PRECISION EXOSOMES
REVOLUTIONARY MEDICINES

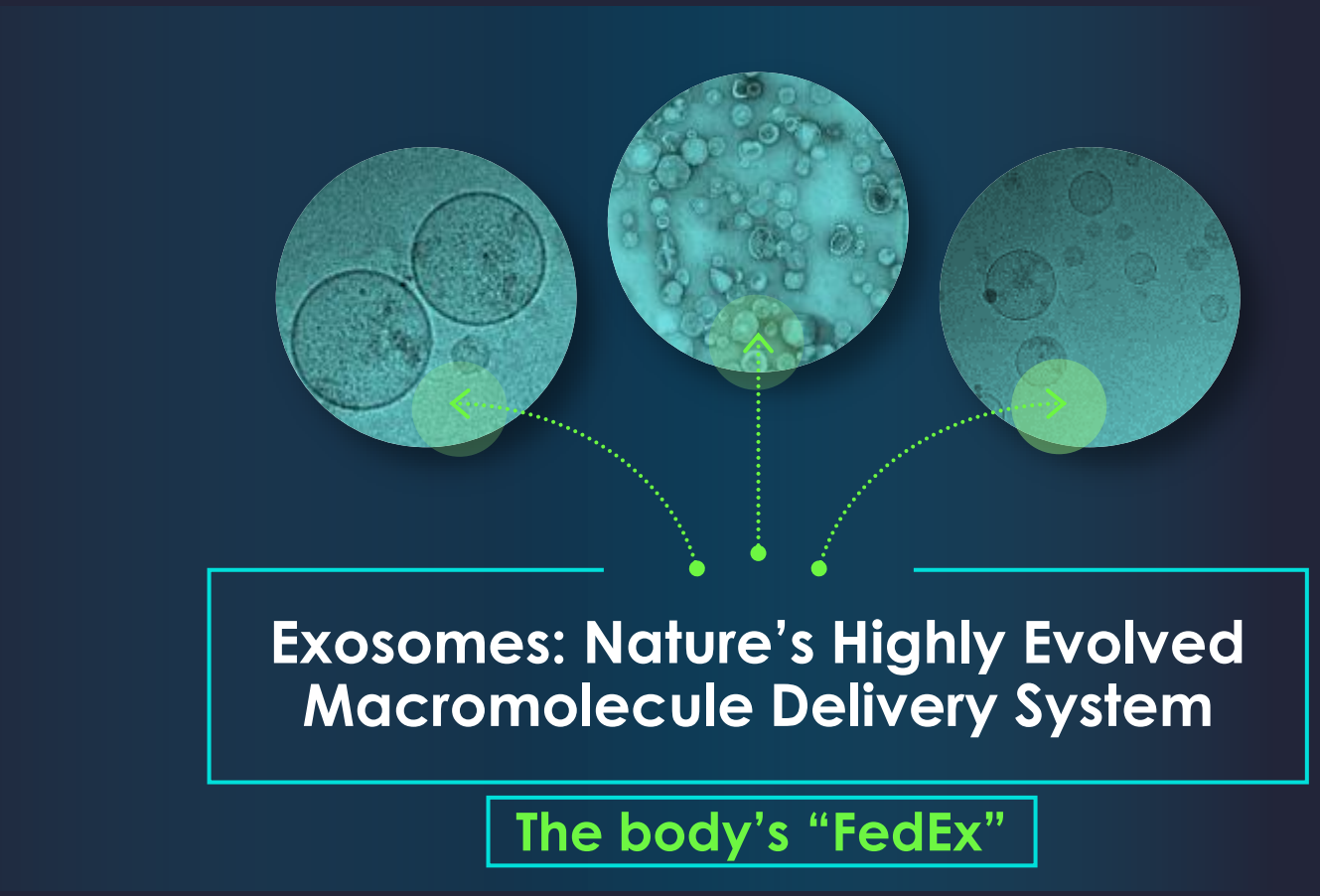
CODIAK

April 2022

Forward-Looking Statements and Disclaimers

These slides and the accompanying presentation contain forward-looking statements and information within the meaning of the Private Securities Litigation Reform Act of 1995. The use of words such as "may," "might," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," "project," "intend," "future," "potential," or "continue," and other similar expressions are intended to identify forward-looking statements. Information regarding other drug products in this presentation is meant to provide context for illustrative purposes only. Because there are no head-to-head clinical studies, no conclusions should be made based on cross study comparison. All forward-looking statements are based on current expectations of future events, estimates and assumptions by our management that, although we believe to be reasonable, are inherently uncertain. All forward-looking statements are subject to a number of risks and uncertainties that may cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements, including those risks and uncertainties that are described under the heading "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2021, as well as discussions of potential risks, uncertainties and other important factors in our subsequent filings with the Securities and Exchange Commission. Any forward-looking statement speaks only as of the date on which it was made. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by law.

Co-opting Nature's Delivery System/Creating a New Therapeutic Class



Exosomes: Nature's Highly Evolved Macromolecule Delivery System

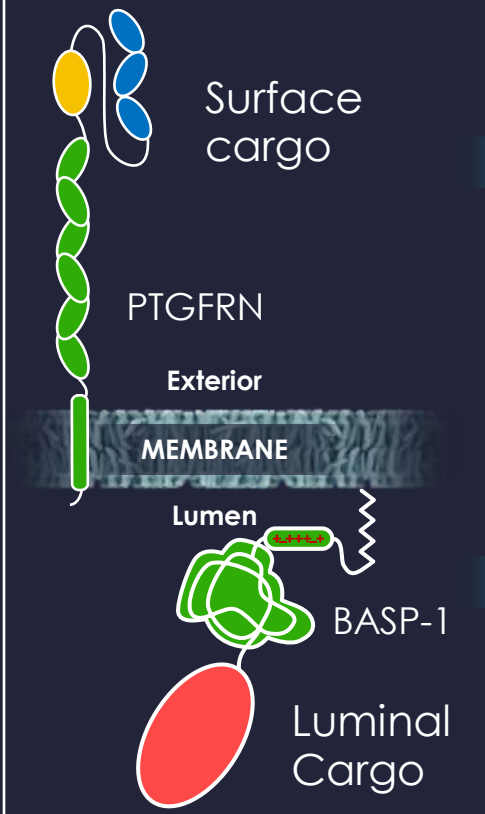
The body's "FedEx"

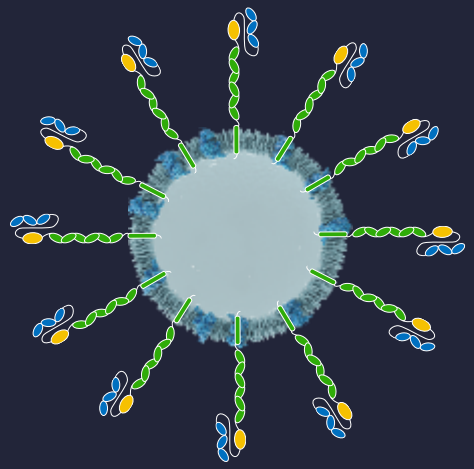
Exosomes for Drug Delivery

- ✓ Immune silent for tolerability and repeat dosing
- ✓ Compatible with multiple drug payloads
- ✓ Tropism for targeted cell delivery
- ✓ Delivery to intracellular and cell surface targets

engEx™ | Designing Drug Candidates with Preferential Cell Tropism

Cell Line Engineering

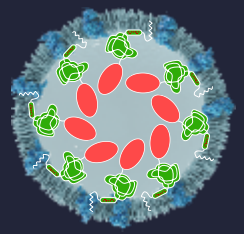




Surface Cargo

- Antibodies, scFab, scFv
- Cytokines
- Receptors
- Enzymes
- Peptides
- Tropism Modifiers

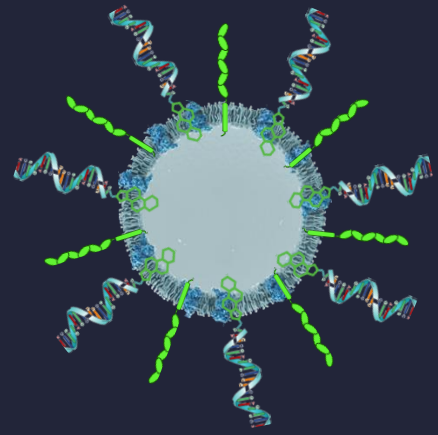
Secreted Exosomes



Luminal Cargo

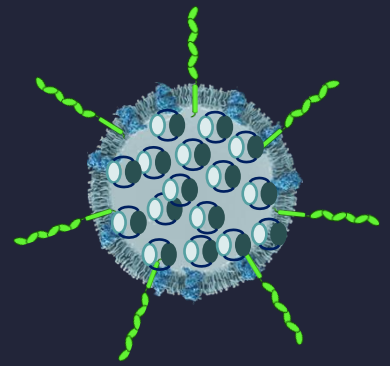
- Antigens
- AAV
- Peptides
- Nucleases
- Enzymes

