THiogenesiS THerapeuticS

Strong Orphan Platform

Proven Biology + Rapid Clinical path + Multiple Catalysts

(TSXV: TTI / OTCQX: TTIPF)

November - 2025

Forward Looking Statement

This document and any attachments are intended for information purposes only and should not be construed as on offer or solicitation for the sale of securities. Statements in this presentation include forward-looking statements within the meaning of certain securities laws. These forward-looking statements include, among others, statements with respect to our objectives, goals and strategies to achieve those objectives and goals, as well as statements with respect to our beliefs, plans, objectives, expectations, anticipations, estimates and intentions. The words "expected to" "illustrate" "has the potential to" "will be", "evaluating" "plans" "can be" "planning" "to predict" "potential" "may" "should" and words and expressions of similar import, are intended to identify forward-looking statements.

Results in early-stage clinical trials may not be indicative of full results or results from later stage or larger scale clinical trials and do not ensure regulatory approval. You should not put undue reliance on these statement or the scientific data presented as a number of important factors, many of which are beyond our control, could cause our actual results to differ materially from the beliefs, plans, objectives, expectations, anticipations, estimates and intentions expressed in such forward-looking statements. We do not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time by us or on our behalf; such statements speak only as of the date made. The forward-looking statements included herein are expressly qualified in their entirety by this cautionary language.

Thiogenesis - Summary

Thiogenesis Therapeutics (TSXV: TTI) is a clinical-stage biotech company developing therapeutic compounds to treat pediatric disease

- *Cysteamine, a sulfur-containing compound, has shown widespread therapeutic potential but its side effects have limited commercial development – only approved in cystinosis*
- **Phase 1 trial has shown that TTI-0102 is well-tolerated at high doses**
- *TTI-0102 is a prodrug of cysteamine, providing a cost and time efficient approach for clinical validation*
- Two open Phase 2 trials in inherited mitochondrial disease (MELAS & Leigh syndrome)
- ***Announced plans for a Phase 3 clinical trial in Cystinosis,*** *provides a low-risk route to approval*
- *Compelling valuation (C$36m) and significant upside relative to comparable peers*

Experienced Leadership

Christopher M. Starr, PhD

Chairman of the Board

- Co-Founder & Executive Chairman, Monopar Therapeutics (Nasdaq: MNPR)
- *Co-founder & CEO, Raptor Pharmaceutical (Nasdaq: RPTP)*
  - Acquired by Horizon Therapeutics for $800M in 2016
- Co-Founder & SVP/CSO, BioMarin Pharmaceutical (Nasdaq: BMRN)

