THiogenesiS THerapeuticS

Advancing Next-Generation Cysteamine Therapies for Rare and Mitochondrial Diseases

(TSXV: TTI / OTCQX: TTIPF)

June - 2026

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 – Investment Summary

Clinical-stage biotech developing next-generation cysteamine prodrugs for diseases driven by oxidative stress and mitochondrial dysfunction

- **Proven team:** Developed Procysbi® at Raptor (acquired for $800M)
- **Next generation prodrug:** TTI-0102 (controlled-release cysteamine)
- **Enhanced adherence:** Improved tolerability and dosing regimen
- **Near-term value driver:** ~$350M cystinosis market with a clear Phase 3 pathway
- **Platform expansion:** Into inherited mitochondrial diseases

Experienced Leadership/Inception

Deep experience at the intersection of rare disease, redox biology and capital markets

Christopher M. Starr, PhD
Chairman of the Board

- Co-founder, BioMarin; co-founder & CEO of Raptor *(acquired for $800M),* Co-founder and Executive Chairman, Monopar

Patrice Rioux, MD, PhD
Founder, CEO, Director

- Clinical development leadership across rare and metabolic disorders, leading authority in mitochondrial metabolism
- CMO/Head of regulatory at Raptor; *led approval of Procysbi® for cystinosis*

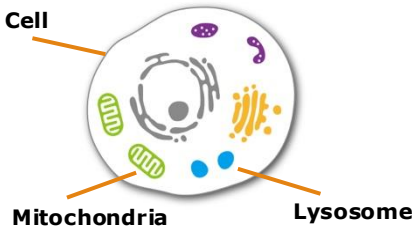
Brook Riggins, CFA
CFO, Director

- Leadership roles across investment firms and public life-science companies (CIO, VP Finance, VP - Research Analyst)

Cysteamine: Proven Biology, Limited by Delivery

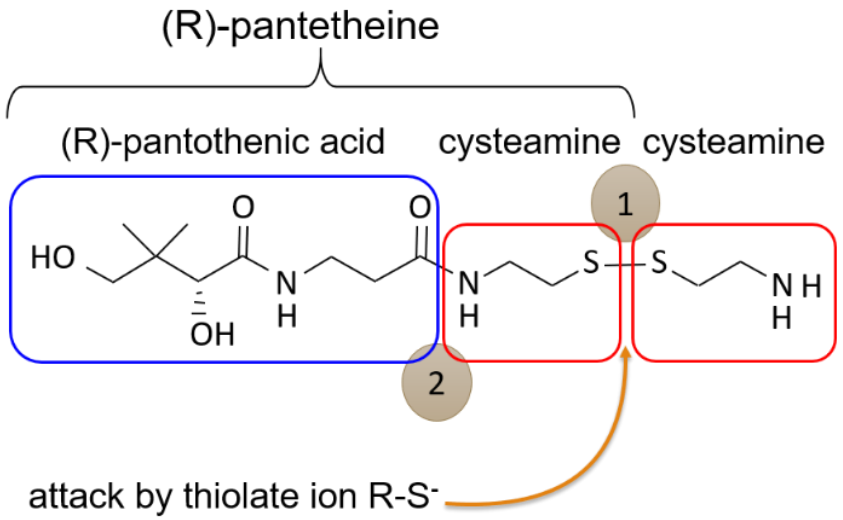
Validated cysteamine biology, enabled by improved pharmacology

- **Procysbi® (delayed-release cysteamine) improved on generic cysteamine as an effective therapy in cystinosis,** a severe rare disease in which tolerability limitations have been accepted within a finite ~$350M market
- ***Cysteamine biology beyond cystinosis:*** *cystine depletion and increased intracellular cysteine supports glutathione synthesis & mitochondrial redox control*
- Earlier clinical experience in mitochondrial and metabolic disease helped inform the design of TTI-0102, highlighting the importance of improved tolerability and sustained exposure
- **TTI-0102 is designed to enable what Procysbi® could not:** provide sustained intracellular cysteine with lower peak exposure and improved dosing potential



