VAXART

developing

the Pill that Moves the Needle

Investor Presentation

November 2022

Forward-Looking Statements

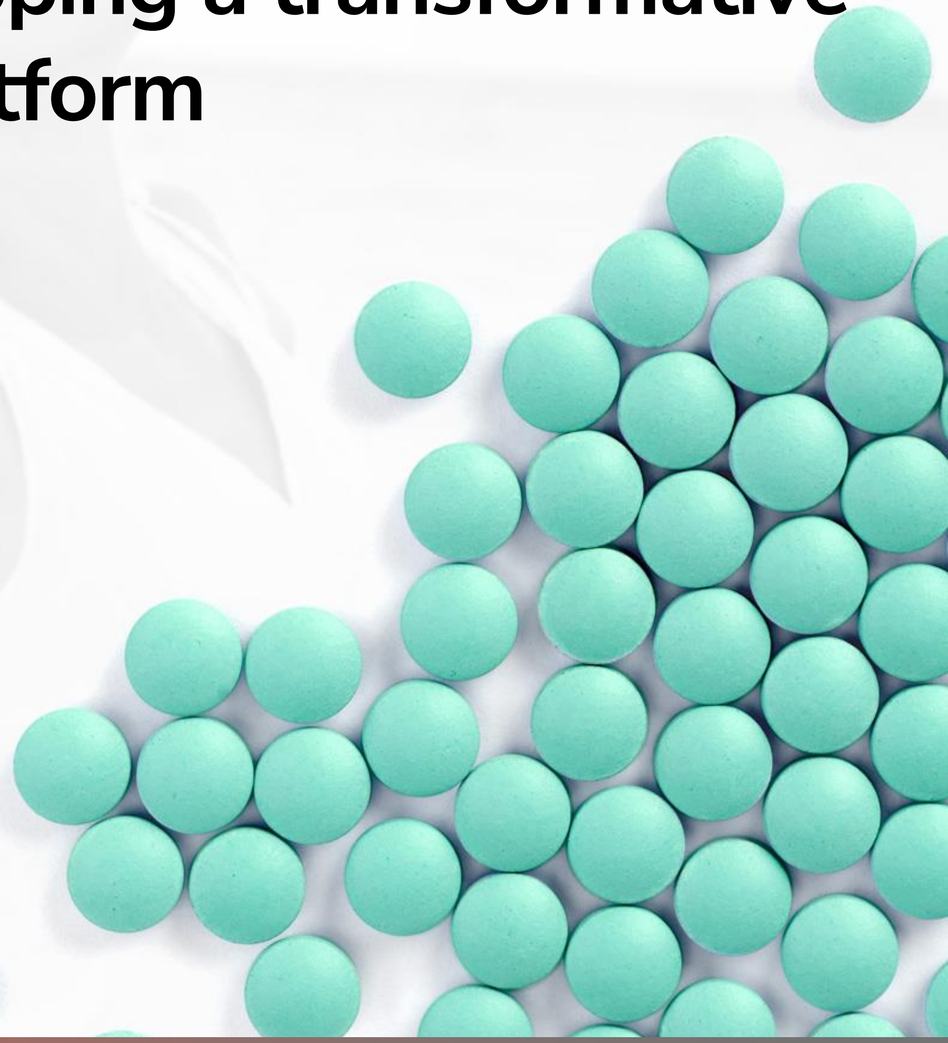
This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this press release regarding Vaxart's strategy, prospects, plans and objectives, results from preclinical and clinical trials, commercialization agreements and licenses, beliefs and expectations of management are forward-looking statements. These forward-looking statements may be accompanied by such words as "should," "believe," "could," "potential," "will," "expected," "plan" and other words and terms of similar meaning. Examples of such statements include, but are not limited to, statements relating to Vaxart's ability to develop (including enrolling a sufficient number of subjects and manufacturing sufficient quantities of its product candidates) and commercialize its COVID-19 vaccine candidate and preclinical or clinical results and trial data (including plans with respect to the COVID-19 vaccine product candidates); expectations regarding the timing and nature of future announcements including, those related to clinical trials and results of preclinical studies; Vaxart's expectations with respect to the important advantages it believes its oral vaccine platform can offer over injectable alternatives, particularly for coronaviruses; the potential applicability of results seen in our preclinical trials to those that may be seen in human studies or clinical trials; the expected role of mucosal immunity in blocking transmission of COVID-19; and Vaxart's expectations with respect to the effectiveness of its products or product candidates, including Vaxart's potential role in mitigating the impact of COVID-19 globally. Vaxart may not actually achieve the plans, carry out the intentions or meet the expectations or projections disclosed in the forward-looking statements and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions, expectations and projections disclosed in the forward-looking statements. Various important factors could cause actual results or events to differ materially from the forward-looking statements that Vaxart makes, including uncertainties inherent in research and development, including the ability to meet anticipated clinical endpoints, commencement and/or completion dates for clinical trials or preclinical studies, regulatory submission dates, regulatory approval dates and/or launch dates, as well as the possibility of unfavorable new clinical data and further analyses of existing clinical data; the risk that clinical trial and preclinical study data are subject to differing interpretations and assessments by regulatory authorities; whether regulatory authorities will be satisfied with the design of and results from the clinical studies; decisions by regulatory authorities impacting labeling, manufacturing processes, and safety that could affect the availability or commercial potential of any product candidate, including the possibility that Vaxart's product candidates may not be approved by the FDA or non-U.S. regulatory authorities; that, even if approved by the FDA or non-U.S. regulatory authorities, Vaxart's product candidates may not achieve broad market acceptance; that a Vaxart collaborator may not attain development and commercial milestones; that Vaxart or its partners may experience manufacturing issues and delays due to events within, or outside of, Vaxart's or its partners' control, including the recent outbreak of COVID-19; difficulties in production, particularly in scaling up initial production, including difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, shortages of qualified personnel or key raw materials, and compliance with strictly enforced federal, state, and foreign regulations; that Vaxart may not be able to obtain, maintain and enforce necessary patent and other intellectual property protection; that Vaxart's capital resources may be inadequate; Vaxart's ability to obtain sufficient capital to fund its operations on terms acceptable to Vaxart, if at all; the impact of government healthcare proposals and policies; competitive factors; and other risks described in the "Risk Factors" sections of Vaxart's Quarterly and Annual Reports filed with the SEC. Vaxart does not assume any obligation to update any forward-looking statements, except as required by law.

Vaxart's Mission

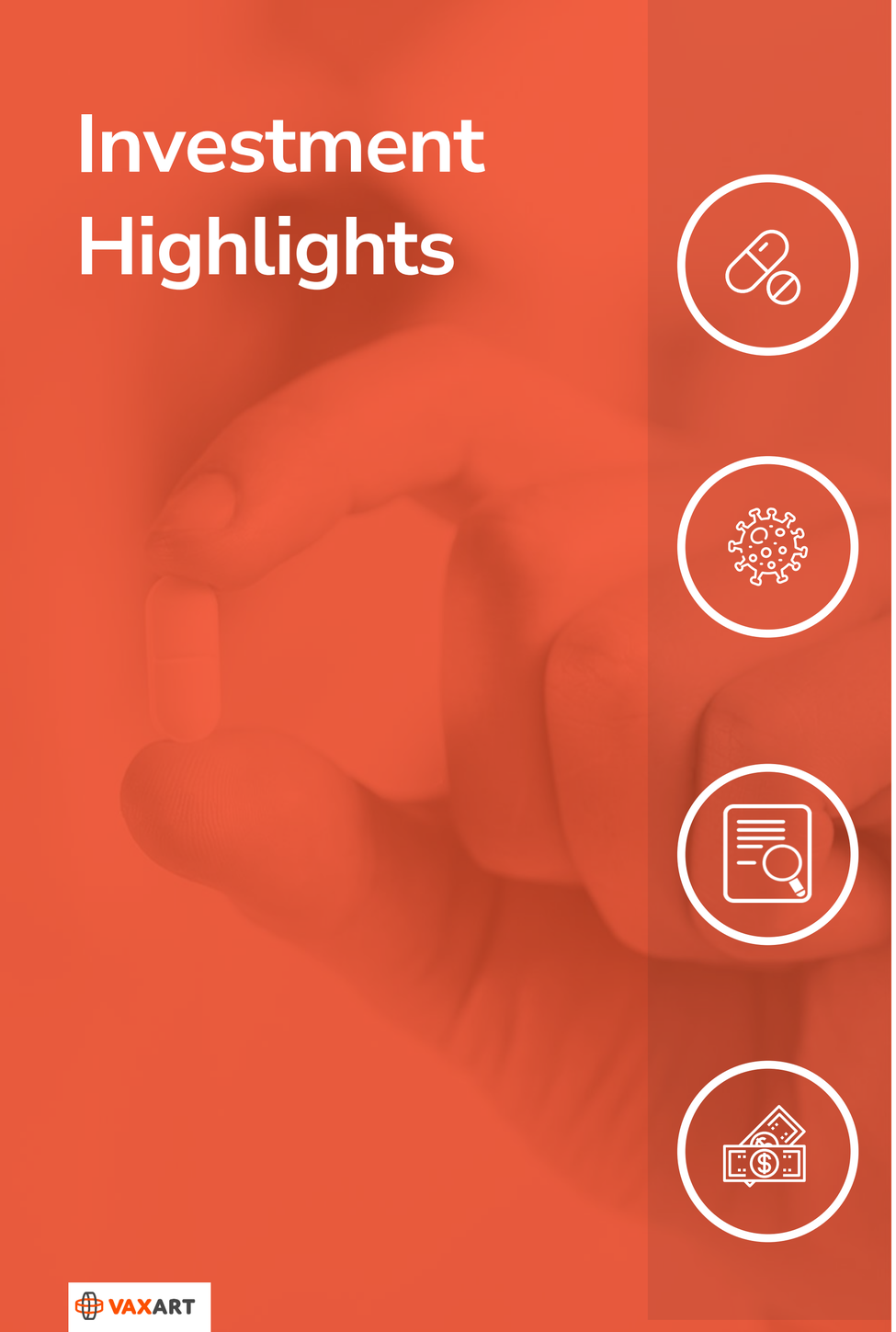
Improve global public health by developing a transformative oral tablet vaccine platform

The potential impact is revolutionary, scalable, and could lead to better global public health

Vaxart is emphasizing its COVID-19 and norovirus vaccine candidates, while advancing other programs that can exploit its platform's advantages



Investment Highlights



VAAST™ Platform Overview

- Room temperature-stable, oral tablet vaccine that delivers systemic AND mucosal immunity through intestinal epithelial cell uptake with single dose
- Ad5 vector backbone containing antigen of interest (HPV, Norovirus, Influenza, COVID-19, RSV) and TLR3 adjuvant for immuno-stimulating effects
- Completed 15 clinical trials against 7 different viruses, vaccinating 500+ subjects

Oral Vaccine Technology Could Address Viral Variant Challenges

- Rapidly emerging Sars-CoV-2 variants underscore the importance of vaccine technology that can address future variant challenges
- Cross-reactive nature of mucosal IgA response increases likelihood of variant coverage

Clinical Pipeline Overview

- COVID-19 candidate in Phase II clinical trials demonstrated high mucosal antibody and T cell responses as well as cross-reactivity to coronavirus variants
- Norovirus candidate in Phase II clinical trials demonstrated bivalent efficacy against both GI.1 and GII.4; Norovirus GI.1 challenge study generated positive preliminary Phase 1b data in elderly adults
- Influenza Phase II clinical trial demonstrated improved protection against infection compared to Fluzone with favorable safety profile

Resources to Aggressively Continue Clinical Advancement and Commercialization

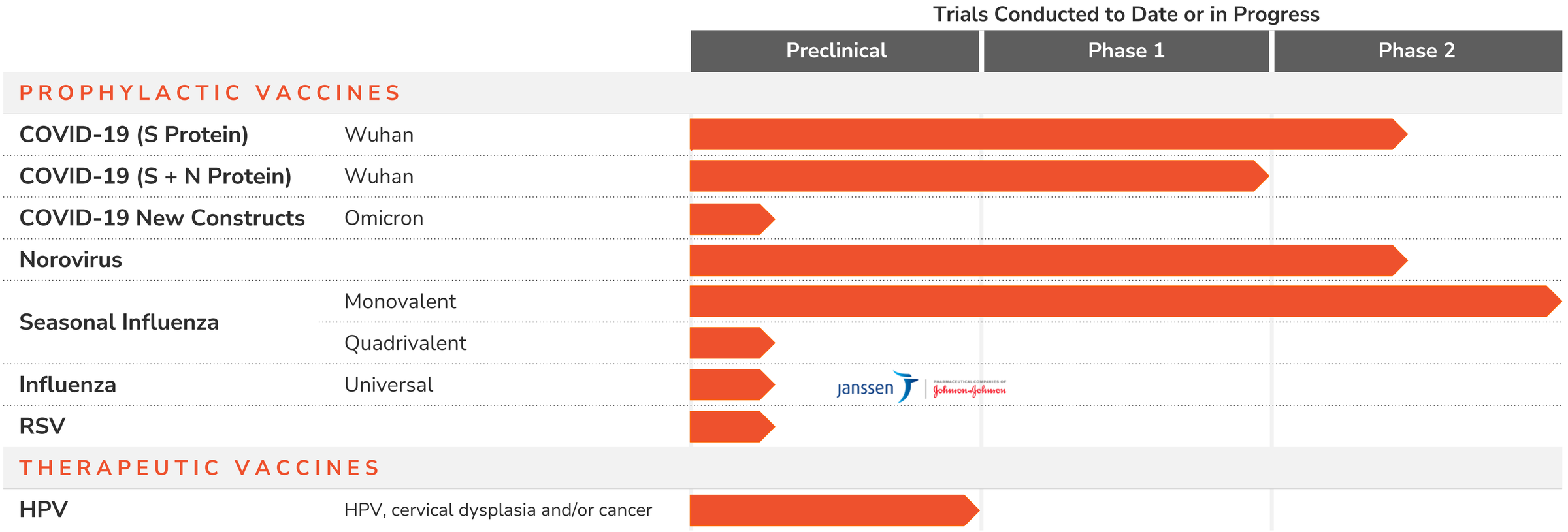
- Cash: $131.5MM (as of June 30, 2022)

