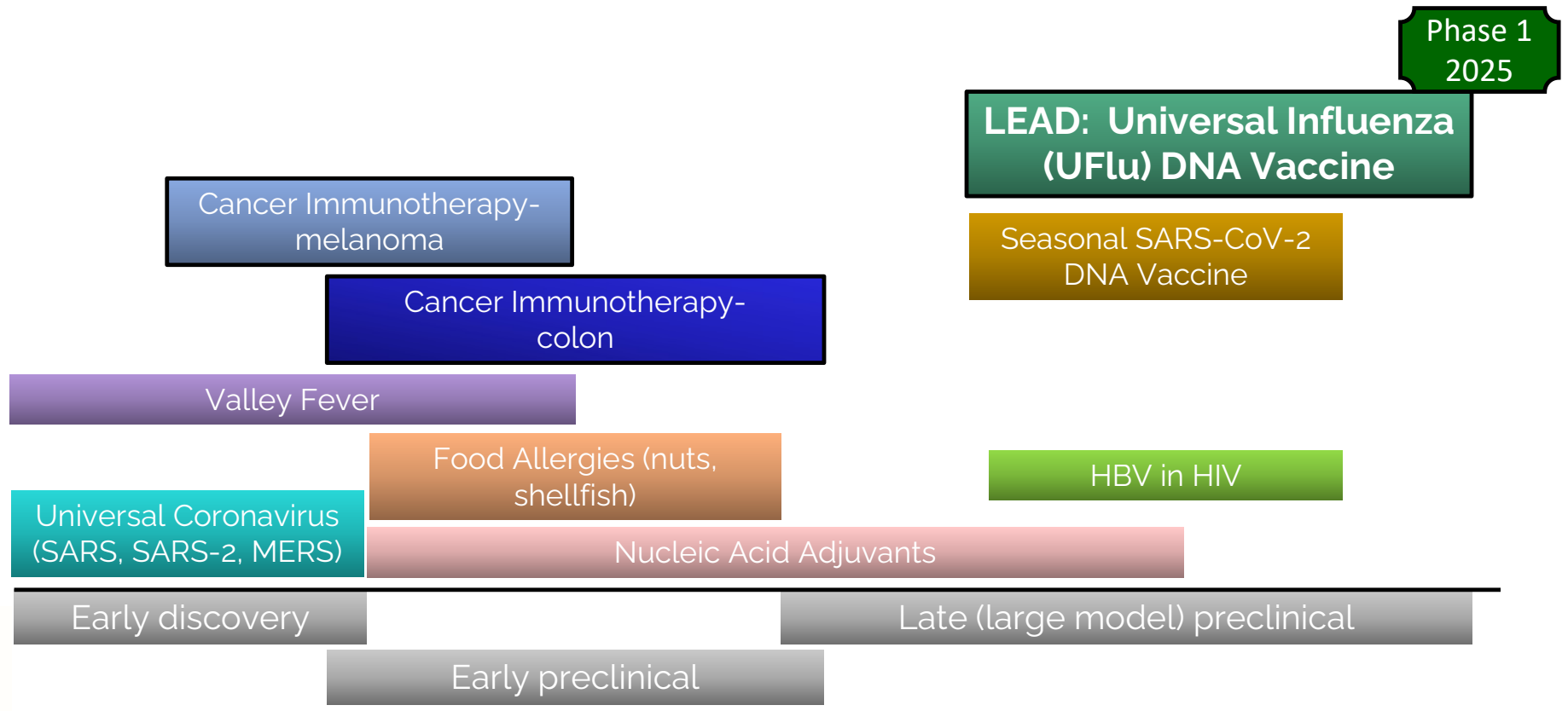


UFlu-A Vaccine Protects Against Clinical Disease After Pathogenic H1N1 Challenge in NHPs



All macaques were challenged with Tx/17 H3N2 12 weeks after the third vaccination (**left**) and followed by Ca/09 H1N1 14-47 weeks after H3N2 infection (**Right**). Clinical symptoms (temperature, respiratory rate, responsiveness, discharge, skin condition, food consumption, fecal consistency) were scored daily. Cumulative clinical score was calculated for each macaque per day and plotted.

Orlance MACH-1 Pipeline



Partnering Strategy

1. Open to multiple partnering and collaborative models
2. Partner DNA or RNA vaccine asset requiring delivery platform
3. Orance development of fit-for-(partner) purpose vaccine asset
4. All cases, vaccine formulation is specific to MACH-1 delivery
5. MACH-1 clinical 1 platform readiness for partner-led trials
 - Preclinical: 2024
 - Clinical: 2025
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