

APRIL 13, 2021



Next-Generation Immunomedicines

Needham Investor Conference

Forward-Looking Statements

To the extent that statements contained in this presentation are not descriptions of historical facts, they may be deemed to be forward-looking statements under the Private Securities Litigation Reform Act of 1995. Words such as “may,” “will,” “expect,” “anticipate,” “estimate,” “intend,” “next,” “near-term,” “future” and similar expressions, as well as other words and expressions referencing future events, conditions, or circumstances, are intended to identify forward-looking statements. Examples of forward-looking statements in this presentation may include, among others, statements regarding: (i) the timing, progress and results of our preclinical and clinical trials; (ii) the evaluation of biomarkers; (iii) the impact of the COVID-19 pandemic on the initiation, progress or expected timing of those trials and the timing of related data, as well as our efforts to adjust trial-related activities to address the impact of the COVID-19 pandemic; (iv) the timing or likelihood of regulatory filings for our product candidates; (v) our manufacturing capabilities and strategy; (vi) the potential benefits and activity of our product candidates; (vii) our expectations regarding the nature of the biological pathways we are studying; (viii) our expectations regarding our FIND-IO platform; and (ix) the potential benefits of our relationships with Dr. Lieping Chen and Yale University.

Various factors could cause actual results to differ materially from those projected in any forward-looking statement. Such risks and uncertainties include, among others: the impact of the ongoing COVID-19 pandemic on our business, including our clinical trials, third parties on which we rely and our operations; our limited operating history and no products approved for commercial sale; our history of significant losses; our need to obtain additional financing; risks related to clinical development, marketing approval and commercialization; and the unproven approach to the discovery and development of product candidates based on our FIND-IO platform. No forward-looking statement is a guarantee of future results or events, and one should avoid placing undue reliance on such statements. For further discussion of these and other factors that could affect the outcome of our forward-looking statements, see our filings with the Securities and Exchange Commission, including in “Risk Factors” and “Special Note Regarding Forward-Looking Statements” in the Risk Factors section and throughout NextCure’s Form 10-K filed with the SEC on March 4, 2021. Except as otherwise indicated, this presentation speaks as of the date indicated herein. Except as required by law, we assume no obligation to update any forward-looking statements, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future. The information in this presentation is not complete and may be changed.

NextCure Highlights

PIPELINE

- NC318 (S15): Phase 2
- NC410 (LAIR-1): Phase 1
- NC762 (B7-H4): IND
- Manufacturing: state-of-the-art facility (2,000L capacity)

PLATFORM

- FIND-IO functional screening discovery engine
- Validating novel cancer targets
- New MOAs

PEOPLE

- Fully integrated
- Experienced management team
- Strong immunology capabilities

Unmet Medical Needs of Cancer Patients



We Need New Solutions

NextCure

Product Development Pipeline

PROGRAMS	CELLS	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	NEXT MILESTONE	WORLDWIDE RIGHTS
PRODUCT CANDIDATES								
NC318 (S15) Monotherapy	Tumors and macrophages	ONCOLOGY					Report update 4Q 2021	NextCure
NC318 (S15) Anti-PD-1 Combo*	Tumors and macrophages	ONCOLOGY					Start Phase 2 2Q 2021	NextCure
NC410 (LAIR-1)	Dendritic and T cells	ONCOLOGY					Initial data 2H 2021	NextCure
NC762 (B7-H4)	Tumors	ONCOLOGY					Start Phase 1 2Q 2021	NextCure
DISCOVERY AND RESEARCH PROGRAMS								
Multiple Programs	Multiple cell types						IND filing in 2022	NextCure

*Investigator-initiated (IIT) trial (Yale University)

