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NASDAQ: ALT

CORPORATE PRESENTATION

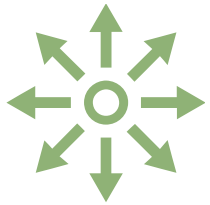
May 2020

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. 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.

INVESTMENT HIGHLIGHTS



Developing **next generation peptide therapeutics** for liver disease and oncology

Proprietary **intranasal vaccine platform** ideally suited for rapid response to pandemic situations

Near-term **value-driving catalysts with sufficient cash and investments on hand**

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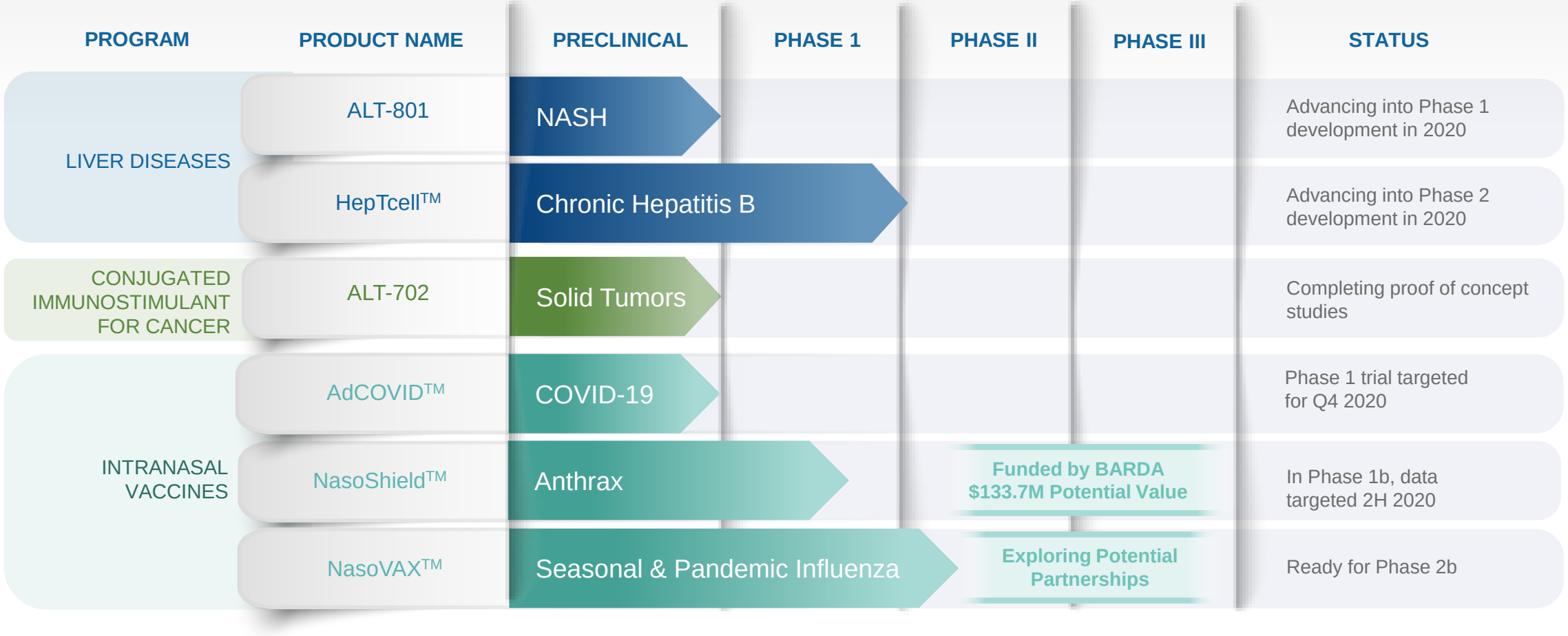
DEVELOPMENT PIPELINE



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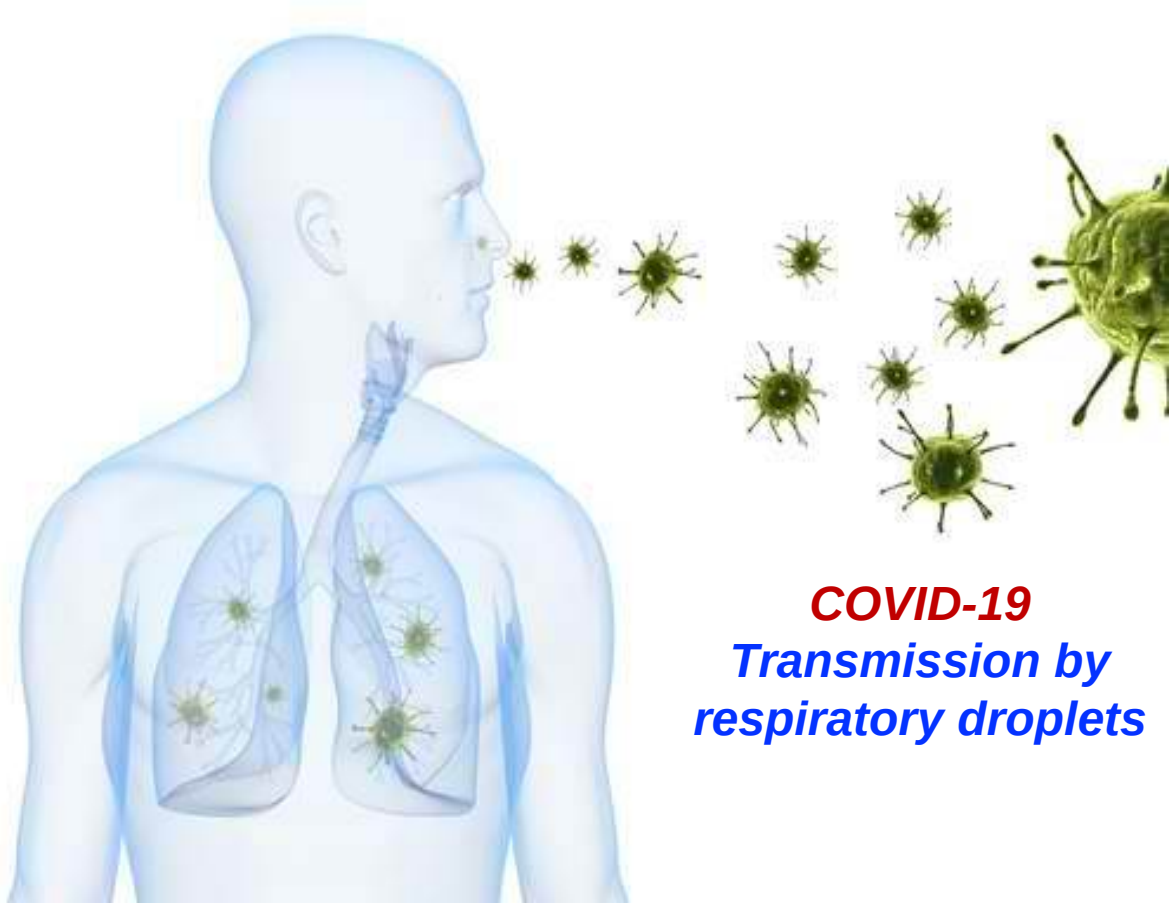
INTRANASAL VACCINES

IMPORTANT CONSIDERATIONS FOR A SUCCESSFUL COVID-19 VACCINE

- Immune mechanism of protection is not well defined – ***vaccine should activate multiple arms of immune system***
- Infection occurs through and in the nose and airways – ***intranasal vaccination to provide nasal mucosal immunity - a first line of defense***
- Vaccine distribution and administration on a global scale represents significant challenge – ***single dose, simple dosing method, product stability critical***



COVID-19 Transmission by respiratory droplets

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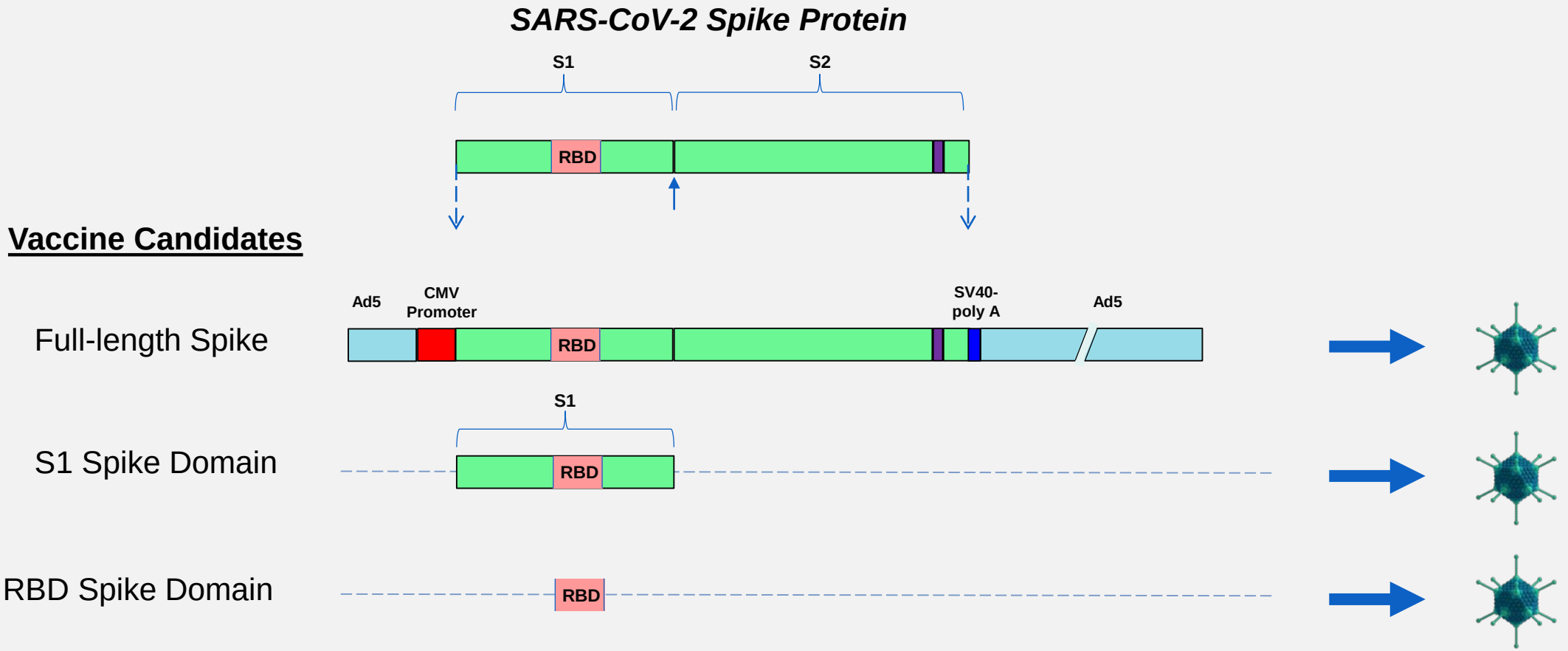
AdCOVID™: SINGLE-DOSE INTRANASAL VACCINE FOR COVID-19

