Liminal BioSciences

Corporate Presentation

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

NASDAQ: LMNL

January 2023

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.

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Liminal Introduction

Aiming to develop **proprietary, novel**, **best/first in class** novel small molecule therapeutics for inflammatory, metabolic and fibrotic diseases

- Pipeline is positioned to deliver multiple value catalysts in **2023/2024**
- Intellectual property (IP) all under the control of Liminal BioSciences

Progressing diverse pipeline:

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

Access to NASDAQ Market: **LMNL**

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

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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 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.
Dr. Gary Bridger Board Member and Interim Chief Scientific Officer	Executive Vice President of R&D, Xenon Pharmaceuticals Inc. Senior Vice President of R&D, Genzyme Corporation, Co-founder & Chief Scientific Officer, AnorMED Inc.
Jeffrey Smith MD Strategic Medical Adviser	Founder & Managing Director, Alder Biopharmaceuticals Inc. Senior Vice President, Alder Biopharmaceuticals Inc.

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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.

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Our Driving Force

Our aim is to rebuild value through four key drivers.

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Our Pipeline

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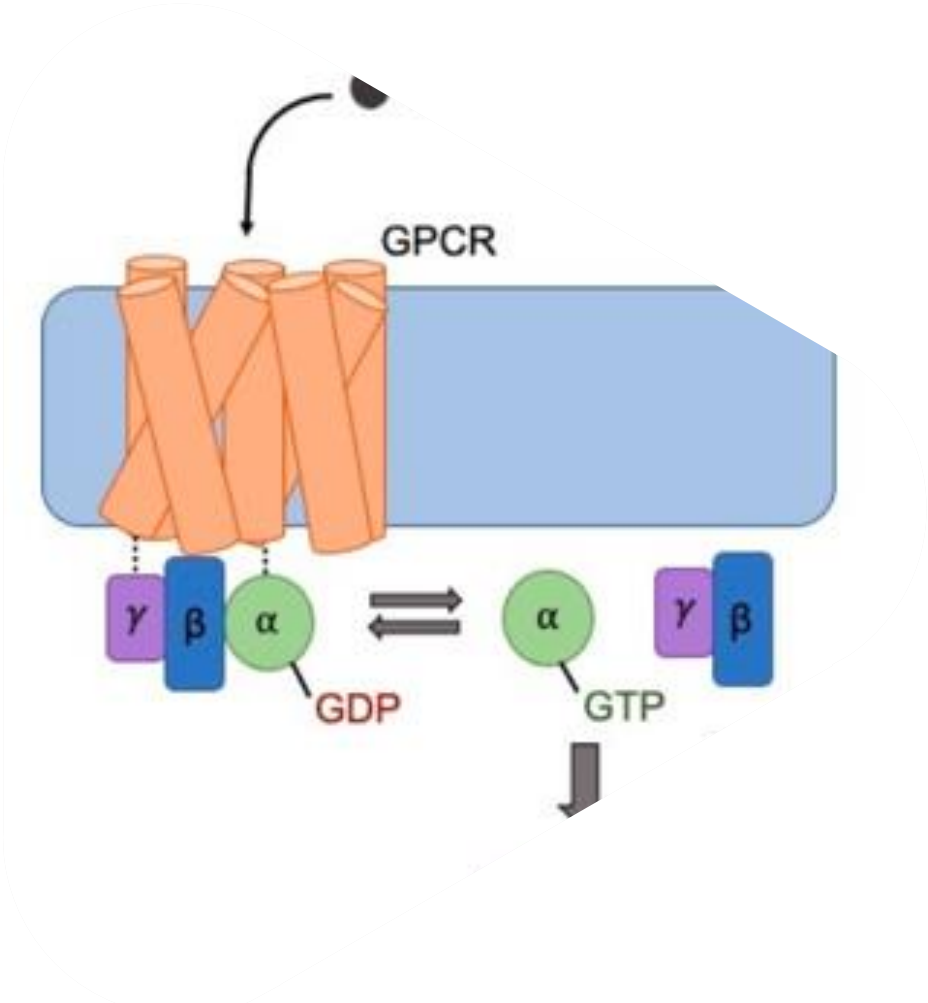
Building a pipeline of Antagonists

