

altimmune

# 2018 CHIPS CONFERENCE PRESENTATION

MARCH 2018



# FORWARD-LOOKING STATEMENT DISCLOSURE

Any statements made in this presentation relating to future financial or business performance, conditions, plans, prospects, trends, or strategies and other financial and business matters, including without limitation, the prospects for commercializing or selling any products or drug candidates and available cash and cash commitments, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In addition, when or if used in this press release, the words “may,” “could,” “should,” “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan,” “predict” and similar expressions and their variants, as they relate to Altimune, Inc. (the “Company”) may identify forward-looking statements. The Company cautions that these forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Important factors that may cause actual results to differ materially from the results discussed in the forward-looking statements or historical experience include risks and uncertainties, including risks relating to: realizing the benefits of the merger between Altimune, Inc. and PharmAthene, Inc.; clinical trials and the commercialization of proposed product candidates (such as marketing, regulatory, product liability, supply, competition, dependence on third parties and other risks); the regulatory approval process; dependence on intellectual property; the Company’s BARDA contract and other government programs, reimbursement and regulation; and the lack of financial resources and access to capital to fund proposed operations. Further information on the factors and risks that could affect the Company’s business, financial conditions and results of operations are contained in the Company’s filings with the U.S. Securities and Exchange Commission, including under the heading “Risk Factors” in the Form 10-K filed March 14, 2017, Form 10-Q filed August 14, 2017, Form 10-Q filed November 9, 2017 and in the Form 8-K filed on August 17, 2017, which are available at [www.sec.gov](http://www.sec.gov).

The statements made herein speak only as of the date stated herein, and any forward-looking statements contained herein are based on assumptions that the Company believes to be reasonable as of this date. The Company undertakes no obligation to update these statements as result of new information or future events.

# ALTIMMUNE INVESTMENT HIGHLIGHTS

## DEVELOPING RATIONALLY DESIGNED PRODUCTS THAT HARNESS THE IMMUNE SYSTEM TO PREVENT AND CURE INFECTIONS

- ANTICIPATED DATA FROM TWO CLINICAL STAGE CANDIDATES 1Q18
  - POTENTIAL CURE FOR CHRONIC HEPATITIS B
  - PARADIGM SHIFT OPPORTUNITY FOR SEASONAL INFLUENZA
- KEY CLINICAL POC DATA FOR SINGLE DOSE ANTHRAX VACCINE EXPECTED 2Q18
  - TWO GOVERNMENT FUNDED ANTHRAX VACCINE OPPORTUNITIES

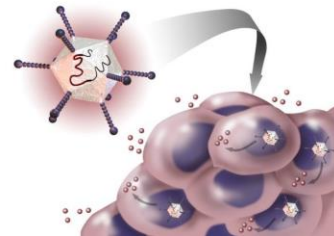
# PROPRIETARY PLATFORM TECHNOLOGIES

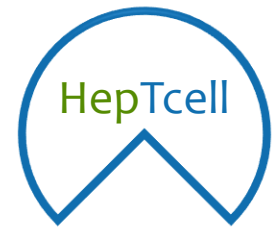
## TWO COMPLEMENTARY PLATFORM TECHNOLOGIES ACTIVATE THE IMMUNE SYSTEM IN DISTINCTLY DIFFERENT WAYS

- DENSIGEN — SYNTHETIC PEPTIDE TECHNOLOGY DESIGNED TO ACTIVATE T CELLS



- RESPIRVEC — VIRAL BASED DELIVERY PLATFORM THAT STIMULATES MULTIPLE ARMS OF THE IMMUNE SYSTEM





# HEPTCELL THERAPY FOR CHRONIC HEPATITIS B

## POTENTIAL CURE FOR CHRONICALLY INFECTED HEPATITIS B PATIENTS

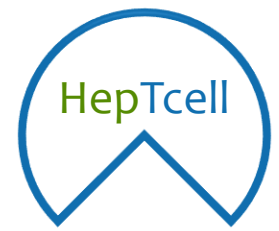
**MARKET SIZE:** 240 MILLION PEOPLE CHRONICALLY INFECTED WORLDWIDE, A ~\$3 BILLION GLOBAL MARKET<sup>5</sup>