Next-Generation Cysteamine Delivery

TTI-0102

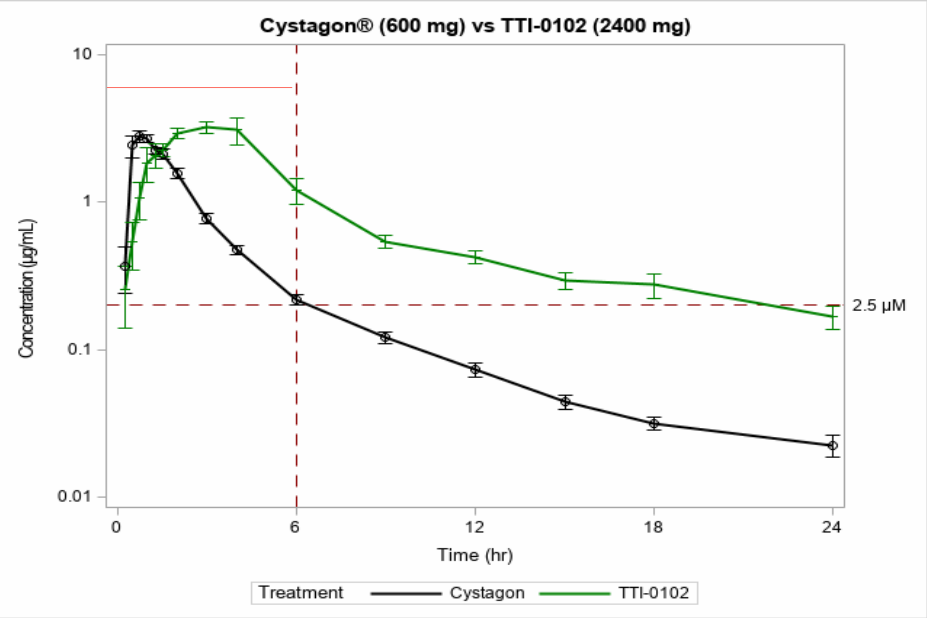


- **Asymmetric disulfide:** linking cysteamine to pantetheine
- Two-stage controlled release across the GI tract
- Sustained exposure with controlled peak concentrations
- Designed to improve tolerability, dosing, and adherence
- Best-in-class successor to Procysbi®

TTI-0102: Human PK and Tolerability

Controlled peak exposure with sustained levels, supporting improved tolerability

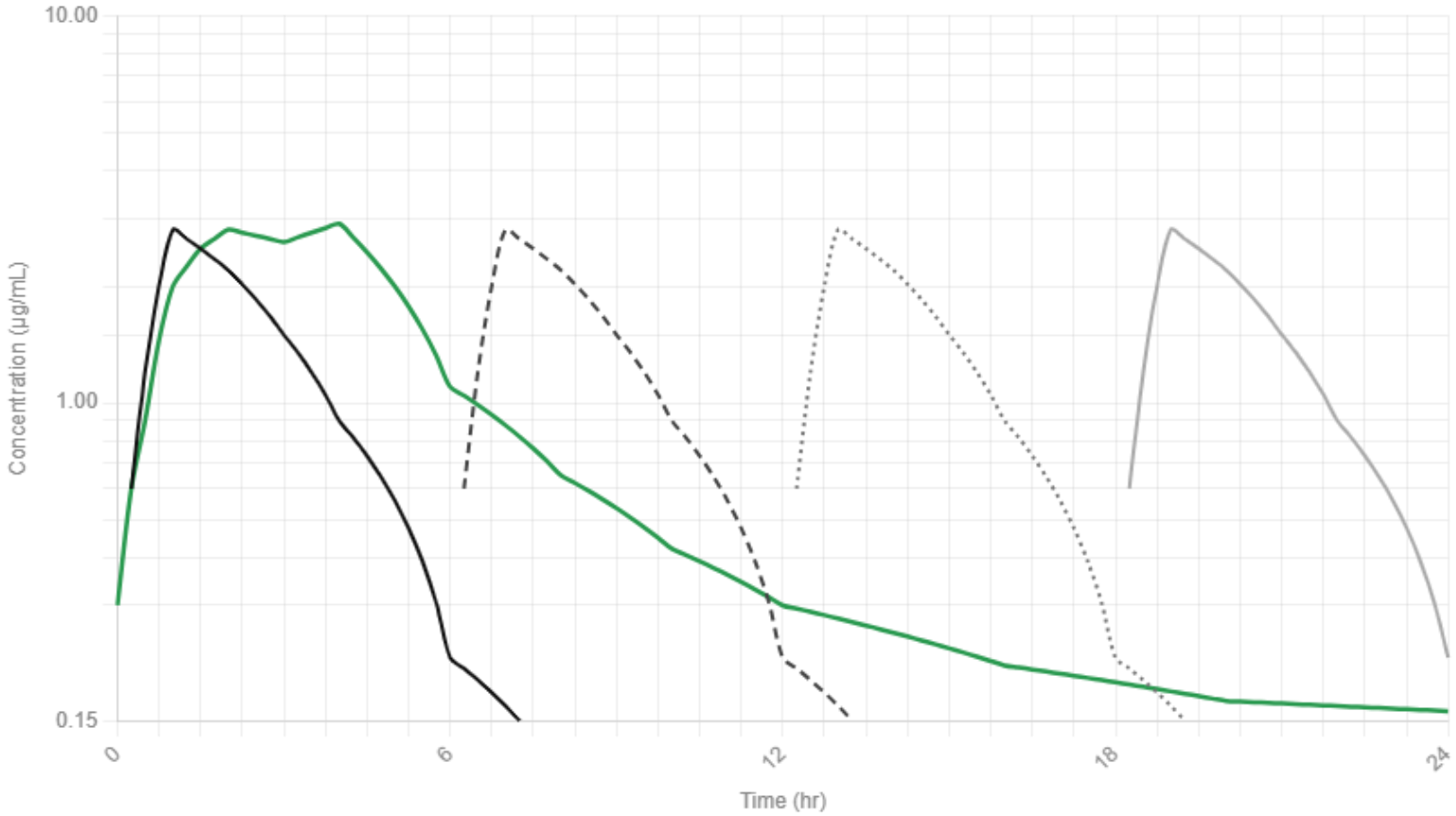
Phase 1 Study (PK/Safety)



