Chemomab
THERAPEUTICS

Pioneering Innovative Treatments for Fibrotic Diseases

Corporate Overview | Nasdaq: CMMB | Non-Confidential | May 2022

Forward Looking Statements

This presentation contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act. These forward-looking statements include, among other things, statements regarding the clinical development pathway for CM-101; the future operations of Chemomab and its ability to successfully initiate and complete clinical trials and achieve regulatory milestones; the nature, strategy and focus of Chemomab; the development and commercial potential and potential benefits of any product candidates of Chemomab; and that the product candidates have the potential to address high unmet needs of patients with serious fibrosis-related diseases and conditions. Any statements contained in this communication that are not statements of historical fact may be deemed to be forward-looking statements. These forward-looking statements are based upon Chemomab's current expectations. Forward-looking statements involve risks and uncertainties.

Because such statements deal with future events and are based on Chemomab's current expectations, they are subject to various risks and uncertainties and actual results, performance or achievements of Chemomab could differ materially from those described in or implied by the statements in this presentation, including: the uncertain and time-consuming regulatory approval process; risks related to Chemomab's ability to correctly manage its operating expenses and its expenses; Chemomab's plans to develop and commercialize its product candidates, including CM-101; the timing of initiation of Chemomab's planned clinical trials; the timing of the availability of data from Chemomab's clinical trials; the timing of any planned investigational new drug application or new drug application; Chemomab's plans to research, develop and commercialize its current and future product candidates; the clinical utility, potential benefits and market acceptance of Chemomab's product candidates; Chemomab's commercialization, marketing and manufacturing capabilities and strategy; Chemomab's ability to protect its intellectual property position; and the requirement for additional capital to continue to advance these product candidates, which may not be available on favorable terms or at all. Additional risks and uncertainties relating to Chemomab's and its business can be found under the caption "Risk Factors" and elsewhere in Chemomab's filings and reports with the SEC. Chemomab expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in Chemomab's expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

This presentation ("Presentation") is for informational purposes only and does not constitute an offer to sell, solicitation of an offer to buy, or a recommendation to purchase any equity, debt or other financial instruments of Chemomab. The data contained herein is derived from various internal and external sources. No representation is made as to the reasonableness of the assumptions made within or the accuracy or completeness of any other information contained herein. All levels, prices and spreads are historical and do not represent current market levels, prices or spreads, some or all of which may have changed since the issuance of this document. Any data on past performance, modeling contained herein is not an indication as to future performance. Chemomab assume no obligation to update the information in this Presentation. Chemomab does not accept any liability whatsoever for any losses arising from the use of this Presentation or reliance on the information contained herein. Nothing herein shall be deemed to constitute investment, legal, tax, financial, accounting or other advice. This Presentation is being provided for use only by the intended recipient.

Investment Highlights

Clinical Stage Biotech Company Focused on Diseases at Confluence of Inflammation and Fibrosis

Focus	• Discovery and development of innovative therapeutics for rare inflammatory and fibrotic diseases with high unmet need
CM-101: A Pipeline in A Product	• CM-101, a first-in-class monoclonal antibody neutralizing CCL24, a novel target for: ○ Primary Sclerosing Cholangitis (PSC) ○ Systemic Sclerosis (SSc) ○ Other high unmet need diseases characterized by interaction of inflammation & fibrosis
Multiple Catalysts	• Conducting two Phase 2 clinical trials; initiating new Phase 2 trial later this year • Multiple data readouts targeted for 2022/2023
Robust IP Portfolio	• Global patent exclusivity through 2041. Granted composition of matter patent with multiple additional patents pending
Top Tier Investors	OrbiMed Healthcare Fund Management; Cormorant Asset Management; THIEL
Solid Balance Sheet	• Cash & equivalents of $57.5M as of March 31, 2022; runway extended through end of 2023

Experienced Management

DALE PFOST, PhD

Chairman & Chief Executive Officer

OPKO · Advent Life Sciences · SmithKline Beckman Corporation · Orchid

ADI MOR, PhD

Co-founder & Chief Scientific Officer

Tel Aviv University · Tel-Aviv Sourasky Medical Center

DON MARVIN

Chief Financial Officer, EVP and COO

Orchid · Abbott · Bayer · concentric · Boehringer Ingelheim

DAVID WEINER, MD

Interim Chief Medical Officer

Acadia · EMD Serono · Lumos Pharma · aTyr · PTI Proteostasis

SHARON ELKOBI

Vice President, Business Development

teva · Medison · Neurim Pharmaceuticals

Jack Lawler

Vice President, Global Clinical Development Operations

teva · Cephalon · Goldfinch Bio · Shire

Experienced Leadership

Board of Directors

Dale Pfost, PhD
Chairman
Chief Executive Officer

Neil Cohen, MA
Director

Nissim Darvish, MD, PhD
Director

Joel Maryles, CFA, MBA
Director

Adi Mor, PhD
Director
Co-founder & Chief Scientific Officer

Alan Moses, MD
Director

Claude Nicaise, MD
Director

Scientific Advisory Board (selected)

Marco Matucci-Cerinic, MD, PhD
Director of the Division of Rheumatology, University of Florence, Italy

Francesco Del Galdo, MD, PhD
Head of the Scleroderma Program at NIHR, University of Leeds, UK

Scott L. Friedman, MD
Dean for Therapeutic Discovery and Chief, Division of Liver Diseases, Mount Sinai, NY, USA

Dinesh Khanna MD, MBBS, MSc
Director of the Scleroderma Program, University of Michigan, Ann Arbor, Michigan, USA

Massimo Pinzani, MD, PhD, FRCP
Sheila Sherlock Chair of Hepatology, Director UCL Institute for Liver and Digestive Health, RFH, London, UK

