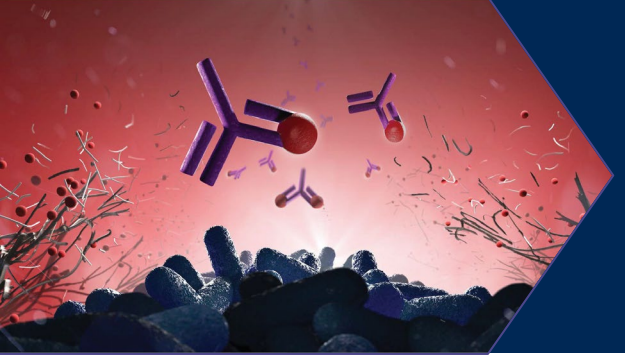
December 2025
Non-Confidential Presentation

CLARAMETYX biosciences

Pioneering Immune-Enabling Therapies for Chronic Respiratory Diseases

Novel biofilm-disrupting approach to reduce inflammation and improve patient outcomes



CLARAMETYX biosciences

Addressing the challenge of biofilm-driven chronic respiratory diseases

Differentiated, disruptive anti-biofilm technology

GAME-CHANGING SCIENCE

- Universal biofilm target
- **Potential to address multiple chronic respiratory disease indications**
- Expansive, long-lasting IP portfolio

FUNDED THROUGH KEY INFLECTIONS

- **$40M Series A** with CF Foundation and institutional investors
- **$15M non-dilutive funding** received, potential for ~$6M additional
- **Planning for 2H26 Series B** to fund Phase 2b bronchiectasis clinical trial with cystic fibrosis subpopulation

PIPELINE-IN-A-PRODUCT PROGRAMS

PLATFORM PROGRAM	TARGET INDICATION(S)	DEVELOPMENT STAGE: LEAD ID / OPT	IND ENABLING	PHASE 1A/B	PHASE 2A	PHASE 2B
CMTX-101 Anti-Biofilm mAb	***Ongoing* Ph2a Trial:** **Cystic Fibrosis (CF)** ***Planning* Ph2b:** **Bronchiectasis with CF Subpopulation**				★	
CMTX-301 Anti-Biofilm Vaccine	**TBD**					

Funding with Completed Series A → **Planned with Series B Funding**

CMTX-101 Anti-Biofilm mAb Program

★ Positive interim analysis data June 2025

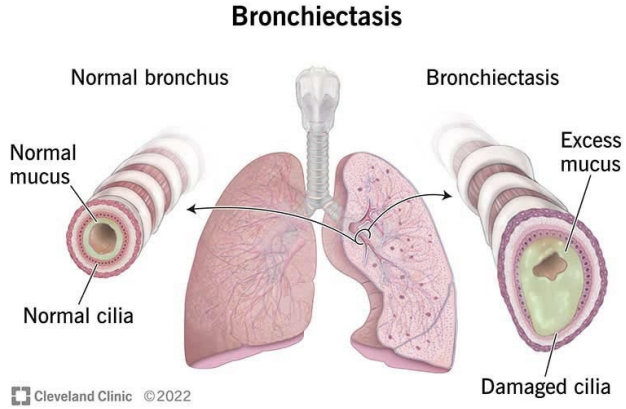
- Top line data expected Q1 2026
- Fast Track & QIDP designations granted by FDA August 2025

Urgent Unmet Needs in Chronic Respiratory Diseases

Biofilms drive high treatment burden, yet no approved therapies target the biofilm structure

Biofilms cause inflammation and bronchiectasis leading to lung function decline in chronic respiratory disease

- Bronchiectasis **requires a multi-pronged therapeutic approach**
- Drugs in development **predominantly focus on inflammation**
- **Anti-biofilm therapies and vaccines** offer strong rationale to reduce inflammation and prevent lung function decline



Biofilms contribute to chronic bronchiectatic respiratory diseases such as:

- Non-CF bronchiectasis (NCFB)
- Cystic fibrosis
- Nontuberculous mycobacterial (NTM)
- COPD

1. Ahearn CP et al. (2017), https://doi.org/10.1093/femspd/ftx042.
2. Kovach K et al. (2017), https://doi.org/10.1038/s41522-016-0007-9.
3. Kolpen M, et al. (2022), https://doi.org/10.1136/thoraxjnl-2021-217576.
4. Fennelly et al. (2017), https://doi.org/10.1164/rccm.201508-1586IM.
5. Proprietary internal and investment bank research.

