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IVX-121 Phase 1/1b Topline Data

June 28, 2022

Forward looking statements

Statements contained in this presentation regarding matters that are not historical facts are forward-looking statements. The forward-looking statements are based on the company's current beliefs and expectations and include but are not limited to: the potential for the company's VLP platform to result in safe and effective vaccines against infectious diseases; the potential for IVX-A12 to serve as a safe and effective combination vaccine and provide protection against RSV and hMPV; and the company's specific plans and anticipated timing to file an IND submission and initiate a Phase 1 trial for IVX-A12. Actual results or developments may differ from those set forth in this press release due to the risks and uncertainties inherent in the company's business, including, without limitation: the fact that topline results are based on preliminary analysis of key safety and immunogenicity data, and such data may change following a more comprehensive review of the data related to the clinical trial and such topline data may not accurately reflect the complete results of the clinical trial; the risk that interim results of a clinical trial do not predict final results and that one or more of the outcomes may materially change as follow-up on the outcome of any particular subject continues, as more subject data become available and following more comprehensive reviews of the data; the possibility of unexpected adverse side effects or inadequate immunogenicity or efficacy of IVX-121 or IVX-A12 that may limit development, regulatory approval, and/or commercialization; the possibility of disappointing results in later clinical trials despite promising results in earlier preclinical research or clinical trials; the possibility that cross study comparisons may not prove accurate as clinical data accrue or due to the inherent limitations of cross study comparisons; potential delays or difficulties in submission of an IND and the commencement, enrollment, and completion of the Phase 1b extension study for IVX-121, the planned Phase 1 trial for IVX-A12 and other clinical trials; the company's approach to the discovery and development of vaccine candidates, which is novel and unproven; competing approaches limiting the commercial value of the company's vaccine candidates and VLP vaccine technology; regulatory developments in the United States and other countries; potential disruption to the company's operations and continued conduct of clinical trials from the COVID-19 pandemic or the conflict in Ukraine; and other risks described in the company's prior filings with the Securities and Exchange Commission (SEC), including under the heading "Risk Factors" in the company's quarterly report on Form 10-Q for the quarter ended March 31, 2022 and any subsequent filings with the SEC. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and the company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date hereof. All forward-looking statements are qualified in their entirety by this cautionary statement, which is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

Agenda

Introduction and Key Takeaways	**Adam Simpson** Chief Executive Officer
Topline Data	**Niranjan Kanesa-thasan, M.D.** Chief Medical Officer
Wrap-up and Q&A	**Adam Simpson** Chief Executive Officer **Niranjan Kanesa-thasan, M.D.** Chief Medical Officer **Tom Russo** Chief Financial Officer

Positive IVX-121 Phase 1/1b topline interim results

- **Initial indication of the company's differentiated VLP platform technology**
  - High RSV-A and RSV-B neutralizing antibody titers seen even at lowest dose tested
- **Positive topline data from the Phase 1/1b trial of IVX-121 suggest a competitive initial profile in RSV**
  - Similarly robust responses in older versus young adults, favorable tolerability, suitability for combination
  - Opportunities to further differentiate RSV profile; durability to be assessed in Phase 1b extension out to 12 months
- **Proceeding to combination with proprietary hMPV VLP in a differentiated bivalent vaccine candidate IVX-A12 (RSV/hMPV) for older adults**
  - Tolerability profile at maximum dose tested in Phase 1 (250 µg) and immunogenicity down to 25 µg gives room for multivalent combinations

Next step: IVX-A12 (RSV/hMPV) on track for IND submission and anticipated start of Phase 1 trial in 2H'22

VLPs may offer one or more of these potential benefits

When compared to existing modalities,
WE BELIEVE OUR VLP TECHNOLOGY HAS THE POTENTIAL TO IMPROVE UPON:

Magnitude of response

to counter immunosenescence that can occur in the elderly

Breadth of coverage

greater degree of protection against related viral strains and mutations; less customization for variants

Durability

longer antibody persistence and requiring fewer boosters

Tolerability/reactogenicity

lower incidence of side effects and greater acceptability

Manufacturing

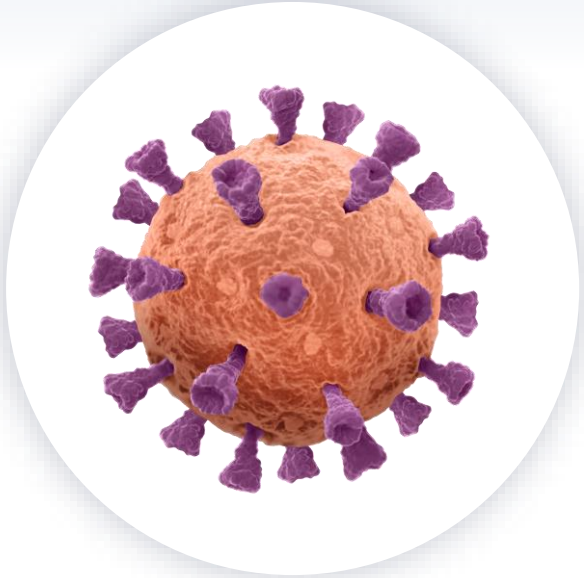
high productivity and scalability with process efficiencies, storage flexibility and stability

Combinability

ability to combine multiple VLPs in one vaccine

Unlike soluble antigens, VLPs mimic the structure of real viruses

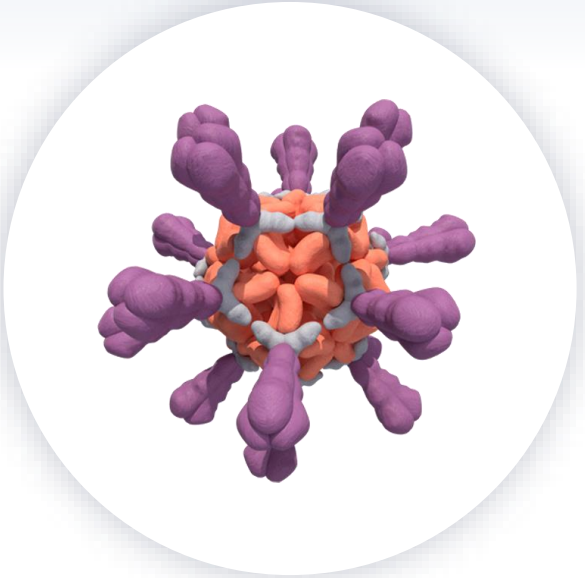
Natural virus



Soluble antigen

Traditionally manufactured or mRNA-derived

VLP-based antigen



Our VLPs are produced via a proprietary, 2-component, computationally-designed system

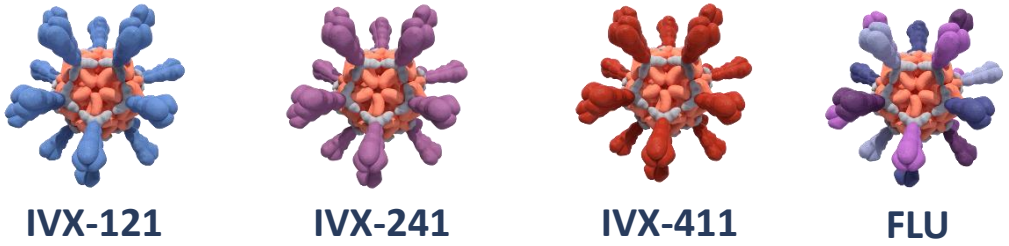
Component A
(antigen-specific)

- Trimeric protein genetically fused to target antigen
- Antigen properly folds to display neutralizing epitopes before assembly into VLP
- New antigen design capabilities allow us to prepare for future threats

Component B
(common)

- Can be used across multiple vaccine candidates

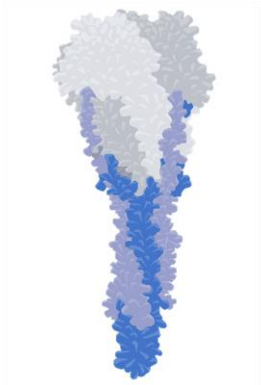
VLPs



- Self-assemble when components A and B are combined
- Icosahedral symmetry and particle size mimics viral properties to potentially enhance immunogenicity
- VLPs can have one antigen target per VLP or multiple different antigens on a single VLP

