

A composite image featuring a microscope lens in the foreground, focusing on a DNA gel electrophoresis image in the background. The gel shows multiple lanes with various colored bands (blue, green, yellow, red, orange) representing different DNA fragments. The microscope lens is positioned over the gel, creating a sense of scientific investigation and precision.

TAIWAN NHRI SPIN-OFF VACCINE COMPANY

OUR TECHNOLOGIES:

- **Reverse Genetics High-Growth Enteroviruses Platform**
- **Influenza Virus-Like Particle Platform**

Contact Person: Hua-Hsuan Liang
E-mail: huahsuan@nhri.edu.tw

Reverse Genetics High-growth Enterovirus for multivalent enterovirus vaccines

- Reduce production costs
- Increase efficiency



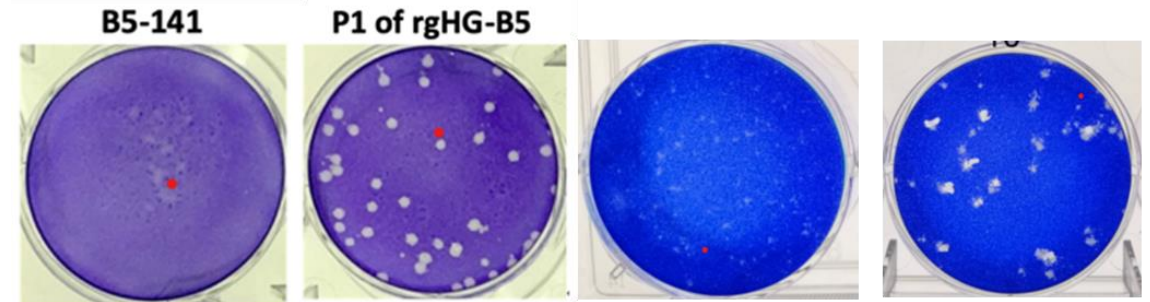
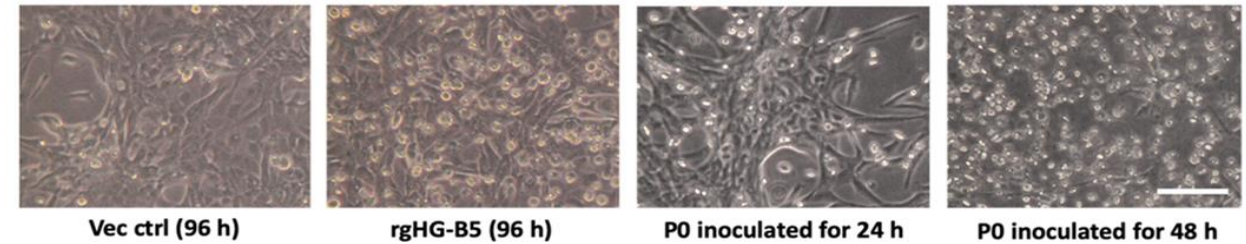
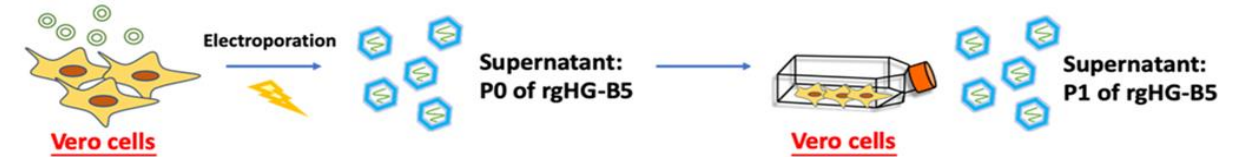
Vaccine
Volume 36, Issue 9, 21 February 2018, Pages 1167-1173



Development of a high-growth enterovirus 71 vaccine candidate inducing cross-reactive neutralizing antibody responses

Min-Yuan Chia^{a,b}, Wan-Yu Chung^a, Chun-Hsiung Wang^c, Wei-Hau Chang^c,
Min-Shi Lee^a