Powerful Anti-Biofilm Targeting Approach

Novel, rapid mechanism enables unique, clinically beneficial modes of action

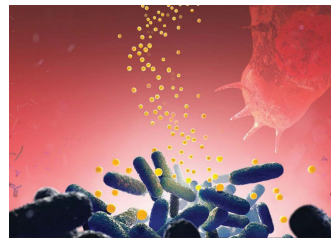
KEY DISCOVERY

Novel DNABII protein target that binds extracellular DNA

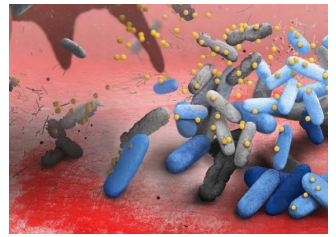
- Bacterial biofilm contains linchpin DNABII proteins that stabilize an extracellular DNA (eDNA) structure [1,2]
- Clarametyx technology captures and removes these DNABII proteins, resulting in biofilm prevention or therapeutic disruption [3,4]

1 Immune Effectors Can Efficiently Clear Bacteria

2 Sensitizes to Antibiotics for Greater Efficacy



3 Reduces Inflammation to Improve Outcomes



Highly conserved target across biofilms

1. Goodman SD et al. (2011) https://doi.org/10.1038/mi.2011.27.
2. Kurbatfinski et al. (2022) https://doi.org/10.1128/AAC.01877-21.
3. Brockson et al (2014) https://doi.org/10.1111/mmi.12735.
4. Devaraj et al. (2018). https://doi.org/10.1002/mbo3.563.

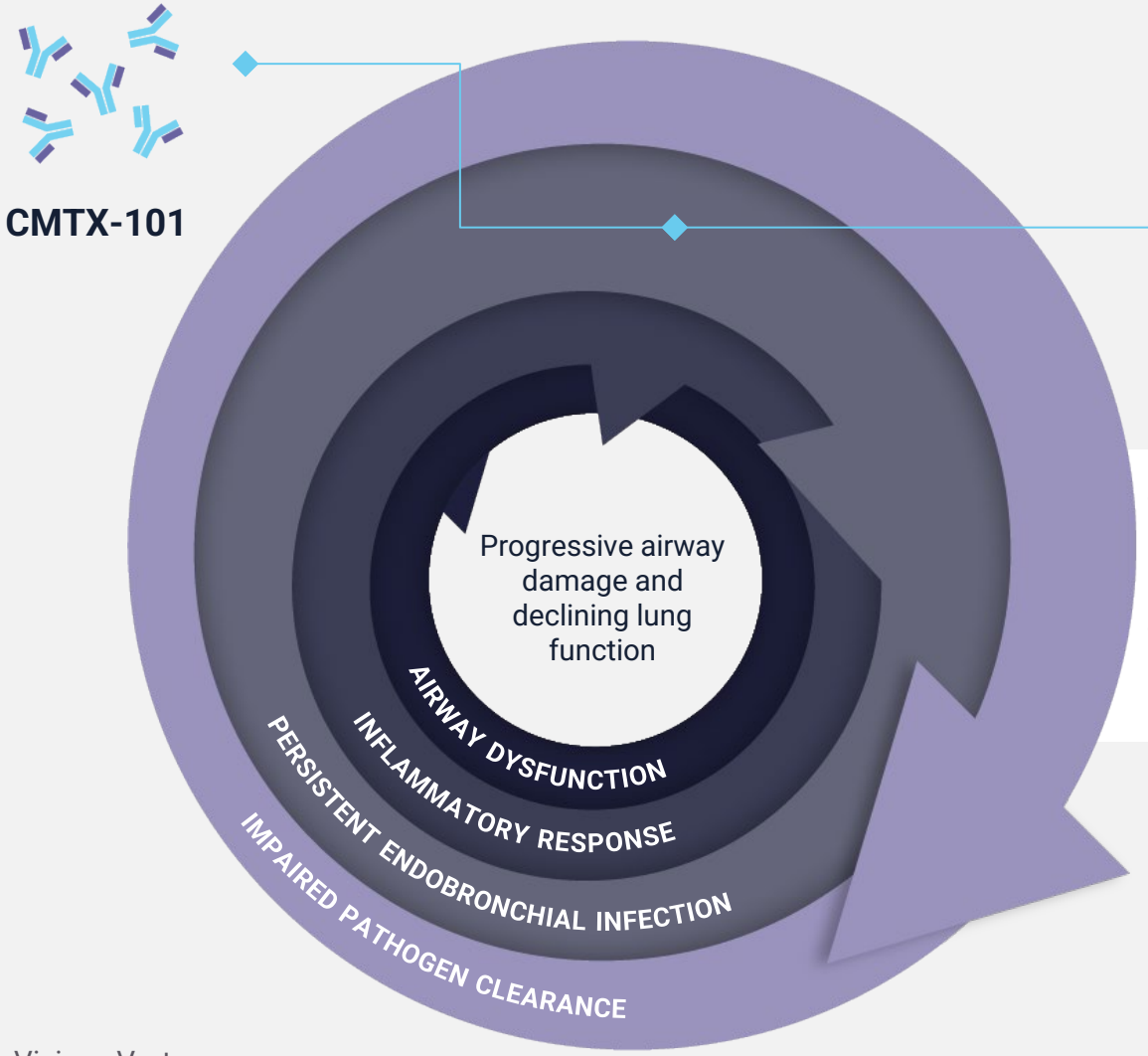
Reducing biofilm-driven burden across chronic respiratory diseases