### CURRENT CHALLENGES

- >1 MILLION HEPATITIS B VIRUS-RELATED DEATHS/YEAR<sup>6</sup> WITH NO KNOWN CURE
- 95% OF PEOPLE CLEAR HEPATITIS B VIRUS NATURALLY WITH T CELL RESPONSE
- CHRONICALLY INFECTED PATIENTS BECOME IMMUNE TOLERIZED

### HEPTCELL

- T CELL ACTIVATING APPROACH TO BREAK TOLERANCE
- COVERAGE AGAINST ALL KNOWN HEPATITIS B VIRUS STRAINS EXPECTED
- DESIGNED FOR GENETICALLY DIVERSE POPULATIONS (ASIAN, AFRICAN, ETC.)
- WORKS IN COMBINATION WITH CURRENT STANDARD OF CARE



# HEPTCELL: PHASE 1 CLINICAL STUDY

## PHASE 1 DATA EXPECTED 1Q 2018

15 PATIENTS (2:1)  
LOW DOSE (100 MG)  
PLACEBO

30 PATIENTS (2:2:1:1)  
LOW DOSE WITH IC31  
HIGH DOSE (500 MG)  
PLACEBO  
IC31 ALONE

15 PATIENTS (2:1)  
HIGH DOSE WITH IC31  
IC31 ALONE

- OTHERWISE HEALTHY HBeAg NEGATIVE CHRONIC HBV PATIENTS
- ALL SUBJECTS ON TENOFOVIR OR ENTECAVIR WITH HBV DNA SUPPRESSED
- DOSING (INJECTION) AT DAYS 1, 29, AND 57
- PRIMARY ENDPOINT – SAFETY AND TOLERABILITY
- SECONDARY ENDPOINT – T CELL RESPONSE AS MEASURED BY ELISpot
- EXPLORATORY ENDPOINT – QUANTITATIVE HBsAg