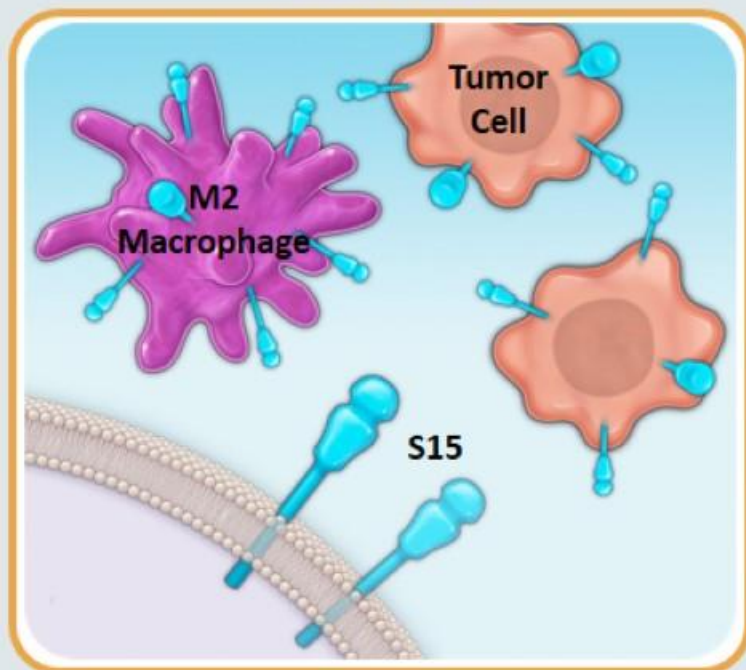
NC318

Humanized Siglec-15 (S15) Monoclonal Antibody

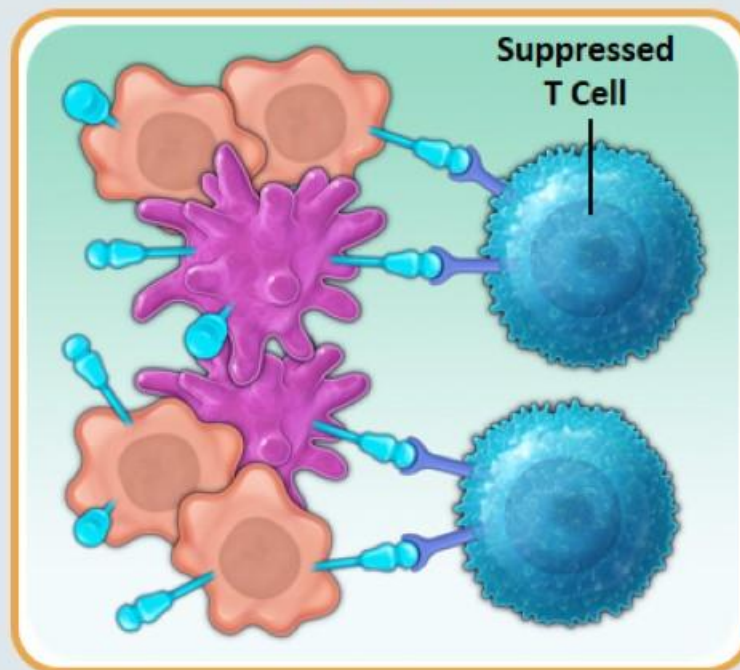


Phase 1/2
CLINICAL
TRIAL

BIOLOGY



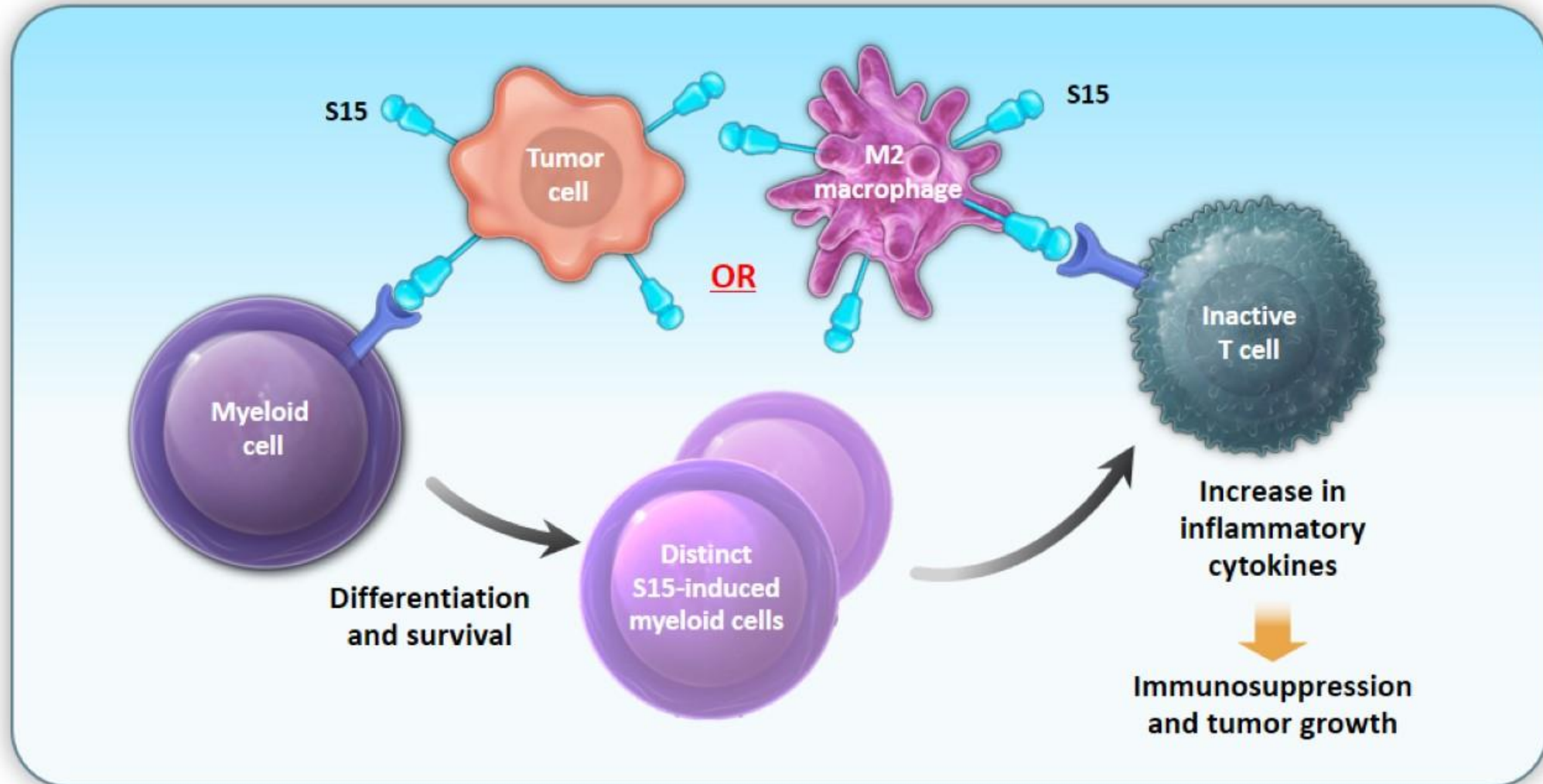
MOA



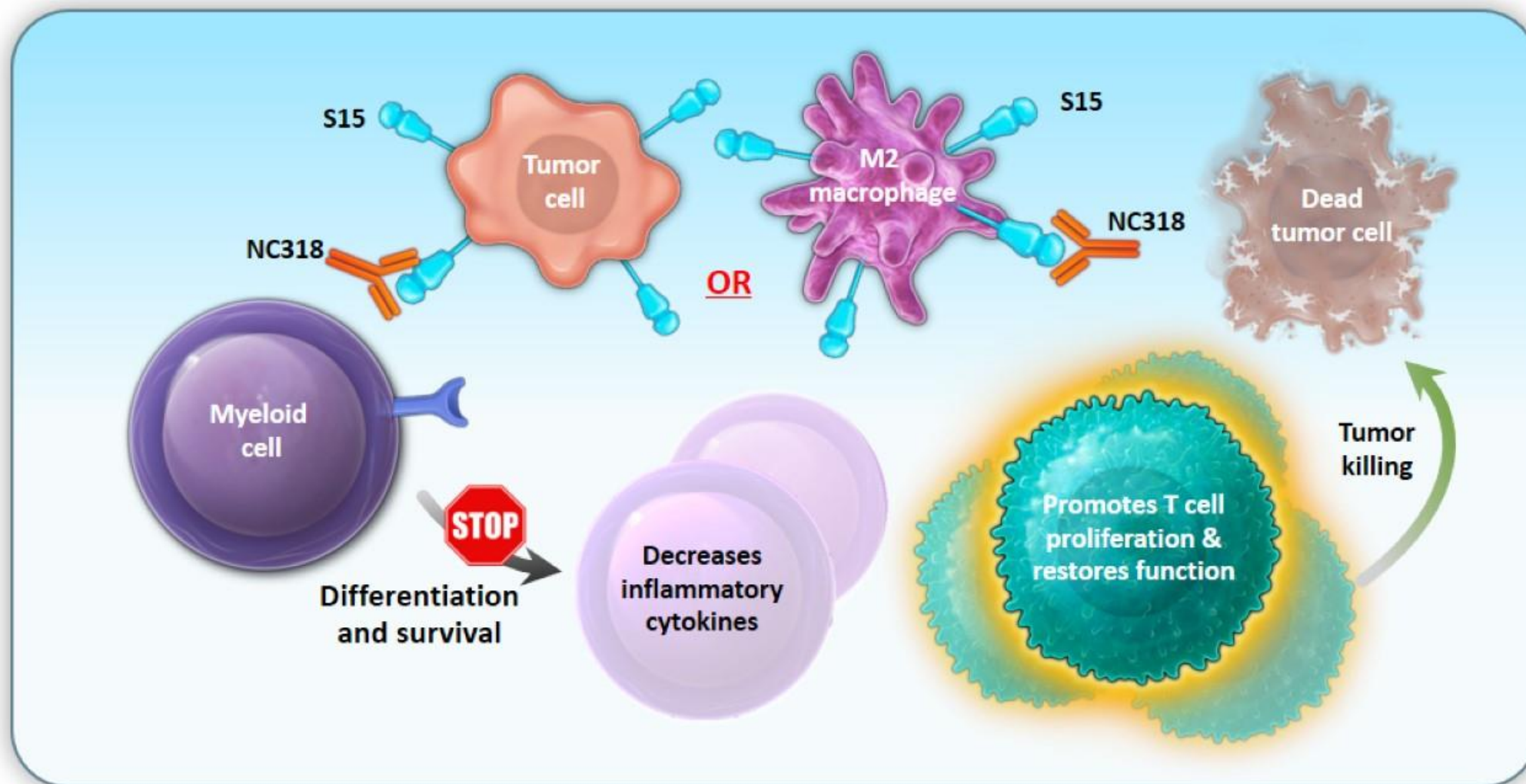
UPDATE

- Clinical strategy update
- TNBC partial response
- CLIA validated IHC assay for patient selection
- Yale investigator-initiated trial
 - NSCLC
 - Monotherapy
 - Pembro combo
- Applying lessons learnt to other programs

S15 is Immunosuppressive in the Tumor Microenvironment



NC318 Blocks Immunosuppressive Activity Induced by S15



NC318 Phase 1 Monotherapy Trial

DOSE ESCALATION AND SAFETY AND TOLERABILITY

Completed

ENROLLMENT

- 49 patients
- 15 tumor types
- Median of 3 prior therapies
- All comers regardless of PD-L1 or S15 expression status

SAFETY

- No DLTs through 800 mg
- 1 DLT at 1600 mg: Grade 3 pneumonitis
- Common irAEs observed, including diarrhea, rashes, vitiligo, arthralgias

RESPONSES

- 1 confirmed CR (118+ weeks)
- 1 confirmed PR (92+ weeks)

The Angeles Clinic
AND RESEARCH INSTITUTE
A CEDARS-SINAI AFFILIATE

next
ONCOLOGY

NYU Langone
MEDICAL CENTER

John Theurer
Cancer Center
at Hackensack University Medical Center

Yale University

Most common AEs: infusion reactions, fatigue, headaches, pruritis, elevated amylase and elevated lipase

