Liminal BioSciences

Corporate Presentation

Aiming to develop Best/First-In-Class Novel Small Molecule Therapeutics for Inflammatory, Metabolic and Fibrotic Diseases

NASDAQ: LMNL

September 2022

Safe Harbour

This presentation contains forward-looking statements about Liminal BioSciences' objectives, strategies and businesses that involve risks and uncertainties. Forward-looking information includes statements concerning, among other things, the Company's ability to regain compliance with the Nasdaq listing requirements, streamline its business, divest its non-core assets, advancement of Liminal Biosciences' product candidates, the outcome of anticipated clinical trials; the analysis of our clinical trial data; the potential development of Liminal Biosciences' R&D programs; the properties of our drug candidates; the timing of initiation or nature of preclinical and clinical trials and potential therapeutic areas.

These statements are "forward-looking" because they are based on our current expectations about the markets we operate in and on various estimates and assumptions. Actual events or results may differ materially from those anticipated in these forward-looking statements if known or unknown risks affect our business, or if our estimates or assumptions turn out to be inaccurate. Among the factors that could cause actual results to differ materially from those described or projected herein include, but are not limited to, risks associated with: the Company's ability to develop, manufacture, and successfully commercialize product candidates, if ever; the impact of the COVID-19 pandemic on the Company's workforce, business operations, clinical development, regulatory activities and financial and other corporate impacts; the availability of funds and resources to pursue R&D projects, manufacturing operations or commercialization activities; the successful and timely initiation or completion of clinical trials; the ability to take advantage of financing opportunities or business opportunities in the pharmaceutical industry; the Company's ability to resolve the Nasdaq listing deficiency and regain compliance with the Nasdaq Listing Rules; uncertainties associated generally with research and development, clinical trials and related regulatory reviews and approvals; and general changes in economic conditions.

You will find a more detailed assessment of these risks, uncertainties and other risks that could cause actual events or results to materially differ from our current expectations in the filings and reports the Company makes with the U.S. Securities and Exchange Commission and Canadian Securities Administrators, including in the Annual Report on Form 20-F for the year ended December 31, 2021, as well as other filings and reports Liminal Biosciences' may make from time to time. Such risks may be amplified by the ongoing COVID-19 pandemic and any related impacts on Liminal BioSciences' business and the global economy. As a result, we cannot guarantee that any given forward-looking statement will materialize. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements and estimates, which speak only as of the date hereof. We assume no obligation to update any forward-looking statement contained in this presentation even if new information becomes available, as a result of future events or for any other reason, unless required by applicable securities laws and regulations.

Disclaimer

Liminal BioSciences reserves the right to make improvements, corrections and/or changes to this presentation at any time.

Liminal Introduction

Aiming to develop Best/First In Class Novel Small Molecule Therapeutics for Inflammatory, Metabolic and Fibrotic Diseases

- Pipeline is positioned to deliver multiple value catalysts in **2022/23**
- Intellectual Property (IP) all under the control of Liminal

Progressing Diverse Pipeline:

- GPR84 Antagonist
- OXER1 Antagonist
- Potential development opportunities from in-house drug discovery platform

Experienced leadership team committed to excellence, innovation, and scientific rigor in our research and clinical development backed by our data driven philosophy

Management Team

LMNL is led by a strong, experienced team with proven track records in the discovery, development, and approval of biopharmaceuticals, all driven to make a difference.