VAAST™: Vector-Adjuvant-Antigen Standardized Technology

Clinical Pipeline

Prophylactic & Therapeutic Oral Intestinal Delivery + Targeted Immune Activation

Completed 15 clinical trials against 7 different viruses, evaluating 500+ subjects



Room Temperature Oral Vaccine

Potential for Significant Advantages in Mass COVID-19 Vaccination Campaigns

INJECTABLE VACCINE

Make appointment | Travel to vaccination site | Wait in line | Get vaccinated | Travel home

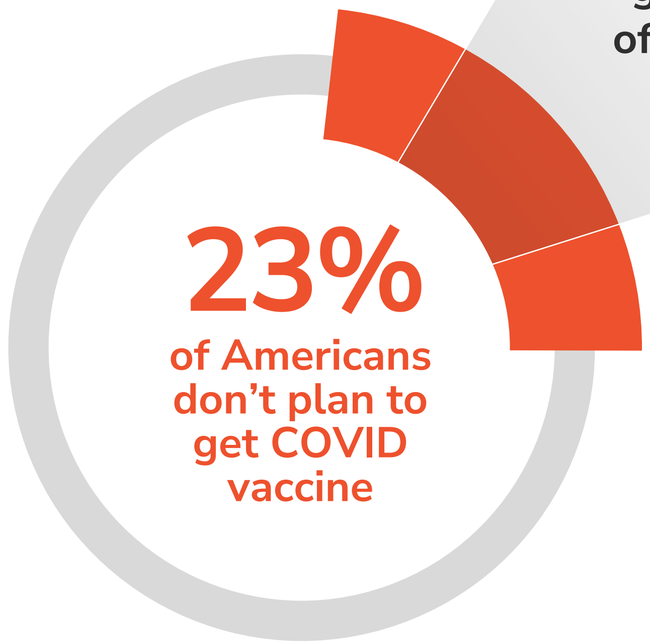
ORAL VACCINE

Order pill | Pill is shipped | Take pill

A pill option could mean as many as

18,700,000

more Americans vaccinated



32%

Would be likely to get the vaccine if offered in pill form

23%

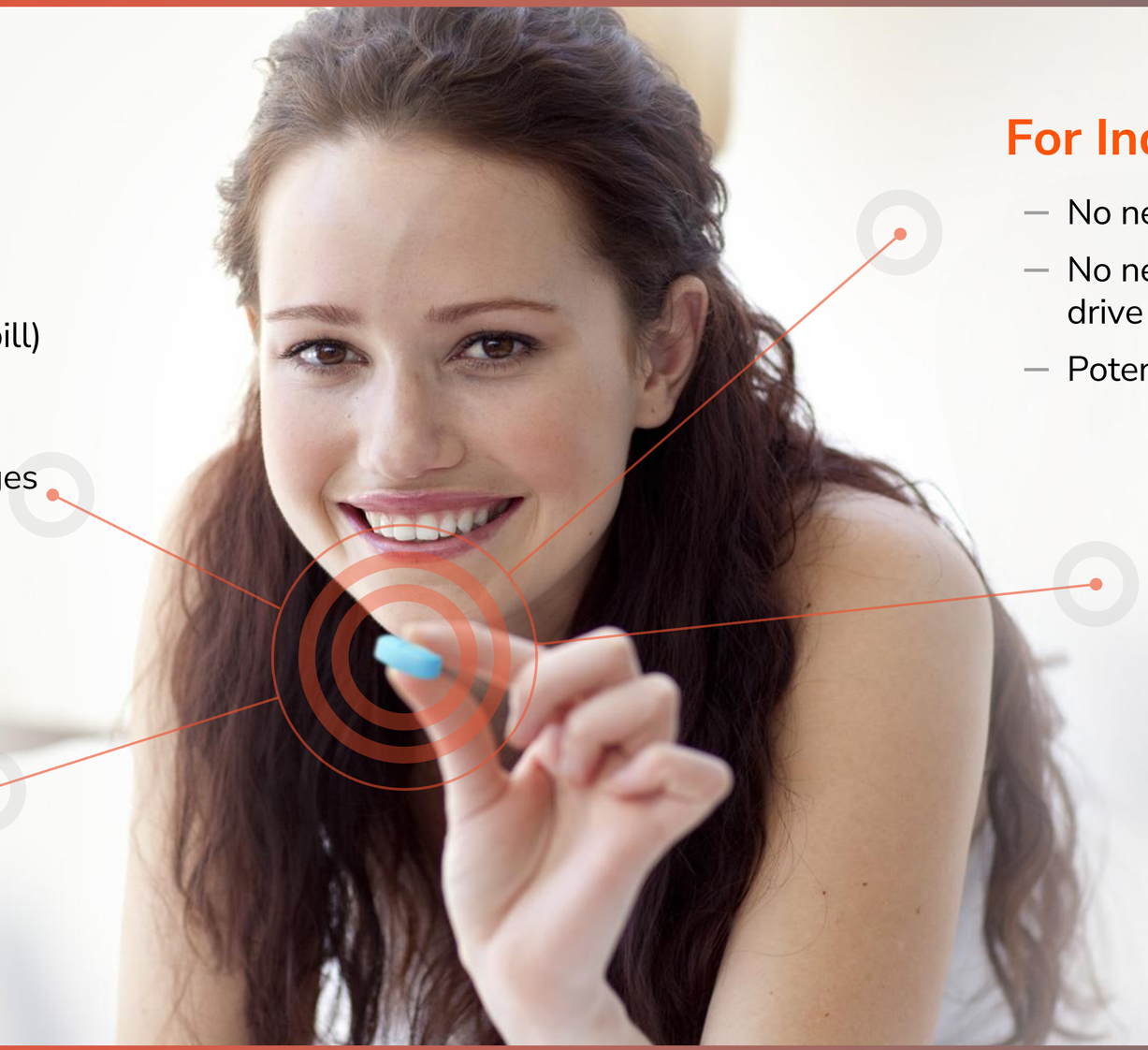
of Americans don't plan to get COVID vaccine

Source: Poll conducted by Quadrant Strategies and commissioned by Vaxart, Inc. Quadrant Strategies conducted an online national survey of 1,500 Americans 18 and older between March 17 and 24, 2021. The margin of error is +/- 3%. Quadrant Strategies is based in Washington, D.C.

Tablet Formulation: *Offers Multiple Advantages vs. Injected Vaccines*

For Society

- Can mitigate vaccine hesitancy
- Can mass vaccinate in days, not months (6+ months with injectables vs. 2-3 days with a pill)
- Substantially reduced environmental footprint: no needles, no syringes, no bandages
- Facilitates social distancing during a pandemic



For Individuals

- No needles, no needle pain
- No need to set up appointment, drive to/from vaccination site, wait
- Potentially better tolerated

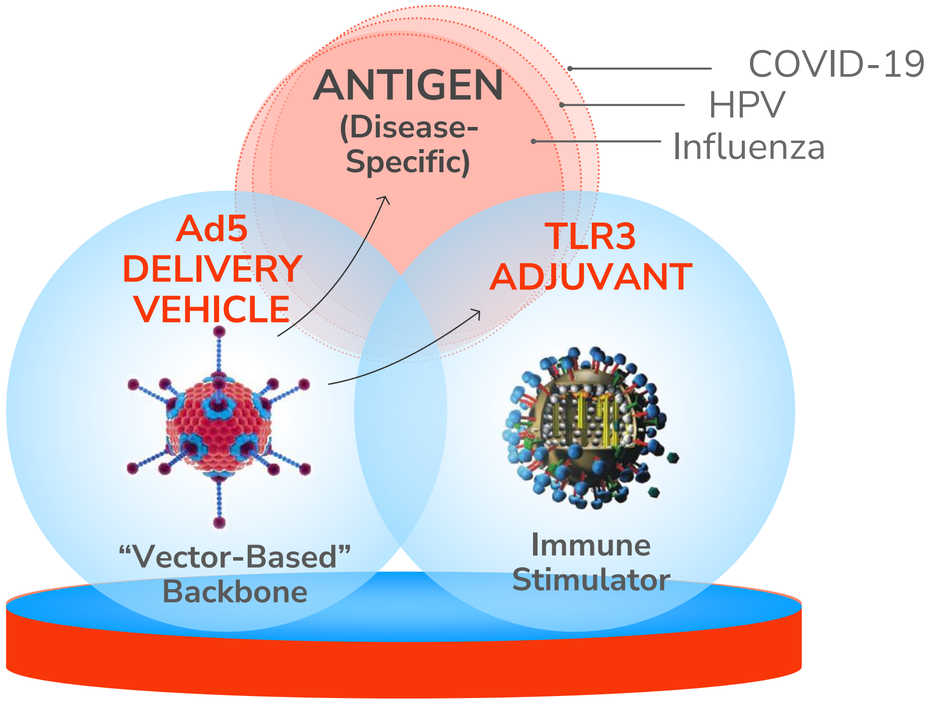
For Governments

- No need for cold chain
- No need for vaccination centers
- No need for medical personnel to administer

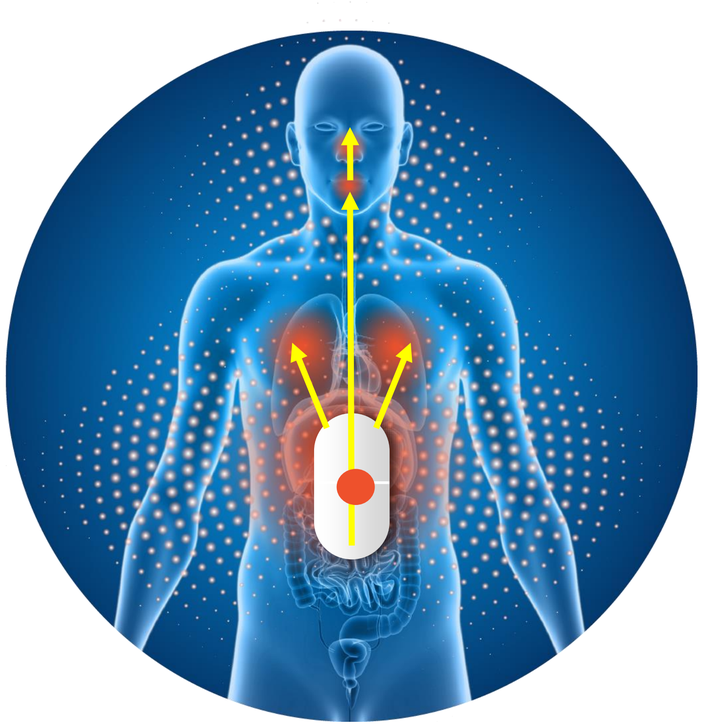
Tablet Formulation: Offers Multiple Advantages vs. Injected Vaccines

Proprietary Oral Vaccine Platform: VAAST™

Intestinal Delivery + Targeted Immune Action



VAAST™: Vector-Adjuvant-Antigen Standardized Technology



Oral vaccine activates immunity in the right places

Systemic and mucosal immunity:

1. Nose
2. Lungs
3. Intestine
4. Mouth

The mucosa is where infection first invades the body and where Vaxart's oral vaccines act to repel infection, potentially providing broader and longer protection against viruses and a reduction in their transmission.

