Chemomab
THERAPEUTICS

Pioneering Innovative Treatments for Fibrotic Diseases

Corporate Overview | Non-Confidential | June 2021

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.

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Chemomab Highlights

A Clinical Stage Biotech Company

Focus	• Discovery and development of innovative therapeutics for rare fibrotic diseases
Clinical Differentiation	• CM-101, a first-in-class CCL24 neutralizing mAb with confirmed anti-fibrotic MoA • Validated CCL24 as critical fibrosis target: clinical findings and experimental models • Positive Ph1b data including safety, tolerability, PK, PD and biomarker readouts
Near-Term Catalysts	• Advancing three phase 2 clinical programs in parallel • Clinical readouts are expected during 2022 to drive multiple value inflections
Robust IP Portfolio	• Issued CoM, multiple nationalization stage filings, worldwide patent exclusivity through 2041
Top Tier Investors	OrbiMed Healthcare Fund Management; **Cormorant Asset Management**; THIEL
Solid Balance Sheet	• $55 million cash following recent $45 million PIPE, with cash runway through H2 2023 and all key Phase 2 trial read-outs

CoM- Composition of matter

Experienced Leadership

Management

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Chief Medical Officer

BIOLINERX THROMBOTECH PHARMOS

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Chief Financial Officer

BiomX evogene DECODING BIOLOGY

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VP Business Development

teva MEDISON Delivering Innovative Healthcare Neurim PHARMACEUTICALS

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VP Research and Development

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The Dean for Therapeutic Discovery and Chief, Division of Liver Diseases, Mount Sinai, NY, USA

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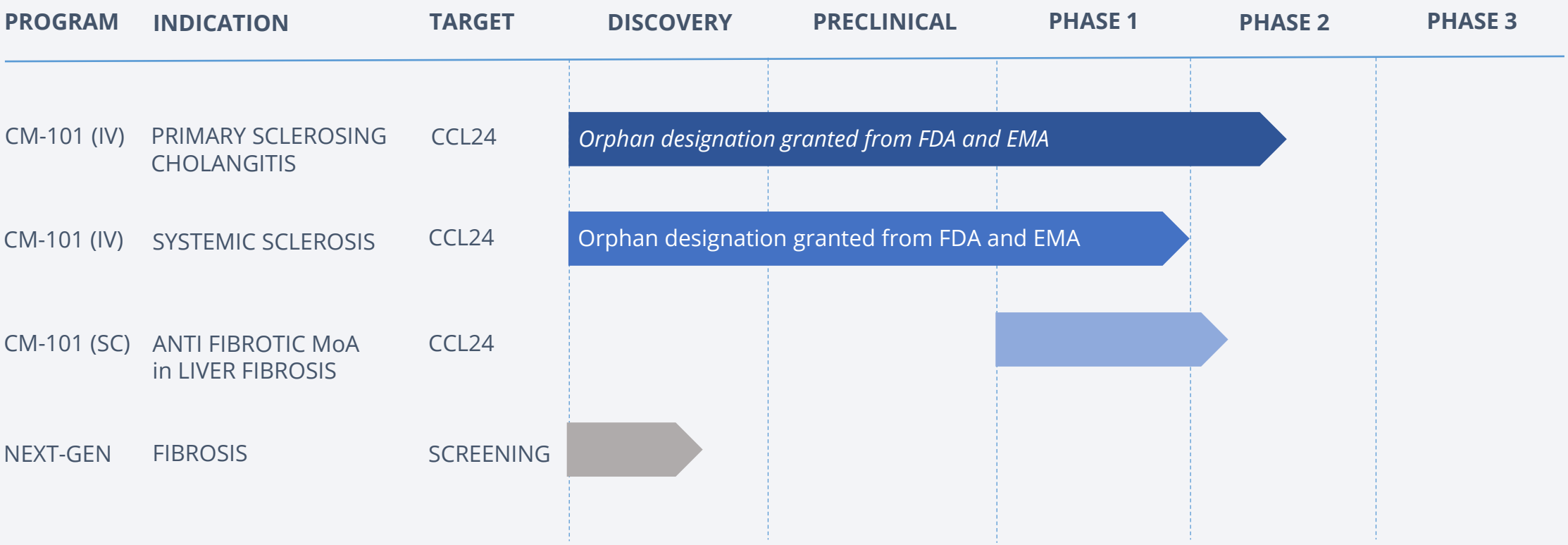
Sheila Sherlock Chair of Hepatology, Director UCL Institute for Liver and Digestive Health, RFH, London, UK

Gideon Hirschfield, MA MB PhD
Lily and Terry Horner Chair in Autoimmune Liver Disease, University of Toronto, Toronto General Hospital, Canada

Chemomab Strategy: Fibrotic Disease Franchise

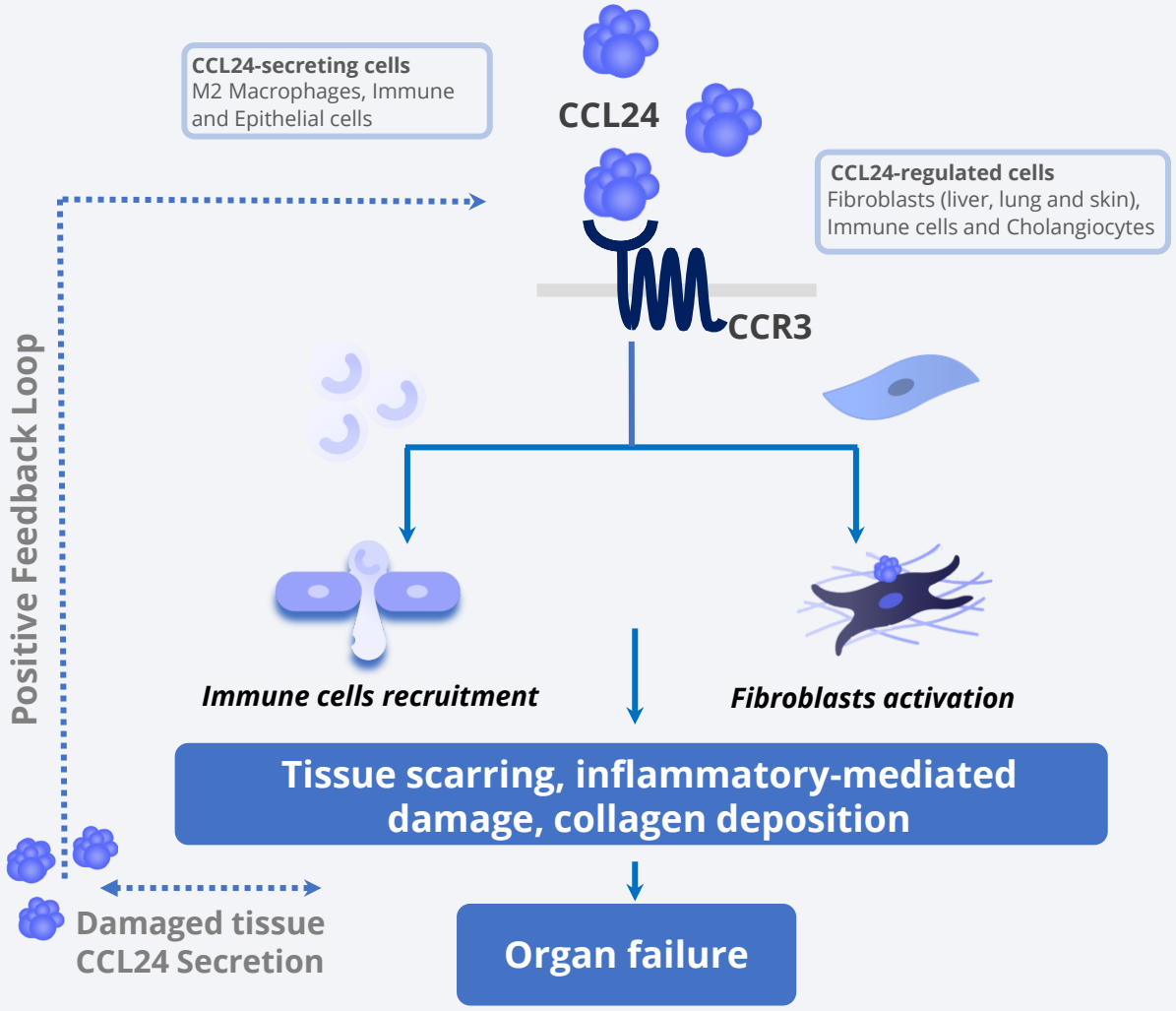
Addressing Fibrotic Diseases with High Unmet Need