NC318 Phase 2 Monotherapy Trial Status as of March 4, 2021

TUMOR TYPES

NSCLC

Ovarian

H&N

TNBC

DESIGN

- Monotherapy
- 400 mg every 2 weeks
- Biopsies required
- Biomarker evaluation

UPDATE

- Confirmed PRs
 - H&N (40 weeks)
 - TNBC (21+ weeks)
- S15+ patient selection

Partial Responses in Head & Neck and Triple-Negative Breast Cancer

HEAD & NECK SQUAMOUS CELL CARCINOMA

BASELINE



WEEK 24



Target lesion decreased 37%

53 y/o HNSCC with
multiple lesions
(PD-L1 TPS <50%)
400 mg every 2 weeks

PRIOR THERAPIES:
Chemotherapy (3x)
Radiation (3x)
Nivo, Pembro (<3 mo to
progression)

Target lesion met RECIST 1.1 criteria

TRIPLE-NEGATIVE BREAST CANCER

BASELINE



WEEK 8



Target lesion decreased 82%

67 y/o TNBC
(PD-L1 TPS <1%)
400 mg every 2 weeks

PRIOR THERAPIES:
Chemotherapy (3x)
Radiation (1x)
Pembro (best response
stable disease then
progression)

Target lesion met RECIST 1.1 criteria

Yale Investigator-Initiated Phase 2 Trial in Non-Small Cell Lung Cancer

PRINCIPLE INVESTIGATORS

- Roy Herbst, MD, PhD
- Scott Gettinger, MD

MONO

- S15+ patients
- PD-1 refractory

COMBO

- Pembrolizumab
- 2 arms
 - PD-1 refractory
 - PD-1 naïve

NCT04699123

NC410

Decoy Human Fusion Protein
Targeting the TME

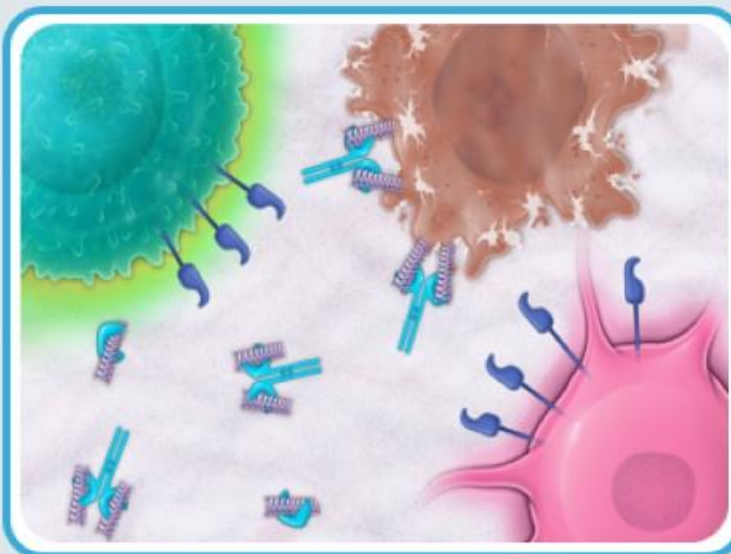


Phase 1/2
CLINICAL
TRIAL

BIOLOGY

- Dendritic cells and T cells
- Advanced or metastatic cancers
 - NSCLC
 - Ovarian cancer
 - Pancreatic cancer