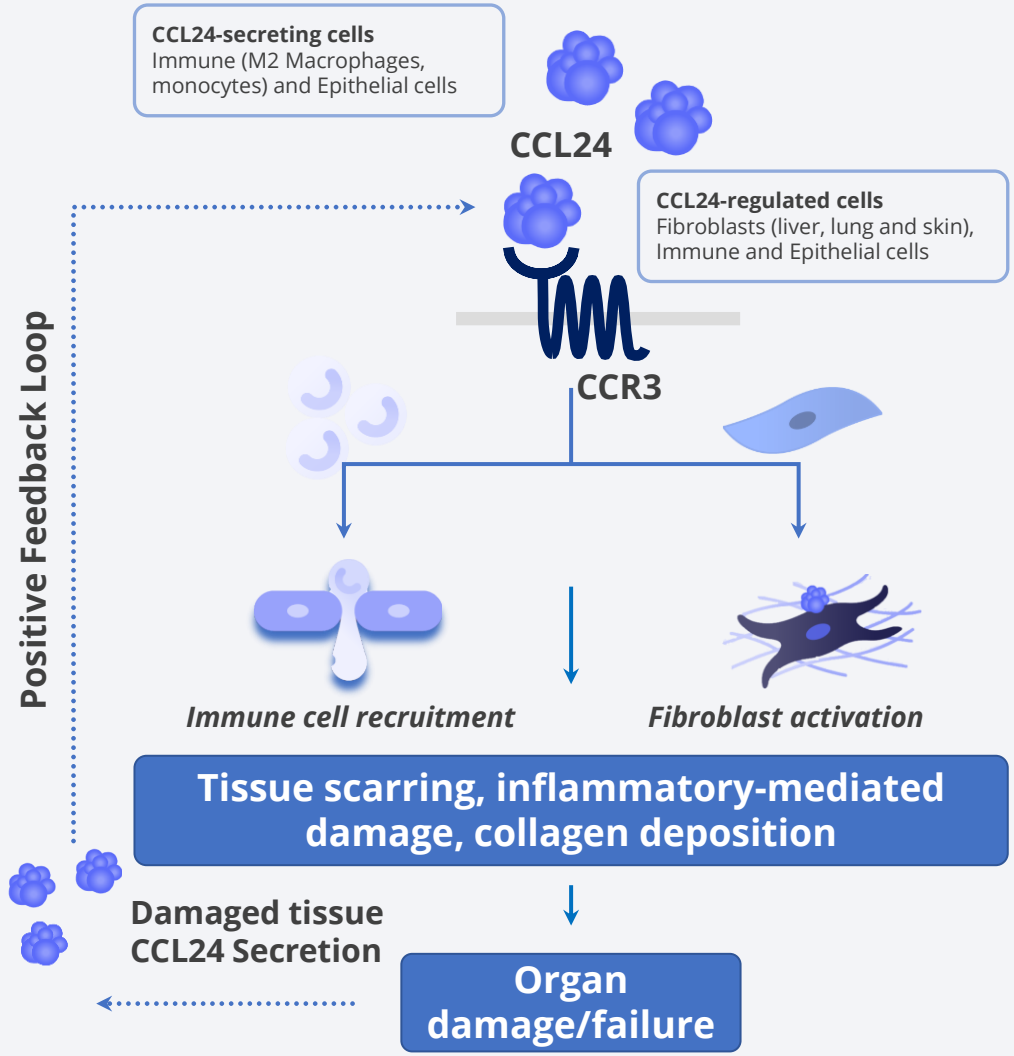
CM-101: Pipeline in a Product

Addressing Inflammatory/Fibrotic Diseases with High Unmet Need

Program	Indication	Target	Discovery	Preclinical	Phase 1	Phase 2	Phase 3	BLA/MAA
CM-101	**Primary Sclerosing Cholangitis**	CCL24	***Orphan designation granted by FDA and EMA***					
CM-101	**Systemic Sclerosis**	CCL24	***Orphan designation granted by FDA and EMA***					
CM-101	**Liver Fibrosis Biomarkers & Subcutaneous Formulation**	CCL24	***SC Route of Administration and biomarker data***					
Next-Gen	**Inflammation/ Fibrosis**	Screening						

CCL24 is a Novel Therapeutic Target for Inflammation & Fibrosis

Critical Mediator Promoting Inflammation and Fibrosis

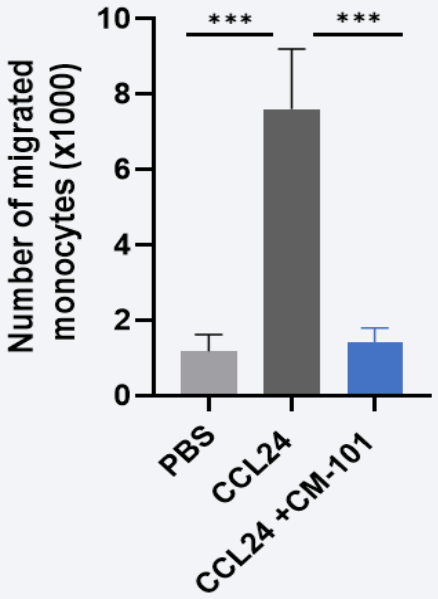


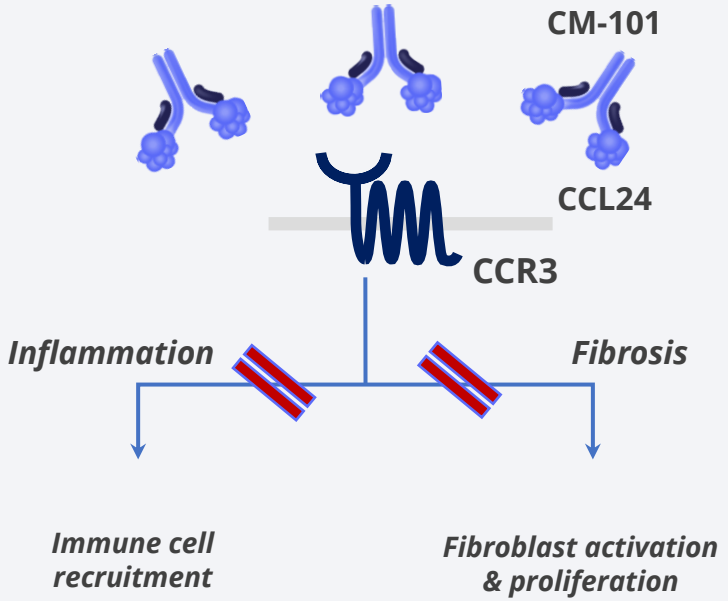
- ✓ **Dual role in promoting fibrosis**
  - directly activates fibroblasts
  - enhances local immune cell recruitment
- ✓ **Unique and differentiated activity**
  - *ex vivo* and *in vivo* data confirms unique role vs. other CCLs
  - correlates with disease outcome and fibrotic biomarkers
- ✓ **Minor expression in healthy tissue**
  - significantly elevated in liver, skin, lung fibrotic tissue
  - wide therapeutic margin
- ✓ **Positive feedback loop potentiates tissue damage**
  - responsible for initiation and perpetuation of fibrosis

CM-101: First-in-Class mAb Blocking CCL24

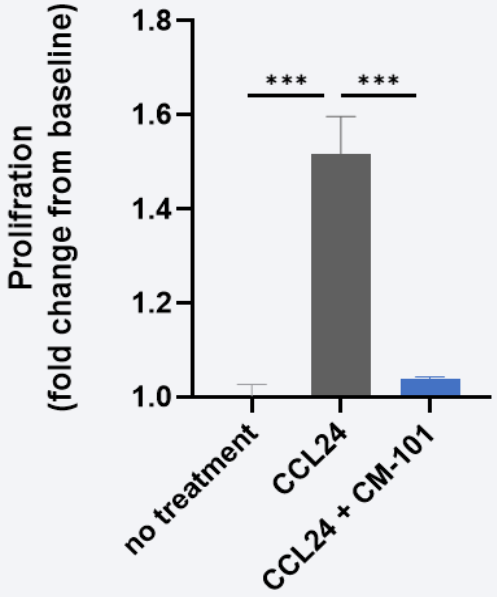
Dual Mechanism of Action Interferes with Core Fibrotic & Inflammatory Pathways

CM-101 Reduces *In vivo* Monocyte Recruitment





CM-101 Inhibits Primary Hepatic Fibroblast Activation



CM-101 attenuates inflammation and fibrosis by inhibiting immune cell recruitment and fibroblast activation

Strong Preclinical Evidence of CM-101 Activity via CCL24 Inhibition

Significant Attenuation of Fibrosis & Inflammation in 11 Different Disease Models & Patient Samples

CCL24 Target Validation

Ex Vivo (Patient Samples)

Primary sclerosing cholangitis

- Biomarker correlations
- Overexpression of CCL24 and CCR3

Systemic sclerosis

- Fibrotic biomarker correlation
- Disease deterioration correlation
- Overexpression of CCL24 and CCR3

Liver fibrosis (NASH)

- Disease severity correlation
- Overexpression of CCL24 and CCR3

In Vivo (Knockout Animal Models)

Systemic sclerosis

- CCL24 knock-out vs. WT (wild type) in Bleomycin-induced skin fibrosis model (mice)

