



- **Headquarters:** Hangzhou, China
- Dedicated to establishing a globally leading biologics development platform based on viral recombinant technology.
- **Seeking global partners to develop, register and commercialize *DIFF-flu*.**

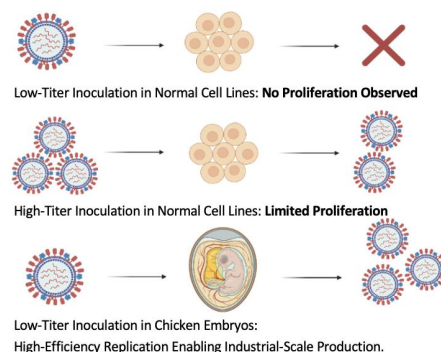
DIFFERENCE VALUE PROPOSITION

Utilizing viral recombinant technology as the core approach

- Through advancements in viral-attenuation techniques, targeted gene delivery systems, and vector-controllability mechanisms, *DIFF*'s platform—built upon recombinant virus technology—enables broad therapeutic applications across vaccines, oncology treatments, gene therapy approaches, and antiviral drug development.
- *DIFF*'s IP portfolio comprises 80+ patent applications, with 10+ international PCT applications.
- *DIFF*'s product portfolio focuses on **mucosal vaccines** with distinct competitive advantages.
- **First-in-class freeze-dried nasal spray live attenuated influenza vaccine *DIFF-flu*:**
 - Engineered using a proprietary *M2* gene-based attenuation technology to generate a replication-restricted live virus with **minimal virulence and near-zero shedding**, the vaccine is suitable for a **broader population**, including immunocompromised individuals.

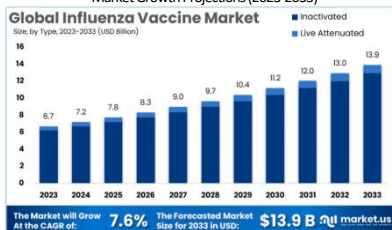
M2 GENE-BASED ATTENUATION TECHNOLOGY

- **Global leading *M2* gene-based attenuation technology of replication-restricted live influenza virus.**
 - *M2* gene is one of proteins encoded by M segment of the influenza virus.
 - *DIFF* was the first to discover an attenuation method for replication-restricted influenza virus by specifically manipulating the *M2* gene while preserving *M1* expression, resulting in the attenuation of influenza A virus.
- **Highlight**
 - Significantly attenuated viral pathogenicity
 - Immune responses without sustained pathogenicity in vivo



DISTINCTIVE ADVANTAGES OF *DIFF-flu*

US Healthcare Market Research Agency's Global Influenza Vaccine Market Growth Projections (2023-2033)



The market grows from 6.7 billion in 2023 to 13.9 billion by 2033.

Limitations of Current Influenza Vaccines:

Post-vaccination side effects such as headaches and fever



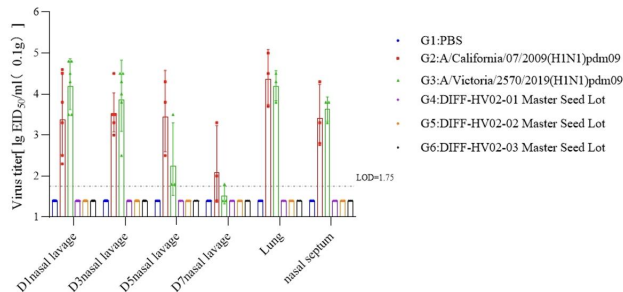
Requirement for multiple doses with poor patient compliance due to intramuscular injection

First-in-Class FreezeDried Nasal Spray Trivalent Live Attenuated Influenza Vaccine: Engineered using a proprietary *M2* gene-based attenuation strategy:

