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Investor Presentation
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January 2022
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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
Executive Summary

Proprietary Oral Vaccine Technology Addresses Adoption and Logistical Challenges
- Oral convenience (potential to mitigate vaccine hesitancy)
- Ease of distribution (room temperature-stable tablet)

VAAST™ Platform Overview
- Room temperature-stable, oral tablet vaccine that delivers systemic AND mucosal immunity through intestinal epithelial cell uptake
- Ad5 vector backbone containing antigen of interest (HPV, Influenza, COVID-19, etc.) and TLR3 adjuvant for immuno-stimulating effects
- Completed 15 clinical trials against 7 different viruses, evaluating 500+ subjects

Clinical Pipeline Overview
- COVID-19 candidate currently in Phase II clinical trials; in completed Phase I clinical trials, the vaccine exhibited high mucosal antibody and T cell responses as well as cross-reactivity to other coronaviruses
- Norovirus candidate in Phase I clinical trials exhibits bivalent efficacy against GI.1 and GII.4 (two most prevalent Norovirus strains)
- Multiple Programs in Clinical Development

Resources to Aggressively Continue Clinical Advancement and Commercialization
- Cash: $204MM (as of September 30, 2021)
Clinical Pipeline
Prophylactic & Therapeutic Oral Intestinal Delivery + Targeted Immune Activation

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

<table>
<thead>
<tr>
<th>PROPHYLACTIC VACCINES</th>
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<tbody>
<tr>
<td><strong>COVID-19 (S Protein)</strong></td>
</tr>
<tr>
<td><strong>COVID-19 (S + N Protein)</strong></td>
</tr>
<tr>
<td><strong>Norovirus¹</strong></td>
</tr>
<tr>
<td>Bivalent</td>
</tr>
<tr>
<td><strong>Norovirus¹</strong></td>
</tr>
<tr>
<td>Monovalent</td>
</tr>
<tr>
<td><strong>Seasonal Influenza²</strong></td>
</tr>
<tr>
<td>Quadrivalent</td>
</tr>
<tr>
<td><strong>Influenza</strong></td>
</tr>
<tr>
<td>Universal³</td>
</tr>
<tr>
<td><strong>RSV⁴</strong></td>
</tr>
<tr>
<td><strong>THERAPEUTIC VACCINES</strong></td>
</tr>
<tr>
<td><strong>HPV⁵</strong></td>
</tr>
<tr>
<td>HPV, cervical dysplasia and/or cancer</td>
</tr>
</tbody>
</table>

**Trials Conducted to Date or in Progress**

<table>
<thead>
<tr>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

1. Bivalent Phase 1 indicated IgA ASC response rates of 90 – 93% for GII.4 and 78 – 86% for GI.1
2. Monovalent H1 flu vaccine completed phase 2 Proof of Concept efficacy study.
3. Janssen collaboration with an option to negotiate an exclusive license.
4. RSV program to be partnered with new antigen partner.
5. HPV therapeutic pre-IND feedback received.
Room Temperature Oral Vaccine

Potential for Significant Advantages in Mass COVID-19 Vaccination Campaigns

A pill option could mean as many as

18,700,000

more Americans vaccinated

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.
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*

**ANTIGEN (Disease-Specific)**

COVID-19

HPV

Influenza

**Ad5 DELIVERY VEHICLE**

**TLR3 ADJUVANT**

"Vector-Based" Backbone

Immune Stimulator

**VAAST™: Vector-Adjuvant-Antigen Standardized Technology**

Oral vaccine activates immunity in the right places:

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:


Langel S., Johnson S, et al. (2021) [https://doi.org/10.1101/2021.10.03.462919](https://doi.org/10.1101/2021.10.03.462919).


Muramatsu M, Yoshida R, et al. (2014) [https://doi.org/10.1371/journal.pone.0085582](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

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

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
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

\[1\] Data on file with Vaxart
## COVID-19: Phase I Study Design

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

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Dose</th>
<th># of Doses</th>
<th># of Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cohort 1 (Sentinels)</strong></td>
<td>VXA-CoV2-1</td>
<td>$1 \times 10^{10}$ I.U.</td>
<td>2</td>
</tr>
<tr>
<td><strong>Cohort 2</strong></td>
<td>VXA-CoV2-1</td>
<td>$1 \times 10^{10}$ I.U.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Cohort 3</strong></td>
<td>VXA-CoV2-1</td>
<td>$5 \times 10^{10}$ I.U.</td>
<td>1</td>
</tr>
</tbody>
</table>