Name & Title	Previous Experience
Bruce Pritchard Chief Executive Officer	Executive Finance Positions: Prometic Life Sciences Inc., CV Therapeutics Inc., Ardana Biosciences Ltd., Director & Chair of Audit Committee Porton BioPharma, Immediate Past-President ICAS
Nicole Rusaw Interim Chief Financial Officer	Chief Financial Officer and Director Klinik Health Ventures Corp. Interim Chief Financial Officer, Nuvo Pharmaceuticals Inc. Chief Financial Officer, Transition Pharmaceuticals Inc.
Jeffrey Smith MD Strategic Medical Adviser	Founder & Managing Director, Alder Biopharmaceuticals Inc. Senior Vice President, Alder Biopharmaceuticals Inc.
Dr. Gary Bridger Board Member and Strategic Scientific Adviser	Executive Vice President of R&D, Xenon Pharmaceuticals Inc. Senior Vice President of R&D, Genzyme Corporation

Potential Expansion of R&D Portfolio

We have a deep understanding of certain biological targets and pathways that have been implicated in the inflammatory and fibrotic process, including G-protein-coupled receptors.

In-House Drug Discovery Engine

Opportunity to expand pipeline to study additional diversified candidates from the in-house discovery engine (over 3,000 compounds already generated).

In-Licensed Compounds

Potential for in-house compounds to be augmented by in-licensed compounds.

Collaborations

Potential access to new drug discovery tools through collaboration to build long-term drug discovery engine.

Strategy Aimed at Best or First in Class Drug Discovery & Development

Compelling Biological Mechanisms

At Liminal, we are focused on elucidating compelling biological mechanisms and plan to advance a pipeline of small molecule therapeutics with best/first-in-class potential across a range of clinical indications with significant commercial prospects

Rigorous Objective Approach

Data-Driven. Dedicated. We focus on molecules with proprietary IP, comprehensive preclinical evaluation and optimized clinical development. We are pursuing indications with high unmet needs and promising market and partnering/licensing potential.

Value Creation

With an improved balance sheet, we are focused on value creation for patients, our shareholders, and our employees as we strive to advance multiple assets into clinical development with a cash runway sufficient to achieve these goals.

2022 Completed Milestones

Initiate Phase 1a Single-Ascending Dose (“SAD") clinical trial in fezagepras by H2 2022 in line with previous guidance

Complete Phase 1a SAD clinical trial in fezagepras by Q3 2022 in line with previous guidance

Update market on outcome of the Phase 1a SAD study by Q3 2022 and resulting impact on development program

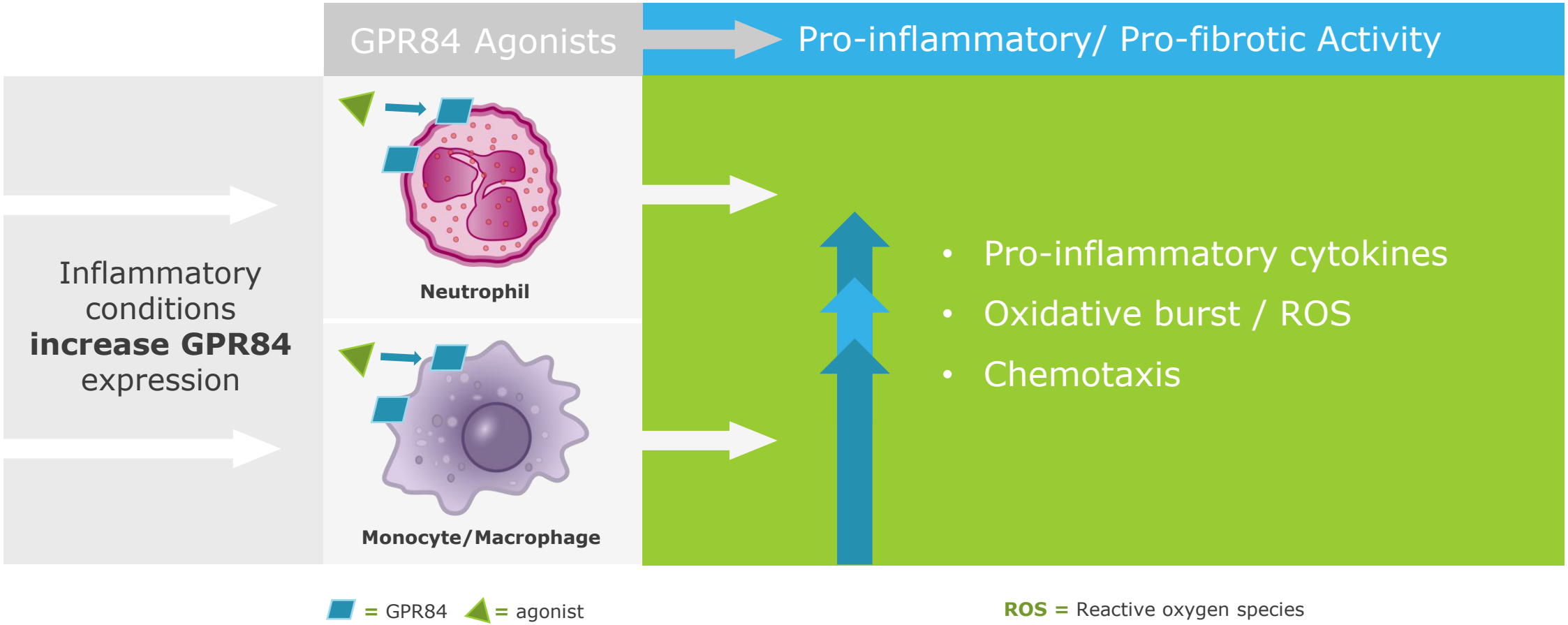
Eliminate contracts associated with its previously owned plasma-derived therapeutics business resulting in estimated cash savings of more than $30 million