IV- Intravenous; SC- Subcutaneous, MoA- Mechanism of Action

CCL24 is a Novel Therapeutic Target for Fibrosis

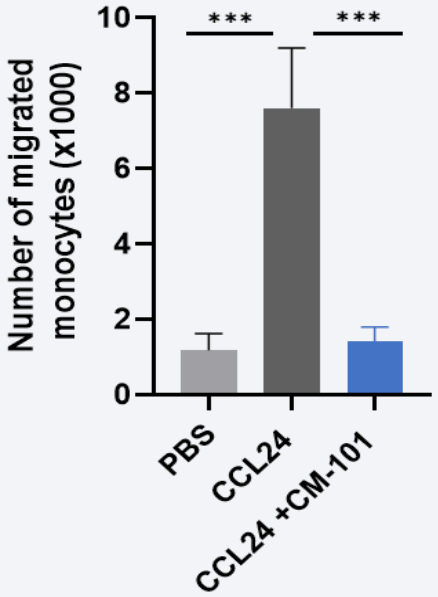
Critical Mediator Promoting Inflammation and Fibrosis

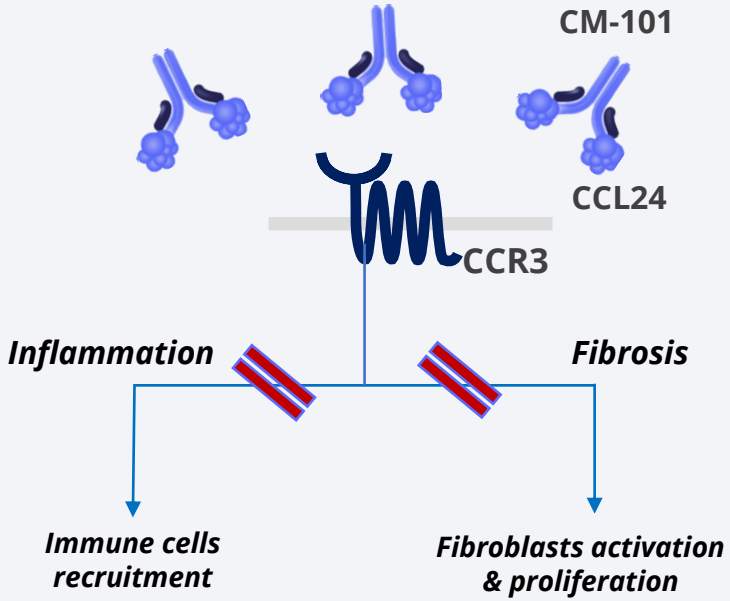


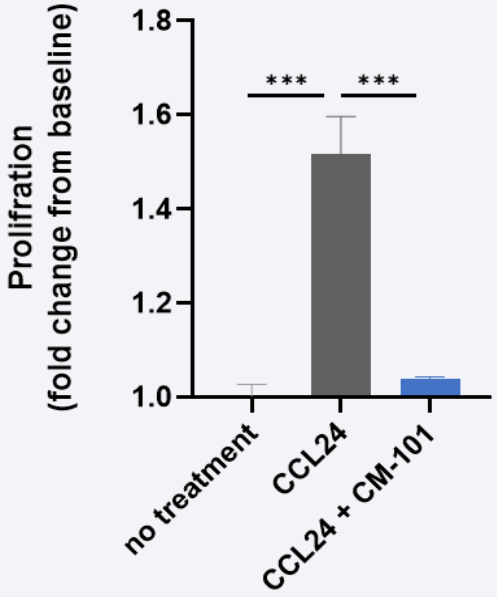
- ✓ **Dual role in promoting fibrosis**
  - directly activates fibroblasts
  - enhances local immune cell recruitment
- ✓ **Unique and differentiated activity**
  - ex vivo and in vivo data confirms unique role vs other CCLs
  - correlates with disease outcome and fibrotic biomarkers
- ✓ **Minor expression 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- A First in Class mAb Blocking CCL24

Dual Mechanism of Action Interfering with the Core Fibrotic Pathways







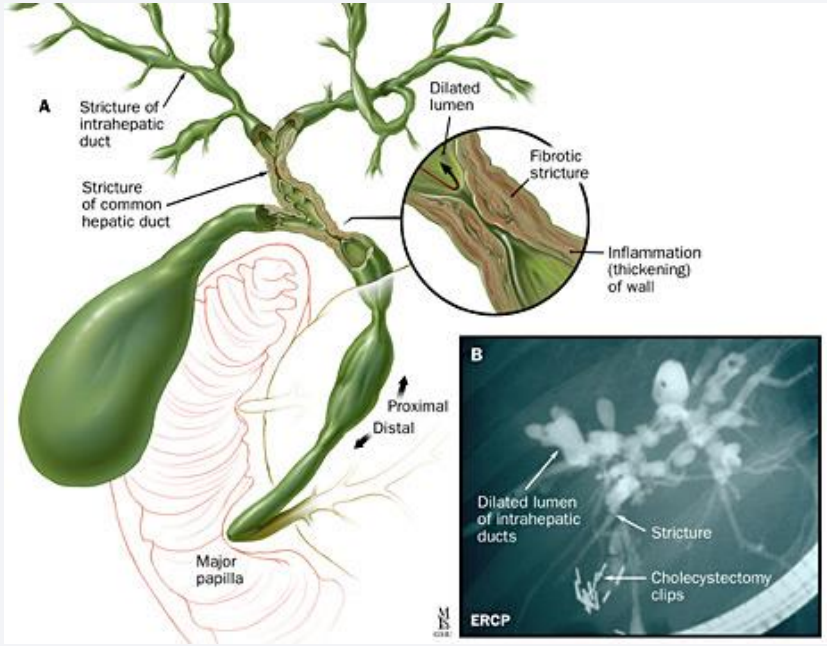
CM-101 attenuates inflammation and fibrosis by inhibiting fibroblast activation and immune cell recruitment