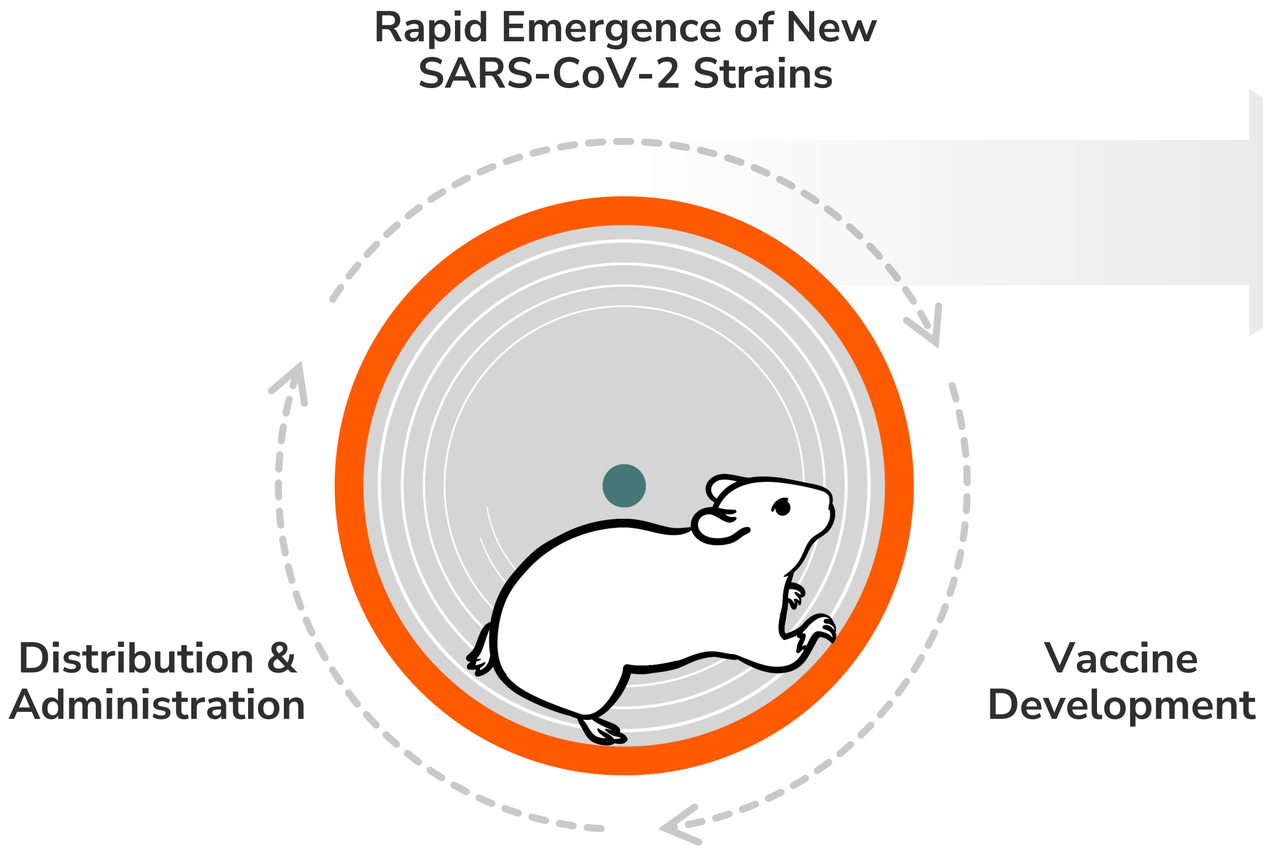
Sources: Saito S, Sano K, Suzuki T, Ainai A, Taga Y, Ueno T, et al. (2019) https://doi.org/10.1371/journal.ppat.1007427.
Suzuki T, Ainai A, Hasegawa H. (2017) https://doi.org/10.1016/j.vaccine.2017.07.093.
Langel S,, Johnson S, et al. (2021) https://doi.org/10.1101/2021.10.03.462919.
Seibert C, Rahmat S, et al. (2013) https://doi.org/10.1128/JVI.00979-13.
Muramatsu M, Yoshida R, et al. (2014) https://doi.org/10.1371/journal.pone.0085582.

COVID-19 Program

Phase II Clinical Trials

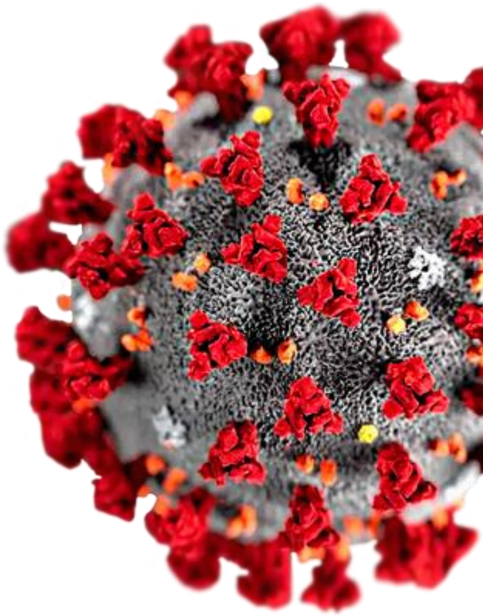
COVID-19: Variant Challenge

Vaccine Development and Distribution Efforts are Being Outpaced by Rapidly Emergent Strains



The Variant Challenge:

- Short time to deploy new vaccines with each variant
- Radically shortening time needed for mass vaccine campaigns is essential to ending the hamster wheel paradigm

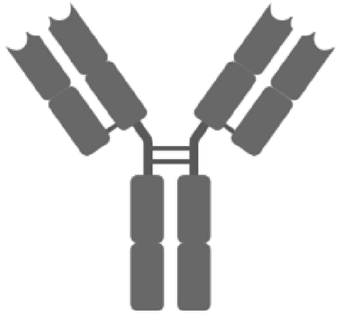


We are currently chasing the virus with vaccines like a hamster on a wheel

Antibody Cross-Reactivity: IgG vs. IgA

IgA Mucosal Responses Have Been Shown to Have Greater Cross-Reactivity to Viral Variants Than IgG Systemic Responses

IgG



Characteristics:

- Major antibody isotype induced systemically
- Major isotype produced by mRNA vaccines
- Binding affinity is significantly reduced when challenged with variants
- Has shown poor cross-reactivity with respect to known variants[1,2]

IgA

Characteristics:

- Predominantly present in the mucosal tissues
- Efficiently produced through VAAST™ platform
- Minimal decrease in binding affinity when challenged with variants
- Shown to have greater cross-reactivity against both Sars-CoV-2[1] and Influenza[2] variants

Cross-reactive nature of VAAST™ mucosal IgA responses lead to high variant coverage

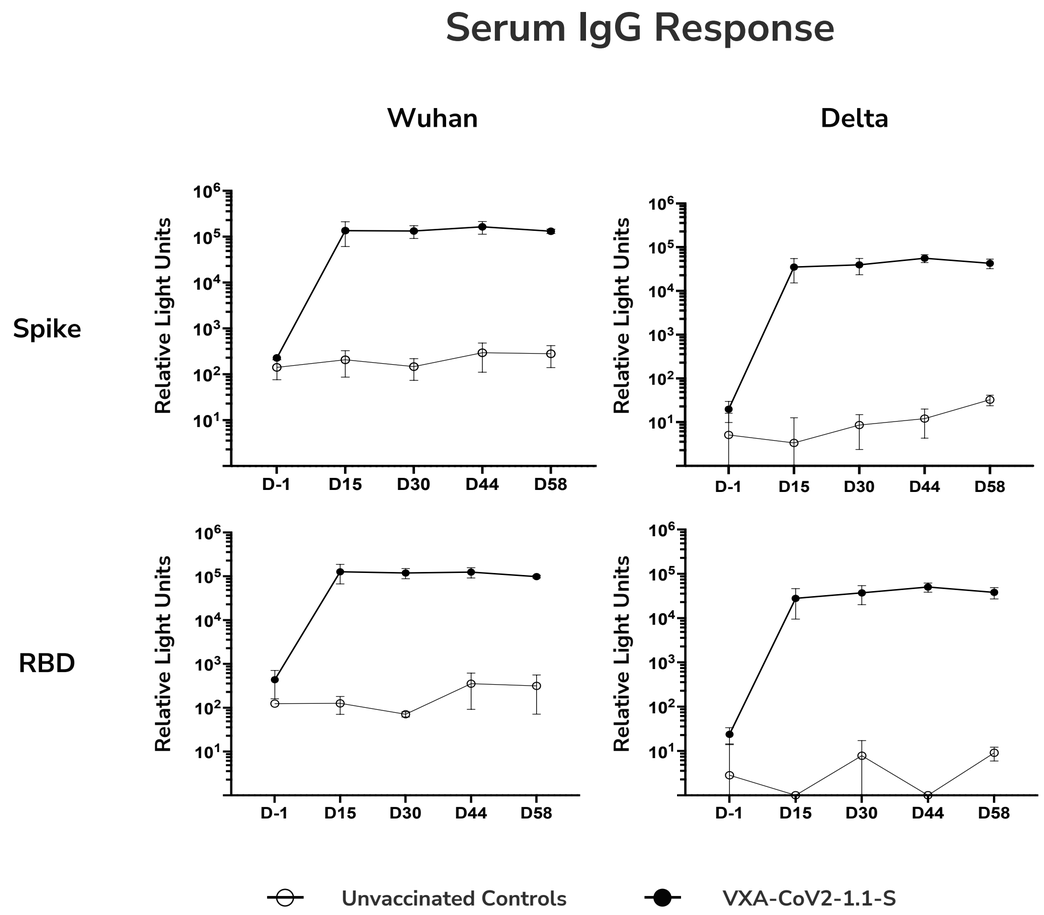
Source: [1] Ejemel, et al, *Nature*, 2020 ; [2] Muramatsu, et al, *PLOS*, 2014.

S-Only COVID-19 Candidate: Preclinical IgG Response

S-Only Candidate Produces Strong, Cross-Reactive Systemic Immune Responses in Non-Human Primates

- VXA-CoV2-1.1-S stimulates IgG serum antibody responses against original strain as well as delta, alpha, gamma and omicron variants[1,2]
- Antibodies recognize viral spike protein and receptor binding domain (RBD) of SARS-CoV-2
- Serum IgG antibody responses are similar to other vaccines evaluated in NHP studies[3-6]

Four macaques in each group were immunized intranasally with a prime boost regimen on day 0 and 28

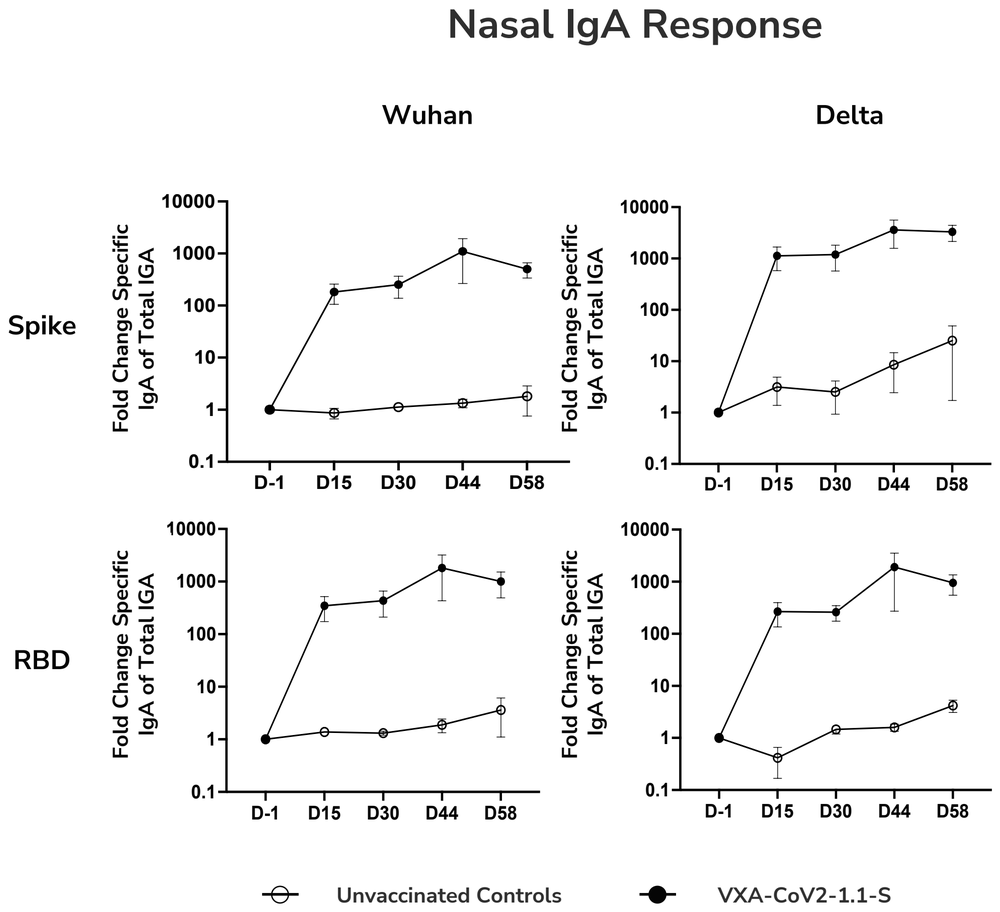


Sources: [1] Flitter BA et al. *bioRxiv*. February 2022. [2] Omicron data on file with Vaxart. [3] Mercado NB et al. *Nature*. 2020. [4] Yadav PD et al. *Nature Comm.* 2021. [5] Corbett KS et al. *Science.* 2021. [6] Brouwer PJM et al. *Cell.* 2021.

S-Only COVID-19 Candidate: Preclinical IgA Response

S-Only Candidate Produces Strong, Cross-Reactive Mucosal Immune Responses in Non-Human Primates

- VXA-CoV2-1.1-S stimulates IgA mucosal antibody responses against original strain as well as delta, alpha, gamma and omicron variants[1,2]
- Mucosal IgA responses are significantly elevated following a single dose of VXA-CoV2-1.1
- IgA increases >1,000x observed



Sources: [1] Flitter BA et al. *bioRxiv*. February 2022. [2] Omicron data on file with Vaxart.