IVX-121 for RSV: Prefusion RSV-F protein may lead to higher neutralizing antibody titers

Postfusion F protein



Postfusion protein subunit vaccines

COMPANIES & TECHNOLOGIES:

Subunit | Particle

sanofi pasteur — The vaccines division of sanofi-aventis Group

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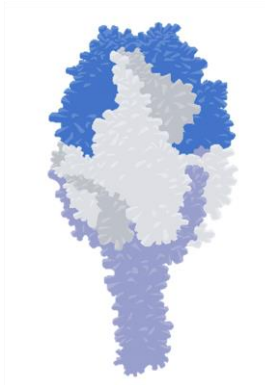
Older Adults Neutralizing Titer Geometric Fold Rise (GMFR) ~2-4x

Prefusion F protein



Prefusion stabilized protein subunit vaccines (e.g., DS-Cav1)

Proof of concept Subunit (Ph1) | Recombinant vector or mRNA | Subunit

NIH National Institutes of Health

janssen

gsk

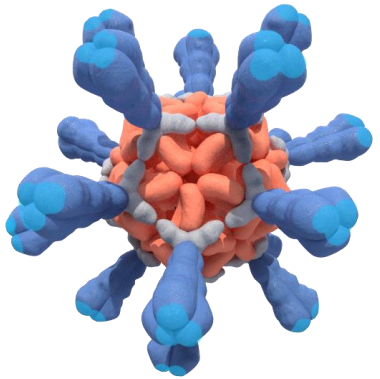
mRNA

moderna messenger therapeutics

Pfizer

DS-Cav1 Adult Neutralizing Titer GMFR ~7-10x

IVX-121



VLP with multivalent display of stabilized prefusion proteins

VLP

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Graham et al 2015; Ruckwardt et al 2021

IVX-121 for RSV: Ph 1/1b trial initiated September 2021

PHASE 1

- First-in-human dose escalation
- Healthy young adults (YA), aged 18–45 yrs
- 6 treatment groups: 3 dosage levels IVX-121 (25, 75, 250 µg) +/- alum adjuvant
- N = 90 (dosing complete)

Allows comparison to NIH DS-Cav1 Phase 1 data in YA, as representative of stabilized prefusion F-based vaccines

PHASE 1B

- Healthy older adults (OA), aged 60–75 yrs
- 6 treatment groups: 3 dosage levels IVX-121 (25, 75, 250 µg) +/- alum adjuvant
- N = 130 (dosing complete)

Assessment of safety and immunogenicity in OA and potential to counter immunosenescence

PHASE 1B REVACCINATION

Preliminary; subject to change

- Subset of Ph 1b OA cohort
- 12 months follow-up
- Revaccination at 12 months after initial Ph 1b dose

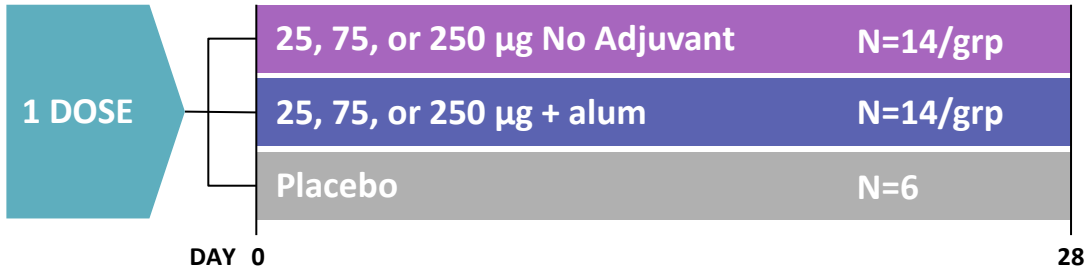
Assessment of long term safety and durability and responses to additional dose of IVX-121 in OA

Following the Phase 1/1b trial, we plan to combine IVX-121 with IVX-241 (our hMPV candidate) for further clinical development as IVX-A12 combination candidate

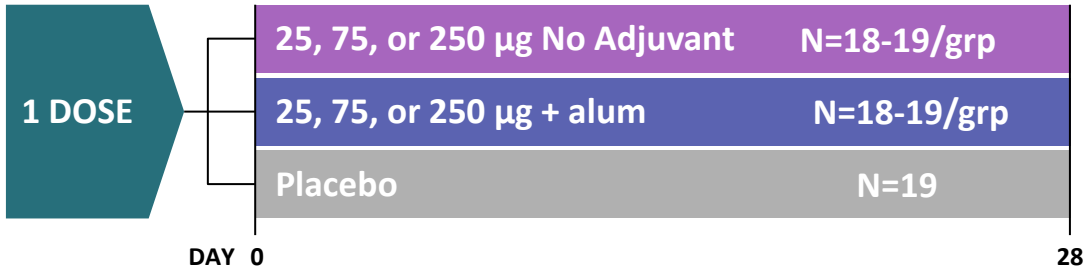
IVX-121 Phase 1/1b Topline Data

Study Design: Phase 1/1b randomized, observer-blinded, placebo-controlled study to evaluate IVX-121 administration in young and older adult subjects

PH1 Young Adult Subjects (ages 18-45) n=90



PH1b Older Adult Subjects (ages 60-75) n=130



Topline Data through Day 28		
Solicited AEs	**SAEs, AESIs, MAAEs, Unsolicited AEs**	**Immunogenicity**
DAYS 0-7	**DAYS 0-28**	**DAYS 0 & 28** • RSV-A and RSV-B Live Virus Microneutralization

alum: 500 µg/mL aluminum hydroxide

Summary of safety data

	PH1 Young Adult Subjects (ages 18-45) n=90		PH1b Older Adult Subjects (ages 60-75) n=130	
	IVX-121 n (%)	Placebo n (%)	IVX-121 n (%)	Placebo n (%)
Any serious adverse event (AE)	0	0	0	0
Any AE of special interest	0	0	0	0
Any AE leading to death or study discontinuation	0	0	0	0
Any grade 4 (life-threatening) AE	0	0	0	0
Any related Medically-Attended AE	0	0	2 (1.8)	0
Any unsolicited adverse event (through day 28)				
Mild	25 (29.8)	2 (33.3)	27 (24.3)	7 (36.8)
Moderate	33 (39.3)	1 (16.7)	21 (18.9)	2 (10.5)
Severe	1* (1.2)	0	3* (2.7)	0