Post-purification Loading



Surface Cargo

- ASO
- siRNA
- miRNA
- Small molecules
- Proteins/Peptides

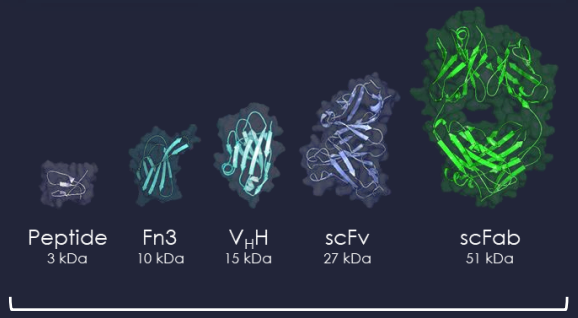


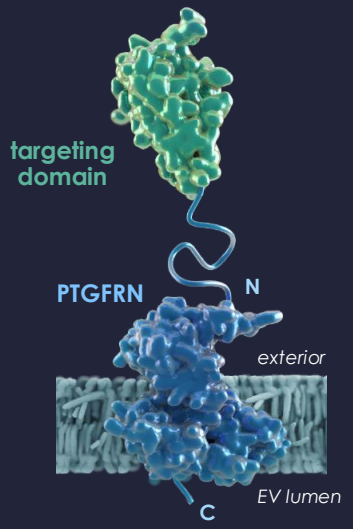
Luminal Cargo

- Small molecules

Building Exosomes for Targeted Drug Delivery: Tropism + Route of Administration Expands the Therapeutic Window

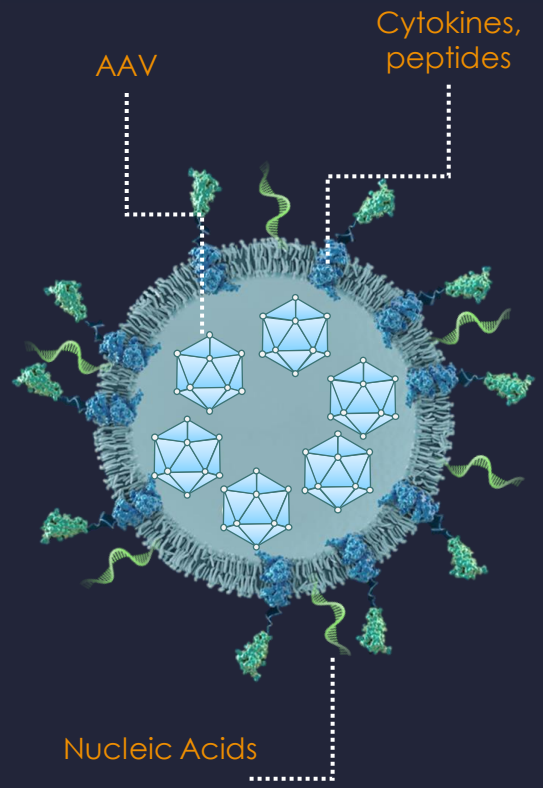
Tropism engineering





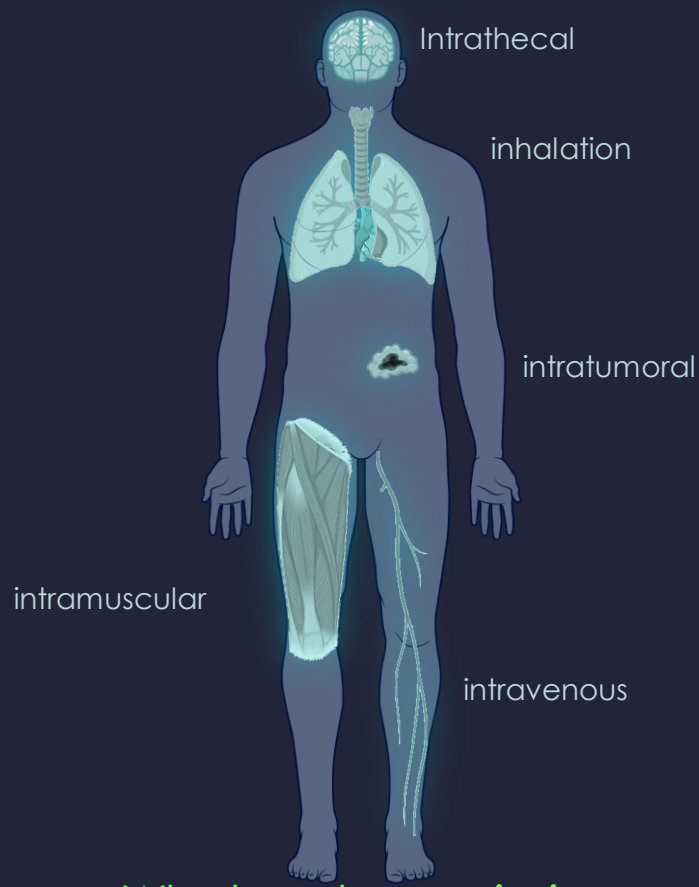
What cell to target

Drug loading



What drug to deliver

Route of Administration



What route maximizes

engEx™: The Leading Exosome Platform for Drug Creation

- Proprietary exosome engineering and manufacturing technologies established
- Multiple drug payloads compatible with engEx Platform
- Preclinical POC with multiple drug modalities and routes of administration
- GLP toxicology conducted for subcutaneous and intravenous dosing
  - No adverse safety findings
- Clinical data from single and repeat doses in HV and cancer patients
  - Well-tolerated at tested doses
  - PD effects mirror preclinical animal studies
  - Targeted delivery improves therapeutic index (>100 fold)

2021 Momentum: Advancing Clinical Pipeline and Platform Progress

- exoSTING™ dose escalation data (cohorts 1-3 of 5) demonstrates differentiation
- exoIL-12™ dose selection completed, enrollment initiated in CTCL
- exoASO™ -STAT6 IND Cleared by FDA
- Peer-review publications on engEx™ Platform, exoIL-12 and exoSTING
- Strategic exosome manufacturing collaboration with Lonza; Center of Excellence
- Platform advancements reported for exoVACC™ and engEx-AAV™

2022: Anticipated Clinical and Platform Milestones

- exoASO™- STAT6 first-in-human dosing 1H'22
- exoIL-12™ CTCL topline clinical activity data in late 1H'22
- exoSTING™ complete dose escalation and dose selection (RP2D); data readout late 1H'22
- Peer-review publications on exoASO™- STAT6 ✓ and Platform advancements
- Potential strategic partnerships to further unlock engEx™ Platform value
- Continue to invest in engEx™ Platform: Scientific Conference Presentations
  - Pan Beta Coronavirus Vaccine pre-clinical POC 1H'22
  - Advance engEx-AAV platform

Expanding Pipeline of Precision Exosome Therapeutic Candidates

Candidate	Payload	Dose Route	Indication	Discovery	Preclinical	Phase 1	Phase 2	Phase 3	Worldwide Rights
Oncology									
exoIL-12™	Biologic	ITu	CTCL				Topline clinical activity data expected: H1 2022		CODIAK
exoSTING™	Sm. Mol.	ITu	Solid Tumors				Complete dose escalation data expected: H1 2022		CODIAK
exoASO™ – STAT6	ASO	IV	Myeloid-rich Cancers (HCC; TAMs)				First-in-human dosing: H1 2022		CODIAK
exoASO™ – C/EBPβ	ASO	IV	Myeloid-rich Cancers (NSCLC; TAMs, MDSCs)						CODIAK
Oncogene Targets	TBD	TBD	Hematologic Cancers / Solid Tumors						CODIAK Jazz Pharmaceuticals
Vaccines and Tolerance									
exoVACC™	Vaccines Tolerance	TBD	Beta Coronavirus / EBV / HIV						CODIAK
engEx™ Platform									
engEx-AAV™	AAV Capsids	TBD	Gene delivery						CODIAK

Definitions: iTu = Intratumoral; iTh = Intrathecal; IV = Intravenous; IM = Intramusuclar

EXOSTING™ FIRST-IN-HUMAN CLINICAL TRIAL: KEY OBSERVATIONS

CODIAK

exoSTING™: Proof of Mechanism and Clinical Activity Signal

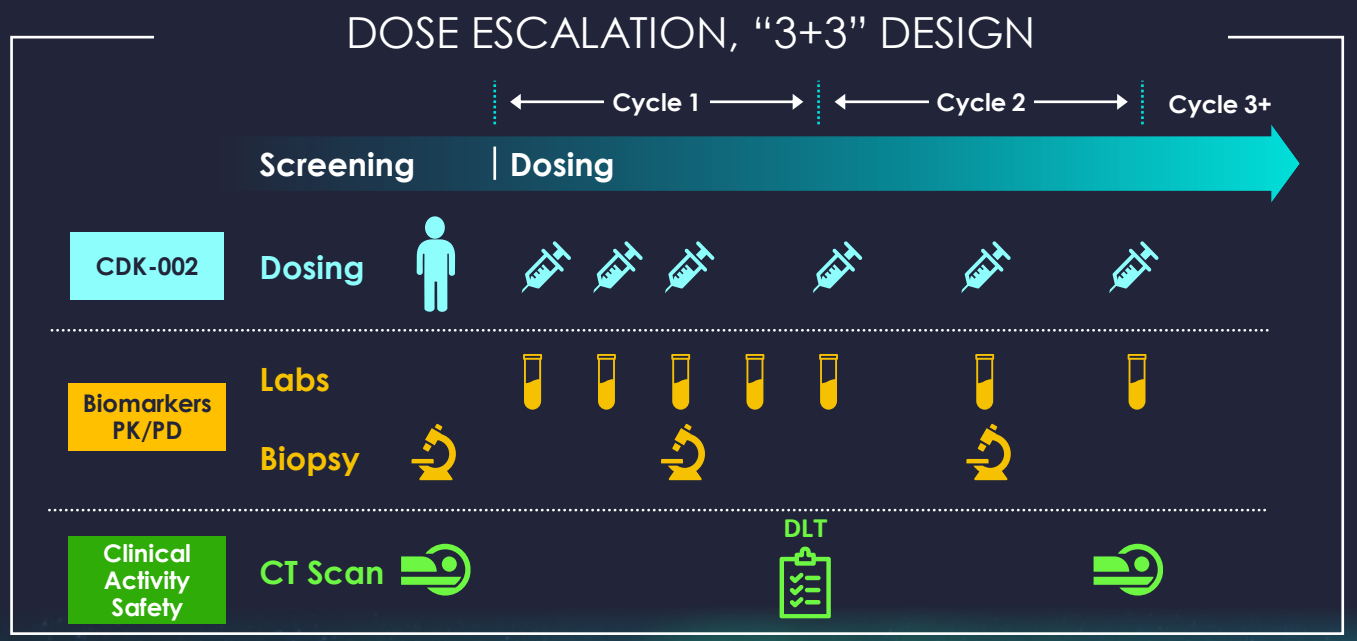
Data from First-in-Human Phase 1/2 Study (cohorts 1-3 of 5) demonstrates:

- ✓ Tumor retention of STING agonist, **no systemic exposure**
- ✓ **No** systemic inflammatory **cytokine related AEs**
- ✓ **Favorable safety and tolerability** profile at doses tested
- ✓ Innate and adaptive **immune activation**
- ✓ **Antitumor activity** in both **injected** and **distal lesions**

exoSTING™ Phase 1/2 Trial: Study Design

exoSTING™ (CDK-002)

	Cohort 1 0.3 mcg	Cohort 2 1 mcg	Cohort 3 3 mcg	Cohort 4 6 mcg	Cohort 5 12 mcg
Dose Escalation	✓	✓	✓	Enrolling	
Enrichment			Enrolling		



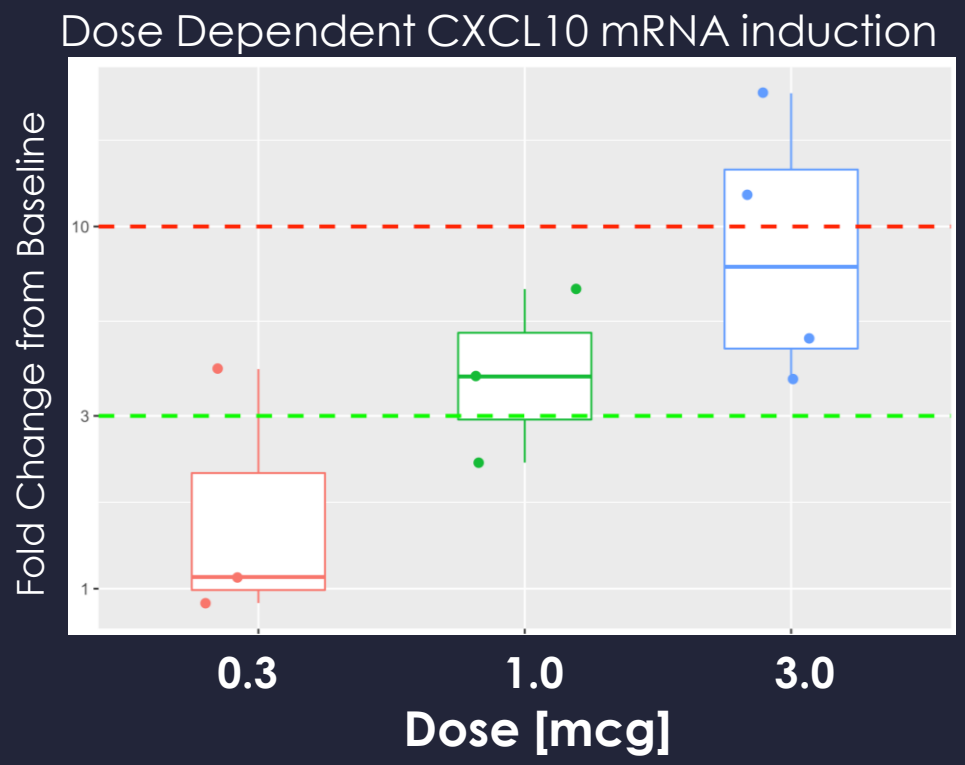
- Intratumoral injection in 1-3 lesions
- Heavily pre-treated patients
- Serial tumor biopsies and blood for PK/PD assessment
- Tumor CT scans every 8 weeks (ORR)
- Phase 2 dose selection

exoSTING™ | Dose Dependent STING Pathway Activation

1 Innate-immune response

exoSTING™

Dose Dependent CXCL10 mRNA induction



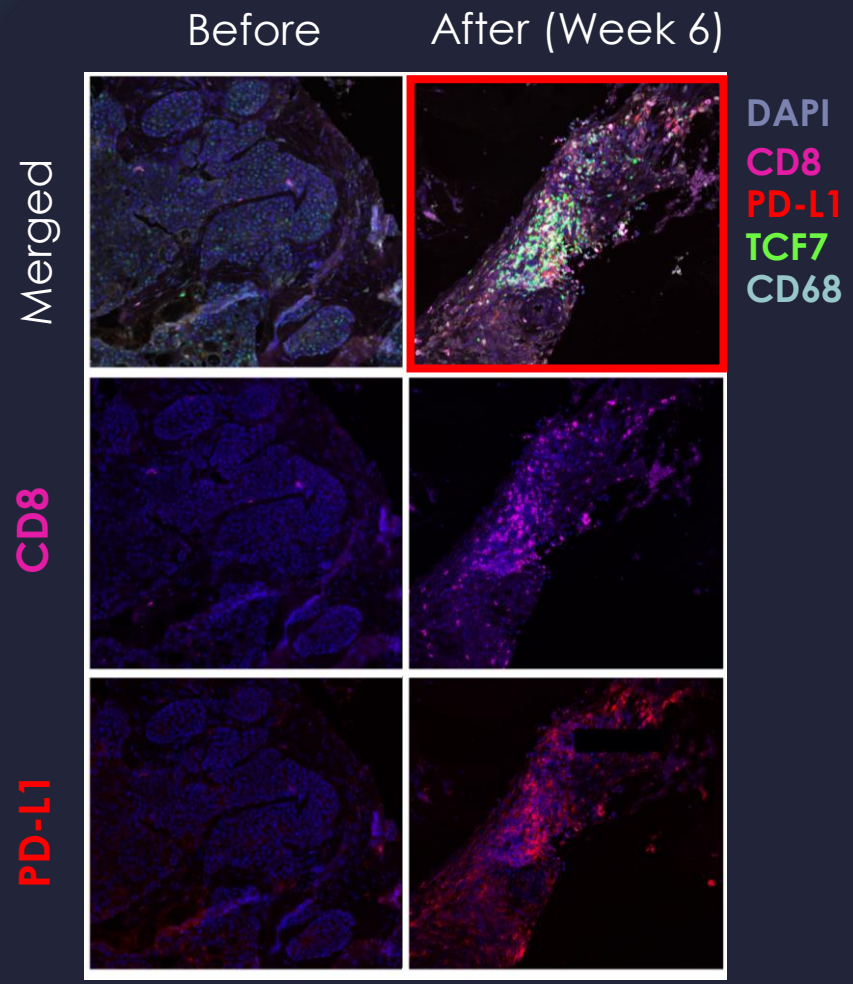
N=10*

- Identical biomarker to MK1454
- All doses of exoSTING active
- Clear dose-dependency
- >100-fold more potent than MK1454 and ADU-S100
- No bell-shaped dose response at high-dose leading to loss of induction of CXCL10

*all patients who received ≥ 1 dose with available PD biomarker data

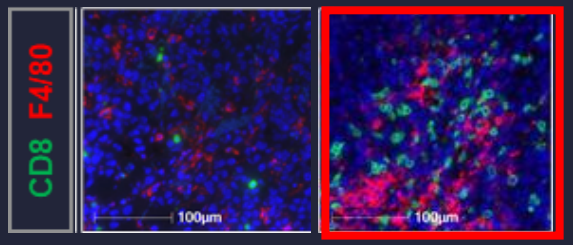
exoSTING™ | CD8 T Cell Infiltration and Activation Following Treatment

