



SCB-1019 (Bivalent RSV PreF-Trimer):
Preliminary Phase 1 Young Adult Cohort Data

April 8th, 2024

Executive Summary

- ✓ **Positive Preliminary Phase 1 Immunogenicity Results for Bivalent RSV Vaccine Candidate SCB-1019 in Initial Young Adult Cohort**
- ✓ **1st RSV PreF Vaccine Candidate Developed in China to Enter the Clinical Trial Stage and Now the 1st to Generate Clinical Data**
- ✓ **Preliminary Phase 1 Data for SCB-1019 in Target Older Adult Population is on Track for H2-2024**

- **Study Design: The Phase 1 Clinical Trial in Australia is a Randomized, Placebo-Controlled Study to Assess the Safety, Reactogenicity and Immunogenicity of SCB-1019 in Young Adults (18-59 Years) and Older Adults (60-85 Years)**

- **Positive Preliminary Results in Young Adults: Bivalent SCB-1019 Significantly Boosted RSV-A and RSV-B Neutralization Titers to Approximately 6,600 IU/mL (6.4-fold increase) and Approximately 46,000 IU/mL (12-fold increase), Respectively**

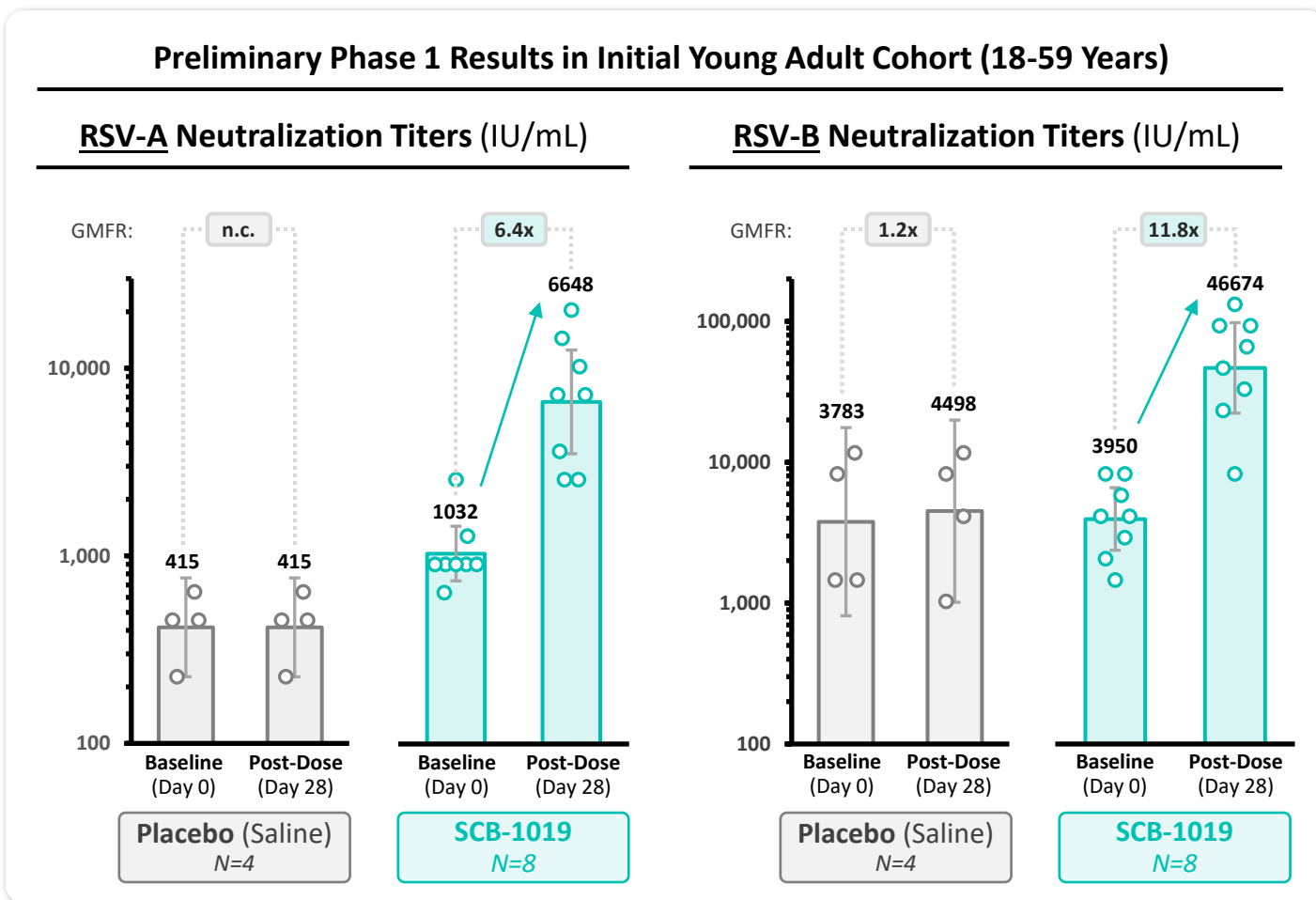
- No significant boost in antibody titers was observed in the placebo (saline) group
- Clover's preliminary immunogenicity data across both RSV-A and RSV-B neutralization appear to be in-line or potentially favorable compared to other top-tier protein subunit RSV PreF vaccines
- Results also confirm that Clover's PreF antigens in SCB-1019 are in the stabilized prefusion and trimeric form, further supported by exploratory results demonstrating significant increases in Site Ø NAb-competitive antibody titers

- **Safety & Reactogenicity: SCB-1019 Vaccination Did Not Observe any Notable Safety or Reactogenicity Issues in Young Adult Cohort, Enabling the Planned Enrollment of Older Adults to Proceed (Ongoing)**

- **Preliminary Phase 1 Data in Target Older Adult Population is on Track for H2-2024**

SCB-1019 Preliminary Phase 1 Results (Initial Young Adult Cohort)

- **SCB-1019:** Significant Increases in RSV-A and RSV-B Neutralization Titers Observed at 28 Days Post-Vaccination
- **Placebo (Saline):** No Change in RSV Neutralization Titers