No SAEs, AEs of special interest (AESIs) or AEs leading to study withdrawal

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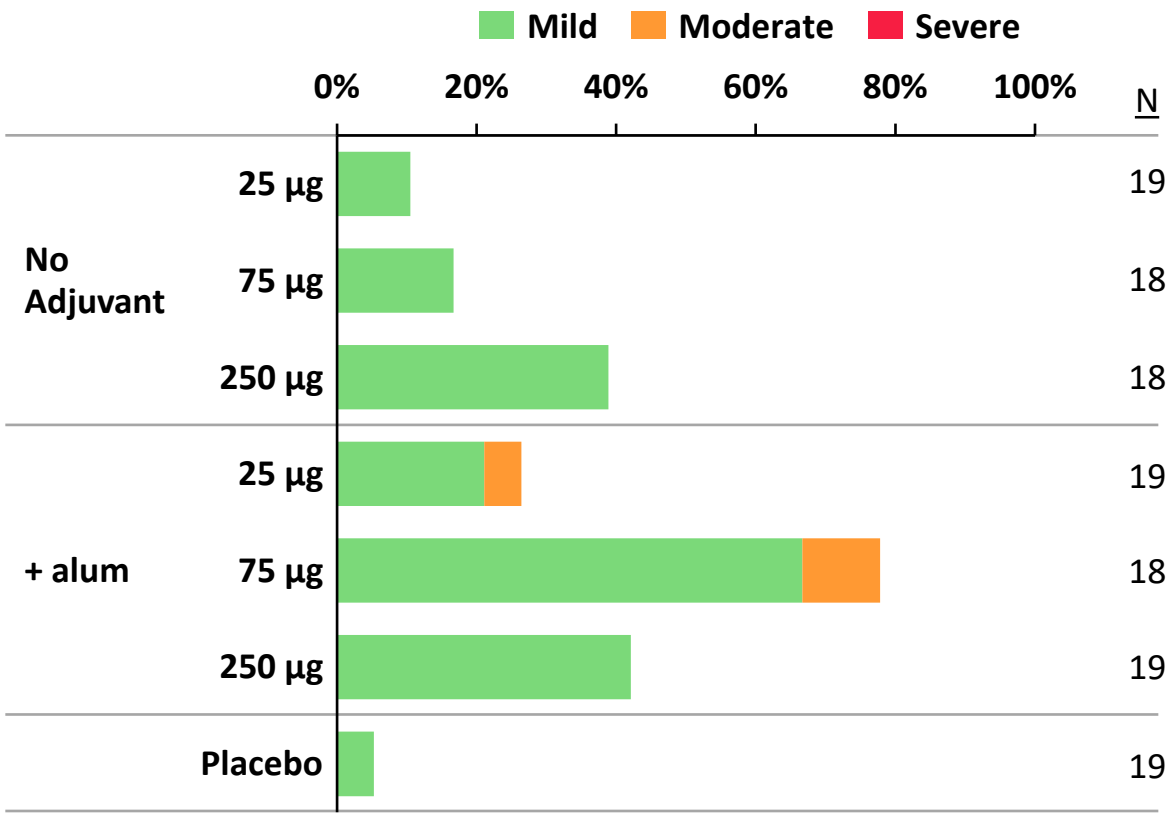
*None of the severe unsolicited adverse events were vaccine-related

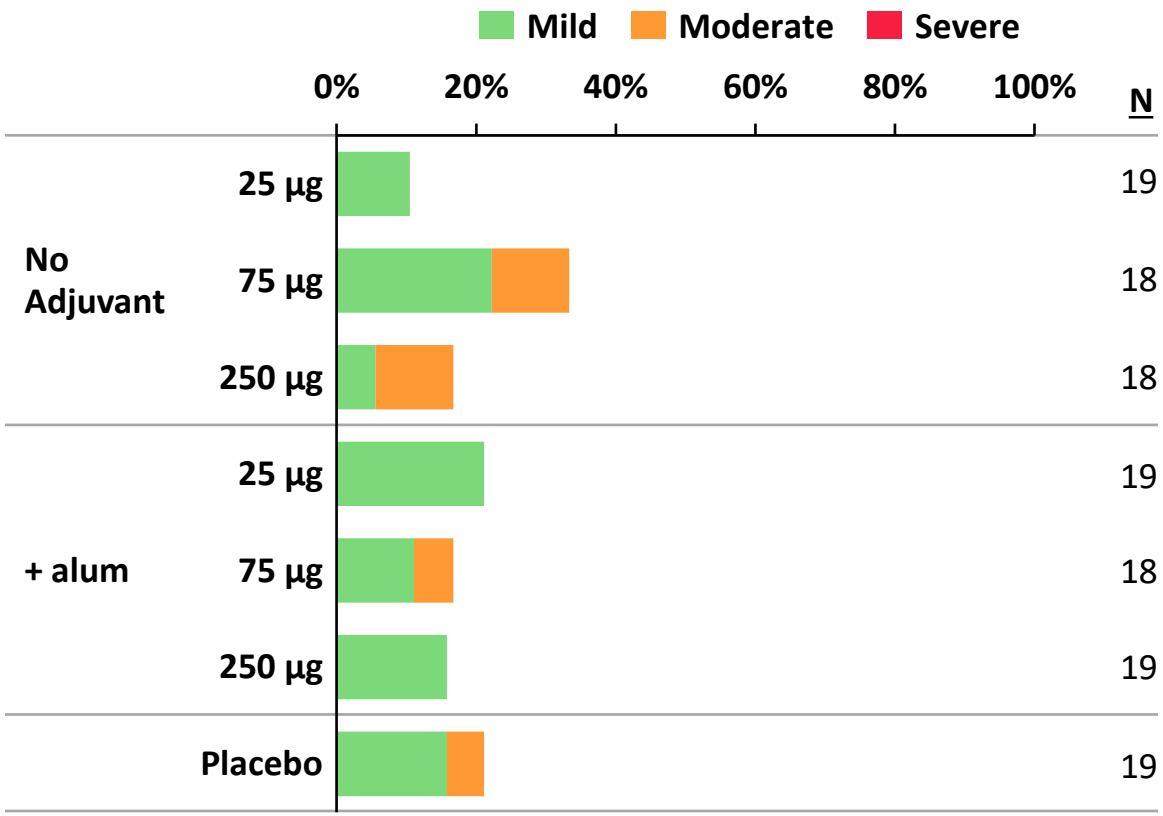
Solicited adverse events within 7 days of single dose, maximal severity

PH1b **Older Adult Subjects** (ages 60-75) n=130

Local Adverse Events (Reactogenicity)



Systemic Adverse Events (Tolerability)



Unadjuvanted IVX-121 reactogenicity is mild in older adults with similar tolerability to placebo

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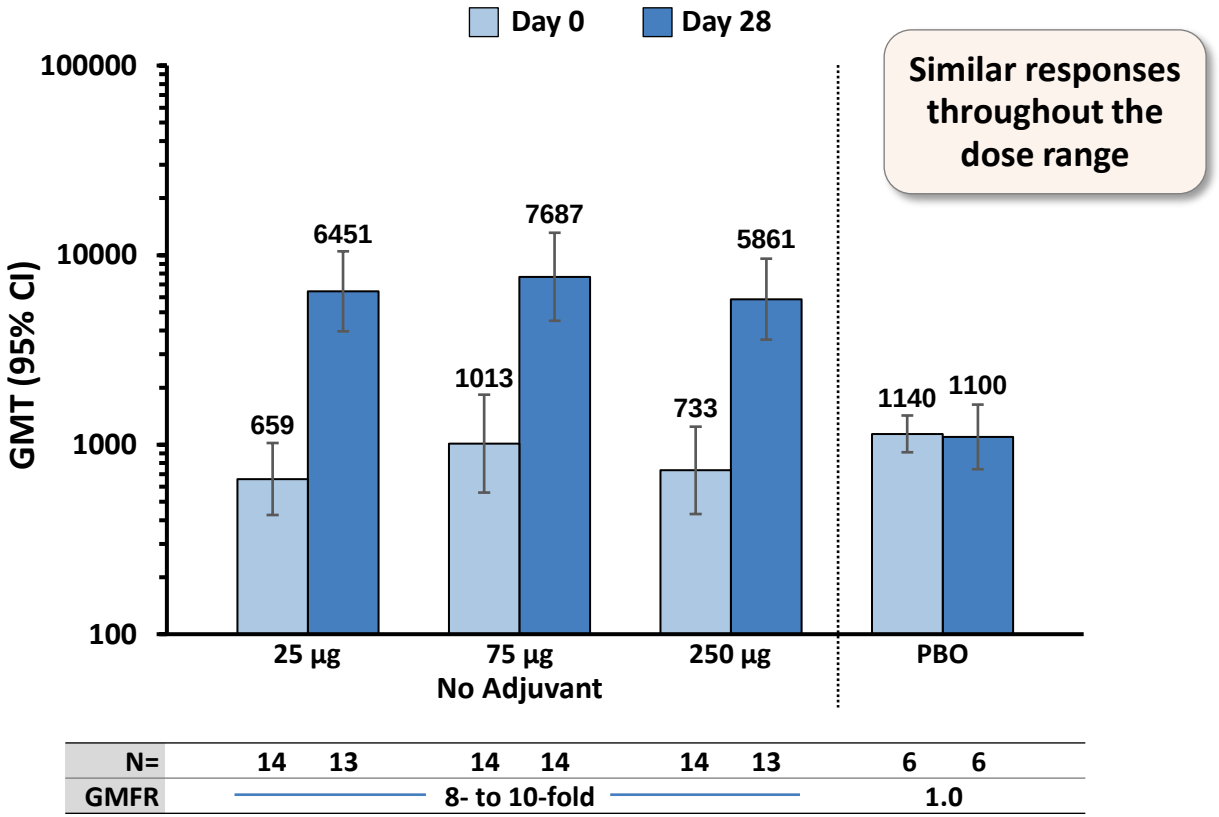
alum: 500 µg/mL aluminum hydroxide