Repayment of secured debt ending its creditor relationship with Structured Alpha LP resulting in release of all security agreements

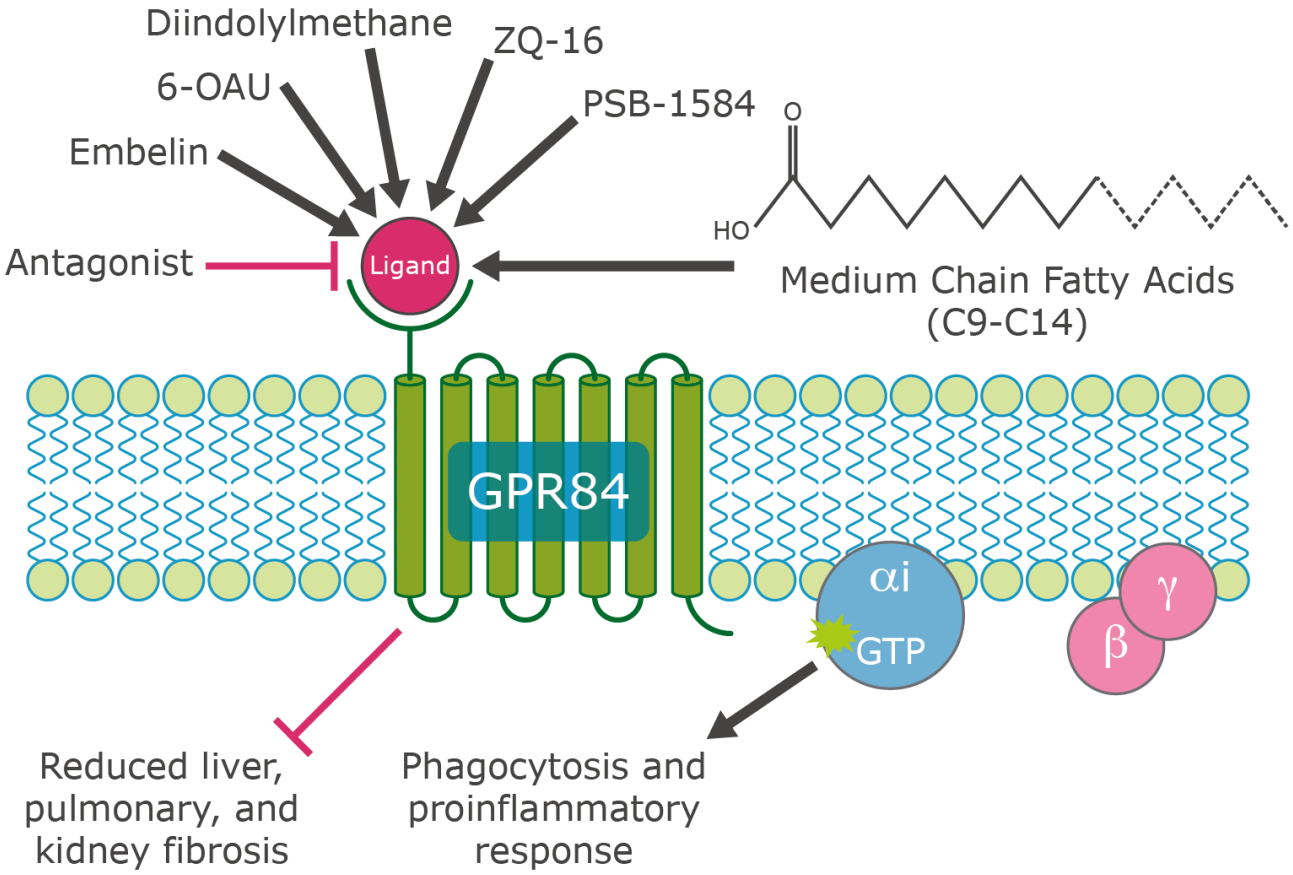
All of the above contributing to non dilutive extension of cash runway