3 **Adaptive immune response**



Cohort 2: 1 mcg dose level

Pre-Clinical Mouse Tumor Data



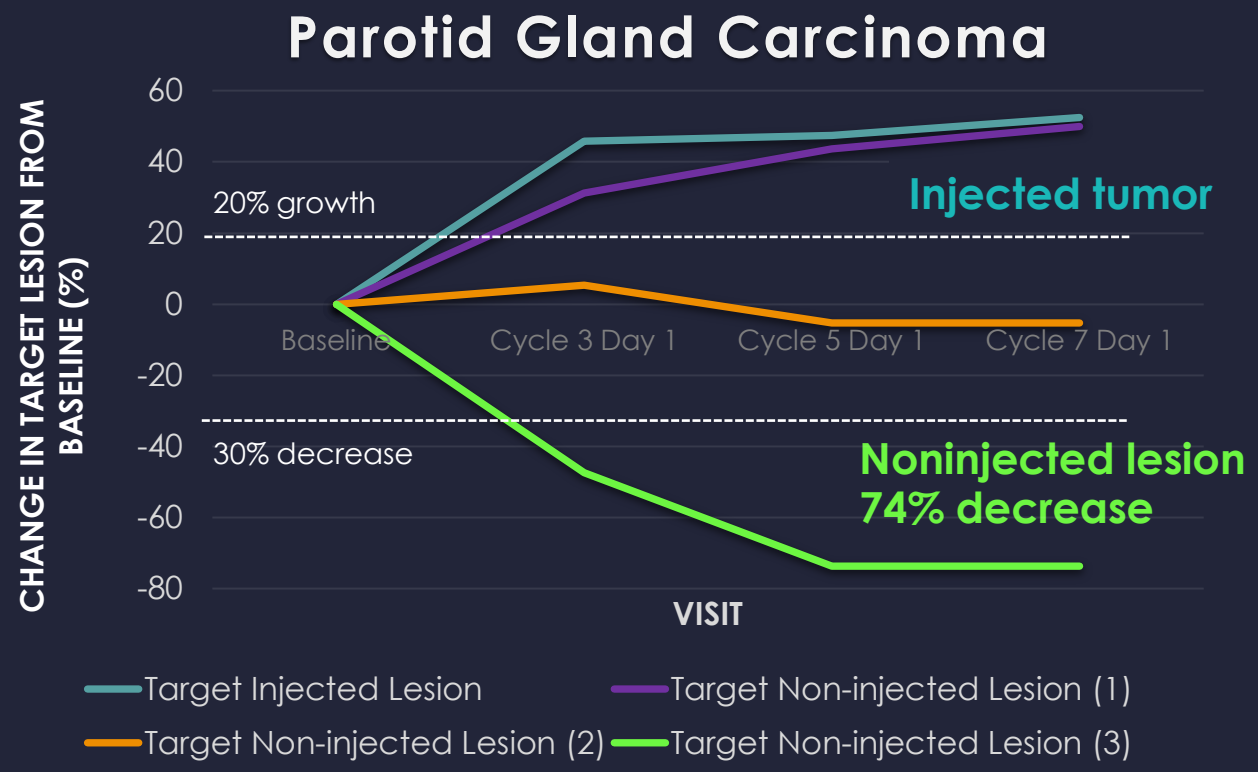
Jang SC et al., Communications Biology 2021

- Adaptive immune-response with 3 and 11- fold increase in CD8 T cells in 2/2 patients with paired biopsies
- Recruit stem-like progenitor effector CD8+/TCF7+ T Cells (non-exhausted)
- PD-L1 Negative tumor to PD-L1 Positive
- Strong correlation with preclinical data

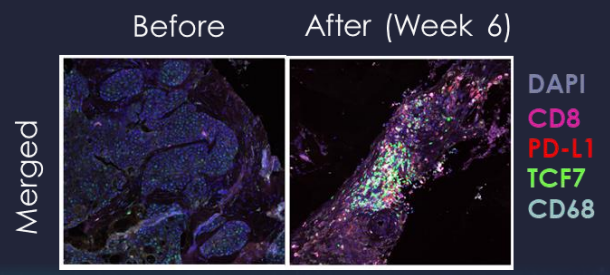
exoSTING™ | Case study: 1 mcg Dose, Clinical Signal in Noninjected Distal Lesion

42 yo female with Parotid Gland Carcinoma

Progression on 4 lines of prior chemotherapy



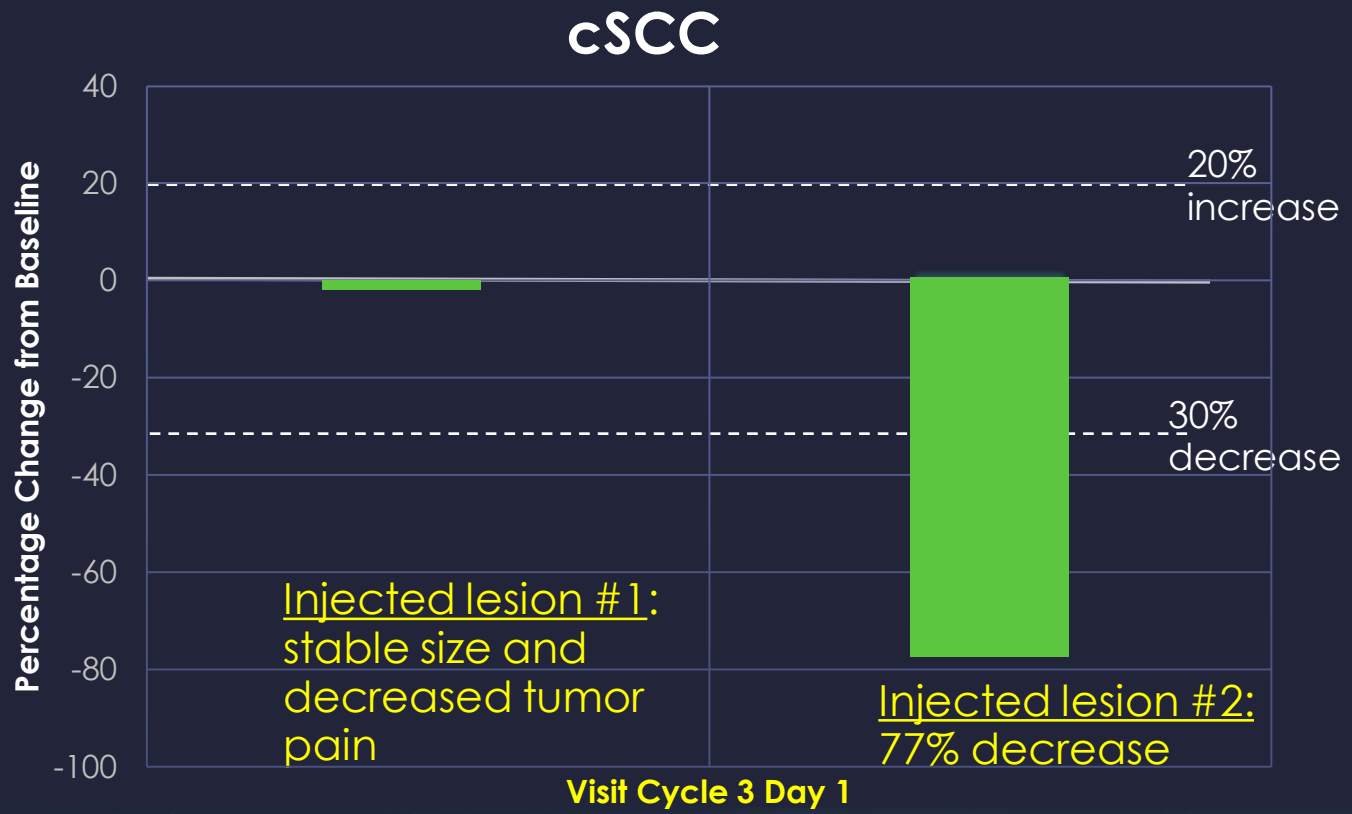
- On study drug for >7 months
- 74% decrease in noninjected tumor (**distal abscopal effect**)
  - Injected tumor:
    - 3-fold increase in CD8 T cells
    - 43-56% decrease in tumor cell content
    - PD-L1 negative to PD-L1 positive
  - Consistent with pseudo-progression



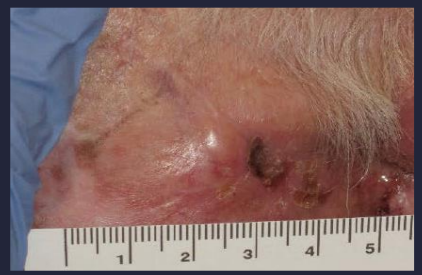
exoSTING™ | Case study: 3 mcg Dose, Clinical Signal in Injected Lesion

75 yo male with Cutaneous Squamous Cell Carcinoma

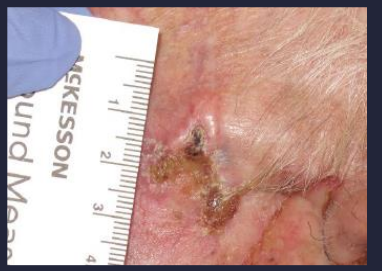
Progression on 3 lines of therapy, failed prior PD-1 inhibitor



- 11-fold increase in CD8+ T cells in injected tumor #1
- PD-L1 low tumor to PD-L1 high (#1)
- 77% shrinkage of injected lesion #2



