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NASDAQ: ALT

CORPORATE PRESENTATION

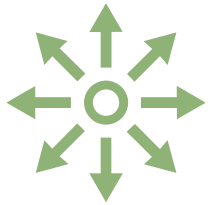
Q4 2020

FORWARD-LOOKING STATEMENTS

Safe-Harbor Statement

This presentation has been prepared by Altimmune, Inc. ("we," "us," "our," "Altimmune" or the "Company") and includes certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the timing of clinical development and funding milestones for our clinical assets as well as statements relating to future financial or business performance, conditions, plans, prospects, trends, or strategies and other financial and business matters, and the prospects for commercializing or selling any product or drug candidates. 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 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: potential impacts due to the COVID-19 pandemic such as delays in regulatory review, manufacturing and supply chain interruptions, adverse effects on healthcare systems and disruption of the global economy, the reliability of the results of the studies relating to human safety and possible adverse effects resulting from the administration of the Company’s product candidates; 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.

COMPANY HIGHLIGHTS



Proprietary **intranasal vaccine platform** ideally suited for rapid response to pandemic situations, including COVID-19

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

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

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STRONG EXECUTIVE MANAGEMENT TEAM

Vipin K. Garg, PhD
President & CEO

Will Brown, CPA, MBA
Chief Financial Officer

Scott Harris, MD
Chief Medical Officer

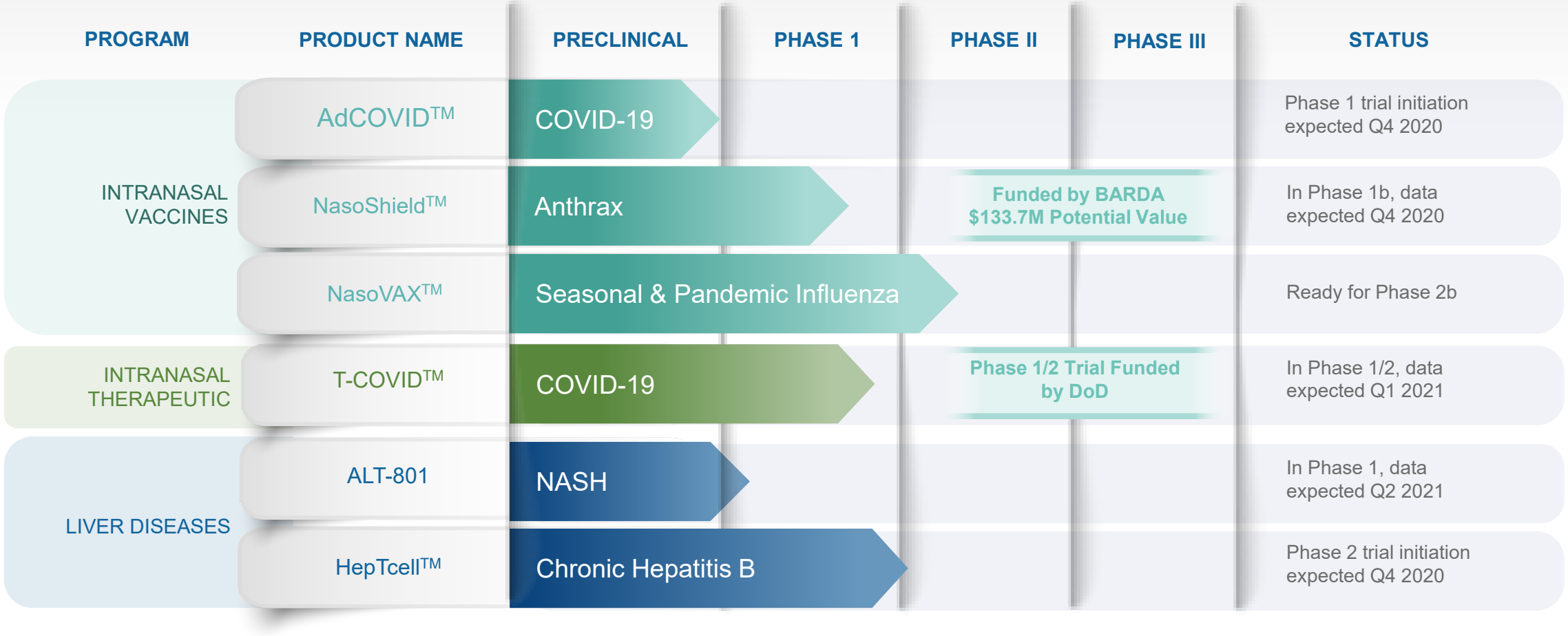
Scot Roberts, PhD
Chief Scientific Officer

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

ADVANCING STRONG DEVELOPMENT PIPELINE



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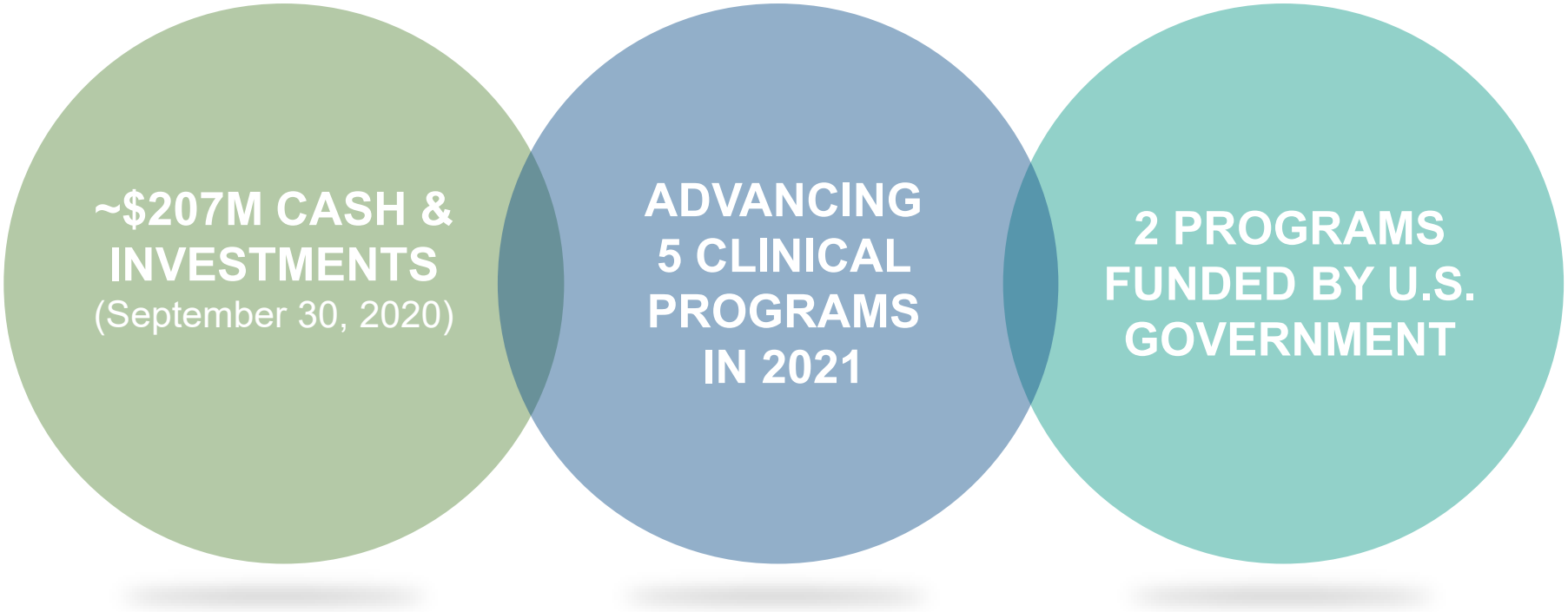
ALTIMMUNE IS WELL POSITIONED TO ADVANCE MULTIPLE PRODUCT CANDIDATES



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STRONG INTELLECTUAL PROPERTY PORTFOLIO

SIGNIFICANT PATENT TERM REMAINING IN ALL FAMILIES

AdCOVID	Issued claims in EP, Prioritized review of pending US claims
NasoShield	Granted US, EP, JP patent Expiry ≥ 2032
NasoVAX	Granted US, EP, JP patent | Patent applications other territories Expiry ≥ 2032
T-COVID	Prioritized review of pending US claims
ALT-801	2 Granted US patents | Patent applications other territories Expiry ≥ 2035
HepTcell	Granted US patent | Patent applications other territories Expiry ≥ 2033