Liver metabolism and inflammation

- CCL24 knock-out vs. WT in MCD-induced NASH (mice)

Proof of Concept\Animal Models

Primary sclerosing cholangitis

- ANIT-induced cholestasis--chronic and acute (mice)
- Bile duct ligation (rat)
- MDR2 knock-out (mice)

Systemic sclerosis

- Bleomycin-induced skin fibrosis (mice)
- Bleomycin-induced lung fibrosis (mice)

Liver fibrosis

- TAA-induced liver fibrosis (rat and mice)

Liver metabolism and inflammation

- STAM (mice)
- MCD diet-induced NASH (mice)

Atherosclerosis

- ApoE knock-out model (mice)

Mechanism of Action

CM-101 effects on fibroblast activation

- Dermal, hepatic and lung fibroblast activation
- Dermal and liver fibroblast transition to myofibroblast
- Hepatic fibroblast motility

CM-101 effects on immune cell migration and recruitment

- Dermal fibroblast migration
- Monocyte polarization
- Monocyte recruitment

Toxicology

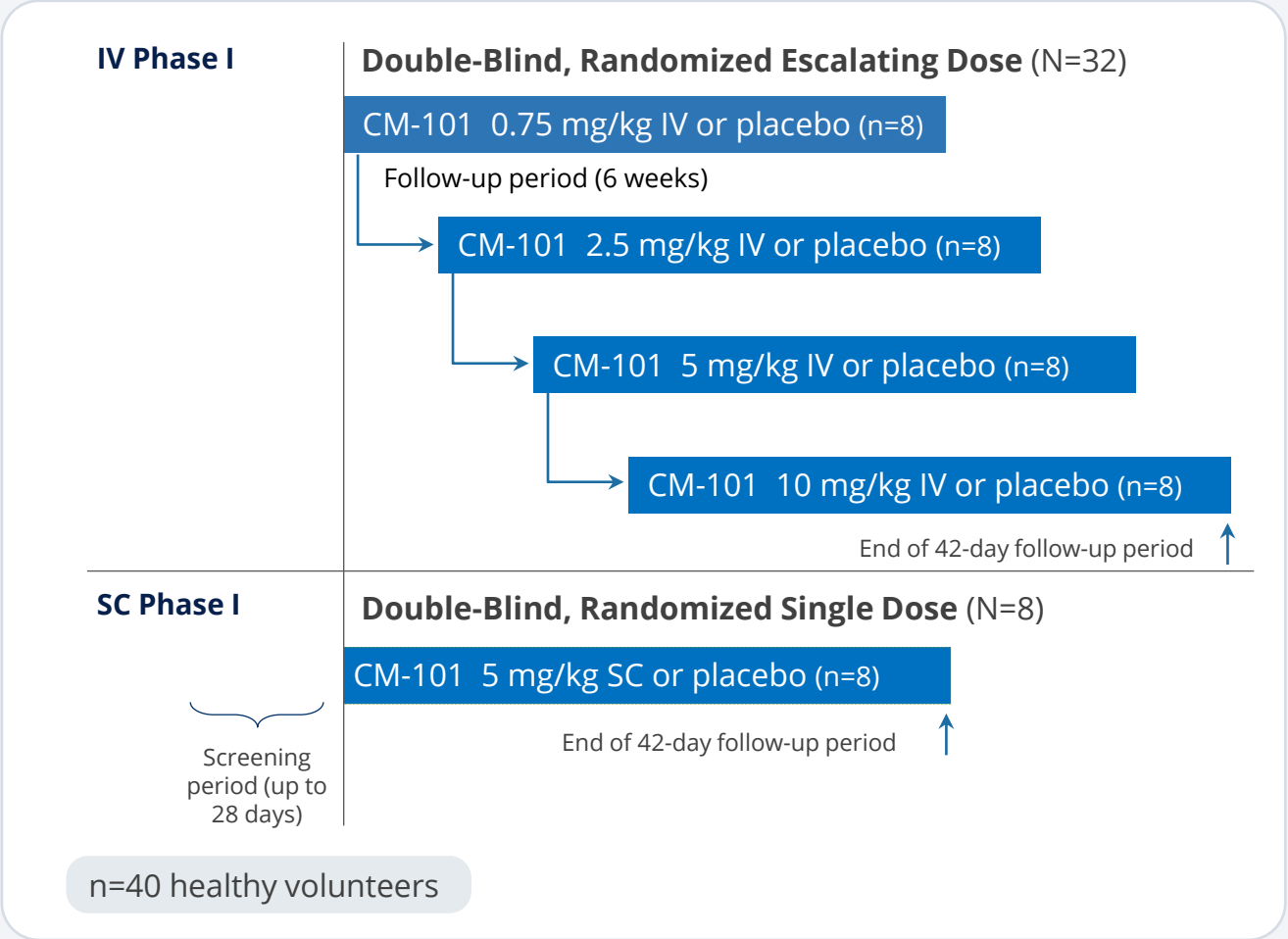
- **Short-term GLP** in rodents
- **Long-term GLP** in non-human primates
- ***Ex vivo* safety**: ADCC, CDC, cytokine secretion
- **Tissue cross reactivity**

Extensive *in vitro*, animal model & patient data supports potential therapeutic utility of CM-101

CM-101 Safe & Well Tolerated in Phase 1a Trial

Single Ascending Dose Study in Healthy Volunteers

- CM-101 was **safe and well tolerated** at all tested doses up to 10 mg/kg and for both IV and SC formulations
- All drug related AEs were classified as **mild with no SAEs reported**
- Average half-life of 19-21 days supports long interval **administration once every 2-4 weeks**
- **Achieved dose-dependent target engagement** measured by serum CCL24 levels
- SC and IV formulations showed **comparable target engagement** and **PK profiles**



IV - Intravenous; SC - Subcutaneous

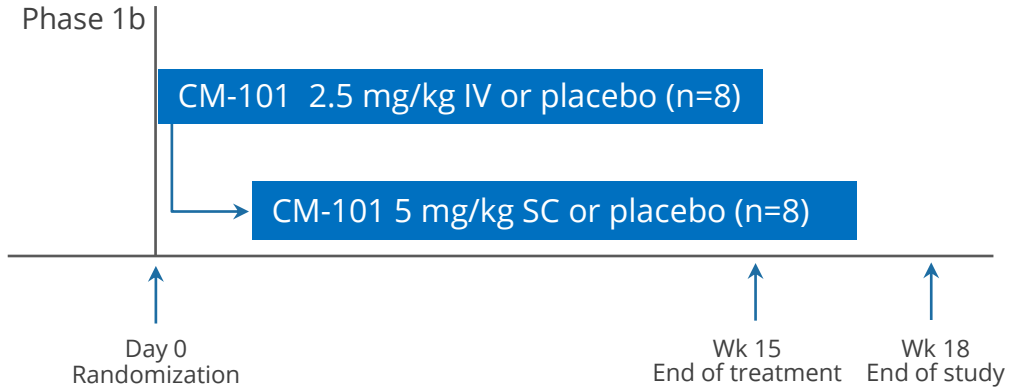
CM-101 Safe & Well Tolerated in NAFLD Patients

Phase 1b Multiple Administration Study

- Study population: **NAFLD patients** with normal liver function
- Multiple CM-101 administrations were **safe and well tolerated** using both **IV** and **SC formulations**
- Most frequently reported AEs were **mild with no drug-related SAEs reported**
- Favorable half-life supports **long dosing interval** (Q2W - Q4W)