Topline immunogenicity data: RSV-A nAb (unadjuvanted)

GMT expressed in IU/mL – Viroclinics Live nAb Assay

PH1 **Young Adult Subjects** (ages 18-45) n=90

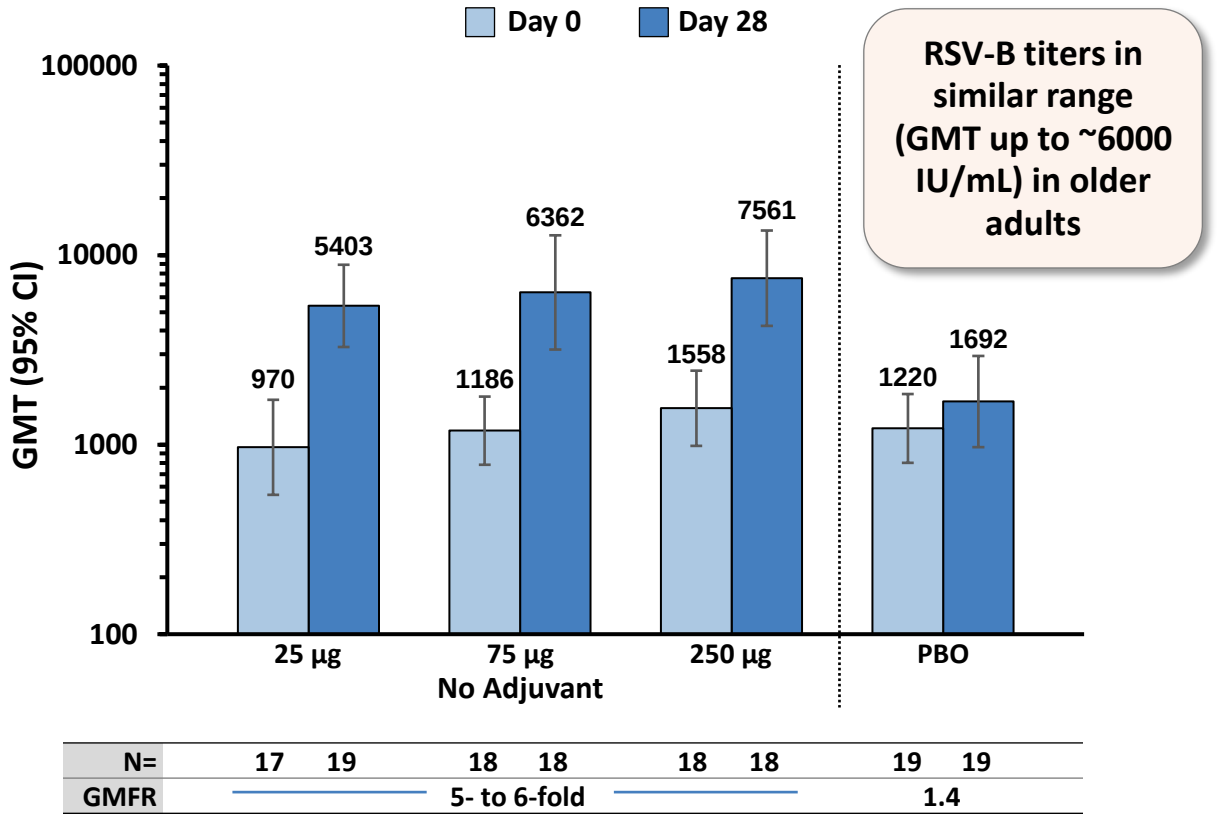
Day 0 and Day 28 Results



N=	14	13		14	14		14	13		6	6
GMFR			8- to 10-fold							1.0	

PH1b **Older Adult Subjects** (ages 60-75) n=130

Day 0 and Day 28 Results



N=	17	19		18	18		18	18		19	19
GMFR			5- to 6-fold							1.4	

Geometric mean titers (in IU/mL) of unadjuvanted IVX-121 are comparable in young and older adults

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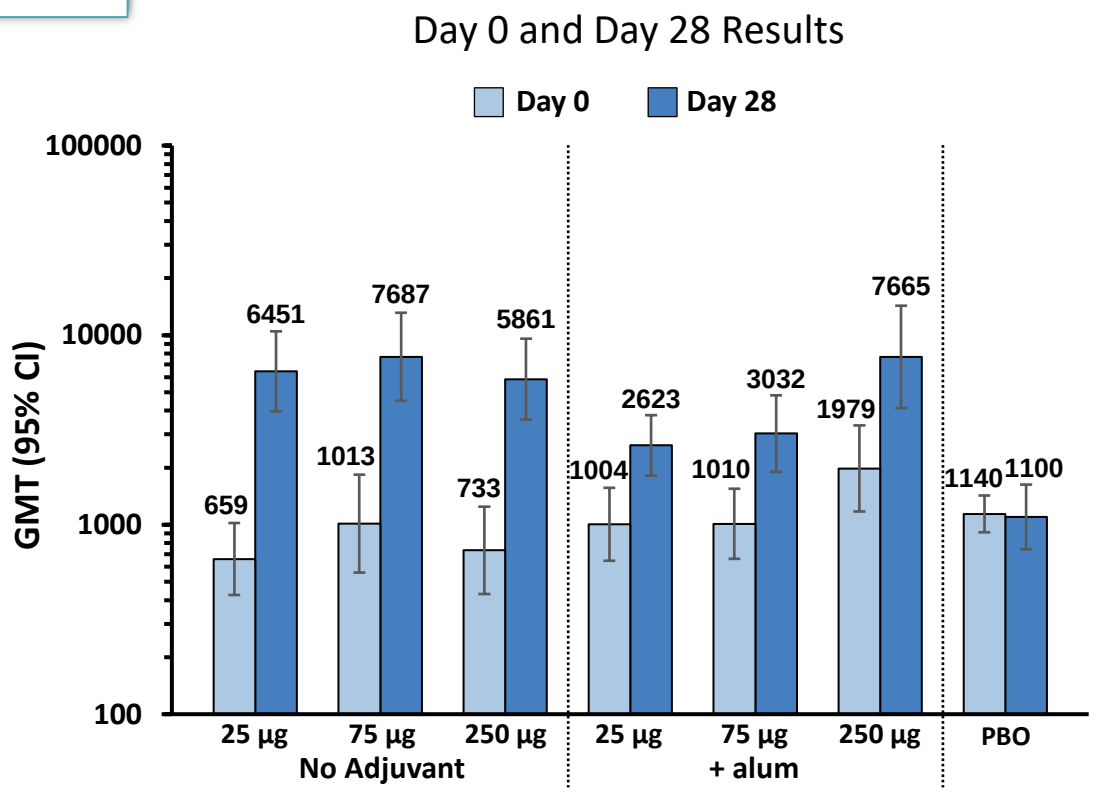
GMT: Geometric mean titer; LLoQ = 9.9; GMFR: Geometric Mean Fold Rise (Day 28) from Baseline. Assays Conducted by Viroclinics

