Liminal BioSciences

JUNE 2023
NASDAQ: LMNL

GPCR DRUG DEVELOPMENT INVOLVING CHALLENGING, HIGH-VALUE TARGETS.

SEEKING GLOBAL & REGIONAL CO-DEVELOPMENT PARTNERS TO ACCELERATE THE PATH TO MARKET

SAFE HARBOUR

Forward–looking information includes statements concerning, among other things: advancement of Liminal Biosciences' candidates or development programs, including the timing and outcome of the potential development of the Company's R&D programs such as the development of LMNL6511, LMNL6326 and our GPR40 agonist discovery program; the timing of initiation or nature of preclinical studies and clinical trials, including the expected filing of a clinical trial authorization or commencement of a Phase 1 clinical trial of LMNL6511 in the second half of 2023; the contemplated potential therapeutic areas of our product candidates, including IBD, NASH, liver or Eosinophilic mediated diseases; the potential for our development programs to address significant unmet medical needs.

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 and other geopolitical tensions 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, clinical development, manufacturing operations or commercialization opportunities; the successful and timely initiation or completion of preclinical and clinical trials; the ability to take advantage of financing opportunities or business opportunities in the pharmaceutical industry, uncertainties associated generally with research and development, clinical trials and related regulatory reviews and approvals; our ability to add new development opportunities to our pipeline or to enter into strategic partnerships; our ability to continue to comply with Nasdaq Listing Rule 5450(a)(1) to remain listed on the Nasdaq Capital Market; our expected cash runway and our ability to actively seek and close on opportunities to monetize non-core assets or commercial opportunities related to our assets and general changes in economic conditions, including as a result of increased inflation, bank failures and rising interest rates.

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, 2022, as well as other filings and reports Liminal Biosciences' may make from time to time. 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 press release 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.

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WHY PARTNER WITH LIMINAL?

NOVEL THERAPEUTIC CANDIDATES DESIGNED FOR HIGH-VALUE GPCR TARGETS

- Innovation & Leadership in the sought-after field of G Protein-Coupled Receptors (GPCRs)
- Developing drug candidates for difficult targets of high value (‘undruggable’)
- Validated target engagement & activity; novel small molecule specificity, potency
- Potential to address unmet needs in growing markets: ex., IBD, multi-organ fibrosis
- Approval for Phase 1 Study for LMNL6511 in Healthy Volunteers expected in H2 2023
- Oral, Small Molecule therapeutics; low COGs, dosing & administration convenience
- Patent filings on lead candidates & back-up compounds for GPR84 and OXER-1 antagonists

GPCR MOLECULAR TARGET OPPORTUNITIES

GPCRS ARE COMPELLING TARGETS FOR THERAPEUTIC DEVELOPMENT

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~400
GPCR targets active in diseases[2]

~34%
of FDA approvals target GPCRs[1]

27%
of global sales are GPCR drugs[1]

- IMMUNOLOGY / INFLAMMATION
- GI DISEASES
- METABOLIC DISORDERS
- NEUROLOGICAL DISORDERS
- RESPIRATORY DISORDERS
- CARDIOVASCULAR DISEASES
- ONCOLOGY

GPCRs are the most intensively studied drug targets, as they are active in a wide range of disease areas and offer broad therapeutic potential

GPCR research has led to more than 700 approved drugs over previous decades and is still ripe for development

Sources: [1] "Unexplored opportunities in the druggable human genome", Nature Reviews, 2016 ; [2] "Trends in GPCR in Drug Discovery – new agents, targets and indications", Nature Reviews, 2017; "Septerna emerges with $100m to spark second golden age of prolific drug target GPCR with pioneer as co-founder" by Kyle LaHucik via Fierce Biotech, Jan 27 2022;

LMNL'S GPCR PIPELINE FOCUSES ON CHRONIC DISEASE, HIGH-VALUE MARKETS

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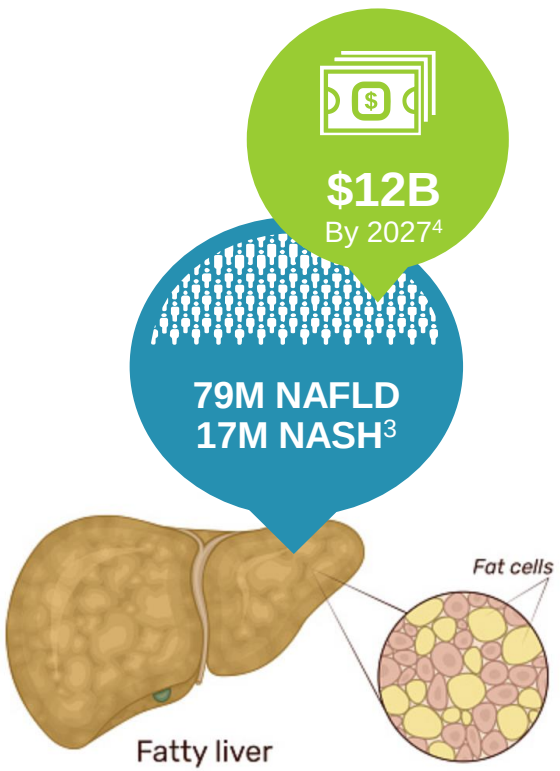
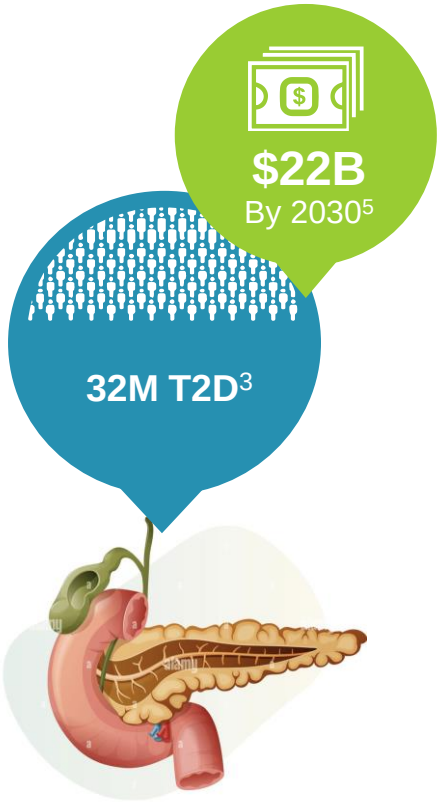
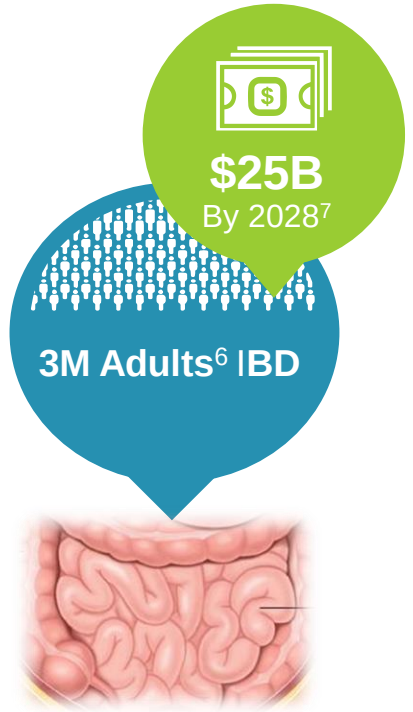
US Prevalence of Chronic Metabolic Diseases & Projected Future Market Value