### Solicited Symptom Days (1 – 8)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Low Dose (n=20)</th>
<th>High Dose (n=15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. (%) with Solicited Symptoms</td>
<td>4 (20)</td>
<td>10 (66.7)</td>
</tr>
<tr>
<td><strong>General Symptoms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaise/Fatigue</td>
<td>2 (10)</td>
<td>2 (13.3)</td>
</tr>
<tr>
<td>Myalgia (Muscle Pain)</td>
<td>1 (5.0)</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td>Anorexia</td>
<td>0 (00)</td>
<td>2 (13.3)</td>
</tr>
<tr>
<td>Headache</td>
<td>3 (15)</td>
<td>2 (13.3)</td>
</tr>
<tr>
<td>Fever</td>
<td>0 (00)</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td><strong>Gastrointestinal Symptoms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhea</td>
<td>0 (00)</td>
<td>4 (26.7)</td>
</tr>
<tr>
<td>Nausea</td>
<td>0 (00)</td>
<td>5 (33.3)</td>
</tr>
<tr>
<td>Vomiting</td>
<td>0 (00)</td>
<td>0</td>
</tr>
<tr>
<td>Abdominal Pain</td>
<td>1 (5.0)</td>
<td>2 (13.3)</td>
</tr>
</tbody>
</table>

- 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
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
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.

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

Phase I Clinical Trials
Norovirus: Market Opportunity

$10 billion
U.S. market opportunity

20,000,000
illnesses/year caused by norovirus in the U.S.

15%
of children under 5 catch norovirus annually

7.5%
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

Economic burden of disease concentrated in these two groups


19-21 Million
Total Norovirus Illnesses

2.3 Million
Outpatient Visits

465,000
Emergency Department Visits

109,000
Hospitalizations

900
Deaths

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

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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.

**40,000,000**
ilnesses/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)

35,000,000
Illnesses

380,000
Hospitalizations

20,000
Deaths

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’
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.

*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

<table>
<thead>
<tr>
<th></th>
<th>Any Symptoms (Solicited)</th>
<th>Pain at Injection Site</th>
<th>Tenderness at Injection Site</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Placebo</strong> (n=36)</td>
<td>42%</td>
<td>2.8%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Oral tablet vaccine</td>
<td>29%</td>
<td>2.9%</td>
<td>4.3%*</td>
</tr>
<tr>
<td>(n=72)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fluzone</strong> (n=72)</td>
<td>36%</td>
<td>13.9%</td>
<td>26.4%</td>
</tr>
</tbody>
</table>

* Placebo injection given to those receiving the oral vaccine

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

Source: [Liebowitz et al., Lancet Infectious Diseases, Jan 2020](#)
Influenza: Oral Vaccine Elicits Robust T Cell Response

Phase I T Cell Data

Effect of Vaccination on IFN-γ Production

- 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

IFN-γ SFC / 1.0 x 10^6 Cells

Coded Subjects

Placebo Vaccine 1e11 Tablet
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
d 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
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.

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

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

52%
male

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

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

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

**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*

Tumor Volume

Survival

- G1 Untreated
- G2 Ad-nr + Iso
- G3 Ad-nr + checkpoint inhib
- G4 Ad-HPV + Iso
- G5 Ad-HPV + checkpoint inhib
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

SEAN TUCKER, PHD
Founder and Chief Scientific Officer

JAMES CUMMINGS, MD
Chief Medical Officer

RICHARD SCHWARTZ, PHD
SVP, Technical Operations

SHAILLY JAINI GARG
SVP, Clinical Development & Project Management

RAJESH KAPOOR
SVP, Quality

BRANT BIEHN
SVP, Business Operations

MARGARET ECHERD, CPA MBA
SVP and Principal Accounting Officer
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 1H 2022
- Will also include countries outside of U.S., starting with trial in India to begin 1H 2022

Norovirus
- Phase Ib boost optimization study results expected 1Q2022
- Phase II Norovirus challenge study initiating 1Q2022

Influenza
- Monovalent H1 Influenza vaccine completed Phase II Proof of Concept efficacy study
- Quadrivalent Influenza Phase I on hold pending partnering process

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
- Manufacturing scale-up including bulk run of HPV16 and HPV18, tableting, and testing
- IND submission planned in Q2 2022
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- Ease of distribution (room temperature-stable tablet)

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