❖ Phase I of A EV-A71 /CV-A16 bivalent enterovirus vaccine in 4Q2024



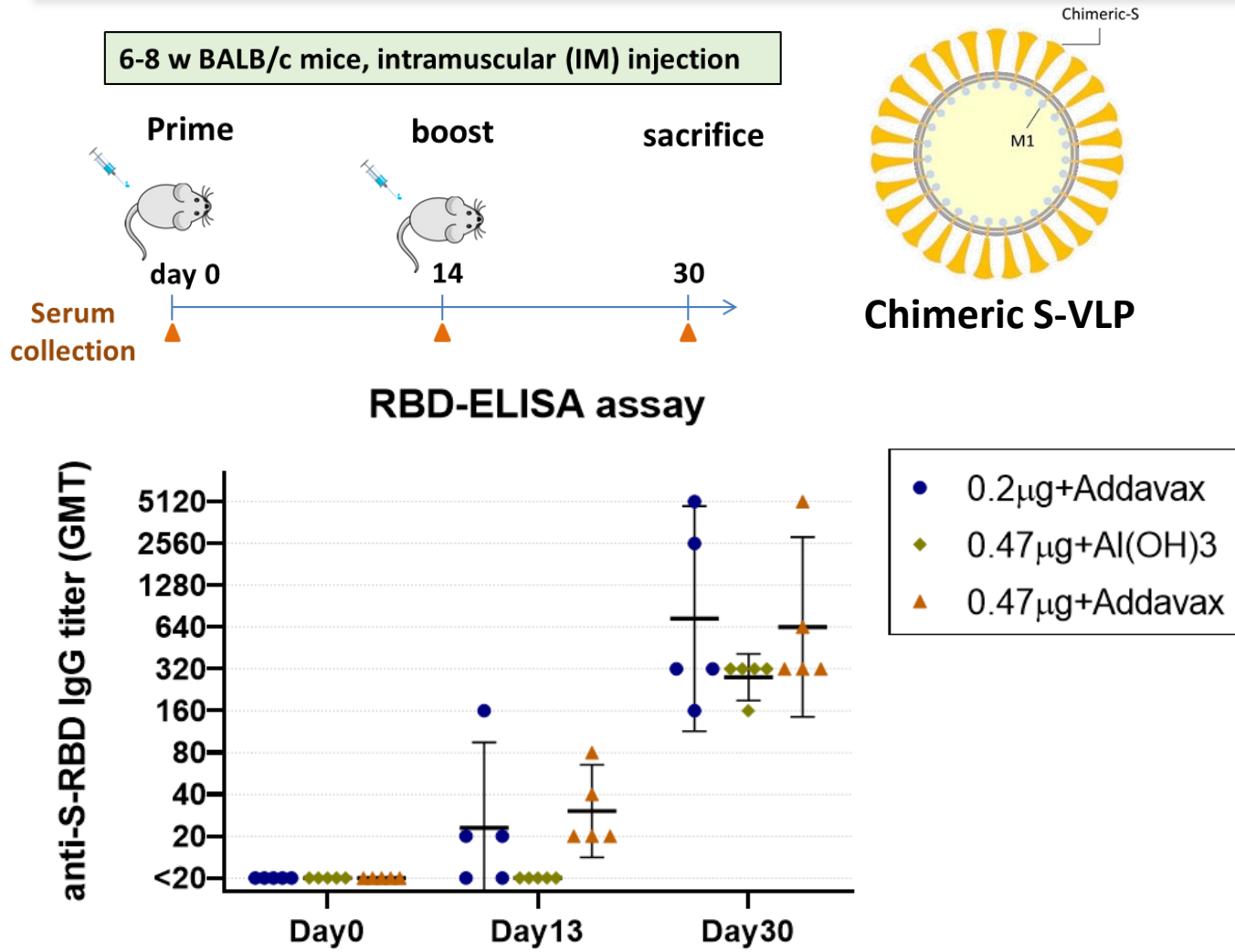
EV-A71
(wild type)
10^7
PFU/mL

EV-A71 (RG)
(high growth)
>10⁸ PFU/mL
(>10X)