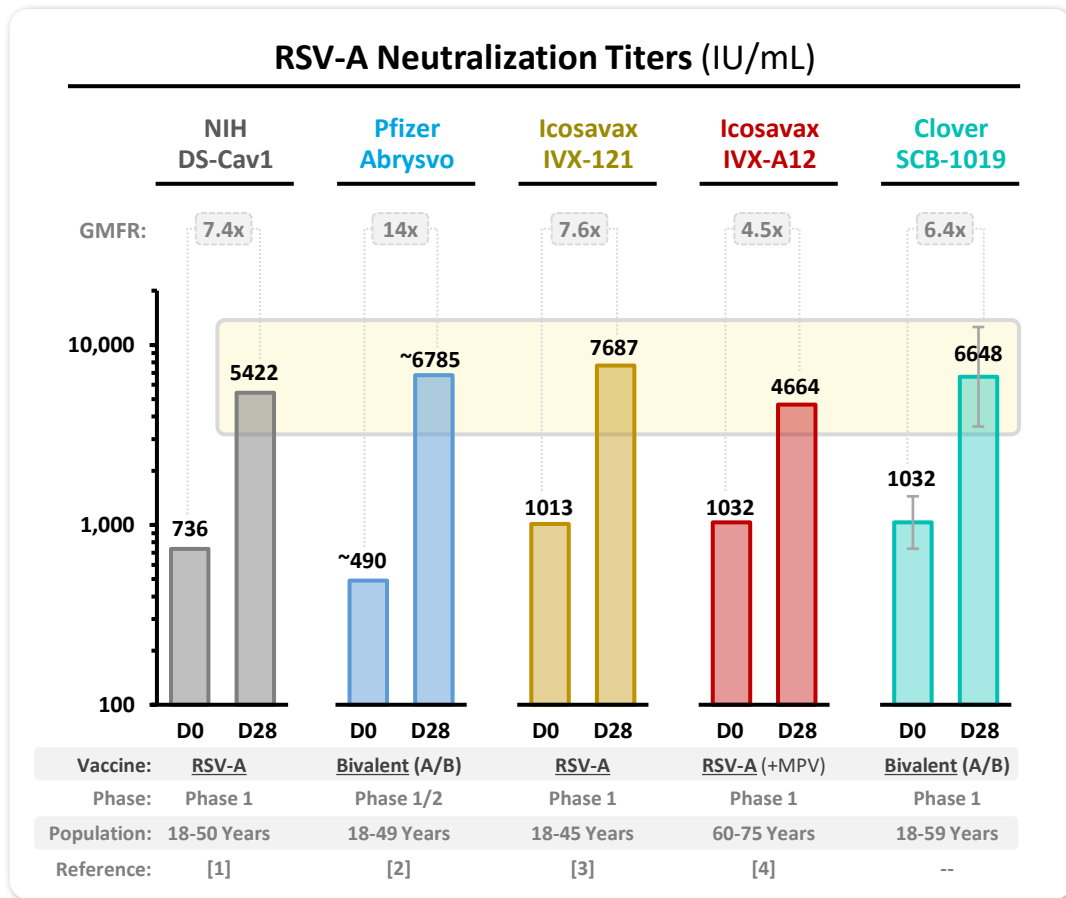
✓ Enrollment in Older Adults Cohort is Ongoing; Preliminary Immunogenicity & Safety Data is On-Track for H2-2024

Abbreviations: IU/mL (International Units Per Milliliter), GMT (Geometric Mean Titer), GMFR (Geometric Mean Fold Rise).

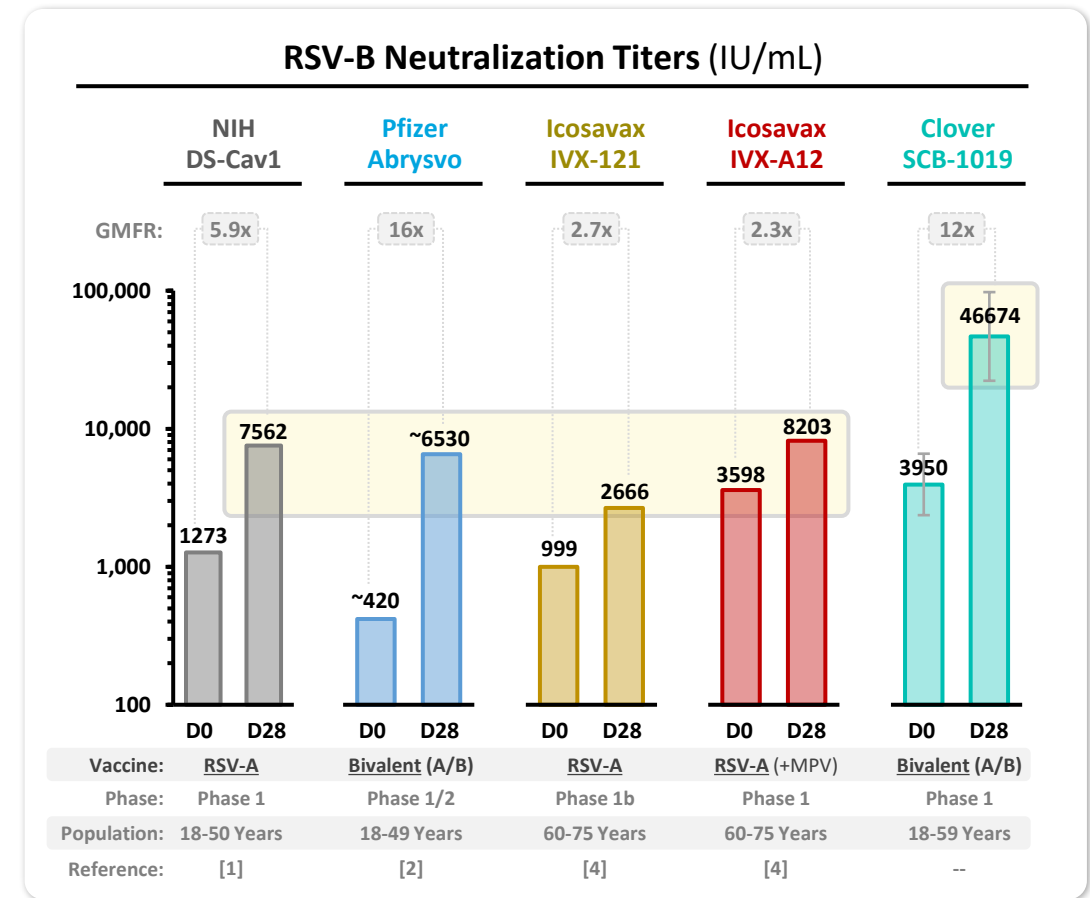
Note: Bars represent GMTs (\pm 95% confidence intervals). Dots represent data for individual subjects.

RSV neutralization titers expressed as IU/mL calculated using comparison to NIBSC 16/284 reference sera. Assay conducted at third-party testing laboratory using validated RSV neutralization assays.