MOA

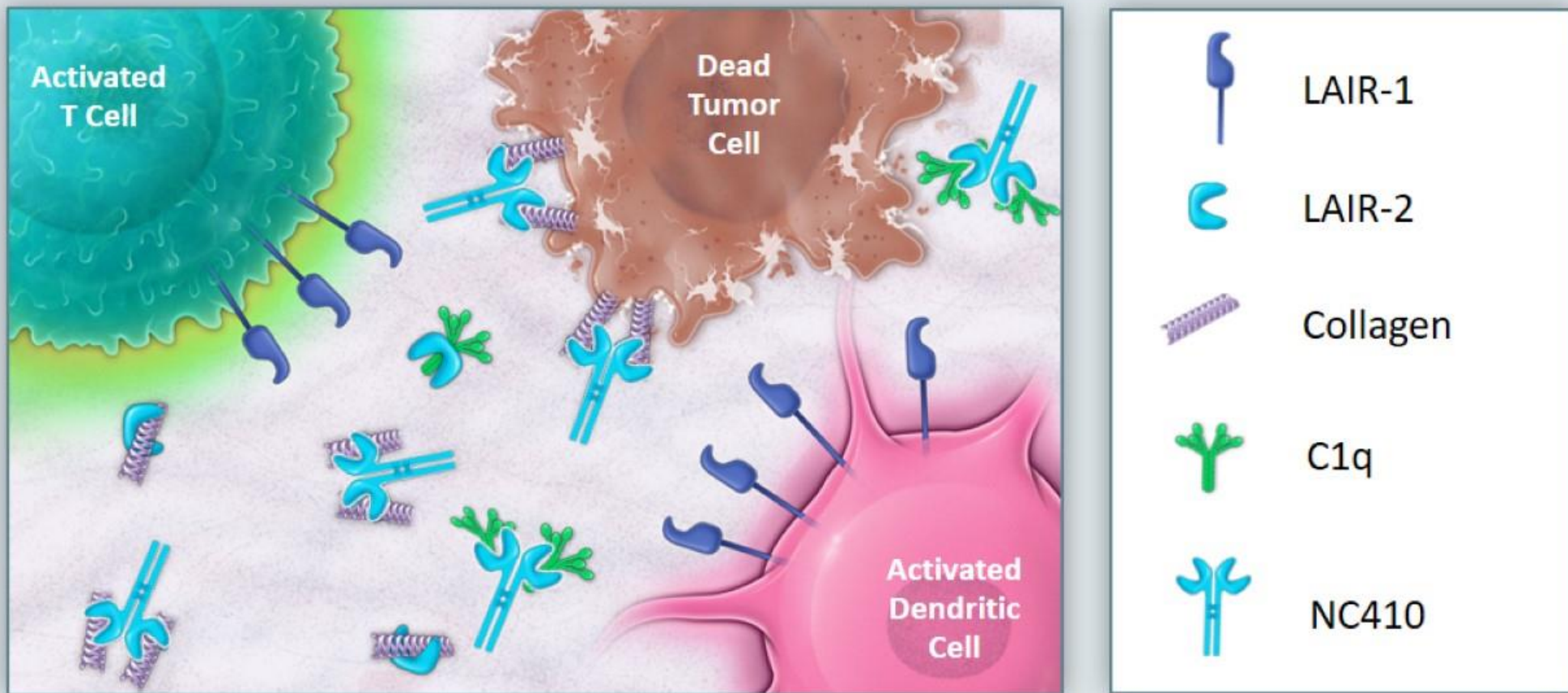


UPDATE

- Extracellular matrix remodeling
- Enhances T cell infiltration and tumor killing
- Synergistic combinations

NC410 Prevents Immune Suppression

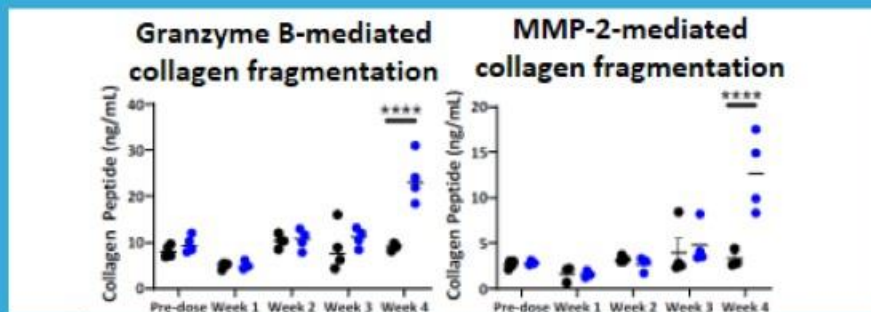
NC410 IS A FUSION PROTEIN OF LAIR-2 AND A DECOY FOR LAIR-1 AND PROMOTES T CELL FUNCTION AND DC ACTIVATION



NC410 Restores Immune Function

TARGETS

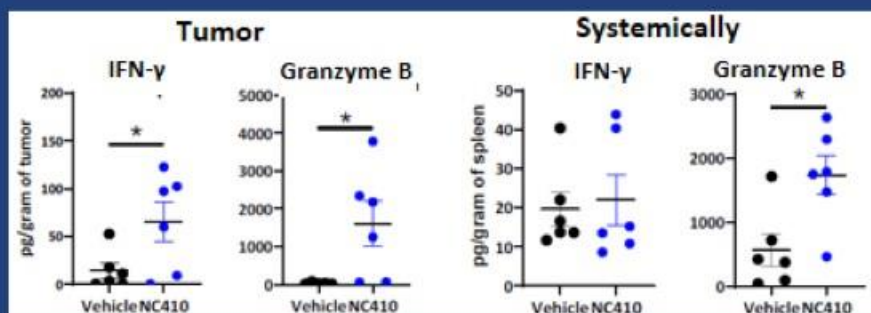
Extracellular Matrix (ECM)