[1]CENTERS OF DISEASE CONTROL AND PREVENTION, MARCH 2020 (NHANES, 2021); [2]BIOSPACE, INC. (SYNDICATED REPORT), JULY 2021; [3]YOUNOSSI, Z, ET AL. *JOURN OF HEPATOL* 2019;71:793-801; [4]GLOBAL INDUSTRY ANALYSTS, INC. (SYNDICATED REPORT), OCTOBER 2022; [5]PRECEDENCE RESEARCH, INC. (SYNDICATED REPORT), APRIL 2022; [6]CDC.GOV, ACCESSED 5/28/23; [7]DATA MONITOR HEALTHCARE; ABIVAX UNIVERSAL REGISTRATION DOCUMENT 2023

GPCR DRUG DISCOVERY PIPELINE FEATURES NOVEL TARGETS

Small molecule pipeline targeting metabolic, inflammatory and fibrotic diseases.

Global Rights	Program	Potential Indications	Preclinical			Clinical			Key Milestones
			Discovery	Lead Optimisation	CTA-enabling	Phase 1	Phase 2	Phase 3	
	GPR84 Antagonist	• IBD • NASH/NAFLD							Seek approval for **Phase 1 clinical trial in H2 2023**
	OXER1 Antagonist	• Eosinophilic-driven Asthma • Atopic Dermatitis							Nominated LMNL 6326 as **preclinical candidate**
	GPR40 Agonist	• Insulin Resistance/ Diabetes • Metabolic Disorders							Identify **potent, low molecular weight GPR40 agonists** without significant PPARγ activity in 2023

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GPR84: BROAD THERAPEUTIC AREA POTENTIAL, WITH MULTI-TISSUE INVOLVEMENT

- GPR84 is a pro-inflammatory G protein-coupled receptor (GPCR) mainly expressed in neutrophils, monocytes, macrophages and other innate immune cells in the peripheral system, and microglial cells in the nervous central system.
- GPR84 expression has also been reported in multiple organ systems, such as bone marrow, skeletal muscle, adipose tissue, liver, lung, kidney, and gastrointestinal tract.
- GPR84 expression is highly upregulated following acute inflammatory stimuli (such as lipopolysaccharide and TNFα) and in inflammatory diseases, suggesting potential therapeutic opportunities in targeting GPR84 in inflammatory, fibrotic, and metabolic diseases.

Marsango et al., 2020; Marsango and Milligan, 2023

LMNL6511
GPR84 ANTAGONIST PROGRAM

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GPR84: A PIVOTAL ROLE IN INFLAMMATION AND FIBROSIS

WHAT IS THE GPR84 RECEPTOR?

- Primarily expressed in immune cells, such as neutrophils, monocytes, and macrophages
- Abundant in multiple organ systems: heart, lung, kidney, liver, GI tract, CNS and bone marrow.[1]

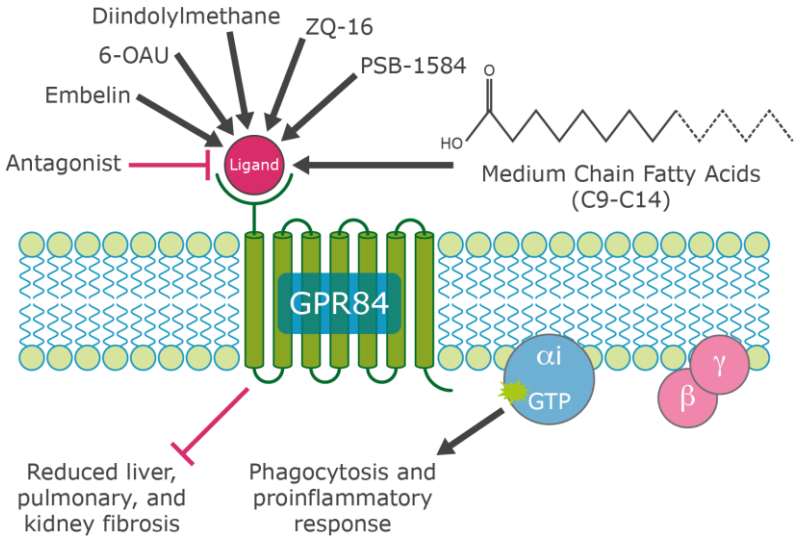
POTENTIAL INDICATIONS

GPR84 antagonism is anticipated to address:

- Non-alcoholic fatty liver disease (NAFLD)/ NASH
- Liver Fibrosis
- Metabolic diseases (diabetes, glucose intolerance)
- Inflammatory bowel disease (Crohn's Disease and Ulcerative Colitis)
- Idiopathic pulmonary fibrosis

WHY ARE IMMUNE CELLS IMPORTANT?