RSV Neutralization Titers In-Line or Potentially Favorable to Other RSV PreF Protein Vaccines



SCB-1019 RSV-A Neutralizing Antibody Titers:
 Potentially In-Line Compared to Other Top Protein-Based RSV PreF Vaccines



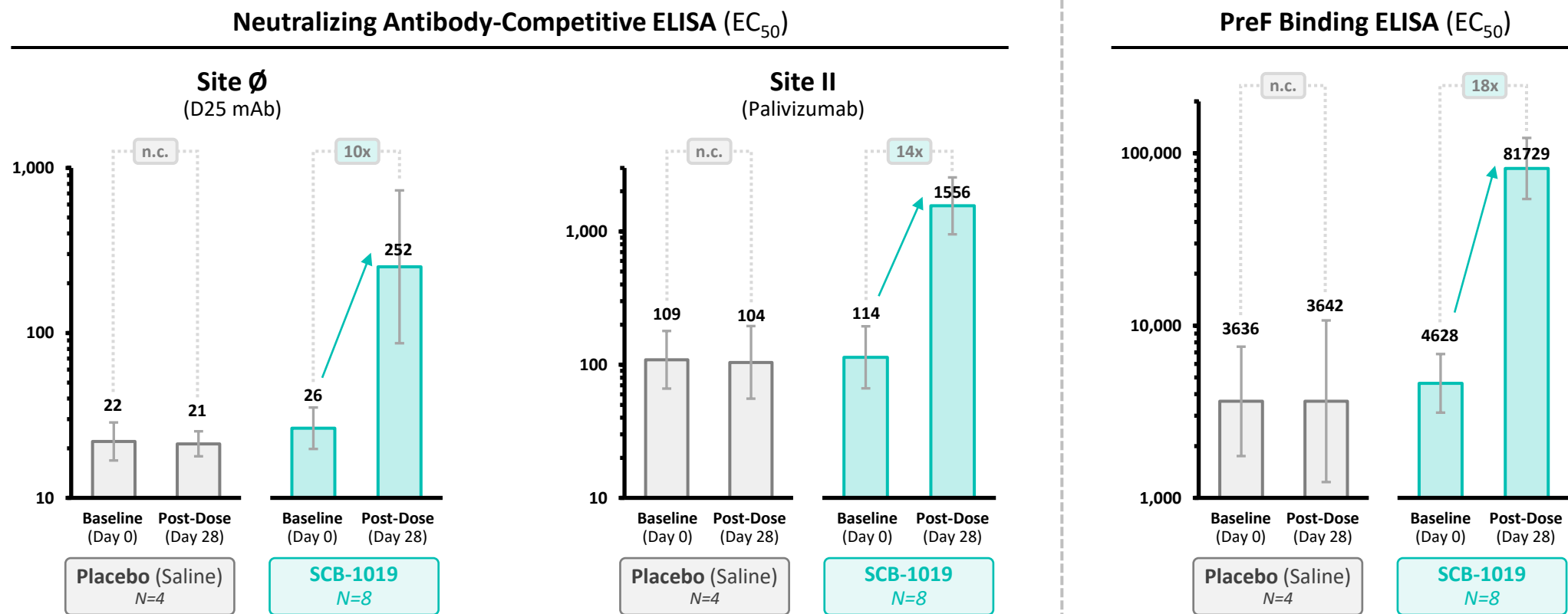
SCB-1019 RSV-B Neutralizing Antibody Titers:
 In-Line or Potentially Favorable Compared to Other Top Protein-Based RSV PreF Vaccines

Note: **Cross Trial Comparisons for Illustrative Purposes Only.** RSV neutralization titers expressed as IU/mL calculated using comparison to NIBSC 16/284 reference sera (testing was conducted at different laboratories across clinical trials). Bars represent GMTs (\pm 95% confidence intervals). Abbreviations: IU/mL (International Units Per Milliliter), GMT (Geometric Mean Titer), GMFR (Geometric Mean Fold Rise).
 [1] DOI: 10.1016/S2213-2600(21)00098-9 (data for 150 μ g group shown), [2] DOI: 10.1093/infdis/jiab612 (data for 120 μ g group shown), [3] Icosavax Company Presentation JUN-28-2022 (data for 75 μ g group shown), [4] Icosavax Company Presentation MAY 22, 2023 (data for 225 μ g group shown).

SCB-1019 Preliminary Phase 1 Results (Initial Young Adult Cohort)

- Significant increase in Site Ø NAb-Competitive Titers further confirm SCB-1019 antigens being stabilized in prefusion form
- Exploratory ELISA assay results provide additional evidence of robust immune response induced by SCB-1019

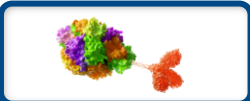
Preliminary Phase 1 Results in Initial Young Adult Cohort (18-59 Years) – Exploratory ELISA Assays



Note: Bars represent GMTs (\pm 95% confidence intervals). Results shown for exploratory ELISA assays. Abbreviations: GMT (Geometric Mean Titer), GMFR (Geometric Mean Fold Rise).

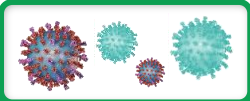
SCB-1019 is a Potential Best-in-Field & Differentiated RSV Vaccine Globally

- ✓ Clover Poised to be a Leader in RSV Vaccine Market in China, with Global Competitive Edge Potential
- ✓ Clover is addressing the high technical hurdles for RSV vaccine development, utilizing our unique in-house technology platform, for potential long-term differentiation




1
Differentiated Stabilized PreF-Trimer

- ✓ **Stabilization of Prefusion F (PreF) Trimer Critical for RSV Vaccines** ⁽¹⁾
- ✓ SCB-1019 is utilizing **proprietary stabilizing Mutations & Trimer-Tag** platform technology; **confirmed as stable PreF-Trimer**
- ✓ Preclinical studies indicate SCB-1019 PreF stabilization is competitive to DS-Cav1 (PreF antigen utilized in GSK and Icosavax RSV vaccines)
- ✓ Preclinical and Phase 1 clinical studies confirm SCB-1019 has **stable PreF conformation inducing significant RSV neutralizing antibody responses**



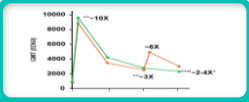
2
Immunological Breadth (RSV-A + RSV-B)

- ✓ **Immunological Breadth is Needed Against Both RSV-A & RSV-B** (2 groups co-circulate & alternate in prevalence across seasons)
 - Monovalent RSV-A vaccines (GSK & Icosavax) observed suboptimal breadth & durability trends against RSV-B in clinical trials ⁽²⁾
- ✓ **SCB-1019 bivalent RSV-A/B approach** is designed to induce **broad neutralization against both RSV-A & RSV-B, demonstrated in Phase 1 & preclinical studies**