- Evaluated in healthy volunteers at doses up to ~4× standard immediate-release (Cystagon®) exposure
- ***Well tolerated at higher exposure, with only mild, transient body odor observed***
- Comparable peak exposure with substantially greater total exposure over 24 hours
- PK profile supports once-daily dosing potential

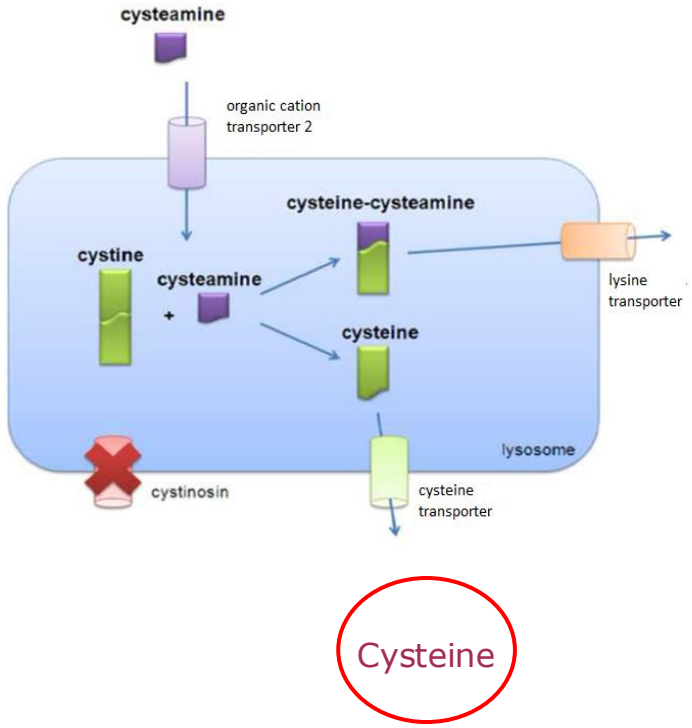
Simulation: 4 x Cystagon® 600 mg q6h vs TTI-0102 5.5 g (2400 mg Cystagon® equivalent)

Cystagon dose 1 (0h)Cystagon dose 2 (6h)Cystagon dose 3 (12h)Cystagon dose 4 (18h)TTI-0102 (0h)



- **Multiple peak exposures with immediate-release cysteamine:** Cystagon® produces repeated peak–trough surges over 24 hours, each associated with rapid changes in exposure
- **Comparable peak exposure at 4× equivalent dose**: TTI-0102 (2400 mg Cystagon®-equivalent) peaks no higher than Cystagon® 600 mg, despite much higher dose
- **Improved PK profile:** Flattened PK curve reduces rate-of-change in exposure with sustained levels over time
- **Once-daily dosing window:** Optimal balance of safety, tolerability and exposure at ~60 ± 5 mg/kg/day