STRUCTURE OF VACCINE CANDIDATES

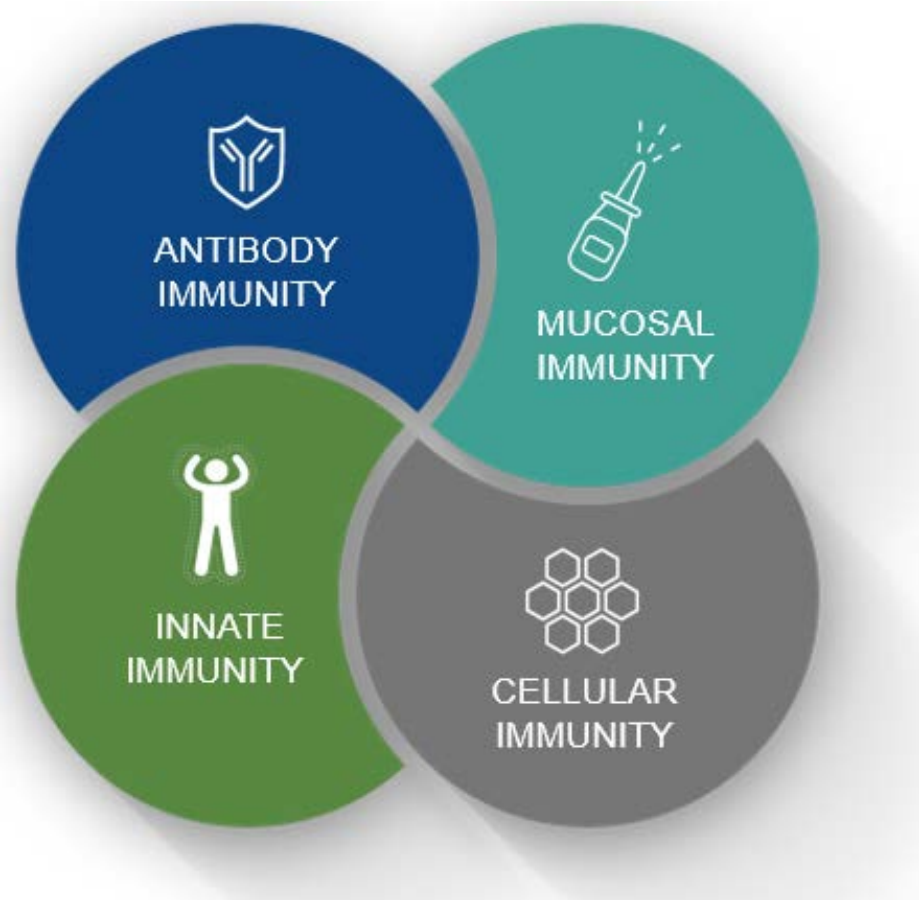


AdCOVID™: SINGLE-DOSE INTRANASAL VACCINE FOR COVID-19

IDEALLY SUITED FOR PANDEMIC RESPIRATORY VIRUS

Intranasal COVID-19 Vaccine Designed for:

- Seroprotection with single intranasal dose
- Stimulation of multiple arms of the body's natural immune responses
- Excellent stability profile shown in Altimmune's intranasal platform vaccines
- Safety profile indistinguishable from placebo in Altimmune's clinically tested platform vaccines



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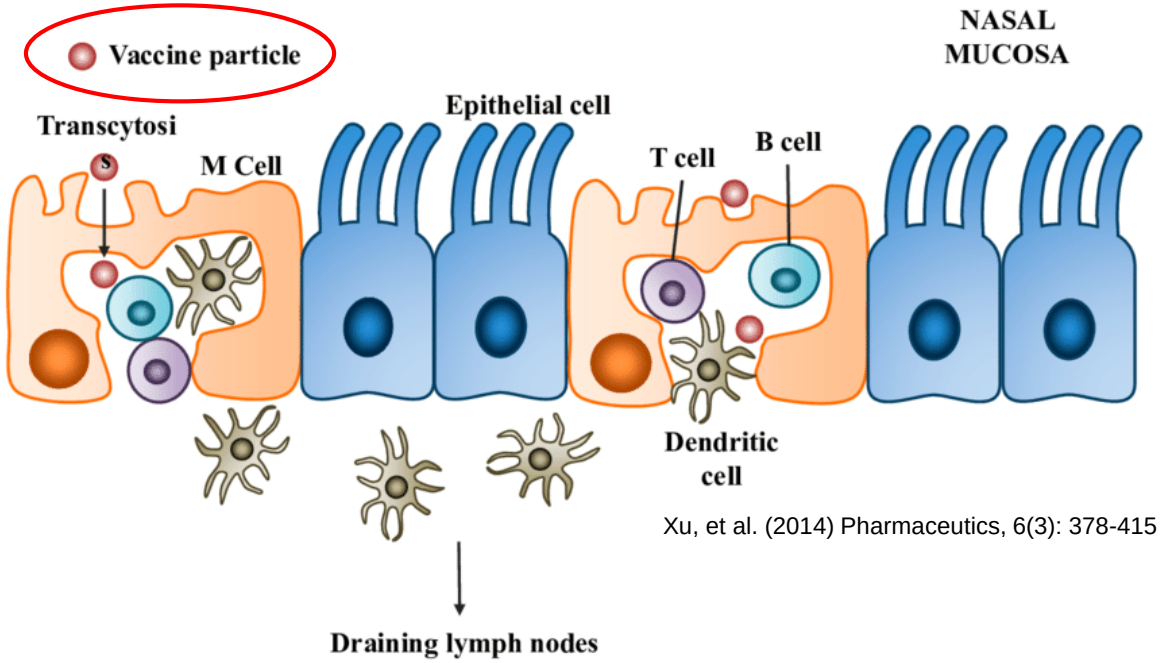
NASAL MUCOSAL IMMUNITY - STIMULATION BY INTRANASAL DELIVERY

FIRST LINE OF DEFENSE AGAINST INVADING VIRUSES AND OTHER PATHOGENS

- A specialized immunity at the boundary of the environment and the host – including the respiratory tract
- Requires intranasal dosing to be stimulated in the nose, lungs and airways
- Protects from virus challenge in humans

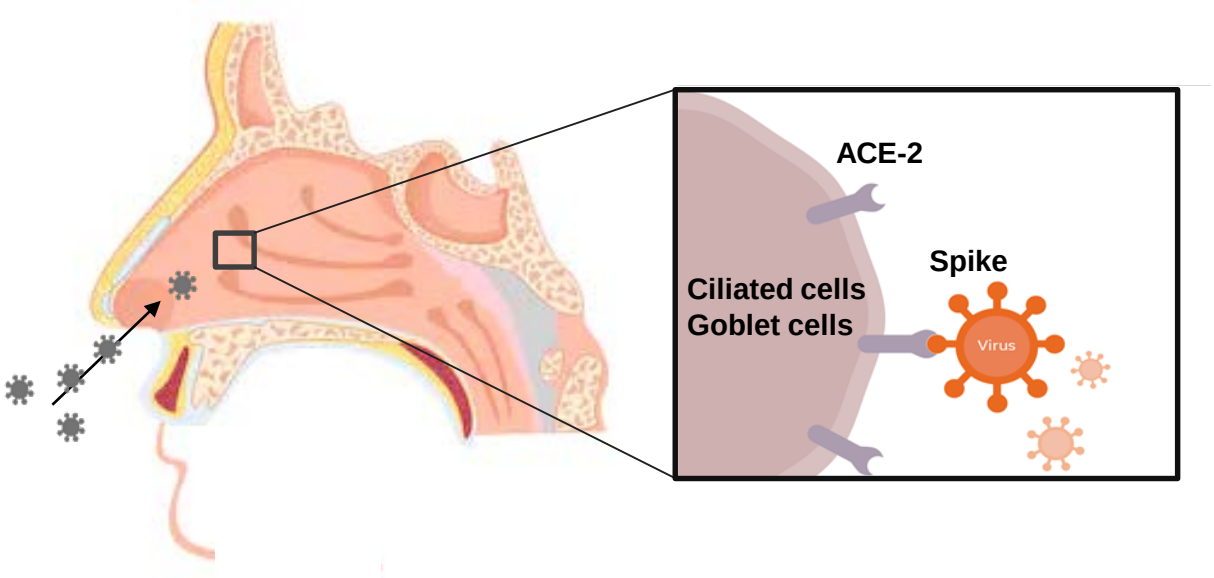


Xu, et al. (2014) Pharmaceutics, 6(3): 378-415

[1] Clements, ML and Murphy, BR, (1986) J Clin Microbiol 23:66–72

NASAL MUCOSAL IMMUNITY PROTECTS AGAINST COVID-19

TREATMENT AT SITE OF VIRAL ENTRY, REPLICATION AND TRANSMISSION



- SARS-CoV-2 has high tropism for the nasal cavity which has a dense cluster of ACE-2 receptors[1]
- CDC has identified loss of smell/taste as an early symptom of COVID-19 infection
- In non-human primates, intramuscular vaccination decreased SARS-CoV-2 in lungs but had no effect on infection in the nasal cavity[2]
- Nasal mucosal immunity affords protection at the site of viral entry and early replication and blocks transmission by shed virus[3]

[1] Sungnak W, Nat Med. 2020;26(5):681-687.

[2] N van Doremalen et al.