Pre-treatment

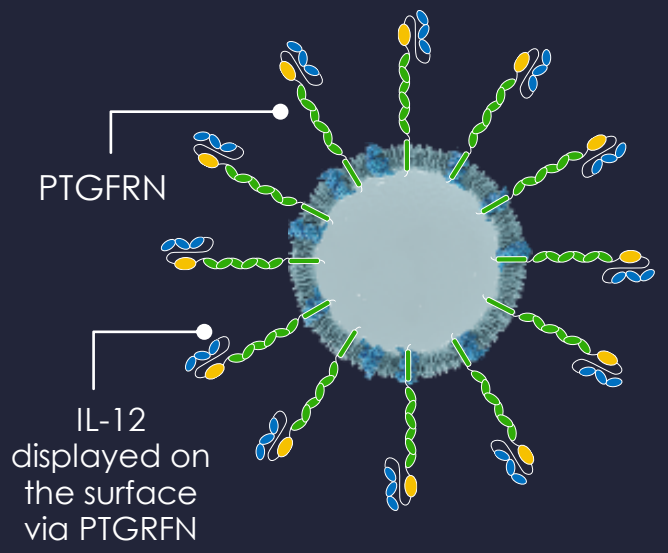


After treatment

exoSTING™ | Future Data and Clinical Direction

- Complete enrollment in cohorts 4 and 5 in late 1H'22
- Determine Recommended Phase 2 Dose in late 1H'22
- Assess antitumor activity from dose escalation in late 1H'22
- Single agent and combination strategies:
  - Single agent indications eg. Parotid Gland tumors, cSCC, Sarcomas
  - Combination with PD-1 inhibitor or exoIL-12 (SITC Presentation)

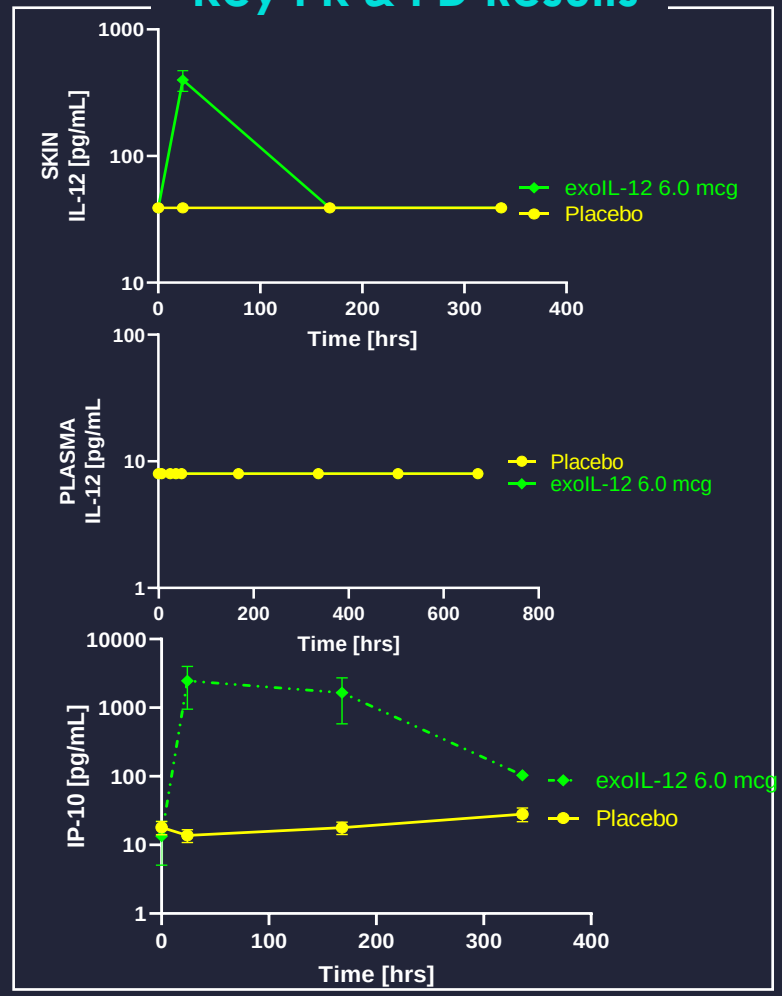
exoIL-12™



Best in Class IL-12 Profile in HV Study

- ✓ Complete tissue retention of IL-12
- ✓ Lack of systemic exposure to IL-12
- ✓ Lack of treatment-related AEs
- ✓ Local, potent, prolonged PD effect
- ✓ Confirmed 6 µg Q2wk for Part B

Key PK & PD Results



exoIL-12™ Phase 1 Trial in CTCL: Data Expected In Late 1H 2022

Study Design

Dose Escalation
Expansion

exoIL-12 monotherapy

3+3 and adaptive cohort enrichment

Target Population: CTCL Stage IA/IIB

Expected Data

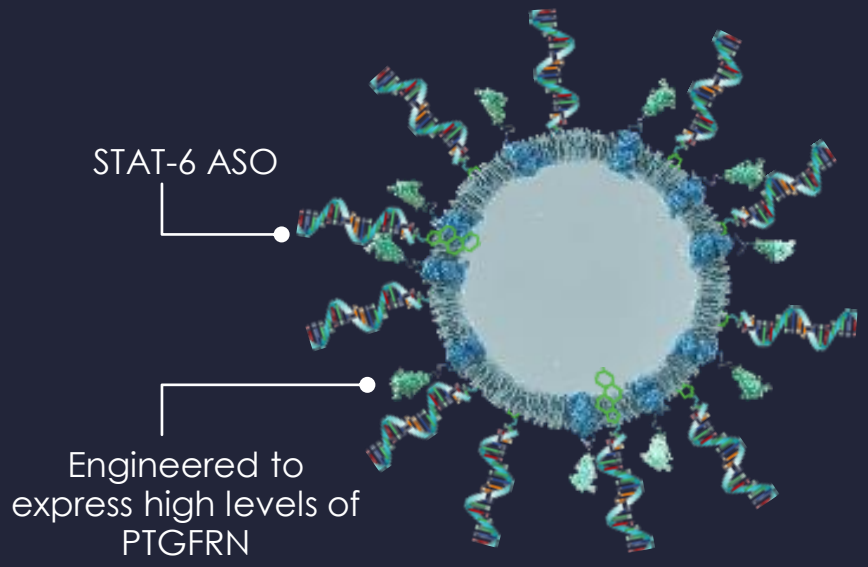
Endpoint Measures		Desired Outcome
PK PLASMA	IL-12	Plasma levels low/absent
PLASMA BIOMARKERS	IFN-γ Nanostring	Lack of systemic immune activation
TISSUE BIOMARKERS (2 & 6 weeks after dosing)	IL-12 CD8 Nanostring	Local IL-12 retention Local Immune cell influx, proliferation, activation
RESPONSE ASSESSMENT (4-week intervals)	CAILS injected CAILS noninjected mSWAT	FDA precedented registrational endpoints

CAILS - Composite Assessment of Index Lesion Severity

exoIL12™ | Future Clinical Directions

- Continue enrollment of CTCL patients; data in late 1H'22
- PK/PD and preliminary efficacy from CTCL patients late 1H'22
- Enroll expansion cohort patients; (data 1H'23)
  - Confirm effect size, safety, distal effects
  - Expansion to other IL-12 responsive tumors
- Regulatory feedback and plan for pivotal studies next year

exoASO™-STAT6



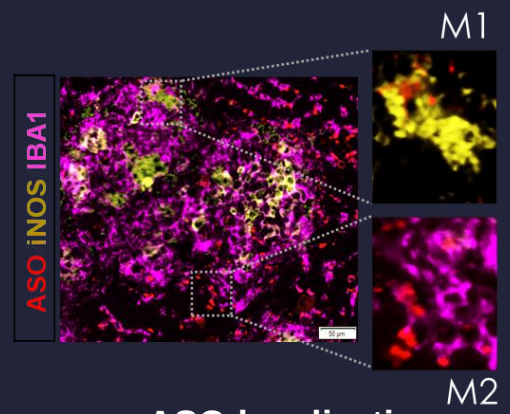
Targeted Delivery, Targeted Therapeutic: Precision Medicine

- M2 immune-suppressive macrophage selective delivery
- Cell specific transcription factor regulation
- Potent single agent activity in HCC models
- STAT6 expression program in HCC negative prognostic indicator
- Initial focus on Hepatocellular Carcinoma
- Expansion into hepatic M2 rich metastases

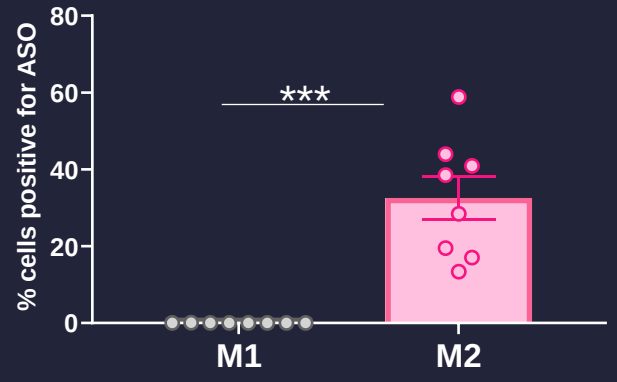
Feb. 18, 2022

exoASO-STAT6 (IV) Selectively Targets TAMs Leading to Potent Anti-tumoral Activity