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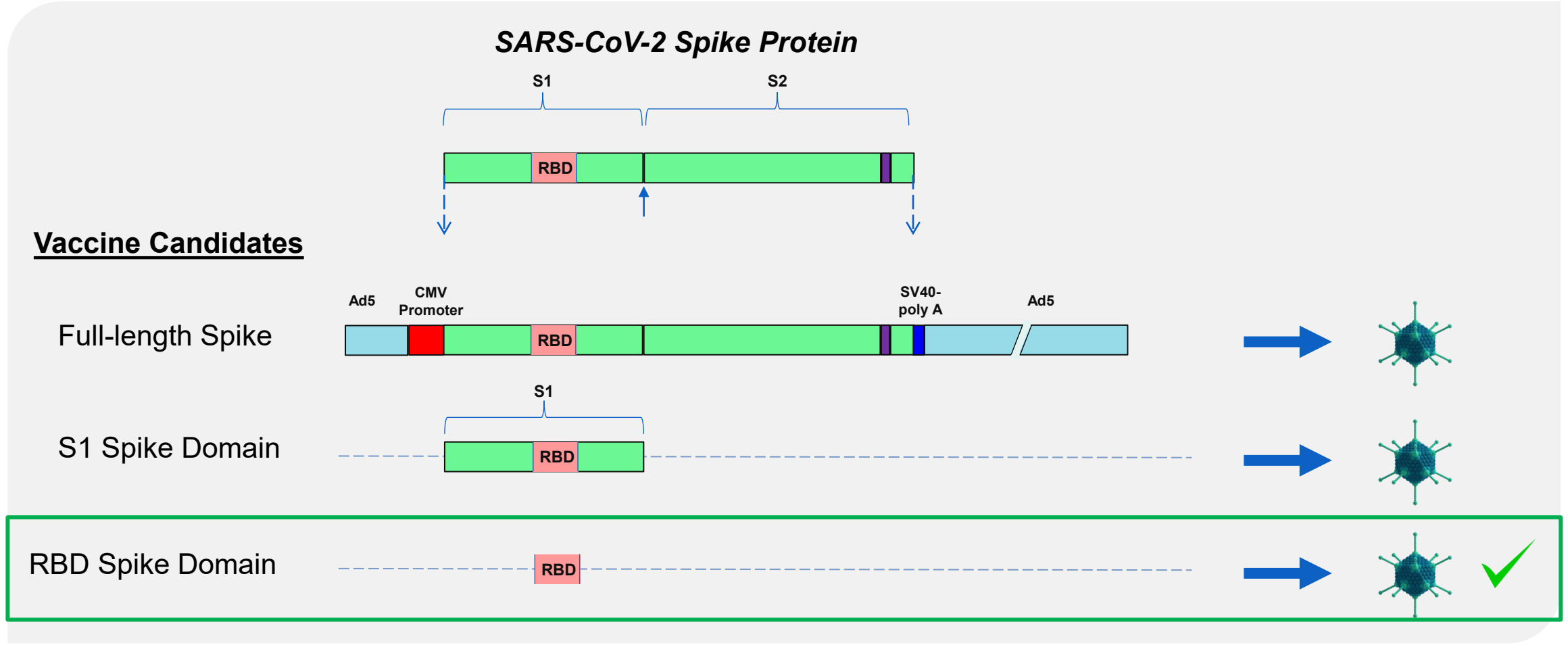
AdCOVID INTRANASAL VACCINE

AdCOVID: SINGLE-DOSE INTRANASAL VACCINE FOR COVID-19

VACCINE CANDIDATES BASED ON REPLICATION-DEFICIENT Ad5 PLATFORM



AdCOVID: IMPROVING UPON FIRST-GENERATION VACCINES

- **Greater ease and comfort of administration**
  - *Single dose, simple nasal spray, not an intramuscular injection*
- **Broader immunity**
  - *Induces neutralizing antibody, T cells and nasal mucosal immunity*
- **Potential to block infection AND transmission**
  - *Stimulates mucosal immunity at the site of viral entry—the nasal cavity*
- **Room temperature stable for several months**
  - *Allows for distribution and deployment without refrigeration or ultra low-temp freezers*
- **Improved safety profile**
  - *Indistinguishable from placebo in Altimmune's clinically tested vaccine platform*
- **Durable antibody response**
  - *13+ months protection demonstrated by Altimmune's clinically tested vaccine platform*

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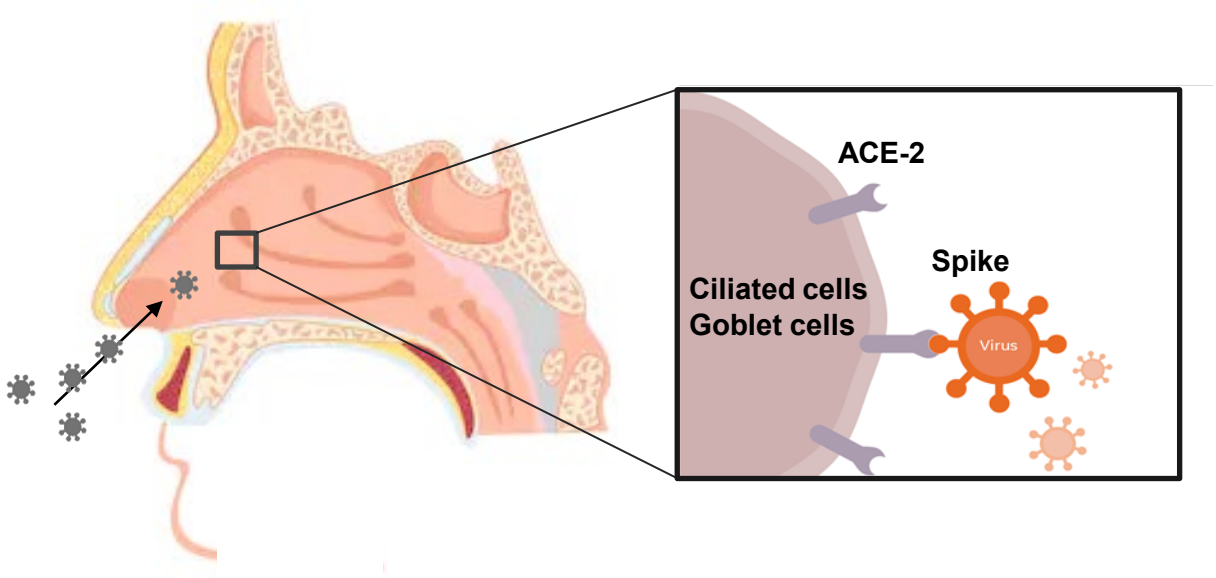
NASAL MUCOSAL IMMUNITY PROTECTS AGAINST COVID-19

TREATMENT AT SITE OF VIRAL ENTRY, REPLICATION AND TRANSMISSION



- 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
- In non-human primates, intramuscular vaccination decreased SARS-CoV-2 in lungs but had no effect on infection in the nasal cavity[1]
- Nasal mucosal immunity affords protection at the site of viral entry and early replication and blocks transmission by shed virus[2]

[1] N van Doremalen et al.

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

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AdCOVID: COMPELLING PRECLINICAL DATA

- Potent induction of multiple arms of the immune system
  - Systemic neutralizing antibody
  - Mucosal IgA response
  - Mucosal and systemic T cell responses
- Longevity of serum antibody responses
- Rapid recruitment of innate and adaptive immune cells into respiratory tract and draining lymph nodes consistent with induction of mucosal and systemic immunity
- Potent CD8+ T cell response in lung with resident memory phenotype

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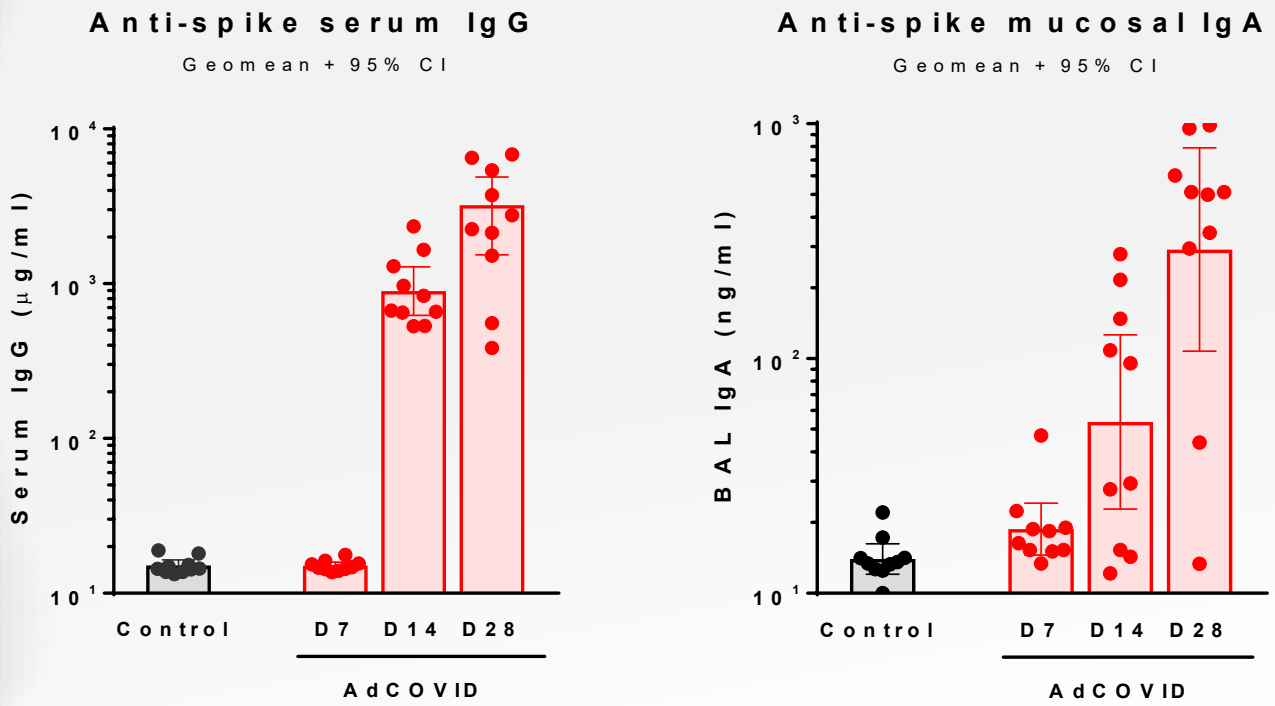
AdCOVID: STIMULATION OF BOTH SERUM AND MUCOSAL ANTIBODIES