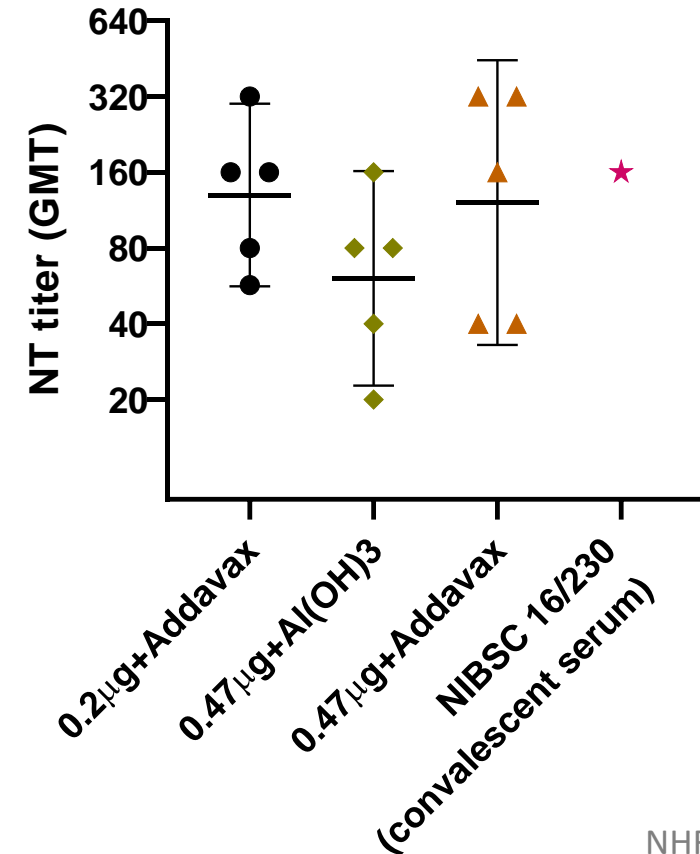
CV-A16
(wild type)
10^6
PFU/mL

CV-A16 (RG)
(high growth)
>10⁷ PFU/mL
(>10X)₇

Immunogenicity of Chimeric COVID S-VLP vaccine

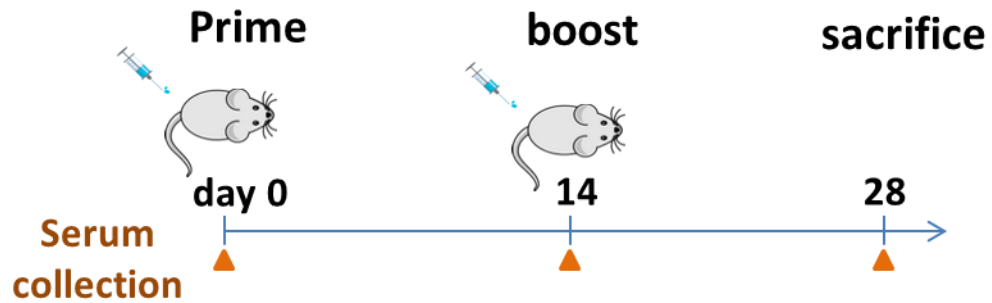


Neutralization assay (Day 30)
against SARS-CoV-2 virus (Wuhan strain)



Immunogenicity of H7N9-Gansu-VLP vaccine

6-8 w BALB/c mice, intramuscular (IM) injection



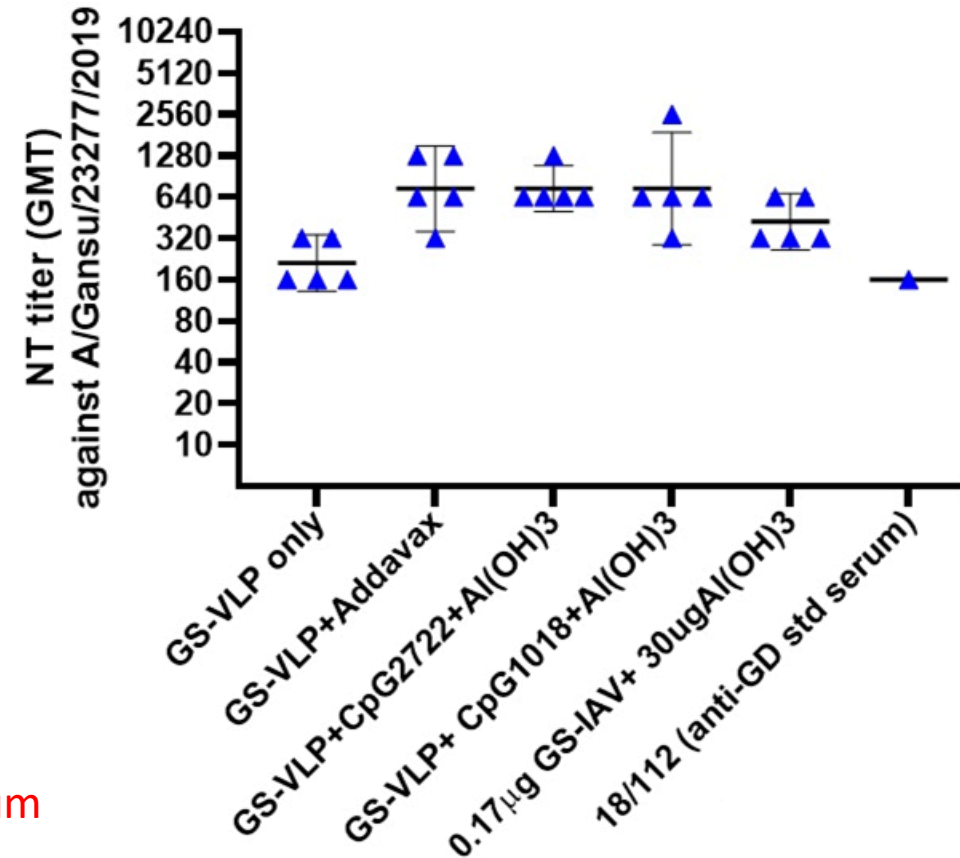
Total volume: 100 μ l/two thighs

Antigens

- 0.11 μ g GS2019-VLP with or w/o adjuvants (Addavax (v/v=1:1), 10 μ g CpG2722+30 μ g Al(OH)₃, or 10 μ g CpG1018+30 μ g Al(OH)₃)
- GS2019-IAV: 0.17 μ g with 30 μ g Al(OH)₃