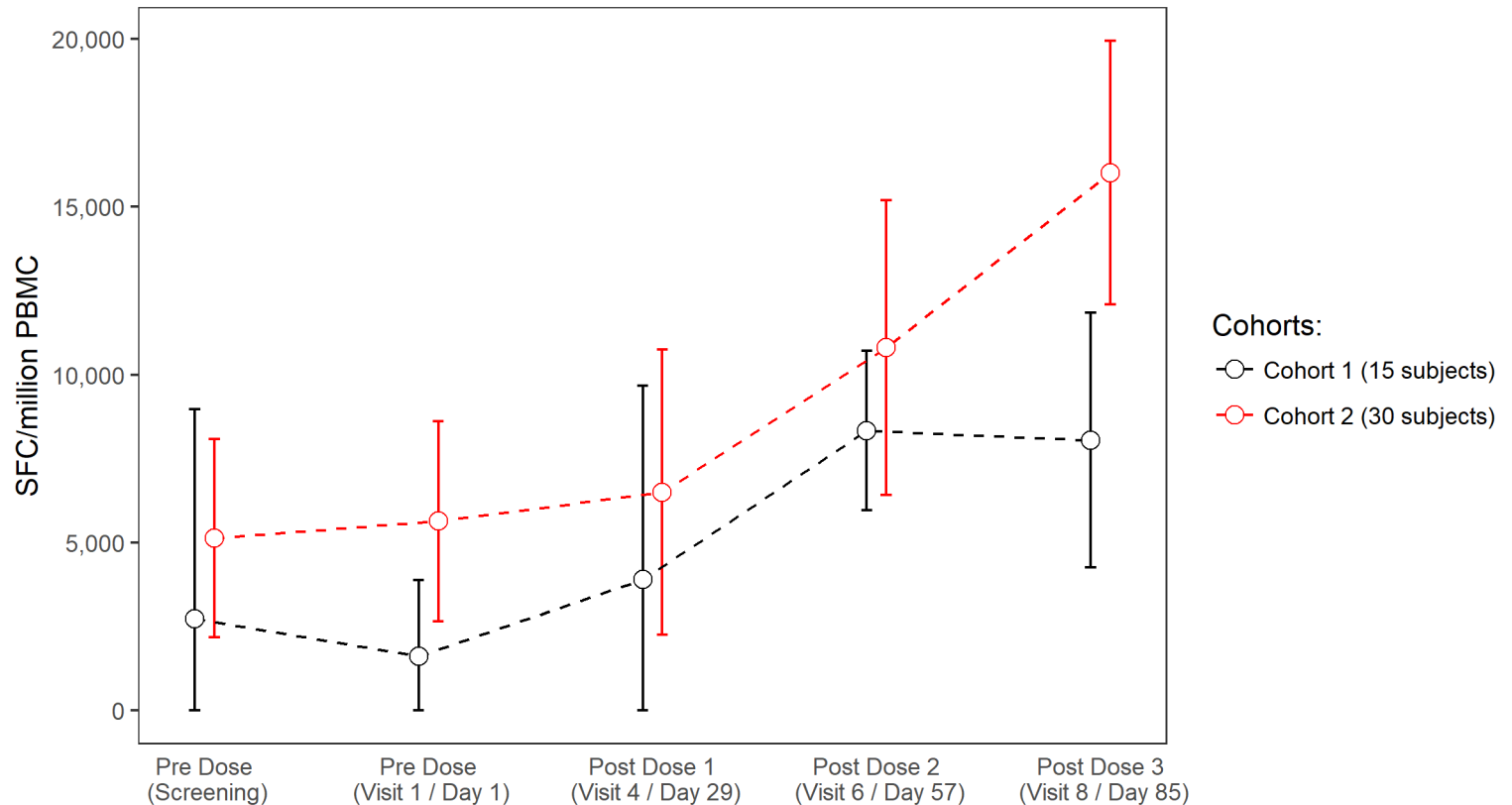
**WIN – SAFE AND BREAKS IMMUNE TOLERANCE**

**HOMERUN –SURFACE ANTIGEN REDUCTION OVER TIME**

**ADDITIONAL INFORMATION – DOSE, DOSING REGIMEN, IS ADJUVANT BENEFICIAL**

# MEDIAN T CELL RESPONSE (BLINDED DATA)

**MEDIAN OF THE SUMMED T CELL RESPONSES TO INDIVIDUAL PEPTIDES  
(EACH COHORT INCLUDES 2/3 TREATED AND 1/3 CONTROL SUBJECTS)**





# HEPTCELL DEVELOPMENT STRATEGY

**POTENTIAL TO COMBINE WITH OTHER THERAPIES OR DISCONTINUE  
CURRENT NUCLEOSIDE THERAPIES**

## PHASE 2

- CONFIRM DOSE
- REFINE DOSING SCHEDULE
- HBeAg POSITIVE AND NEGATIVE PATIENTS
- GLOBAL STUDY TO INCLUDE U.S. IND

DATA FROM PHASE 1 AND PHASE 2 STUDIES TO INFORM FUTURE  
DEVELOPMENT PATH





# NasoVAX SEASONAL INFLUENZA VACCINE

**POTENTIAL FOR AN INFLUENZA VACCINE WORKING AGAINST ALL STRAINS OF FLU AND ELIMINATING THE ANNUAL FLU SHOT**

**MARKET SIZE:** \$2.0B ANNUAL U.S. FLU VACCINE MARKET<sup>1</sup> (\$10.2B GLOBALLY BY 2022<sup>2</sup>)

## **CURRENT INFLUENZA VACCINE CHALLENGES**

- ANNUAL VACCINE EFFICACY AVERAGED 40% BETWEEN 2005-2015<sup>3</sup>
- 40,000 ANNUAL DEATHS IN THE U.S.<sup>4</sup>
- INFORMED GUESS AT WHICH FLU STRAINS WILL BE PREVALENT
- LONG PRODUCTION TIME IN CHICKEN EGGS