Potent Antibody Responses in Serum and Respiratory Tract



Single intranasal dose of AdCOVID

Anti-Spike IgG over 800 µg/mL IgG in serum by Day 14

29-fold induction of mucosal IgA in the respiratory tract by Day 21

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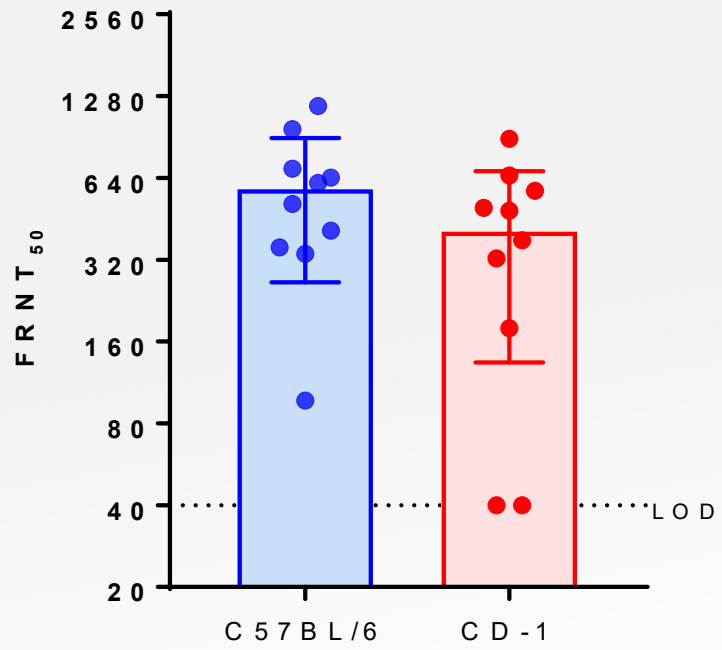
AdCOVID: POTENT INDUCTION OF SERUM NEUTRALIZATION TITERS

Mean Neutralizing Antibodies Against Wild-type SARS-CoV-2



Single intranasal dose of AdCOVID

Consistent results in two strains of mice

Responses are several fold higher than reported for most convalescent sera

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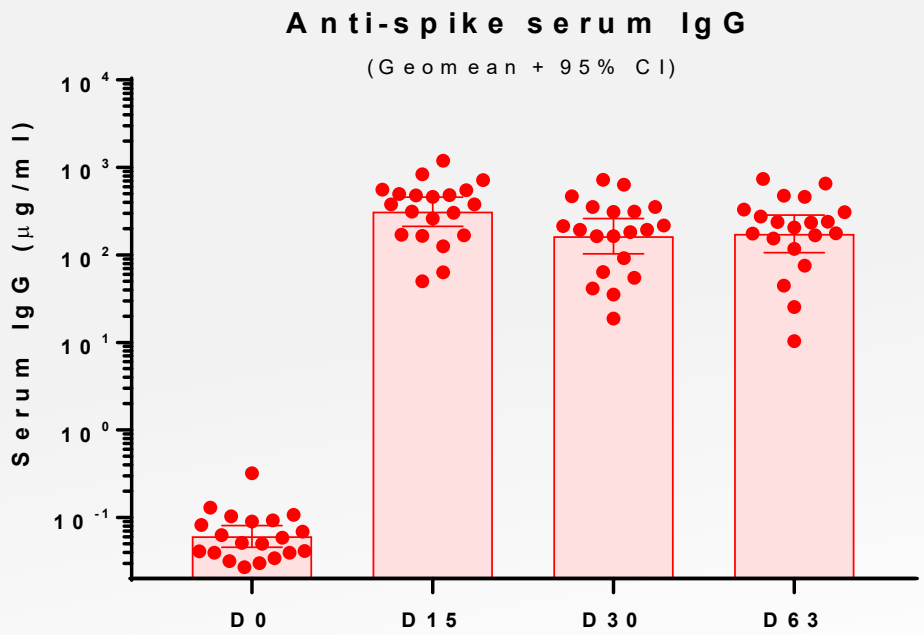
AdCOVID: LONGEVITY OF SERUM ANTIBODY RESPONSE

Stability of Spike-specific serum IgG over time



Single intranasal dose of AdCOVID

No apparent decline in serum IgG two months after vaccination

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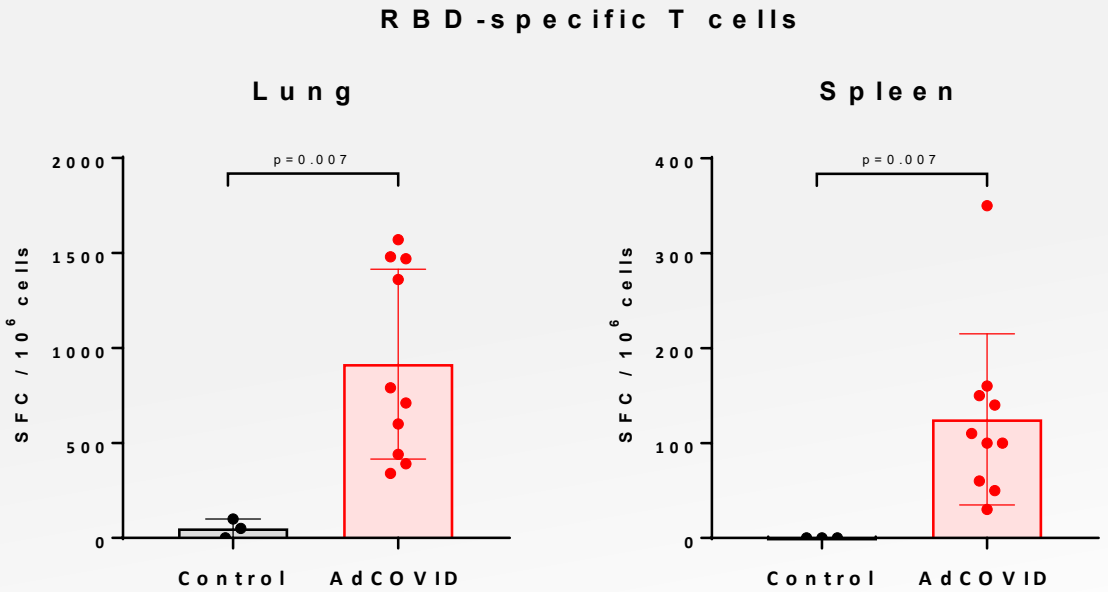
AdCOVID: STIMULATION OF MUCOSAL & SYSTEMIC T CELL IMMUNITY

RBD-SPECIFIC T CELLS IN THE LUNG AND SPLEEN

RBD-specific T Cell Responses



Single intranasal dose of AdCOVID

Mucosal (lung) and systemic (spleen) T cell responses

T cell response especially strong in lung

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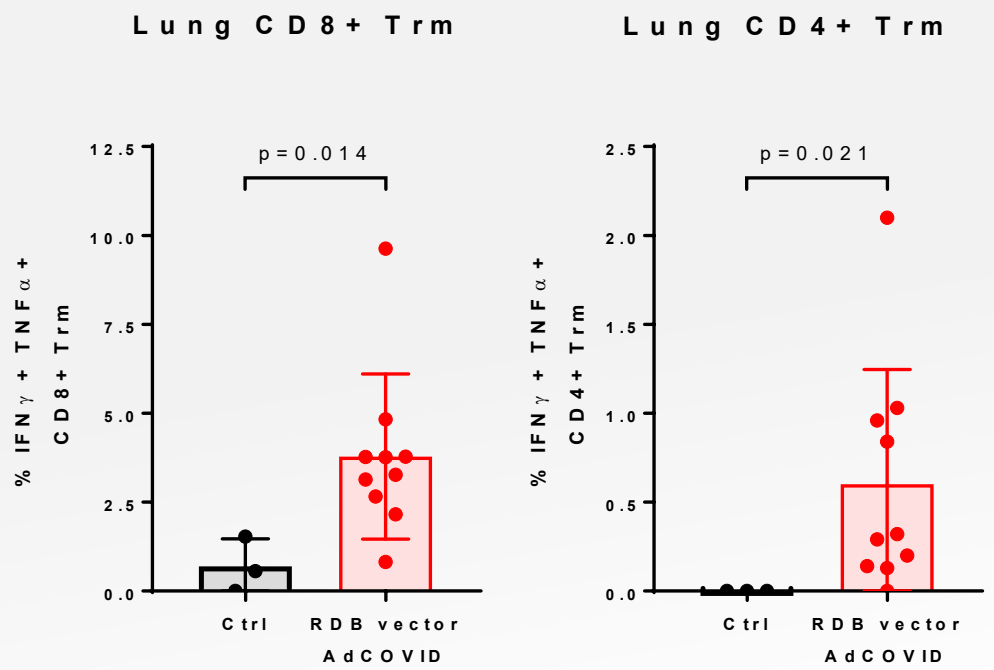
AdCOVID: CELL IMMUNITY INCLUDED RESIDENT MEMORY T CELLS