- The GPR84 receptor plays a role in controlling the inflammatory response as evidenced by its primary expression in innate immune cells.[2]
- Expression levels of GPR84 increase significantly under inflammatory conditions.[2]
- Independent research suggests that GPR84 receptor plays a role in the linkage and regulation of the inflammatory and metabolic responses.[3]



1. Labéguère et al., 2020
2. Luscombe et al., 2020
3. Chen et al., 2020

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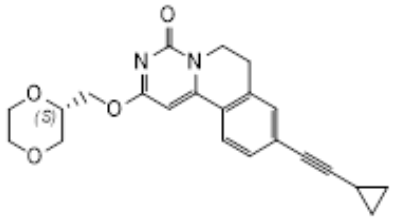
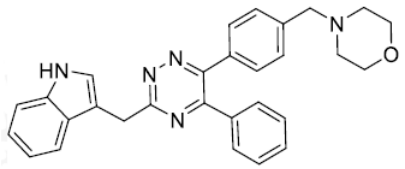
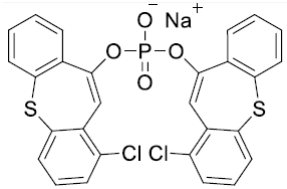
GPR84 ANTAGONISTS: OPEN DEVELOPMENT LANDSCAPE FOR LMNL6511

FEW COMPETITIVE PROGRAMS; ONE CLINICAL PROGRAM FOR NEUROPATHIC PAIN

GLPG1205 - *halted* (and related dihydropyrimidino isoquinolinone compounds) Galapagos NV		Phase 2 Clinical Setbacks for GLPG1205: • Phase 2a trial in UC, and Phase 2b for IPF both failed primary endpoint measures • Company updates indicate the drug candidate has been discontinued in IPF; no further news forthcoming in any TA
Compound 42 (and related 1,2,4-triazine compounds) University of Glasgow		R&D / Pre-clinical
BGT-004 (and related phosphodiester compounds) Chinese Academy of Sciences		R&D / Pre-clinical
BAY3178275 Bayer	undisclosed structure	Phase 1 ongoing (completion estimated Q2 2024) Indication: diabetic neuropathic pain

Labéguère et al., 2020; Mahindra et al., 2022; Chen et al., 2022

LMNL6511: CANDIDATE SELECTION & DEVELOPMENT RATIONALE

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Potency & specificity for a novel target; consistent in vivo safety

- Liminal's potent and selective GPR84 antagonist has IP and patent filings for the treatment of inflammatory/fibrotic/metabolic diseases, including NAFLD/NASH and IBD/UC.
- > 1700 compounds synthesized & tested;
- LMNL6511 was screened for greater potency, in addition to selectivity; optimal PK in Non-Human Primates (NHP)

PK/POTENCY OF GLPG1205 VS POTENCY OF LMNL6511

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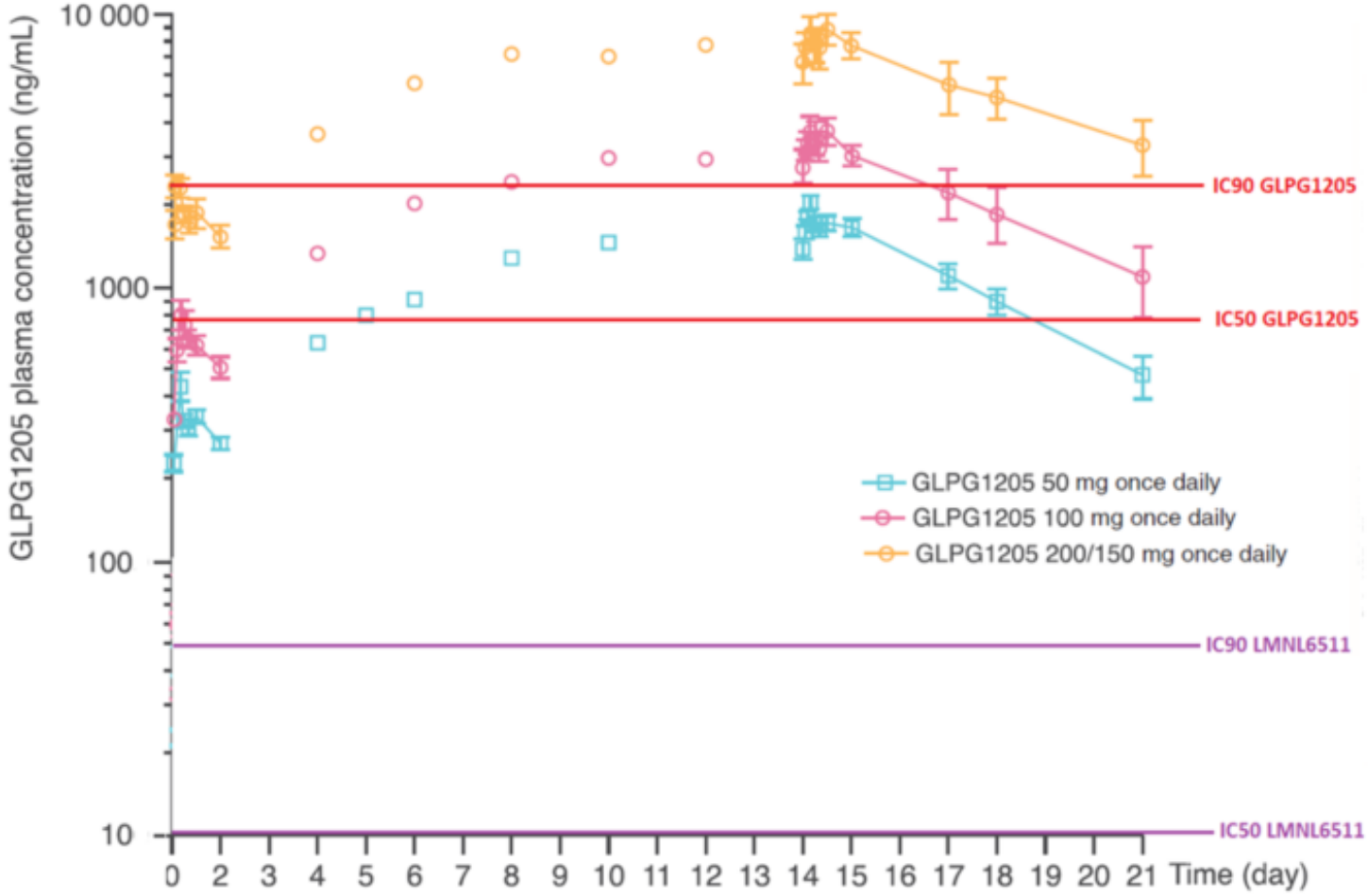
Results from GLPG1205 Phase 1 study (Timmis et al., 2021; adapted from Figure 2) **vs in vitro potency**