Selective Delivery to M2 MΦ



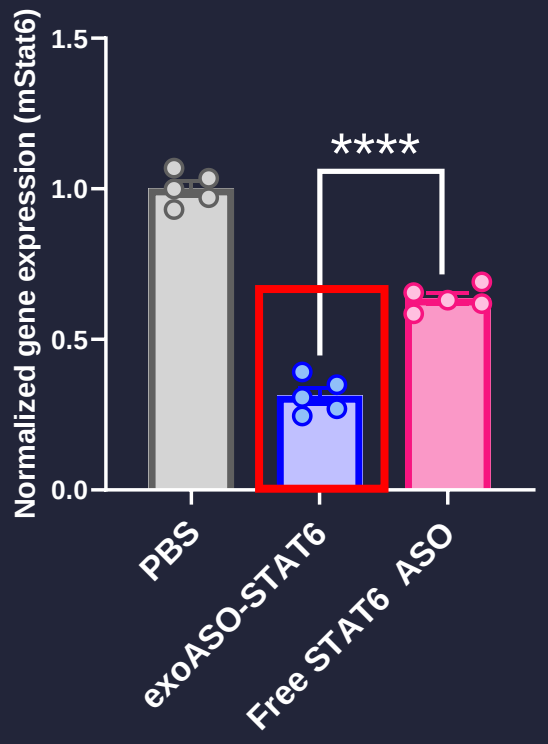
ASO localization



99% of labelled exosome in the liver in M2 TAMs in HCC Tumor Model

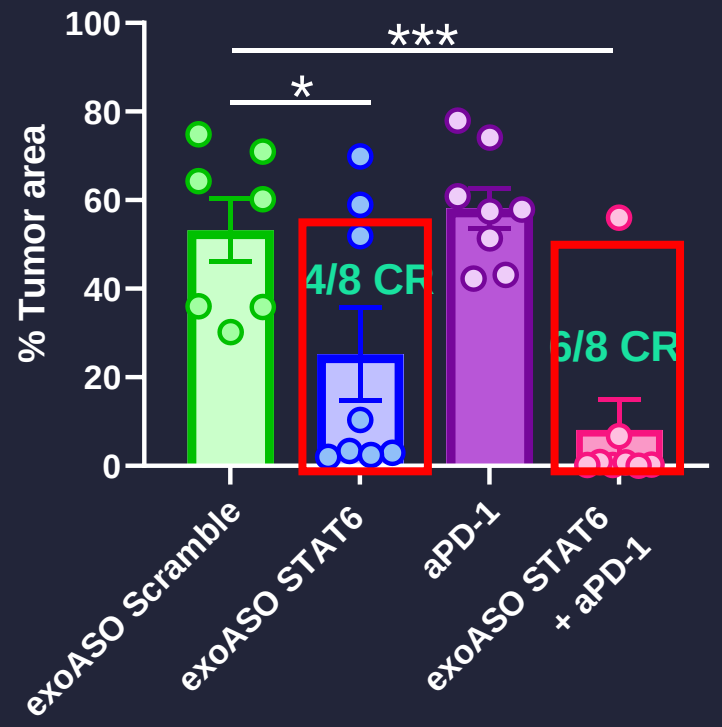
Potent STAT6 mRNA Knockdown

***Stat6* mRNA: Liver**



80% STAT6 mRNA gene silencing

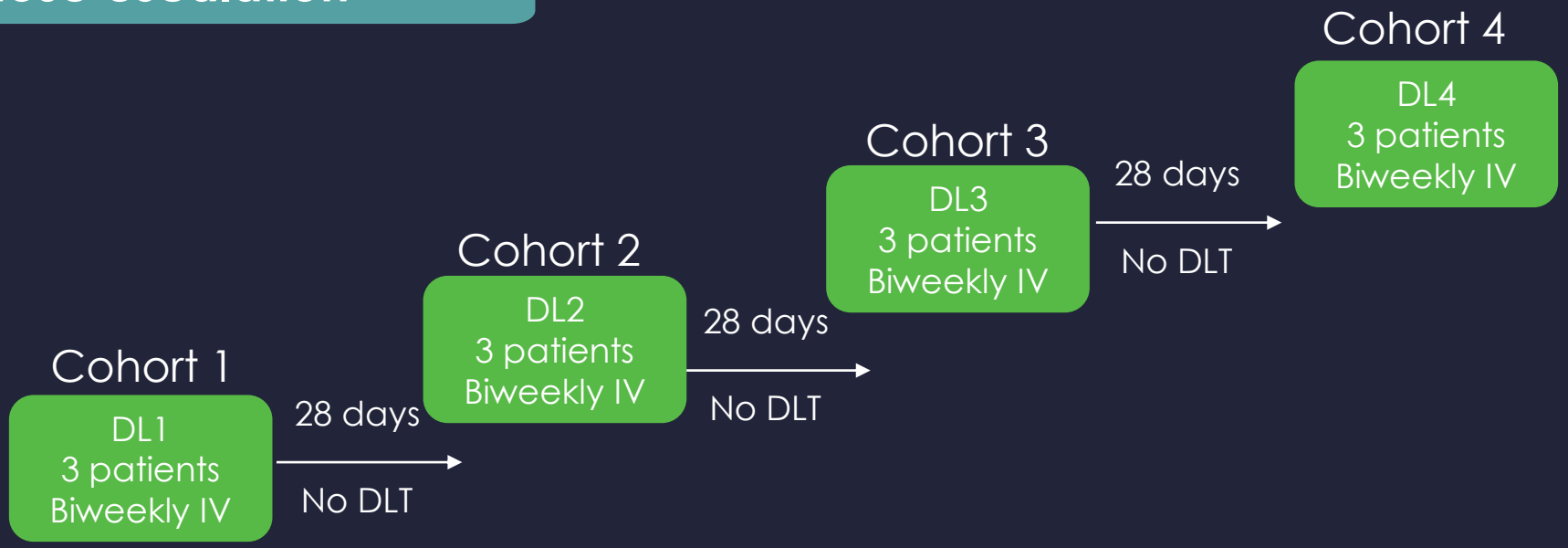
Monotherapy Efficacy



Aggressive HCC mouse model Resistant to anti-PD-1 and anti-CSF1R

exoASO™-STAT6 Ph1 Study Design – First Patient Anticipated H1 '22

exoASO™ STAT6 (CDK-004)
Phase 1 dose escalation



Advanced Hepatic Cancers

Disease progression ORR, Safety, Tolerability and Biomarkers

- Objective: determine the safety, tolerability, Pk/PD profile, MTD and/or RP2D

exoASO-STAT6 Expected Complete Data Readout in H1 2023

Endpoint Measures		Desired Outcomes
PK	STAT6 ASO	• Rapid clearance from plasma
BLOOD BIOMARKERS	Serum Cytokines PBMC RNAseq	• Low levels of systemic inflammatory cytokines • Pro-inflammatory gene expression phenotype
TUMOR BIOMARKERS (pre-dose and 8 weeks post initial dose)	IHC: • STAT6/IL4R • Mac/M1/M2 • CD8/Treg • ASO RNAseq DNAseq	• Reduced expression of STAT6 • Macrophage reprogramming M2→M1 • CD8 T cell infiltration/activation • ASO localization to tumor M2 macs • Mutational analysis of tumor
RESPONSE ASSESSMENT (8 week intervals)	RECIST 1.1, mRECIST, iRECIST post progression	• ORR >10%

EXOVACC™ VACCINE PLATFORM

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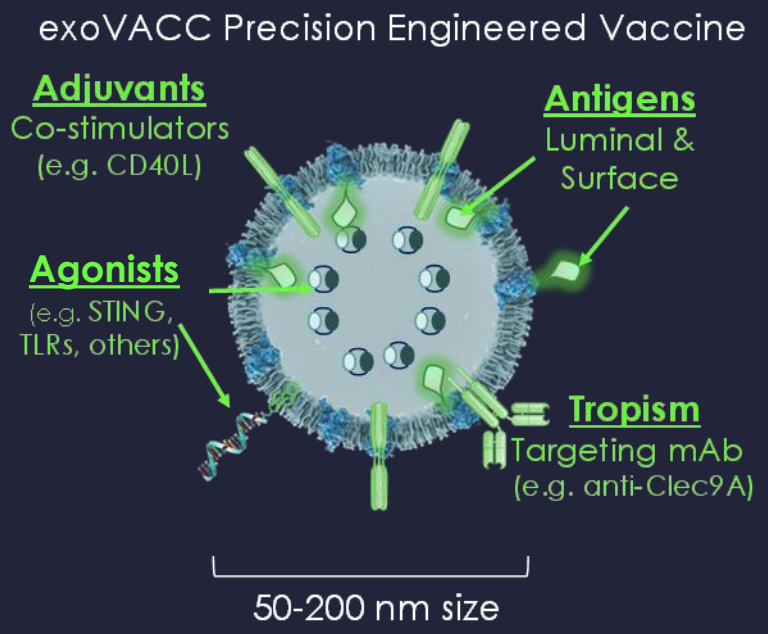
exoVACC™: A Versatile Exosome-based Vaccine Platform



Flexible antigen display for T and B cell responses
beta-Coronavirus, HIV, EBV, cancer