Study Design

Double-Blind, Randomized Escalating Dose (N=16)



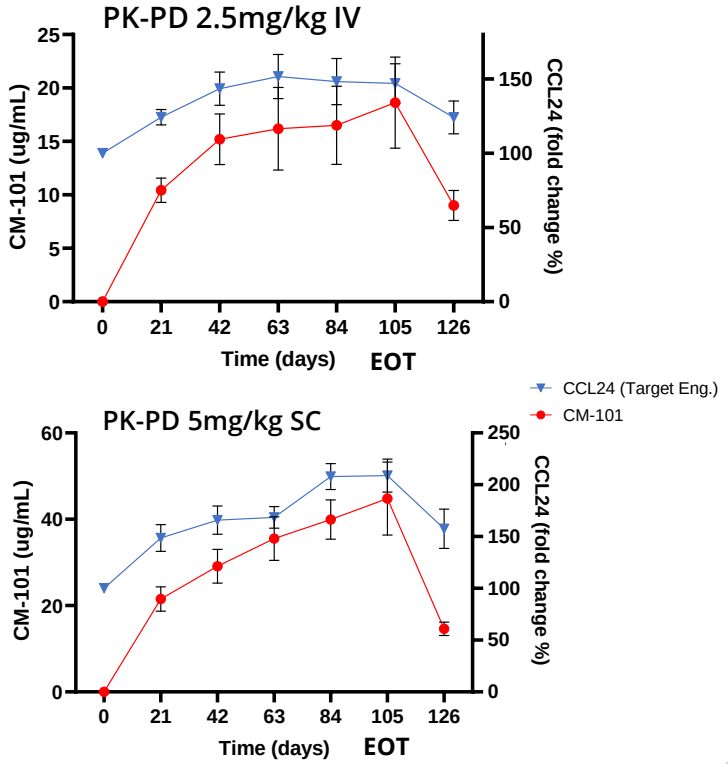
- Tested doses - 2.5 mg/kg IV infusion and 5 mg/kg SC injection
- 5 repeated administrations per patient; Q3W
- Primary endpoints - safety and tolerability

IV - Intravenous; SC – Subcutaneous; Wk - week

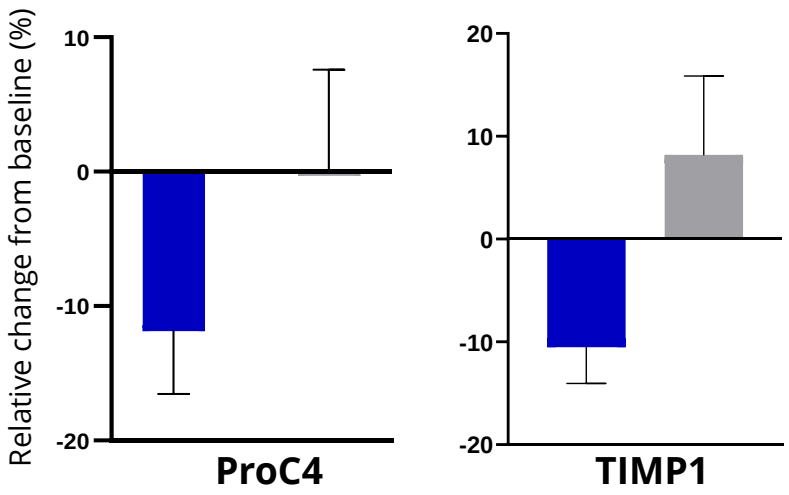
CM-101 Anti-Fibrotic Mechanisms Confirmed in NAFLD Patients

Phase 1b Patient Data Confirmed Target Engagement & Improvements in Fibrotic Disease Measures

PK-Target Engagement



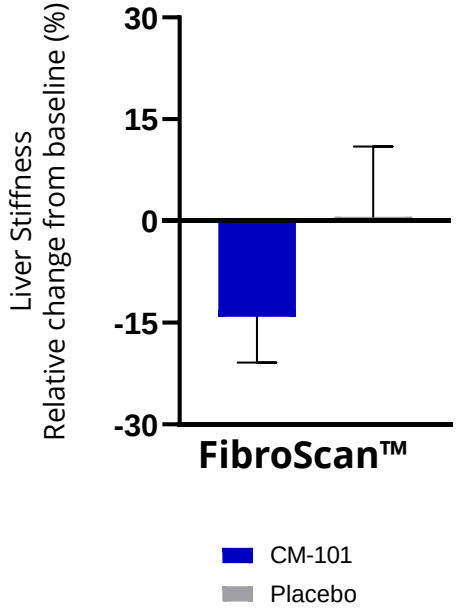
Fibrotic Biomarkers Improved*



*Concordant results across 6 relevant fibrotic markers

Nordic Biosciences , Denmark

Elastography Decreased



ProC4-Procollagen 4
TIMP1-Tissue inhibitor of metallopeptidase 1
EoT-End of Treatment

CM-101 improved liver biomarkers, decreased liver stiffness & achieved dose-dependent PK-target engagement

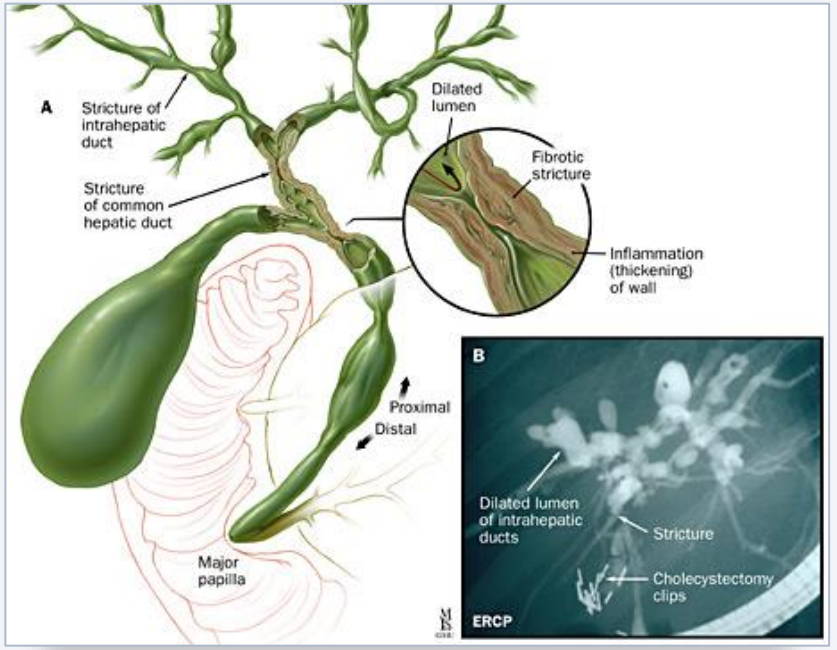
Chemomab
THERAPEUTICS

CM-101 for the Treatment of Primary Sclerosing Cholangitis

Primary Sclerosing Cholangitis (PSC)

Characterized by High Morbidity and Mortality

- **PSC is a rare, chronic liver disease** characterized by progressive course of cholestasis **with inflammation and fibrosis** of the intrahepatic and extrahepatic bile ducts **leading to end-stage liver disease, cirrhosis and cancer**
- Diagnosis is most often between the **ages of 30 - 40 years**; Predominantly affects men (2:1 male:female ratio)
- **No FDA approved drug:** Liver transplant is the only therapy with curative potential
- **Median survival of 10-12 years** with no intervention
- ~77,000 patients in 7 major markets