- IC_{50} and IC_{90} were established internally using the human GPR84 trafficking to early endosomes assay
- Taking into consideration the higher potency observed in preclinical studies and free fraction of LMNL6511, it is expected that a **≈40x lower blood concentration** of LMNL6511 would be needed to get a similar effect as GLPG1205 in human

GLPG1205 REPORTED CLINICAL SAFETY AND TOLERABILITY

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Phase 1 study (Clinicaltrials.gov number NCT01887106; Timmis et al., 2021)

- Randomized, double-blind, placebo-controlled study of GLPG1205 (part 1: SAD GLPG1205 10 to 800 mg; part 2: MAD GLPG1205 50, 100, or 200 mg once daily for 14 days).
- Reduced tolerability was observed in the GLPG1205 200-mg once-daily dose cohort, with 3 out of 6 subjects discontinuing study drug due to treatment-emergent adverse events (TEAEs) including headache and nausea or vomiting. As a result, the dose was reduced to 150 mg on day 8 for the remainder of the study.
- The maximum tolerated dose tested was GLPG1205 100 mg once daily.

Phase 2 PINTA study (Clinicaltrials.gov number NCT03725852; Strambu et al., 2022)

- Randomized, double-blind, placebo-controlled, proof-of-concept trial.
- Patients with IPF were randomized 2:1 to once-daily oral GLPG1205 100 mg or placebo for 26 weeks and stratified to receive GLPG1205 alone or with standard of care (nintedanib or pirfenidone).
- Compared with placebo, treatment with GLPG1205 resulted in higher proportions of serious and severe TEAEs and treatment-emergent discontinuations, most apparent in the nintedanib stratum.

These observations suggest that a more potent GPR84 antagonist could help avoid adverse events while maintaining target occupancy.

INSIGHTS GAINED FROM LMNL NASH LIVER DISEASE IN-VIVO STUDIES

Results suggests that treatment with a small molecule GPR84 antagonist for 6 weeks could improve liver fibrosis and health in a model of diet-induced liver disease (high fat diet).

Treated mice have shown:

- reduced ALT concentration in the serum
- reduced liver hypertrophy
- reduced steatosis as well as liver fibrosis shown by histological analysis (reduced fibrosis confirmed by hydroxyproline assay in liver biopsies)
- reduced level of TIMP-1 and CK-18 in the serum, supporting a reduced fibrotic activity
- Reduced liver expression of many genes related to inflammation and fibrosis

We found no impact of the drug candidate on all parameters related to insulin resistance. GPR84 antagonism could thus potentially alleviate NASH/liver disease related to metabolic syndrome.

***PROPOSED INDICATION AREA HAS NOT BEEN FINALISED BY THE COMPANY**

KEY TAKE-AWAYS FROM LMNL IBD IN VIVO STUDIES

- LMNL6511 was evaluated in the indomethacin-induced inflammatory bowel disease rat model.
- Results showed a reduction in the number of indomethacin-induced lesions and macroscopic disease grade in rats dosed with LMNL6511.
- We also showed an improvement in the albuminemia (indicating reduction in gut bleeding) in dosed animals.
- Our data supports a positive effect of LMNL6511 on indomethacin-induced gut inflammation in this animal model.

***PROPOSED INDICATION AREA HAS NOT BEEN FINALISED BY THE COMPANY**

GPCR PARTNERSHIPS

COMPANIES	INDICATIONS	STAGE OF ASSETS AT TIME OF PARTNERSHIP	COLLABORATION GOALS
Tempero Bio & Sosei Heptares	Neurological & Psychiatric Disorders	• Phase 1	• Develop potent, orally available mGluR5 negative allosteric modulators. • Lead compound TMP-301 (HTL0014242) was designed by Sosei's GPCR drug design tech platform
Domain Therapeutics & ONO	Metabolic Diseases	• Discovery Stage • Single Target Collaboration	• Discovery of small molecule candidates with Domain's proprietary technology and medicinal chemistry experience with GPCRs • ONO-Selected Target Not Disclosed
Confo Therapeutics & Daiichi Sankyo	CNS Disorders	• Discovery stage • Single target collaboration	• Daiichi Sankyo has an exclusive option to license global rights • DS performs clinical development and commercialization of resulting products
Domain Therapeutics & Boehringer Ingelheim	GPCR discovery program focused in CNS	• Discovery Stage • Multi-Target Collaboration	• Comprehensive characterization of small molecule GPCR binders • BI to fund research activities with global commercialization rights for any future products

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LMNL'S PARTNERING APPROACH & TIMELINE

WHY LMNL6511? WHY PARTNER AT THIS STAGE OF DEVELOPMENT?