- Both our GPR84 antagonist and OXER1 antagonist are considered seven transmembrane G protein-coupled receptors (7TM GPCR's), the receptor protein passes through the cell membrane seven times.
- Around 35% of all approved drugs target GPCR's, and GPCR's are considered very "druggable"[1]
- An agonist is a drug that binds to a target and mimics the action of the natural ligand
- An antagonist is a drug that binds to a receptor and prevents other molecules (such as the natural ligand) from binding
- Ligands are the natural agonist
- G proteins, also known as guanine nucleotide binding proteins, act as molecular switches inside cells and are involved in transmitting signals
- Multiple potential indications



[1]Sriram K, Insel PA. G Protein-Coupled Receptors as Targets for Approved Drugs: How Many Targets and How Many Drugs? Mol Pharmacol. 2018 Apr;93(4):251-258.

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GPR84 Antagonist with Numerous Potential Clinical Applications

Focused inflammatory disease targets support product in a pipeline development strategy

Target	Receptor for orphan GPC receptor GPR84
Rationale	Blocks a proinflammatory modulator on immune cells, including macrophages, once inflammation is established[1]
Liminal IP	Novel IP
Potential Clinical Applications	Many pro-inflammatory conditions[2] such as: • Inflammatory bowel disease (Crohn's Disease and Ulcerative Colitis) • Idiopathic pulmonary fibrosis • Non-alcoholic fatty liver disease (NAFLD)/ NASH • Metabolic diseases (diabetes, glucose intolerance)

[1]Recio, C, et al. Activation of the immune-metabolic receptor GPR84 enhances inflammation and phagocytosis in macrophages. *Front Immunol* 2018; 9: 1419;

[2]Marsango, S, et al. Therapeutic validation of an orphan G protein-coupled receptor: the case of GRP84. *Br J Pharmacol* 2022;179:3529-3541;

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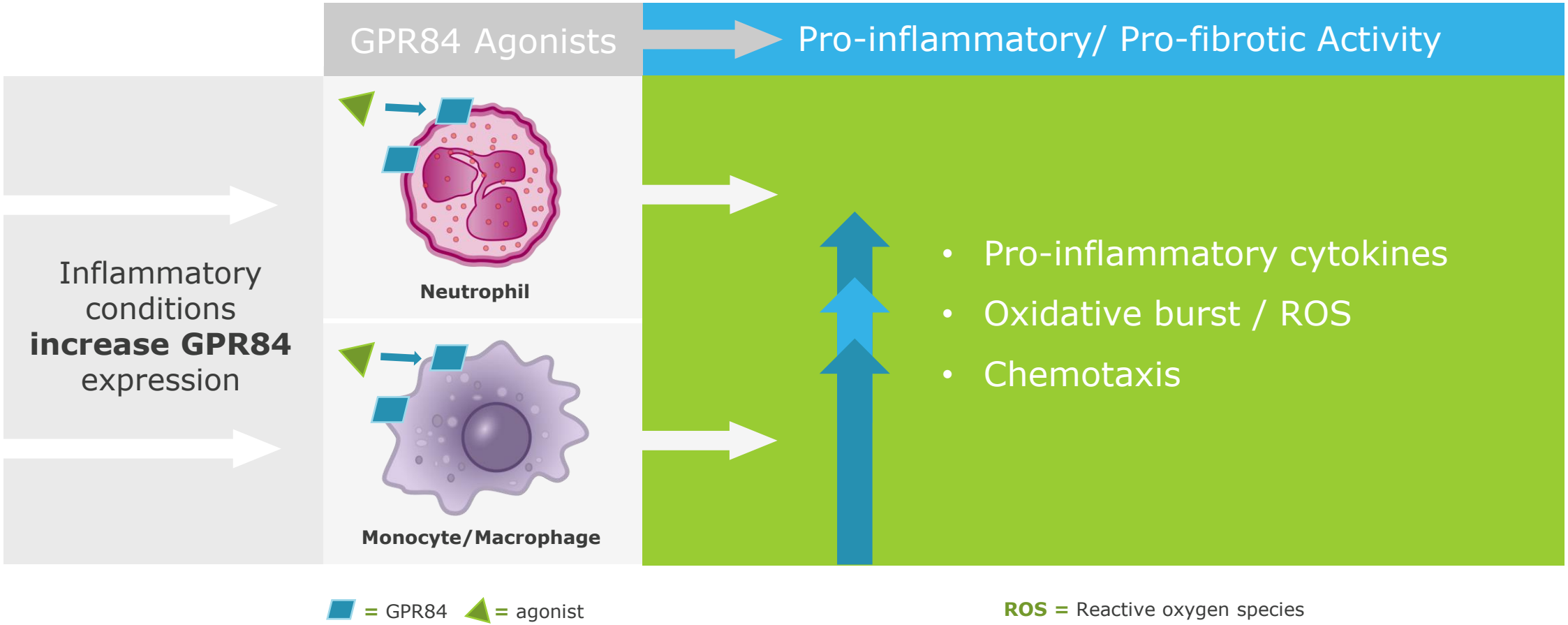
GPR84: Role in Inflammation and Fibrosis