Source: Johns Hopkins Medicine

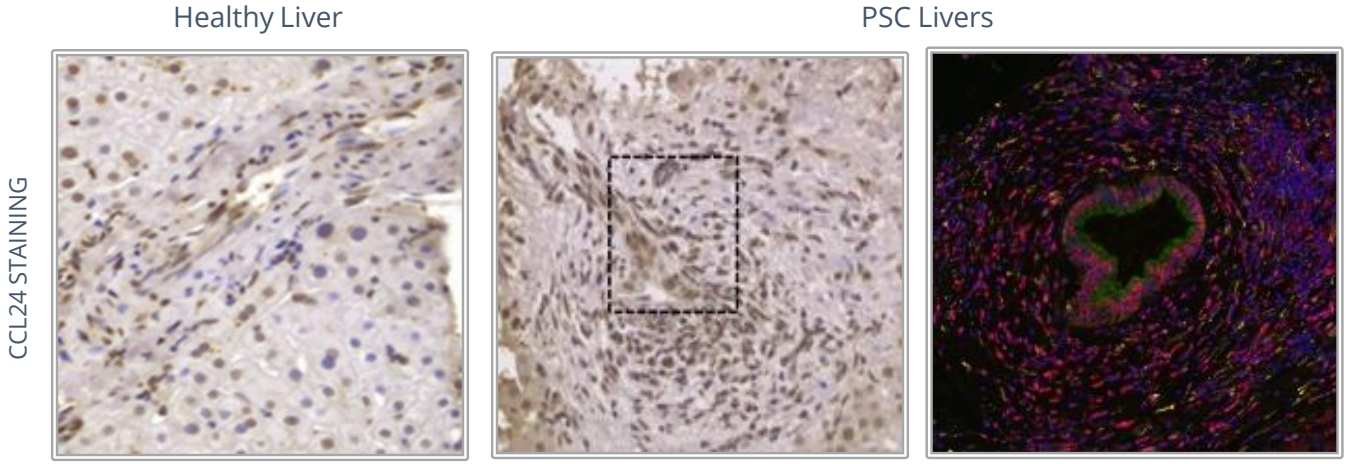
Lazaridis et al. Primary Sclerosing Cholangitis., N Engl J Med. 2016
James H et al.Primary Sclerosing Cholangitis, Part 1: Epidemiology, Etiopathogenesis, Clinical Features, and Treatment Gastroenterology & Hepatology 2018
7 Major Markets – USA, 5 EU (UK, Germany, France, Italy, Spain), Japan

CCL24 Plays a Key Role in PSC

Clinical Relevance of CCL24 in PSC Pathophysiology is Supported by Patient Samples

CCL24 expression is significantly and selectively elevated in PSC livers

CCL24 level in healthy vs PSC patients' liver tissue



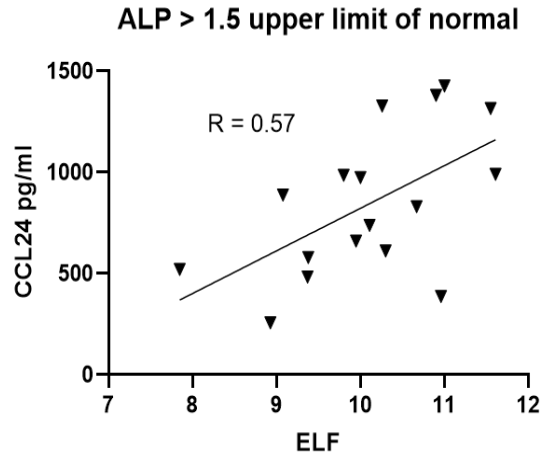
CCL24 (brown) overexpressed in damaged bile duct area

CCL24 (red) overexpressed in bile epithelial cells (green) and immune cells (yellow)

Collaboration with RFH, UK

CCL24 correlates with ELF in PSC patients with elevated ALP

CCL24 serum level in PSC patients



Enhanced Liver Fibrosis (ELF) test reflects fibrosis and predicts clinical outcomes in PSC[1]

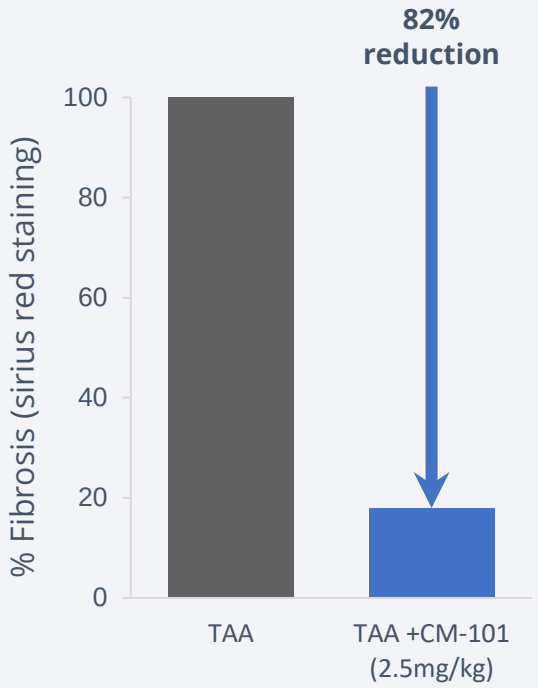
ELF – Enhanced Liver Fibrosis; ALP – Alkaline Phosphatase

Patient Samples Support Clinical Relevance of CCL24 in PSC

1. M. Vesterhus et al. Hepatology, 62 (1) (2015), pp. 188-197

CM-101 Reduces Liver Fibrosis by >80% in Animal Model

Reduced Liver Collagen in TAA Liver Fibrosis Rat Model When Administered as Therapeutic



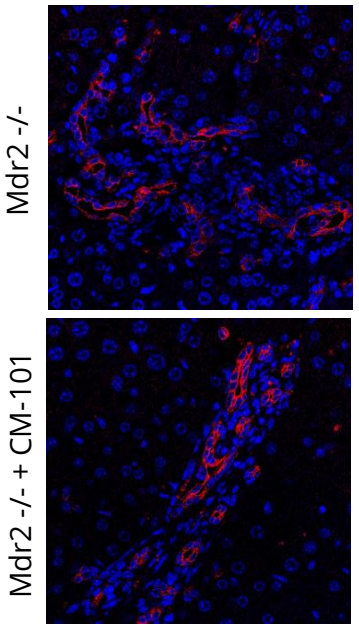
Pro-fibrotic genes
- Col1A1
- Col3A1
- TIMP1
- ACTA2
- TGF-β

Liver enzymes
- ALT
- AST
- ALP

Segal-Salto et al, JHEP reports 2020
TAA- Thioacetamide

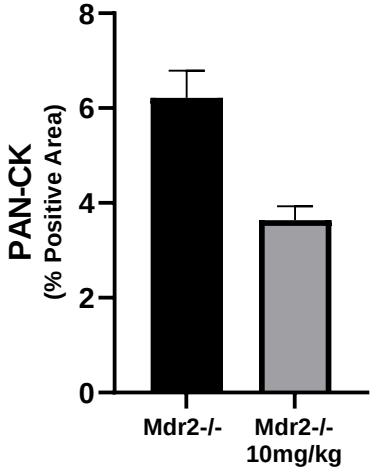
CM-101 Ameliorates Liver Injury and Fibrosis in PSC Model