- Opportunity to secure an option & license agreement for a novel, Phase 1 asset with potential to address unmet need in metabolic, inflammatory & fibrotic-driven diseases; >10% CAGR by 2030[1,2]
- Unencumbered competitive landscape: few groups working on GPR84, making the target a logical bolt-on for other GPCR-focused pipelines
- Preclinical studies show that LMNL6511 is a highly potent and selective GPR84 antagonist. Further clinical development activities beyond phase 1 to be coordinated with licensing partner
- Opportunity for multi-asset deal structure, involving LMNL GPCR compounds for novel, high value targets may provide partner with timely, additional pipeline growth drivers
    - OXER1 Antagonist
    - GPR40 Agonist

1. Liver Fibrosis Treatment Market, Research & Markets, August 2022
2. Inflammatory Bowel Disease Market, 2023 – 2030, April 2023

LMNL6326
OXER1 ANTAGONIST PROGRAM

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OXER1 POTENTIAL TO TREAT EOSINOPHILIC-DRIVEN DISEASE

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

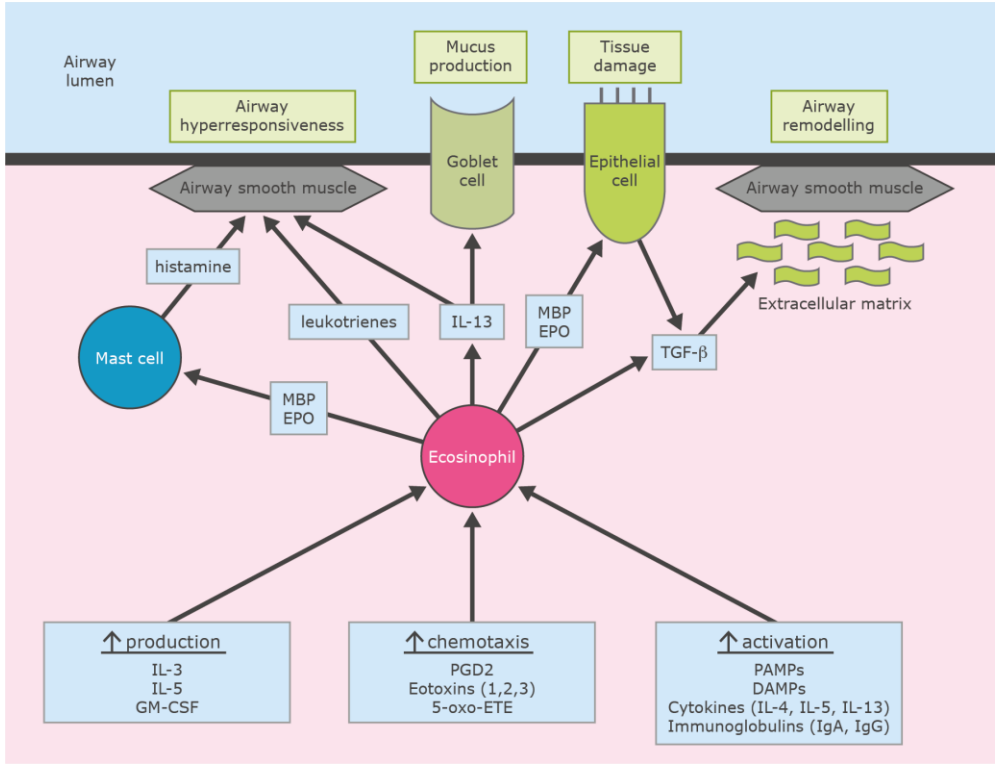
Gastrointestinal Disease:

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

OXER1 ROLE IN DISEASE IS DRIVEN BY EOSINOPHILIC IMMUNE DYSFUNCTION

MODERATE AND SEVERE ASTHMA

- Asthma is a heterogeneous disease; there are multiple clinical sub-types
- The two primary asthma phenotypes, Type 2 high and Type 2 low, are defined by eosinophilic and neutrophilic pattern of inflammation, respectively
- The Type 2 high subtype is associated with the cytokines IL-5 and IL-13
- Most drugs have focused on Type 2 high asthma, including four of the biologics approved for treatment of uncontrolled asthma target IL-5, IL-5R or IL-4/IL-13
- Asthma affected an estimated 262 million people in 2019[2] and caused 455 000 deaths



***PROPOSED INDICATION AREA HAS NOT BEEN FINALISED BY THE COMPANY**

1. McBrien CN and Menzies-Gow (2017)

2. Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019

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EOSINOPHILIC AND SEVERE ASTHMA MARKETS MAY PROVIDE MORE POTENTIAL COMMERCIAL OPPORTUNITY FOR EFFECTIVE, TARGETED THERAPIES

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Market expected to reach

$38B by 2029[1]

40%
CAGR

9
Approved Products:
5 Topical, 2 Oral and
2 injection[2]

Fasenra® (benralizumab) Subcutaneous Injection 30 mg

2022 SALES
$1.4B
est. $2.2B in peak sales ('27)[3]

Nucala (mepolizumab) Injection 100 mg/mL

2022 SALES
$1.8B
est. $2.6B in peak sales ('27)[3]

EPIDEMIOLOGY[4]