Cystinosis: A De-Risked Orphan Opportunity



- **Lysosomal Storage Disease:** Rare genetic disorder caused by mutations in the CTNS gene
- Standard of care: cysteamine therapy - **Procysbi®**
- Existing therapies limited by tolerability and dosing burden
- Clear regulatory precedent

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

Upgrade Over Standard-of-Care

Improving Dosing and Adherence

Feature	**Procysbi®**	**TTI-0102**
Dosing	Twice daily	Once-daily
Administration	Multiple capsules/granules	Oral powder
Treatment Burden	High pill burden	Sachet
GI Tolerability	Peak-related side effects	Improved tolerability
Adherence	Limited by dosing complexity	Improved compliance
Pharmacokinetics	Delayed-release	Controlled-release
Innovation	Improved over Cystagon®	Novel prodrug

Cystinosis: Adherence Remains the Unmet Need

Standard-of-care cysteamine limits long-term disease control

- KOL Dr. Greenbaum (Emory), planned investigator-initiated study with TTI-0102, supports Phase 3 IND submission
- **Adherence declines in adolescence and adulthood, driving progressive kidney, neurologic, and extra-renal damage despite early treatment**
- TTI-0102 is purpose-built for long-term control, targeting improved tolerability and simplified dosing across a patient's lifetime
- Procysbi® successfully replaced Cystagon® based on improved dosing & adherence, demonstrating rapid upgrade behavior within the standard of care
- ~$350M cystinosis market with lifelong therapy & durable orphan pricing