The “**vicious vortex**” (right) of bronchiectatic lung disease involves:

- Chronic bacterial infection
- Neutrophil-driven inflammation
- Progressive airway damage and dilation resulting in lung function decline

Common inflammatory pathophysiology across cystic fibrosis, bronchiectasis, and NTM lung disease all addressable by treatment with CMTX-101

Intervening Early to Stop Decline



Vicious Vortex

1. Keir HR, Chalmers Semin Respir Crit Care Med (2021). doi: 10.1055/s-0041-1730891.
2. Flume PA, Chalmers JD, Olivier KN. Lancet (2018). doi: 10.1016/S0140-6736(18)31767-7.

Differentiated Approach in Bronchiectasis Competitive Landscape

Targeted biofilm therapy is a broad and transformative approach to treating multiple bronchiectasis etiologies

Anti-Biofilm

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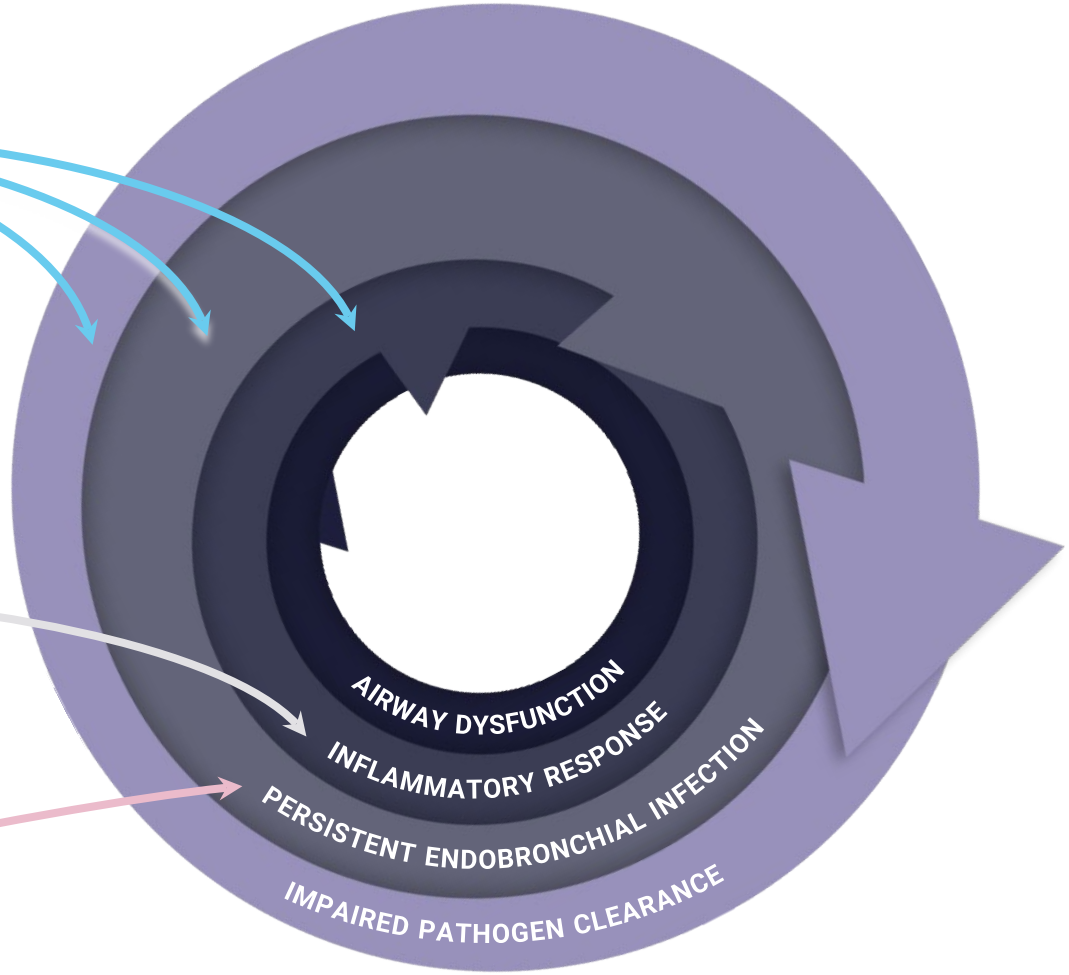
Neutrophilic or Type 2 Inflammation