Primary Sclerosing Cholangitis (PSC)

Potentiating High Morbidity and Mortality

- **PSC** is a rare, chronic **bile duct inflammatory and fibrotic disease** leading to end-stage liver disease and cirrhosis
- **No FDA approved drug;** Liver transplant is the only therapy with curative potential
- **Median Survival of 10-12 years** with no intervention
- ~77K patients in 7 major markets; +$1B market potential

Orphan Drug Designation granted for CM-101 in EU and US



Source: Johns Hopkins Medicine

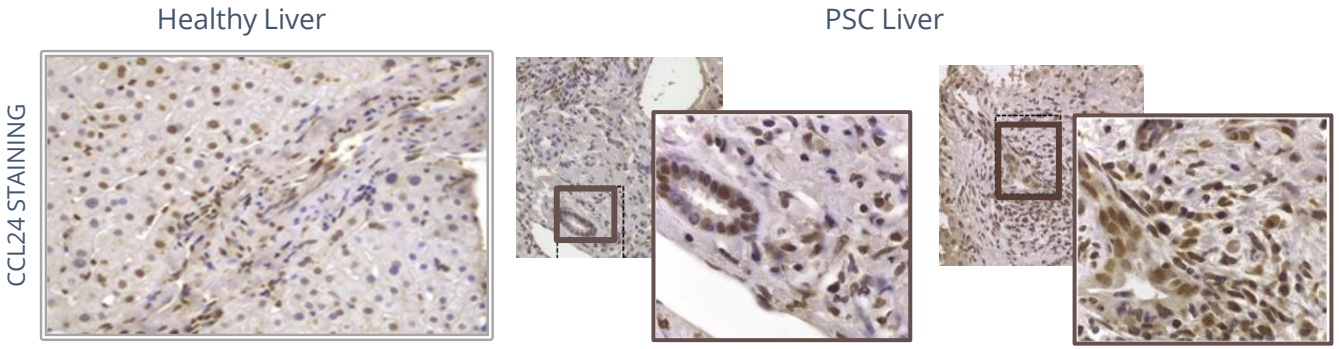
Lazaridis et al. Primary Sclerosing Cholangitis., N Engl J Med. 2016
James H et al.Primary Sclerosing Cholangitis, Part 1: Epidemiology, Etiopathogenesis, Clinical Features, and Treatment Gastroenterology & Hepatology 2018
7 Major Markets – USA, 5EU (UK, Germany, France, Italy, Spain), Japan

CCL24 Plays a Key Role in PSC Pathology

Target Validation in PSC

CCL24 expression is significantly and selectively elevated in PSC livers

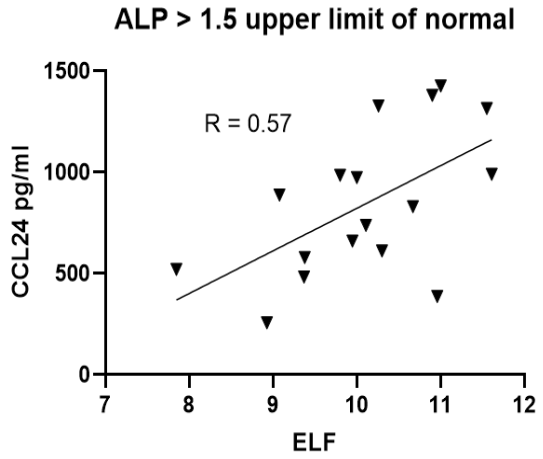
CCL24 level in healthy vs PSC patients' livers tissues



Collaboration with RFH, UK

Strong correlation between CCL24 and fibrotic biomarkers

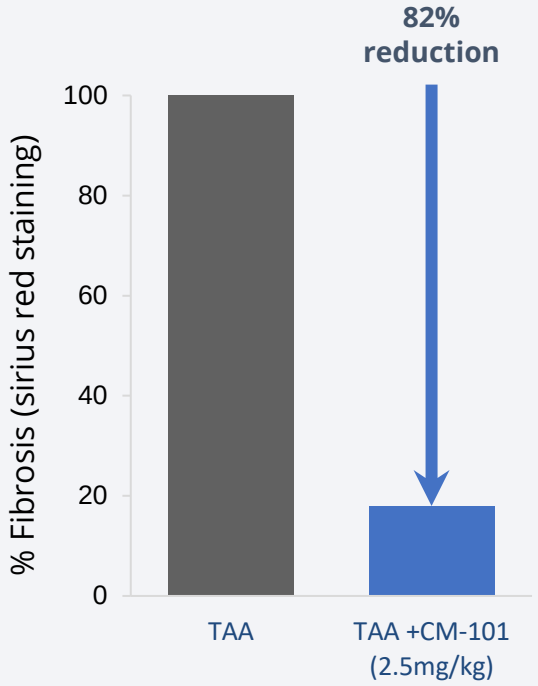
CCL24 serum level in PSC patients



Chemomab's Internal report
ELF – Enhanced Liver Fibrosis; ALP – Alkaline Phosphatase