## **NasoVAX**

- BROAD PROTECTION AGAINST MISMATCHED INFLUENZA STRAINS
- RAPID PROTECTION IN DAYS NOT WEEKS
- MUCOSAL IMMUNITY AT SITE OF INFECTION
- FASTER, CHEAPER, SCALABLE MANUFACTURING PROCESS



# NasoVAX: PHASE 2 CLINICAL STUDY

## DATA EXPECTED 1Q 2018

### COHORT 1

20 VOLUNTEERS  
1 IN DOSE  
 $1 \times 10^9$  VP  
3:1 (VACCINE:PLACEBO)

### COHORT 2

20 VOLUNTEERS  
1 IN DOSE  
 $1 \times 10^{10}$  VP  
3:1 (VACCINE:PLACEBO)

### COHORT 3

20 VOLUNTEERS  
1 IN DOSE  
 $1 \times 10^{11}$  VP  
3:1 (VACCINE:PLACEBO)

- MONOVALENT H1 STRAIN VACCINE
- FLUZONE® OPEN LABEL COMPARATOR
- HEALTHY VOLUNTEERS 18-49 YEARS OLD
- PRIMARY ENDPOINT – SAFETY AND IMMUNOGENICITY
- ADDITIONAL ENDPOINTS – ANTIBODIES AGAINST DIVERGENT STRAINS, CELLULAR AND MUCOSAL

**WIN – VACCINE IS SAFE AND ELICITS AN IMMUNE RESPONSE AGAINST THE VACCINATED STRAIN**

**HOMERUN – IMMUNE RESPONSE AGAINST MISMATCHED STRAINS**

**ADDITIONAL INFORMATION – DOSING, IMMUNE BIOMARKERS, KINETICS OF IMMUNE RESPONSE**

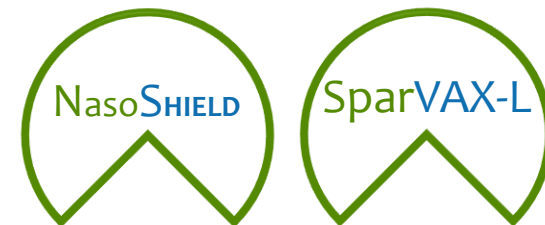


# NasoVAX DEVELOPMENT STRATEGY

**PROCEED DOWN KNOWN FDA APPROVAL PROCESS WITH POTENTIAL FOR ACCELERATED DEVELOPMENT PATH**

- **PHASE 2 QUADRIVALENT DOSE RANGING STUDY (150 SUBJECTS)**
  - IMMUNOGENICITY AGAINST 4 STRAINS
  - APPROPRIATE DOSE
  - HEALTHY YOUNG ADULT AND ELDERLY SUBJECTS
  - NON-ANTIBODY IMMUNE RESPONSES
  - LONGER DURATION OF IMMUNE RESPONSES
- **PHASE 2 QUADRIVALENT DOSE CONFIRMATION STUDY (350 SUBJECTS)**
  - CONTINUATION OF DOSE RANGING STUDY AT CHOSEN DOSE
  - TIMING TO OVERLAP INFLUENZA SEASON TO LOOK AT PROTECTIVE EFFICACY
  - MAY RUN PARALLEL STUDIES IN HIGH RISK SPECIAL POPULATIONS