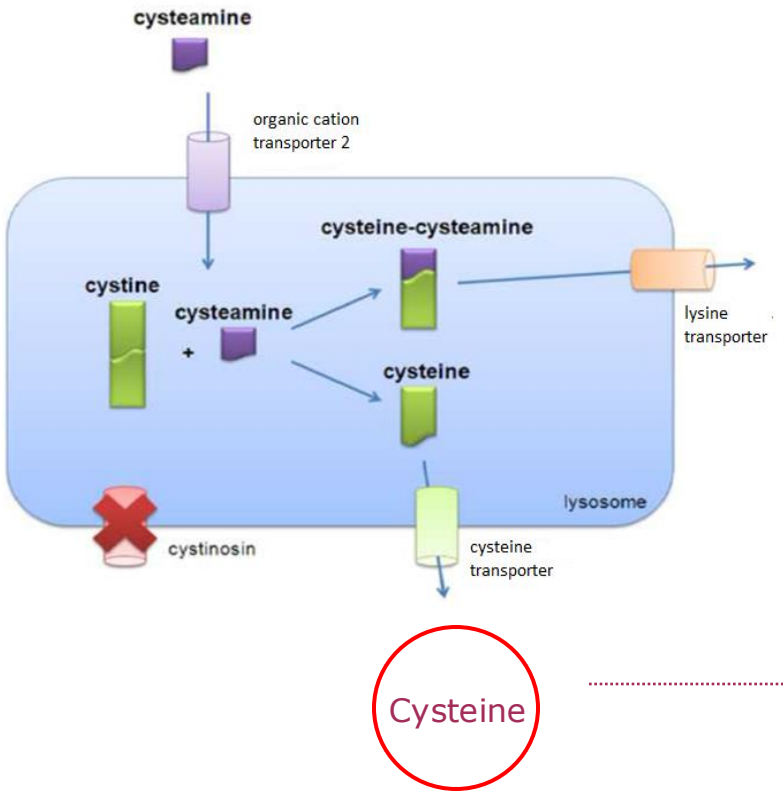
Patrice Rioux, MD, PhD

Founder, CEO, Director

- *CMO & Head of Regulatory Affairs, Raptor Pharmaceutical*
  - Led FDA approval for Procysbi® a delayed-release cysteamine therapy
- CMO, Edison Pharmaceuticals
- Senior roles at Repligen (Nasdaq: RGEN), Biogen (Nasdaq: BIIB) and Variagenics

BIOMARIN Biogen RepliGen raptor pharmaceutical corp. Naglazyme ALDURAZYME (LARONIDASE) KUVAN (sapropterin dihydrochloride) Tablets or Powder for Oral Solution PROCYSBI (cysteamine bitartrate) delayed-release capsules delayed-release oral granules

Cysteamine ➞ Cystine Depletion ➞ GSH/Taurine



Cystinosis

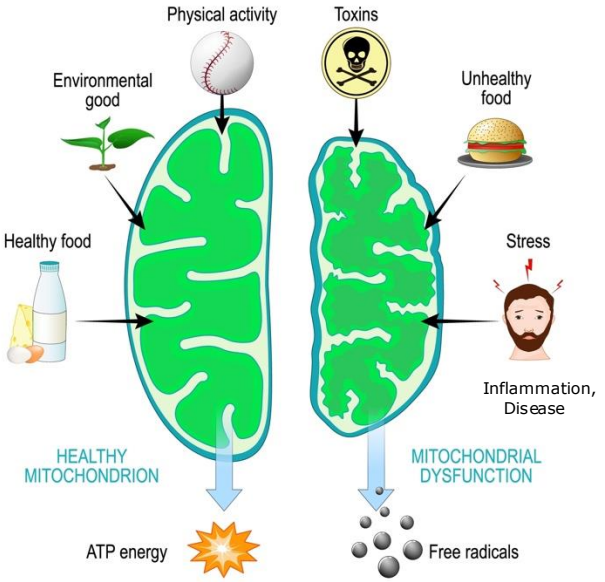
- Cystinosis results from a faulty cystine transporter, leading to toxic cystine crystal accumulation
- Cysteamine breaks down cystine & facilitates its exit

Production of Intracellular GSH/Taurine

- *Critically increases free intracellular cysteine, the limiting building block in producing* ***glutathione (GSH)***
- Cysteine is also metabolized into ***taurine***