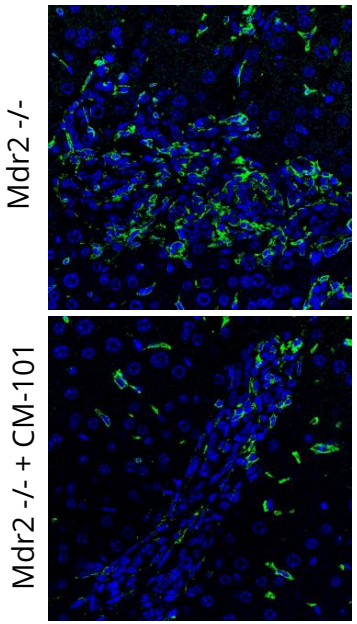
Cholestasis, Inflammation and Fibrosis Reduced in MDR2 Mouse Knockout Model



Cholangiocytes
(pan-ck)

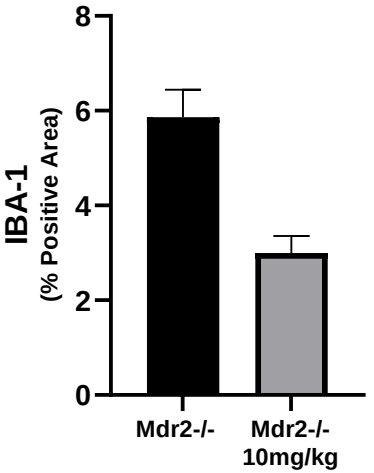
Decreased Bile Epithelial Cell Proliferation

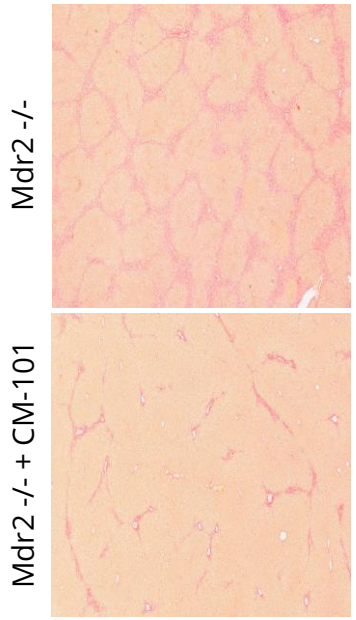




Macrophages (IBA1)

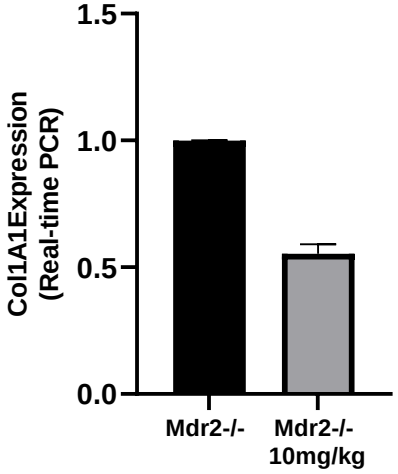
Reduced Macrophage Number





Sirius Red

Attenuated Liver Collagen Deposition



CM-101 interferes with the core pathways that drive PSC

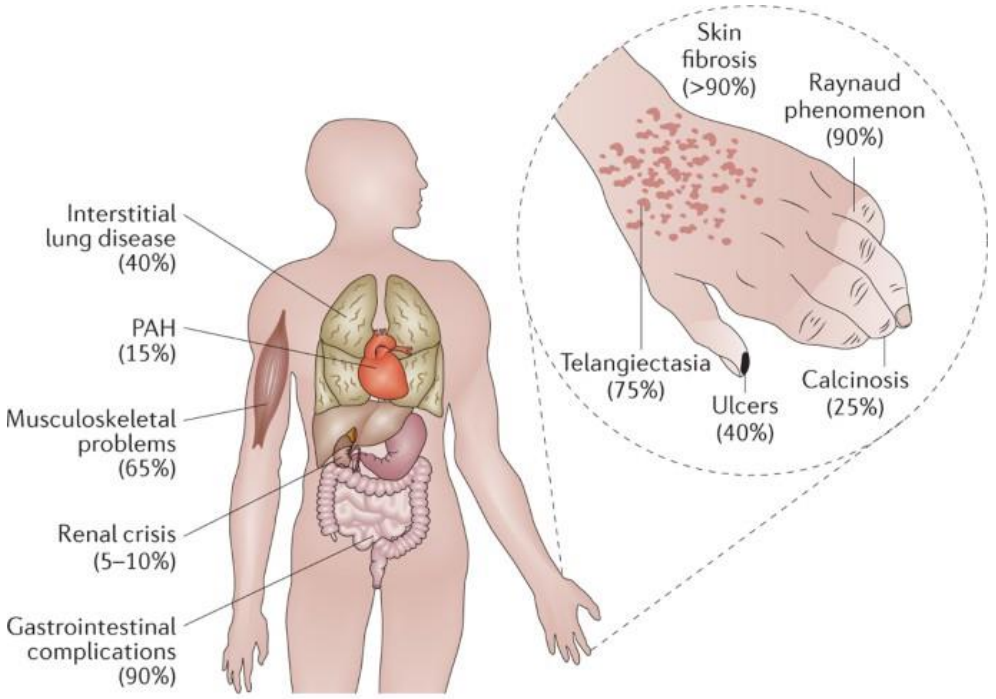
Chemomab
THERAPEUTICS

CM-101 for the Treatment of Systemic Sclerosis

Systemic Sclerosis (SSc)

Most Lethal Among Systemic Rheumatic Diseases

- **Rare** autoimmune rheumatic disease characterized by **inflammation and fibrosis** of skin, internal organs and **vasculopathy**
- **Age of diagnosis 30-50 years;** Predominantly affects women (3:1 female:male ratio)
- There is **no approved disease modifying drug;** Treatments focus on managing disease symptoms (Nintedanib, Tocilizumab)
- Median survival of 10 years - the **highest mortality rate among systemic rheumatic diseases**
- Pulmonary involvement is leading cause of death
- ~170,000 patients in 7 major markets



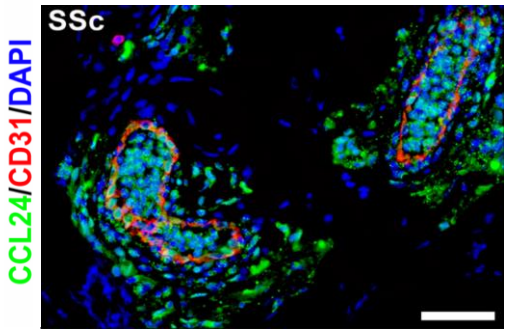
Source: Nature Reviews | Disease Primers

Global data; Bergamasco et al., Clin Epidemiol. 2019; 11: 257–273
7 Major Markets – USA, 5 EU (UK, Germany, France, Italy, Spain), Japan

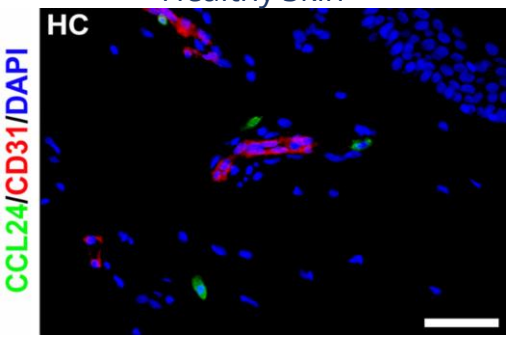
CCL24: A Critical Node Potentiating Systemic Sclerosis

Clinical Relevance of CCL24 in SSc Pathophysiology is Supported by Patient Samples