TISSUE-LOCALIZED T CELLS POISED TO FIGHT LUNG INFECTION

RBD-specific Resident Memory T Cell Responses



- Single intranasal dose of AdCOVID
- T cells with a resident memory phenotype stay in lung poised for protection
- Strong CD8+ killer T cell response to clear infected lung cells

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AdCOVID: PHASE 1 CLINICAL TRIAL TO COMMENCE Q4 2020

- 180 healthy volunteers randomized 5:1 to AdCOVID or placebo within 6 cohorts (prime alone or prime + boost at 3 dose levels, n = 30/cohort)
- Safety endpoints
  - Adverse events and reactogenicity (local and systemic)
- Immunogenicity endpoints:
  - Anti-SARS-CoV-2 spike IgG antibody levels
  - Virus neutralizing antibody titer against live and/or pseudotype SARS-CoV-2 virus
  - Anti-SARS-CoV-2 RBD T cell responses and subsets
  - Anti-SARS-CoV-2 spike IgA
  - Antibody responses based on pre-dose Ad5 antibody levels

Phase 1 data readout expected Q1 2021

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AdCOVID: IDEALLY SUITED FOR ADULTS AND CHILDREN

- Underlying platform has excellent safety profile, which is essential for treating the pediatric population
- Intranasal administration better accepted by adolescents and children, better compliance
- While children experience less severe COVID-19, they are potent transmitters of SARS-CoV-2 due to higher levels of virus in the nasopharynx and ACE2 compared to adults
  - Children who attend school put their teachers and parents at risk of disease
  - The recent surge of COVID-19 has been partially attributed to the return of children to school
  - An effective vaccine that blocks viral transmission would allow children to return to school and their parents to return to work

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AdCOVID: IDEALLY SUITED FOR HETEROLOGOUS PRIME BOOST

- Heterologous prime boost regimens have been suggested by CDC as a potential way to improve vaccine effectiveness for protection, durability and transmission
- Nearly all Phase 3 COVID-19 vaccines require a two-shot, prime-boost regimen
- None of the Phase 3 vaccines are expected to elicit mucosal immunity in the respiratory tract
- Heterologous prime boost regimens with AdCOVID could have significant advantages
  - Stimulation of mucosal IgA and mucosal T cell responses for improved protection and reduced transmission
  - Enhanced durability of immune response
  - Reduced adverse events associated with the prime boost

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AdCOVID DEVELOPMENT STATUS

Activity	Status
Design and Engineering of Vaccine Candidates	Complete
Preclinical Testing and Down Selection of Candidate	Complete
Toxicology	Not Required
GMP Manufacturing	Ongoing
Phase 1 Initiation	Expected Q4 2020
Phase 1 Topline Data	Expected Q1 2021
Phase 2 Initiation	Expected Q2 2021

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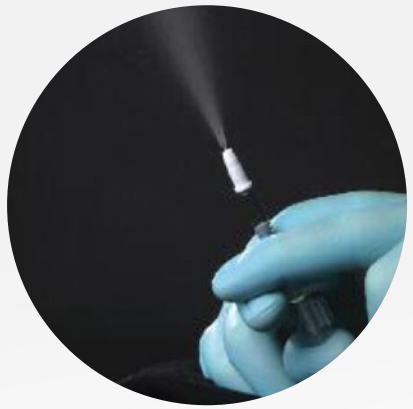
NasoSHIELD
INTRANASAL VACCINE

NasoShield: FUNDED THROUGH A DEVELOPMENT CONTRACT WITH BARDA

Phase 1b data expected in Q4 2020



Received $3.7M BARDA funding to conduct Phase 1b clinical trial

$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 $1.6 billion total potential contract value

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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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T-COVID
INTRANASAL
THERAPEUTIC

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

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

Single dose intranasal therapeutic

- Potentially self-administered

Modulates the innate immune response

- Reduced lung inflammation and inflammatory cytokine response in preclinical models

Acts rapidly

- Provided protection within days of administration in preclinical models

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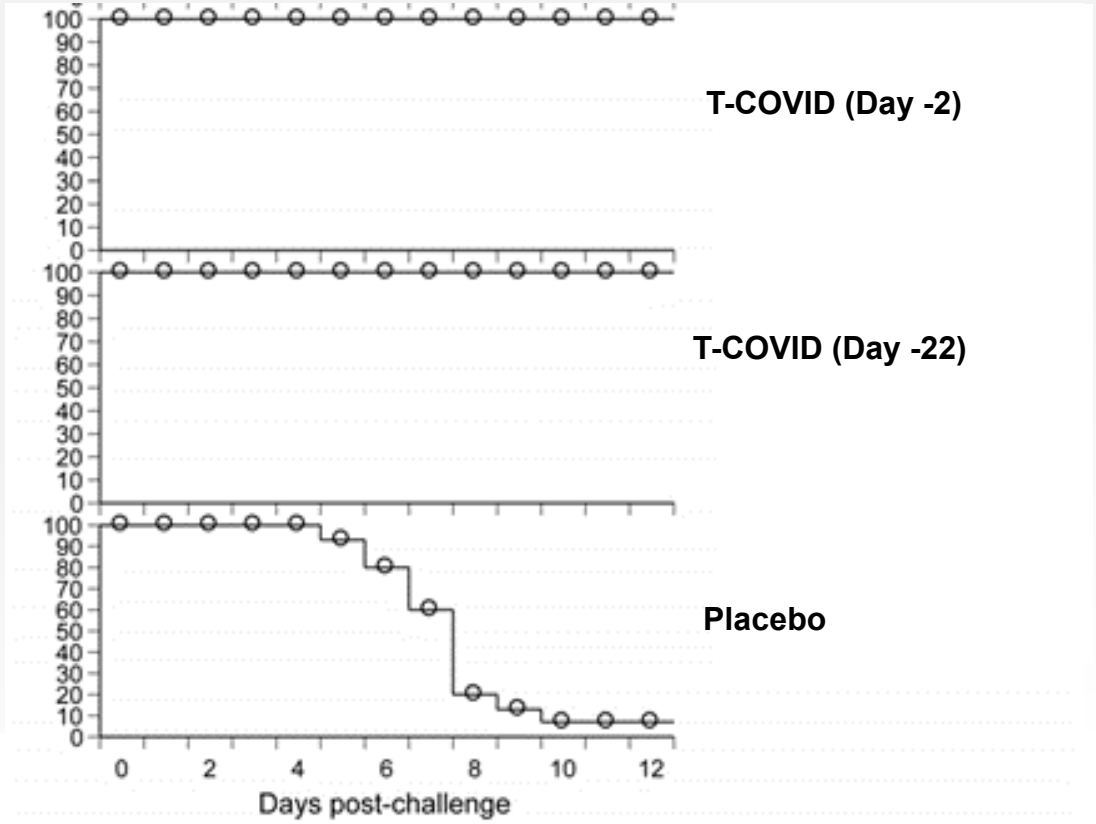
T-COVID: RAPID PROTECTION FROM RESPIRATORY PATHOGENS

Survival curves following lethal influenza challenge



Near immediate protection from challenge with influenza virus

Mechanism based on reduction of exaggerated lung inflammatory cytokine response

Pathogen-independent mechanism suggests efficacy against broad panel of respiratory pathogens

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T-COVID PHASE 1/2 CLINICAL TRIAL ONGOING

- 96 community-based patients with fever, cough, or shortness of breath, with onset of symptoms and confirmed diagnosis of COVID-19 within 72 hours
- Randomized 1:1 to T-COVID or placebo administered as a single 0.5 mL nasal spray on the day of diagnosis
- 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 (SpO_2), or hospitalization
- Secondary endpoints:
  - Average decrease in resting SpO_2
  - Average increase in resting pulse rate
  - Proportion of patients requiring oxygen supplementation and mechanical ventilation