# FUTURE GENERATION ANTHRAX VACCINES



**ALTIMMUNE HAS TWO GOVERNMENT FUNDED ANTHRAX VACCINE PROGRAMS WITH CLINICAL POC DATA FOR SINGLE DOSE VERSION 2Q18**

## CURRENT VACCINES

- **BIOTHRAX<sup>®</sup> (ANTHRAX VACCINE ADSORBED)** ONLY ANTHRAX VACCINE WITH FDA APPROVAL
  - \$237 MILLION IN SALES IN 2016<sup>7</sup>
  - PROTECTION REQUIRES 6 MONTHS AND 3 INJECTIONS<sup>8</sup>
- **NUTHRAX = BIOTHRAX + CPG ADJUVANT**
  - LIKELY ONLY TWO DOSES OVER EITHER TWO WEEK OR ONE MONTH<sup>9</sup>

## ALTIMMUNE VACCINES

- **SPARVAX-L** – \$15 MILLION NIAID CONTRACT
- **NASOSHIELD** – \$127 MILLION BARDA CONTRACT

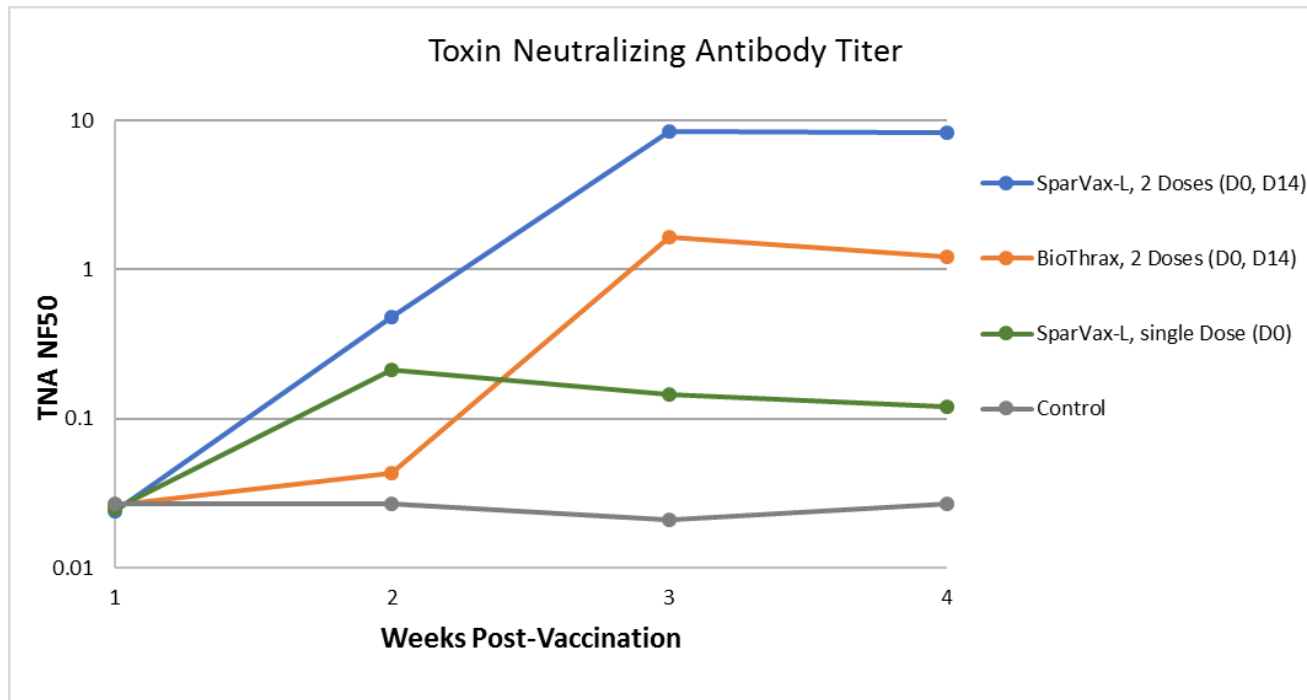
<sup>7</sup> Emergent BioSolutions Inc. website; <sup>8</sup> BioThrax package insert; <sup>9</sup> Vaccine 34(18):2096-2105