SSc Skin



Healthy Skin

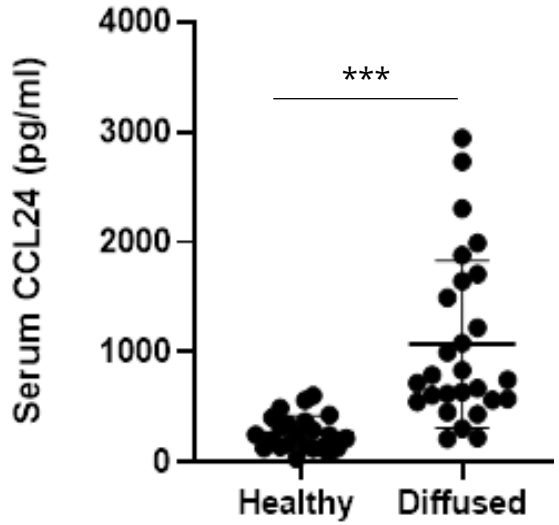


Collaboration with University of Florence

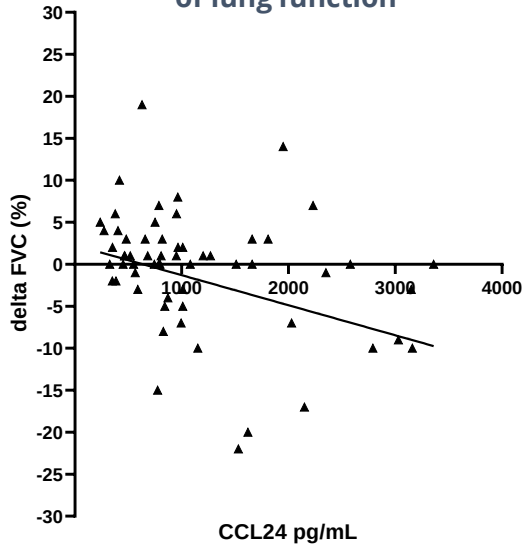
CCL24 overexpressed in skin and serum samples of dSSc patients compared to healthy

CCL24 correlates with disease progression and fibrotic biomarkers

CCL24 is highly elevated in dSSc population



CCL24 serum level correlates with worsening of lung function

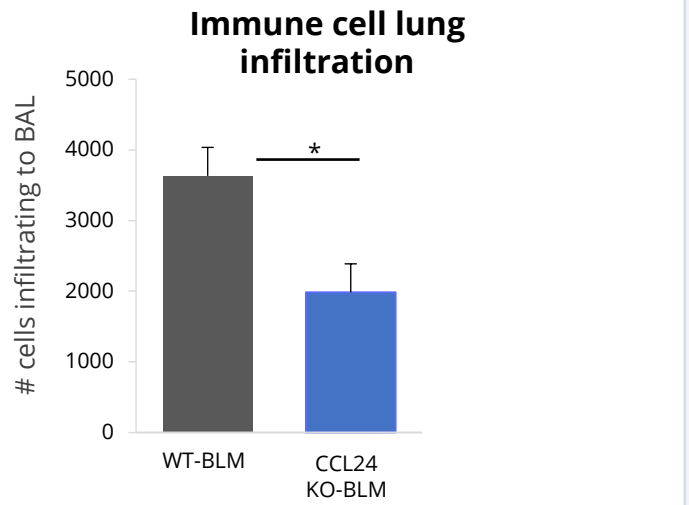


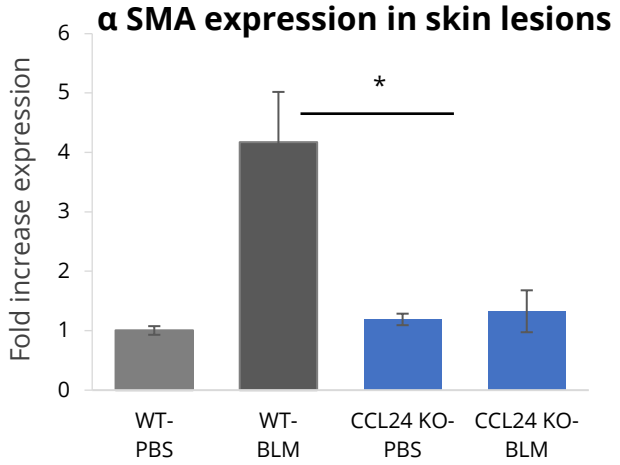
Patient samples support potential therapeutic utility of blocking CCL24 in systemic sclerosis

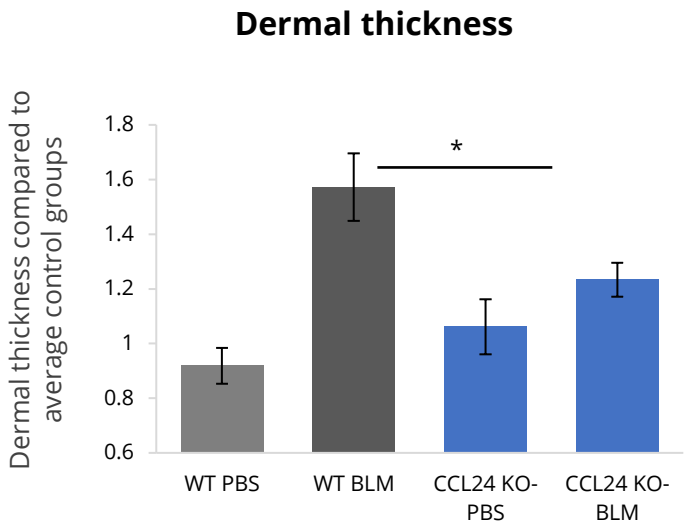
dSSc – diffuse systemic sclerosis
Mor A et al., Annals of Rheumatic Diseases, 2019
***p ≤0.001

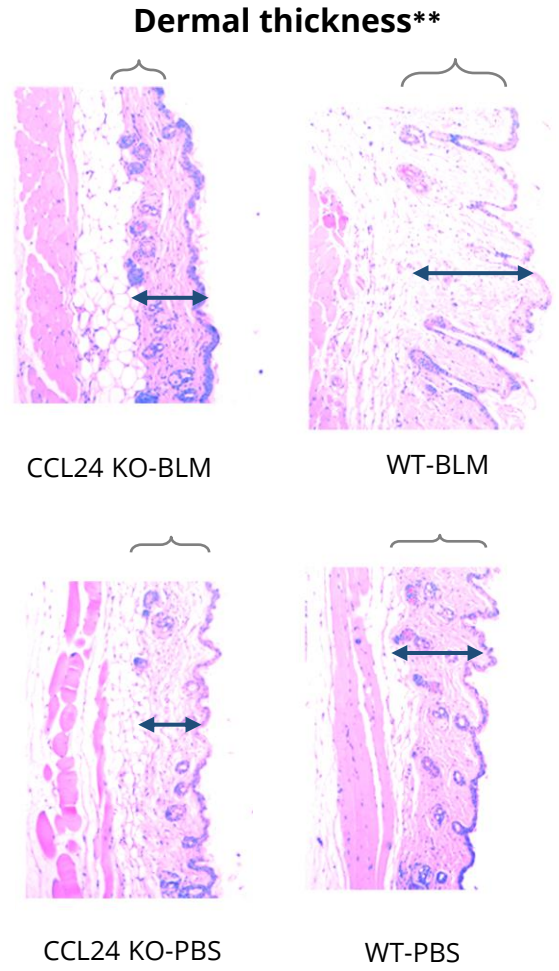
CCL24 Gene Knockout Ameliorates SSc in Experimental Model