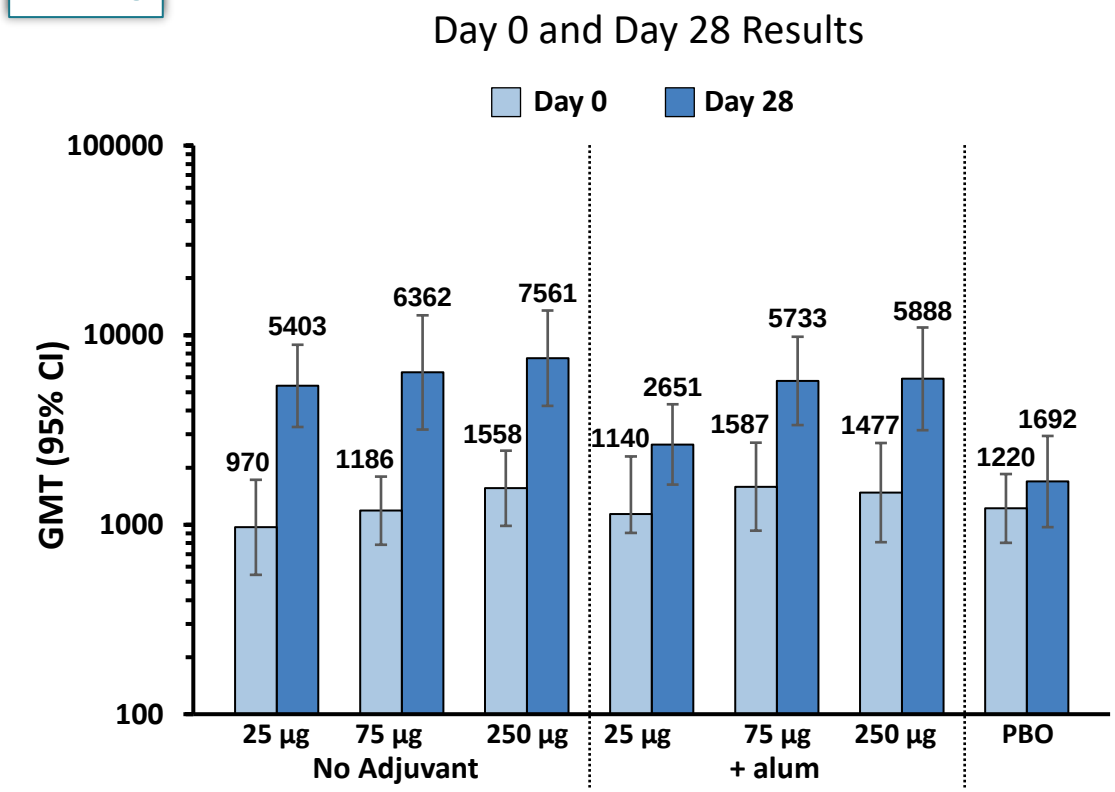
Topline immunogenicity data: RSV-A nAb (unadjuvanted vs. adjuvanted)

GMT expressed in IU/mL – Viroclinics Live nAb Assay

PH1 **Young Adult Subjects** (ages 18-45) n=90



PH1b **Older Adult Subjects** (ages 60-75) n=130



Alum adjuvant had no beneficial effect in young and older adults

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GMT: Geometric Mean Titer. LLoQ = 9.9. alum: 500 µg/mL aluminum hydroxide. Assays conducted by Viroclinics

Key takeaways from IVX-121 Phase 1/1b topline interim results

- **Clinical study met primary safety and immunogenicity objectives**
- **Generally well tolerated with no serious or dose limiting adverse events in adults, including older adults**
  - Mild reactogenicity associated with unadjuvanted IVX-121 in older adults
  - Systemic adverse events comparable to placebo for older adults
- **Immunogenicity data show substantial induction of neutralizing antibodies to RSV-A and RSV-B**
  - Geometric mean titers (in IU/mL) were comparable in young and older adults
  - Robust antibody responses seen at lowest (25 µg) unadjuvanted IVX-121 dose and across range of doses
  - Despite high baseline titers, age dependent geometric mean fold rises up to 10 fold at Day 28
  - No beneficial adjuvant effect from formulation with alum in either adult cohort
- **Supports planned combination with hMPV antigen**
  - The immunogenicity of IVX-121, even at the lowest dose, and its tolerability to the highest dose level, makes it well suited to a combination vaccine approach

IVX-121 showed favorable safety and immunogenicity in older adults, even at very low dosages; supports moving ahead with combination vaccine strategy

Wrap-up

Favorable IVX-121 tolerability data in Phase 1/1b study

	RSV vaccines – OA				Shingles vaccine	Quadrivalent influenza vaccines – OA[1]				IVX-121
	RSVpreF3 (w/ AS01) (GSK)	Ad26.RSV. preF + preF (Janssen)	RSVpreF[2] (Pfizer)	mRNA-1345 (Moderna)	Shingrix (w/ AS01) (GSK)	Fluzone (Sanofi)	Flublok (Sanofi)	Afluria (Sequirus)	mRNA-1010[3] (Moderna)	25-250 µg - OA N=111
Solicited systemic AEs	–	41%	49%	50 - 79%[6]	66%	25%	25%	20%	48% - 77%	11-33%
Grade 3+ solicited systemic AEs	*'Grade 3 AE rates were generally low'*	2%	0 - 7%[4]	–	11%	0.4%	1%	–	0% - 16%	0%
SAEs	*'Low reporting of SAEs'*	5%	5 - 19%	3%	1%	0%	3%	2%[7]	0%	0%
Vaccine-related SAEs	0%	0%	0%	0%	0%	0%	0%	0%[7]	0%	0%
Vaccine-related deaths	0%	0%	0%	–	0%	0%	0%	0%[7]	–	0%
Age Group	65-80	65+	65-85	65-79	50+	65+	50+	65+	65+	60-75
Study Phase	1/2	2b	1/2	1	3	3	3	3	2	1

IVX-121 Phase 1/1b safety data support advancement of multivalent vaccine vision

****Data shown side by side for illustrative purposes only; not a head-to-head comparison and there could be assay and laboratory differences across trials****

Data are based on: IDWeek2020 (GSK), ReSViNET 2021 (Janssen), Falsey et al 2021 (Pfizer), Jordan et al 2020 (Bavarian Nordic), Moderna Vaccines day 2022 (Moderna), Lal et al, 2015 (Shingrix), Treanor et al 2017 (Afluria), FDA influenza package inserts (Shingrix, Fluzone, Flublok, Afluria); [1] Non-exhaustive, representative set of quadrivalent flu vaccines recommended for 2021-2022 flu season; [2] Ranges represents 60 µg – 240 µg doses +/- alum; [3] Ranges represent 25 µg - 100 µg doses; [4] 'Solicited severe systemic events' interpreted as Grade 3+ AEs; [6] Range represents data post 1 dose (12.5 µg - 200 µg); [7] Data available only for combined safety population (YA and OA), 65+ population represents ~50% of Afluria cohort