insmed · Boehringer Ingelheim · GSK · MERCK · Harsco · Verona Pharma · sanofi · REGENERON

Anti-Infectives

AstraZeneca



Multi-faceted MOA addresses vicious vortex lung function decline

- Addresses bacterial biofilms—the root cause of chronic inflammation and subsequent airway dysfunction
- Therapeutic solution for patients less likely to benefit from anti-inflammatory approaches
- Strong safety profile supports chronic treatment

CMTX-101 holds the potential for more effective intervention where DPP-1 inhibitors fall short

Larger companies with most clinically advanced programs depicted

Broad Efficacy Against Respiratory Biofilms

CMTX-101 affects inflammatory biofilms associated with more than 20 pathogens

Biofilm Pathogen	CMTX-101 Efficacy	Indications
Pseudomonas aeruginosa [1]	✓	**CF, NCFB, COPD**
Haemophilus influenzae	✓	CF, NCFB, COPD
Streptococcus pneumoniae	✓	CF, NCFB, COPD
Klebsiella pneumoniae	✓	CF, NCFB, COPD
Staphylococcus aureus (MSSA & MRSA)	✓	CF, NCFB
Nontuberculous mycobacteria: *M. avium* and *M. abscessus*	✓	CF, NCFB, NTM-LD[2]
Acinetobacter baumannii	✓	CF, NCFB,[3] COPD[3]

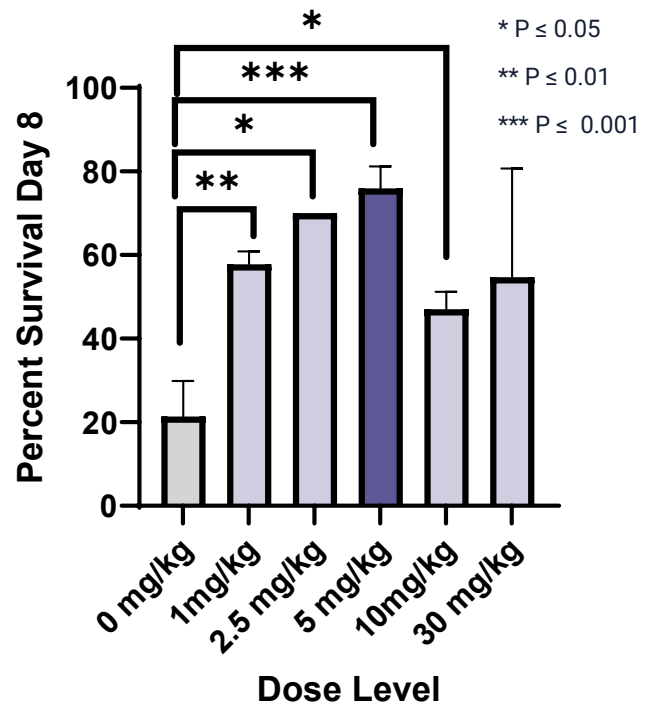
1. Most common and highly correlated to exacerbation rate, morbidity, lung function decline, and mortality across CF, NCFB, and COPD.
2. Less common in COPD, but still significantly higher in COPD than in the general population.
3. Most common during exacerbation and/or hospitalization in NCFB and COPD.