US: **4.4M**

EU4+UK: **3.4M**

COMPETITIVE PIPELINE[5]

NO OXER1 MOA in development

Ph 3 – 17 products
Ph 2 – 15 products

Average **9 Years** from **IND to PDUFA**[5]

5 YEAR DEALS SNAPSHOT

Range $7.7M- $1.4B[5]

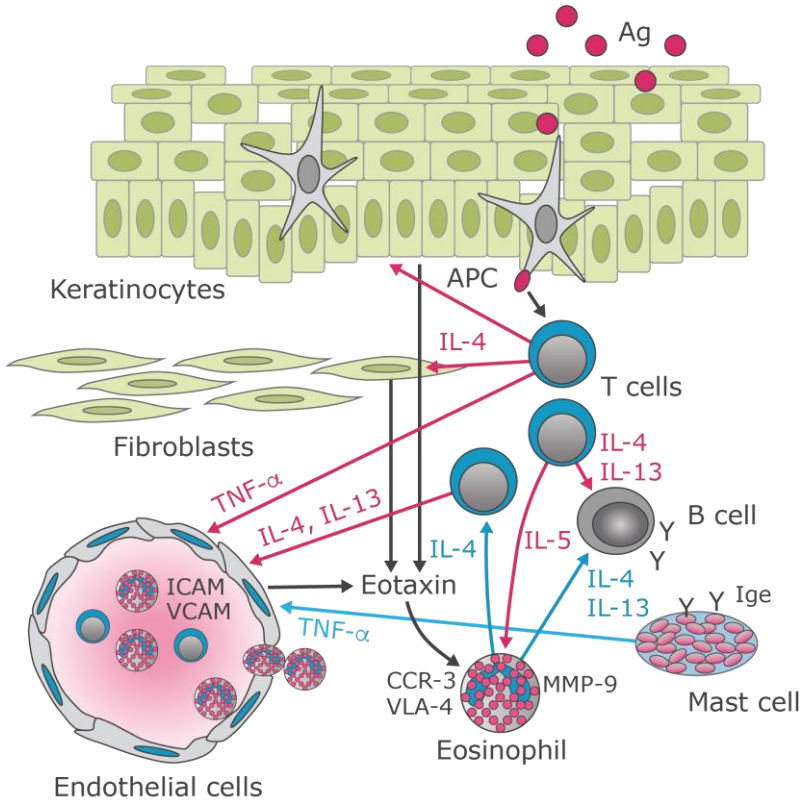
- **4 M&A**
- **24 Marketing licenses**
- **6 of 19 deals** with financials provided were **valued at >$1B (31%)**

1 GLOBAL AND UNITED STATES EOSINOPHILIC ASTHMA TREATMENT MARKET SIZE, STATUS AND FORECAST 2021-2027 (HTTPS://WWW.GIIRESEARCH.COM/REPORT/QYR1051541-GLOBAL-UNITED-STATES-EOSINOPHILIC-ASTHMA-TREATMENT.HTML), 2 FDA CENTERWATCH APPROVED DRUG LISTING IN EOSINOPHILIC AND SEVERE ASTHMA, 3COMPANY WEBSITE'S, 4 THE NEMETZGROUP SEPTEMBER 2022, 5 CORTELLIS COMPETITIVE INTELLIGENCE AND DEALS DATABASES; REGULATORY FILINGS CALCULATED FROM AVAILABLE REGULATORY FILING DATA IN CORTELLIS AND US CLINICAL TRIALS WEBSITE

OXER1 ROLE IN DISEASE IS DRIVEN BY EOSINOPHILIC IMMUNE DYSFUNCTION

ATOPIC DERMATITIS

- The immune response observed during the course of Atopic Dermatitis (AD) is characterized by a biphasic inflammation.
- A Th2-biased immune response (IL-4, IL-13, TSLP and eosinophils) is predominant in the initial and acute phase of AD, while in chronic AD skin lesions, a Th1/Th0 dominance has been described (IFN-γ, IL-12, IL-5 and GM-CSF)
- In particular, molecular interactions between VCAM and VLA-4 are important for preferential eosinophil recruitment. Interleukin-5 specifically acts on eosinophils and is involved in recruitment, activation, and life-span regulation of these cells. Eosinophils play an important immunoregulatory role because of the production of cytokines. For example, they generate IL-4 and IL-13, two important regulators of T and B cell functions, respectively.



***PROPOSED INDICATION AREA HAS NOT BEEN FINALISED BY THE COMPANY**

1. D. Simon,L. R. Braathen, H.-U. Simon (2004)

2. Fiset PO, Leung DY, Hamid Q (2006)

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NO OTHER OXER-1 ANTAGONISTS IN DEVELOPMENT IN LARGE AND GROWING GLOBAL ATOPIC DERMATITIS MARKET

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Market expected to reach

$7.6B by 2029[1]

4.8%
CAGR

9
Approved Products:
5 Topical, 2 Oral and
2 injection[2]

DUPIXENT® (dupilumab) Injection

2021 SALES
$6.4B
product in a pipeline with 4 indications[3]

CIBINQO™ (abrocitinib) tablets

EST. PEAK SALES ('27)
$1.1B
Pfizer's newly approved small molecule[3]

EPIDEMIOLOGY[4]

US Children: **12.7M**
US Adults: **18.4M**

EU4+UK Children: **22.2M**
EU4+UK Adults: **37.7M**

COMPETITIVE PIPELINE[5]

NO OXER1 MOA in development

Ph 3 – 3 products
Ph 2 – 42 products

Average **7 Years** from **IND to PDUFA**[5]

5 YEAR DEALS SNAPSHOT

Range $0.7M–$1.45B[5]

- **10 M&A**
- **27 Marketing licenses**
- **7 of 26 deals** with financials provided were **valued at >$1B (27%)**