3
Potential Best-in-Field Safety & Tolerability

- ✓ **Safety & tolerability important to maximizing vaccine uptake**, especially for target populations for RSV (elderly & pediatric)
- ✓ Oil-in-water emulsion adjuvanted protein-based vaccines & mRNA vaccines have observed higher rates of adverse events
- ✓ Potential for **SCB-1019 to show best-in-field safety & tolerability profile** (oil-in-water emulsion adjuvant not utilized in SCB-1019)



4
Repeated Dosing Ability (No Immune Interference)

- ✓ **Potential to satisfy need for repeated annual seasonal boosting**; human-derived **Trimer-Tag technology has demonstrated boosting & has not observed immune interference** previously
 - **GSK** observed **lack of efficacy** after second dose in Year 2 **in Phase III study** (with suboptimal increase in RSV neutralizing antibody levels)
 - Potentially associated with **GSK & Pfizer** trimerization technology: non human-derived T4 Foldon may induce **ADA against T4 Foldon interfering with PreF immune responses**



5
Potential LCM to Develop Respiratory Combo Vaccine

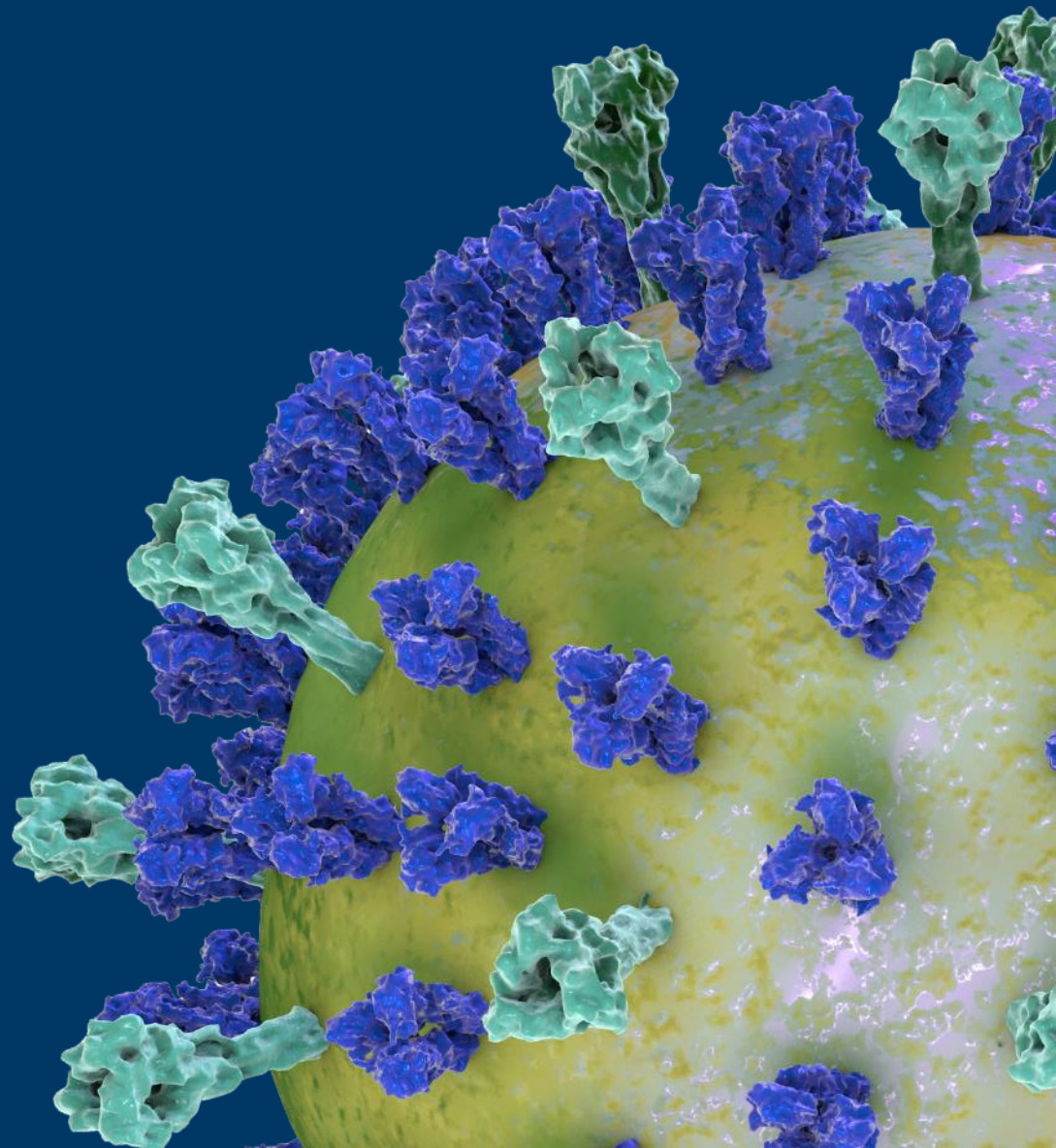
- ✓ Potential to develop '**Respiratory Combination Vaccines**' across Mononegavirales order of viruses (**RSV + PIV3 + MPV**), utilizing RSV as the 'anchor'
- ✓ **Trimer-Tag protein subunit** has **platform advantages** for combo approach versus mRNA (combo dose is limited by safety) and VLP (complicated CMC)
- ✓ Can Leverage Clover's **PreF stabilization** experience for PIV3/MPV
- ✓ Lifecycle management (LCM) opportunity for blockbuster RSV

✓ **Differentiation for Potential Best-in-Class Efficacy & Safety Profile**

✓ **Potential Continued Differentiation & Lifecycle Management (LCM) Opportunities**

Note:
(1) Taleb et al., Eur J Clin Microbiol Infect Dis., 2018 (DOI: 10.1007/s10096-018-3289-4). Besteman & Bont, Am J Respir Crit Care Me, 2019 (DOI: 10.1164/rccm.201901-0233ED).
(2) GSK June 2023 ACIP presentation, NCT04732871. Icosavax Investor Update Presentation (08-AUG-2023)