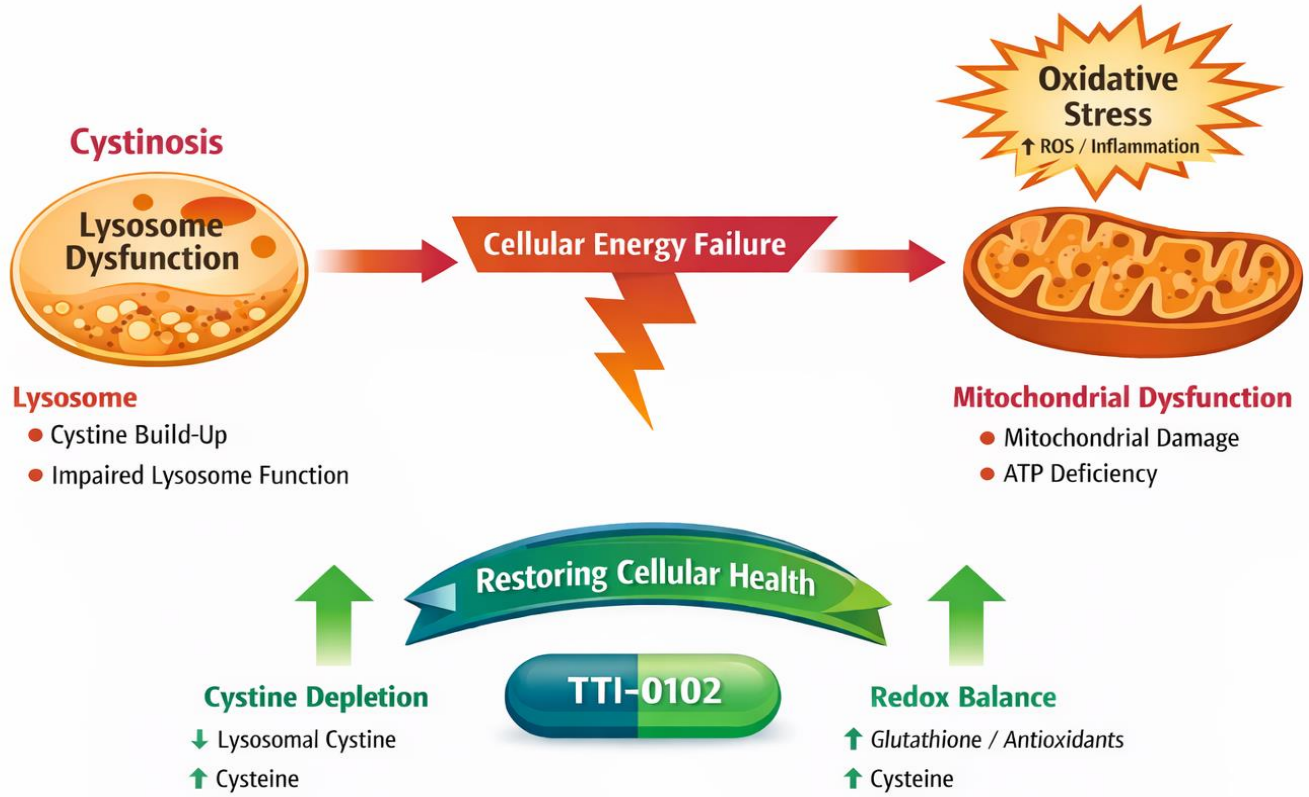
A De-risked Path to Cystinosis Phase 3

Established precedent and validated surrogate endpoints

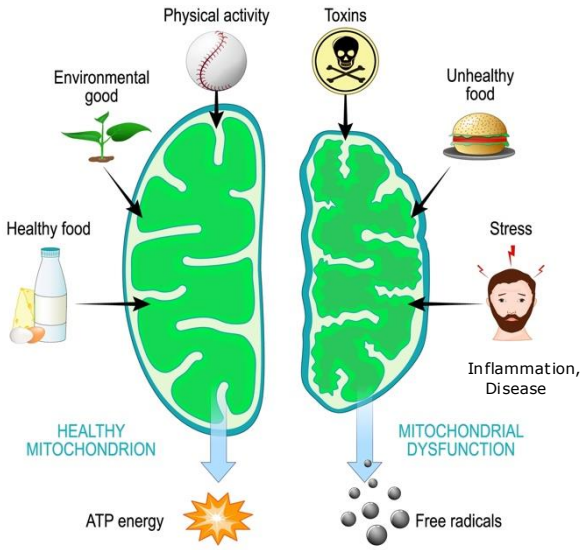
- **TTI-0102: New Chemical Entity (NCE) and 505(b)(2) regulatory pathway**
- Investigator-led study at Emory, in support of the design and powering of a Phase 3 clinical trial
- Pre-IND meeting planned to discuss:
  - Non-inferiority Phase 3 clinical trial design
  - Validated surrogate endpoint: white blood cell cystine levels
  - Small, capital-efficient cross-over trial

Linking Lysosomal & Mitochondrial Disease Biology

Lysosomal cystine accumulation contributes to mitochondrial dysfunction and oxidative stress



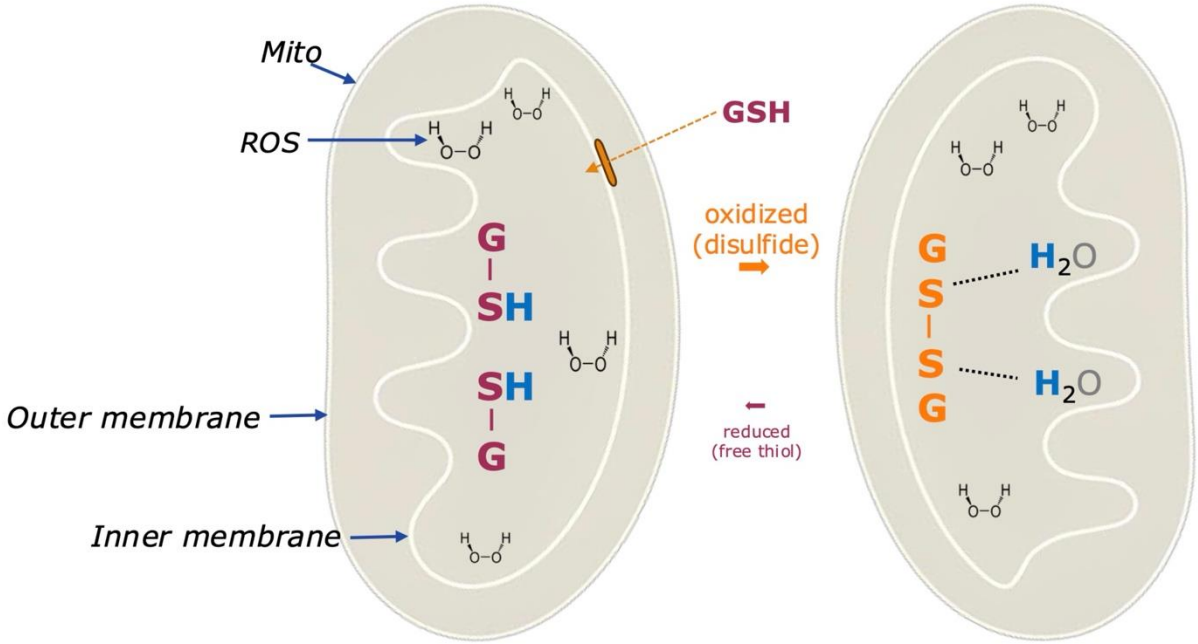
Primary Mitochondrial Disease (Overview)