Besouw M - Adapted from et al. Drug Discovery Today, 2013

Mito Dysfunction and Oxidative Stress

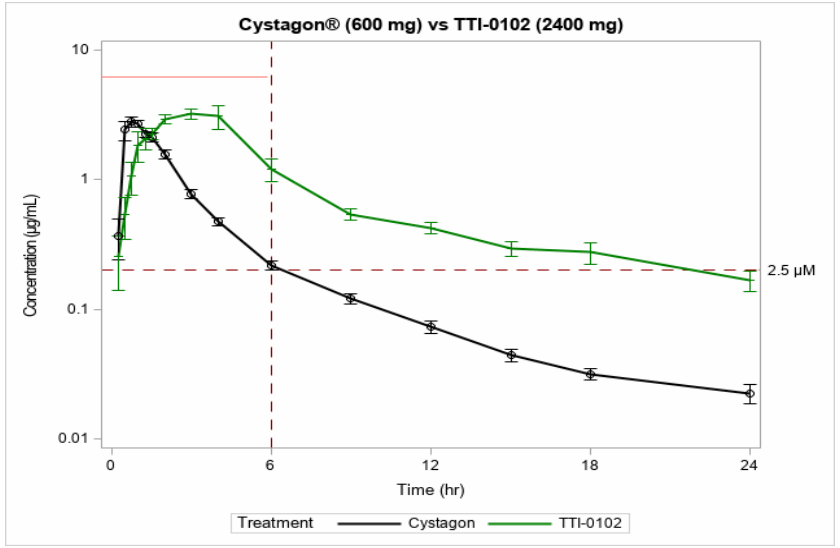


- ***Mitochondria generate the energy required to power cells***
- When mitochondria generate too many free radicals, oxidative stress & mitochondrial dysfunction occur, conditions underlying many diseases
- *Sufficient levels of **glutathione** (an antioxidant) and **taurine** are crucial for neutralizing free radicals and protecting mitochondrial integrity*
- Inherited mitochondrial diseases are characterized by deficiencies in glutathione and taurine - with more than 75,000 patients affected in the U.S. - *including those diagnosed with MELAS and Leigh syndrome*

TTI-0102 Lead Compound

- ***TTI-0102*** is a proprietary disulfide that is a precursor to cysteamine and pantothenic acid (B5)
- Its unique **'gating metabolic mechanism'** enables a controlled & sustained release of cysteamine, allowing for potential once-daily dosing and fewer side-effects

Phase 1 Study (PK/Safety)