Compelling CMTX-101 Preclinical Findings

Favorable findings in four *in vivo* proof of concept studies

- **CMTX-101** administered IV without antibiotics **significantly increased survival** of mice with *Pseudomonas aeruginosa* biofilm infection at multiple doses
- **Dose response** observed across studies from **1 mg/kg to 5 mg/kg**
- 5 mg/kg dose consistently demonstrated optimal survival translating to a potential **efficacious human dose of less than 0.5g**

80% survival across four studies



Single administration of CMTX-101 on Day 1, following bacterial challenge on Day 0; same administration in all referenced POC studies.

Pipeline-in-Product Potential

Aim to address a range of biofilm-mediated infections and inflammation, with IP protection through 2040+

PLATFORM PROGRAM	DRUG MECHANISM	TARGET INDICATION(S)	DEVELOPMENT STAGE	RECENT OR NEXT MILESTONE AND PROGRAM SUPPORT
CMTX-101	Anti-Biofilm mAb (Infusion)	**Cystic Fibrosis**	CARB-X* (LEAD ID / OPT, IND ENABLING); PHASE 1A, PHASE 1B, PHASE 2A	**Q1 2026** Top-line data; CYSTIC FIBROSIS FOUNDATION
CMTX-301	Anti-Biofilm Vaccine (IM Injection)	**TBD**	LEAD ID / OPT, IND ENABLING	**Q1 2027** IND; CARB-X

LEAD ID / OPT | IND ENABLING | PHASE 1A | PHASE 1B | PHASE 2A

★ Positive interim analysis data supports advancing study

Key milestones to be achieved with Series A funding:

- **Completion of CMTX-101 Phase 2a study**
- **IND for CMTX-301 program**

Future clinical development:

- ***Non-CF bronchiectasis***
- ***NTM lung disease***

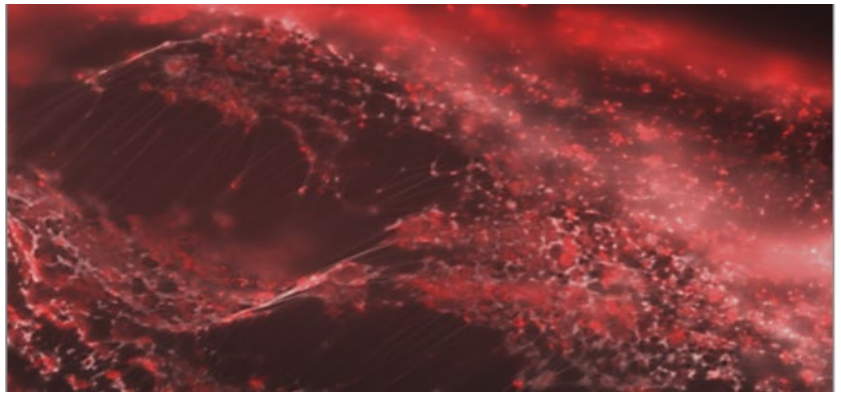
* CARB-X and Ph1a were for initial pneumonia program

Current Clinical Program: Cystic Fibrosis

CMTX-101 aims to improve standard-of-care in evolving CF patient population

- **Rationale for initial CF Focus:**
  - Growing orphan respiratory disease market with extended lifespans[1]
  - Despite effective CFTR correctors, chronic biofilm infections and resulting inflammation remains a persistent unmet need[2]
  - Demonstrated mechanism and activity in sputum[3]
  - Clinically and pathologically similar to non-CF bronchiectasis[4]

- **Phase 1b/2a trial in CF patients**
  - CMTX-101 on top of standard-of-care therapies
  - Foundational study will inform expansion to additional larger chronic respiratory indications bronchiectasis, NTM-LD