CM-101 Reduces Liver Fibrosis by 80%

Reduced Liver Collagen in TAA Liver Fibrosis Rat Model Using Therapeutic Design



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

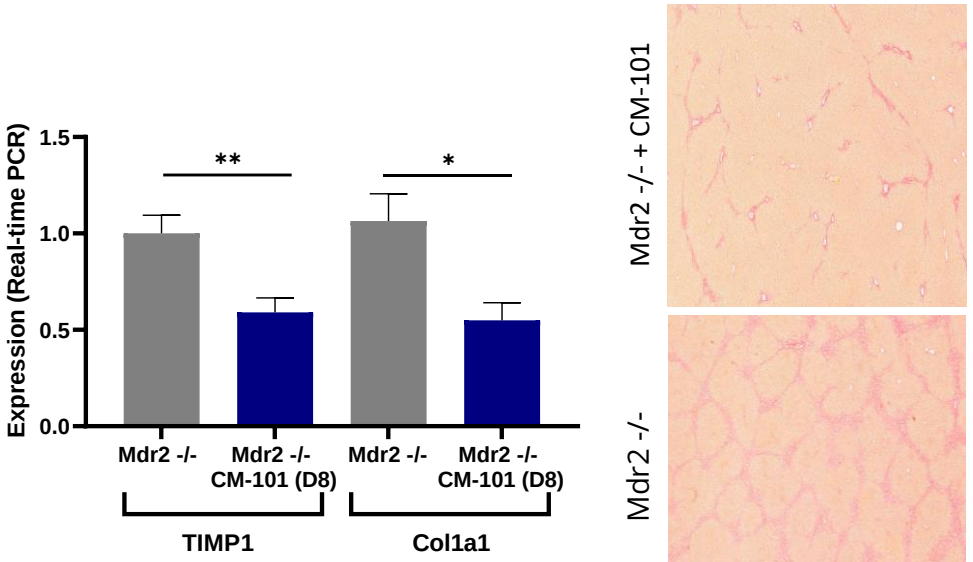
Liver enzymes
- ALT
- AST
- ALP

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

CM-101 Reduces Liver Injury and Fibrosis in PSC

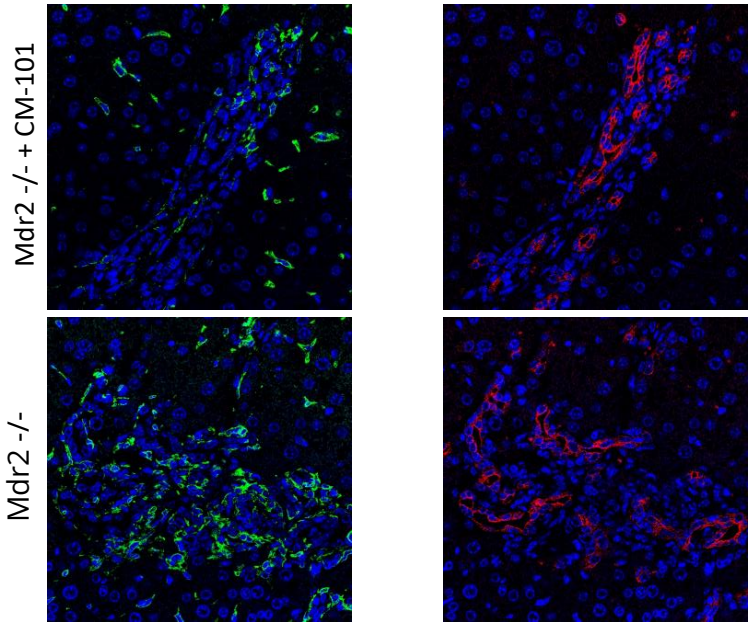
Cholestasis, Inflammation and fibrosis are reduced in the MDR2 Knockout Model in Mice

CM-101 attenuates liver collagen levels and fibrotic biomarkers



Sirius Red

CM-101 reduces cholangiocytes proliferation and monocytes recruitment



Macrophages (IBA1)

Cholagiocytes (panck)

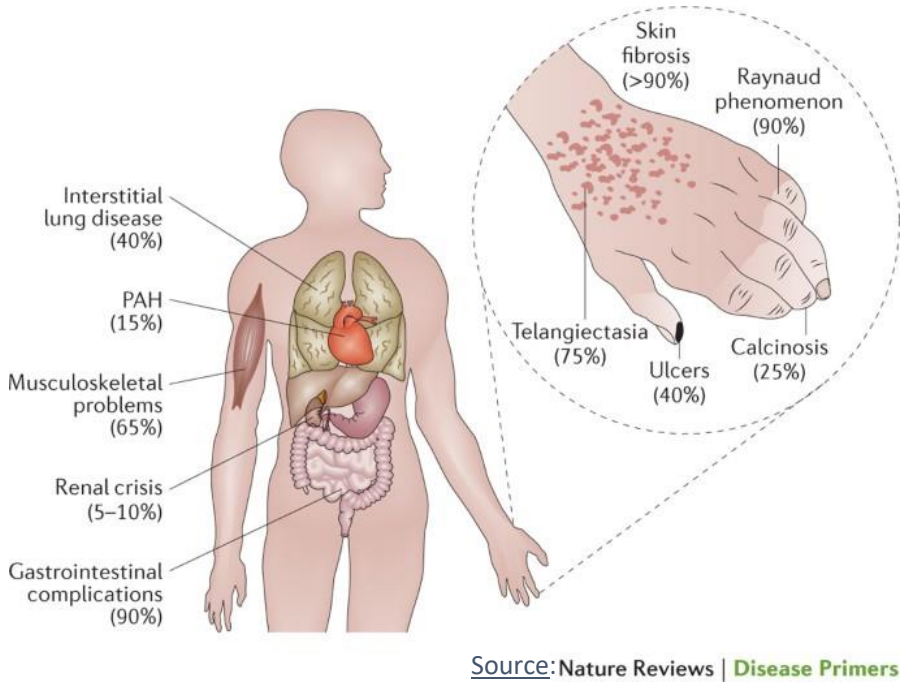
CM-101 interferes with the core pathways that drive PSC

Systemic Sclerosis (SSc)

Most Lethal Among Systemic Rheumatic Diseases

- **Systemic Sclerosis (SSc)** is a rare autoimmune rheumatic disease characterized **by inflammation and fibrosis** of the skin and internal organs
- 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 the systemic rheumatic diseases**
- ~140K patients in 7 major markets ; +$2B market potential

Orphan Drug Designation granted for CM-101 in EU and US



Source: Nature Reviews | Disease Primers

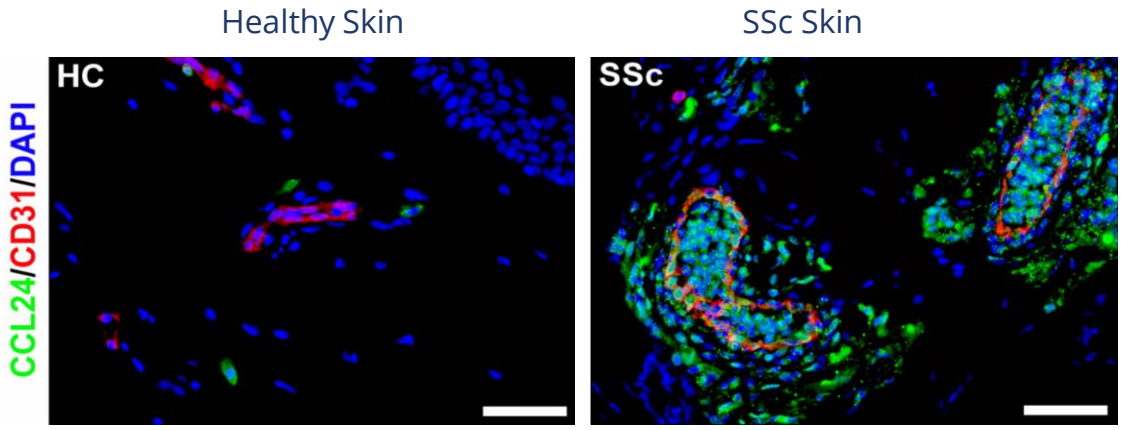
Global data, systemic sclerosis (scleroderma) – opportunity analysis and forecast to 2024
Bergamasco et al., Clin Epidemiol. 2019; 11: 257–273
7 Major Markets – USA, 5EU (UK, Germany, France, Italy, Spain), Japan

