Corporate Update and Report of Fourth Quarter and Year-End 2017 Financial Results

March 14, 2018
Certain information, particularly information relating to future performance and other business matters, including expectations regarding clinical development, market opportunities and anticipated milestones constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act.

Forward-looking statements may generally contain words such as “believe,” “may,” “could,” “will,” “possible,” “can,” “estimate,” “continue,” “ongoing,” “consider,” “intend,” “plan,” “project,” “expect,” “should,” “would,” or “assume” or variations of such words or other words with similar meanings. Novavax cautions that these forward-looking statements are subject to numerous assumptions, risks and uncertainties that change over time and may cause actual results to differ materially from the results discussed in the forward-looking statements.

Uncertainties include but are not limited to clinical trial results, dependence on third party contractors, competition for clinical resources and patient enrollment and risks that we may lack the financial resources to fund ongoing operations.

Additional information on Risk Factors are contained in Novavax’ filings with the U.S. Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2017, our Quarterly Reports on Form 10-Q, and our Current Reports on Form 8-K, which are all available at http://www.sec.gov.

Forward-looking statements are based on current expectations and assumptions and currently available data and are neither predictions nor guarantees of future events or performance.

Current results may not be predictive of future results.

You should not place undue reliance on forward-looking statements which speak only as of the date hereof.

The Company does not undertake to update or revise any forward-looking statements after they are made, whether as a result of new information, future events, or otherwise, except as required by applicable law.
Agenda

- CEO’s opening remarks
- The flu problem and NanoFlu™ program update
- RSV F Vaccine IVM program update
- Report on financials
- Questions and answers
CEO’s opening remarks

… last quarter we collected our most significant results to date from our two lead vaccine programs.

… results give us enhanced focus and momentum to execute under these programs for the remainder of 2018 and beyond.
The flu problem and NanoFlu program update
The current flu vaccine problem: A(H3N2) viruses

- This year’s vaccine effectiveness against H3N2 for older adults in the U.S. is estimated at 17%\(^1\)

- During the current 2017/18 U.S. season, roughly 75% of flu-related hospitalizations are associated with A(H3N2) viruses\(^2\)

1. Interim Estimates of 2017–18 Seasonal Influenza Vaccine Effectiveness — United States, February 2018. MMWR. February 16, 2018; 67(6);180–185
2. Update: Influenza Activity — United States, October 1, 2017–February 3, 2018. MMWR. February 16, 2018; 67(6);169–179
The flu problem: H3N2 in the current flu season highlights need for better vaccine

Two issues contributing to **MISMATCH** and poor flu vaccine effectiveness

**Antigenic evolution and drift**
Vaccines are derived from recommended strains, but when viruses “drift” – natural genetic evolution – vaccines may not protect as well

**Egg adaptation**
Viruses are modified to grow better in chicken eggs.
Over multiple egg-growth passages, these changes can result in mismatch between vaccine and circulating viruses.

Image Source: https://www.fda.gov/ForConsumers/ConsumerUpdates/ucm336267.htm
The flu problem: Antigenic drift issue

• All flu viruses are constantly changing and evolving
• This results in antigenically drifted viruses
• Current vaccines may not be able to protect against antigenically drifted viruses
• This is a reason why people get sick even though they are vaccinated

An example:

A/Hong Kong (H3N2) recommended for 2017 flu vaccines in S. Hemisphere

A/Hong Kong drifted and new antigenic strain A/Singapore emerged

A/Singapore was predominant in 2017 flu season in S. Hemisphere

Resulting vaccine effectiveness of 10% against A(H3N2) in Australia

The flu problem: Rapid evolution and diversity of H3N2

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The flu problem: Rapid evolution and diversity of H3N2


Most common in Australia summer ‘17

Most common in U.S. 17/18 season

Circulating H3N2 viruses present in 2017-18 season

Epitope Changes

1

15

Number of significant changes to important regions of the hemagglutinin gene

X = Vaccine Viruses

The flu problem: Egg adaptation issue

Egg-based flu vaccines are predominant

- ~87% of commercial flu vaccines in U.S. manufactured in eggs
- Same manufacturing technology used for over 50 years

Egg propagation can result in mismatch that impacts vaccine effectiveness

- Flu viruses that infect humans are difficult to grow in eggs
- Egg-based viruses must be passaged numerous times to grow better
- Virus changes across these passages result in mutations and potential mismatch that can lead to poor vaccine effectiveness

1. Paules, C. Chasing Seasonal Influenza – The Need for a Universal Influenza Vaccine. NEJM November 29 2017
The flu problem: Not all influenza vaccines are the same

~87% of flu vaccine doses are egg-based\(^1\)

Novavax is advancing an improved flu vaccine

NanoFlu vaccine is different

- Recombinant nanoparticle
- Non-egg based
- Adjuvanted with Matrix-M

- Exact genetic match to recommended vaccine strains
- Broader immune response addresses antigenic drift

NanoFlu vaccine demonstrates improved immune responses compared to egg-based high-dose flu vaccine
NanoFlu program: Phase 1/2 clinical trial description

- Conducted in U.S.\(^1\)
- 330 clinically-stable adults ages ≥60 years
- Randomized 1:1:1, stratified by age
- Single IM dose on day 0 of:
  - NanoFlu: 15µg each HA (45µg total) + 50µg Matrix-M, or
  - NanoFlu: 60µg each HA (180µg total) + 50µg Matrix-M, or
  - Licensed egg-based high-dose (180µg total), trivalent, inactivated influenza vaccine (IIV3-HD)
- All 3 vaccines include the same strains:
  - A/Michigan (H1N1)
  - A/Hong Kong (H3N2)
  - B/Brisbane