ECM remodeling

PROMOTES

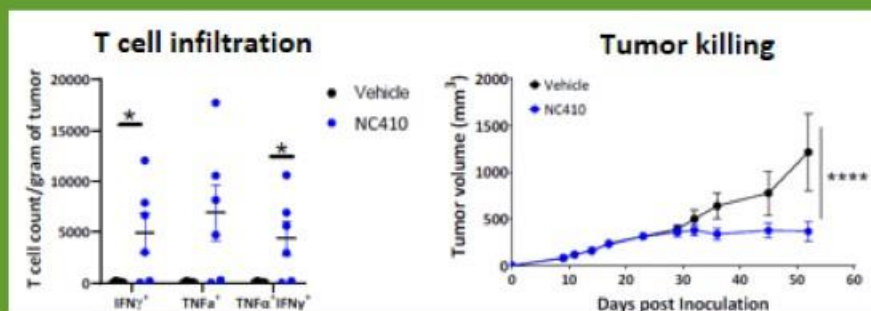
Anti-Tumor Immunity



Local and systemic immune activity

ENABLES

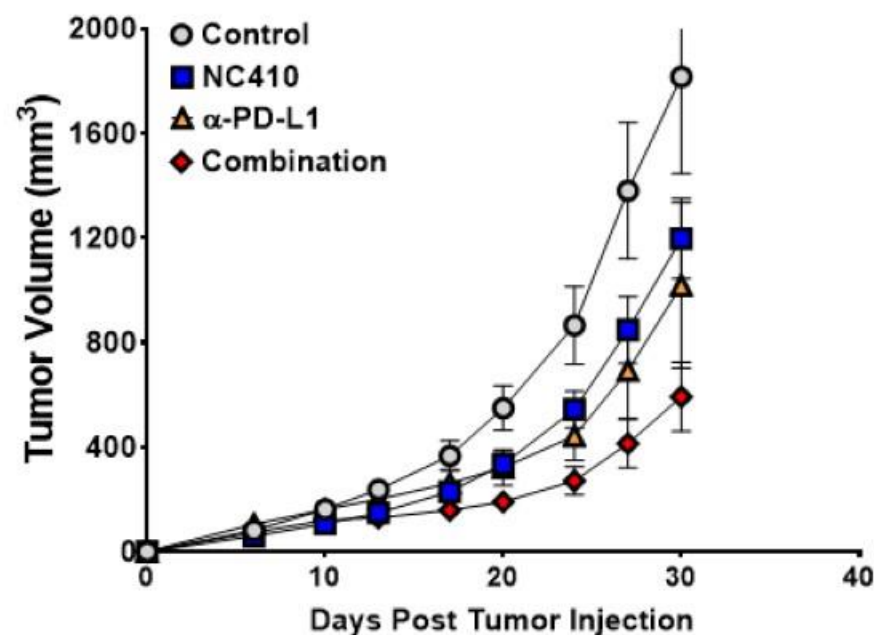
Immune Normalization



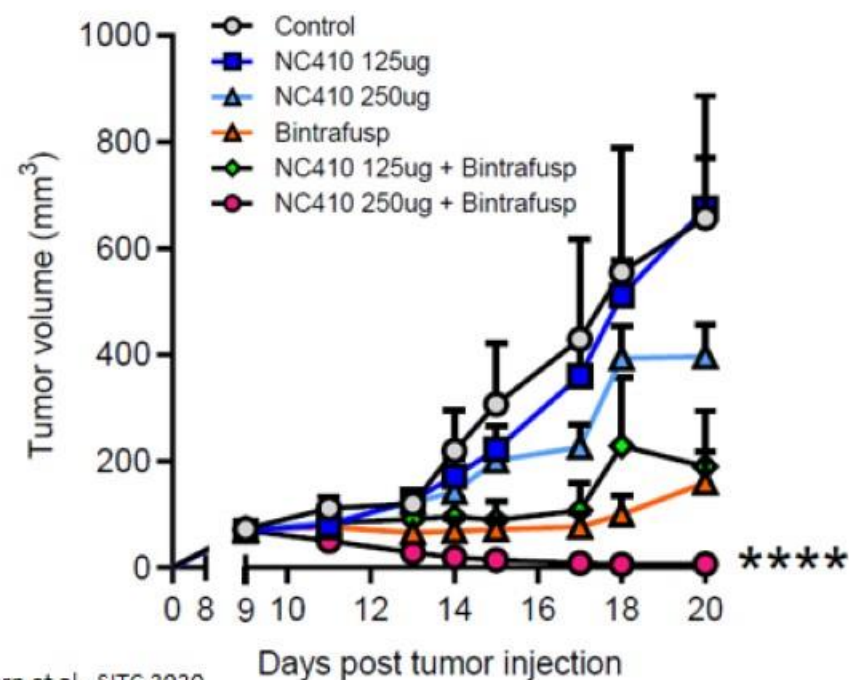
Enhances T cell infiltration and tumor killing

NC410 Demonstrates Synergistic Activity in Preclinical Models

PD-L1



BINTRAFUSP ALPHA



Horn et al., SITC 2020

NC410 Phase 1 Portion of Phase 1/2 First-in-Human Trial

DESIGN

- Dose-escalation
- Safety & tolerability

TUMOR TYPES

- Advanced or metastatic solid tumors
- NSCLC
 - Ovarian cancer
 - Pancreatic cancer

DELIVERABLES

Initial Phase 1 data
2H 2021



NATIONAL CANCER INSTITUTE
Center for Cancer Research



John Theurer
Cancer Center
at Hackensack University Medical Center

THE UNIVERSITY OF TEXAS

MDAnderson
~~Cancer~~ Center

NC762

Humanized B7-H4 Monoclonal Antibody

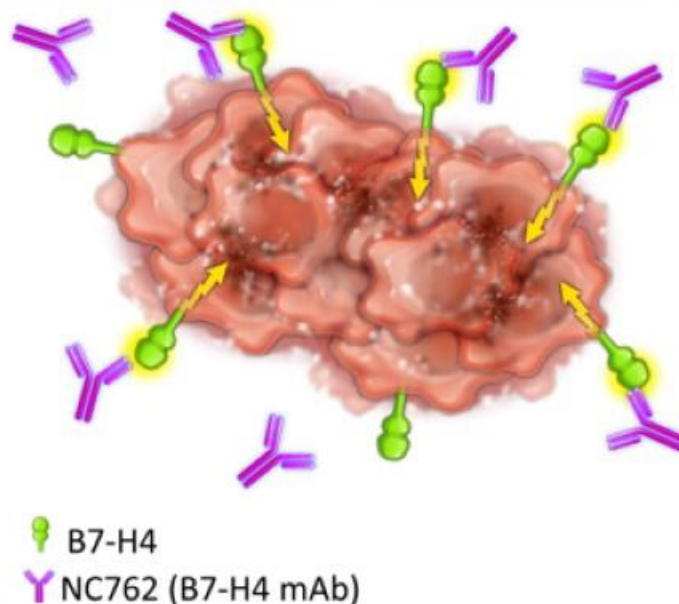


Phase 1/2
CLINICAL
TRIAL

BIOLOGY

- Inhibits tumor cell growth and is not dependent on T cells
- NK cells enhance anti-tumor activity
- Advanced or metastatic cancers
 - NSCLC
 - Breast cancer
 - Ovarian cancer