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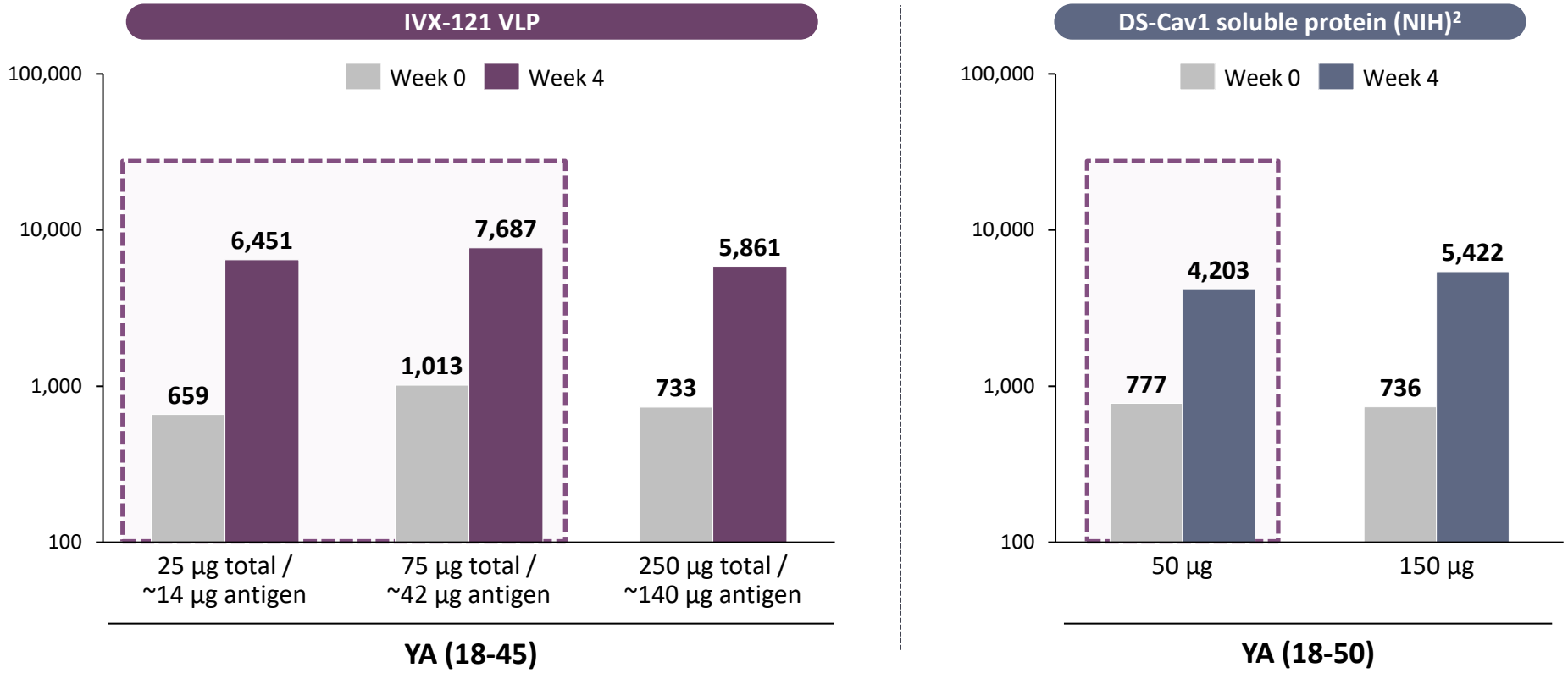
At comparable or lower antigen dose equivalents, IVX-121 elicits high RSV-A NAb titers relative to those previously shown for DS-Cav1 antigen

YA immunogenicity, ~1 month post dose (unadjuvanted): RSV-A neutralization assays (IU/mL)[1]



Robust initial immunogenicity at lower dose levels of VLP enables advancement of multivalent vaccine vision

****Data shown side by side for illustrative purposes only; not a head-to-head comparison and there could be assay and laboratory differences across trials****

[1] NAb assays conducted at different labs, using the World Health Organization (WHO) International Standard for antiserum to RSV-A (NIBSC code: 16/284), for conversions to WHO International Units/mL (IU/mL); [2] DS-Cav1 doses range from 50-500 µg (Ruckwardt et al 2021), doses comparable to IVX-121 are shown

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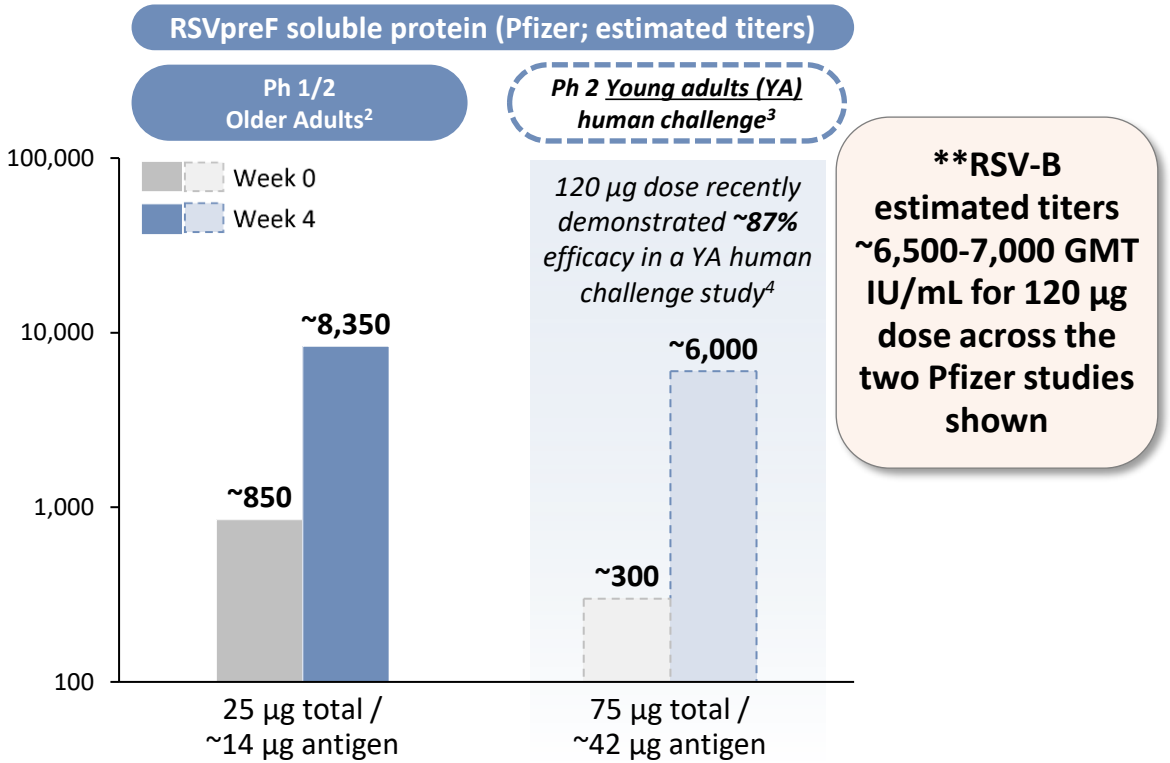
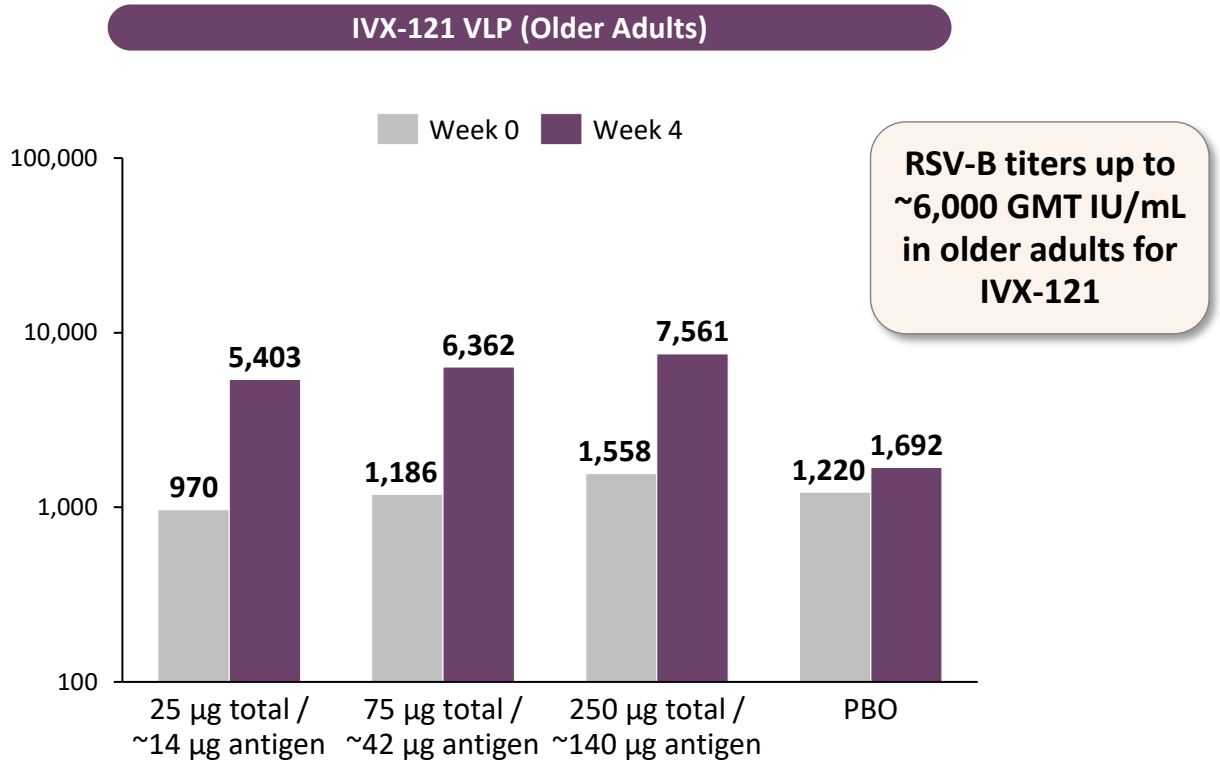
IVX-121 neutralizing antibody titers are in the estimated range of a leading RSV candidate in Phase 3 for older adults

