



NASDAQ: ALT

**T-COVID™**

**SINGLE-DOSE INTRANASAL  
THERAPEUTIC FOR THE TREATMENT  
OF EARLY COVID-19**

June 2020

# FORWARD-LOOKING STATEMENTS

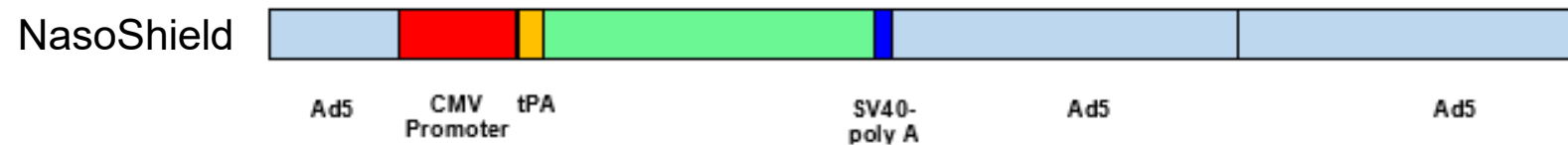
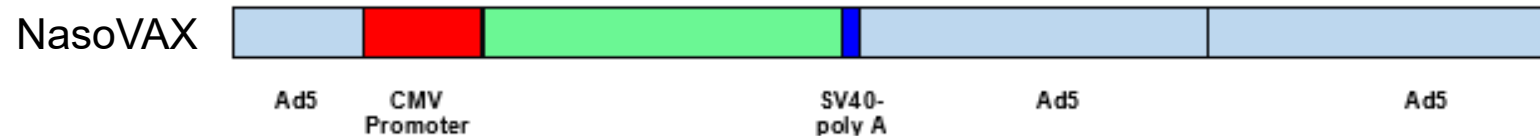
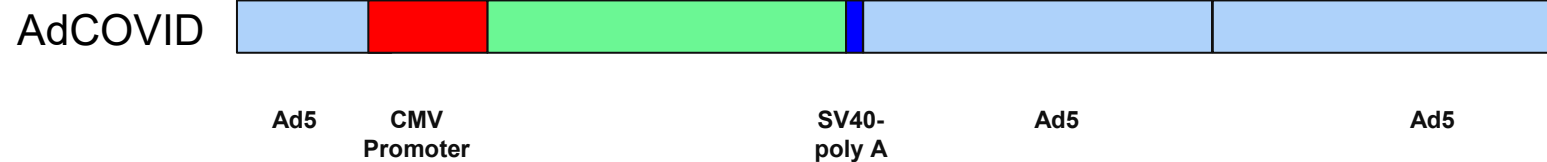
## **Safe-Harbor Statement**

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 product or drug candidates, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In addition, when or if used in this presentation, the words “may,” “could,” “should,” “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan,” “predict” and similar expressions and their variants, as they relate to Altimmune, 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: our lack of financial resources and access to capital; 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. 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 Company’s annual reports on Form 10-K and quarterly reports on Form 10-Q filed with the SEC, 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.

# T-COVID™: BASED ON RD-Ad5 VECTOR VACCINE PLATFORM

## SINGLE DOSE INTRANASAL THERAPEUTIC FOR THE TREATMENT OF EARLY COVID-19

- Identical vector technology used for AdCOVID (COVID-19), NasoVAX (seasonal influenza) and NasoShield (anthrax) vaccines



# T-COVID™: MODULATES INNATE IMMUNITY IN ANIMAL MODELS

## PRECLINICAL STUDIES FUNDED BY NIAID & CONDUCTED AT UTAH STATE UNIVERSITY



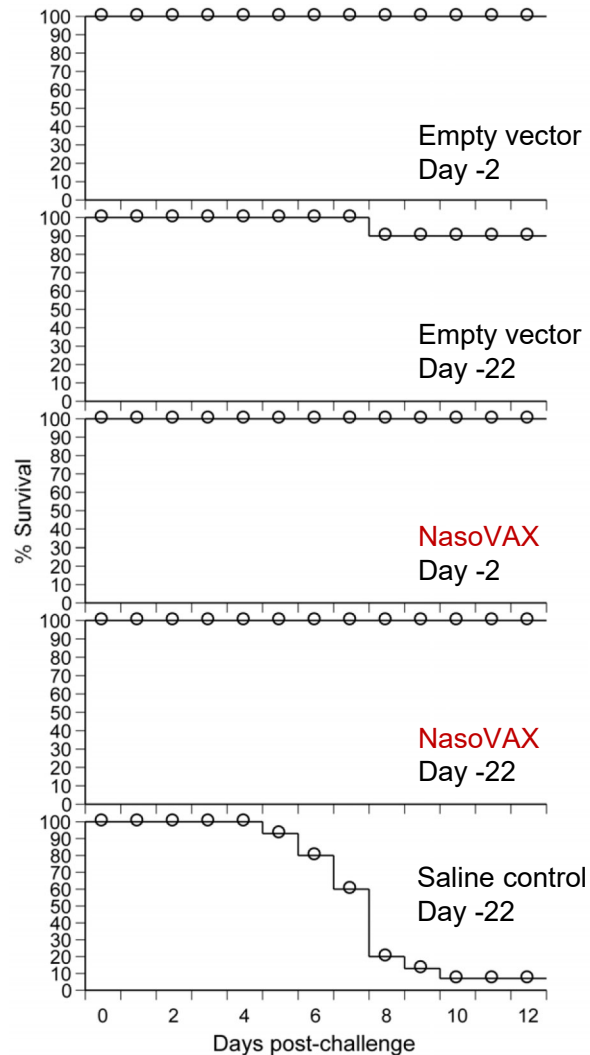
Data from 6 preclinical studies of influenza infection funded by NIAID and conducted at Utah State University showed:

- Rapid, non-antigen mediated modification of host cytokine response
- Protection from lethal challenge occurs within days and lasts for weeks
- Significantly decreased inflammation following respiratory virus infection



# PROTECTION ESTABLISHED IN ANIMALS WITHIN 2 DAYS

EFFECTS SEEN WITH ADMINISTRATION OF EITHER EMPTY VECTOR OR NasoVAX



## Experimental design

Day -2 or Day -22

- Intranasal administration ( $2.5 \times 10^8$  ifu) of either empty vector (vector without antigen) or NasoVAX (vector with antigen)

Day 0

- Challenge with influenza A/CA/04/2009 ( $3 \times \text{LD}_{50}$ )

## Results

- Protection provided by both empty vector and NasoVAX
- Protection occurred when treated between 2- and 22-days prior to challenge
- Identical results obtained following challenge with other influenza A strains, influenza B, H5N1 and H7N9

# REDUCED INFLUENZA-INDUCED LUNG INFLAMMATION

EFFECT SEEN WITH ADMINISTRATION OF EITHER EMPTY VECTOR OR NasoVAX

## RD-Ad5 Vector

Treatment:	None	None	Empty Vector	NasoVAX
Influenza Challenge:	Yes	No	Yes	Yes

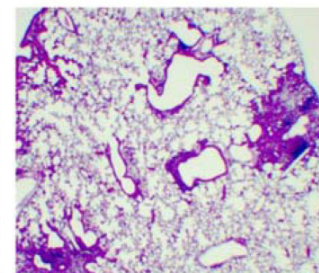
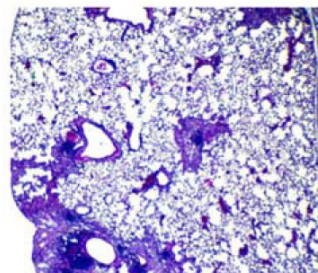
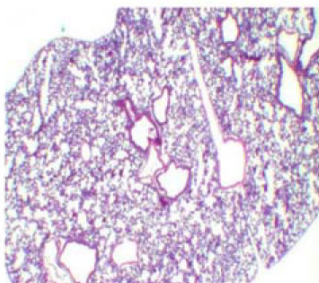
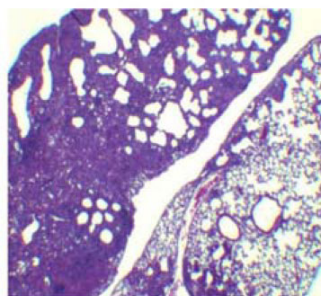
A

B

C

D

Low mag



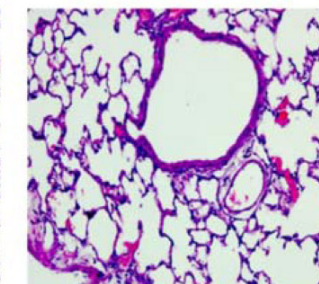
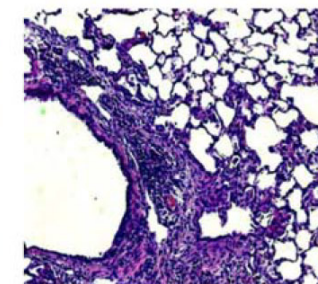
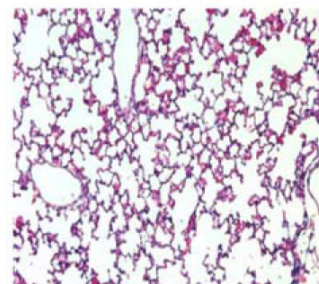
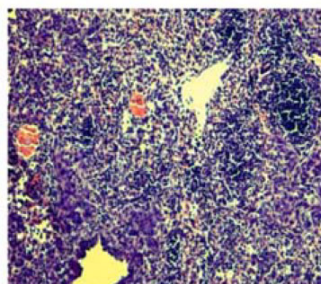
E