# SPARVAX-L A PHASE 2 ANTHRAX VACCINE



Single dose protection and better immunogenicity than BioThrax®

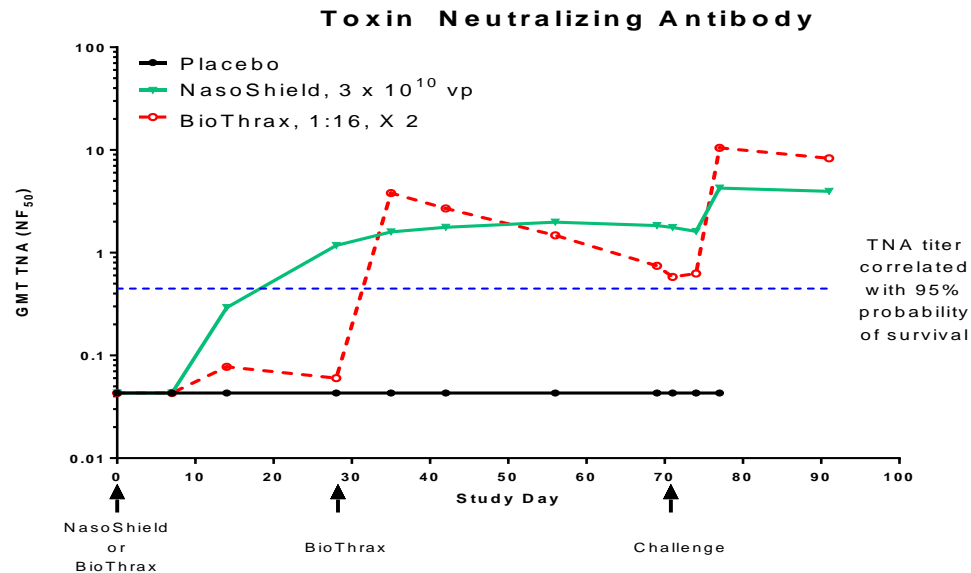
| Group                          | Survival at Day 42 |
|--------------------------------|--------------------|
| SparVax-L, Two Doses (D0, D14) | 100                |
| BioThrax, Two Doses (D0, D14)  | 96                 |
| SparVax-L, Single Dose (D0)    | 67                 |
| Control                        | 0                  |