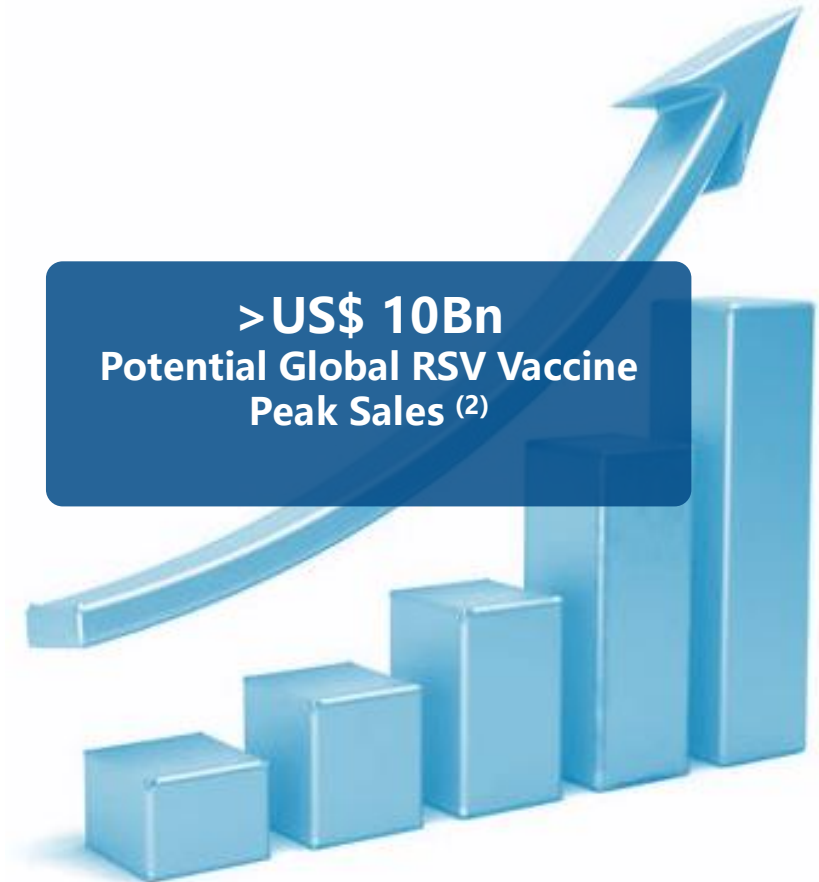
Appendix



✓ Global Commercial Opportunity of RSV Vaccine has been Validated: *Product Sales in First Season of Launch (H2-2023) Beats Expectations*

RSV Vaccine is the Fastest Vaccine in History to Reach Blockbuster Status (Non-Pandemic Vaccines)

- ✓ **Global RSV vaccine sales reached ~US\$ 2.5Bn in the first season of commercial launch in H2-2023**
(H2 2023: ~US\$ 1.5 billion for GSK Arexvy and ~US\$ 890 million for Pfizer Abrysvo ⁽¹⁾)
- ✓ **~40-50% of people who received RSV vaccine were co-administered with Flu±COVID vaccines, demonstrating the commercial synergies of respiratory vaccines**
- ✓ **Premium Pricing Achieved: ~US\$ 300/dose**



(1) GSK and Pfizer Q3 2023 results announcements

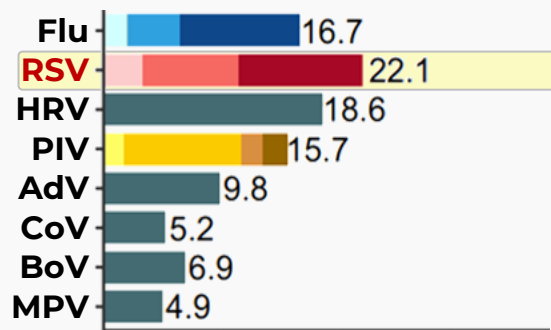
(2) Wall Street Investment Bank Research has released forecasts for the global RSV vaccine market for the elderly , among them Cowen Research – US\$13Bn (Feb 2023), Jefferies – US\$15Bn (Jul 2023).

Potential Blockbuster RSV Vaccine Market in China & Globally

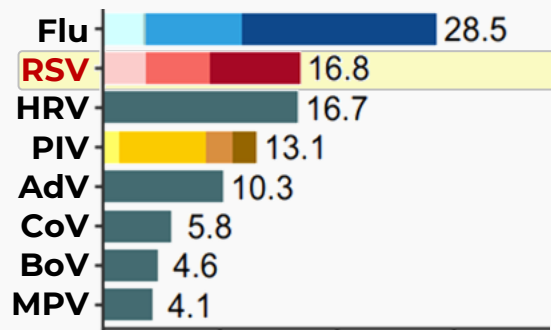
- ✓ RSV is the leading cause of viral pneumonia in China, with an addressable population of >340 million
- ✓ **Blockbuster China Opportunity Wide Open:** Clover has the first RSV PreF vaccine developed in China to enter clinic stage and the first to generate clinical data

RSV is #1 Cause of Viral Pneumonia in China ⁽¹⁾

% of All Viral Pneumonia (2009-2019)

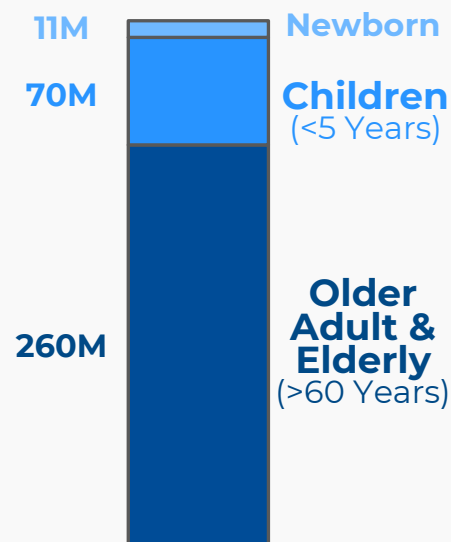


% of All Viral Acute Respiratory Infections (ARIs) (2009-2019)



Potential Blockbuster Market in China & Globally

>340 Million
Addressable Population in China ⁽²⁾



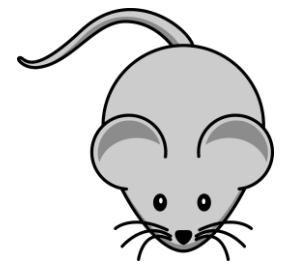
RMB 15Bn+
China Potential Peak RSV Vaccine Sales ⁽³⁾

Abbreviations: Flu (influenza virus), HRV (human rhinovirus), PIV (human parainfluenza virus), AdV (human adenovirus), CoV (human betacoronavirus), BoV (human bocavirus), MPV (human metaneumovirus).