- **Primary mitochondrial diseases arise from mutations in mtDNA and/or nDNA affecting cellular energy metabolism**
- Primary mitochondrial diseases affect ~75,000 patients in the U.S.
- ***Shared disease cascade:*** *Genetic mutations → mitochondrial dysfunction → excess ROS → oxidative stress → tissue damage*
- Common biochemical feature: cysteine and GSH deficiency

TTI-0102 Restores Mitochondrial Redox Balance

Restoring intracellular cysteine enables glutathione (GSH) synthesis and recovery of mitochondrial antioxidant defense



GSH neutralizes reactive oxygen species (ROS), protecting mitochondrial proteins, lipids and DNA from oxidative damage

Clinical POC in Mitochondrial Disease

Melas Phase 2 informs dosing and endpoints

- **Symptoms:** Stroke-like episodes, seizures, encephalopathy, and myopathy
- **European randomized,** placebo-controlled Phase 2 study (n=9)
- **Key outcome:** Established optimal weight-based dosing (~60 mg/kg/day)
- **Biomarkers:** Positive changes associated with mitochondrial metabolism
- **Clinical signal:** Improvements in fatigue (MFIS)
- **Strategic value:** Informed dosing, biomarkers, and endpoints for LSS trials

Leigh Syndrome Spectrum (LSS)

Devastating Pediatric Mitochondrial Disorder

- **Cause:** Mutations in >75 nuclear or mitochondrial genes disrupting mitochondrial energy metabolism
- **Disease biology:** Mito energy failure leads to neurodegeneration in the brainstem & basal ganglia, cysteine and GSH deficiency even more pronounced than in MELAS
- **Diagnosis:** Usually infancy (3–24 months) based on neurological decline, elevated lactate and characteristic MRI lesions
- **Clinical burden:** Developmental regression, feeding difficulties, respiratory dysfunction, seizures and progressive neurological deterioration
- **Patient population**: Estimated ~ 800–1,500 patients in the U.S.
- **Treatment today:** No approved therapies; supportive care only, disease frequently fatal in childhood

Leigh Syndrome Spectrum (LSS)