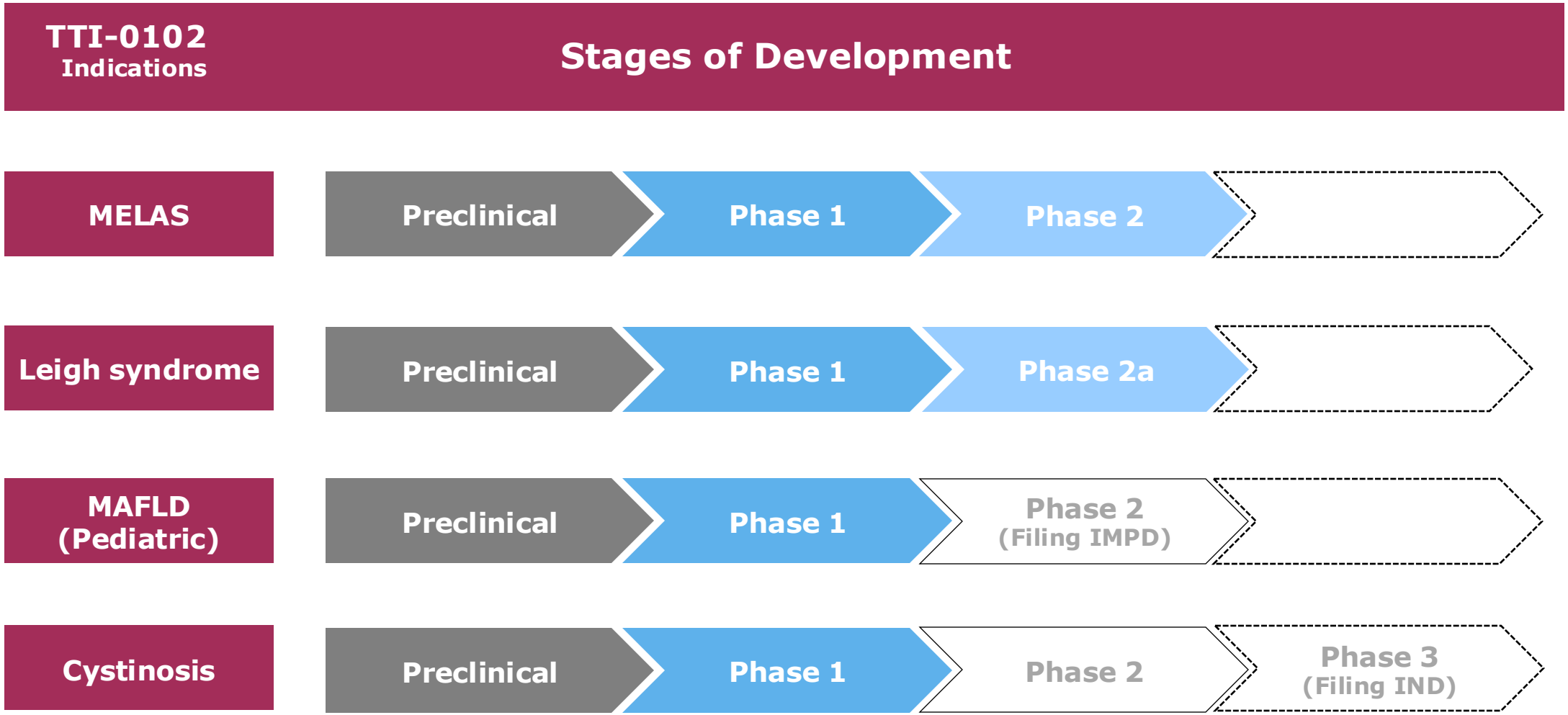


- ***TTI-0102*** **was well-tolerated** when dosed at 4x the therapeutic level of generic cysteamine in a Phase 1 study in twelve healthy adult volunteers (May-2022)

TTI-0102 Regulatory Pathway

- **TTI-0102 is a New Chemical Entity (NCE)** and if approved, would receive 5 years of market exclusivity in the US and the EU on top of its patent protections (Core patents US/EU to 2037-2038)
- TTI-0102 is also an oral prodrug - **a compound that is inactive and only becomes pharmaceutically active after administration** through normal metabolic conversion
- Benefits of a prodrug are improved bioavailability and reduced toxicity/side effects
- As a prodrug, TTI-0102 is **eligible to follow the 505(b)(2) pathway** in the US and its analogous hybrid system in the EU
- **Benefits from the 505(b)(2) regulatory pathway:**
  - ***Saves time and money*** *as some safety data can be referenced to studies performed historically for other drug approvals (in this case Cystagon®), rather than conducting expensive and time-consuming toxicity and animal model studies*

Thiogenesis Pipeline



Nephropathic Cystinosis

Near-Term, De-Risked Commercial Opportunity

Nephropathic cystinosis is a rare disorder caused by mutations in the CTNS gene, *which disrupts cystine transport and results in lysosomal crystal accumulation, s*ymptoms typically present in infancy and without treatment will progress to renal failure. Addresses an estimated global population of ~ 2,000 patients, with annual treatment costs > $200,000 per patient in the U.S.

- **Cystinosis is the only condition for which cysteamine is approved** (Procysbi®, Cystagon®)
- Key side effects of current treatments include - GI distress, sulfur odor, strict dosing schedule, and poor adherence - **TTI-0102 aims to improve upon existing therapies; offering once-daily dosing and fewer side effects**
- *Phase 3 non-inferiority trial in nephropathic cystinosis planned for the U.S., **with IND submission expected in early 2026** - the regulatory pathway is validated, and the addressable market exceeds US$300 million*

MELAS

(Mitochondrial Encephalomyopathy, Lactic Acidosis & Stroke Like Episodes)

MELAS is a rare, inherited mitochondrial disease caused by genetic mutations (most often m.3243A>G in the MT-TL1 gene). Diagnosed between 2 and 15. Prevalence is estimated to be 4.1:100,000 in the population. No approved treatments in the U.S. or EU. Symptoms include fatigue/weakness, loss of motor skills, loss of appetite, seizures and stroke-like episodes.

'A Randomized, Blinded, Placebo-Controlled Study to Assess the Safety, Tolerability, Efficacy, PK and PD of Oral TTI-0102 for Treatment of Patients with MELAS'

- EU trial in Netherlands and France
- **Primary endpoints**: 12 min walk test & fatigue; **Secondary endpoints:** significant biomarkers
- *Positive interim analysis: informed on dose exploration and indicated significant support for TTI-0102's mitochondrial antioxidant and restorative activity (see press release, Nov. 4, 2025)*
- ***Final 6-month data anticipated in January 2026***

Leigh Syndrome Spectrum ("LSS")

LSS is one of the most debilitating genetic diseases of the mitochondria and shows up in infancy; it is highly heterogeneous involving mutations in both mitochondrial DNA and nuclear DNA. Prevalence is estimated to be 1:40,000 live births. Symptoms include impaired sucking & breastfeeding, loss of mental & movement abilities, seizures, respiratory issues and poor muscle development.