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Next Steps for GPR84 Antagonist Program

Based on the data from development work so far, we have nominated our lead preclinical drug candidate for our GRPR84 Antagonist program, LMNL6511.

LMNL6511 Properties

- Low molecular weight
- Highly selective: no significant off-target liabilities noted in the comprehensive 169-target SpectrumScreen™ panel

Next steps

- Subject to continued satisfactory results in ongoing clinical trial application (CTA)-enabling work, we expect to seek approval to commence a first-in-human Phase 1 clinical trial of LMNL6511 during 2023.
- On-going In-vivo experiments are expected to allow us to select our initial target indication for this lead preclinical drug candidate in the coming months.

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OXER1 Antagonist

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OXER1 Antagonist with Numerous Clinical Applications

Focused inflammatory disease targets support product in a pipeline development strategy

Target	Receptor for inflammatory mediator 5-oxo-ETE
Rationale	Blocks potent proinflammatory mediator on eosinophils[1]
Liminal IP	Novel IP
Potential Clinical Applications	Numerous acute and chronic allergic, inflammatory, and proliferative disease mediated by eosinophils[2], such as: • Severe eosinophilic asthma • Atopic dermatitis • Eosinophilic gastritis/gastroenteritis • Eosinophilic esophagitis • Allergic conjunctivitis

[1]Recio, C, et al. Activation of the immune-metabolic receptor GPR84 enhances inflammation and phagocytosis in macrophages. *Front Immunol* 2018; 9: 1419;

[2]Marsango, S, et al. Therapeutic validation of an orphan G protein-coupled receptor: the case of GRP84. *Br J Pharmacol* 2022;179:3529-3541;