CCL24: A Critical Node Potentiating Systemic Sclerosis (SSc)

Target Validation in SSc

CCL24 Levels in Skin Tissues of SSc Patients

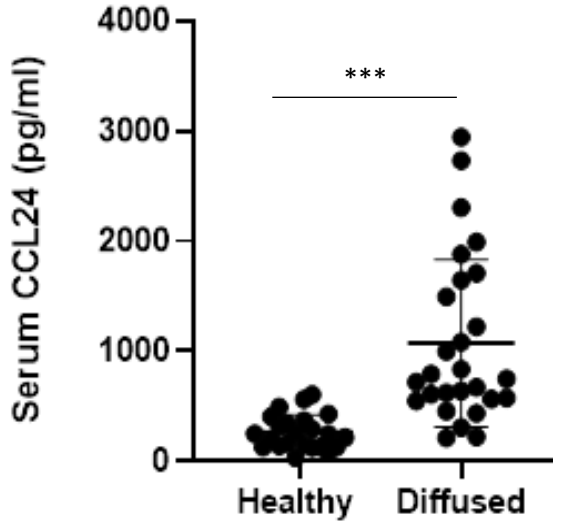
- **Significantly overexpressed in skin** of SSc patients vs. healthy



Collaboration with University of Florence

CCL24 Levels in Serum samples of SSc patients

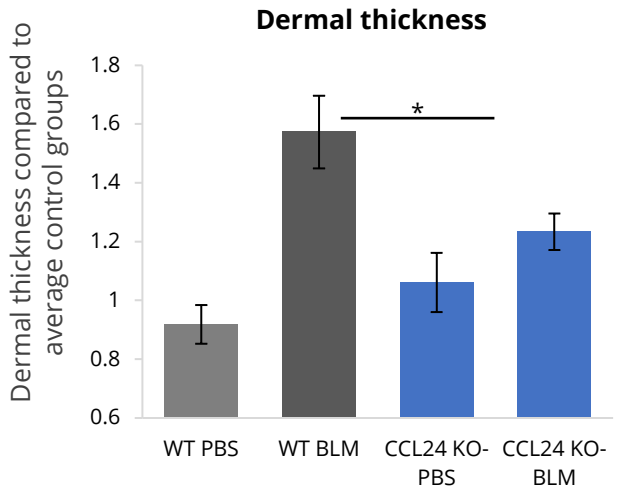
- **Strongly elevated** in diffused SSc serum
- **Correlates with fibrotic biomarkers** and **disease progression**

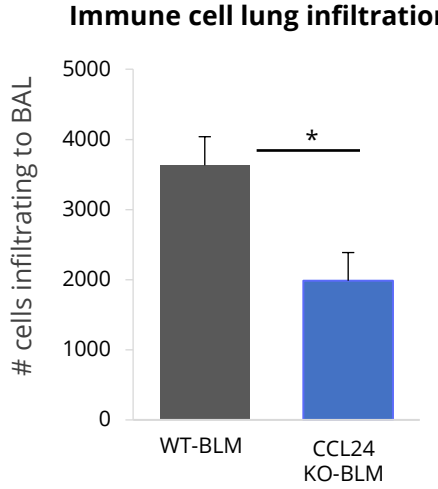


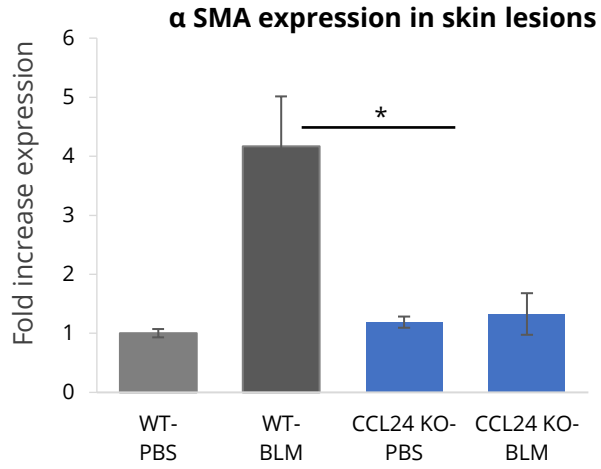
Mor A et al., Annals of Rheumatic Diseases, 2019
***p ≤0.001
BLM – Bleomycin; WT - Wild type; KO - Knock out

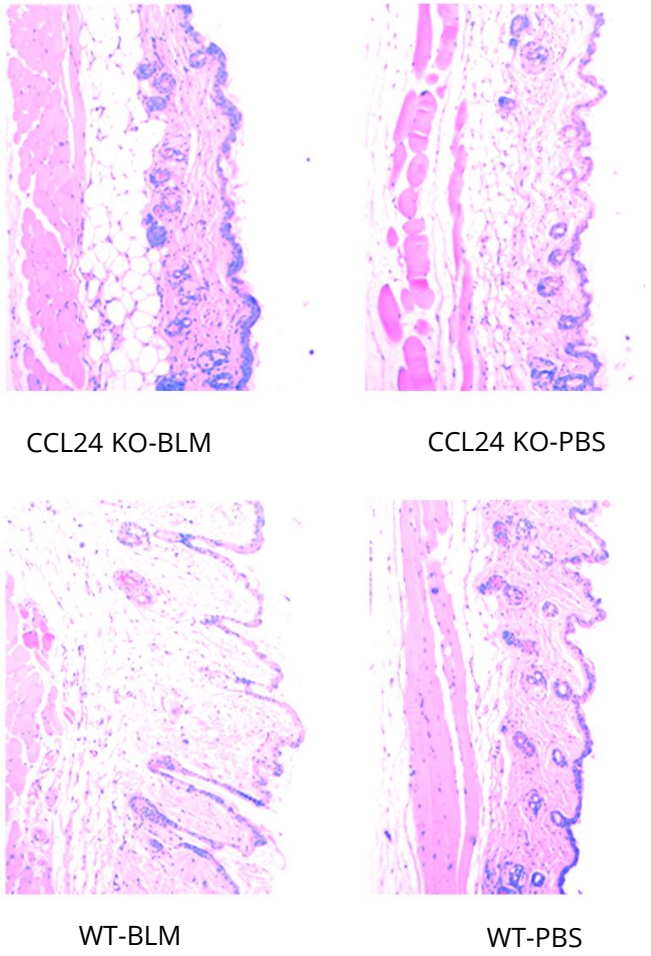
CCL24 Blockade is Singularly Sufficient to Attenuate Fibrosis