Immunogenicity, ~1 month post dose (unadjuvanted): RSV-A neutralization assays (IU/mL)[1]



**RSV-B estimated titers ~6,500-7,000 GMT IU/mL for 120 µg dose across the two Pfizer studies shown



RSV-B titers up to ~6,000 GMT IU/mL in older adults for IVX-121

IVX-121 durability profile to be assessed in Phase 1b extension out to 12 months

Data shown side by side for illustrative purposes only; not a head-to-head comparison and there could be assay and laboratory differences across trials

[1] NAb assays conducted at different labs, using the World Health Organization (WHO) International Standard for antiserum to RSV/A (NIBSC code: 16/284), for conversions to WHO International Units/mL (IU/mL); [2] Based on Ph 1/2 OA expanded cohort in Falsey et al 2021, data are approximate estimates derived from reported graphs and IU/mL conversion factors; [3] Beate Schmoele-Thoma et al 2022; [4] Final RSVpreF formulation selected for OA (120 µg no adj, Baber et al 2022)

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VLPs may offer one or more of these potential benefits

When compared to existing modalities,
WE BELIEVE OUR VLP TECHNOLOGY HAS THE POTENTIAL TO IMPROVE UPON:

✓ Magnitude of response

to counter immunosenescence that can occur in the elderly

✓ Breadth of coverage

greater degree of protection against related viral strains and mutations; less customization for variants

☐ Durability

longer antibody persistence and requiring fewer boosters

Will be assessed in Phase 1b extension study

✓ Tolerability/reactogenicity

lower incidence of side effects and greater acceptability

✓ Manufacturing

high productivity and scalability with process efficiencies, storage flexibility and stability

☐ Combinability

ability to combine multiple VLPs in one vaccine

Will be assessed in IVX-A12 RSV/hMPV combination study

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Based on early clinical data and a limited number of subjects, to be assessed further in subsequent clinical studies

Our first combination vaccine candidate—IVX-A12—targets both RSV and hMPV

RSV and hMPV are related *Pneumoviridae* and have overlapping seasonal circulation

Both viruses are common with high re-infection rates

The goal for both is to target the F protein (responsible for viral cell entry)

RSV

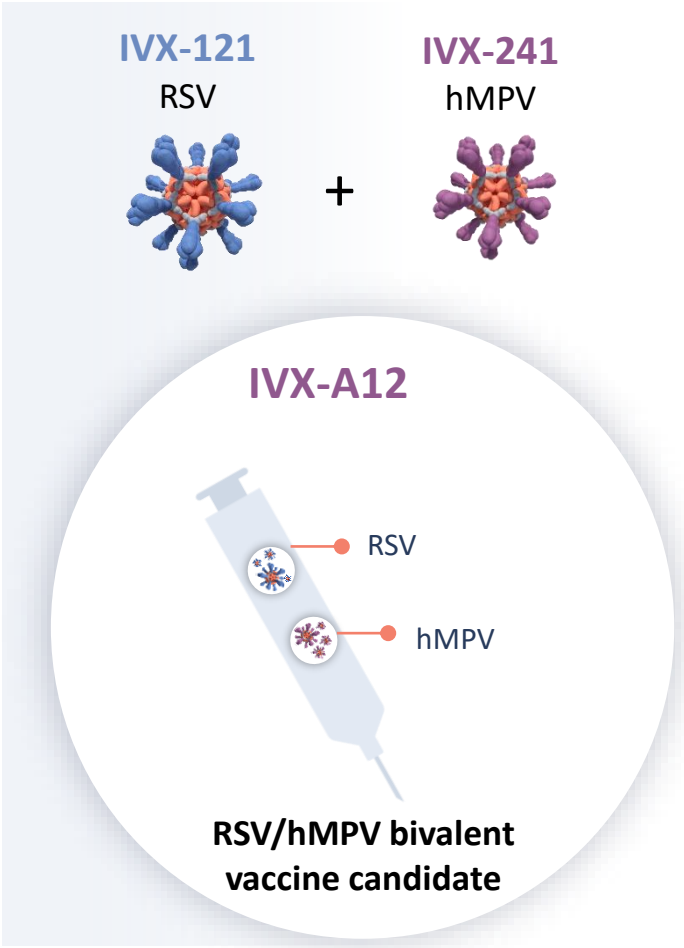
- Found in 8% of US adults hospitalized for pneumonia where pathogen detected
- 16% likelihood of ICU admission, 5% likelihood of death
- Symptoms: Cough, fatigue, dyspnea, congestion, wheezing, fever

hMPV

- Found in 11% of US adults hospitalized for pneumonia where pathogen detected
- 17% likelihood of ICU admission, 4% likelihood of death
- Symptoms: Cough, wheezing, dyspnea, congestion, fatigue

Clinical precedent for use of VLPs for combination vaccines targeting related pathogens (e.g., human papillomavirus, norovirus)

Icosavax utilizing prefusion stabilized F antigens for display on VLP



Next step: IVX-A12 (RSV/hMPV) on track for IND submission and start of Phase 1 trial in 2H'22

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Jain et al 2015; Widmer et al 2012; Walsh et al 2008; T Shi et al 2019

Q&A

Appendix

Demographics of trial participants

PH1 Young Adult Subjects (ages 18-45) n=90

		IVX-121 N=84	Placebo N=6
Gender	Male (%)	31.0	66.7
	Female (%)	69.0	33.3
Age	Average Age (min, max)	30.1 (18, 44)	33.3 (21, 41)
Race	White or Caucasian (%)	97.6	100
BMI (kg/m²)	Mean	24.26	24.17

PH1b Older Adult Subjects (ages 60-75) n=130

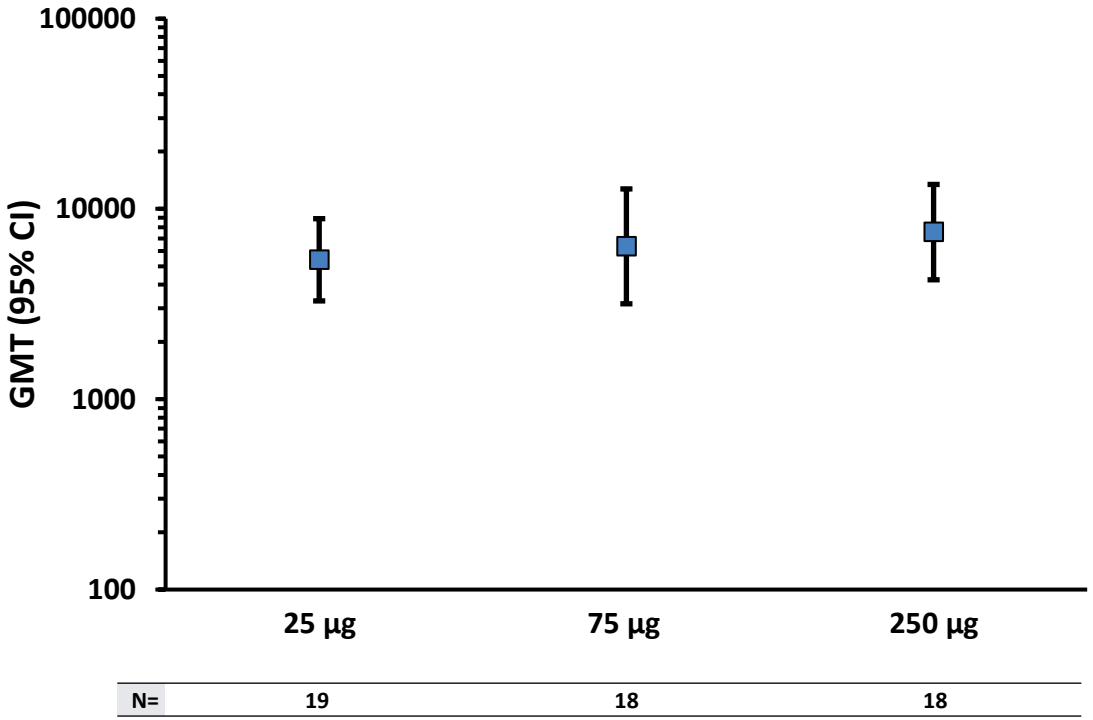
		IVX-121 N=111	Placebo N=19
Gender	Male (%)	49.5	68.4
	Female (%)	50.5	31.6
Age	Average Age (min, max)	65.7 (60, 76)	66.1 (59, 75)
Race	White or Caucasian (%)	100	100
BMI (kg/m²)	Mean	26.32	24.41