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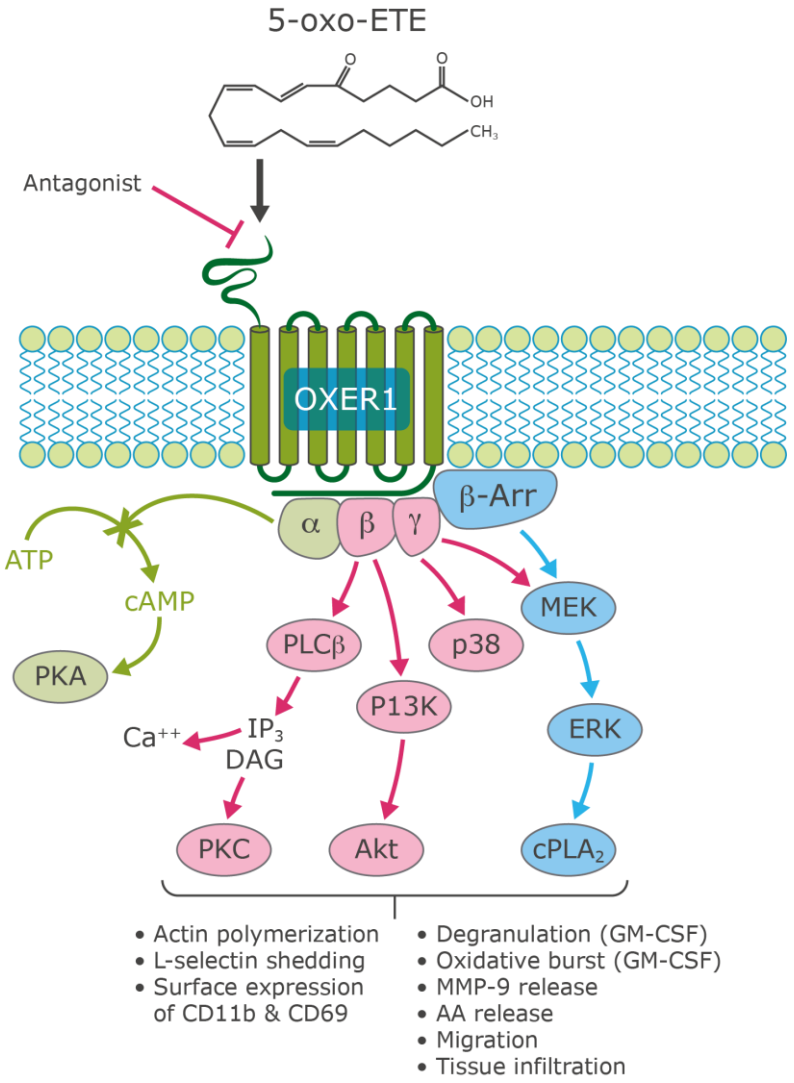
OXER1: Role in Tissue Repair and Inflammation



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 themselves 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.

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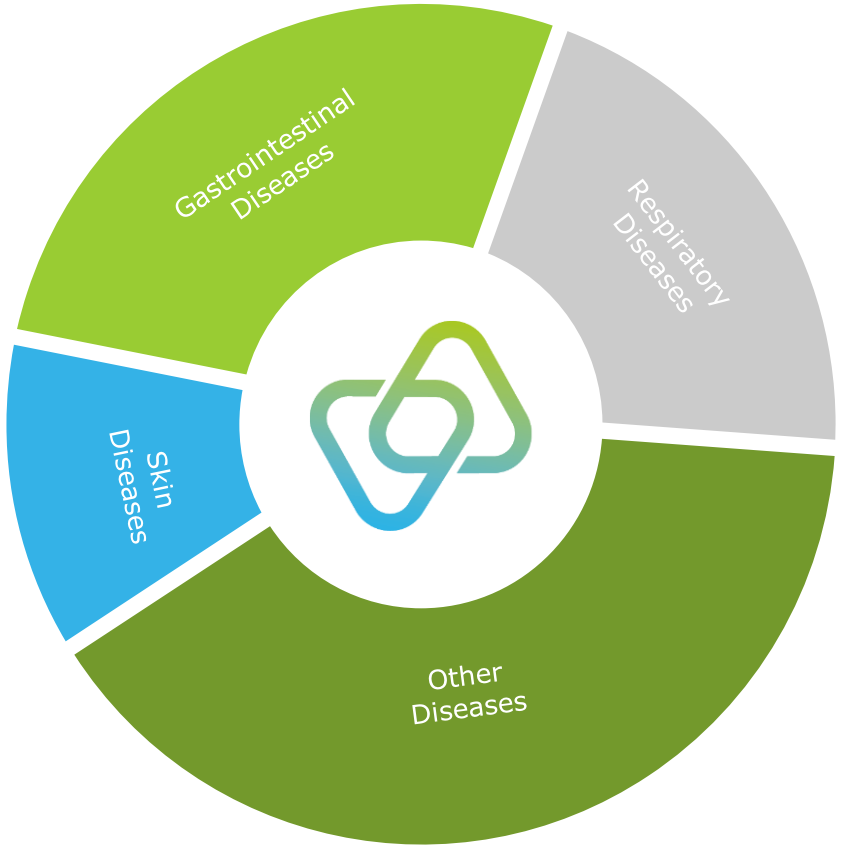
1. Gail et al, 2009