[3] Gould VMW, Front Microbiol. May 2017| Volume 8 | Article 900

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COMPELLING CLINICAL EVIDENCE WITH ALTIMMUNE'S INFLUENZA VACCINE CANDIDATE – NasoVAX

NasoVAX Intranasal Influenza Vaccine

- 100% seroprotection after a single dose
- Neutralizing antibody response equal to Fluzone® commercial influenza vaccine
- Stimulated nasal mucosal and cellular immune responses
- Durable response lasted at least one year after single dose vaccination
- Safety profile indistinguishable from placebo

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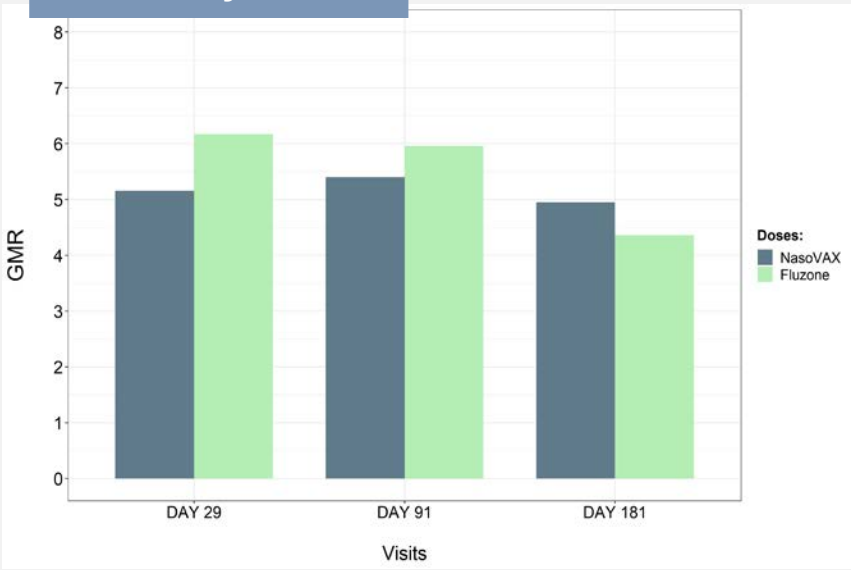
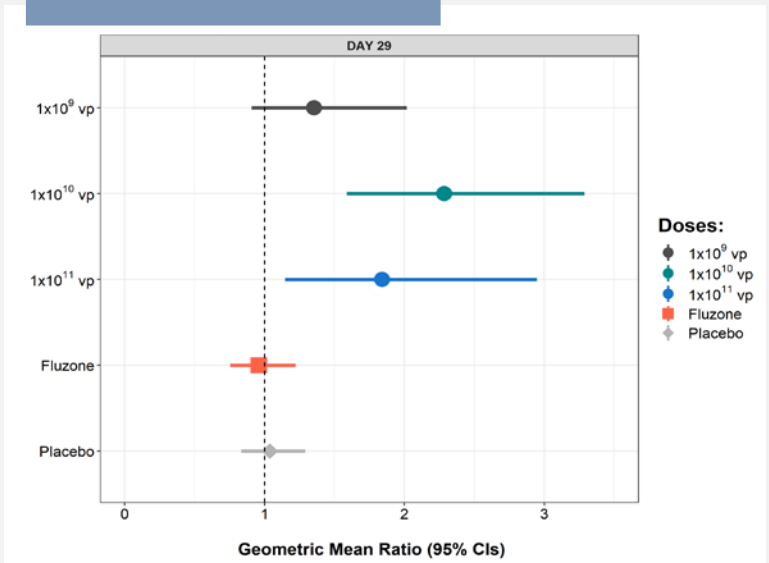
COMPELLING CLINICAL EVIDENCE WITH ALTIMMUNE'S INFLUENZA VACCINE CANDIDATE – NasoVAX

Neutralizing Antibody Level



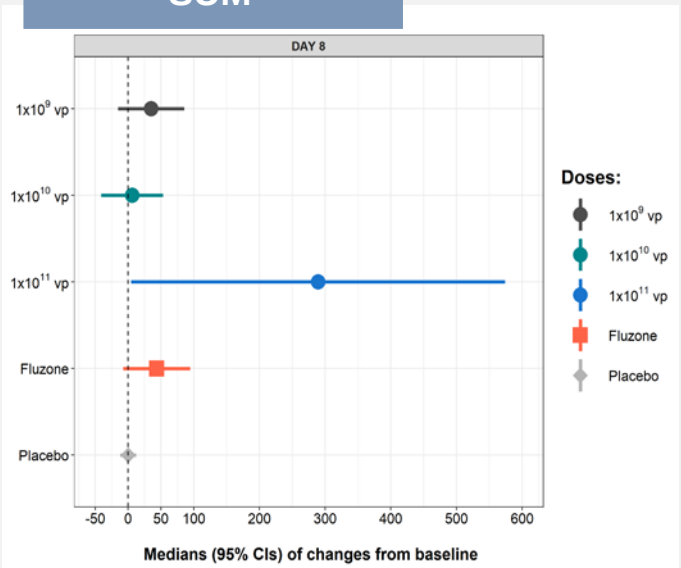
Strong Antibody response

IgA Antibody Level



Strong mucosal IgA response

Ex Vivo ELISpot SUM



Strong T cell response

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INTRANASAL AdCOVID IS NOT LIKE INTRANASAL FLUMIST®

FLUMIST VERSUS REPLICATION-DEFICIENT Ad5 VECTOR

FluMist	Replication-deficient Ad5 Vector
Attenuated influenza virus that requires replication for potency	**Does not** require replication for potency
Activity blocked by pre-existing immunity to influenza	Activity **not blocked** by pre-existing immunity to Ad5
Low vaccine dose (6 -7 logs)	**High** vaccine dose (9 -11 logs)
Weak serum Ab response[1]	**Strong** serum Ab response
Weak T cell response[1]	**Strong** T cell response

[1] Hoft, et al., Clin Vaccine Immunol. 2017 Jan; 24(1) 1-9

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WHO COVID-19 VACCINE TARGET PRODUCT PROFILE

ALTIMMUNE VACCINE PLATFORM MEETS WHO'S PREFERRED ATTRIBUTES

Preferred Attribute[1]	Altimmune Influenza Vaccine Data
Single dose	**Seroprotection with single dose administration**
Rapid onset of protection	**Strong serological response at 2 weeks**
Immunity lasting at least 1 year	**Serological response unchanged at 400 days**
Non-injected	**Intranasal administration**
Temperature stability	**At least 3 months at 25º C in a liquid formulation**
Ability to provide at low cost	**High yield, scalable manufacturing process**

[1] https://www.who.int/blueprint/priority-diseases/key-action/WHO_Target_Product_Profiles_for_COVID-19_web.pdf

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COMPARISON OF CURRENT COVID-19 VACCINE CANDIDATES

PLATFORM CHARACTERISTICS AND PRACTICAL CONSIDERATIONS

Factor	RNA	DNA	Protein	AdCOVID
Number of Doses	2	1-2	1-2	**1**
Route of Administration	Injection	Injection	Injection	**Nasal Spray**
Neutralizing antibody / T cells	Yes	Yes	Yes	**Yes**
Nasal Mucosal Immunity	No	No	No	**Yes**
Ease of Administration	++	+	++	**++++**
Other Components Required	No	Yes	Yes	**No**
Product Stability	+	+++	++	**++++**

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AdCOVID™: DEVELOPMENT STATUS

RAPID RESPONSE TO THE COVID-19 PANDEMIC

Activity	Completion
Design and Engineering of Vaccine Candidates	Complete
Preclinical Testing and Down Selection of Candidate	Q2 2020
Toxicology	Not Required
GMP Manufacturing	Q4 2020
Phase 1 Initiation	Q4 2020

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AdCOVID™: VACCINE ATTRIBUTES IDEAL FOR COVID-19

MEETS THE CRITERIA FOR AN EFFECTIVE EASY-TO-USE VACCINE

COVID-19 Challenge	Altimmune Platform Attributes
Immune mechanism of protection is not well defined	**Broad activation of antibody, mucosal and cellular immune arms**
Infection occurs through the nose and airways	**Intranasal delivery establishes nasal mucosal immunity at point of viral entry**
Vaccine distribution and administration on a global scale represents significant challenge	**Stable, single dose vaccine delivered without needles**

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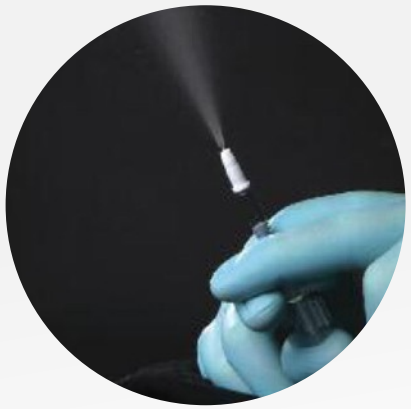
NasoShield: FUNDED THROUGH A DEVELOPMENT CONTRACT WITH BARDA

Phase 1b initiated, data expected in H2 2020



Received $3.7M BARDA funding to initiate Phase 1b

$133.7M total contract value through Phase 2

Stockpiling of vaccine may occur prior to licensure[1]

- Nuthrax® initial stockpiling valued at $261M with a $1.5 billion total potential contract value

[1] https://globalbiodefense.com/2019/08/01/barda-exercises-first-option-in-transition-from-biothrax-to-av7909-anthrax-vaccine/

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DIFFERENTIATED

Only single-dose vaccine
currently in development

Intranasal spray

Faster protection

Superior logistics

- No cold chain distribution
- Self administered/no injection required

NasoShield
Differentiated
Anthrax Vaccine

COMPETITION

Biothrax® - Only approved vaccine

- **3 dose** regimen
- **Requires an adjuvant**
- Subcutaneous **injections**

NuThrax® (AV7909) – Phase 3

- **2 dose** regimen
- Requires **2 adjuvants**
- Intramuscular **injections**

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LIVER DISEASE

NASH AND NAFLD

HEPATIC MANIFESTATIONS OF OBESITY AND METABOLIC SYNDROME

- NAFLD is present in up to **90% of obese patients**, and **~20%** of NAFLD patients **progress to NASH**[1]
- Up to **40% of NASH patients develop NAFLD** recurrence one year after liver transplant—the underlying metabolic disease is still present[2]
- The **treatment of obesity** is the cornerstone of treating NASH and the principal morbidities of NASH[1,3]
- Drugs in development should target the **weight loss range achieved by bariatric surgery**[4]

[1]Glass LM, Fed Pract 2019; [2]Dureja, P, Transplantation 2011; [3]Perazzo H, Liver Int 2017; [4]Armstrong M, Vantage December 14, 2018