- ***Thiogenesis received IND clearance on June 11, 2025,*** *to initiate a Phase 2a clinical trial with a leading children's hospital in the U.S.*

'A Double-Blind, Phase 2a trial to Evaluate the Efficacy & Safety of TTI-0102 in Leigh Syndrome'

Stage 1:

- A randomized, double-blind, placebo-controlled trial enrolling 9 patients, with 6 receiving *TTI-0102* and 3 receiving placebo – ***initiation anticipated in Q1/2026***
- *This stage will evaluate safety, tolerability, efficacy, and pharmacokinetics / pharmacodynamics ("PK/PD") over a 3-month period, in adult and adolescent patients*

- ***Stage 2:*** *Open label trial on 6 pediatric patients*

Pediatric MASH

- ***Pediatric Metabolic Dysfunction-Associated Steatohepatitis*** *(MASH)* is a progressive liver disease in children associated with obesity, involving inflammation, fat buildup, and fibrosis - it affects over 1.5 million children in the US and is rapidly growing
- ***An IMPD submission for a Phase 2 clinical trial in the EU is planned for 2025,*** aiming to achieve higher dosing with fewer side effects compared to the NIH-CyNCh trial with delayed release cysteamine

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Pediatric MAFLD Trial with *Delayed Release Cysteamine (2015)*

CyNCh Trial (NIH)

- NIH sponsored trial, ***N=169 children with MAFLD were treated with low dose of Procysbi®,*** the children ranged from 50-90 kgs
- Did not meet the primary endpoint for the overall group, improvement of fat levels in the liver

CyNCh - *Secondary Analysis*

- Post-hoc analyses, the smaller children (≤65 kgs) **had a 4-fold better chance of improvement of fat in the liver (P=.005)**
- Dosing was uniformly low; ***improved outcomes in smaller children likely resulted from a higher dose per kg of body weight – overall*** **improvement in biomarkers**

Schwimmer J. *et al.*, 2016, Gastroenterology

Thiogenesis – Upcoming Milestones

Potential milestones (6 months):

MELAS	⟶	Initiated Phase 2 trial, *data Q1/2026*
Leigh syndrome	⟶	Initiate Phase 2 trial Q1/2026
Pediatric MASH	⟶	Filing IMPD - Phase 2 trial 2025
Cystinosis	⟶	Filing IND - Phase 3 trial Q1/2026

Company Info

Thiogenesis Therapeutics	(TSXV: TTI / OTCQX: TTIPF)
Shares Issued	51.8 million
Shares Fully Diluted	56.9 million
Insiders (32%)	16.7 million
Share Price (11/11/2025)	$0.72
52 week high/low	$0.88/C$0.51
Market Cap.	$37.3 million
Cash (09/30/2025)	$3.3 million
Contact	info@thiogenesis.com

- Currency in Canadian dollars

Scientific Advisory Board

Dr. David Housman

- MIT, award winning professor of biology, known for his contribution to the study of Huntington's disease and as a co-founder of 5 biotech companies

Dr. Gregory Enns

- Stanford University, professor of Medical Genetics and Director of Biochemical Genetics Program; focus on mitochondrial and lysosomal disorders

Dr. Miriam Vos

- Emory University, professor of Pediatrics and Division of Gastroenterology, Hepatology and Nutrition, and Director of Pediatric Fatty Liver Program at Children's Healthcare of Atlanta

Companies of Interest

Name	Symbol	Disease	Stage	Market Cap	Notes
Thiogenesis	***TTI***	***MELAS***	***Ph.2***	***C$30 mn***	***Anti-ox, Anti-inflam.***
Satellos	C-MCSL	Duchenne's	Ph. 1/2	C$133 mn	DMD, Non-GT
Brightminds	C-DRUG	Epilepsy	Ph. 2	C$630 mn	Serotonin
Spruce	SPRB	MPS IIIb	Ph. 2	US$120 mn	Enz. Replacement
Sagimet	SGMT	Obesity/NASH	Ph 2	US$310 mn	FASN
Larimar	LRMR	F. Ataxia	Ph. 2	US$310 mn	Protein Replacement
Zevra	ZVRA	NP-C	NDA	US530 mn	Enz. Signaling
Reata	*RETA*	*F. Ataxia*	*Approved*	*US$7.0 bn*	*Anti-ox & Anti-inflam.*