Phase 1 data readout expected Q1 2021

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LIVER DISEASE
ALT-801

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—we believe 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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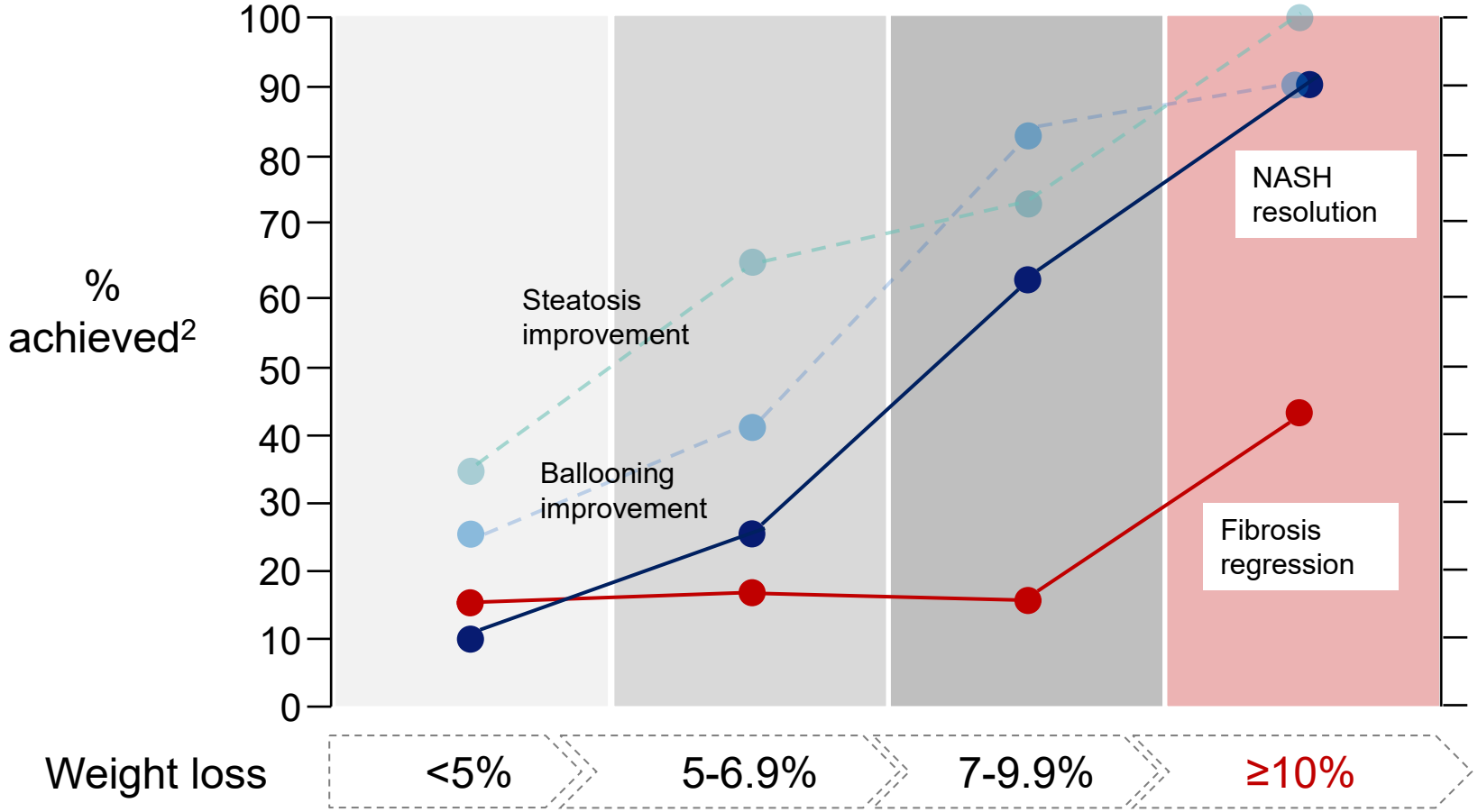
SUBSTANTIAL BODY WEIGHT LOSS IS NECESSARY TO BLUNT NASH PROGRESSION

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

GLP-1

blood glucose

appetite

inflammation

Indirect effects on liver

GLUCAGON

energy expenditure

adipose browning

lipolysis/ gluconeogenesis

mobilization of liver fat

Direct effects on liver

DESIGNED FOR SIGNIFICANT REDUCTIONS IN

body weight

liver fat, inflammation and resulting fibrosis

blood glucose

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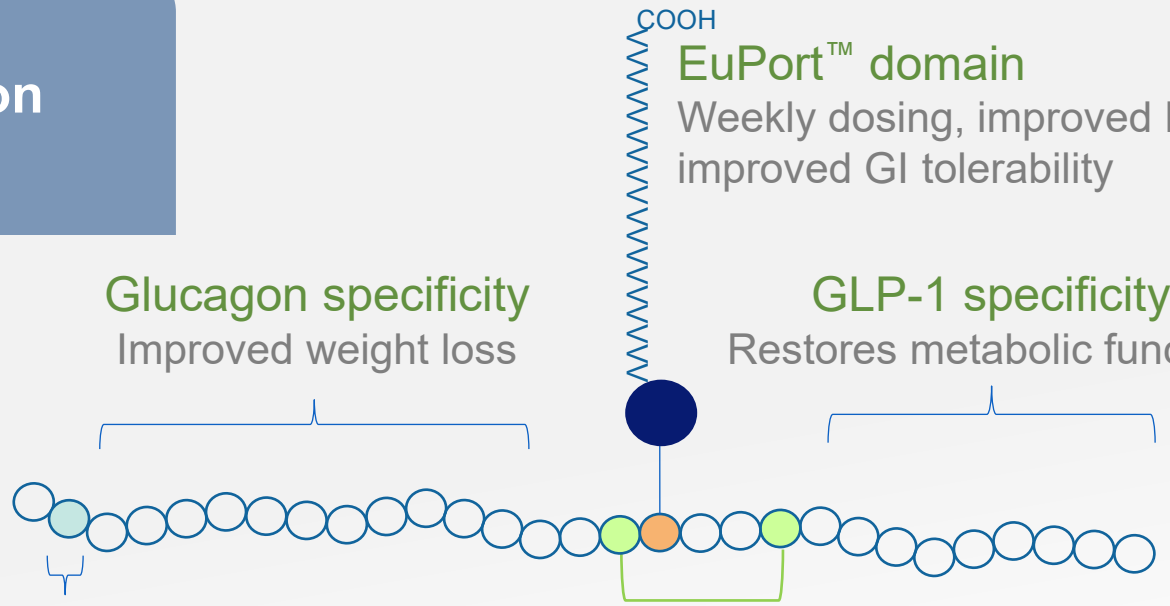
ALT-801: RATIONALLY DESIGNED AND HIGHLY DIFFERENTIATED

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

SUMMARY OF PRECLINICAL STUDIES

- ALT-801 preclinical results in diet induced obesity models 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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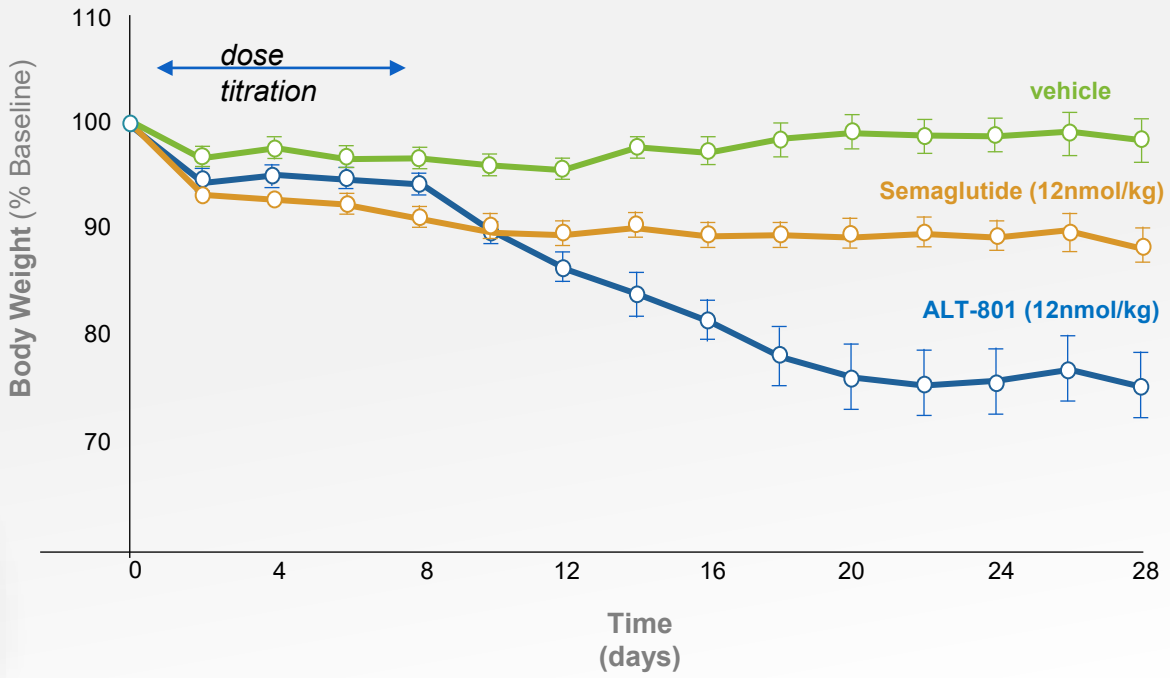
ALT-801