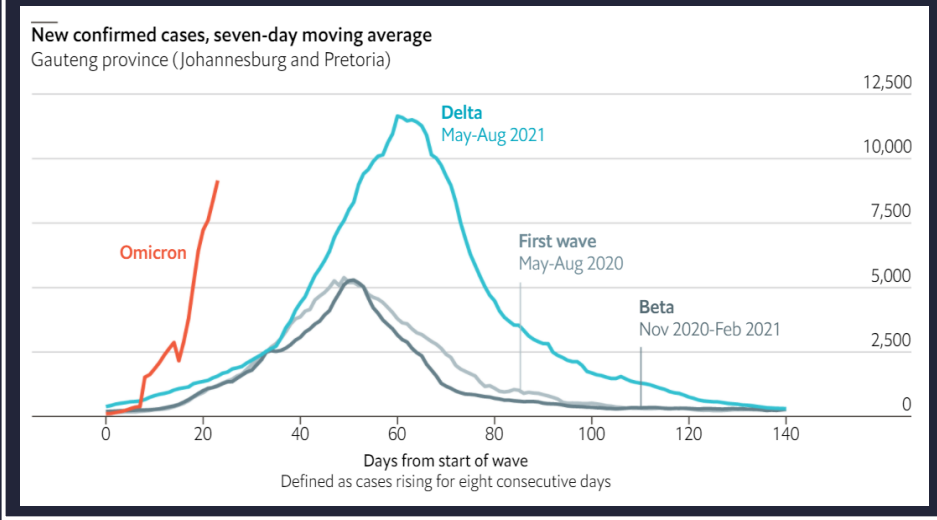
Diverse adjuvant & immunomodulator combinations

Enhanced cell-specific tropism

Urgent Need for a Pan-Coronavirus Vaccine

An alternative approach to address both current and future beta coronavirus pandemics

Omicron infectivity surpasses Delta



Risk of new Beta-coronaviruses "jumping" to humans

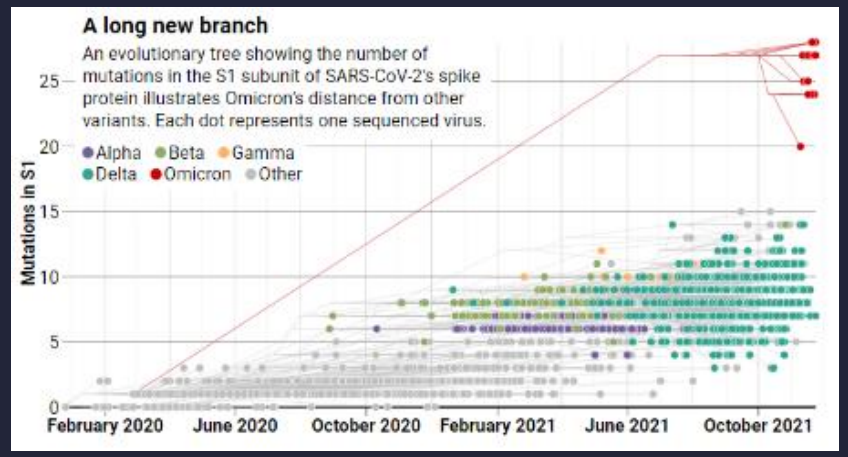
Ranking the risk of animal-to-human spillover for newly discovered viruses

Zoë L. Grange[a,1], Tracey Goldstein[a,2], Christine K. Johnson[a,2], Simon Anthony[a,b,c,d], Kirsten Gilardi[a], Peter Daszak[b], Kevin J. Olival[b], Tammie O'Rourke[e], Suzan Murray[f], Sarah H. Olson[g], Eri Togami[a], Gema Vidal[a], Expert Panel[3], PREDICT Consortium[3], and Jonna A. K. Mazet[a,1]

5 of top 20 highest risk viruses are beta-coronaviruses

Mutationally driven therapeutic resistance

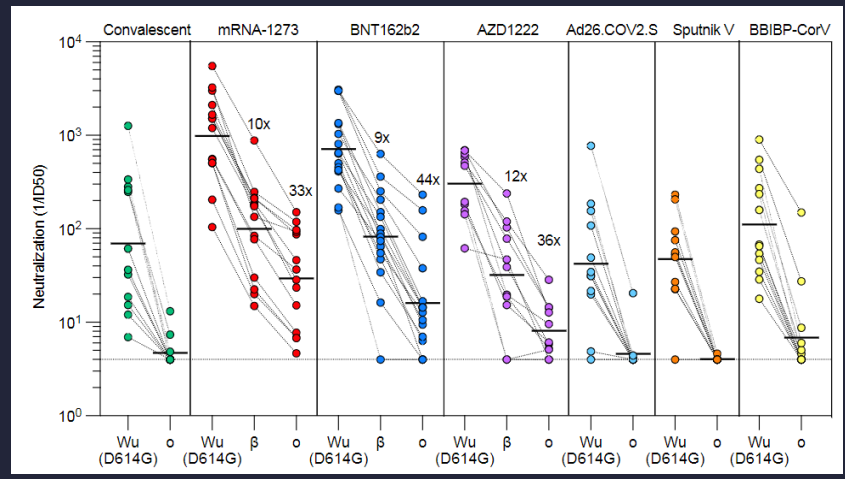
Spike S1 Mutations



Omicron variant

Delta variant

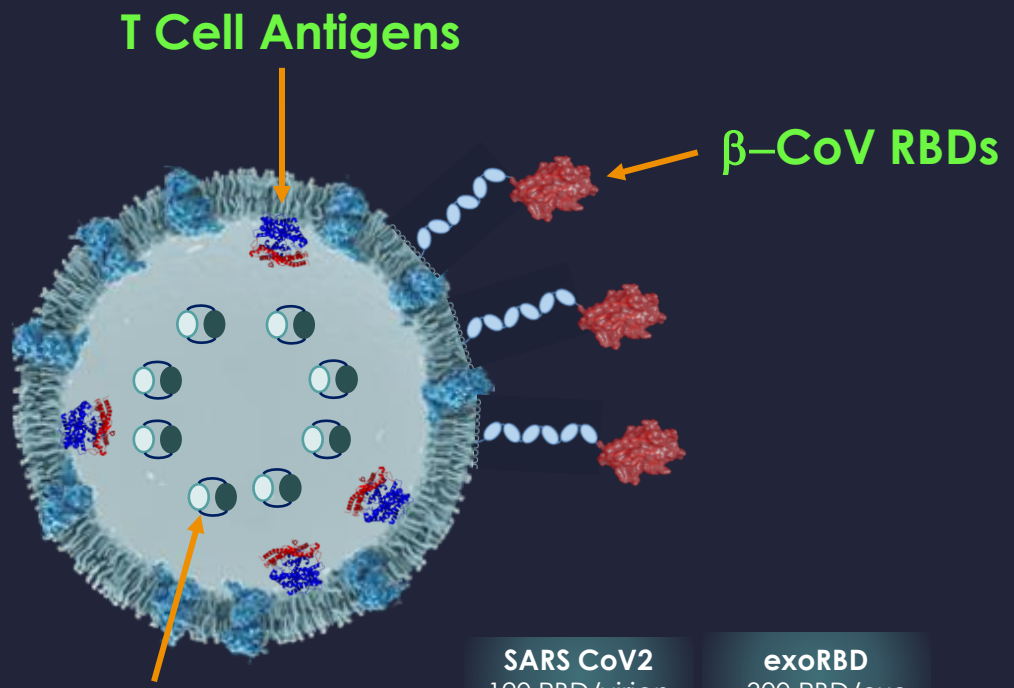
Neutralizing Antibodies

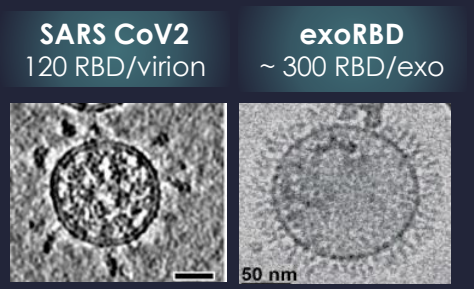


Wu-Wuhan strain
β = beta variant
o = Omicron variant

Cameroni *Nature* 2021

Pan Beta Coronavirus Vaccine Offers Comprehensive Protection





Turonova et al *Science* 2020

- Protection from emerging variants
- Protection from potential new beta Coronavirus'
- Both antibody & CD8 T cell immunity
- Mutation constrained T cell epitopes
- Broad global coverage Collaboration with Ragon Institute (of MGH, MIT and Harvard)

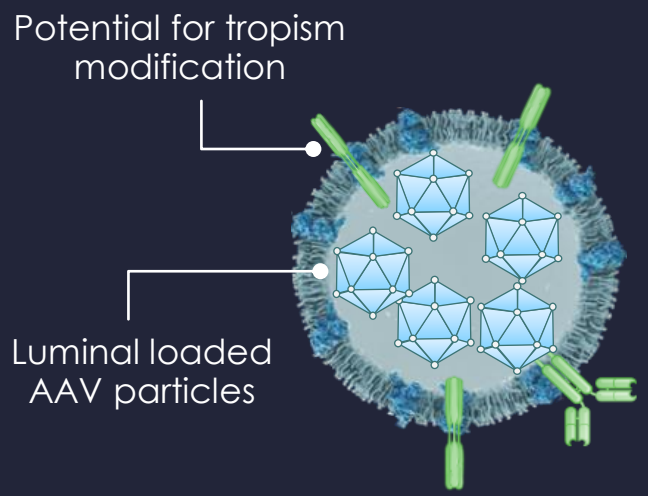
WORLD VACCINE & IMMUNOTHERAPY

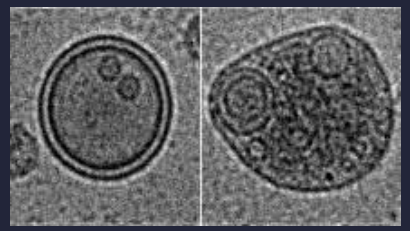
exoVACC Induces a Comprehensive Immune Response

Induce both cellular and humoral immunity to enhance vaccine breadth and durability