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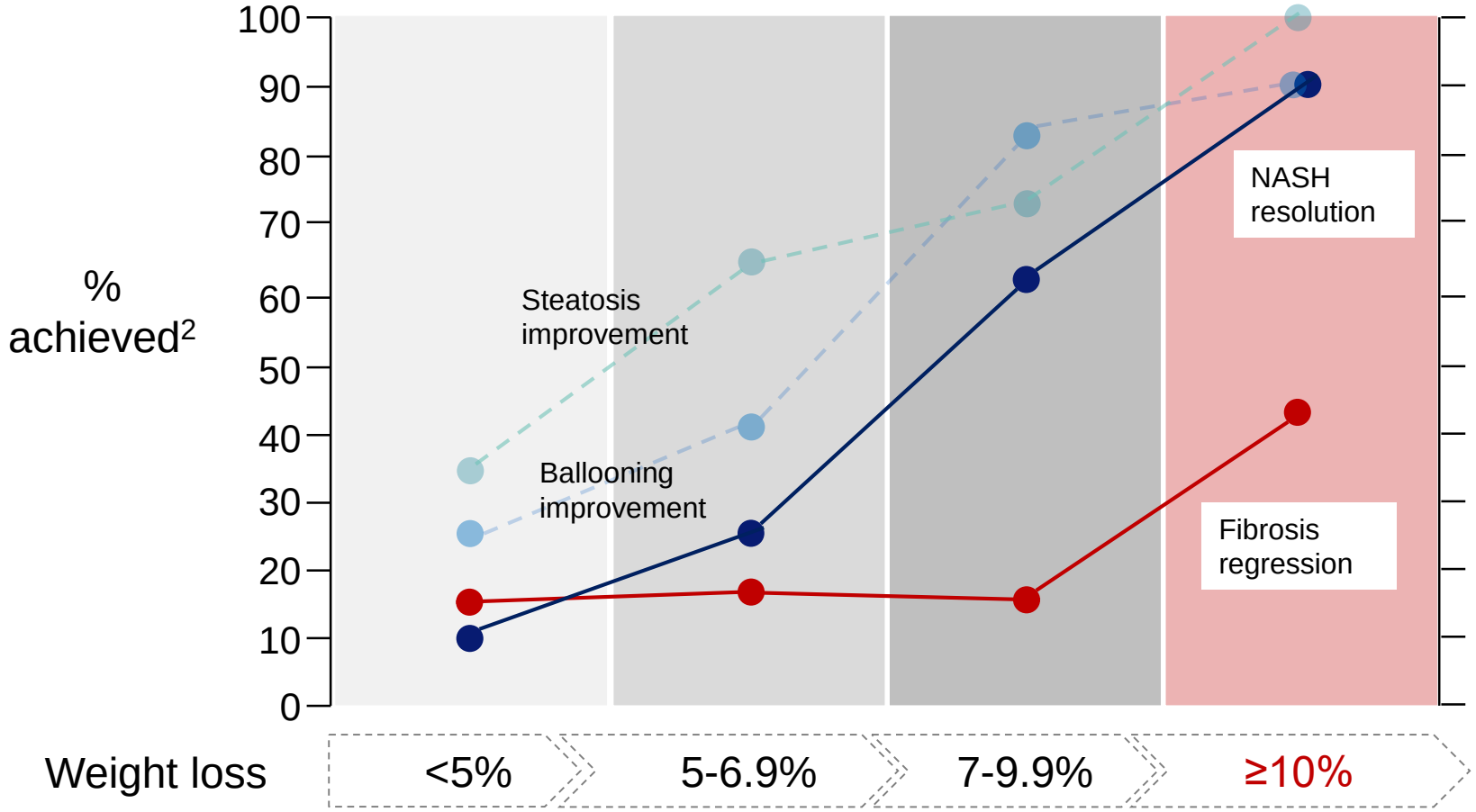
SUBSTANTIAL BODY WEIGHT LOSS IS NECESSARY TO BLUNT NASH PROGRESSION

10% OR MORE WEIGHT LOSS MUST BE ACHIEVED[1]



The **treatment of obesity** remains the cornerstone of NASH and NAFLD therapy

Meaningful weight loss is rarely achieved without medical intervention

Current drugs have failed to deliver the weight loss achieved by bariatric surgery

[1] *Promrat et al Hepatology 2010; Glass et al Dig Dis Sci 2015; Vilar-Gomez et al Gastroenterology 2015; Marchesini et al Hepatology 2016; Koutowkidis et al JAMA Intern Med 2019*

[2] *Adapted from Harrison, EASL 2019, Traber, Discovery on Target: Targeting NASH 2019, and Vilar-Gomez, Gastroenterology 2015*

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SNAPSHOT OF COMPOUNDS IN ADVANCED NASH DEVELOPMENT

MOST AGENTS FAIL TO ACHIEVE MEANINGFUL LEVELS OF WEIGHT LOSS

Agent	Author (year)	Mechanism	Weight Loss (%)
Obeticholic acid	Younossi, ZM 2019[1]	FXR agonist	~2%
Resmetirom	Harrison, SA 2018[2]	THRβ agonist	no change
Aldafermin (3mg)†	Harrison, SA 2019[3]	FGF19 agonist	1.3%
Pegbelfermin (10 mg)††	Sanyal, A 2018[4]	FGF21 agonist	2.2%
AKR-001 (70 mg)	Ritchie, M 2020[5]	FGF21 agonist	no change
Firsocostat	Lawitz, EJ 2018[6]	ACC inhibitor	no change
Elafibranor	Ratziu, V 2016[7]	PPARα/δ agonist	no change

† No information has been made public on 1mg dose

†† Gain of 0.6% on 20mg dose

[1]Younossi, YM, et al. (2019) Lancet 394: 2184-96; [2]Harrison, SA, et al. Lancet 394: 2012-24; [3] Harrison, SA, et al. (2019) Lancet 391:1174-85; [4]Sanyal, A, et al. (2018) Lancet 392:2705-17; [5]Ritchie, M, et al. (2020) Exp Opin Invest Drugs, 29:2, 197-204; [6] Lawitz, EJ, et al. (2018) Clin Gastroenterol Hepatol 16:1983-91; [7]Ratziu, V, et al. (2016) Gastroenterol 150: 1147-59

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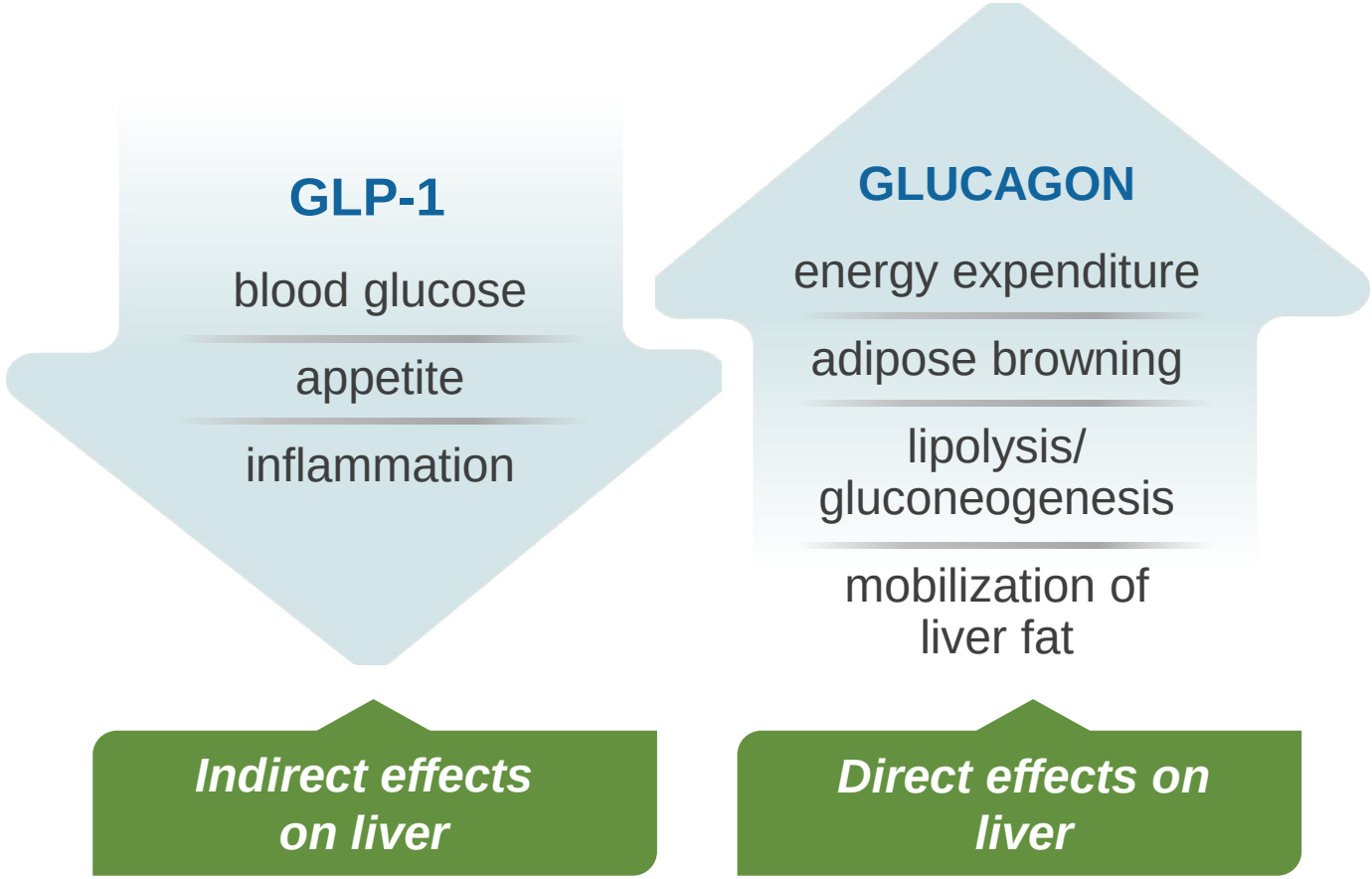
ALT-801: GLP-1/GLUCAGON RECEPTOR DUAL AGONIST

OPTIMIZED FOR NASH AND WEIGHT LOSS



SIGNIFICANT REDUCTIONS IN

body weight

liver fat, inflammation and resulting fibrosis

blood glucose

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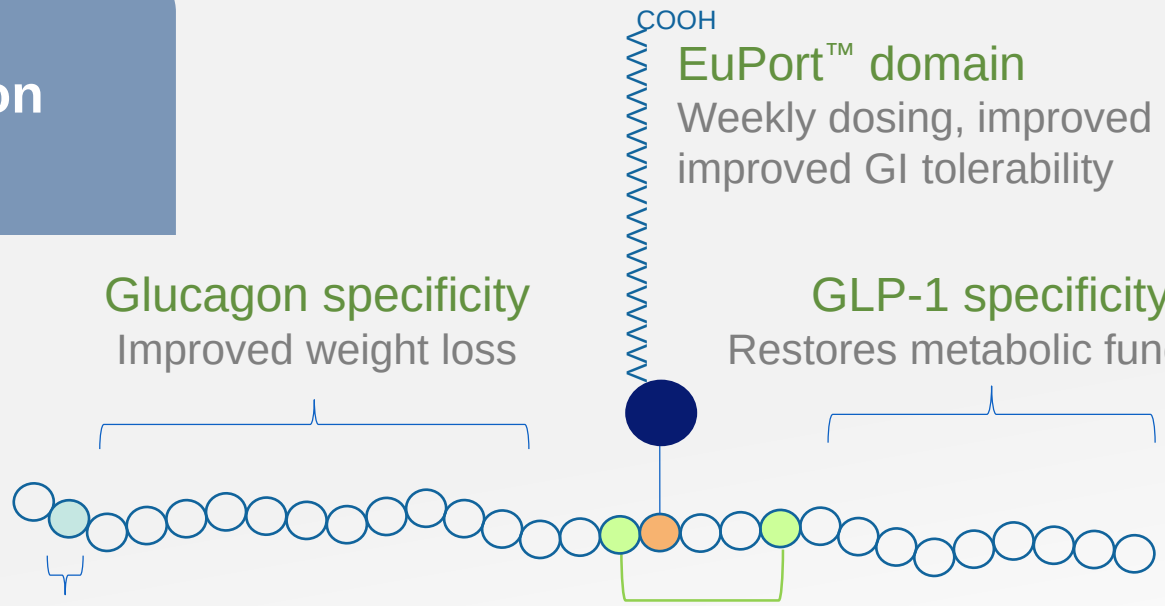
ALT-801: RATIONALLY DESIGNED AND HIGHLY DIFFERENTIATED