MOA



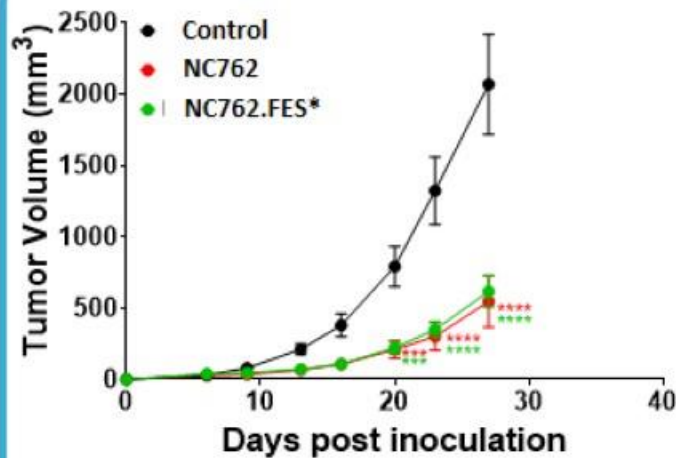
UPDATE

- IND filed
- Unique mechanism of action
- IHC assay for patient selection
- Biomarkers
- Phase 1 2Q 2021

NC762 Inhibits Human Melanoma Tumor Growth *In Vivo*

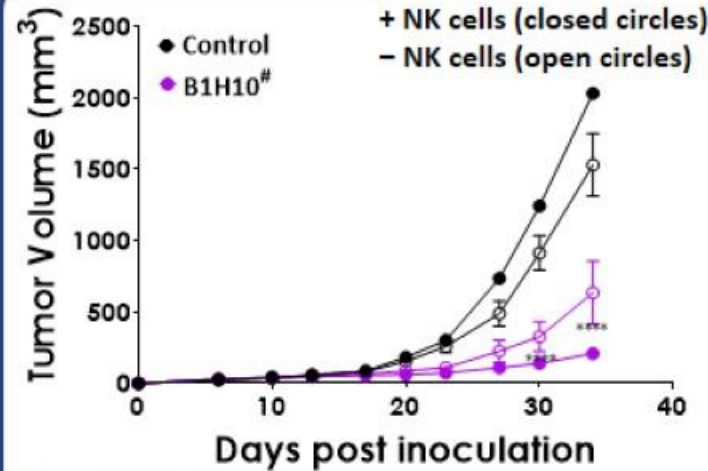
Activity Enhanced by Human PBMCs

TUMOR INHIBITION



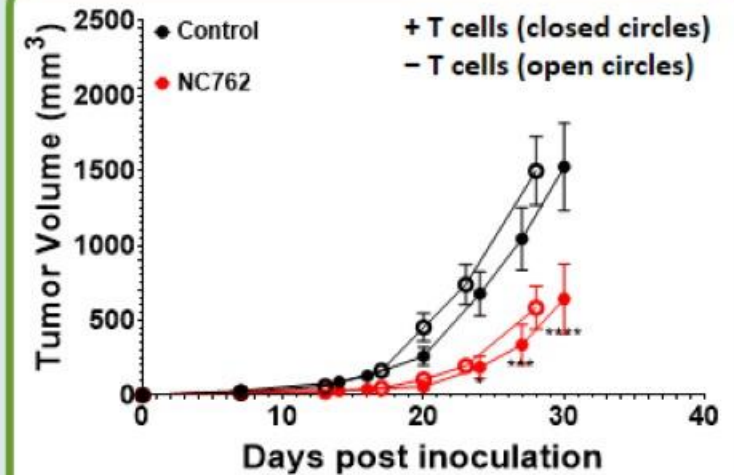
*Designed to reduce FcγR binding/restrict ADCC activity