Knocking out the CCL24 gene attenuates experimental SSc model (bleomycin)









Mor A et al., Annals of Rheumatic Diseases, 2019

BLM – Bleomycin; WT - Wild type; KO – Knockout, BAL- Bronchoalveolar lavage, PBS- Phosphate-buffered saline

*p ≤0.05

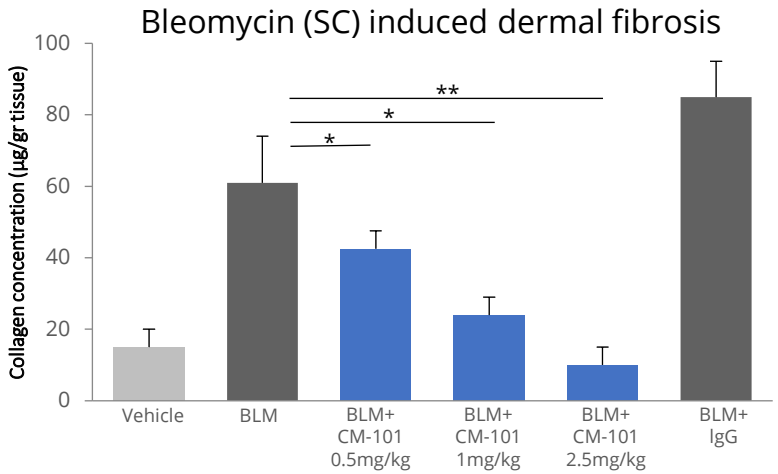
CM-101 Profoundly Reduces Skin and Lung Fibrosis in SSc

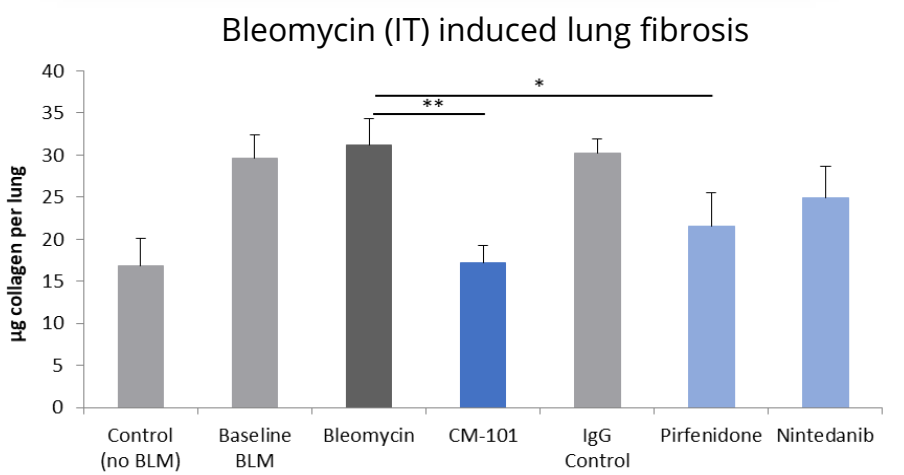
Experimental Models Relevant to Systemic Sclerosis Using Prevention and Therapeutic Designs

Attenuates skin and lung fibrosis levels in bleomycin induced models using treatment mode

Demonstrates a **dose dependent attenuation of fibrosis**

Reduces lung collagen and inflammation as compared to 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 Holds a Robust Preclinical Package

Significantly Attenuates Fibrosis & Inflammation Across a Wide Range of Models

CCL24 Target Validation

Ex-Vivo (Patient Samples)

PSC

- Biomarkers correlation
- Overexpression of CCL24 and CCR3

Systemic Sclerosis

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

NASH

- Disease severity correlation
- Overexpression of CCL24 and CCR3

In-Vivo (Knockout Animal Models)

Systemic Sclerosis

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

NASH

- 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)

Nonalcoholic steatohepatitis

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

Atherosclerosis

- ApoE knock out model (mice)

Mechanism of Action

CM-101 effects on fibroblasts activation

- Dermal, Hepatic and Lung fibroblast activation
- Dermal and liver fibroblast transition to myofibroblasts
- Hepatic fibroblast motility