PROPRIETARY EuPort™ DOMAIN PROVIDES PROLONGED SERUM HALF-LIFE AND REDUCED PEAK CONCENTRATION

Balanced GLP-1:Glucagon Agonism



[1]Guarracino DA et al., Chem Rev. 2019 Sep 11;119(17):9915-9949

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ALT-801: BALANCED 1:1 GLP-1/ GLUCAGON AGONISM

KEY TO ACHIEVING IMPROVED WEIGHT LOSS

- By activation of a 2nd mechanism, GLP-1/glucagon receptor dual agonists promote greater weight loss than GLP-1 agonists alone
- As demonstrated by ALT-801 in animal models, dual agonists have potential for greater weight loss with lower dose
- Sustained effects on both receptors are necessary to achieve improved weight loss
- Single receptor-biased ligands retain effects on only one receptor over a prolonged dosing period[1]
- By achieving 1:1 balance, the synergies of GLP-1 and glucagon are maintained throughout the entire dosing period

1 Day JA, et al. Peptide Science 2012;98:443-50

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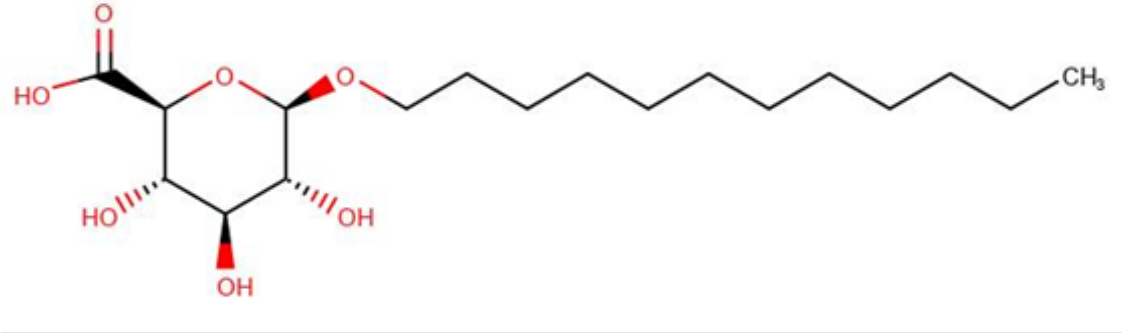
ALT-801: IMPROVED PK FOR BETTER GI TOLERABILITY

PROLONGED SERUM HALF-LIFE AND REDUCED PEAK CONCENTRATION MAY LEAD TO BETTER TOLERABILITY

- EuPort™ domain has surfactant-like properties – containing a water-soluble portion and a fat-soluble portion:



- When conjugated to a small peptide the EuPort domain can:
  - Slow the entry of the peptide into the blood lowering the peak concentration (C_{max}) of the peptide for improved tolerability
  - Significantly extend the half-life ($t_{1/2}$) of the peptide from minutes to a week or more which has been shown to improve tolerability for GLP-1 receptor agonists[1]

[1]*Bettge, K., et al. (2017) Diabetes Obes Metab (2017) 19: 336-347*

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ALT-801: SUMMARY OF NON-CLINICAL STUDIES COMPLETED TO DATE

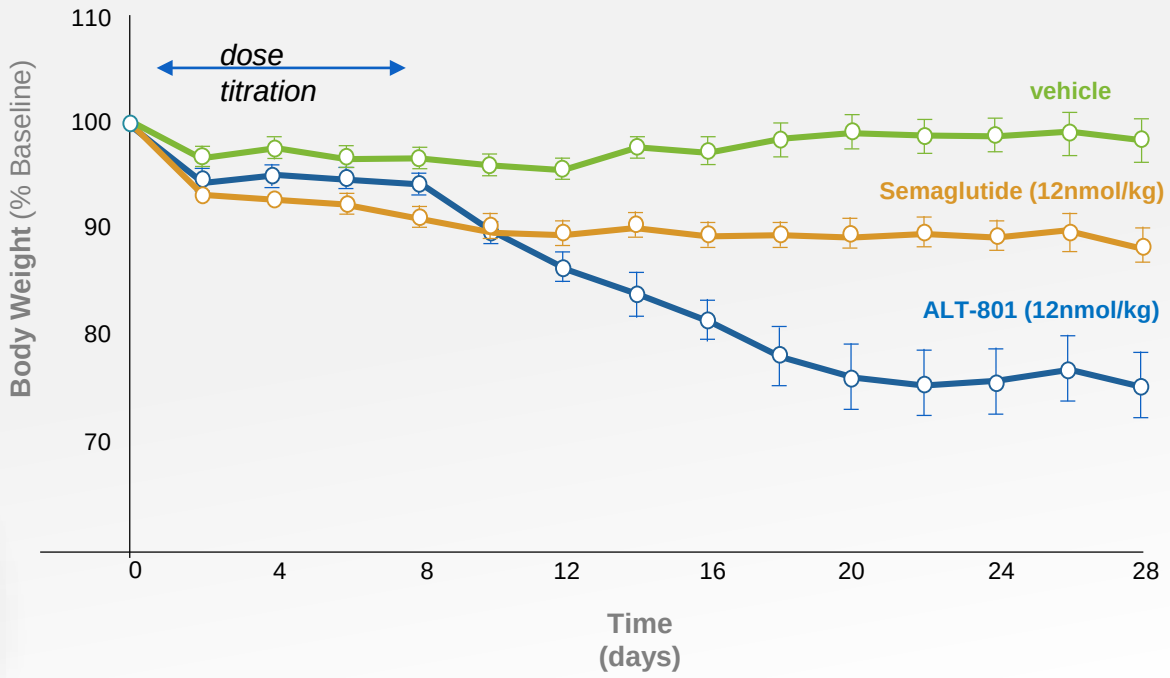
THOROUGH INVESTIGATION OF COMPOUND CHARACTERISTICS

Species	Model	Treatment	Location	Results	Assessment
Mouse	Gubra DIO	12 weeks	Gubra (Denmark)	25% body weight loss 68% liver weight loss 74% decrease in fibrosis	ALT-801 returns animals to lean normal body/liver weight
Mouse	Diet Induced Obesity	4 weeks	The Jackson Laboratory (USA)	25% body weight loss	ALT-801 returns animals to lean normal body weight
Rat	Diet Induced Obesity	4 weeks	Charles River (USA)	40% body weight loss 52% liver weight loss	ALT-801 returns animals to lean normal body/liver weight
Mouse	Primary pharmacology	Single Dose	The Jackson Laboratory (USA)	Normalized glucose	ALT-801 more potent that semaglutide with prolonged gluco-regulatory effect
Mouse	PK	Single Dose	The Jackson Laboratory (USA)	ALT-801 later Tmax, lower Cmax vs semaglutide	More gradual PK for improved tolerability
Rat	PK	4 weeks	Charles River (USA)	Concentration still rising at 8hr	ALT-801 later Tmax, lower Cmax vs semaglutide
Minipig	PK	Single dose	Sinclair Research (USA)	$T_{1/2}$ 52hr, MRT 86hr	ALT-801 $T_{1/2}$ and MRT longer than literature standard (semaglutide) in minipigs
Human	Receptor activation	Cells in vitro	DiscoverX (USA)	GLP-1 EC_{50} 38pM Glucagon EC50 42pM	ALT-801 highly potent, evenly balanced dual agonist

ALT-801

25% REDUCTION IN BODY WEIGHT TO CHOW-FED LEAN NORMAL RANGE

Mouse DIO Model After 4 Weeks of Treatment



More than **2x** the weight loss of **semaglutide**

Body weight decreased to **lean normal range**

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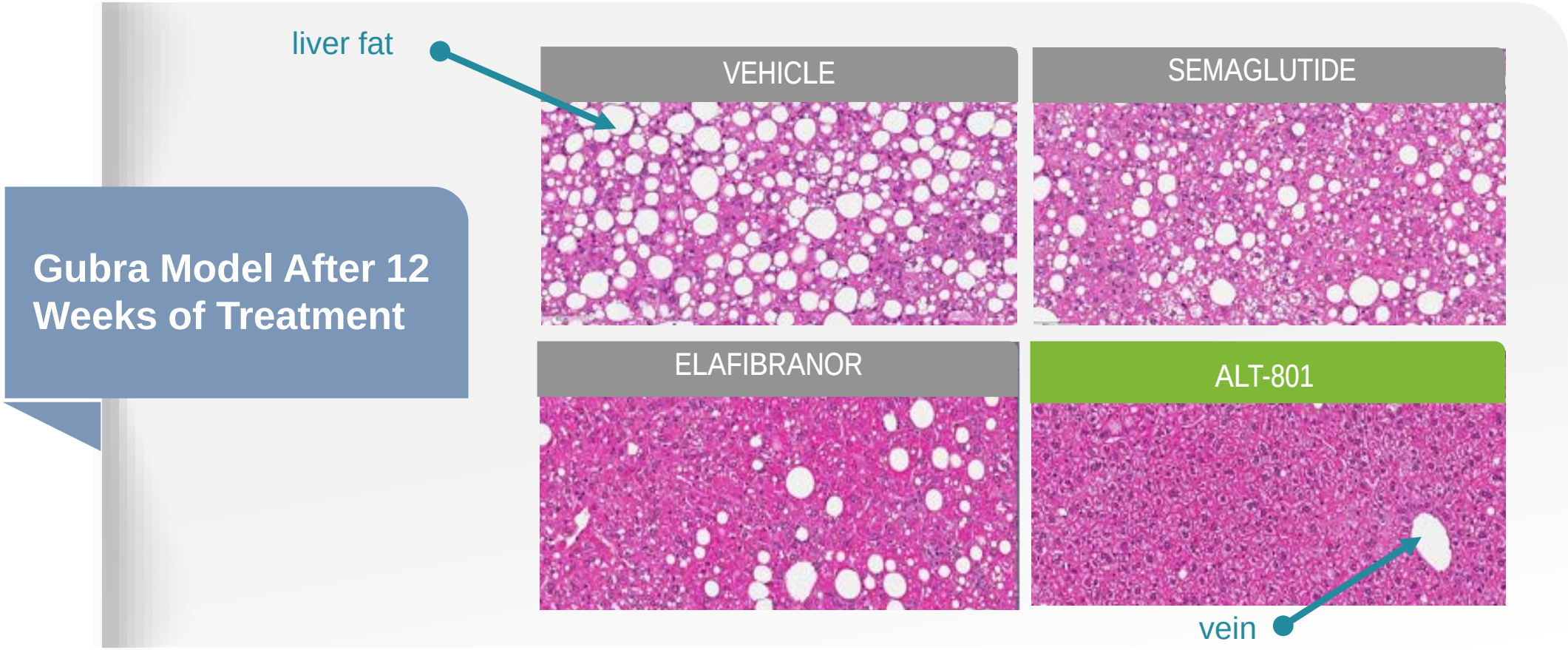
REDUCTION IN LIVER FAT TO CHOW-FED LEAN NORMAL