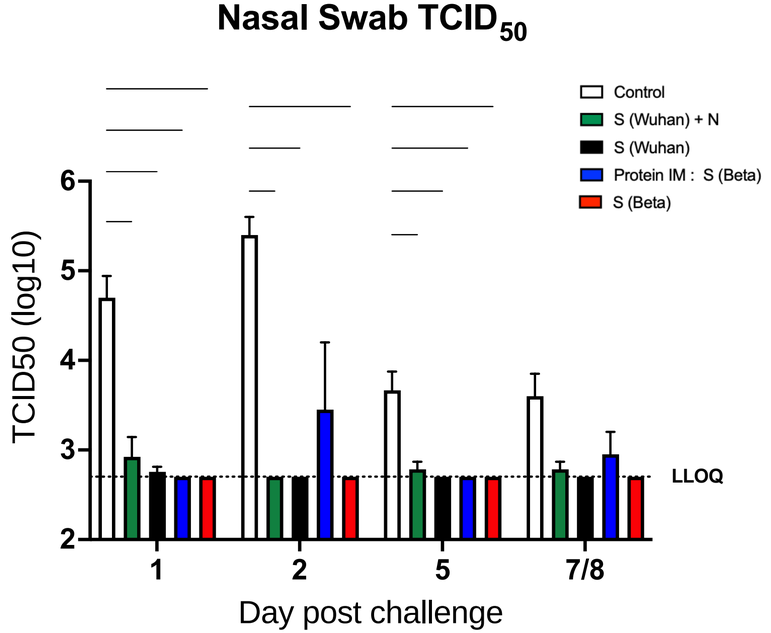
Vaxart's Vaccine Candidates Decrease Viral Load and Viral Shedding in Nasal Secretions

All rAd5 vaccines tested were immunogenic in African Green Monkeys

- S (Wuhan) + N and S (Wuhan) vaccines induced highly cross-reactive serum IgG and mucosal IgA responses to multiple variants of concern
- S (Beta) vaccination induces strong antibody responses to homologous spike protein

Functional nasal antibody responses were enhanced after rAd5 mucosal boost administration

Viral shedding in the nasal passages was significantly reduced in immunized animals following beta variant SARS-CoV-2 challenge



COVID-19: Vaccine Constructs

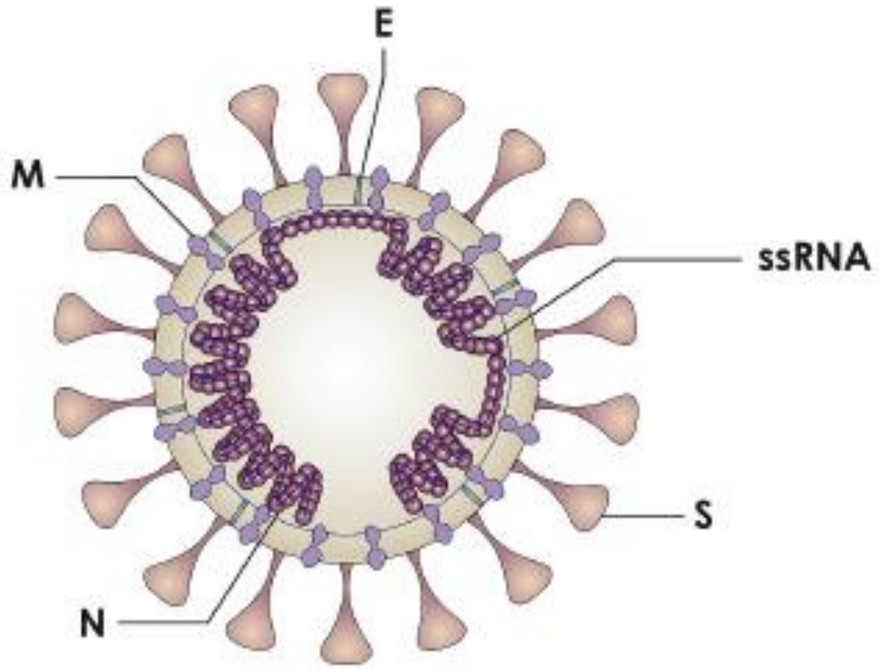
Vaxart is Developing Two Different COVID-19 Candidate Constructs

VXA-CoV2-1.1-S (Expresses only S): Currently Enrolling Phase II

- Much higher serum antibody responses than the S + N candidate in NHP study

VXA-CoV2-1 (Expresses S + N): Completed Phase I

- Highly immunogenic on eliciting T cells, to both S and N
  - T-cell responses to the S appear much higher than those of injectable mRNA vaccines in Phase 1 study[1]



[1] Data on file with Vaxart

COVID-19: Phase I Study Design

Favorable Safety Profile Supports Potential of Single-dose Oral Tablet Vaccination

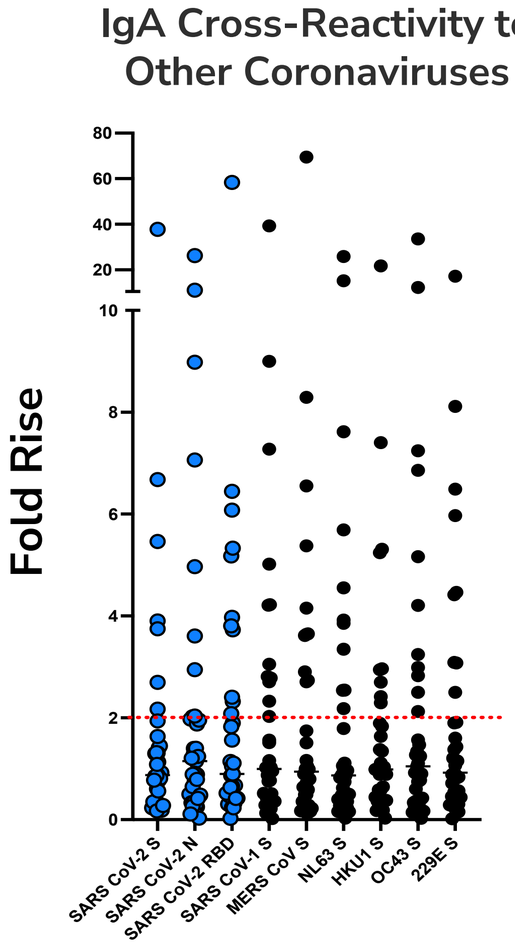
	Vaccine	Dose	# of Doses	# of Subjects
Cohort 1 (Sentinels)	VXA-CoV2-1	$1x10^{10}$ I.U.	2	5
Cohort 2	VXA-CoV2-1	$1x10^{10}$ I.U.	1	15
Cohort 3	VXA-CoV2-1	$5x10^{10}$ I.U.	1	15

Solicited Symptom Days (1 – 8)	Low Dose (n=20)	High Dose (n=15)
No. (%) with Solicited Symptoms	**4 (20)**	**10 (66.7)**
General Symptoms		
Malaise/Fatigue	2 (10)	2 (13.3)
Myalgia (Muscle Pain)	1 (5.0)	1 (6.7)
Anorexia	0 (00)	2 (13.3)
Headache	3 (15)	2 (13.3)
Fever	0 (00)	1 (6.7)
Gastrointestinal Symptoms		
Diarrhea	0 (00)	4 (26.7)
Nausea	0 (00)	5 (33.3)
Vomiting	0 (00)	0
Abdominal Pain	1 (5.0)	2 (13.3)

- Most Solicited Adverse Events mild and transient; few moderates @ Days 2 to 6
- 6 Mild unsolicited AEs: sore throat, epistaxis, chills, dry sinus, back pain & testicular pain
- No SAEs or MAAEs reported to date

COVID-19: Phase I Cross-Reactivity Responses

Immunized Subjects Have Increased Cross-Reactive Nasal IgA Response to Other Coronaviruses



- **Increased IgA antibodies to SARS-Cov-2 also led to increased antibody responses to the S protein of other coronaviruses including SARS-CoV-1, MERS, and endemic common cold viruses**
- **Beneficial for maintaining immunization protection against various COVID-19 variants (delta, omicron, etc.)**

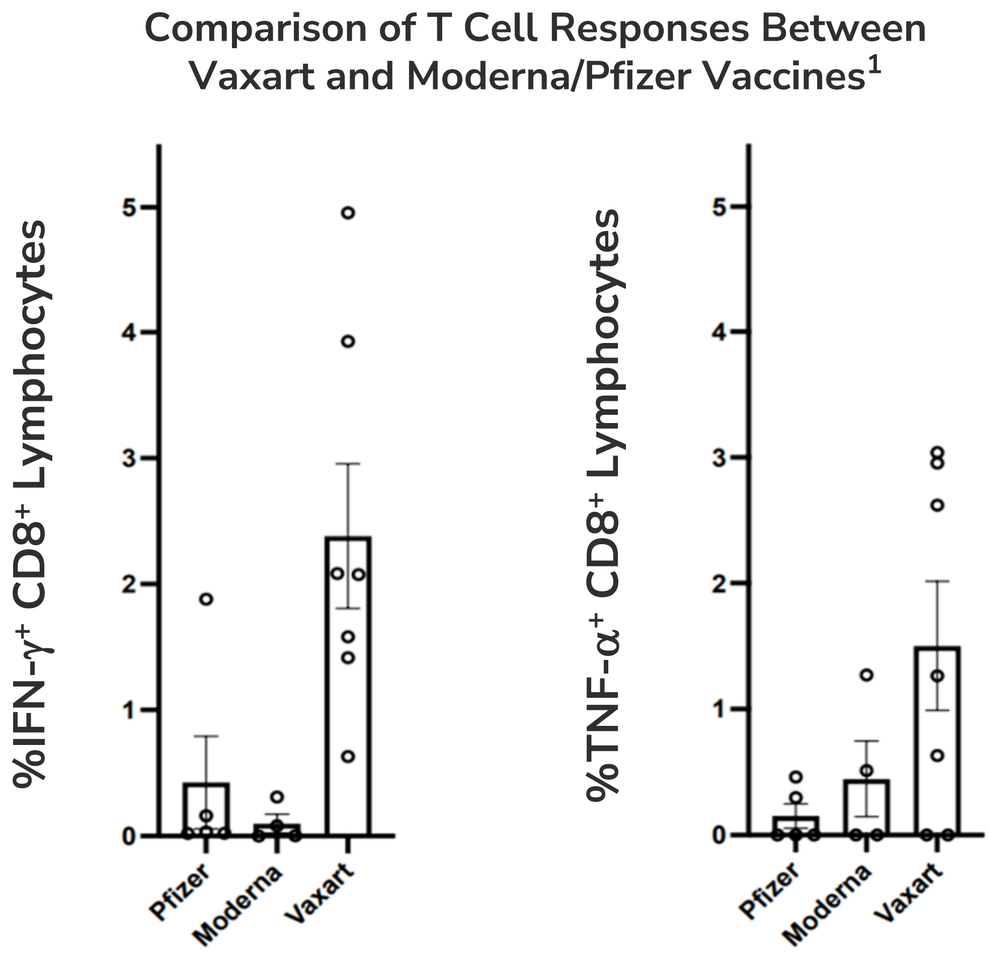
- Graph shows increase in nasal IgA at d29 over d1 sample, normalized for amounts of total IgA
- Preliminary data

COVID-19: Phase I T Cell Responses

Robust T Cell Response

Induction of T cells responses measured 7 days after the first dose. Increase over day 1 for IFN-γ and TNF-α are shown.

- Frozen PBMC samples from Vaxart's Phase I trial were compared to PBMCs from volunteers that were immunized with the Pfizer or Moderna vaccines under EUA. Analysis was done at the same time points post immunization
- Preliminary data



[1] Data on file with Vaxart

Norovirus Program

Phase I Clinical Trials

Norovirus: Market Opportunity

Presents Significant Threat to Children and Seniors

$10.6 billion

U.S. market opportunity

21,000,000

illnesses/year caused by norovirus in the U.S.

15%[1]

of children under 5 catch norovirus annually

7.5%[1]

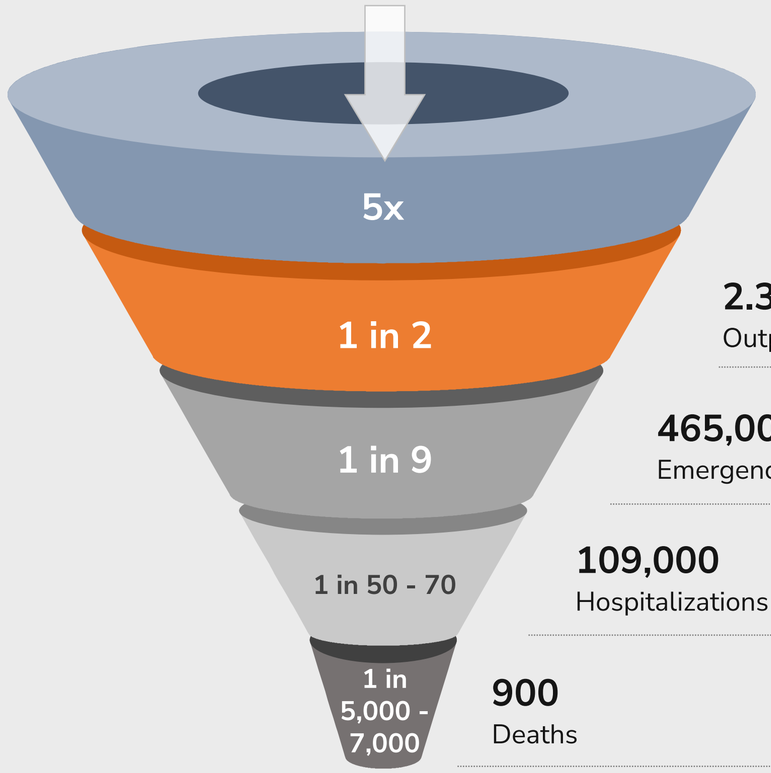
of age 65+ get sick, most hospitalizations in this group

3,000,000

sets of parents need to take time from work (2.2 days) to care for these children