NKs ENHANCE ACTIVITY



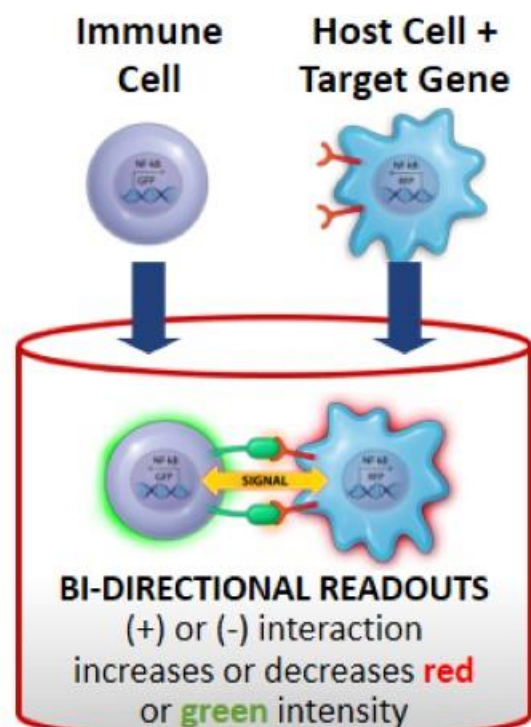
#Parent of NC762

T CELLS NOT REQUIRED

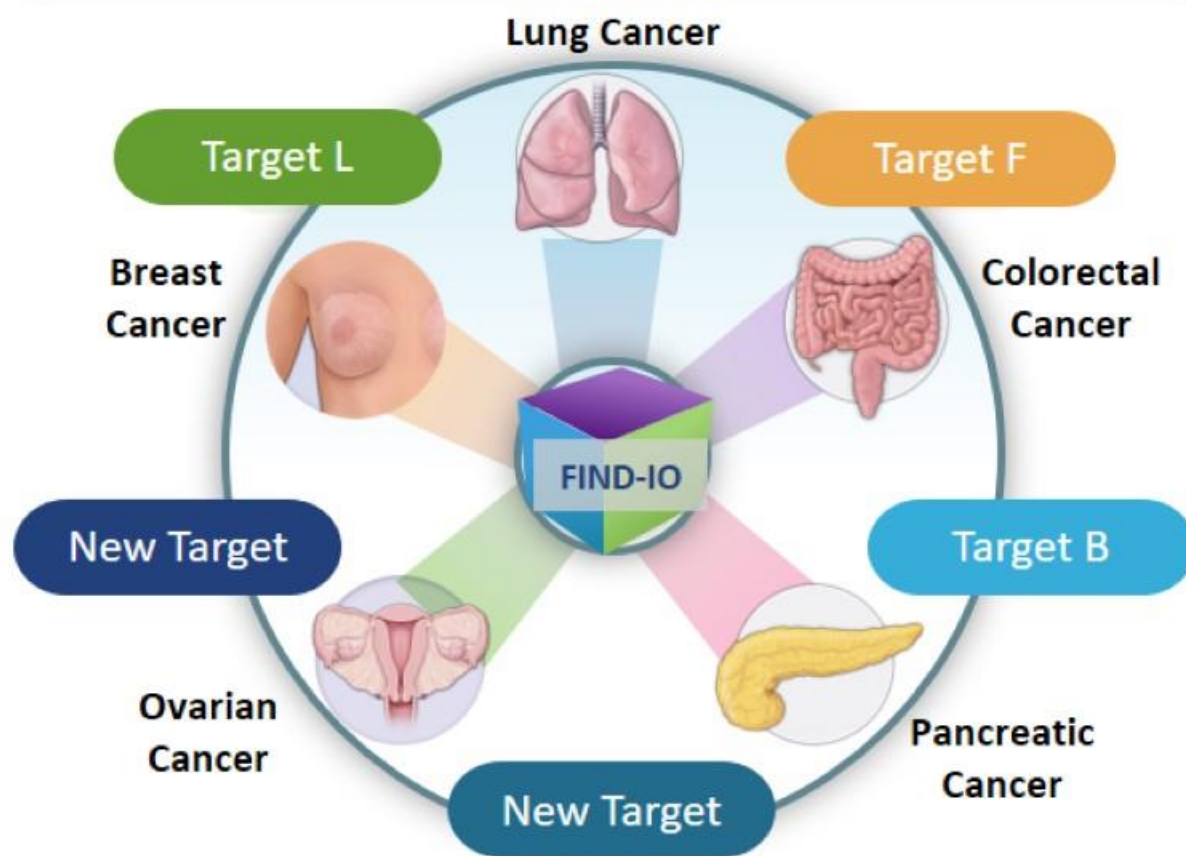


Versatile, Flexible and Comprehensive Approach for Product Development

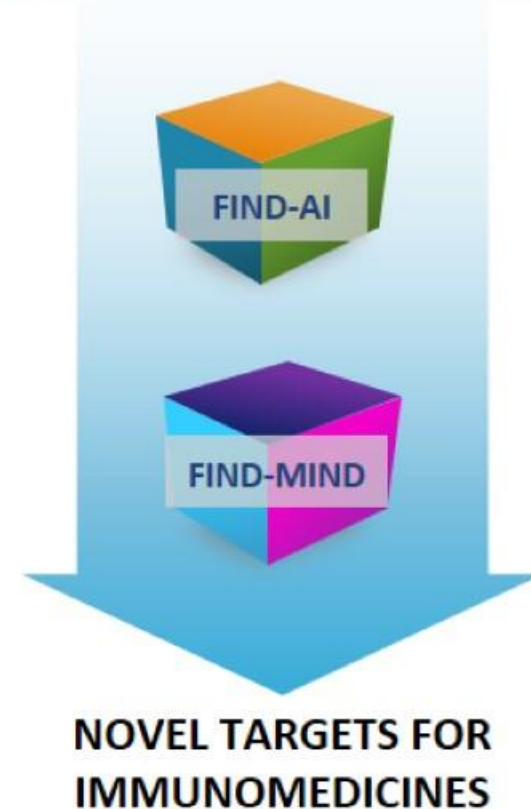
FUNCTIONAL READOUTS



FUTURE PIPELINE



DIVERSIFICATION



Anticipated Near-Term Milestones

Cash Position: \$283.4M Runway: 2H 2023

PROGRAMS	2021				2022			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
PRODUCT CANDIDATES								
NC318 (S15) Monotherapy				Phase 2 update				
NC318 (S15) Anti-PD-1 Combo*		Start Phase 2			Anticipate initial data			
NC410 (LAIR-1)				Initial data				
NC762 (B7-H4)		Start Phase 1				Initial data		

*Investigator-initiated (IIT) trial (Yale University)



Committed to Addressing the Unmet Needs of Patients with New Solutions

FOCUSED
Approach

PROVEN
Momentum

INNOVATIVE
Platform

EXPERIENCED
Team

FUTURE
Deliverables