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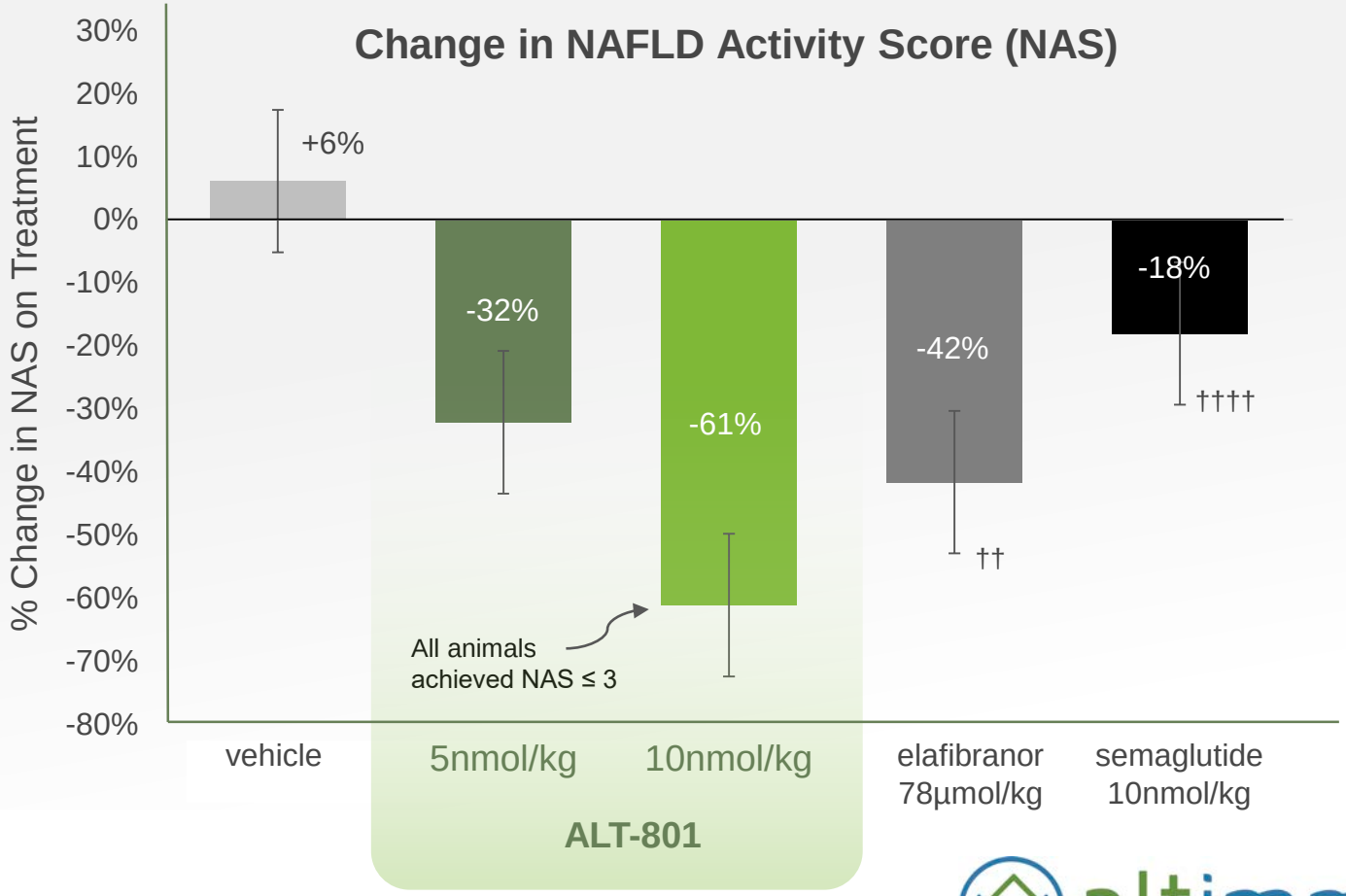
GREATER REDUCTION IN NAFLD ACTIVITY SCORE (NAS)

Gubra NASH Mouse Model After 12 Weeks of Treatment



Mean (SE), 1-way ANOVA with Dunnett's adjustment for multiplicity
†† p < .01, ††† p < .001, ††††, p < .0001 vs. ALT 10 nmol/kg (n=11-12)

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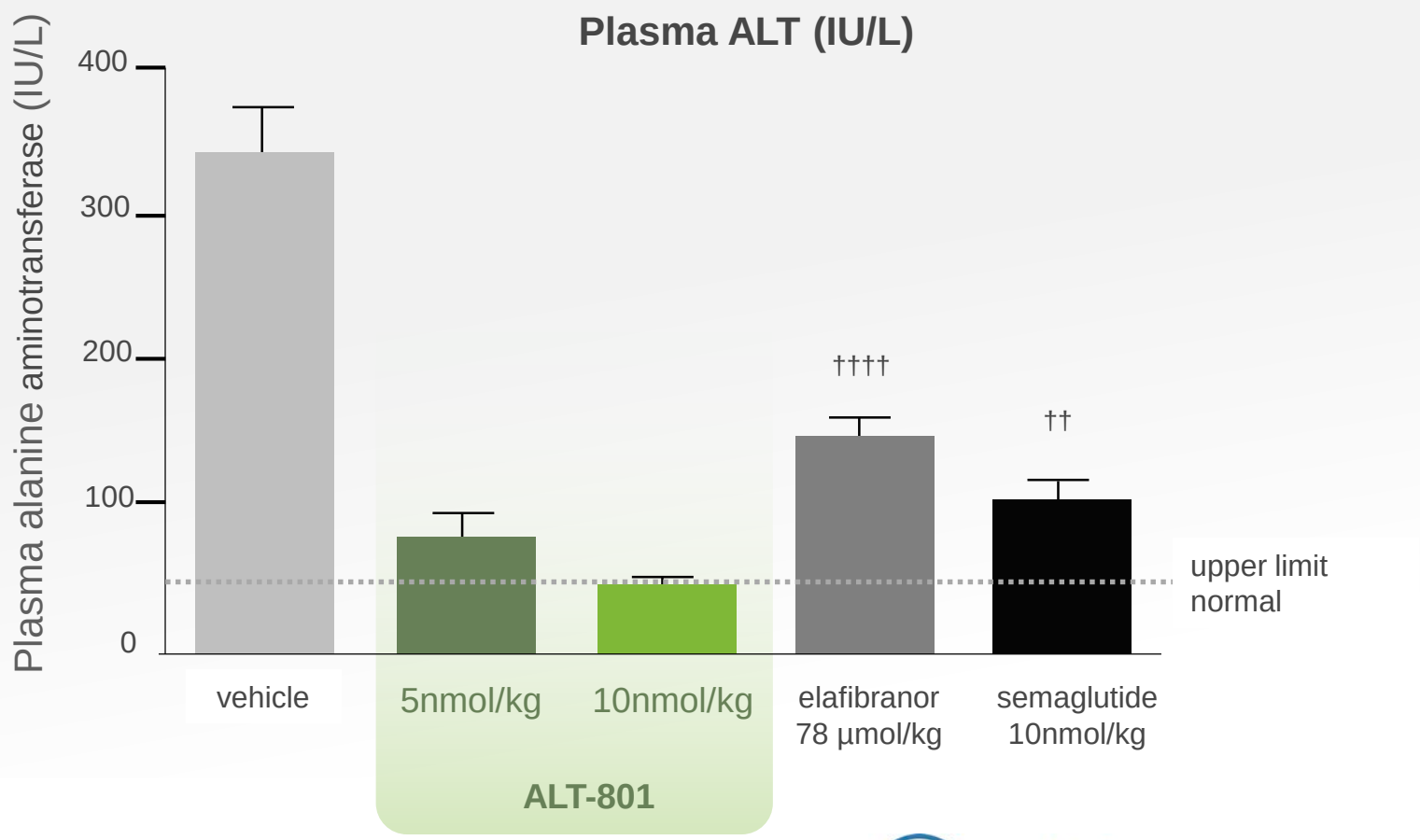
PLASMA ALT NORMALIZED

Gubra NASH Mouse Model After 12 Weeks of Treatment



Mean (SE), 1-way ANOVA with Dunnett's adjustment for multiplicity
†† p < .01, ††† p < .001, ††††, p < .0001 vs. **ALT-801** 10 nmol/kg (n=11-12)