Next step in inherited mitochondrial disease validation

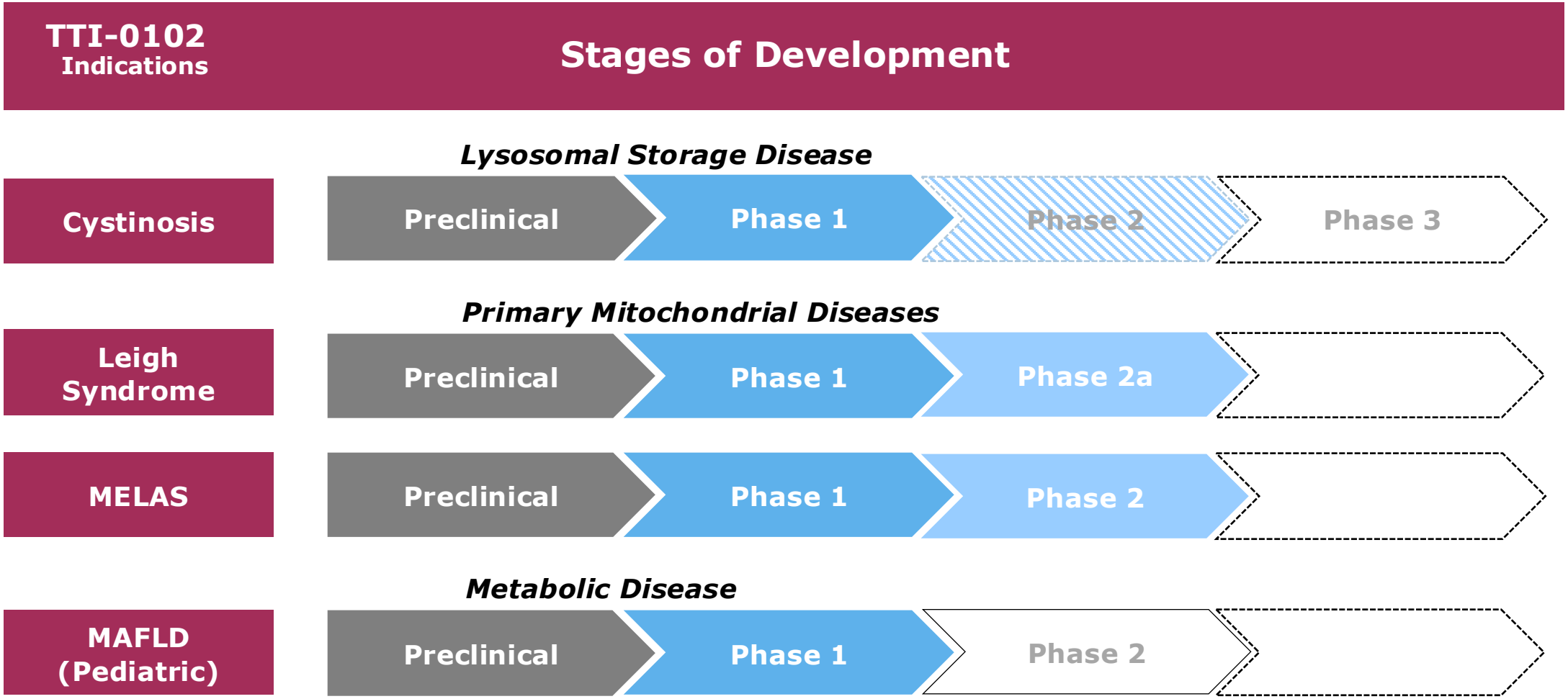
- *FDA-cleared IND for a two-stage Phase 2a clinical trial, to be conducted in collaboration with a leading children's hospital in the U.S.*

- **Phase 2a clinical design:**
  - Stage 1: Randomized, placebo-controlled study (9 patients)
  - Stage 2: Pediatric open-label extension (6 patients)

- **Program informed by MELAS clinical experience:**
  - Weight-based dosing, biomarker selection, & functional endpoints (fatigue/MM-COAST)

- **Near-term catalyst:**
  - Trial Initiation, mid-2026
  - Completion, mid-2027

Thiogenesis Development Pipeline



Near-Term Execution Priorities - Milestones

Cystinosis

- Investigator Initiated Study – Dr. Greenbaum (Emory)
- Pre-IND meeting planned to discuss Phase 3 trial design
- Completion of manufacture and stability testing of TTI-0102 salt
- IND submission planned and Phase 3 trial initiation - subject to FDA clearance

Leigh Syndrome Spectrum

- IND-amendments cleared and IRB approval
- Initiation of Leigh syndrome spectrum Phase 2(a) trial
- Phase 2a Leigh syndrome clinical trial results

Company Info

Thiogenesis Therapeutics	(TSXV: TTI / OTCQX: TTIPF)
Shares Issued	69.9 million
Shares Fully Diluted	76.2 million
Insiders (24%)	16.9 million
Share Price (15/06/2026)	$0.60
52 week high/low	$0.88/$0.44
Market Cap.	$42.0 million
Cash (03/31/2026)	$1.0 million
Contact	info@thiogenesis.com

- Currency in Canadian dollars
- **Closed C$9.1m NBPP on June 3, 2026**

Scientific Advisory Board

World-class experts in mitochondrial, metabolic & lysosomal disease

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

Intellectual Property – United States & Europe

- ***Composition-of-Matter Protection for TTI-0102***
  Issued & pending patents in the U.S. and Europe covering the proprietary thiol prodrug molecule
- ***Recently Patented Salt Formulation***
  Recently patented salt formulation designed to further optimize stability & manufacturability
- ***Method-of-Use Protection in Rare Diseases***
  Claims covering cystinosis and mitochondrial disorders including MELAS and Leigh syndrome
- ***Lifecycle Extension Strategy***
  Salt form and formulation patents strengthen duration and market exclusivity in core jurisdictions
- ***Manufacturing & Process Protection***
  Patent filings supporting scalable synthesis and drug substance production
- ***Strategic Focus on Major Orphan Markets***
  Protection concentrated in the U.S. and key European territories — the largest commercial markets for rare disease therapeutics