Attenuates Inflammation and Fibrosis in Lung and Skin in SSc Bleomycin Mouse Model









Mor A et al., Annals of Rheumatic Diseases, 2019
BLM – Bleomycin; WT - Wild type; KO – Knock-out, BAL- Bronchoalveolar lavage, PBS- Phosphate-buffered saline
*p ≤0.05

** Thickness measures taken at multiple locations on samples. Arrows on graphic are for illustrative purposes only

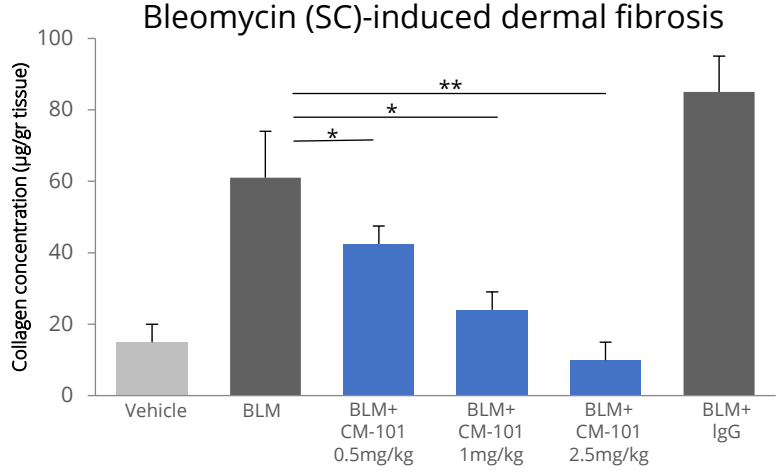
CM-101 Profoundly Reduces Skin and Lung Fibrosis in SSc

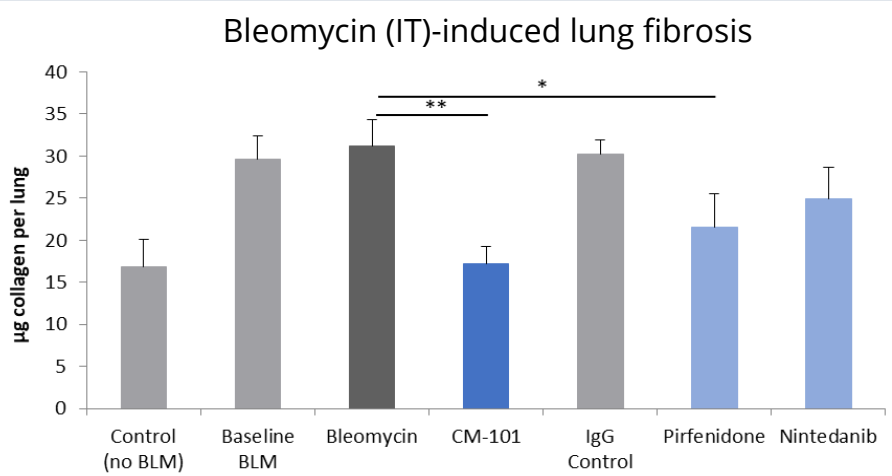
SSc Experimental Systemic Sclerosis Models Used Both Prevention and Therapeutic Designs

Attenuates skin and lung fibrosis levels as treatment in bleomycin-induced SSc models

Demonstrates **dose dependent attenuation of fibrosis**

Reduces lung collagen and inflammation compared to 2 approved drugs for lung fibrosis

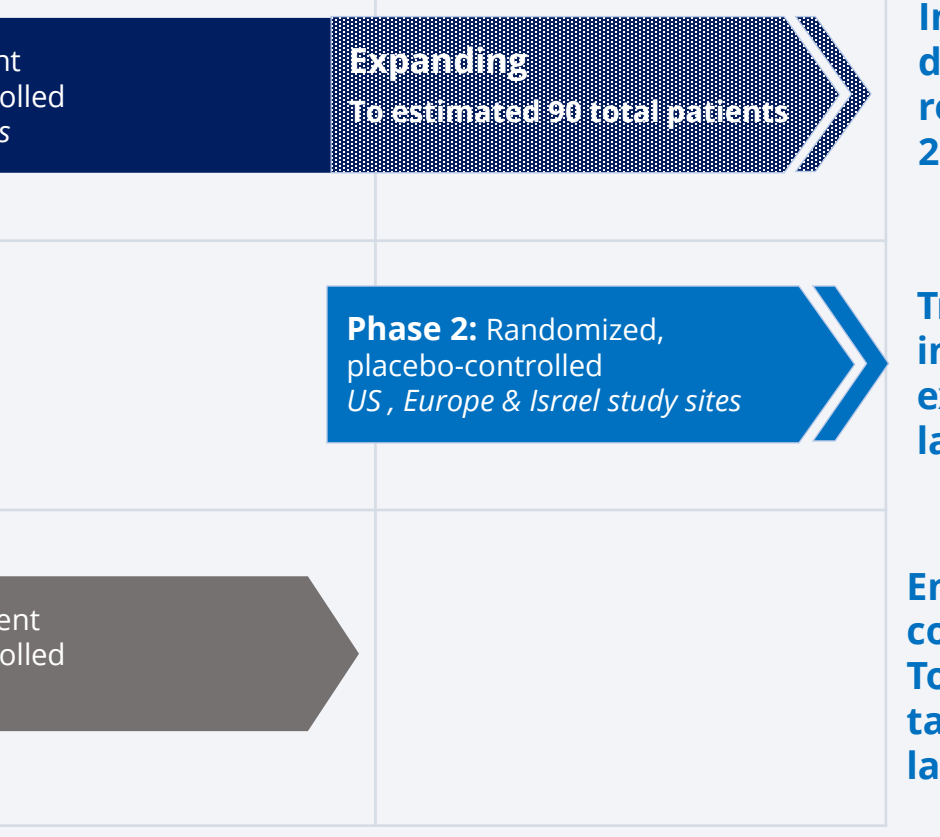




Mor et al, Annals of Rheumatoid Diseases, 2019
**p ≤0.01; *p ≤0.05.
BLM - bleomycin; IT - Intratracheal; SC – Subcutaneous
IgG - Immunoglobulin G

CM-101 Clinical Development Plan Overview

Position CM-101 for Subsequent Registrational Trials



Investment Summary

Pioneering Innovative Treatments for Diseases at Confluence of Inflammation and Fibrosis with High Unmet Need

Chemomab

- **Advancing Phase 2 trials in 2 orphan indications with high unmet need**
- **Potential to address many indications at confluence of fibrosis and inflammation**
- **Multiple value inflection points in next 2 years**
- **Strong leadership with proven track record**
- **Cash runway extended through end of 2023**

CM-101

- **First-in-class mAb blocking CCL24**
- **Novel and differentiated dual Mechanism of Action**
- **SC & IV formulations in development; well established manufacturing process**
- **Strong IP protection**
- **De-risked/optimized CM-101 clinical program**

Efficacy

- **Initial evidence of anti-fibrotic activity in patients**
- **Significant anti-fibrotic effects across multiple *in vivo, ex vivo* and *in vitro* models**

Safety

- **Favorable safety and tolerability that support chronic treatment based on toxicology, Phase 1a and Phase 1b clinical trials**

PK & Mode of Administration

- **Positive PK for both SC and IV formulations**
- **Comparable exposure levels and target engagement in the two formulations**

IV – Intravenous; SC – Subcutaneous
PK - Pharmacokinetics

Thank You

Chemomab
THERAPEUTICS