[1] Future Market Insights, Atopic Dermatitis Market Forecast 2021-2029, [2] FDA Centerwatch Approved Drug listing in Atopic Dermatitis, [3]Company Website's, Dupixent indicated in eosinophilic esophagitis, eosinophilic phenotype mod-to-severe asthma, and chronic rhinosinusitis with nasal polyposis, Rinvoq indicated in RA, PSA, anklylosing spondylitis, and UC, [4] The NemetzGroup September 2022, [5] Cortellis Competitive Intelligence and Deals Databases; Regulatory filings calculated from available regulatory filing data in Cortellis and US Clinical Trials website

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OXER1 ANTAGONIST CANDIDATE SELECTION & DEVELOPMENT RATIONALE

- Liminal's potent and selective OXER1 antagonist has IP and patent filings for the treatment of inflammatory, allergic, and proliferative diseases involving eosinophils and neutrophils.
- An OXER1 antagonist was found to have positive effects in the house dust mite allergen (HDM)-induced pulmonary inflammation and HDM-induced skin eosinophilia NHP models (N.B. OXER1 receptor not expressed in rodents).
- ≈ 400 compounds synthesized & tested.
- Liminal's pre-clinical activities and data have shown that LMNL6326 is a potent and selective OXER1 antagonist. 10-day MTD/DRF tox studies have been completed in rats and NHP.

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OXER1 ANTAGONIST WITH POTENTIAL NUMEROUS CLINICAL APPLICATIONS

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[1], such as: • Severe eosinophilic asthma • Atopic dermatitis • Eosinophilic gastritis/gastroenteritis • Eosinophilic esophagitis • Allergic conjunctivitis

[1]Dagmar, et al. *Current reviews of allergy and clinical immunology.* Eosinophilic disorders. *2007.* American Academy of Allergy, Asthma & Immunology doi:10.1016/j.jaci.2007.02.010

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OXER1: ROLE IN TISSUE REPAIR AND INFLAMMATION

WHAT IS THE OXER1 RECEPTOR?

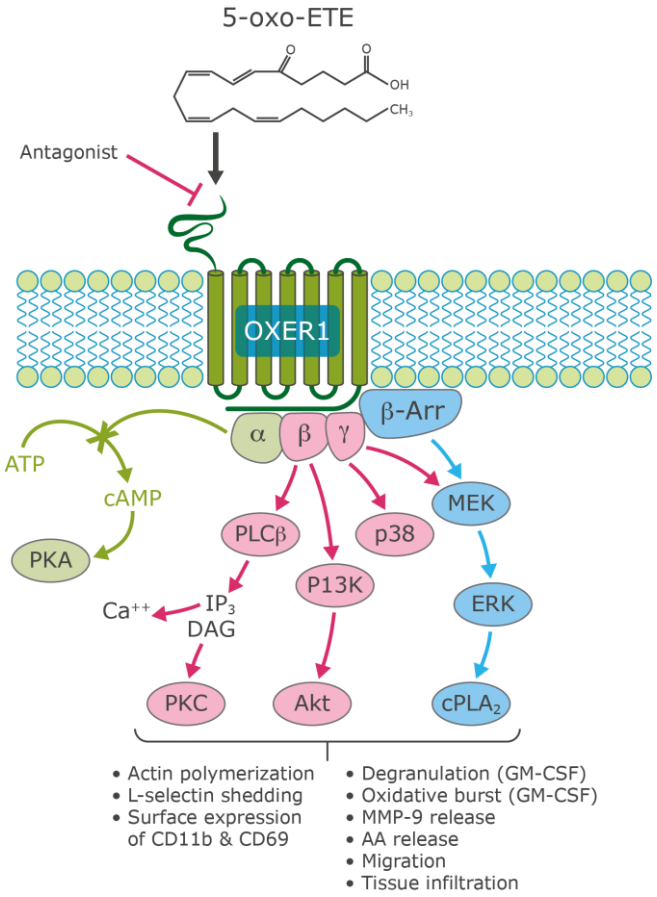
OXER1 is a GPCR receptor which is mainly expressed in inflammatory cells. OXER1 is highly selective for 5-oxo-ETE, one of the most powerful chemo-attractants and activators of eosinophils.

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.

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 (EDDs).



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GPR40 AGONIST PROGRAM

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GPR40: ROLE IN METABOLIC SYNDROME AND GLUCOSE MANAGEMENT

WHAT IS THE GPR40 RECEPTOR?

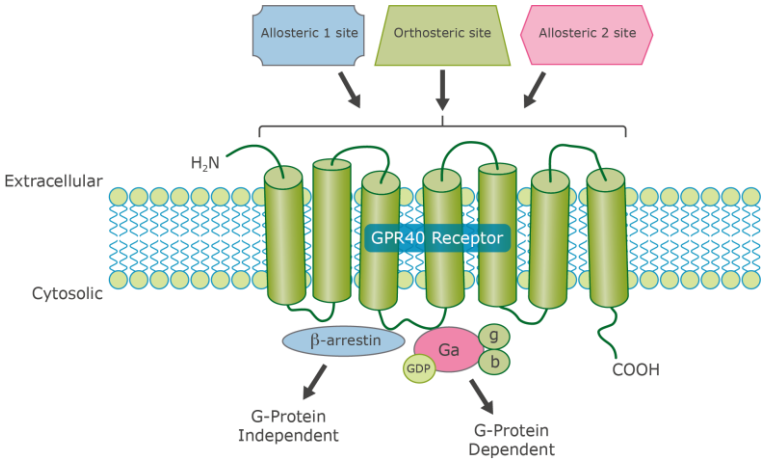
GPR40, also known as FFA1 or FFAR1, is a GPCR highly expressed in pancreatic β-cells and responds to medium and long chain unsaturated fatty acids, resulting in increased insulin secretion only in the presence of elevated glucose levels.