F

G

H

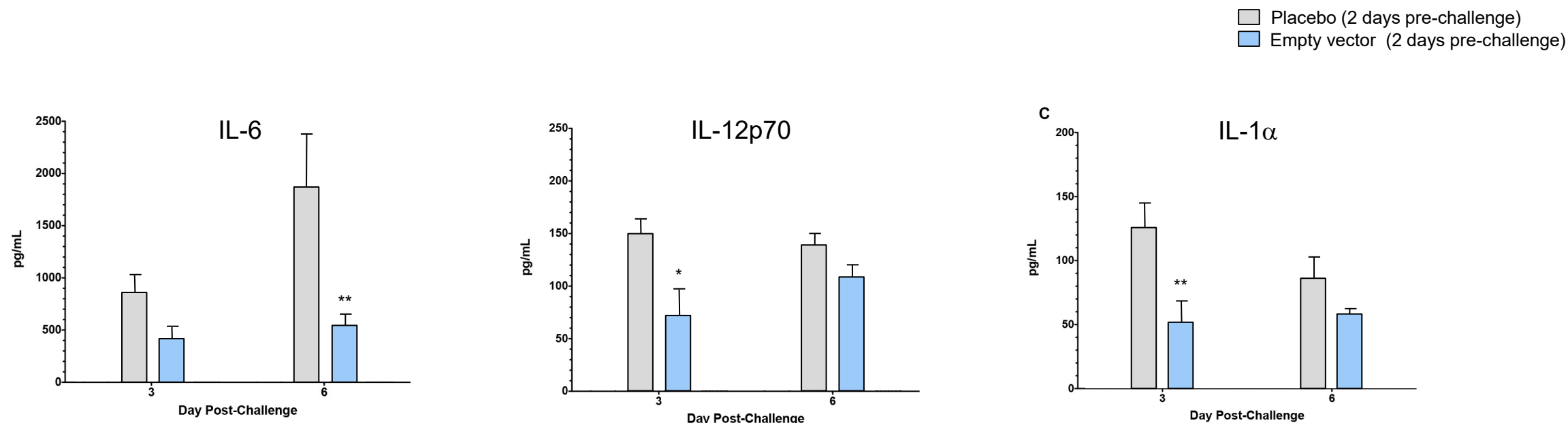
High mag



- Intranasal administration of either empty vector or NasoVAX on Day -2
- Challenge with influenza A/PR/08/34 (4 x LD<sub>50</sub>) on Day 0
- Lung histology on Day +19 post-challenge

# DECREASED INFLAMMATORY CYTOKINES IN LUNGS

## RD-Ad5 VECTORS MODULATE THE INNATE IMMUNE RESPONSE TO INFECTION



Balb/c mice administered an intranasal dose of RD-Ad5 ( $3.2 \times 10^8$  ifu) on Day -2 and challenged with influenza A/CA/04/2009 ( $3 \times \text{LD}_{50}$ ) on Day 0. Cytokines in lung lavage were analyzed on Days 3 and 6; mean  $\pm$  SD,  $p \leq 0.05$ , \*\*  $p \leq 0.01$  by ANOVA

# TARGET PRODUCT PROFILE

---

<b>Indications:</b>	Prevention of clinical worsening and hospitalization of ambulatory patients with early COVID-19
	Prevention of COVID-19 in individuals at high-risk of infection (known exposures)
	Potential first-line community protection against future strains of coronavirus and other pandemics
<b>Mode of administration:</b>	Single dose, intranasal, with potential for self-administration
<b>Storage and distribution:</b>	Stable at ambient temperatures for 3 or more months
<b>Safety profile:</b>	Similar to placebo



# PHASE 1/2 CLINICAL TRIAL DESIGN

---

- 96 community-based patients with fever, cough, or shortness of breath, with onset of symptoms within 48 hours, and a diagnosis of COVID-19 within 24 hours, will be randomized 1:1 to NasoVAX or placebo administered as a single 0.5 mL nasal spray on the day of diagnosis
- The study will consist of 3 cohorts of increasing age and risk for complications of COVID-19
- Primary efficacy endpoint
  - Proportion of patients with clinical worsening, defined as a 4% decrease in pulse oxygen saturation ( $\text{SpO}_2$ ), or hospitalization
- Secondary endpoints
  - Average decrease in resting  $\text{SpO}_2$
  - Average increase in resting pulse rate
  - Proportion of patients requiring oxygen supplementation and mechanical ventilation
- FDA agreed to allow Altimune use its existing lot of RD-Ad5-based NasoVAX influenza vaccine for this trial so that it may be initiated quickly



NASDAQ: ALT

**T-COVID™**  
**SINGLE-DOSE INTRANASAL  
THERAPEUTIC FOR THE TREATMENT  
OF EARLY COVID-19**

June 2020