\(^1\) ClinicalTrials identifier: NCT03293498
NanoFlu program:
Phase 1/2 clinical trial results

Homologous HAI results
Significantly higher hemagglutination inhibition (HAI) antibody responses against H1N1 and H3N2 strains; comparable against B/Brisbane strain.
*Addresses egg-adaptation mismatch.*

Antigenic drift HAI results
Significantly higher HAI immune responses against multiple mismatched H3N2 strains.
*Addresses antigenic drift.*

Neutralization results
Correlate with and validate HAI results for H3N2 strains.
NanoFlu program: Comparison of HAI responses against H3N2 strains

• In our trial, statistically significant increase in the ratio of day 21 geometric mean titers (GMTs) between NanoFlu vaccine and IIV3-HD against three H3N2 strains:
  • 47% higher NanoFlu response against homologous strain (A/Hong Kong)
  • 64% higher NanoFlu response against forward-drifted strain (A/Singapore)
  • 54% higher NanoFlu response against historic strain (A/Switzerland)

• In a separate trial, IIV3-HD vs. IIV3-SD demonstrated 80% better ratio of GMTs
  • Which translated into 23% better relative efficacy¹

¹ Fluzone-HD [package insert]. Sanofi Pasteur, Swiftwater, PA; 2017
NanoFlu program: Rapid evolution and diversity of H3N2 requires a better vaccine

Most common in Australia summer ‘17
Most common in U.S. this season
Circulating H3N2 viruses present in 2017-18 season

NanoFlu program: Rapid evolution and diversity of H3N2 requires a better vaccine

NanoFlu vaccine has potential to provide broader protection against antigenic drift

NanoFlu program: Next steps

**Phase 1/2 clinical data results**

**Data and Phase 2 study design with FDA**

**Phase 2 study**
*Projected for Fall 2018*

**End of Phase 2 meeting with FDA**
*Projected for H1 2019*

**Potential to initiate Phase 3**
*Projected for H2 2019*
RSV F Vaccine IVM Program update
Primary endpoint: Medically-significant RSV lower respiratory tract infection (LRTI)

- Presence of RSV detected by RT-PCR during a continuous illness episode, AND
- At least one manifestation of LRTI (cough, nasal flaring, lower chest wall indrawing, subcostal retractions, stridor, rales, rhonchi, wheezing, crackles or observed apnea), AND
- One of the following:
  - SpO2 <95% at sea level or <92% at >1800m
  - Respiratory rate ≥70 bpm in infants 0 to 59 days of age or
    ≥60 bpm in infants ≥60 days of age
RSV IVM program: Prepare trial ongoing worldwide

- Currently completing enrollment in Global Year 3 and beginning enrollment in Global Year 4
- ~80 sites in 11 countries

>4,000 enrolled to date

Project ~4,600 by Q2 2018
RSV IVM program: Outcome of Prepare trial de-risked by successful informational analysis

Vaccine Efficacy (VE) Against Primary Endpoint

- 1,307 Enrollees
- Assumes 2:1 randomization

Data from the informational analysis indicate an observed vaccine efficacy in the range of 45-100%

Informational Analysis Result
1,307 Enrollees
Assumes 2:1 randomization
RSV IVM program: Interim analysis plan

- ~4,600 mothers treated by 2Q 2018
- 3,000+ active infants born by 1Q 2019 (conducted by DSMB)
- Interim analysis completed by 1Q 2019
- BLA filing by 4Q 2019/1Q 2020
RSV IVM program:
Large addressable target population ~8.4 million births

RSV IVM program: Annual direct burden of infant RSV exceeds ~$1.8B

Infant RSV disease burden by country (2014)

<table>
<thead>
<tr>
<th>Country</th>
<th>Direct Burden+</th>
<th>Indirect Burden*</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S</td>
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<td>0.0</td>
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<tr>
<td>UK, Italy, Germany, France, Spain</td>
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<tr>
<td>Japan</td>
<td>0.8</td>
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<tr>
<td>South Korea</td>
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<tr>
<td>Taiwan</td>
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<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5.6</strong></td>
<td><strong>0.5</strong></td>
</tr>
</tbody>
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*Indirect burden measurements considered: Value of statistical life, present value of lost earnings
*Direct burden measurements considered: Hospitalization, office visits, pharmaceutical products, etc.

Source: L.E.K. interviews, research, and analysis
RSV IVM program: Global peak revenues > $1.5B

US Market
$750M in peak revenues

Other Major Markets (similar modeling)
$750M in peak revenues

U.S. Market Detail

- 3.9M births in U.S. annually
- 95% infants born after mother vaccinated (28-36 wks g.a.)
- 80-90% immunization rate after ACIP recommendation
- > $750M net revenue for U.S. market
RSV IVM program: Commercial vaccine success demands policy and physician support

Building on a proven strategy
• Growing acceptance of maternal vaccination for flu and pertussis among HCPs and mothers
• American College of Obstetrics and Gynecology now conducts CME-accredited webinar entitled: “Respiratory Syncytial Virus: The Need for a Maternal Immunization Strategy”

Vaccine Injury Compensation Program (VICP)
Amendment in 21st Century Cures Act: As of December 13, 2016, program covers “both a woman who received a covered vaccine while pregnant and any child who was in utero” under government no-fault insurance program

ACIP RSV Working Group
• CDC Advisory Committee on Immunization Practices (ACIP) established RSV Working Group, May 2016
• First step towards ACIP consideration for recommendation

RESCEU (REspiratory Syncytial virus Consortium in EUrope)
• EU consortium of global leaders in RSV research (academia, public policy, industry)
• Epidemiology, surveillance and economic burden research
Thank you