WHAT ARE THE POTENTIAL INDICATIONS?

- GPR40 has been proposed as a possible target for pharmacotherapy in type 2 diabetes (T2D).
- Due to the potential efficacy and safety profile of small molecules compared to existing therapies such as insulin and sulfonylureas, efforts have been focused on developing small molecule GPR40 agonists.

ROLE IN GLUCOSE MANAGAMENT?

- GPR40 is also expressed in enteroendocrine cells of the gastrointestinal tract, with activation resulting in the secretion of incretin hormones (GLP-1, and GIP) which can indirectly regulate insulin secretion.
- Due to the effects of hyperglycaemia in various tissues and organs, as well as the involvement of GPR40 in many physio-pathological processes, GPR40 agonists are emerging as possible therapeutic tools for alleviating organ inflammation and fibrosis.



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GPR40/FFAR1 AGONISTS: AN EMERGING CLASS OF COMPOUNDS FOR T2D

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GPR40 IS A VALIDATED TARGET FOR THE TREATMENT OF TYPE 2 DIABETES

- Strong clinical evidence that GPR40 agonists can improve glucose control, without the risk of hypoglycemia.
- Liver toxicity led to the discontinuation of the most advanced clinical-stage product candidate (TAK-875) in 2013. The development of this compound was terminated due to a low frequency of drug-induced liver injury (DILI).

NUMEROUS PROGRAMS ARE UNDERWAY TO OPTIMIZE DRUG DESIGN

- Other companies, including Celon Pharma, Ildong, Scohia, Kallyope and Piramal are working on next-generation GPR40 agonists.

OUR DISCOVERY PROGRAM

- We believe that small molecule agonists of GPR40 can be designed to minimize the risk of drug-induced liver injury (DILI). Our GPR40 agonist program is currently in the discovery phase. Our objective for 2023 is to identify potent, low molecular weight GPR40 agonists without significant PPARγ activity.

DEVELOPMENT ACTIVITIES & LEADERSHIP

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DATA DRIVEN EXECUTION AND DELIVERY

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GPR84 ANTAGONIST PROGRAM

H1 2023
On-going In-vivo experiments expected to allow narrow down a lead clinical indication

2023
Ongoing CTA-enabling studies for first-in-human clinical trial

H2 2023
Expect to file CTA for first-in-human Phase 1 clinical trial

H2 2023
Expect to Commence first-in-human clinical trial

OXER1 ANTAGONIST PROGRAM

H1 2023
Pre-clinical candidate selected LMNL6326

2024
Expect to file CTA/IND for first-in-human clinical trial

2024
Expect to Commence first-in-human clinical trial

GPR40 AGONIST PROGRAM

2023
Expect to identify potent, low molecular weight GPR40 agonists without significant PPARγ activity.

BUSINESS DEVELOPMENT & UPDATES

2023

- Continue to actively seek opportunities to monetize non-core assets, seek strategic partnerships, and further reduce costs.
- Opportunity to expand pipeline to study additional candidates with novel targets and novel pathways from in-house discovery engine, 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.

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MANAGEMENT TEAM WITH TRACK RECORD OF SUCCESS

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

BRUCE PRITCHARD
Chief Executive Officer

PORTON BIOPHARMA
HERIOT WATT UNIVERSITY
CVT | CV Therapeutics
Prometic
ardana
Moredun

NICOLE RUSAW
Chief Financial Officer

NUVO
Transition therapeutics inc.

DR. GARY BRIDGER
Board Member and Interim Chief Scientific Officer

EXPANSION THERAPEUTICS
X4 PHARMACEUTICALS
XENON
genzyme
ANORMED
FIVE CORNERS CAPITAL

PATRICK SARTORE
President

Prometic
univalor
ROBIC 1892

MARIE ISKRA
General Counsel & Secretary

Prometic
JUBILANT DRAXIMAGE
JUBILANT HOLLISTERSTIER
ROLLS ROYCE
DRAXIS

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BOARD OF DIRECTORS

ALEK KRSTAJIC
Director

As former Chief Executive Officer of Wind Mobile, Alek sits on a number of boards, and has received numerous awards and recognitions, including Canada's Top 40 under 40 and a Queen Elizabeth II Diamond Jubilee Medal for his service to Canada.

NEIL A. KLOMPAS
Chair Audit, Risk & Finance Committee

Mr. Klompas brings with him a breadth of experience as a financial executive in the biopharmaceutical industry. Mr. Klompas joined Zymeworks Inc. in March 2007 where he currently serves as President and Chief Operating Officer.

SIMON G. BEST (OBE)
Chair, Human Resources & Corporate Governance Committee

Prof. Best has experience as the founder and/or CEO of four biotechnology companies between 1992 and 2012, and as a Chairman or board member of major industry bodies including the UK BioIndustry Association (BIA) and the US Biotechnology Industry Organization (BIO).

TIMOTHY S. WACH
Director

Mr. Timothy Wach is Managing Director and Board Member of Taxand since January 2015. Mr. Wach, a trained lawyer, also has extensive experience in government relations and tax policy, having twice served in the tax policy branch of the Canadian department of finance in Ottawa. Mr. Wach also previously worked at KPMG.

DR. GARY BRIDGER
Director

Dr. Bridger has extensive experience in leading Research & Development teams at large pharmaceutical companies such as Genzyme and Xenon Pharmaceuticals. As well as co-founding AnorMED Inc. Mr Bridger also brings venture capital experience. Dr. Bridger has a Ph.D in Organic Chemistry.

EUGENE SIKLOS
Director

Mr. Siklos is the President of ThomVest Asset Management, Mr siklos as formerly VP , Head of Investments for Export Development Canada and has broad business and financial experience, including as a corporate finance professional at Merrill Lynch and Morgan Stanley

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