Our Pipeline

GPR84: Role in Inflammation and Fibrosis



The GPR84 Receptor



What is the GPR84 Receptor?

- The GPR84 receptor is primarily expressed in immune cells in addition to multiple organ systems. It plays a key role in the linkage and regulation of the inflammatory and metabolic response, and promotes fibrosis.

Why is this this important?

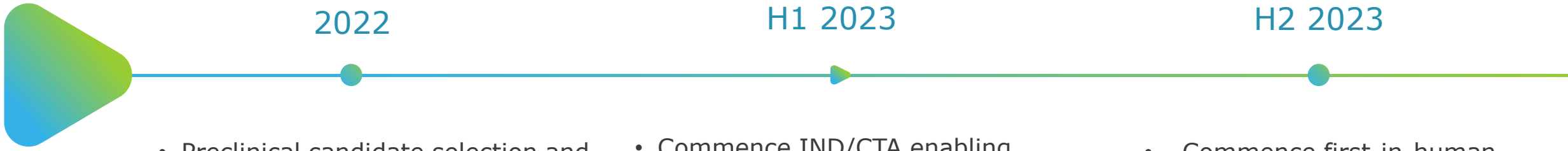
- A potential beneficial role for the antagonism or downregulation of the GPR84 receptor, could be the reduction of fibrosis in several diseases.

What are the potential indications?

- Antagonism of the GPR84 receptor proposes a potentially novel therapy for disease processes characterized by immunometabolism dysfunction such as
  - Interstitial Lung Disease
  - Kidney Fibrosis
  - Non-alcoholic steatohepatitis (NASH)

1. Wellen and Hotamisligil, 2005
2. Libby, Ridker and Hansson, 2011
3. Puengel et al., 2020
4. Wojciechowicz and Ma'ayan 2020