[1]Economic burden of disease concentrated in these two groups

Estimated Lifetime Risk of Norovirus

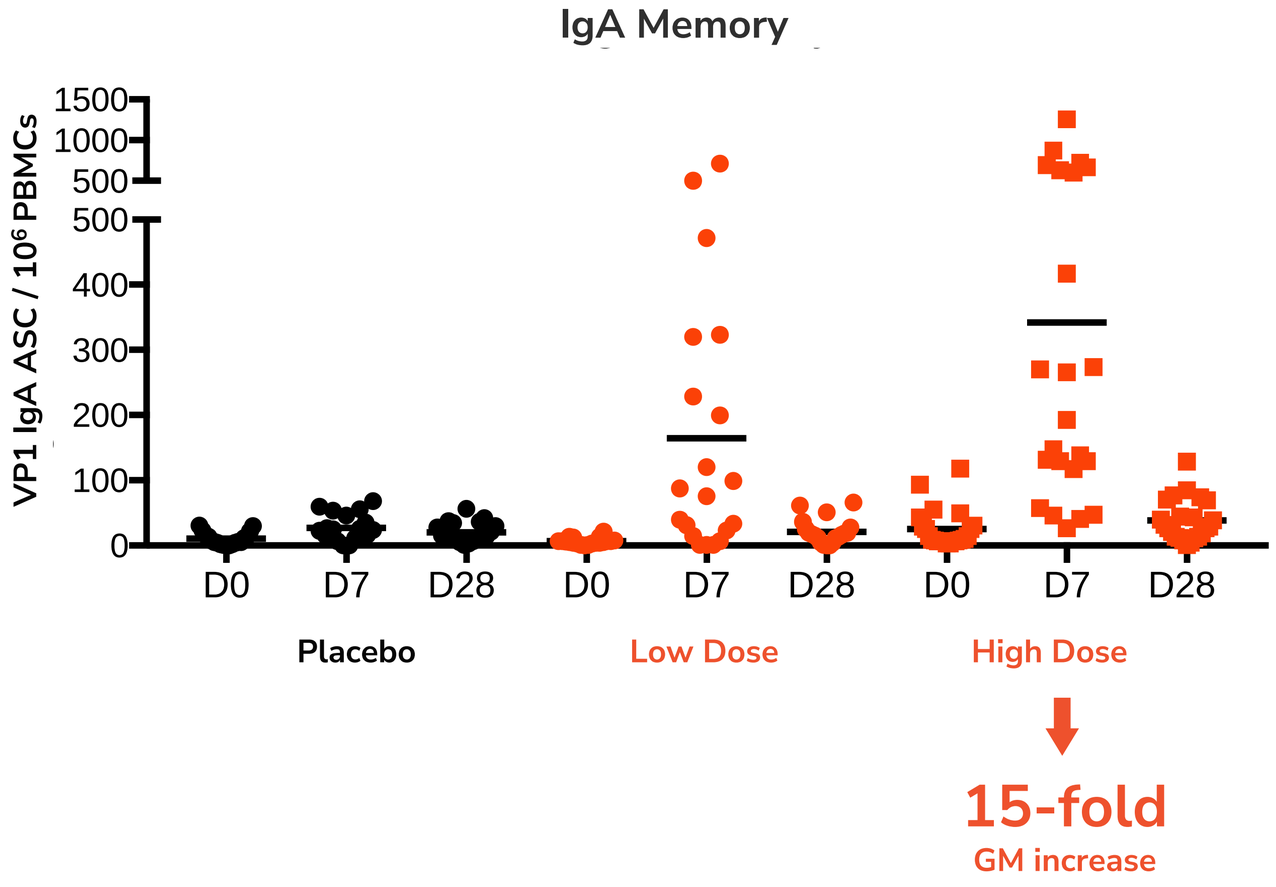


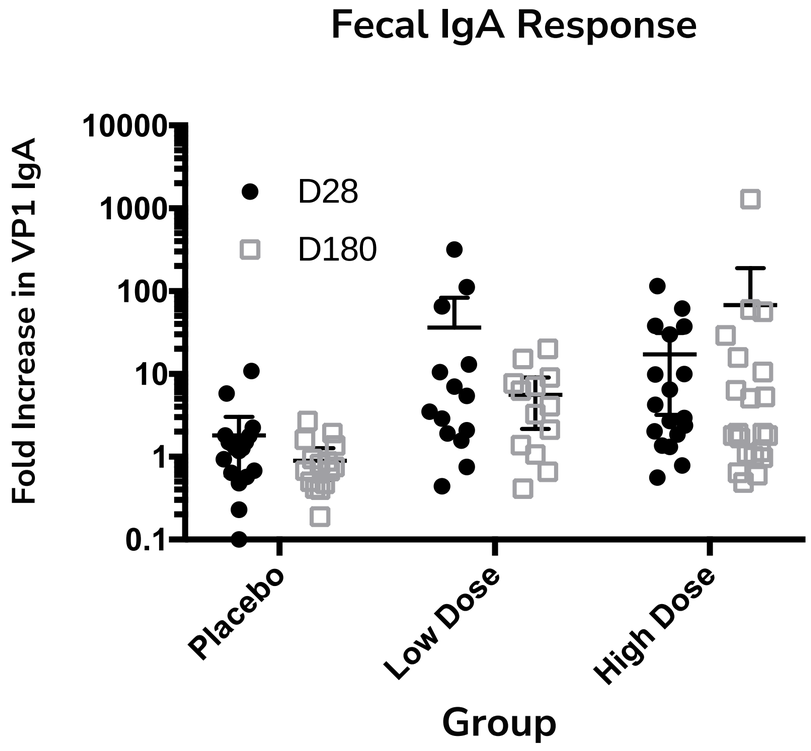
Source: Incidence of Norovirus and Other Viral Pathogens That Cause Acute Gastroenteritis (AGE) among Kaiser Permanente Member Populations in the United States, 2012–2013, Grytdal et al, PLOS 1, 2016

Source: CDC website (https://www.cdc.gov/norovirus/php/illness-outbreaks.html

Norovirus: Phase I Mucosal Responses

Memory and Effector Responses on the Same Order of Magnitude as Infection





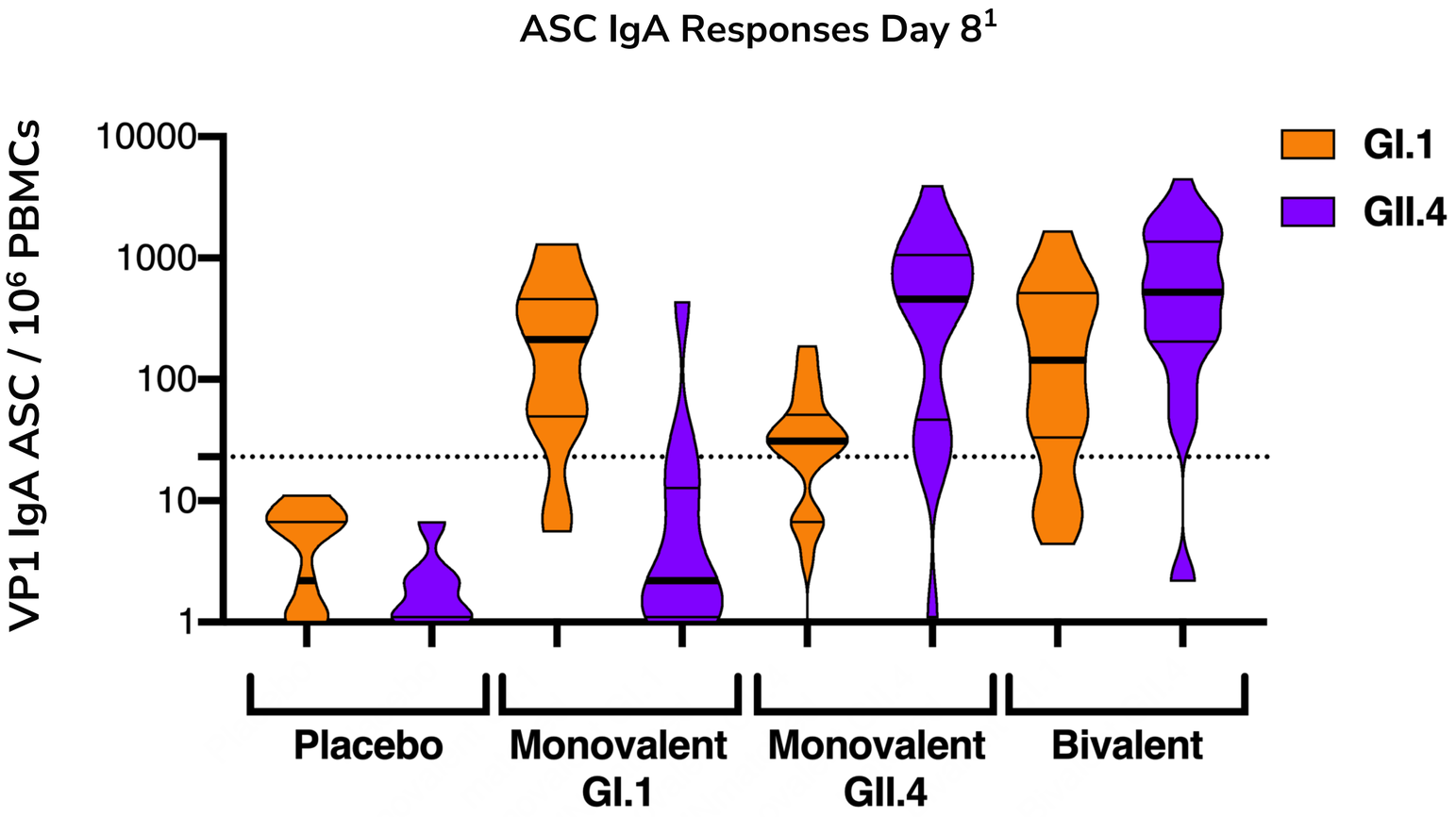
Fecal samples show durable fecal antibody response

Fecal IgA measured by Marcela Pasetti, U Maryland, Baltimore

Source: Kim, et al, *JCI Insight*, 2018

Norovirus: Phase I Bivalent Responses

Bivalent Results: No Interference, Strong Antigen-Specific B Cell Induction



- Both monovalent GI.1 and GII.4 constructs elicit strong IgA mucosal response
- Bivalent response elicits strong antigen-specific B cell induction with no cross-interference

[1] Data on file with Vaxart

Influenza Program

Phase II Clinical Trials

Influenza Vaccine Market Opportunity

$5+ billion
market opportunity in U.S.

200,000,000
doses are planned for 2022 in the U.S.

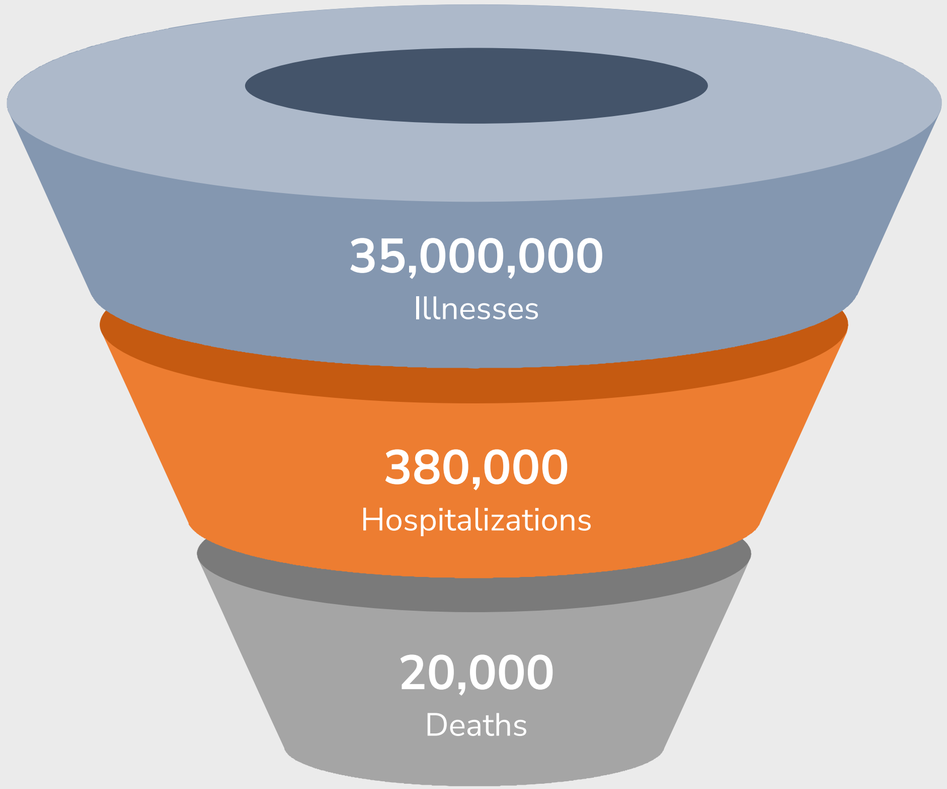
35,000,000
illnesses/year caused by influenza in the U.S.

172,000,000
doses distributed in 2021 in the U.S.