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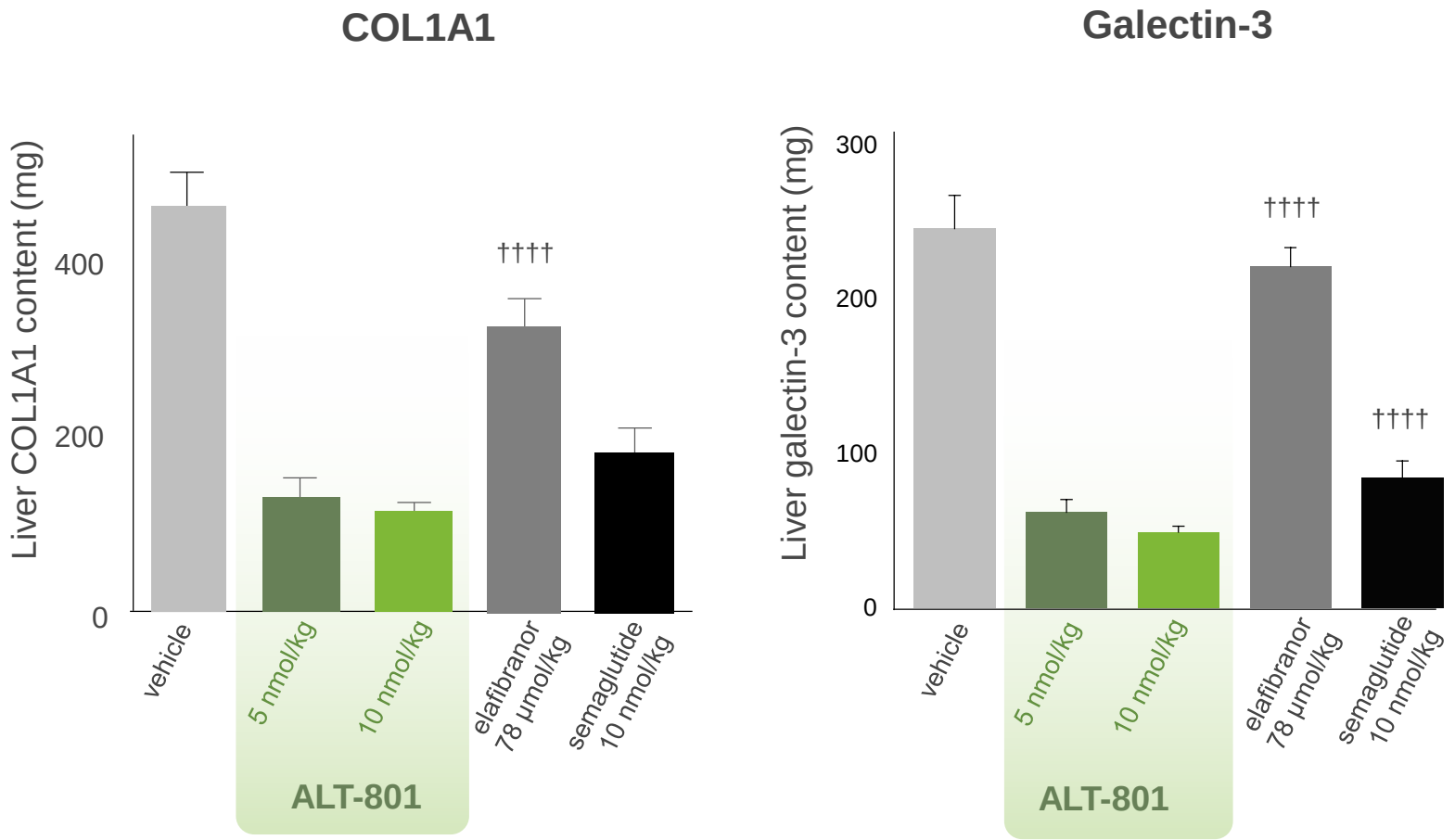
GREATER EFFECTS ON FIBROSIS

Gubra NASH Mouse Model After 12 Weeks of Treatment



Mean (SE), 1-way ANOVA with Dunnett's adjustment for multiplicity
†† p < .01, ††† p < .001, ††††, p < .0001 vs. ALT 10 nmol/kg (n=11-12)

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ALT-801

SUMMARY

- ALT-801 preclinical results showed superior reductions in nearly all measured NASH parameters compared to semaglutide or elafibranor, returning many parameters to lean normal range:
  - Body and liver weight
  - NAS and ALT
  - Collagen (COL1A1 and galectin-3) content
  - Liver fat, cholesterol and triglycerides
- ALT-801 improved metabolic function and exhibited pleiotropic effects in preclinical testing across multiple pathways involved in NASH
- ALT-801 resulted in more profound suppression of genes associated with steatosis, inflammation and stellate cell fibrosis by RNA sequencing compared to elafibranor

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ALT-801

PROJECTED PHASE 1 CLINICAL TIMELINE

Phase 1 Summary

1. SAD in Australia: ~50 patients
2. 6-week MAD in Australia: ~60 patients
3. 12-week parallel-dose in US: ~50 patients

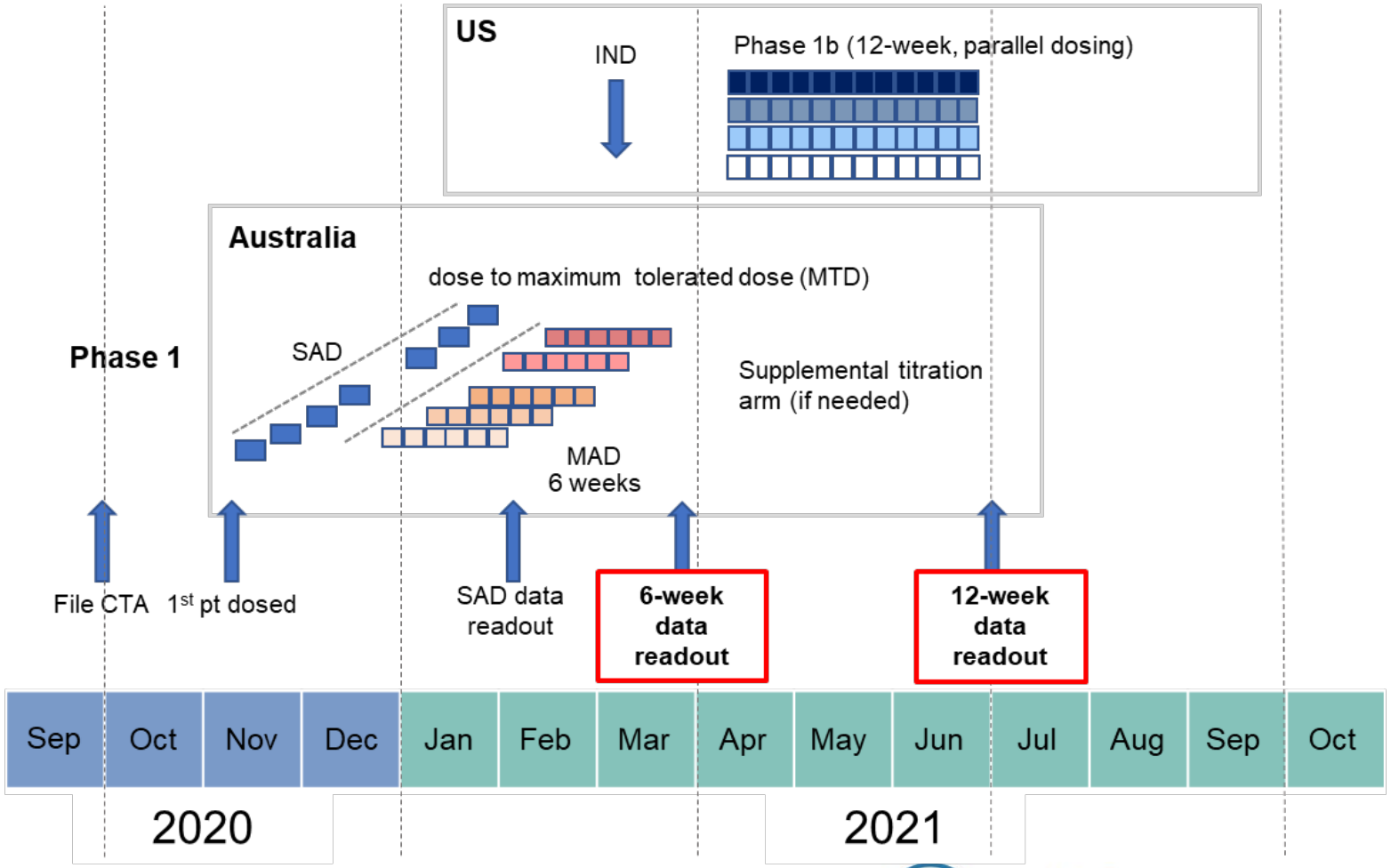
Patient population: Overweight and obese non-diabetics

Endpoints in 6-week study

- Safety, tolerability
- Pharmacokinetics (PK)
- Preliminary read out on weight loss, resting energy expenditure (REE), and liver fat
- Glucose homeostasis

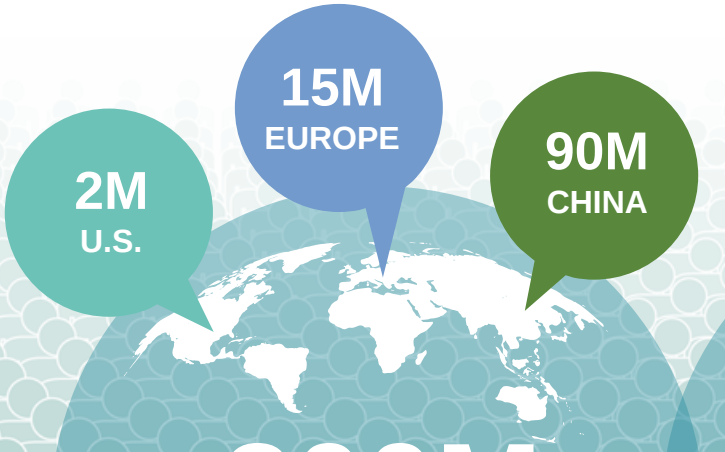
Endpoints in 12-week study

- Safety, tolerability
- PK
- ***Weight loss***
- Liver Fat by MRI-PDFF; lean body mass;
- Non-invasive fibrosis markers
- REE and respiratory quotient (Rq), lipids
- Glucose homeostasis