GPR84 Expected Milestones



2022

- Preclinical candidate selection and guidance on potential target disease areas

H1 2023

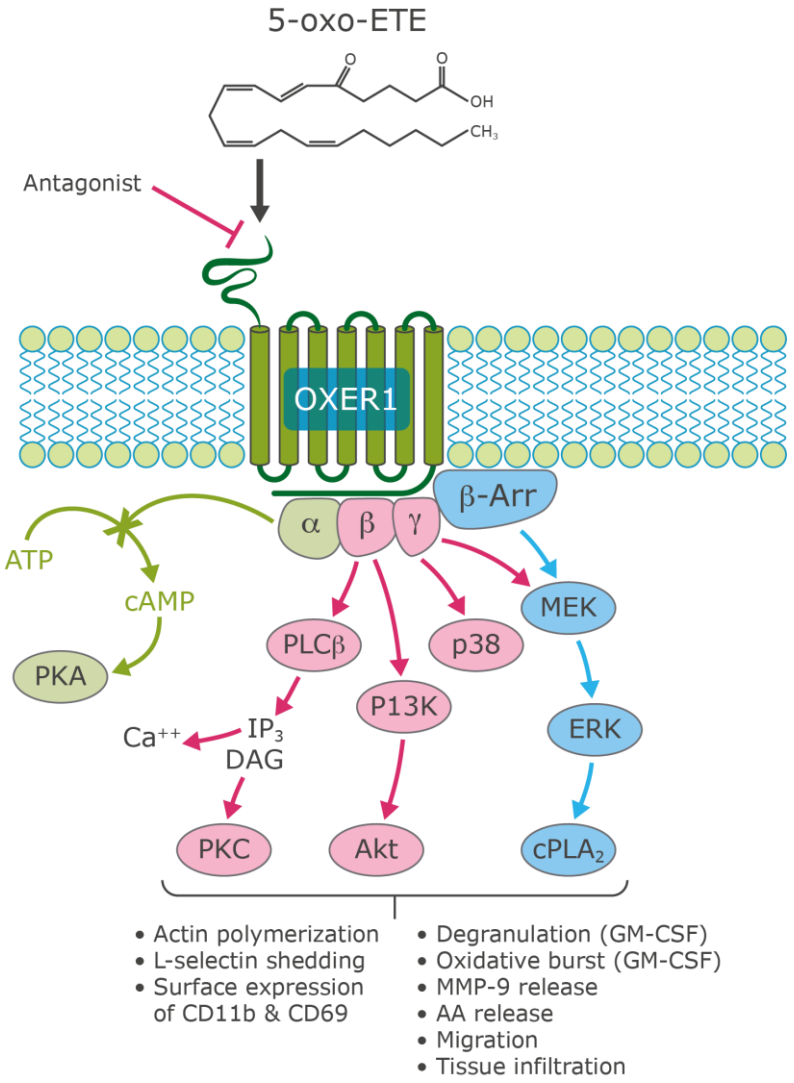
- Commence IND/CTA enabling studies for regulatory approval of clinical trial
- Regulatory Submission for Phase 1 Clinical Trial

H2 2023

- Commence first-in-human clinical trial

OXER1 Antagonist

OXER1: Role in Tissue Repair and Inflammation



What is the OXER1 Receptor?

- OXER1 is a GPCR receptor which is mainly expressed in inflammatory cells. OXER1 is highly selective for 5-oxo-ETE, one of the most powerful chemo-attractants and activators of eosinophils.

Why are eosinophils important?

- Eosinophils themself are key in mounting an appropriate immune response against pathogens.
- When activated, they release a cocktail of toxic proteins along with cytokines to attract other immune cells all designed to attack and damage the pathogen.
- However, when eosinophils are chronically activated, these toxic proteins can also damage normal tissue and promote inflammation causing Eosinophilic-driven diseases