Among premium vaccines, 2021 prices were

- FLUAD Quad: **$66**/dose
- FLUZONE HD Quad: **$65**/dose
- Flublok Quad: **$65**/dose

Influenza represents a significant burden in U.S. (2019-2020 Flu Season)



Source: Centers for Disease Control and Prevention – 2019-2020 Flu Season; CMS – Seasonal Influenza Vaccines Pricing; Fierce Pharma - Sanofi, GSK and Seqirus prep for near-record flu shot sales as COVID's delta variant cooks up 'recipe for disaster'

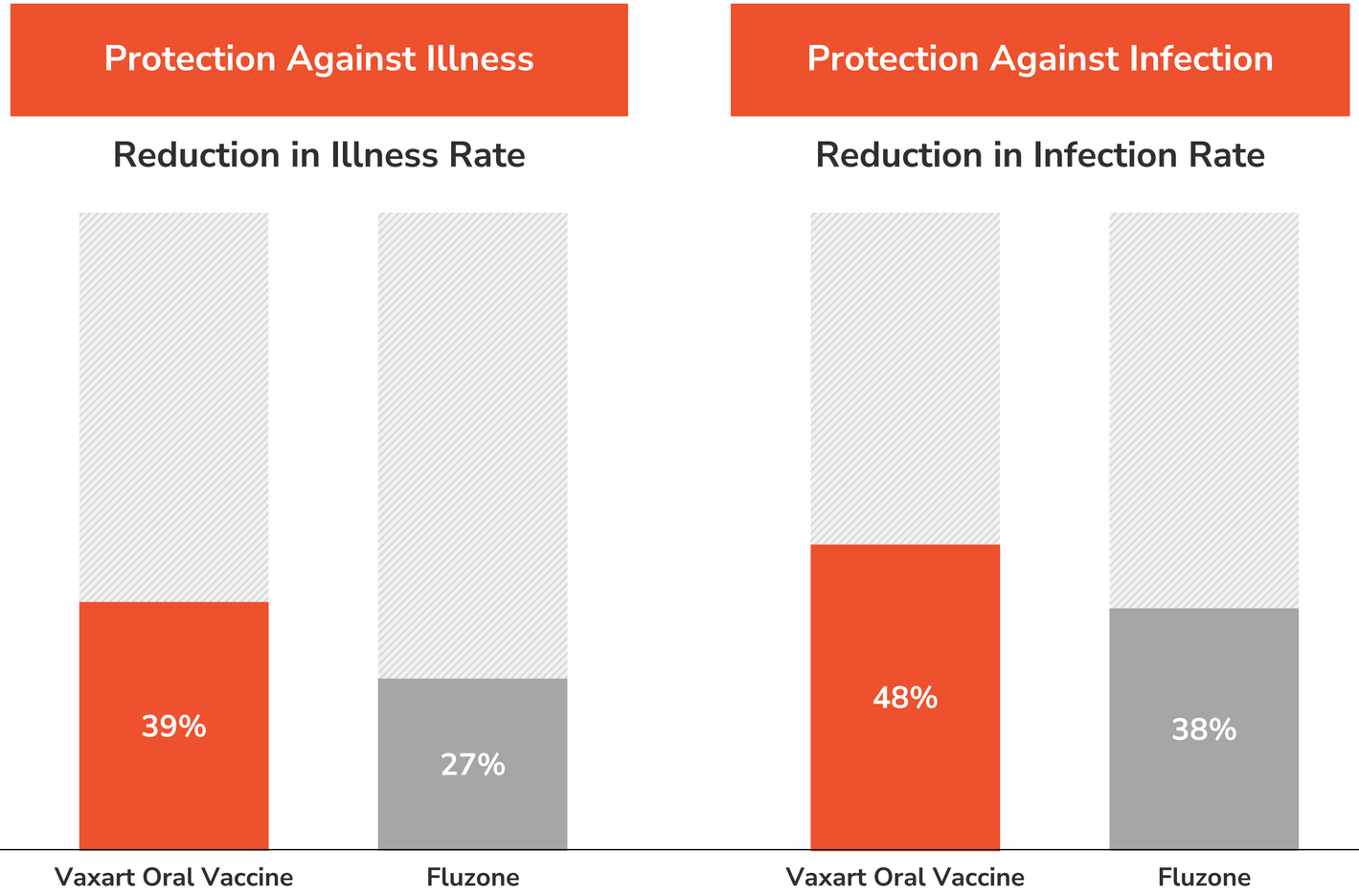
Influenza: Phase II Efficacy Comparison to Fluzone

Results Show Improved Efficacy Over Fluzone Against Infection

Phase II clinical trial comparing Vaxart's oral tablet flu vaccine and Sanofi's Fluzone injectable flu vaccine

- Compared to those unvaccinated, illness rates were 39% lower in those taking Vaxart's oral vaccine, and 27% lower in those vaccinated with Fluzone
- BARDA-funded Phase II clinical trial
- Results published in January 2020

THE LANCET Infectious Diseases



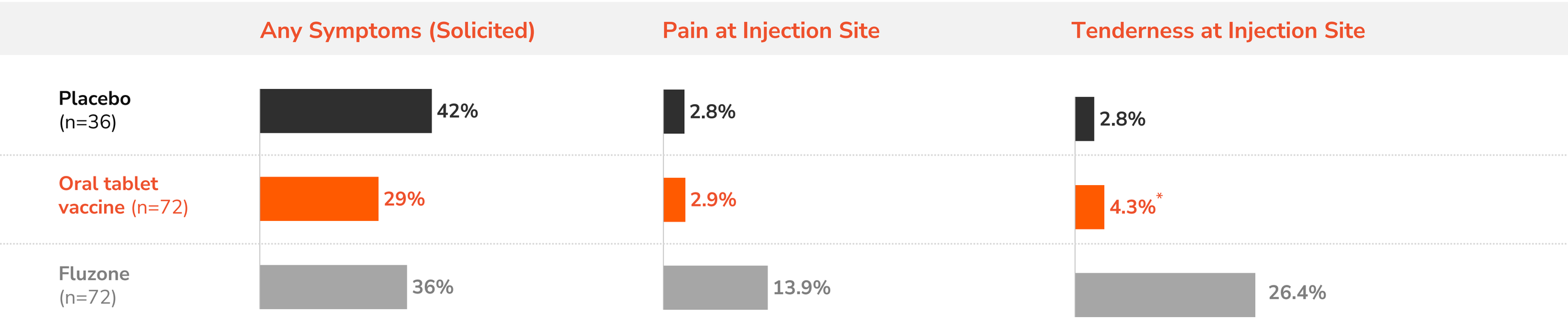
Source: Liebowitz, et al, Lancet ID, 2020

Influenza: Phase II Safety Data

Favorable Safety Profile and Tolerability Comparable to Placebo in Influenza

Flu challenge study

Solicited symptoms after vaccination



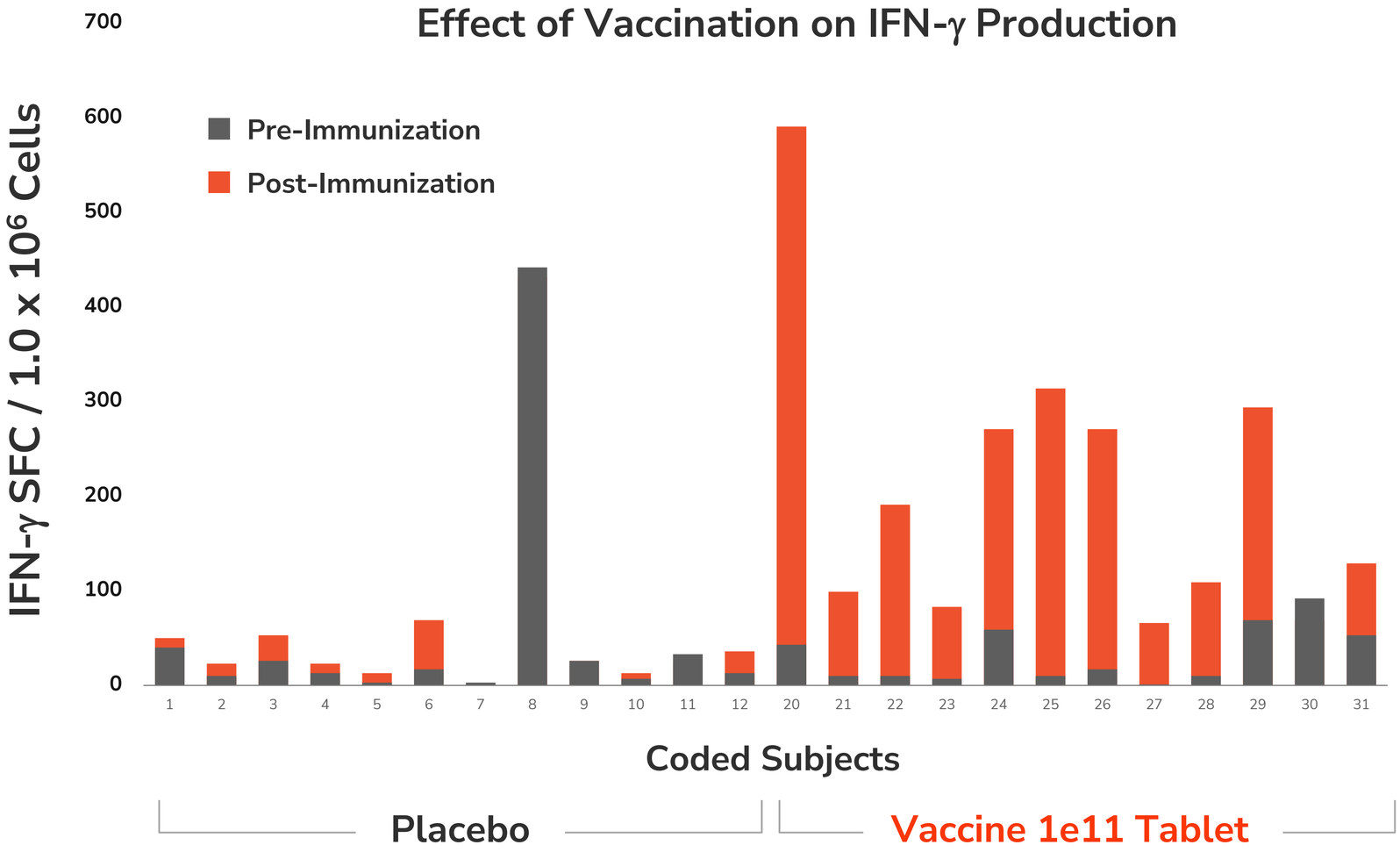
Pain: A Key Reason for Which People Don't Like Needles

* Placebo injection given to those receiving the oral vaccine

Source: Liebowitz et al., Lancet Infectious Diseases, Jan 2020

Influenza: Oral Vaccine Elicits Robust T Cell Response

Phase I T Cell Data



Induction of T cell responses in treatment vs. placebo group with significantly higher IFN-γ score post-immunization

- IFN-γ responses 7-14 days post immunization
- Measured using ELISPOT

RSV Program

Preclinical

RSV Vaccine Market Opportunity

$5+ billion
market opportunity in U.S.

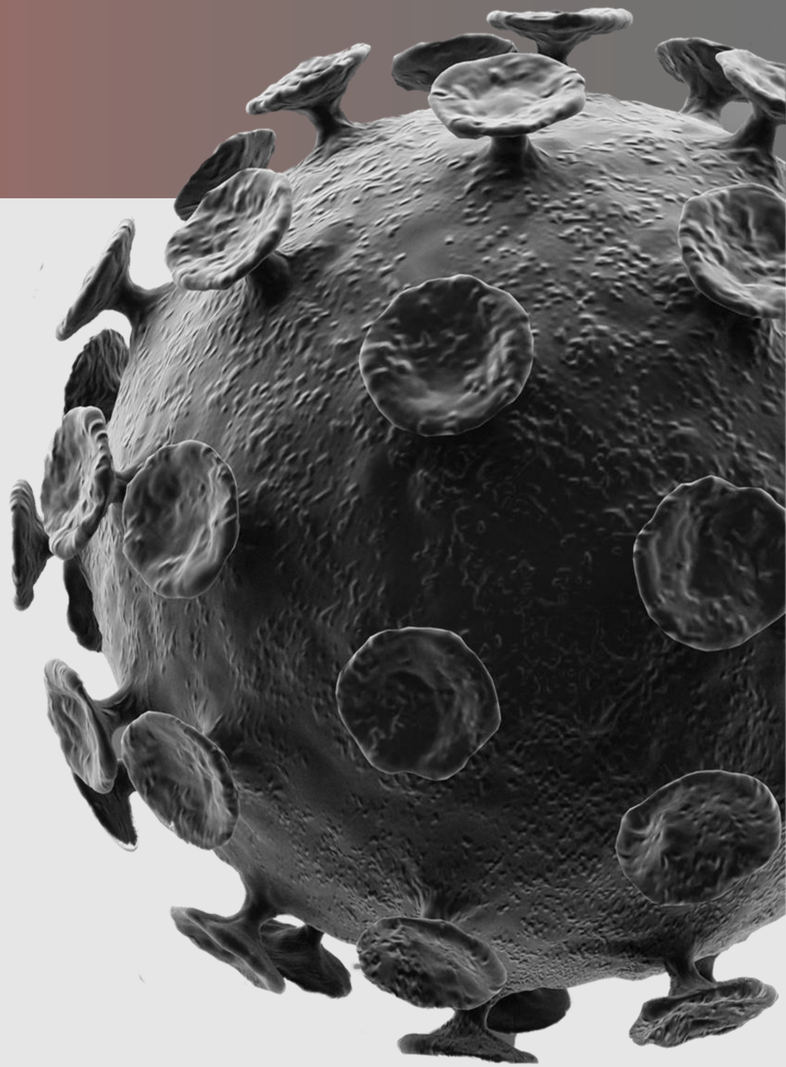
58,000+ hospitalizations of children < age 5

177,000+ hospitalizations of adults 65+

$6+ billion
in hospitalization costs each year caused by RSV

2,100,000
outpatient visits for age 5 and younger caused by RSV in the U.S.