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, including:



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

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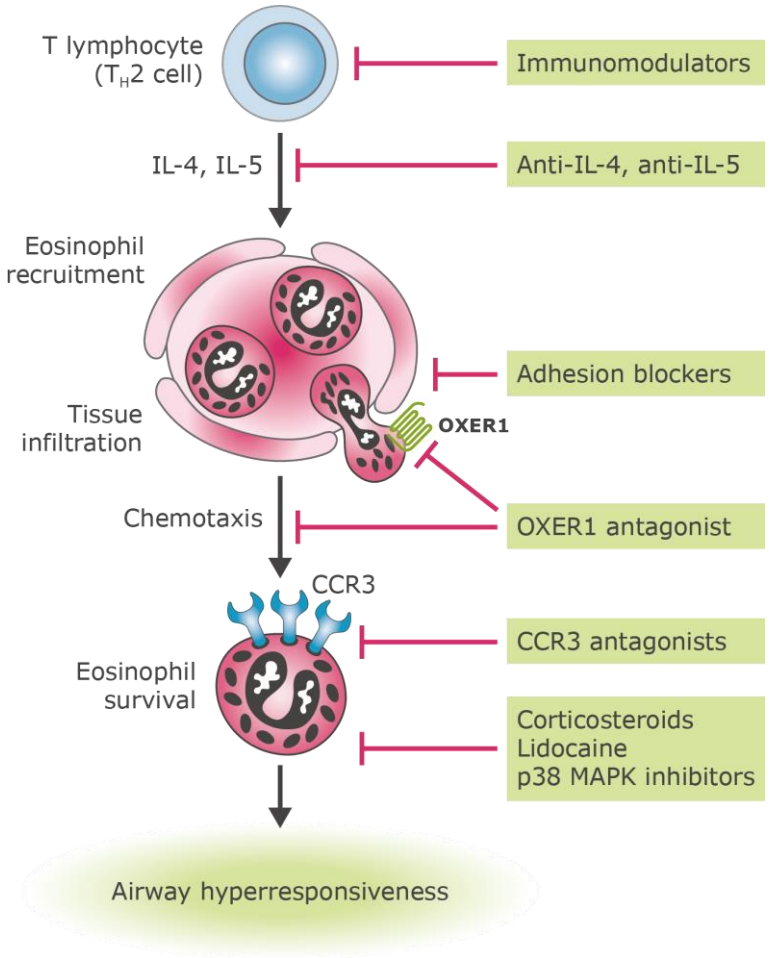
Development Rationale & Opportunities in Eosinophil-related Diseases



- 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: it's an entirely novel approach
- Preclinical candidate nomination expected in 2023.

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

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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 to enter into strategic partnering or out-licensing opportunities for our programs with the potential of bringing in upfront and milestone payments to add to our cash runway.

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Business Summary

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Data Driven Execution and Delivery

	Expected Program Milestones
GPR84 Antagonist Program	**2023:** Pre-clinical candidate selection and guidance on potential target disease areas **2023:** 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	**H1 2023:** Pre-clinical candidate selection and guidance on potential target disease areas **2023:** 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

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Data Driven Execution and Delivery

	Potential Business Opportunities
Drug Discovery Platform	**2023:** Opportunity to expand pipeline to study additional candidates with novel targets and novel pathways from in-house discovery engine, in-licenced compounds, or strategic partnering or out-licensing opportunities for our programs with the potential of bringing in upfront and milestone payments to add to our cash runway.
Business Updates	**2023:** Continue to actively seek opportunities to monetize non-core assets, seek strategic partnerships, and further reduce costs.

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Executive Summary

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

Cash as of December 31, 2022 just over $37M

Current cash runway is anticipated to support our near-term development goals into early **2024.**

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

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