HepTcell: T CELL STIMULANT THERAPEUTIC FOR CHRONIC HEPATITIS B

SIGNIFICANT OPPORTUNITY TO IMPROVE CURRENT HBV CURE RATES



~300M

People with chronic HBV infection worldwide

780,000+

deaths/year due to cirrhosis and liver cancer

~2.2M

Estimated prevalence of chronic HBV in USA

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CURRENTLY APPROVED HBV THERAPEUTICS DO NOT LEAD TO A CURE

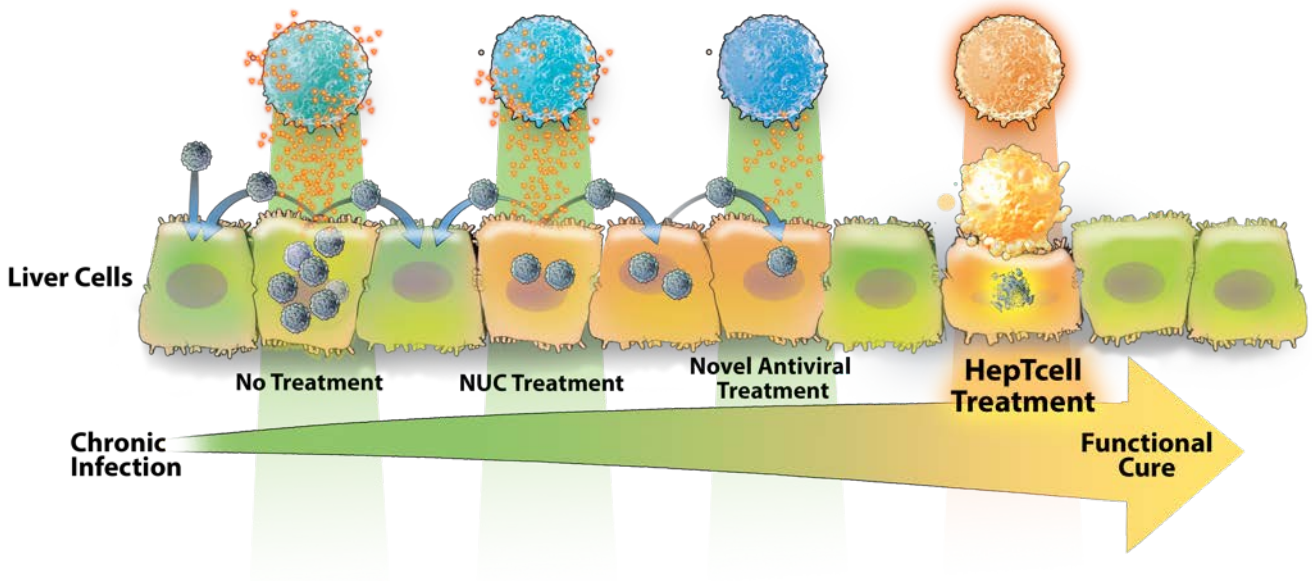
IMMUNE ACTIVATION WILL BE REQUIRED FOR SIGNIFICANT IMPACT

Current antivirals prevent disease progression but **rarely clear chronic infection**

Breaking T cell immune tolerance is key to functional cure

Newer direct-acting antivirals **unlikely to result in immune reactivation alone**

HepTcell is designed to "wake up" dormant T-cells to eliminate infection



altimmune

HepTcell: PHASE 1 SAFETY AND IMMUNOGENICITY STUDY

STUDY IN SUBJECTS CHRONICALLY INFECTED WITH HBV

POPULATION

60 HBeAg- chronic HBV patients

Well controlled on licensed antivirals (entecavir or tenofovir)

DESIGN

3 injections 28 days apart

4 different regimens vs placebo and adjuvant alone

RESULTS

All regimens well tolerated

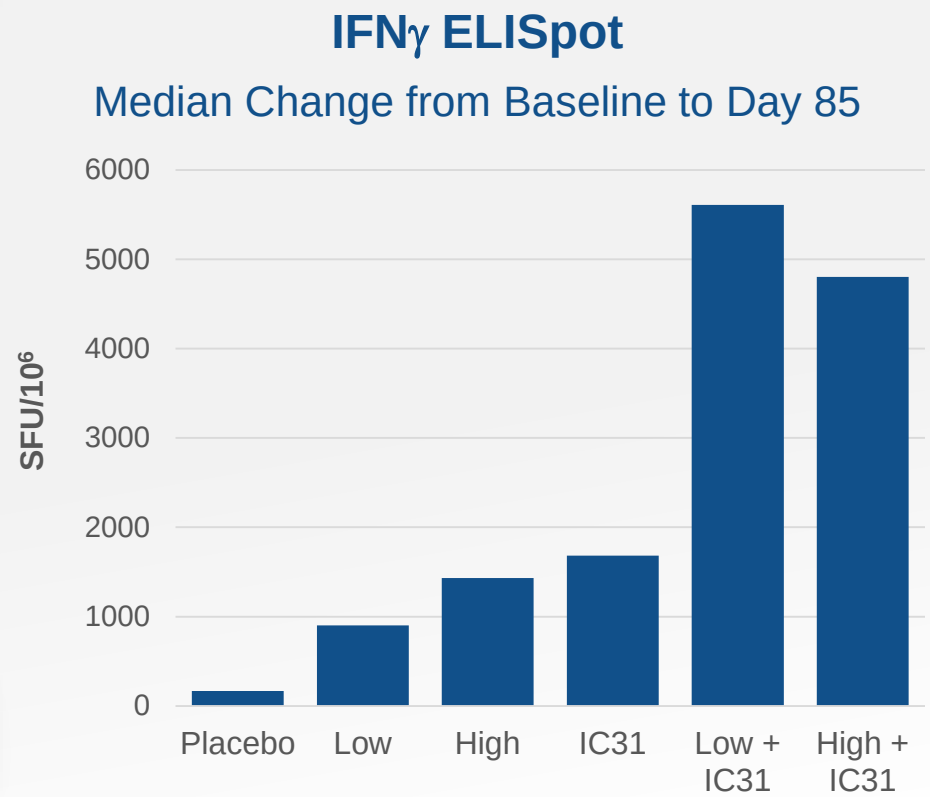
No liver flares or autoimmune events

Increased T cell response to HBV peptides in adjuvanted regimens

altimmune

HepTcell: PHASE 1 SAFETY AND IMMUNOGENICITY STUDY

Anti-HBV T-cell Response After 3 Injections



- HepTcell breaks immune tolerance in chronic hepatitis B patients
- T cell responses strongest when combined with IC31™ adjuvant
- HepTcell dose and use of adjuvant confirmed for Phase 2 studies

altimmune

DIFFERENTIATED

Designed to **restore immune control of infection** instead of targeting viral pathway

Targets all HBV genotypes

Complimentary to currently approved antivirals and other products in development

Phase 1 data in chronically infected population **documented HBV T cell stimulation**

HepTcell

Specific Immunotherapy for Chronic HBV

DEVELOPMENT PLAN

File IND in Q2 2020 following **successful pre-IND meeting**

Phase 2 program in **expanded chronic HBV patient population**

Exploit immune activation of HepTcell in combination with other novel HBV therapeutics

Seek commercial partner with complementary therapeutic product

STRONG INTELLECTUAL PROPERTY PORTFOLIO

SIGNIFICANT PATENT TERM REMAINING IN ALL FAMILIES

ALT-801	2 Granted US patents | Patent applications other territories Expiry ≥ 2035
HepTcell	Granted US, KR patent | Patent applications other territories Expiry ≥ 2033
ALT-702	Granted US patent | Patent applications other territories Expiry ≥ 2034
NasoShield	Granted US, EP, JP patent Expiry ≥ 2032
NasoVAX	Granted US, EP, JP patent | Patent applications other territories Expiry ≥ 2032
AdCOVID	Patents pending

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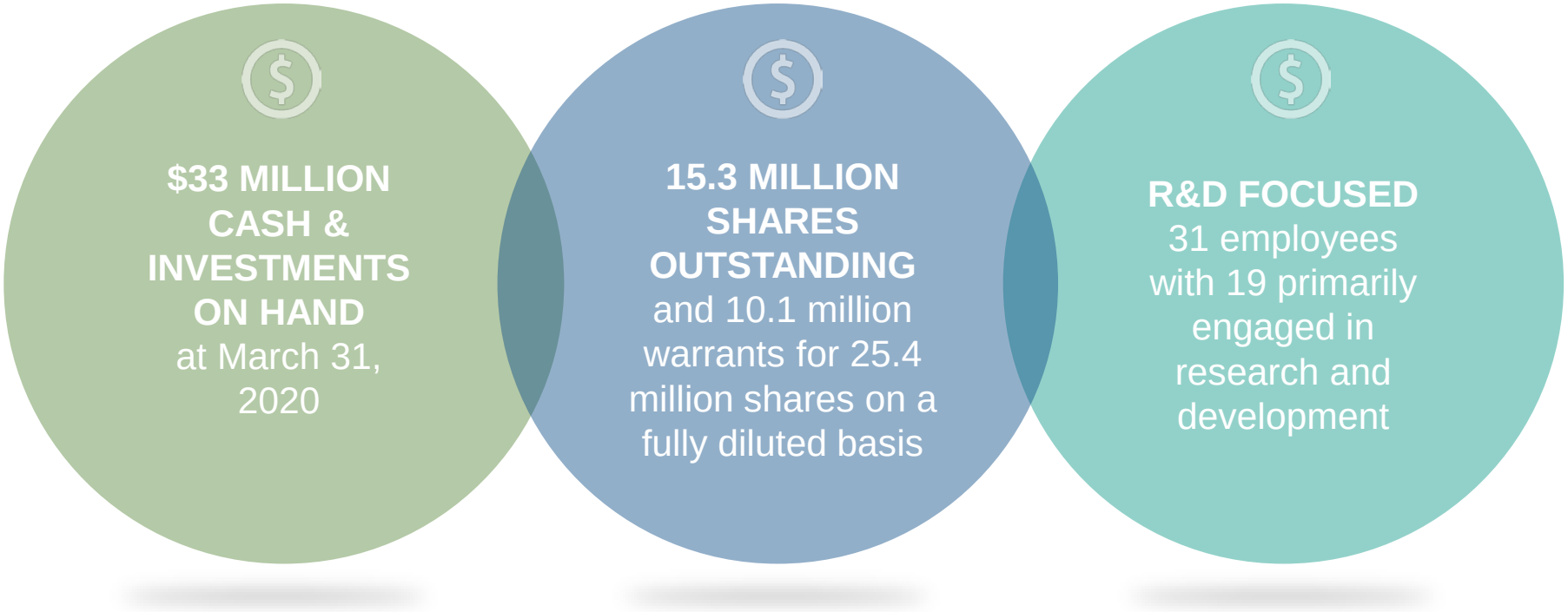
FINANCIAL HIGHLIGHTS

ALTIMMUNE IS WELL POSITIONED TO ADVANCE MULTIPLE PRODUCT CANDIDATES



STRONG EXECUTIVE MANAGEMENT TEAM

Vipin K. Garg, PhD
President & CEO

Will Brown, CPA, MBA
Chief Financial Officer

Scott Harris, MD
Chief Medical Officer

Scot Roberts, PhD
Chief Scientific Officer

Bertrand Georges, PhD
Chief Technology Officer

José Ochoa, JD
Chief Business Officer

SEPRACOR
tranzyme pharma
NEOS Therapeutics
emergent biosolutions
ImQuest BioSciences
Institut Pasteur
Lyric Pharmaceuticals
ocera
IDT
Rheem The new degree of comfort.
Wellstat Group of Companies
IMMUNE TARGETING SYSTEMS
pwc

altimmune

NASDAQ: ALT

CORPORATE PRESENTATION

May 2020