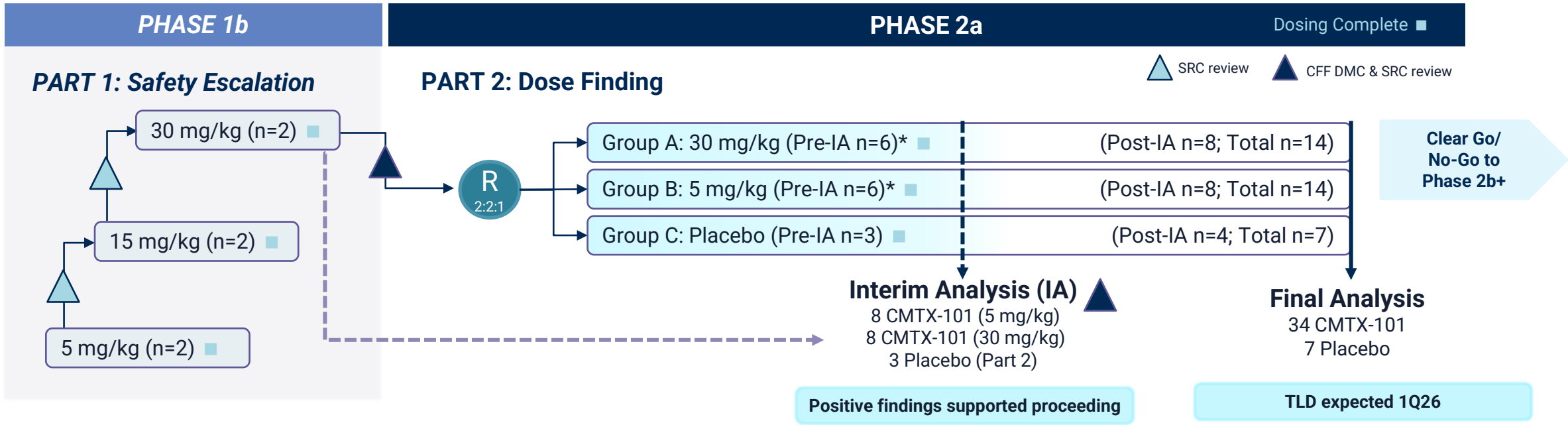
Well-Established Biofilm Role in CF Pathophysiology

Immuno-histochemical labeling showing high density of DNABII (Clarametyx target) in CF sputum

1. Cystic Fibrosis Foundation Patient Registry 2020 Annual Data Report. Bethesda, Maryland ©2021 Cystic Fibrosis Foundation. https://www.cff.org/media/9741/download.
2. Armbruster et al. (2024), https://doi.org/10.1128/spectrum.00787-24; Internal KOL Research.
3. Gustave et al. (2013), https://doi.org/10.1016/j.jcf.2012.10.011.
4. Swenson et al. (2025), https://doi.org/10.1371/journal.pone.0316721.

Cystic Fibrosis 1b/2a Trial Readout Early 2026

Interim analysis in June 2025 supported proceeding with both dose levels



Primary Endpoint:
- Safety and tolerability

Secondary Endpoints:
- Characterization of the PK profile of CMTX-101
- Proportion of participants with ADA and Nabs
- Reduction in pulmonary *P. aeruginosa* bacterial burden

Exploratory Endpoints:
- Detection of CMTX-101 in sputum
- Reduction in pulmonary total bacterial burden
- Improvement in ppFEV1, LCI, impact on renal and hepatic function, and CFQ-R Respiratory score
- Increase in body weight
- Changes in inflammatory biomarkers in sputum

Interim Analysis Supported CF Phase 2a Study Progression

Full data will enable pursuit of additional chronic respiratory indications

Safety/Tolerability:

No safety signals in both 5 and 30 mg/kg dosing levels

Change in *P. aeruginosa* (Pa) burden in sputum:

Reduction of Pa burden in both dose groups, meeting pre-defined threshold to proceed

Pharmacokinetics (PK) and Immunogenicity in people with CF (pwCF):