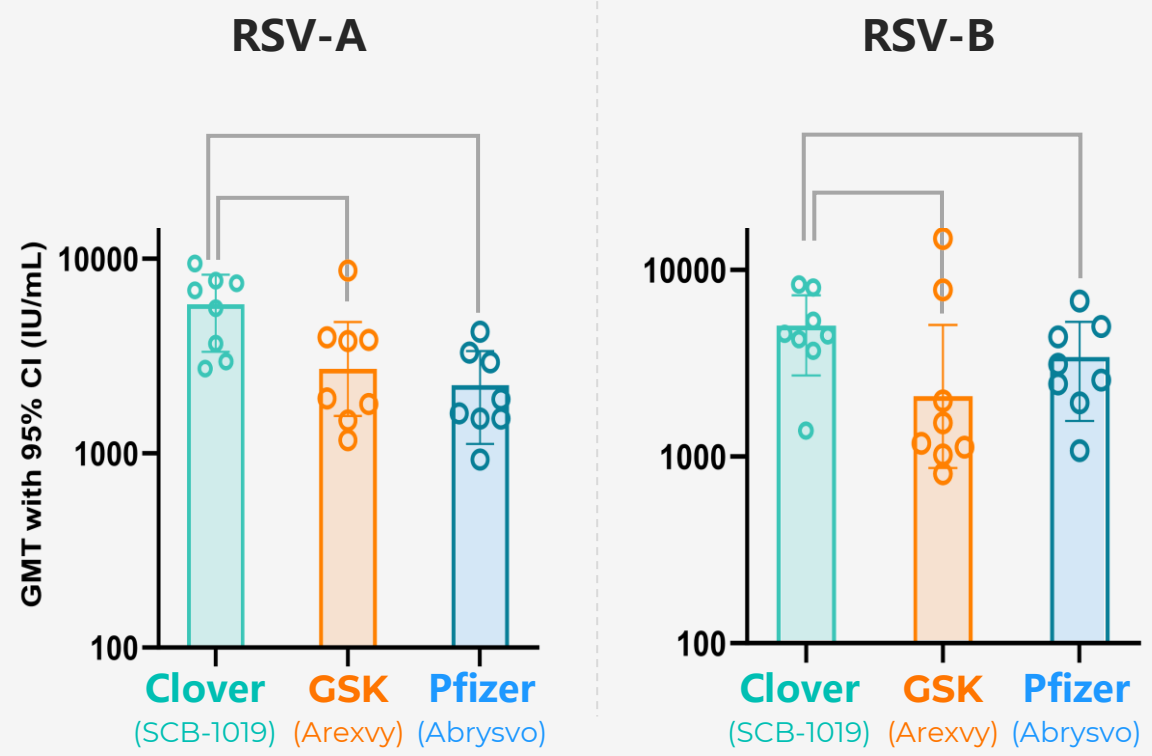
⁽¹⁾ Li et al., *Nat. Commun.*, 2021 (DOI: 10.1038/s41467-021-25120-6). ⁽²⁾ China demographics in 2021. ⁽³⁾ Illustrative projection assuming RSV vaccine market of ~50 million doses annually at peak (approximately half of flu vaccine market) and average blended pricing in China of RMB 350 per dose (pricing in between flu vaccine [~RMB 120-200/dose] and pneumococcal conjugate vaccines [~RMB 550-700/dose]). ⁽⁴⁾ Wall Street research estimates for global older adult RSV vaccine market, including *Cowen Research* – US\$13Bn (Feb 2023), *Jefferies* – US\$15Bn (Jul 2023).

1

Clover (SCB-1019) vs. GSK (Arexvy) vs. Pfizer (Abrysvo)



Neutralizing Antibody Titer (IU/ml)



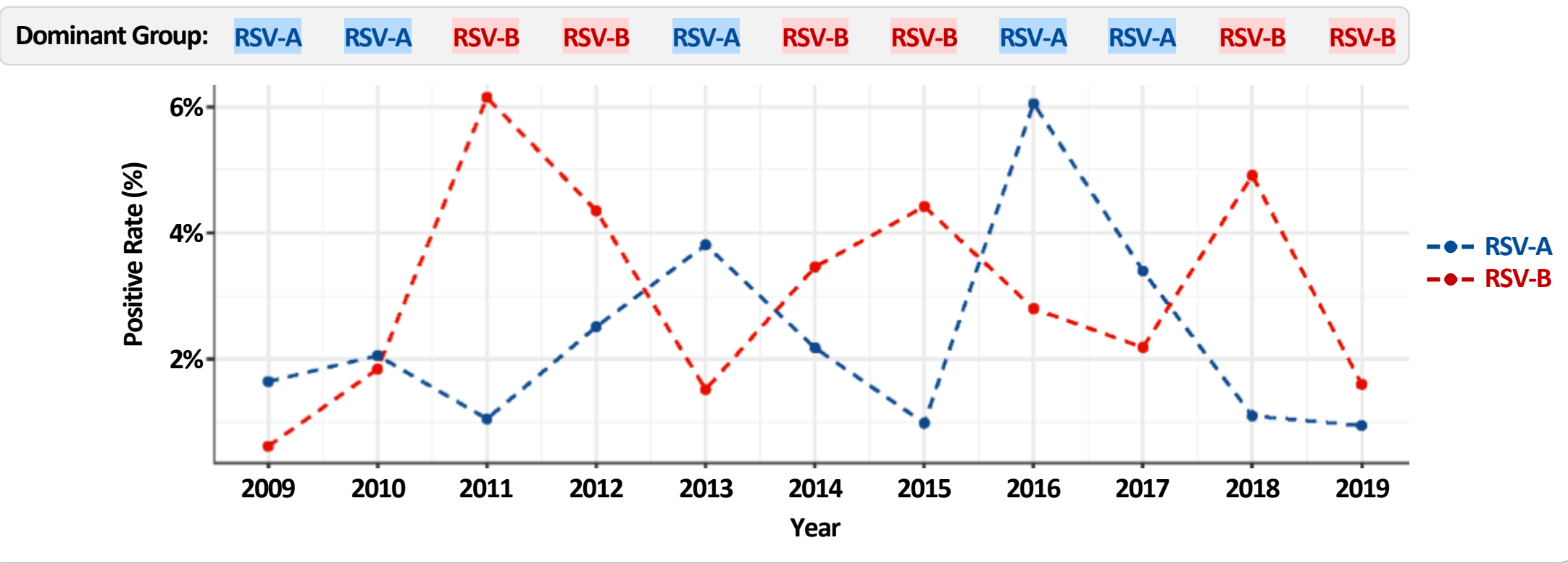
☑ SCB-1019 is Comparable to GSK / Pfizer

Note: Clover preclinical studies. Head-to-head comparison of SCB-1019 versus commercially-procured Arexvy (GSK) and Abrysvo (Pfizer) in primed mouse model. Mice were primed with live RSV-A virus, and after approximately 3 months, mice were given a single dose of vaccine (Day 0). Sera were collected on Day 14 (14 days post-vaccination) for neutralizing and binding antibody testing. SCB-1019 (0.36µg), Arexvy and Abrysvo were administered at equimolar doses. Geometric mean titers (GMT) ± 95% confidence intervals (95% CI) shown for antibody titers.