- Strong Neutralizing Antibody response against multimeric RBDs
- RBD as antigen maintains focused response on mutationally constrained region essential for cell entry
- Broad neutralization against multiple variants and SARS CoV1
- CD8 T-cell response against conserved epitopes in all Beta-coronavirus'
- Broad immunity against current variants and new zoonotic transmission
- Durable immunity and with mucosal tissue resident T-cell response
  - Rapid immune response at site of virus exposure (first line of defense)
- Improved survival in *in vivo* challenge models

engEx-AAV™ to Advance Gene Delivery





AAV Gene Delivery: Not Quite "One and Done"

- Safety issues persist due to capsid dose/empty capsid issues
  - Clinical holds, patient deaths
- Immunogenicity of capsids prevents re-dosing
- Waning transgene expression

- exoAAV addresses these issues:
  - Functional AAV capsids inside exosomes
  - exoAAV not neutralized by AAV antibodies (repeat dosing)
  - Exosome tropism for selective delivery (lowers AAV dose)
  - Higher transduction efficiency than AAV
  - "Booster" to deal with waning expression

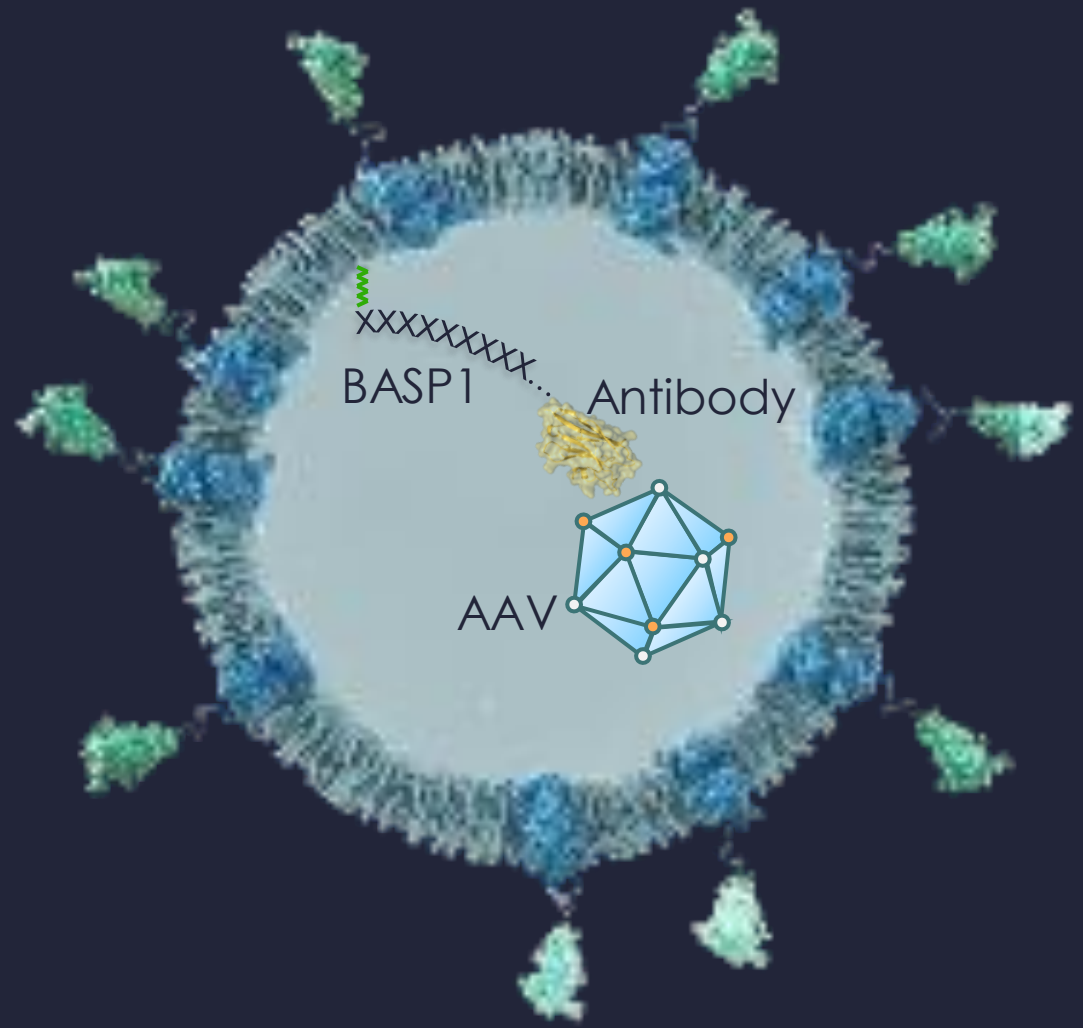
EngEx Successfully Creates a Functional exoAAV Gene Delivery Platform: "Catch AND Release"

CATCH:

- BASP-1 as a scaffold for luminal loading
- Antibody (VHH) to catch AAV during synthesis
- 2-3 log improvement in capsid loading

RELEASE:

- VHH(s) releases AAV at pH 5.5 in lyso-endosome
- Released AAV Transduces with high efficiency



engEx™: A Novel Platform for Drug Creation

- Proprietary exosome engineering and manufacturing technologies established
- Multiple drug payloads compatible with engEx Platform
- Preclinical POC with multiple drug modalities and routes of administration
- GLP toxicology conducted for subcutaneous and intravenous dosing
  - No adverse safety findings
- Clinical data from single and repeat doses in HV and cancer patients
  - Well-tolerated at tested doses
  - PD effects mirror preclinical animal studies
  - Targeted delivery improves therapeutic index (>100 fold)

Experienced Leadership, Continued Execution

EXECUTIVE TEAM

Doug Williams, Ph.D. President and CEO	Biogen, ZymoGenetics, SeattleGenetics, immunex
Linda Bain Chief Financial Officer	Avalanche Biotech, bluebirdbio, genzyme, AstraZeneca
Nicole Barna SVP, Head of Human Resources	Bioverativ A Sanofi Company, Biogen, Broad Institute
Richard Brudnick CBO, Head of Strategy	Bioverativ A Sanofi Company, Biogen, Bain & Company
Yalonda Howze EVP, Chief Legal & Compliance Officer	Mintz Levin, Nutter uncommon law
Konstantin Konstantinov, Ph.D. Chief Technology Officer	genzyme, Bayer
David Mauro, M.D., Ph.D. Chief Medical Officer (interim)	Prelude Therapeutics, Checkmate Pharmaceuticals
Sriram Sathyanarayanan, Ph.D. Chief Scientific Officer	Jounce Therapeutics, Merck Inventing for Life

BOARD OF DIRECTORS

Steven Gillis, Ph.D.
Chairman

Karen Bernstein, Ph.D.
Director

Charles L. Cooney, Ph.D.
Director

Anne-Virginie Eggimann
Director

Jason Haddock
Director

Theo Melas-Kyriazi
Director

Lini Pandite, MBChB
Director

Doug Williams, Ph.D.
President, CEO

2022: Anticipated Clinical and Platform Milestones

- exoASO™- STAT6 first-in-human dosing 1H'22
- exoIL-12™ CTCL topline clinical activity data in late 1H'22
- exoSTING™ complete dose escalation and dose selection (RP2D); data readout late 1H'22
- Peer-review publications on exoASO™- STAT6 ✓ and Platform advancements
- Potential strategic partnerships to further unlock engEx™ Platform value
- Continue to invest in engEx™ Platform: Scientific Conference Presentations
  - Pan Beta Coronavirus Vaccine pre-clinical POC 1H'22
  - Advance engEx-AAV platform


CODIAK

Peer-Reviewed Scientific Publications

engEx™ Platform

Published online Jan 20, 2021
In print May 5, 2021 issue

exoIL-12™

Published online Dec 21, 2020
In print March 2021 issue

exoSTING™

Published online April 22, 2021
via Open Access

exoASO™-STAT6

Published online February 18, 2022

Fed Batch or Continuous Bioprocessing Technologies Established

- Broad IP filings
- Scalable
- MHRA and FDA reviewed
- Proprietary analytics

- High purity, product quality, stability
- Highly intensified processing
- Proprietary exosome drug-loading
- Multiple scales with multiple constructs

Cell Banking

GMP cell banks, human cell line

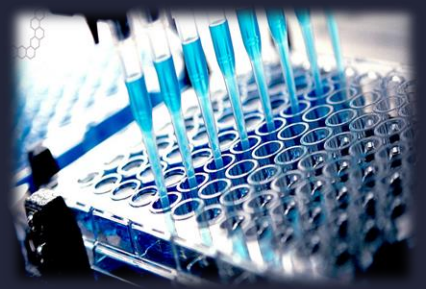
Bioreactor

Suspension, high cell density, chemically defined media

Purification

Advanced chromatography & filtration: scalable

Analytics



Advanced analytics for characterization and QC release

Clinical Mfg

Codiak's Clinical Manufacturing Facility

Lonza Deal Holds Significant Strategic Value for Codiak

Solidifies Codiak's capacity for future manufacturing
Including late-stage clinical and potential commercial needs

Accelerates and expands Codiak's vision for our manufacturing platform, while retaining programs and core IP

Enhances realization of our platform's full potential
By tapping into Lonza's modalities, facilities and financial resources

Advances exosome production as a whole
By leveraging strengths of both companies through formation of Center of Excellence