CM-101 effects on immune cells migration and recruitment

- Dermal fibroblast migration
- Monocyte polarization
- Monocytes recruitment

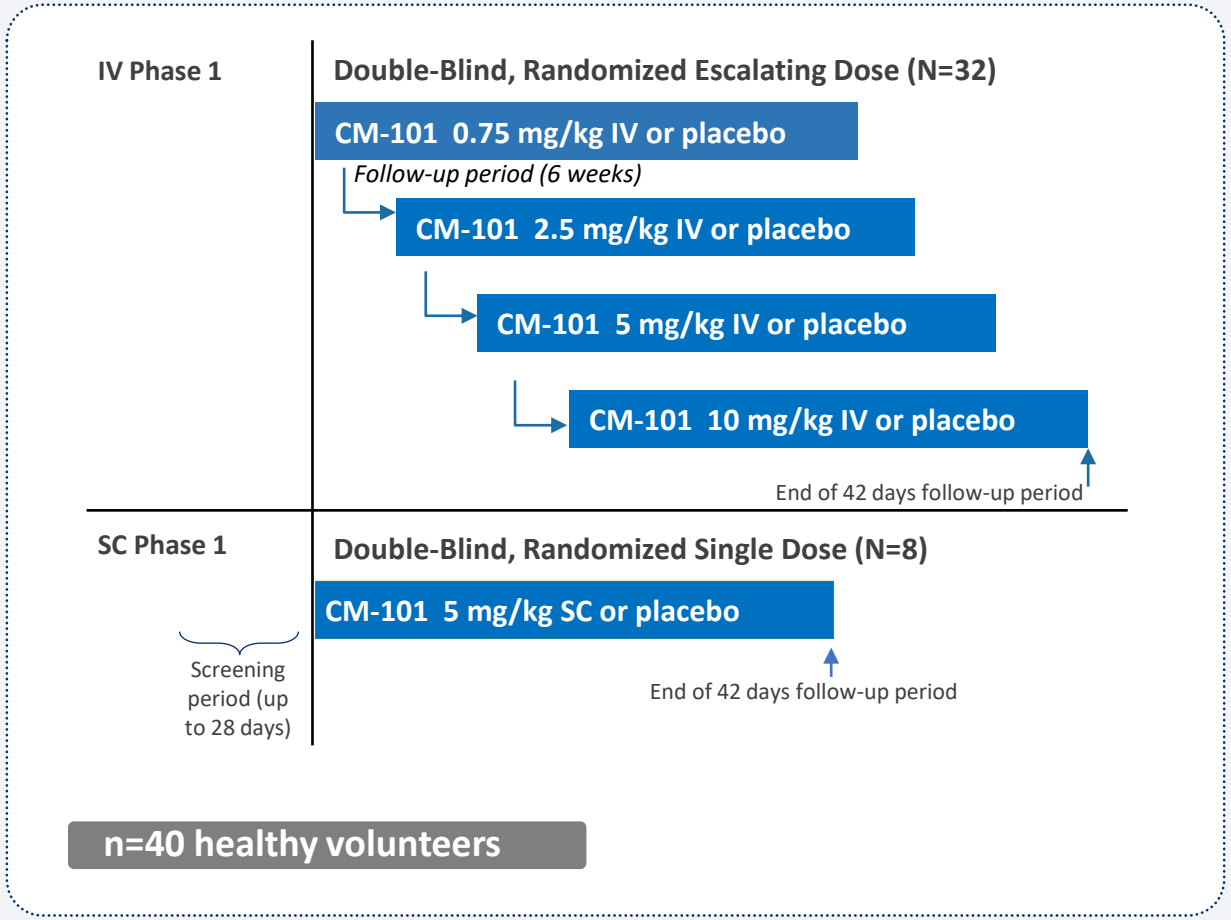
Toxicology

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

CM-101 is Safe & Well Tolerated in Healthy Volunteers

Phase 1a Single Administration study

- CM-101 was **safe and well tolerated** at all tested doses up to 10 mg/kg and for both formulations
- Average $t_{1/2}$ of 19-21 days (for IV and SC), supports long interval **administration once every 2-4 weeks**
- **Dose dependent target engagement** measured by serum CCL24 levels
- **Comparable target engagement & PK Profiles** for the SC and IV formulations



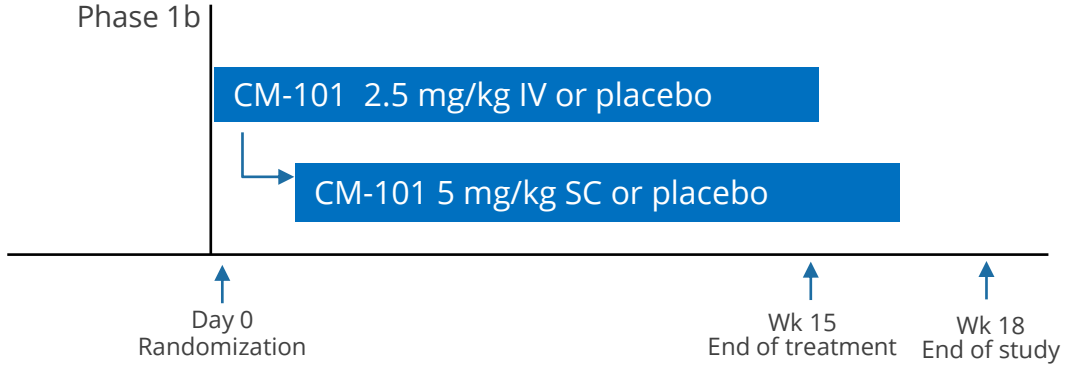
IV - Intravenous; SC - Subcutaneous

Ph1b Demonstrates Safety & Tolerability Along 15 Weeks Treatment

Phase 1b Multiple Administration Study in NAFLD Patients

- Study population- **NAFLD patients** with normal liver function
- Multiple CM-101 administrations were **safe and well tolerated** using both **IV and SC** formulations
- Favorable $t_{1/2}$, supports **long dosing interval** (Q2W - Q4W)
- Dose dependent **PK and target engagement**

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



Study Design

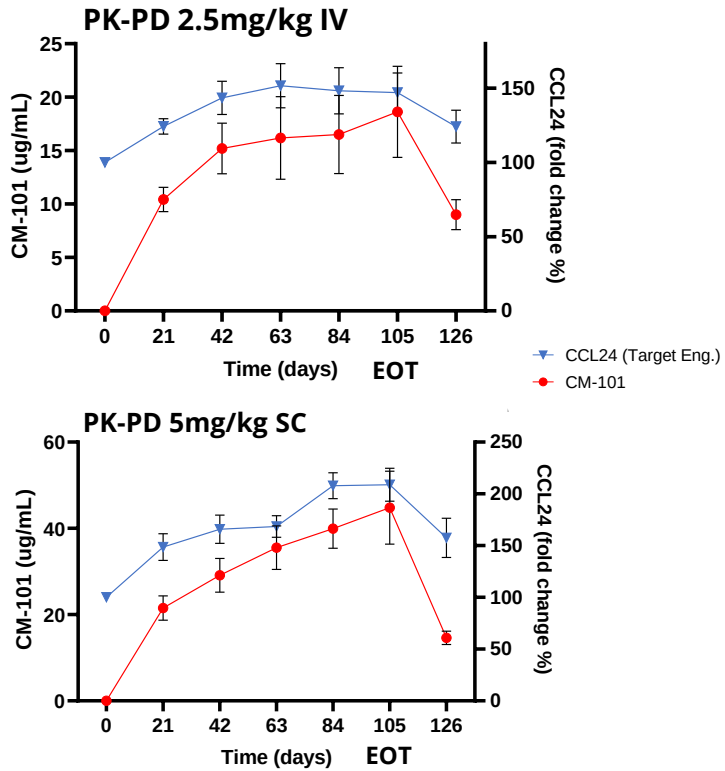
- Tested doses - 2.5 mg/kg IV infusion and 5 mg/kg SC injection
- 5 repeated administrations per patient; Q3W
- Primary endpoint - safety and tolerability

IV - Intravenous; SC – Subcutaneous; Wk - week

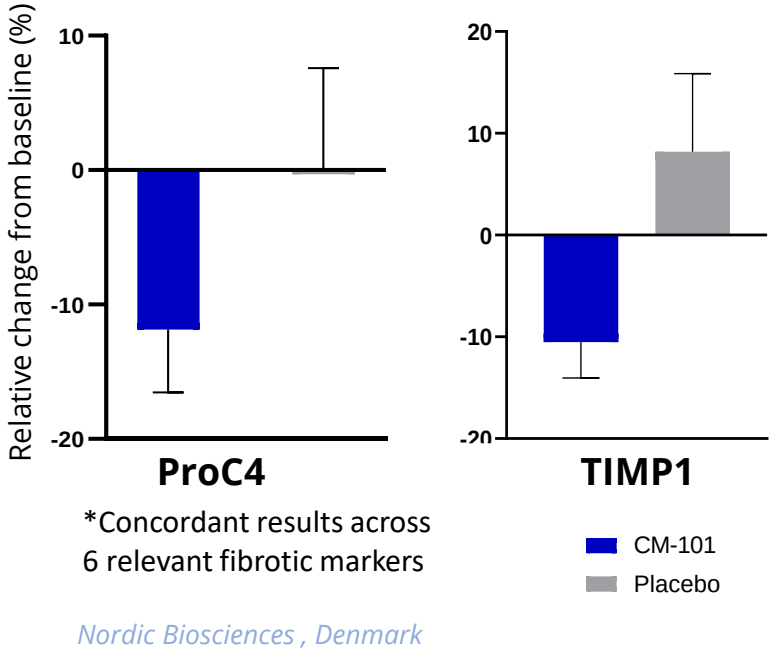
CM-101 Target Engagement & Anti-Fibrotic Mechanism