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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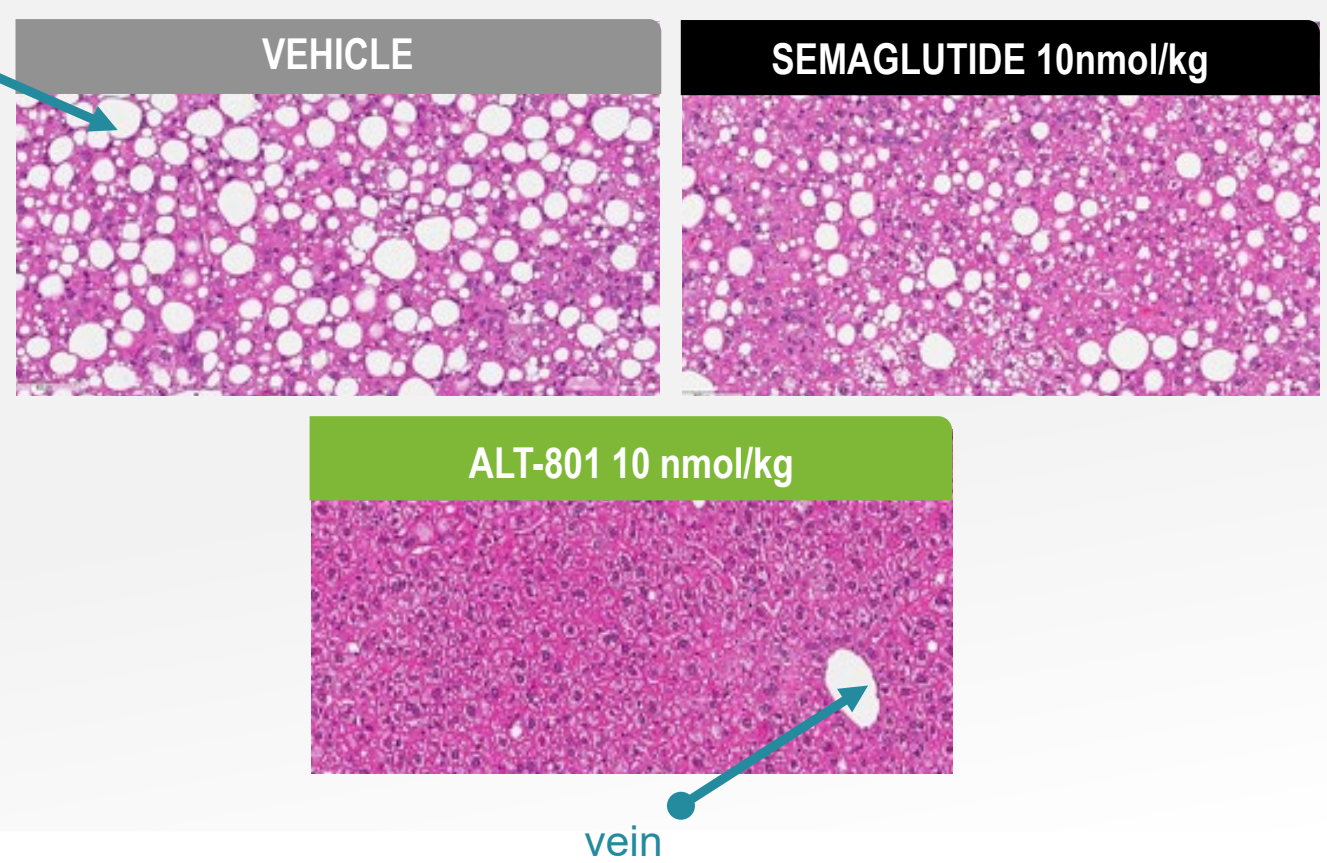
REDUCTION IN LIVER FAT AND LIVER WEIGHT TO LEAN NORMAL RANGE

Gubra Model After 12 Weeks of Treatment



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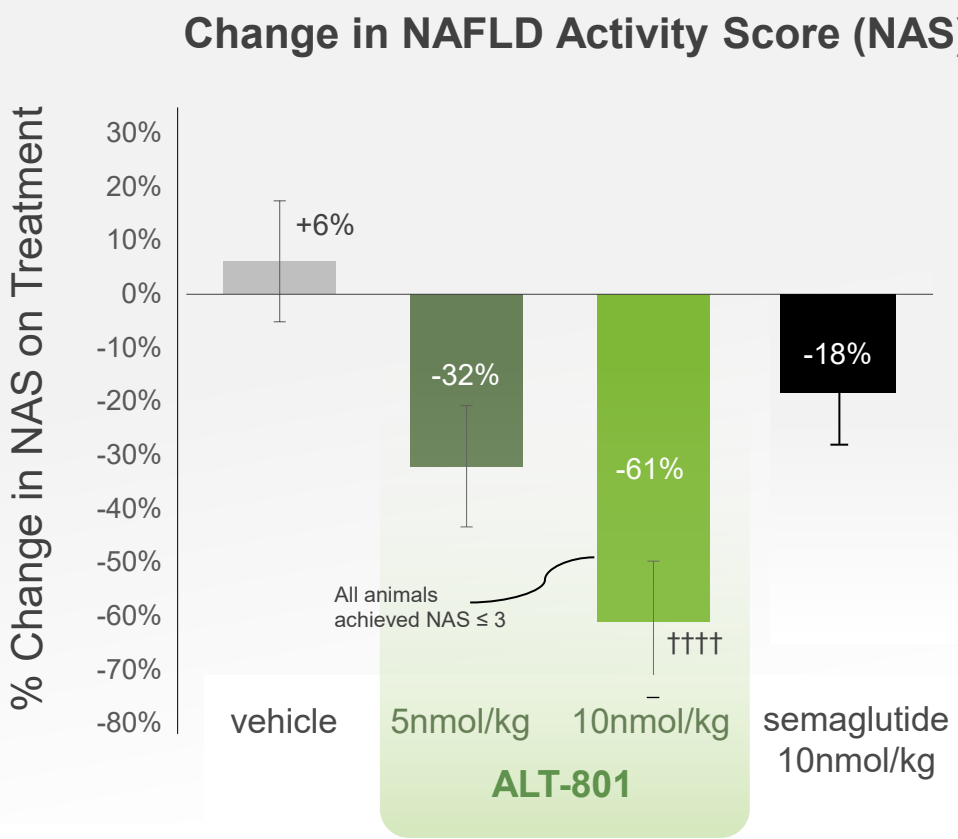
IMPROVEMENT IN NAFLD ACTIVITY SCORE (NAS)

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. semaglutide (n=11-12)

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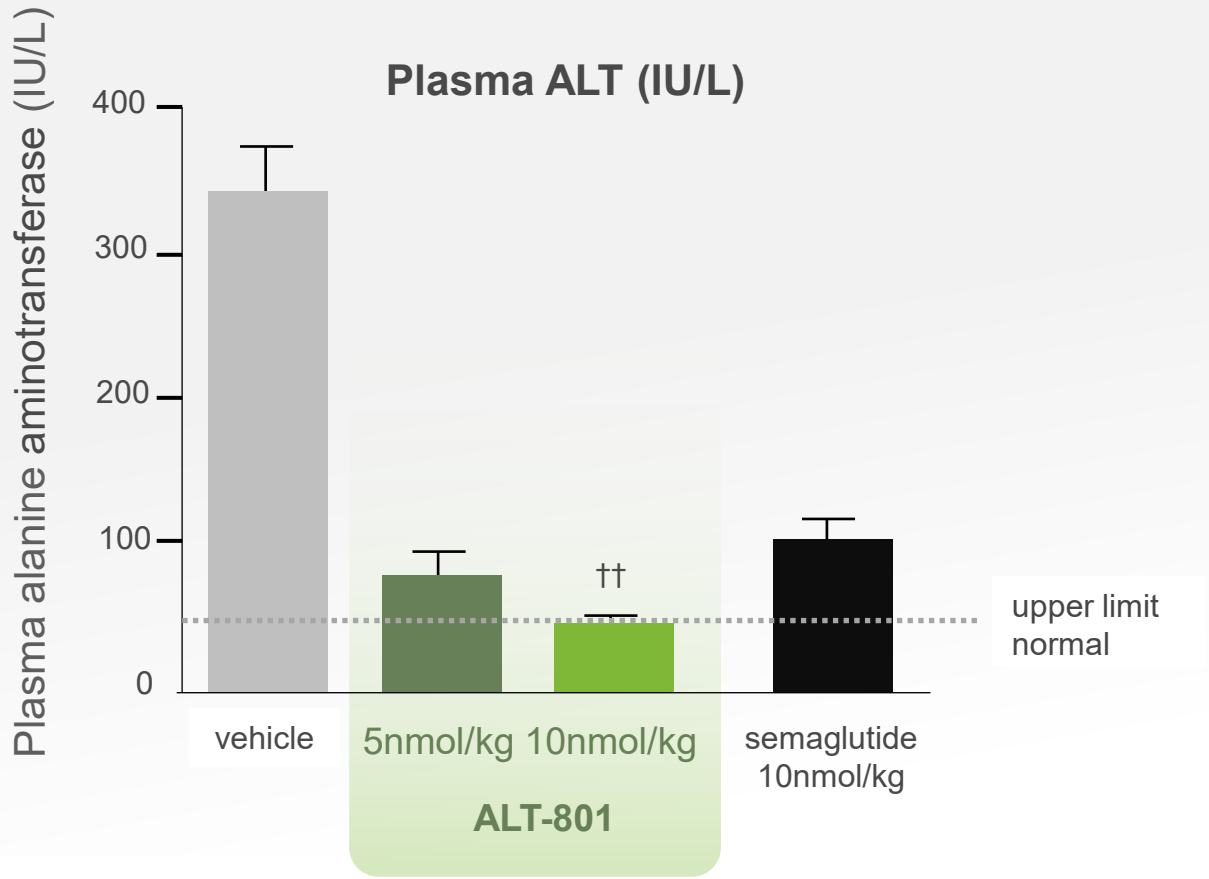
NORMALIZATION OF PLASMA ALT