14,000
deaths linked to RSV annually

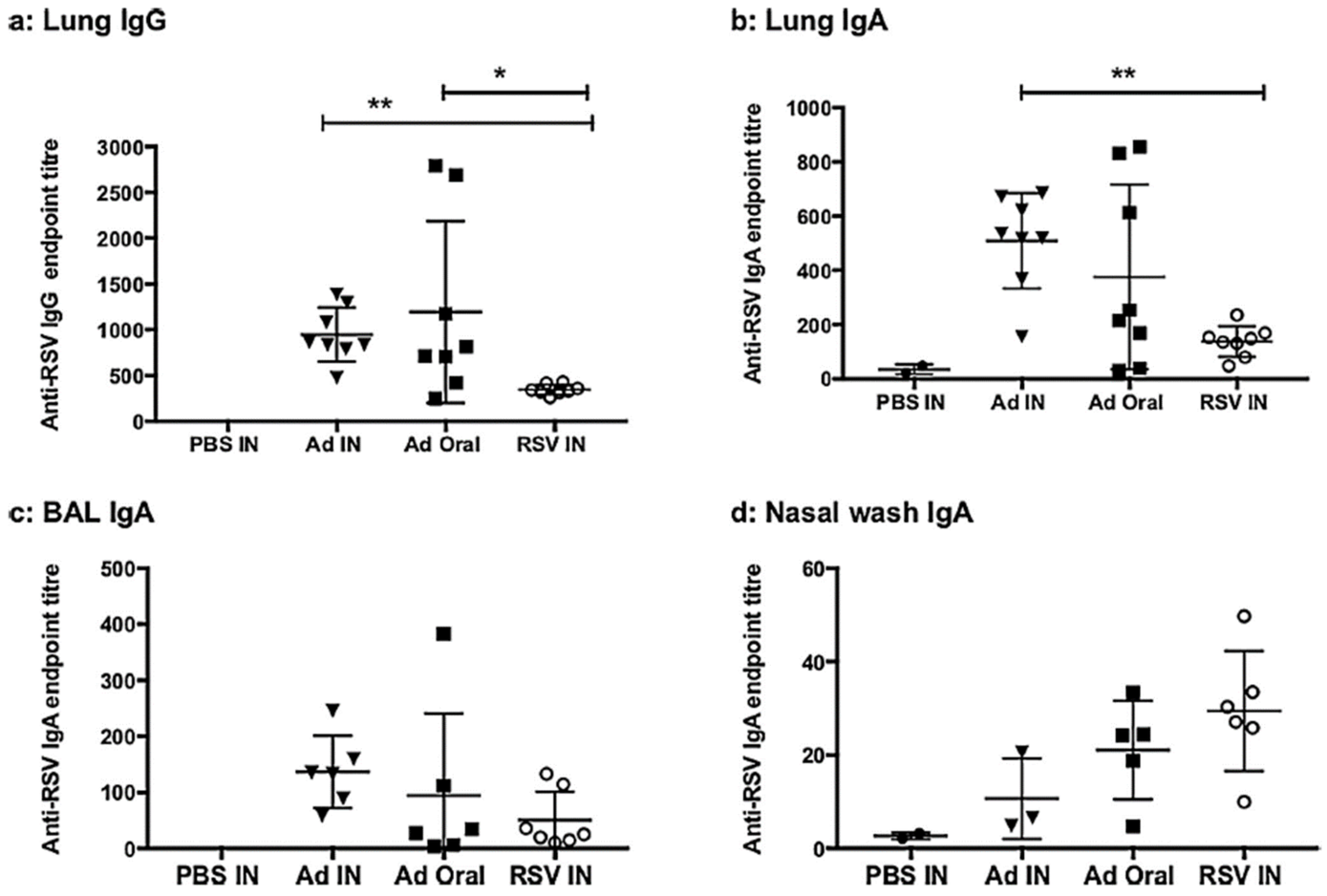


RSV is the most common cause of bronchiolitis and pneumonia in children under one year of age in the U.S.

Source: Centers for Disease Control and Prevention – Emergency Preparedness - RSV

RSV: Preclinical Data

Oral Vaccine Elicits Robust Anti-RSV IgG and IgA Responses



Source: *Joyce et al., Vaccine, May 2018*

Ad-RSVF immunization by oral or intranasal (IN) route induced significantly greater respiratory humoral immunity compared to RSV infection.

- Cotton rats (n = 8 per group) were immunized with 1e10 IFU of Ad-RSVF by the intranasal or oral route
- One group was treated with PBS intranasally, and one group received RSV A2 by the IN route
- Animals were immunized or infected with RSV on days 0 and 28 and samples were harvested on day 42

HPV Program

Preclinical

HPV Vaccine Market Opportunity

$600+ million
market opportunity in U.S.

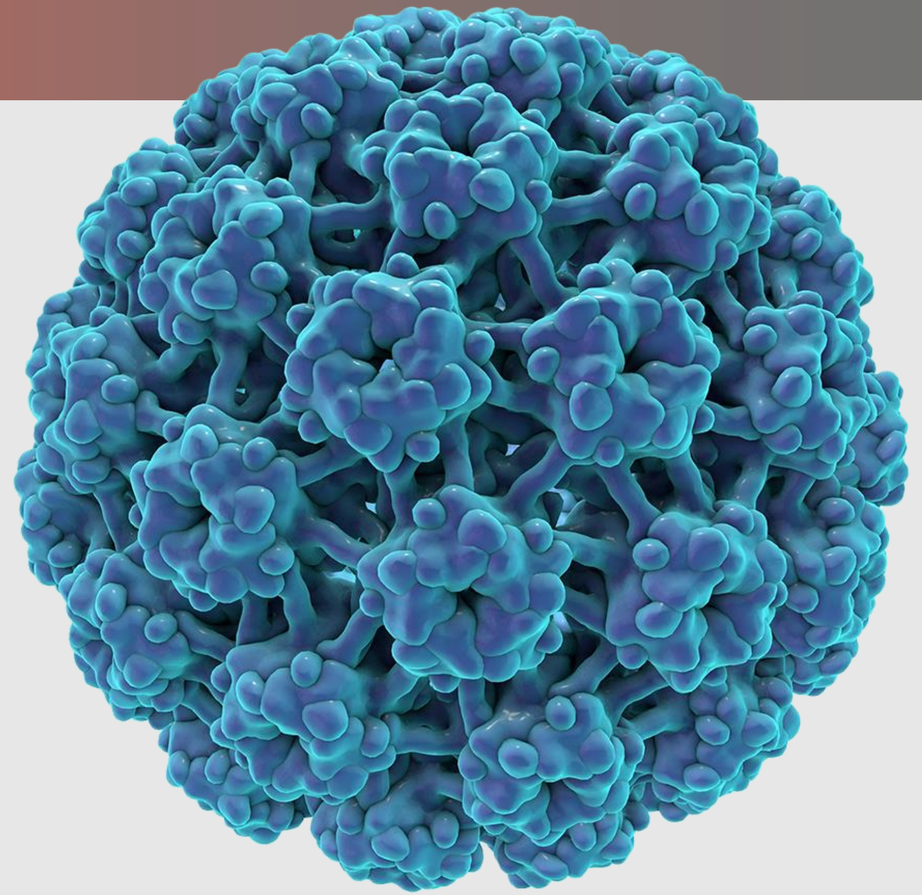
43,000,000
illnesses/year caused by HPV in the U.S. – most common STI

46,000
cancer cases associated with HPV in the U.S. annually

200,000
cervical pre-cancer cases diagnosed in U.S. annually

56% female
52% male
vaccination coverage – far below national goals of 80%

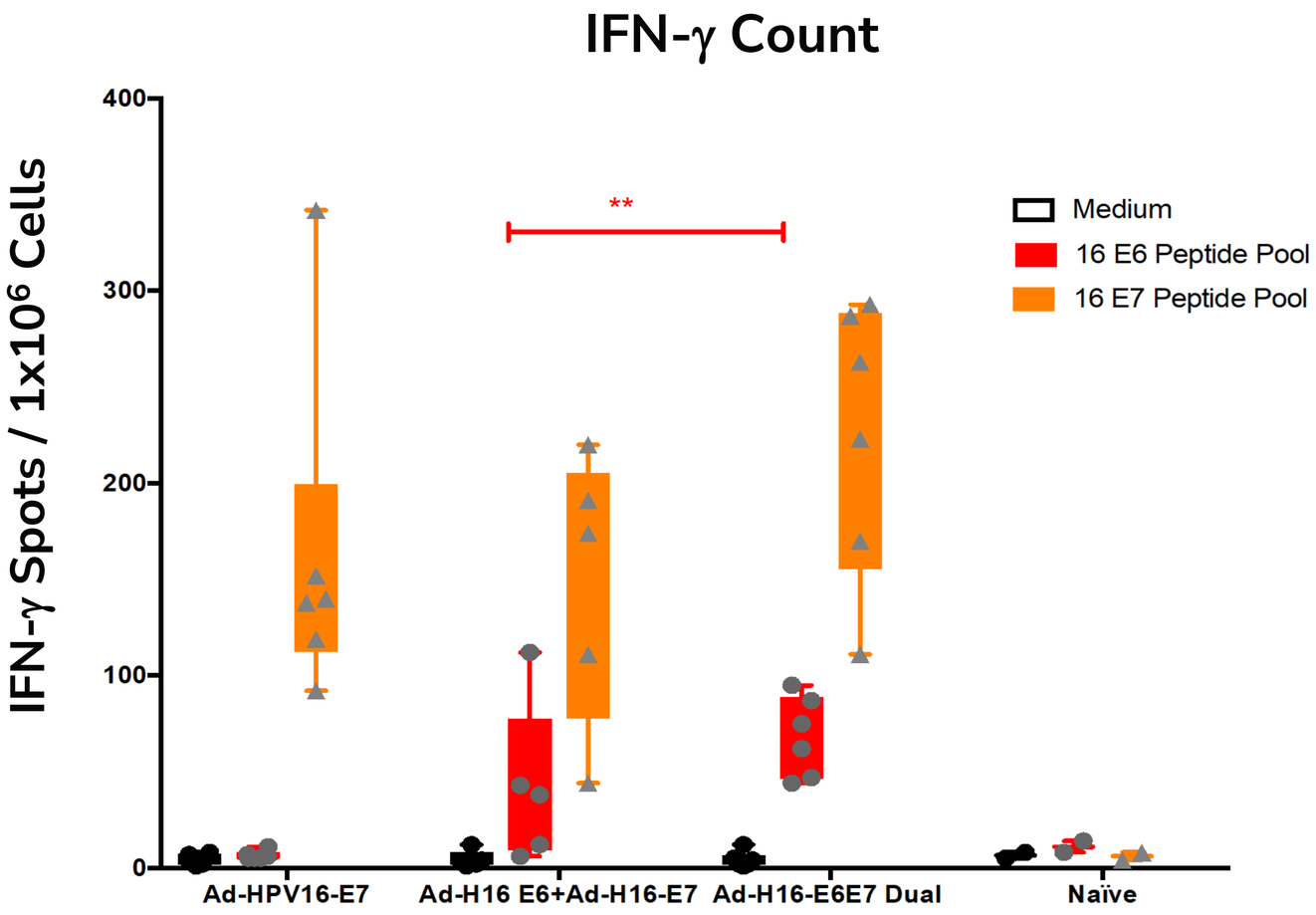
36,500
cancers cases caused by HPV in the U.S. annually



Source: Kaiser Family Foundation (KFF) – Women's Health Policy – The HPV Vaccine: Access and Use in the U.S.. (12 July 2021); Centers for Disease Control and Prevention – Cancer Home – HPV and Cancer – HPV-Associated Cancer Statistics.