Human Confirmation for CM-101 Anti-Fibrotic Mechanism of Action

PK-PD



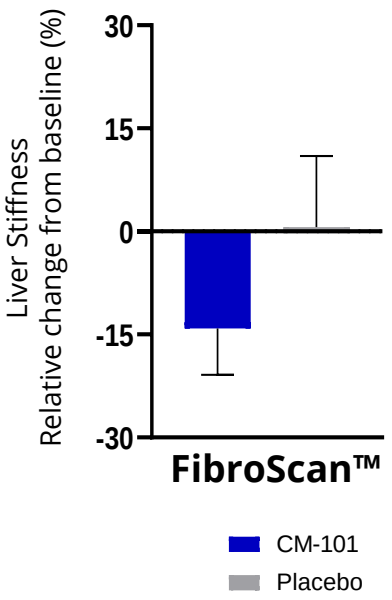
Fibrotic Biomarkers*



*Concordant results across 6 relevant fibrotic markers

Nordic Biosciences , Denmark

Elastography

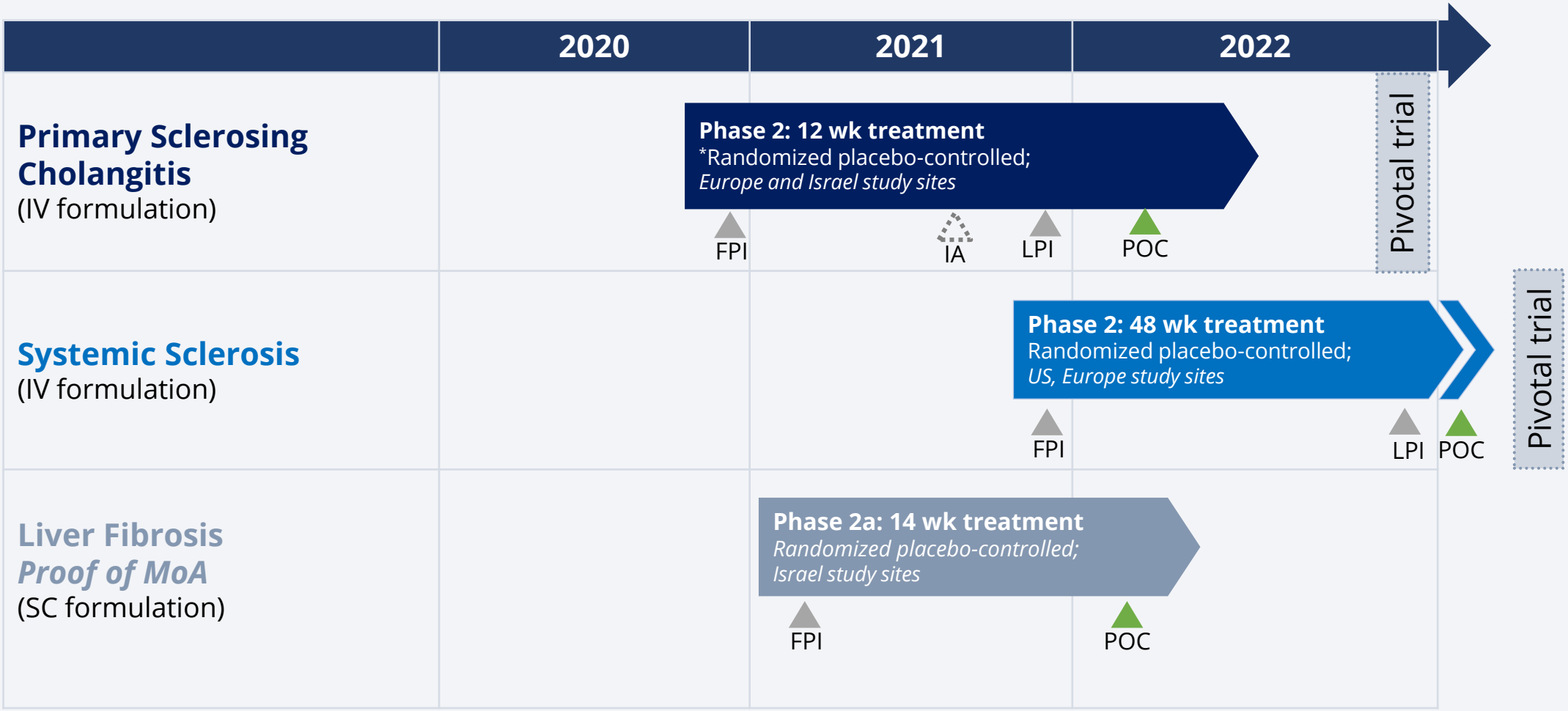


First evidence for an anti fibrotic effect in human supported by dose dependent PK-PD

ProC4-Procollagen 4
TIMP1- metallopeptidase inhibitor 1
EOT-End of Treatment

CM-101 Clinical Development Plan and Key Catalysts

Phase 2 Studies Driving Pivotal Studies



FPI- First patient in, LPI - Last patient in, IA - Interim assessment
POC - Proof of Concept, IV -Intravenous, SC – Subcutaneous,
MoA- Mechanism of Action
*NCT04595825

Chemomab, Fighting Fibrosis Across Indications

Pioneering Innovative Treatment for Fibrosis-Related Diseases with High Unmet Need

Chemomab

- **Clinical stage company entering Ph2 trials in multiple fibrotic indications with high unmet need**
- **Substantial near term value inflection points**
- **Strong leadership with proven track record**

CM-101

- First-in-class mAb blocking CCL24
- Novel and differentiated dual anti-fibrotic and anti-inflammatory MoA
- SC and IV Formulation; Contract manufactured via reputable & established CMO
- Strong IP protection

Efficacy

- First anti-fibrotic evidence 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 Ia and Phase Ib clinical trials

PK & Mode of Administration

- Optimal PK for both SC and IV formulations
- Comparable Exposure levels and target engagement using both formulations

IV – Intravenous; SC - Subcutaneous

Thank You

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