GMT ranges for RSV-A and RSV-B in older adults

PH1b **Older Adult Subjects** (ages 60-75)

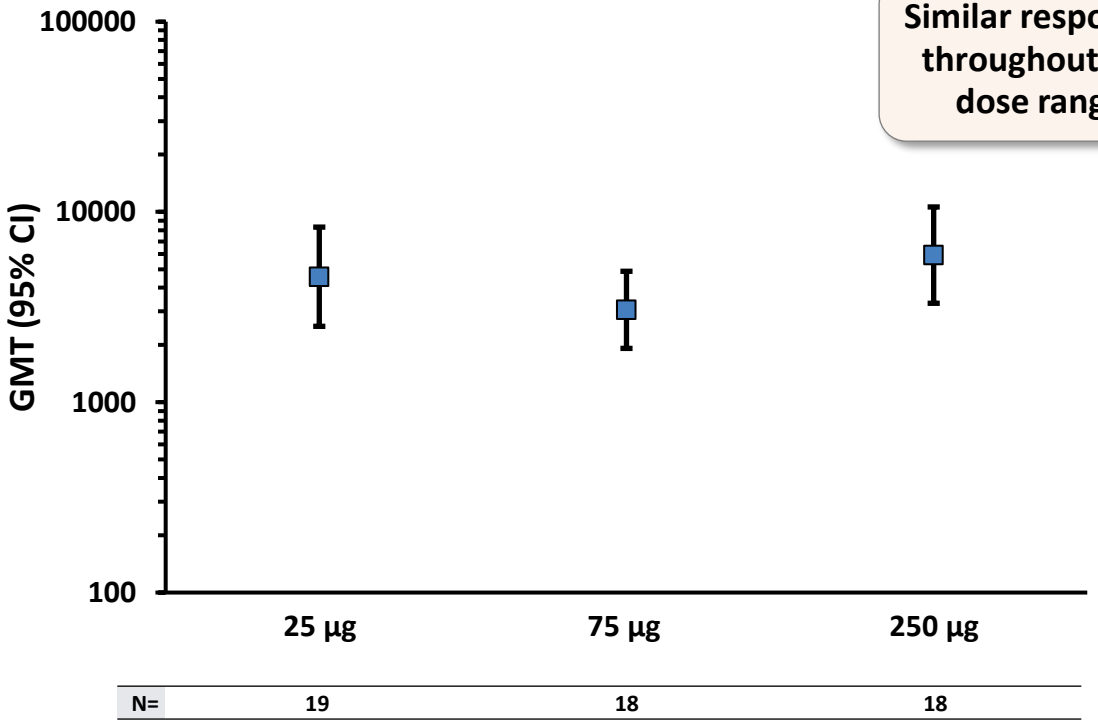
RSV-A

Day 28 Results (Unadjuvanted)



RSV-B

Day 28 Results (Unadjuvanted)

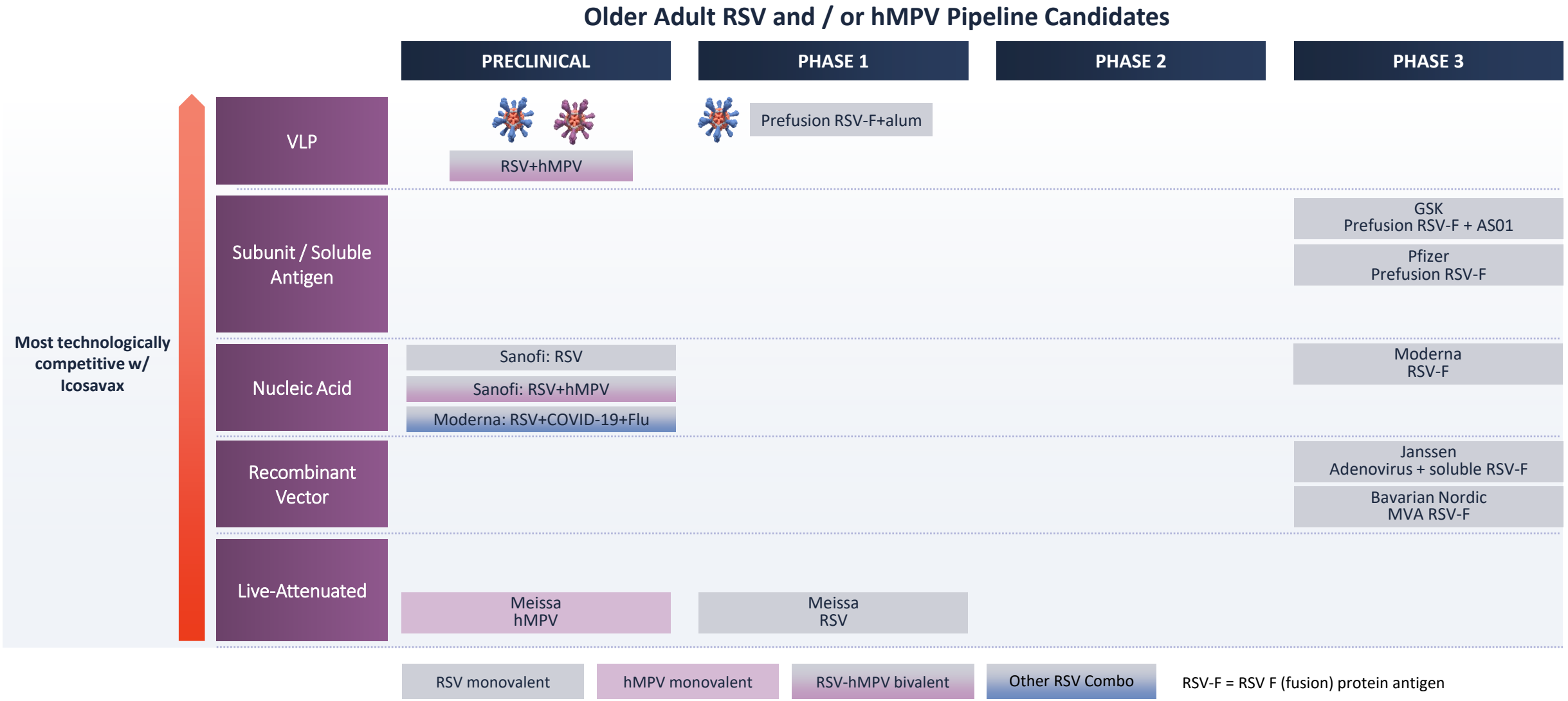


Similar responses throughout the dose range

Pattern of RSV-B responses show immunogenicity even at lowest dosage level and comparable ranges to those of RSV-A

Icosavax is the only company pursuing RSV and hMPV with the VLP modality

Older Adult RSV and / or hMPV Pipeline Candidates



RSV-F = RSV F (fusion) protein antigen

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