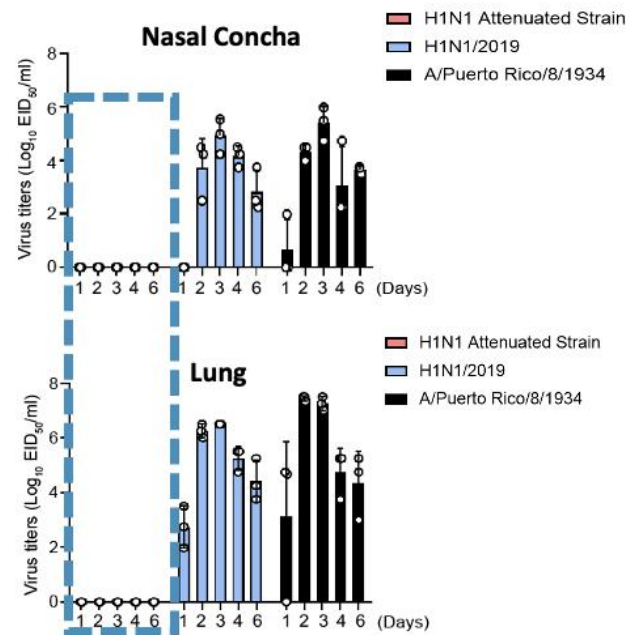
Category	Specifications
Stage	Preclinical. 1st patient enrolling in Q4 2025.
Indications	Influenza
Administration	Nasal Spray
Patent Status	6 patents granted (including 2 authorized in US, Europe and Japan)
Mechanism of Action	• Delivery Method: Attenuated virus via nasal spray, activating nasal mucosal immunity. • Immune Response: - Stimulates IgA antibodies for rapid viral interception. - Activates T-cell immunity. - Induces systemic IgG antibodies. • Triple-Layered Immunity: Mucosal, cellular, humoral.
vs. FluMist (AZ)	• Safety: Superior self-limiting viral shedding → broader population applicability. • Efficacy: Enhanced cross-protection against variants.
vs. Inactivated Vaccines	• Compliance: Higher patient compliance. • Manufacturing: Simpler processes, lower costs, and greater production capacity.

Superior Safety Profile

- **Minimal viral shedding** observed post-vaccination.
- **Significantly lower virus load** post-vaccination in nasal turbinates and lung tissues.
- No significant toxicity, tissue irritation, or sensitization observed across multiple animal models.
- **Applicable for broader population**, including children, the elderly, and immunocompromised individuals.



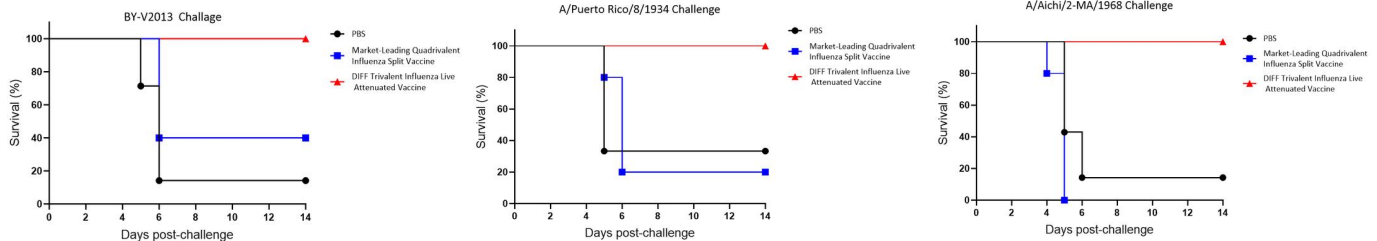
Low Tissue Viral Loads in Ferrets Post-immunization



Low Tissue Viral Loads in Immunized Mice

Robust Efficacy

- **Superior cross-protective effect and immunogenicity.** *DIFF-flu* (trivalent vaccine) demonstrated higher levels of protection against heterologous influenza strains with higher levels of IgG antibodies and significantly improved survival rates to 100% compared to a conventional quadrivalent vaccine.



Cross-protective Effect Against Heterologous Influenza Viruses in Mouse Model

- **Effective homologous challenge protection.** *DIFF-flu* effectively protects against matching flu strains with minimal temperature fluctuations and lower virus load in ferrets.
- **Long-lasting immunity:** After vaccination with varying doses of BV, H1N1, and H3N2 attenuated strains, IgG antibody levels in mice remained sustained at peak levels for over 1 year.

Strong Industrial Scalability

- **Production cost reduction:** *DIFF-flu* produces 3~5 doses per chicken embryo, compared to other influenza vaccines on the market.
- **Long storage duration** over 1 year as a lyophilized vaccine formulation.
- **Greater convenience, flexibility and accessibility** for individuals and families.

High DTC commercialization potential according to **FDA approved direct-to-consumer (DTC) sales model** for competing products(FluMist). *DIFF-flu*'s high safety and stability support the massive overseas market potential.