2 Broad Protection: RSV-A & RSV-B

- **2 main RSV groups (RSV A and RSV B)** typically co-circulate and alternate in prevalence across seasons
- Thus, it is important for RSV vaccines to induce **broad & durable protection** against both groups
- Amino acid sequence differences on F antigen may result in different neutralizing antibody binding epitopes, indicating antibody epitopes form strain-specific sequence and configuration under the pressure of immune selection

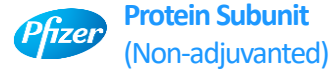
% of Acute Respiratory Viral Infections (ARIs) in China (2009-2019)



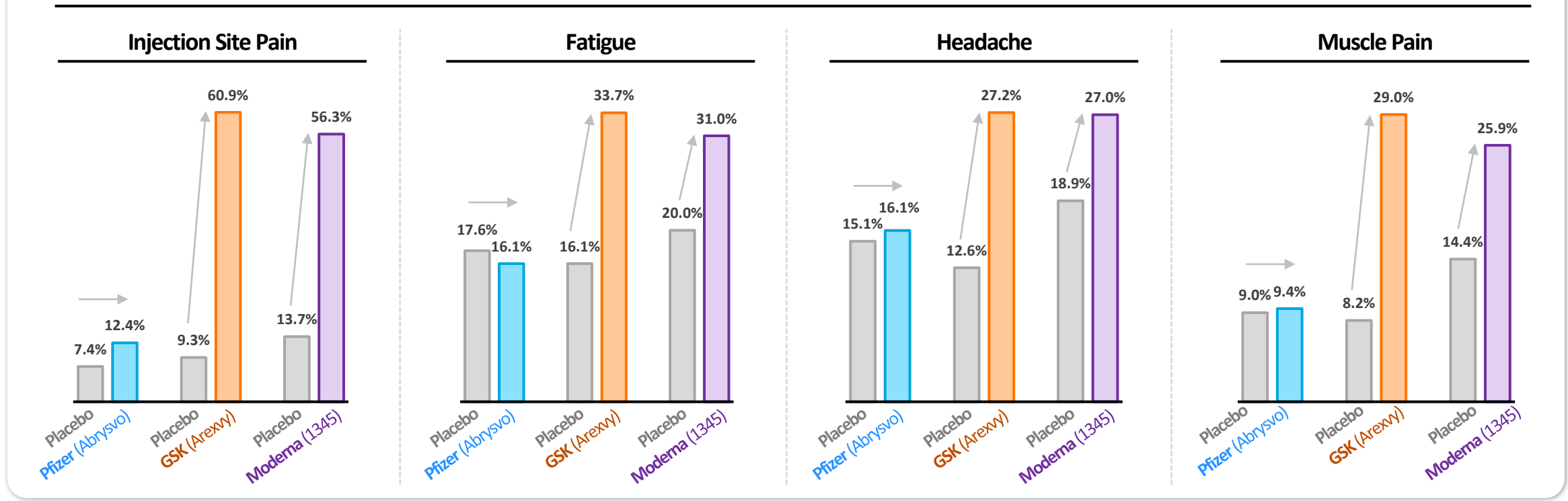
Note: Viral composition tested in 110,058 patients with ARIs in the mainland of China from 2009–2019.
Source: Li et al., Nature Communications, 2021 (DOI: 10.1038/s41467-021-25120-6).

3 Differentiation in Safety & Tolerability

- Potential significant differentiation in safety & tolerability profiles among RSV vaccines observed in clinical trials
- Important consideration for vaccine uptake, especially for targeted populations (elderly & pediatrics) in China



% of Subjects with Adverse Events (AEs) in Phase 3 Trials ^(1,2,3)



Note: Percentage of subjects experiencing selected adverse events (AEs) following vaccination with RSV vaccine or placebo.

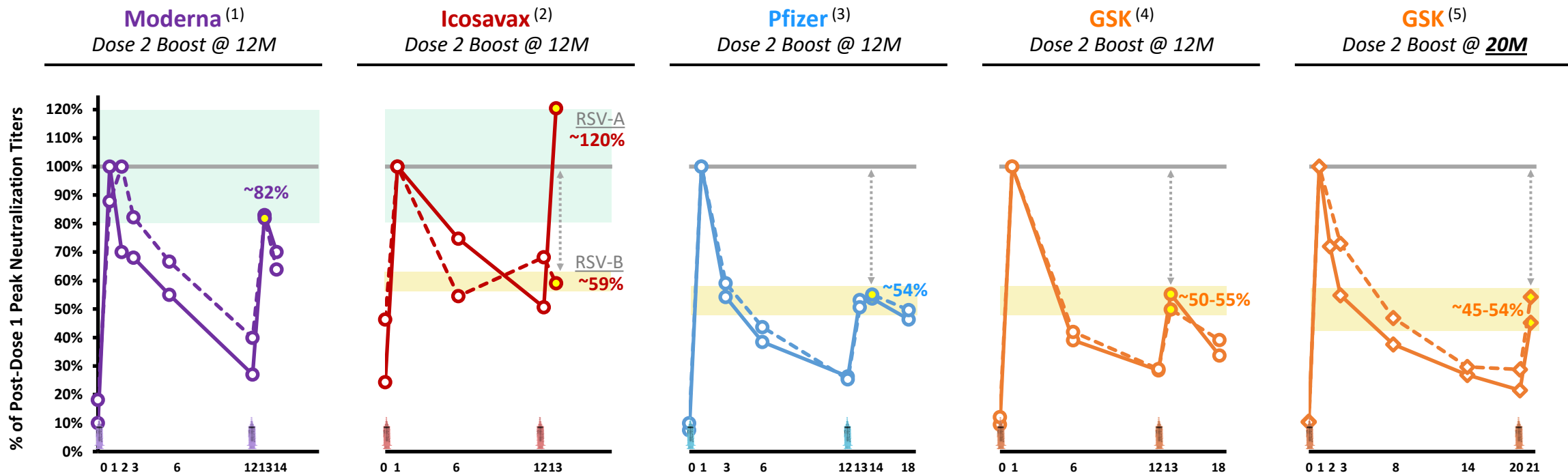
- (1) Pfizer June 2023 ACIP presentation.
- (2) GSK June 2023 ACIP presentation, NCT04732871.
- (3) Moderna 4th Vaccines Day presentation (April 11, 2023).