HPV: Robust T Cell Responses to Both HPV Antigens

IFN-γ Responses Significantly Increased with Vaxart's Oral Vaccine

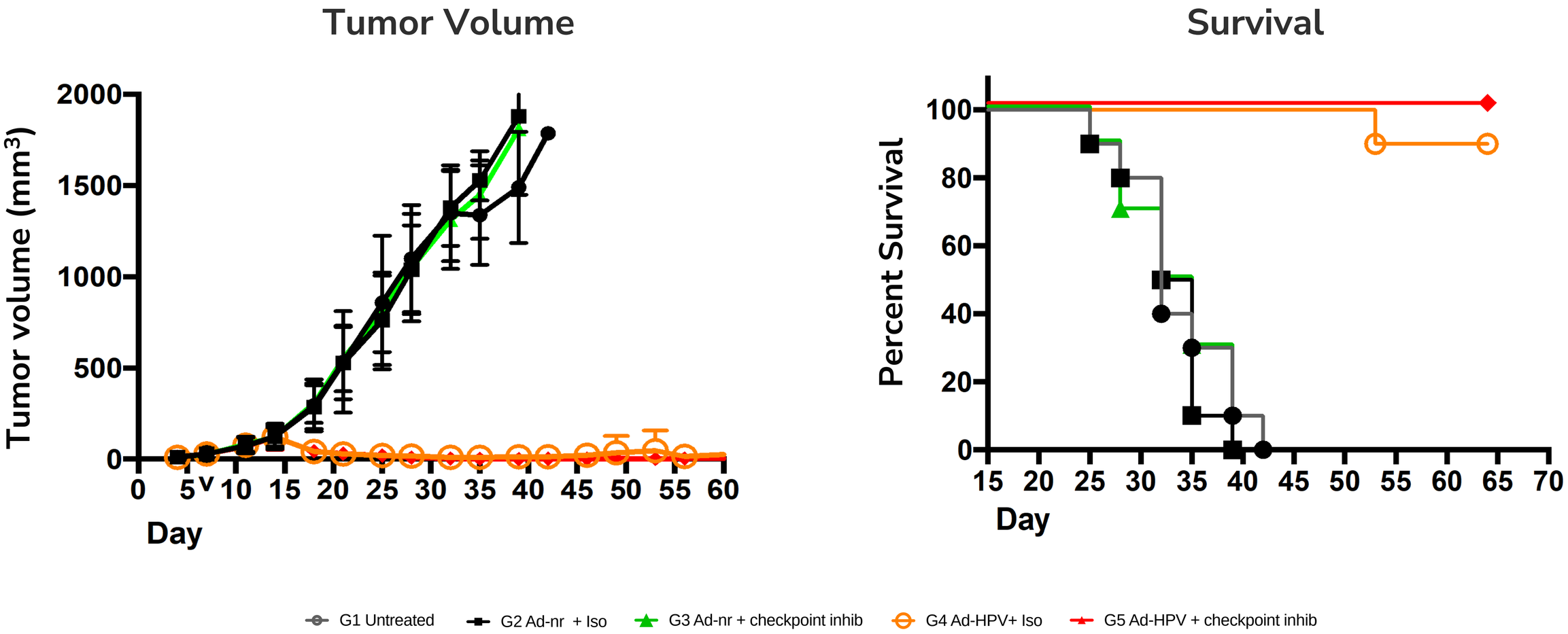


Significant increase in IFN-γ levels in response to oral vaccine with both E6/E7 antigens separately as well as combined

- C57BL/6 mice immunized days 1 & 28
- Splenocytes harvested day 42

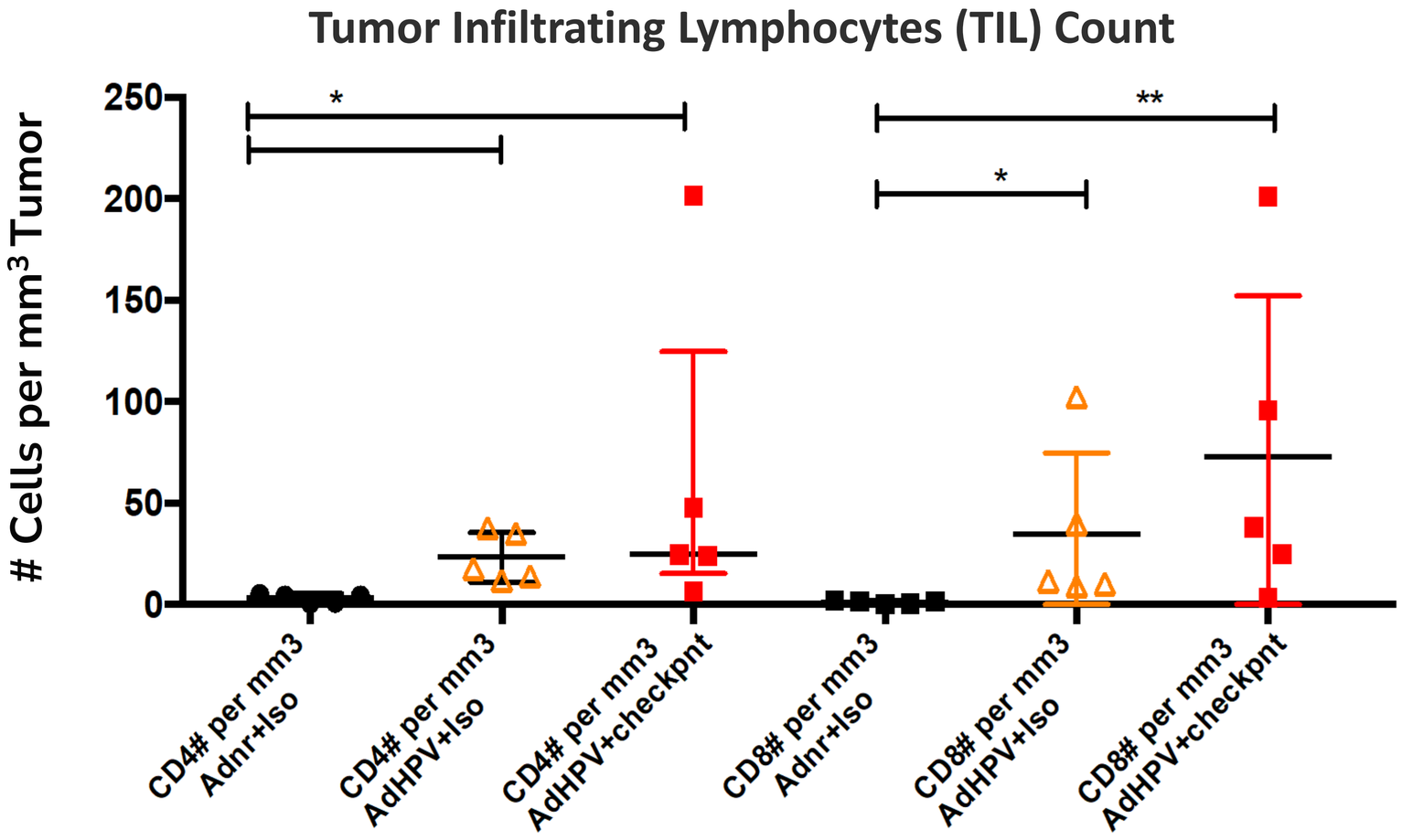
HPV: Efficacy in Tumors

Significant Decreases in Tumor Volume Coupled with Significant Increase in Mouse Survival



HPV: Dual Vaccine Induces Both CD4 and CD8 TILs

Essential for Effective and Durable Anti-Tumor Response



- **Oral vaccine elicits CD4+ and CD8+ TIL infiltration**
- **Further increased in combination with checkpoint inhibitors**
  - Two immunizations (days 13 and 20)
  - Harvested at day 24
  - TILs counted by FACS

Vaxart Team

Deep Expertise Provides Strong Foundation for Success

ANDREI FLOROIU, MBA

Chief Executive Officer

McKinsey & Company · INVUS

SEAN TUCKER, PHD

Founder and Chief Scientific Officer

DOW · GENTERIC · Systemix

JAMES CUMMINGS, MD

Chief Medical Officer

ICON · NOVAVAX

RAYMOND STAPLETON, PHD

Chief Technology Officer

genocea · MERCK · IOVANCE BIOTHERAPEUTICS

BRANT BIEHN

SVP, Business Operations

MERCK · DYNAVAX INNOVATING IMMUNOLOGY

ED BERG

SVP and General Counsel

BIOMARIN · Bristol Myers Squibb · MERCK · sanofi · SANDOZ

Near-Term Development Plan for Oral Vaccine Programs

Series of Upcoming Inflection Points Across Multiple Indications

COVID-19

- **U.S. Phase II S-only initiation** in 96 patients, split evenly between COVID-19 naïve and mRNA vaccinated subjects, with **results expected 3Q 2022**
- Will also include countries outside of U.S., starting with an efficacy **trial in India expected to begin in 2023**
- Selection of COVID-19 vaccine constructs **expected in Q4 2022** with clinical trials to **start in 1H 2023**
- **Omicron Human Challenge Trial in the UK starting in the 2H 2023** using selected vaccine construct

Norovirus

- Planned start of **Phase II** bivalent norovirus vaccine candidate in **2H 2022**
- **Phase II** Norovirus challenge study **currently enrolling; top-line data expected at the end of Q1 2023 or early Q2 2023**

Influenza

- Monovalent H1 Influenza vaccine completed **Phase II Proof of Concept efficacy study**

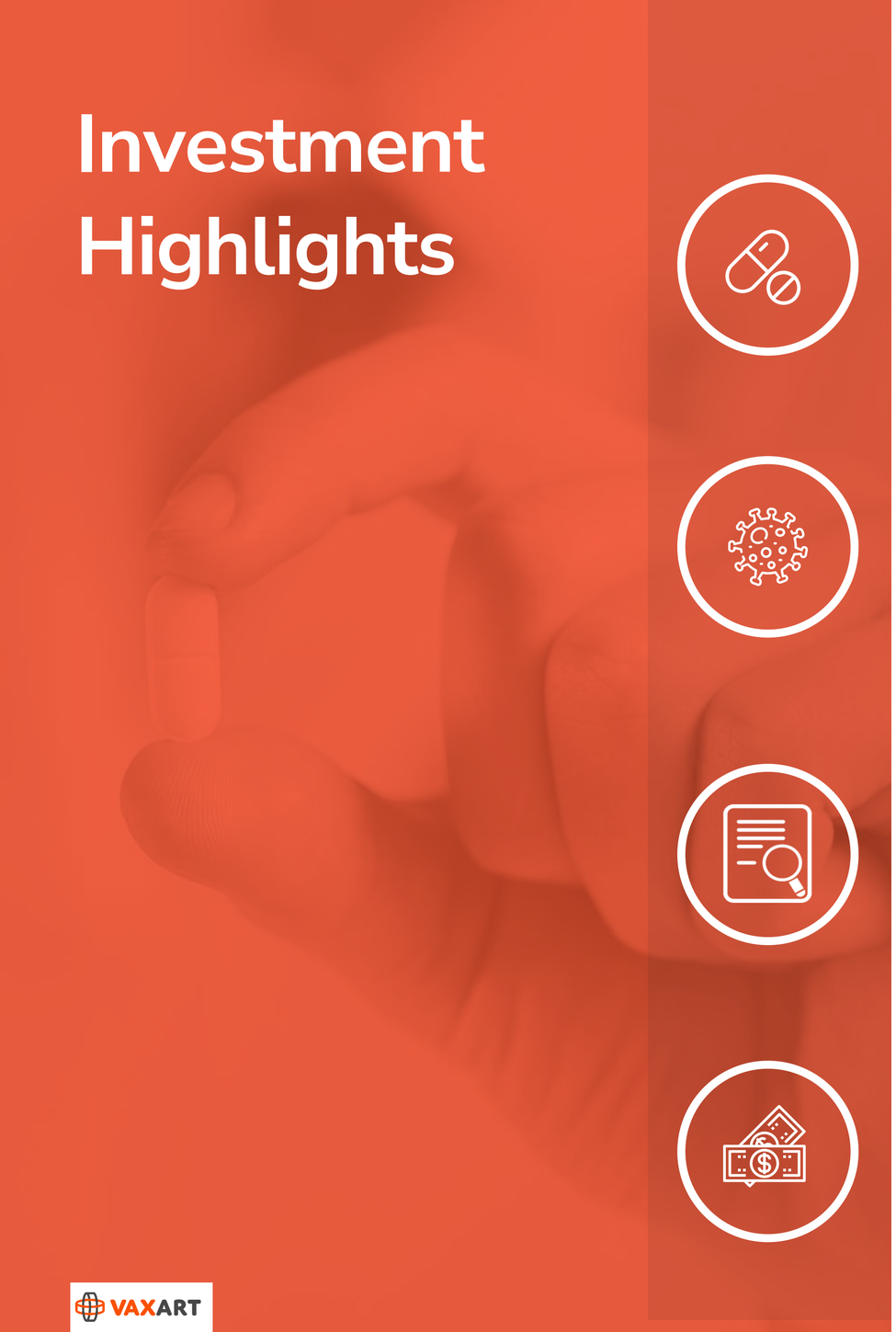
RSV

- **Evaluating novel RSV antigens** for pre-clinical studies
- Selection of vaccine candidate for **FIH studies**

HPV

- Additional **IND-enabling toxicity and efficacy** studies to support regulatory requirements

Investment Highlights



VAAST™ Platform Overview

- Room temperature-stable, oral tablet vaccine that delivers systemic AND mucosal immunity through intestinal epithelial cell uptake with single dose
- Ad5 vector backbone containing antigen of interest (HPV, Norovirus, Influenza, COVID-19, RSV) and TLR3 adjuvant for immuno-stimulating effects
- Completed 15 clinical trials against 7 different viruses, vaccinating 500+ subjects

Oral Vaccine Technology Could Address Viral Variant Challenges

- Rapidly emerging Sars-CoV-2 variants underscore the importance of vaccine technology that can address future variant challenges
- Cross-reactive nature of mucosal IgA response increases likelihood of variant coverage

Clinical Pipeline Overview

- COVID-19 candidate in Phase II clinical trials demonstrated high mucosal antibody and T cell responses as well as cross-reactivity to coronavirus variants
- Norovirus candidate in Phase II clinical trials demonstrated bivalent efficacy against both GI.1 and GII.4; Norovirus GI.1 challenge study generated positive preliminary Phase 1b data in elderly adults
- Influenza Phase II clinical trial demonstrated improved protection against infection compared to Fluzone with favorable safety profile

Resources to Aggressively Continue Clinical Advancement and Commercialization

- Cash: $131.5MM (as of June 30, 2022)

VAAST™: Vector-Adjuvant-Antigen Standardized Technology

VAXART

vaxart.com