# NEXT GENERATION ANTHRAX VACCINE



## NASOSHIELD WELL SUITED TO FULFILL STRATEGIC NATIONAL STOCKPILE REQUIREMENTS

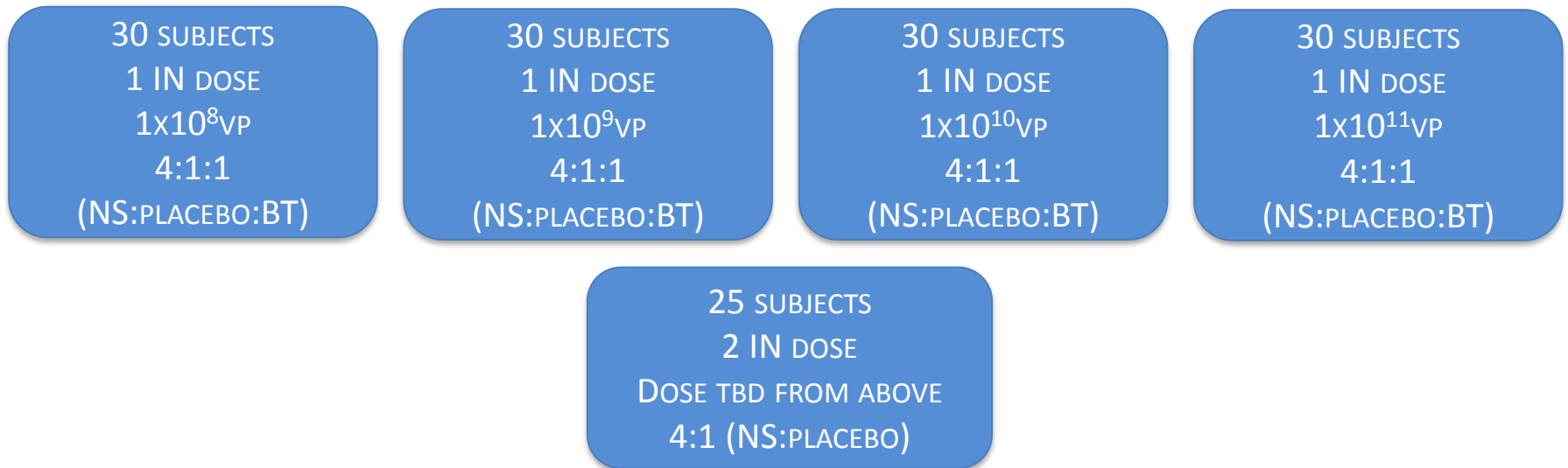


- SINGLE, INTRANASAL DOSE WITH NON-INFERIOR PROTECTION VS BIOTHRAX IN ANIMAL MODEL
- PROTECTIVE IMMUNITY IN HALF THE TIME
- STABLE AND LONGER LASTING IMMUNE RESPONSE
- HIGHLY STABLE AT REFRIGERATED AND ROOM TEMPERATURES



# NASOSHIELD: PHASE 1 CLINICAL STUDY

## PHASE 1 STUDY OPEN FOR ENROLLMENT WITH DATA 2Q 2018



- HEALTHY VOLUNTEERS
- PRIMARY ENDPOINT – SAFETY AND IMMUNOGENICITY

**WIN – NASOSHIELD IS SAFE AND IMMUNOGENIC**

**HOMERUN – CREATES POC TO BECOME CDC VACCINE OF CHOICE FOR ANTHRAX**

**ADDITIONAL INFORMATION – DOSE AND SCHEDULE**

# FINANCIAL SUMMARY

**\$17.1 MILLION OF CASH, PLUS BARDA AND NIAID CONTRACT REVENUE AND TAX REFUND,  
EXPECTED TO BE SUFFICIENT TO FUND OPERATIONS INTO 2019**

**SEPTEMBER 30, 2017**

- REVENUE \$7.9M
- CASH/CASH EQUIV. \$17.1M
- STOCKHOLDERS EQUITY \$48.8M
- COMMON SHARES OUTSTANDING 15.6M



# MILESTONES

**CURRENT & PROJECTED CASH EXPECTED TO BE SUFFICIENT TO FUND OPERATIONS INTO 2019**

- 1Q 2018
  - HEPtCELL UNBLINDED PH 1 DATA
  - NASOVAX PH 2 INITIAL DATA
  - INITIATE NASOSHIELD FIRST IN MAN PH 1 STUDY
  - SPARVAX-L RABBIT BRIDGING STUDY
  