4 Potential Booster Issue for Vaccines Using T4-Foldon Tag (GSK/Pfizer)

- Neutralization Titers Only Reach ~50% of Peak Levels Following Pfizer and GSK Booster Doses in Year 2, Potentially Due to Immune-Interference from T4-Foldon Trimerization Tag Utilized by Both Vaccines
- Moderna and Icosavax Demonstrate that RSV Neutralization is Boostable in Year 2, Although Icosavax Fails to Boost RSV-B Neutralization (non-adjuvanted monovalent RSV-A vaccine)

% of Peak Neutralization Titers Post-Dose 1 ⁽¹⁾

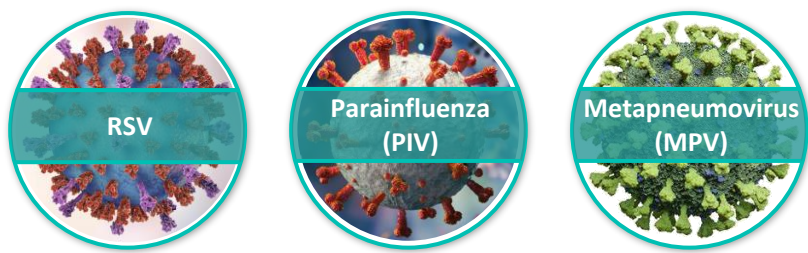
—○— RSV-A Neutralization
 - -○- - RSV-B Neutralization



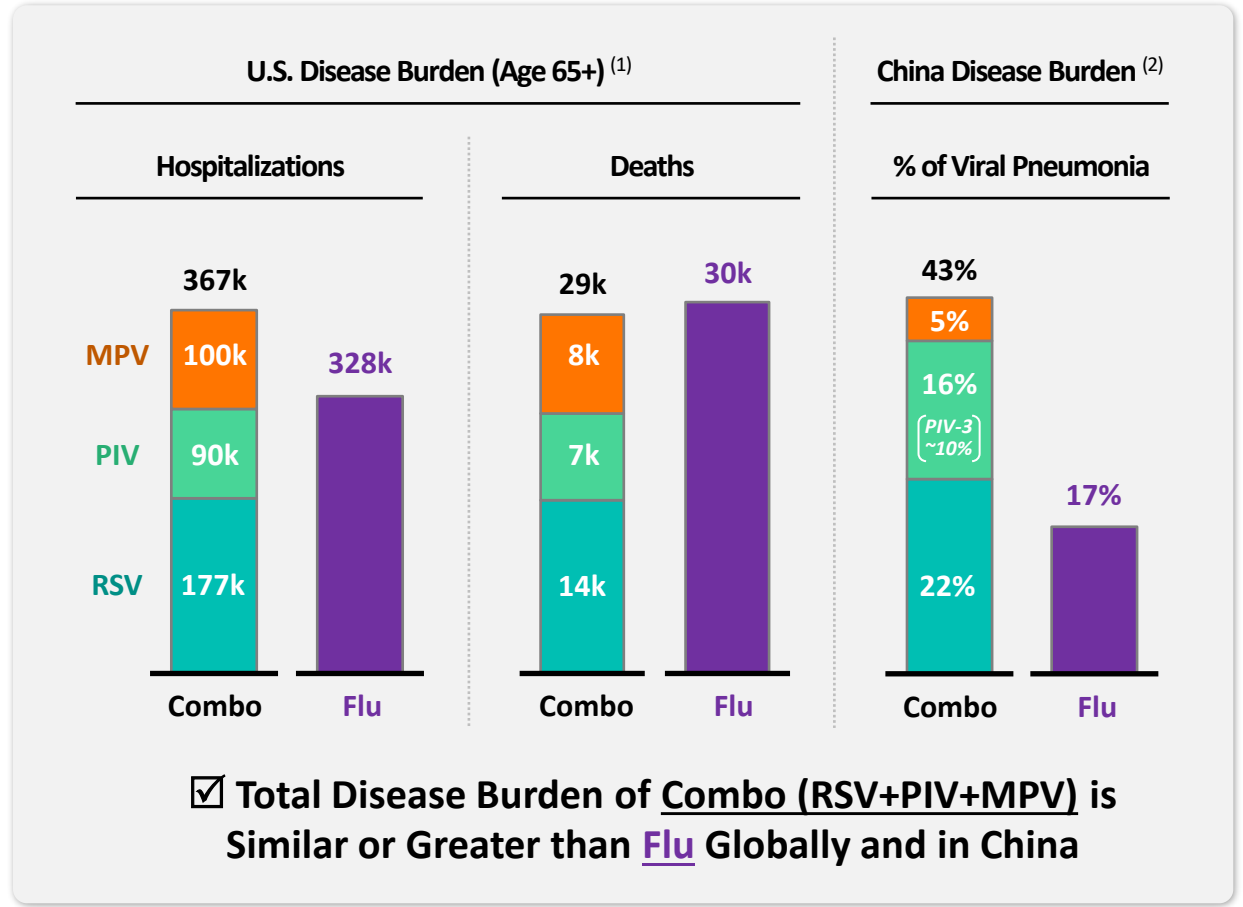
Note: Moderna, Icosavax and Pfizer neutralization titers based on IU/mL. GSK units expressed as ED₆₀.
 (1) Moderna ACIP Presentation (29-FEB-2024), (2) Icosavax Company Presentation IVX-121 (28-JUN-2023), (3) Pfizer 2023 VRBPAC Company Briefing Document, (4) DOI: 10.1093/infdis/jiad321. (5) GSK ACIP Presentation (21-JUN-2023).

5 Potential for Respiratory Combo Vaccine (RSV + PIV + MPV) LCM Opportunity

- Total Disease Burden of Combo (RSV+PIV+MPV) is similar or greater than Flu Globally and in China; combination vaccine is a compelling opportunity & unmet need
- Potential to directly leverage Clover's RSV experience to develop 'Respiratory Combo Vaccines' across mononegavirales order of viruses (RSV + PIV + MPV)
- Trimer-Tag protein subunit has platform advantages for combo versus mRNA (combo dose is limited by safety) and VLPs (complicated CMC)



- Virus Order/ Disease**
 - ☑ All 3 are Part of Mononegavirales Order
 - ☑ All 3 Cause Symptomatic Respiratory Disease
- Antigen**
 - ☑ All 3 have Similar Trimeric Fusion (F) Antigen, Requiring Stabilization in Prefusion form (PreF)
- Seasonality**
 - ☑ All 3 Observe Peak Outbreaks in Winter
- At-Risk Populations**
 - ☑ Highest Risk is Elderly and Infants/Toddlers



(1) Sources: [A] Widmer et al., 2012; [B] Russell et al., 2019 (62% of RSV); [C] Colosia et al., 2017; [D] Using RSV rate from Colosia 2017 as proxy. [E] <https://www.cdc.gov/rsv/research/us-surveillance.html> [F] Compiled data from CDC, 9 seasons from 2010-2011 to 2018-2019 <https://www.cdc.gov/flu/about/burden/index.html> [G] Burden in already vaccinated pop [H] Assuming vaccine durability >1 year.
 (2) Li et al., Nat. Commun., 2021 (DOI: 10.1038/s41467-021-25120-6). Data across all age groups from 2009-2019.

Thank You!