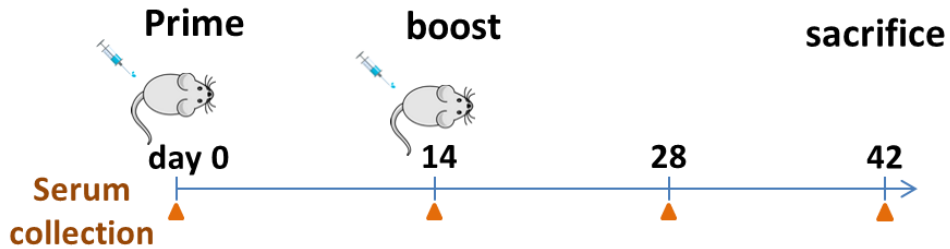
* Influenza anti A/Guangdong/17SF003/2016 (H7N9) HA serum
NIBSC code: 18/112

Neutralization assay (Day 28)



Immunogenicity of NHRI **tetravalent** seasonal flu VLPs

6-8 w BALB/c mice, intramuscular (IM) injection



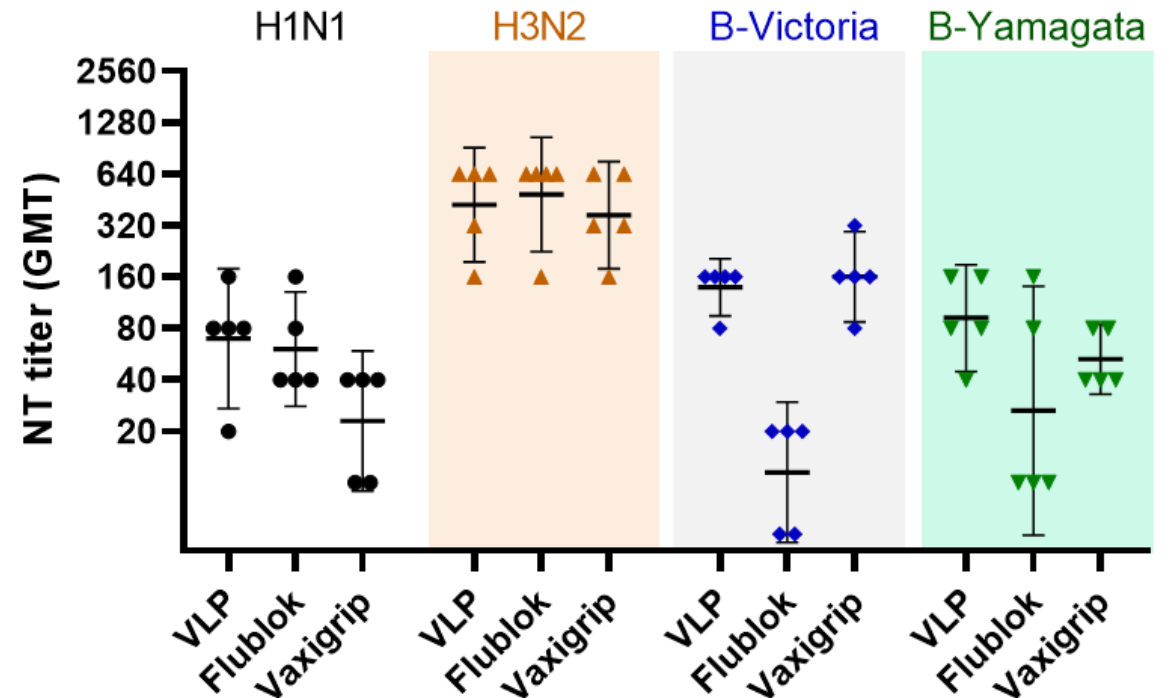
Total volume: 100µl/two thighs

Antigens

- 2020-2021 influenza VLPs, and commercial vaccines (~0.5µg HA/strain) **without adjuvant**; Flublok (recombinant HA); Vaxigrip (egg-based)

Neutralization titers in mice after 2 doses	Tetravalent VLP (GMT)	Flublok (GMT)
A/H1N1	70	61
A/H3N2	422	485
B/Victoria	139	11
B/Yamagata	92	30

Neutralization assay (Day 42) against 2020-2021 influenza CVV



Call for co-development partners

For VLP antigens

- Cancers
- Autoimmune diseases

For intranasal vaccines

- Respiratory infection diseases