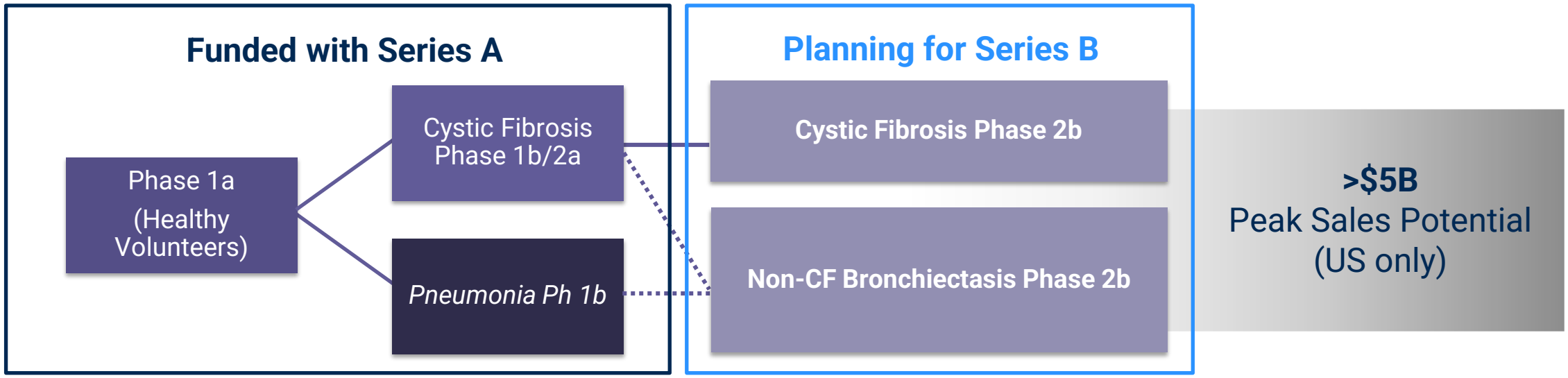
PK appears linear, **no anti-drug antibodies** (ADAs) detected

Detection of CMTX-101 in sputum:

CMTX-101 present in sputum of all dosed subjects with systemic administration

Defined Clinical Development Strategy

Pathway to demonstrate novel mechanism and applicability to multiple chronic indications



Common outpatient call point with significant prescriber overlap

+ Potential Expansionary Indications:

NTM Lung Disease, COPD, Hidradenitis Suppurativa, Atopic Dermatitis, Prosthetic Joint Infection

>$8B
Peak Sales Potential (US only)

CMTX-301: Anti-Biofilm Vaccine

Strong market potential across multiple indications

- **Compelling approach** with clear proof-of-principle
  - Targets universal biofilm protein DNABII to reduce infection incidence and severity
  - Three positive proof-of-principle *in vivo* studies across antigens, adjuvant, and routes of administration
- **CARB-X support** for Phase 1 healthy volunteer study
  - Evaluating multiple vaccine platforms for immune response to optimize lead candidate
  - IND targeted Q1 2027
- **Persistent need for bacterial vaccines**
  - Ability to address serious or recurrent biofilm infection and inflammation in respiratory, skin and other areas with high unmet need

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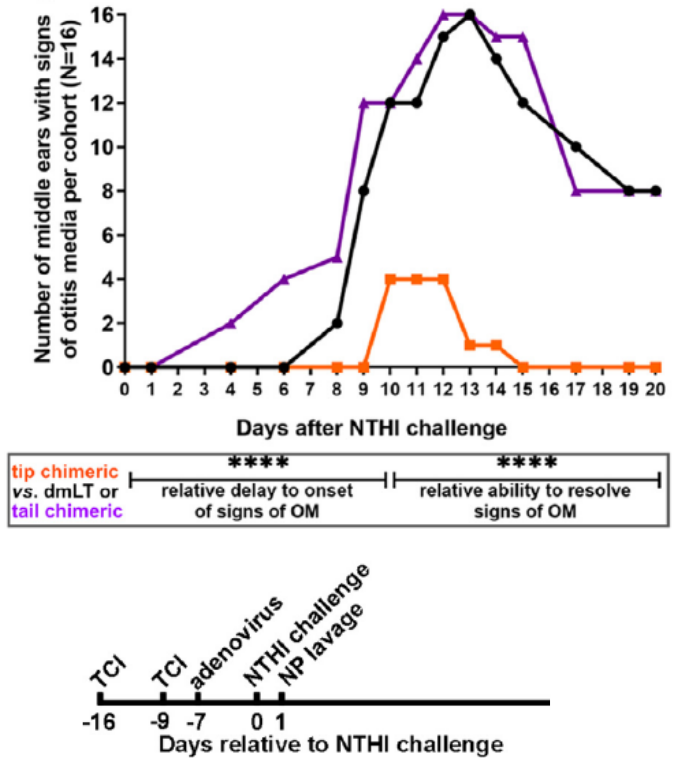
Prevention / reduction of infection



- **72% efficacy** in preventing/reducing acute otitis media (AOM)[1]
- **Prevention/reduction of AOM** using CMTX-301 antigen (Tip Chimer)[2]
- **Increased immunogen-specific IgG** with CMTX-301 antigen (Tip Chimer)[3]

1. Novotny, et al. CVI (2017), https://doi.org/10.1128/CVI.00563-16.
2. Novotny, et al. EBioMedicine (2020), https://doi.org/10.1016/j.ebiom.2020.102867.
3. Bailey, et al. mSphere (2020), https://doi.org/10.1128/msphere.00296-20.