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. semaglutide (n=11-12)

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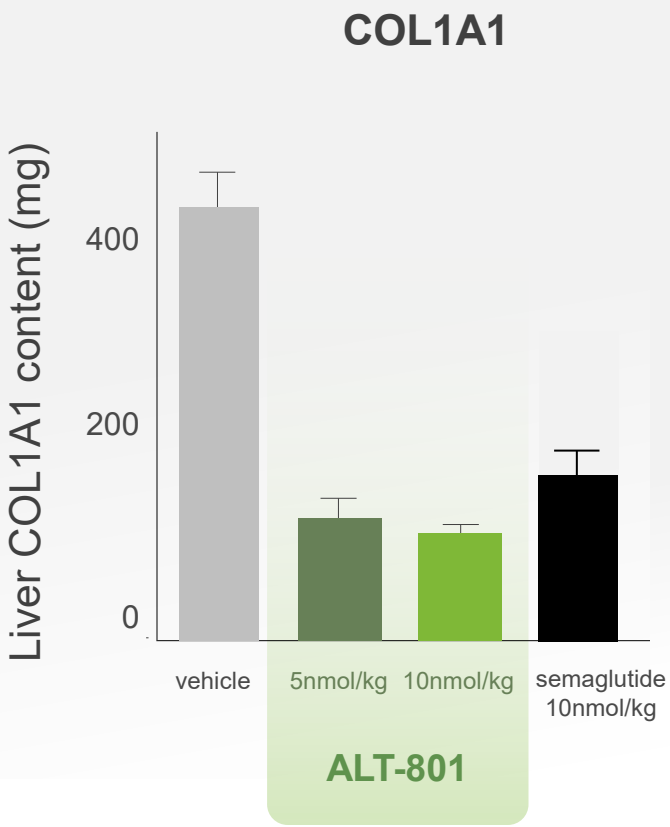
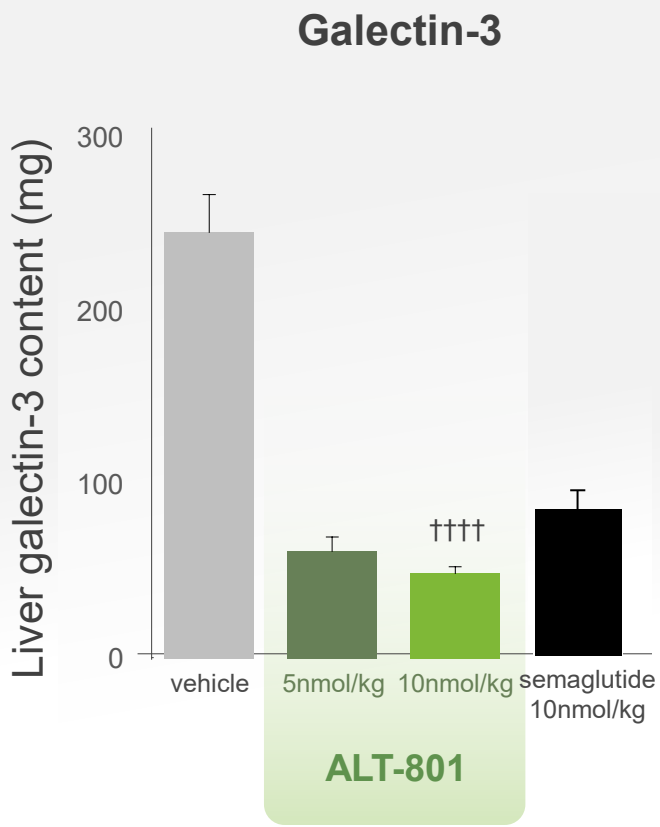
GREATER EFFECTS ON FIBROSIS

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. semaglutide (n=11-12)

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ALT-801

PROJECTED PHASE 1 CLINICAL TIMELINE

Phase 1 Summary - Australia

1. SAD: ~50 patients
2. 6-week MAD: ~60 patients
3. 12-week parallel-dose NAFLD extension study: ~100 patients

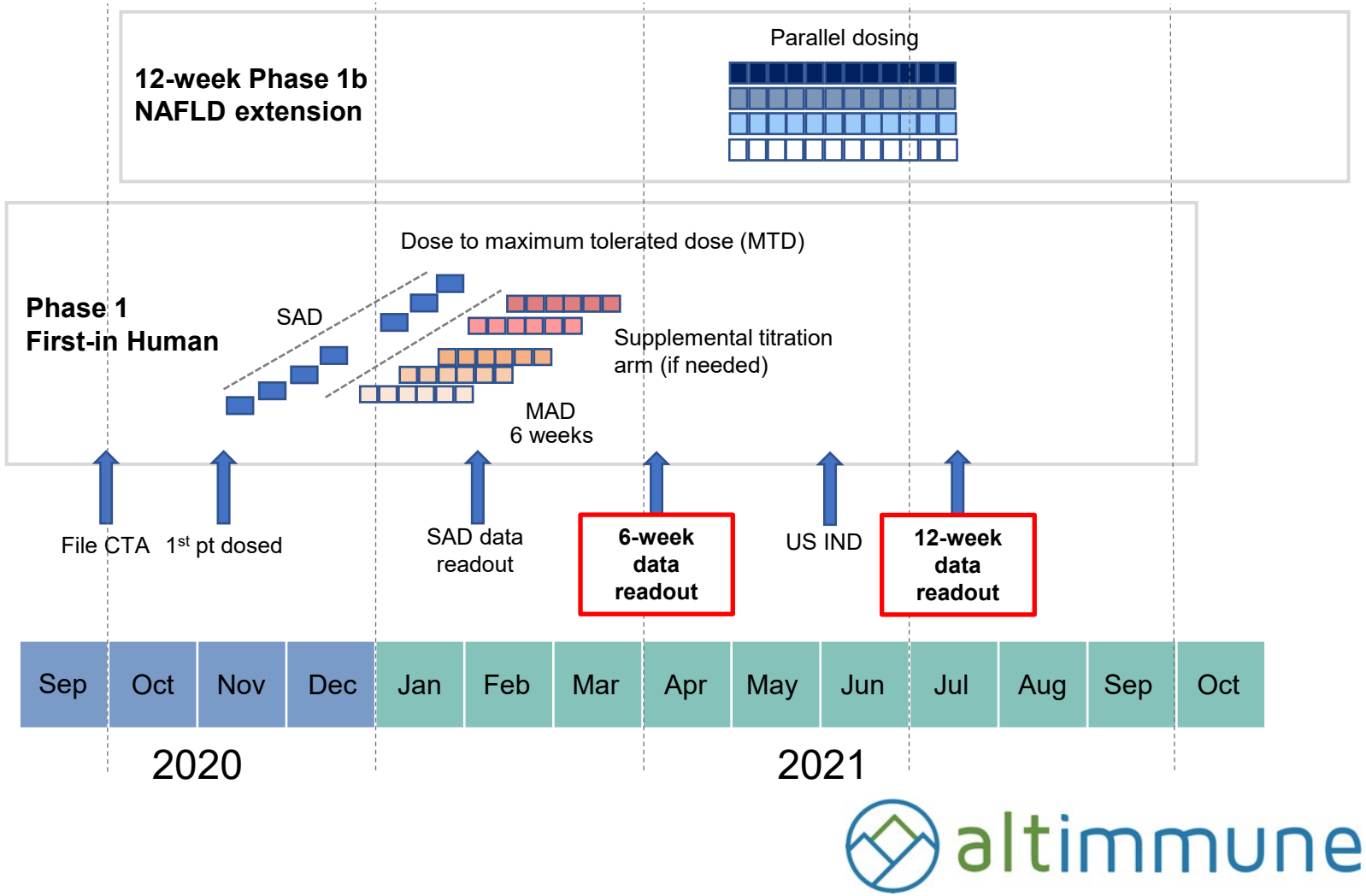
Patient population: Overweight and obese non-diabetics