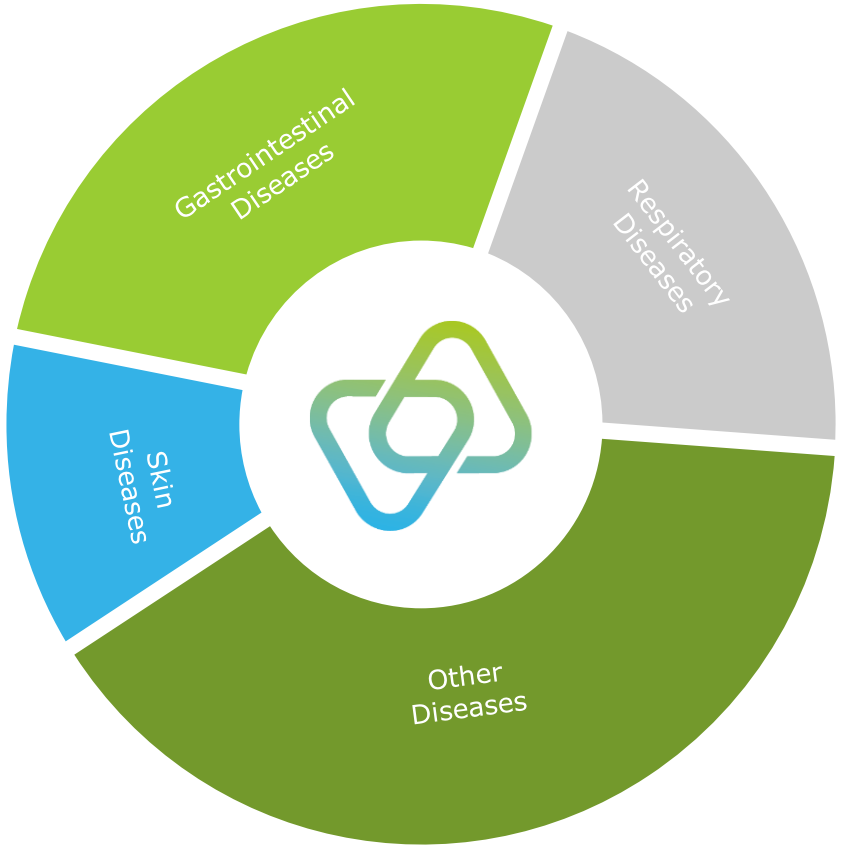
What are the potential indications?

- Eosinophils are involved in acute and chronic inflammation and play an important role in a large number of allergic, inflammatory and proliferative diseases.

1. Gail et al, 2009

OXER1 Potential To Treat Eosinophilic-Driven Disease

Eosinophils are involved in acute and chronic inflammation and play an important role in a large number of allergic, inflammatory and proliferative diseases. Both eosinophils and mast cells are involved in the pathology of many of these diseases.



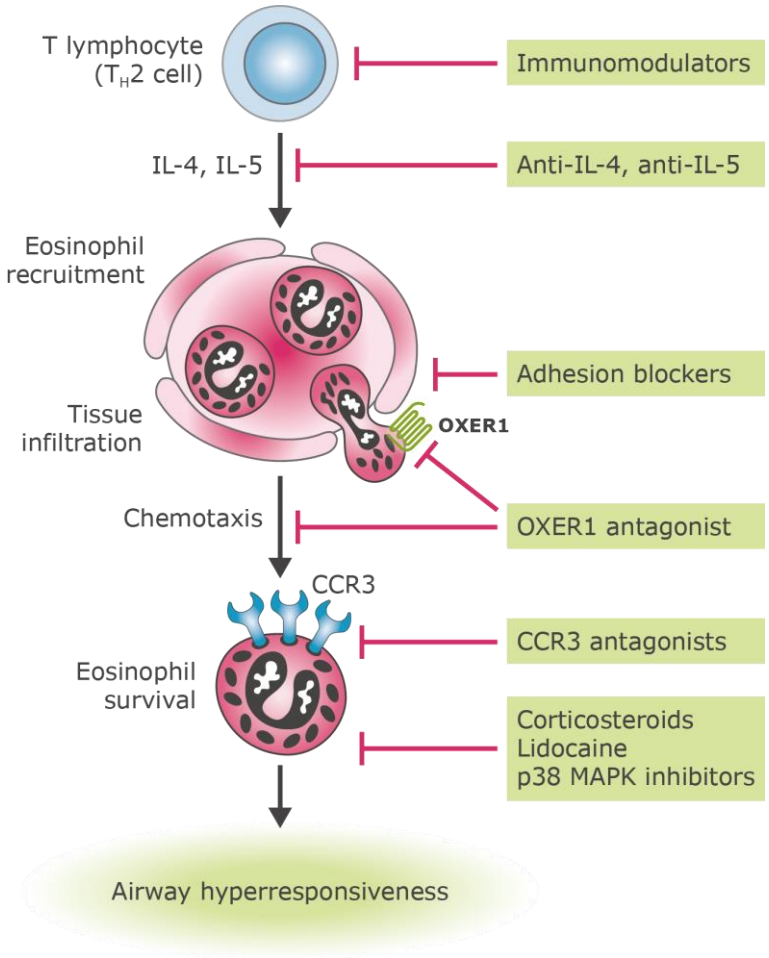
Respiratory and Inflammatory Disease:

- Severe eosinophilic asthma
- COPD
- Hypereosinophilic syndrome (HES)
- Nasal polyposis
- Atopic dermatitis
- Chronic spontaneous urticaria

Gastrointestinal Disease:

- Eosinophilic gastritis
- Eosinophilic esophagitis (EoE)
- Eosinophilic gastroenteritis

Development Rationale & Opportunities in Eosinophil-related Diseases



- There are many drug development approaches to limit eosinophil-related tissue damage
- Eosinophil-targeting biology proven with existing, approved, monoclonal antibody drugs
  - Reducing eosinophil levels shown to improve outcomes in severe asthma
- Blood eosinophil levels offer an easy-to-measure biomarker for early-stage clinical studies
- Despite existing competitor products in eosinophilic asthma, there is still an opportunity for an effective, small-molecule drug
- Not many competitor drugs in clinical-stage development for eosinophilic diseases
- No known competitors identified targeting the 5-oxo-ETE / OXE receptor: its an entirely novel approach
- Preclinical candidate nomination expected in 2023.

*Image adapted from: https://www.immunology.org/public-information/bitesized-immunology/cells/eosinophils

OXER1 Expected Milestones

H2 2023

- Preclinical candidate selection and guidance on potential target disease areas

H1 2024

- Commence IND/CTA enabling studies for regulatory approval of clinical trial
- Regulatory Submission for Phase 1 clinical Trial

H2 2024

- Commence first-in-human clinical trial

Data Driven Execution and Delivery

	Expected Program Milestones
GPR84 Antagonist Program	**2022:** Pre-clinical candidate selection and guidance on potential target disease areas **2022:** Commence IND/CTA enabling studies for regulatory approval of clinical trial **2023:** Regulatory submission for Phase 1 clinical trial **2023:** Commence first-in-human clinical trial
OXER1 Antagonist Program	**2023:** Pre-clinical candidate selection and guidance on potential target disease areas **2024:** Commence IND/CTA enabling studies for regulatory approval of clinical trial **2024:** Regulatory submission for Phase 1 clinical trial **2024:** Commence first-in-human clinical trial

Data Driven Execution and Delivery

	Expected Organisational Milestones
Drug Discovery Platform	**2022/2023:** Opportunity to expand pipeline to study additional candidates with novel targets and novel pathways from in-house discovery engine **2022/2023:** Seek opportunities for potential acquisition of clinical-stage compounds in current therapeutic areas of focus **2022/2023:** Seek opportunities for access to new drug discovery tools through collaboration to build long-term drug discovery engine.
Business Updates	**2022/2023:** Continue to actively seek opportunities to monetize non-core assets and to reduce costs

Executive Summary

All figures presented in this section are in Canadian dollars unless otherwise specified.

Cash as of June 30, 2022	$55.8M

Potential development opportunities from in-house drug discovery platform

Ongoing opportunity to monetise non-core assets

Debt free Company with IP all under the control of Liminal