Support from CARB-X
Combating Antibiotic-Resistant Bacteria

Bronchiectasis Phase 2b Study

Aiming to initiate mid-stage study by 2H26, building upon CF Phase 2a trial data

PLATFORM PROGRAM	DRUG MECHANISM	TARGET INDICATION(S)	DEVELOPMENT STAGE					TARGETED MILESTONES
			PRECLINICAL	PHASE 1	PHASE 2A	PHASE 2/2B	PHASE 3	
CMTX-101	Anti-**DNABII** mAb (Infusion)	**Bronchiectasis, including CF**						**Phase 2b initiation** ***2H26***
CMTX-301	Vaccine vs **DNABII** (IM Injection)	**TBD**						**Phase 1 healthy volunteer start** ***1H27***

Key value Inflections to be achieved with Series B funding and further clinical development

- Leverage CF Phase 2a trial data to springboard into larger bronchiectasis indication, including CF—similar pathophysiology and significant prescriber overlap
- Complete Ph2b trial to de-risk registrational endpoints for CMTX-101 programs
- Phase 1 healthy volunteer study for CMTX-301 program

Strong Senior Leadership

Management team with over 200 years combined industry experience

David V. Richards | Chief Executive Officer

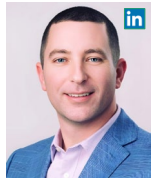
- Life sciences executive with expertise in corporate development, operations, capital structuring, program management, IP and regulatory strategy, R&D
- Operations roles at Aclipse Therapeutics, Kinnear Pharmaceuticals, N8 Medical and PriorAuthNow, Inc.

Charles McOsker, PhD | Co-founder & Chief Scientific Officer

- Veteran scientific executive, 40+ years of drug discovery and development experience
- Former Chief Technical Operations Officer at BioMotiv, founder of Airway Therapeutics, Director of BD for Drug Discovery Center at University of Cincinnati; P&G Pharmaceuticals drug discovery and development over a 23-year tenure

Veronica L. Hall, PhD | Chief Operating Officer

- Multidisciplinary background with more than 20 years of experience in life science research for vaccines, therapeutics, and drug/device combinations
- Former Senior Director at Emergent BioSolutions Inc.



Steve St. Onge, PharmD, MBA | Chief Business Officer

- Significant clinical infectious disease and corporate development experience
- Previously Executive Director, Business Development of Paratek Pharmaceuticals through take private acquisition Gurnet Point and Novo Holdings

Brendan Doran, PharmD | SVP, Clinical Development

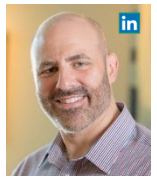
- Previously Head of Clinical, CinRx
- Diverse clinical operations, development and strategy roles at industry and CROs

Teresa M. Byrne | VP of Clinical Operations

- Experienced Clinical Operations Manager
- Previously Novartis and GSK Associate Director, Clinical Operations Manager Roles; Operations Roles at BioBridges and ICON

Thomas Hofmann, MD, PhD | Consulting CMO

- Former CSO at MannKind, following sale of QrumPharma
- 25+ Years of chronic respiratory development experience
- Significant cystic fibrosis and NTM lung disease R&D experience



George Arida, MBA | Consulting CFO

- Significant venture capital and operational experience
- Recent respiratory vaccine experience at BlueWillow Biologics
- ~25 years startup investment and board experience in biotech and healthcare, including Venture Investors

Clarametyx Summary

Game-changing science

- Novel immune-enabling technology applicable to all bacterial biofilm-associated diseases
- Premise derived from groundbreaking discoveries in biofilm structure

Expert team

- Accomplished team of scientific, biotech, and pharma leaders with substantial sector experience
- Pioneering, renowned academic partners leading biofilm science

Pipeline-in-a-product approach

- CMTX-101 therapeutic for chronic respiratory disease exacerbation, starting with bronchiectasis
- CMTX-301 broad-spectrum vaccine addresses limitations of today's vaccines across numerous potential indications

Poised for rapid progress

- $40M Series A with CF Foundation and institutional investors
- $15M non-dilutive funding received to date from CARB-X and NIH
- Near-term readout in cystic fibrosis Ph2a trial in 1Q26

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