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



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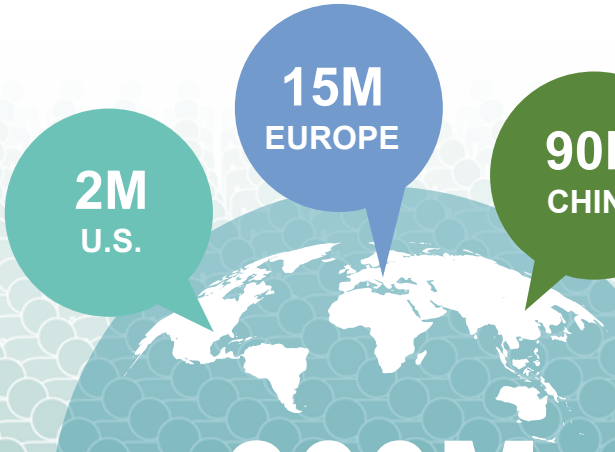
LIVER DISEASE

HepTcell

HepTcell: T CELL IMMUNOTHERAPEUTIC 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

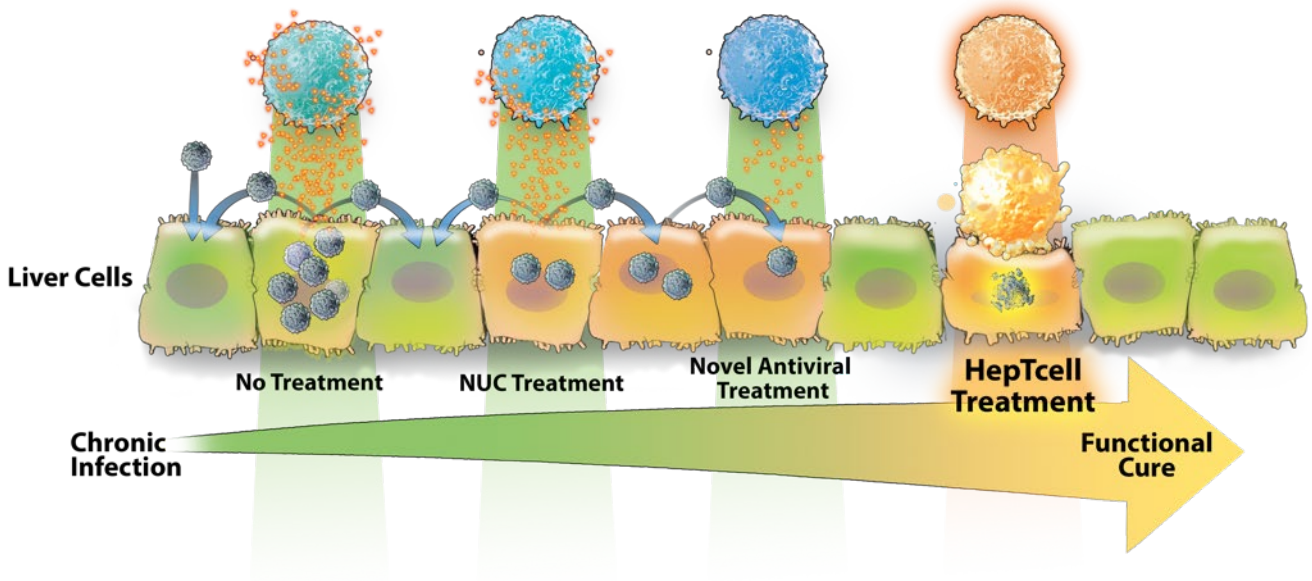
IMMUNE ACTIVATION WILL BE REQUIRED FOR SIGNIFICANT IMPACT

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



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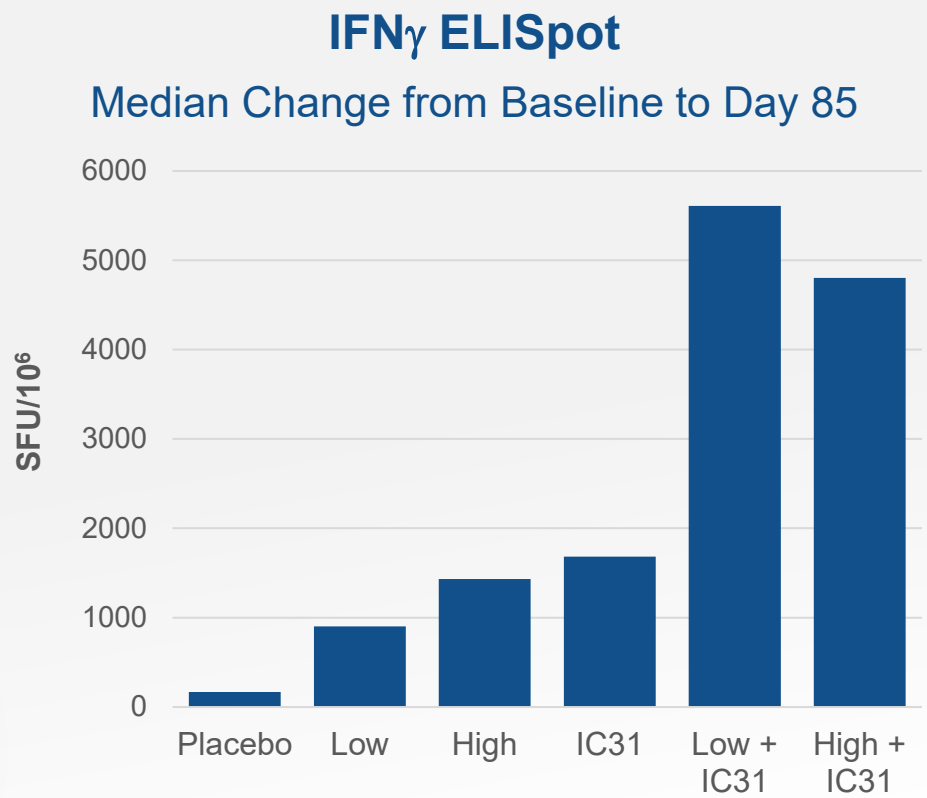
HepTcell: PHASE 1 SAFETY AND IMMUNOGENICITY STUDY

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

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HepTcell: PHASE 2 CLINICAL TRIAL

MULTINATIONAL, MULTICENTER TRIAL OF HEPTCELL IN INACTIVE CHRONIC HEPATITIS B

- 80 patients with e-antigen negative inactive chronic hepatitis B and HBsAg ≤ 100 IU/mL randomized 1:1 to HepTcell or placebo administered every 4 weeks for 24 weeks
- Follow-up study phase of 48 weeks after the last dose will assess the safety and durability of response of treatment
- Study to be conducted at 20 sites in the US, Canada and Europe
- Efficacy endpoints
  - Primary endpoint: proportion of patients with 1.0-log reduction in HBsAg from baseline at Week 24
  - Secondary endpoints: HBsAg clearance, changes from baseline in HBsAg, HBV DNA, HBcrAg, pg-RNA at Week 24

Enrollment expected to commence Q4 2020; data readout expected Q1 2022

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Conclusion

STRONG ANTICIPATED NEWS FLOW

Timing	Program	Event
Q4 2020	AdCOVID	Commence Phase 1 clinical trial
Q4 2020	NasoShield	Phase 1b clinical trial readout
Q4 2020	HepTcell	Commence Phase 2 clinical trial
Q1 2021	T-COVID	Phase 1/2 clinical trial readout
Q1 2021	AdCOVID	Phase 1 clinical trial readout
Q1 2021	NasoShield	BARDA decision to exercise $105M option for Phase 2 development
Q2 2021	ALT-801	Phase 1 SAD/MAD clinical trial read-out

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ALTIMMUNE: INVESTMENT HIGHLIGHTS

1. **Diversified portfolio with 2 proprietary technology platforms**
   Intranasal vaccines & peptide therapeutics
2. **Highly-differentiated intranasal vaccine approach**
   Offers advantages over other vaccine approaches
3. **Strong clinical focus and momentum**
   5 active clinical programs in Q4 2020
4. **Multiple valuation catalysts anticipated over the next 6 months**
   Data read-outs from multiple clinical programs
5. **Solid cash position to reach value-generating milestones**
   ~$207M at September 30, 2020

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THANK YOU