- 2Q 2018
  - NASOSHIELD PH 1 DATA

# STRONG EXECUTIVE MANAGEMENT TEAM

## BILL ENRIGHT

PRESIDENT AND CHIEF EXECUTIVE OFFICER



## ELIZABETH A. CZEREPAK

CHIEF FINANCIAL OFFICER AND EXECUTIVE VICE PRESIDENT  
OF CORPORATE DEVELOPMENT



## SCOT ROBERTS, PH.D.

CHIEF SCIENTIFIC OFFICER



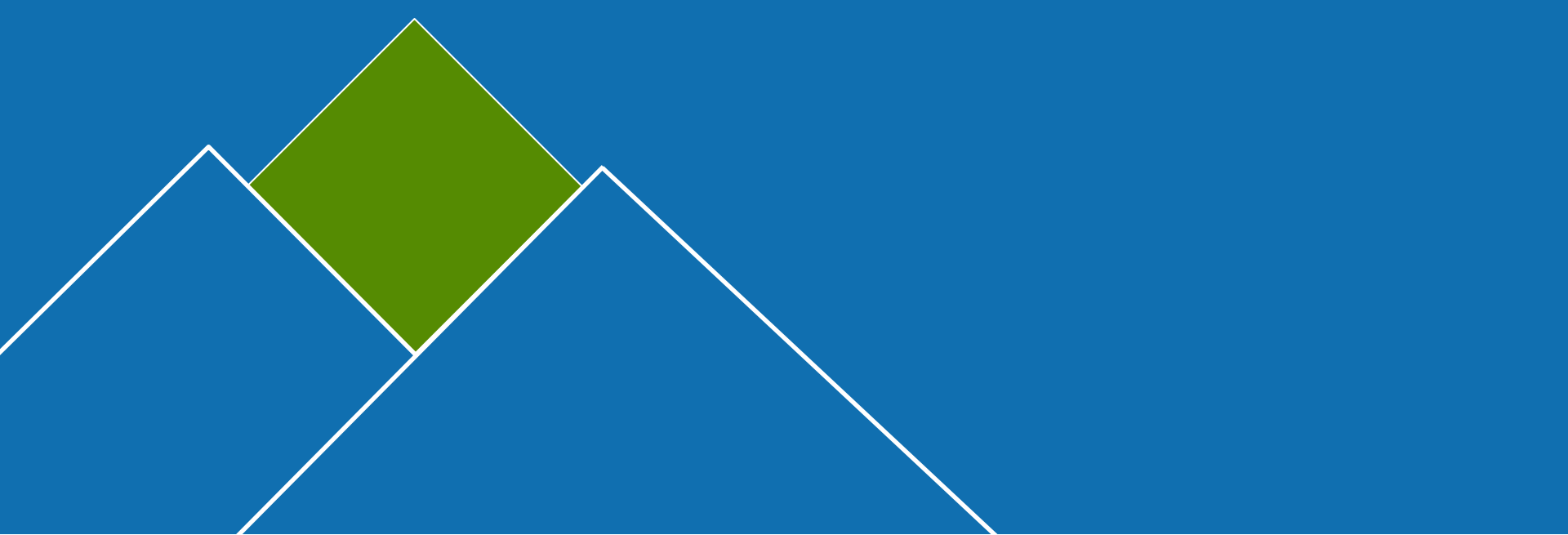
## SYBIL TASKER, M.D., MPH, FACP, FIDSA

CHIEF MEDICAL OFFICER



# ALTIMMUNE INVESTMENT HIGHLIGHTS

|                                 |   |
|---------------------------------|---|
| <b>PRODUCTS</b>                 | <ul style="list-style-type: none"><li>• PROMISING CLINICAL PRODUCT CANDIDATES WITH NEAR TERM MILESTONES</li></ul>                                     |
| <b>PLATFORMS</b>                | <ul style="list-style-type: none"><li>• INNOVATIVE PLATFORM TECHNOLOGIES FOR CONTINUED GROWTH</li></ul>   |
| <b>ADDITIONAL OPPORTUNITIES</b> | <ul style="list-style-type: none"><li>• A STRONG COMPETITIVE POSITION IN THE ANTHRAX VACCINES MARKET – \$300 MILLION ANNUAL MARKET</li></ul>          |
| <b>FINANCIAL DETAILS</b>        | <ul style="list-style-type: none"><li>• \$17.1M OF CASH AT THE END OF 3Q17. SUFFICIENT TO GET INTO 2019 AND SEVERAL KEY CLINICAL MILESTONES</li></ul> |



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