THiogenesiS
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Company Overview

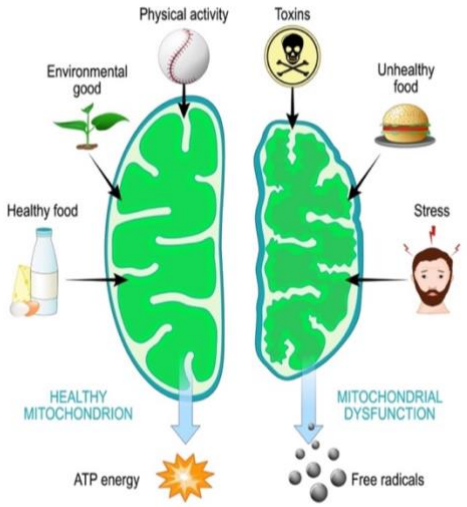
(Dec. 2025 – C$'s)

Shares Issued: 51.8m *Market Cap. $39.4m*

Fully Dilluted: 55.8m *info@thiogenesis.com*

Thiogenesis Therapeutics (TSXV: TTI | OTCQX: TTIPF) is a clinical-stage biotechnology company advancing next-generation thiol-based prodrugs to restore mitochondrial function and reduce oxidative stress in high-need pediatric and orphan diseases. Mitochondrial dysfunction is a central driver of inherited conditions such as Leigh syndrome and MELAS, and also contributes to acquired pediatric metabolic diseases such as MASH.

Mitochondrial Dysfunction



Mechanism & Rationale

The company's lead program, TTI-0102, is a next-generation cysteamine prodrug engineered for improved tolerability, sustained exposure, and simplified dosing. Once metabolized, TTI-0102 releases cysteamine in a smoother profile, increasing intracellular cysteine, the rate-limiting precursor for glutathione (GSH) - the body's master antioxidant - and taurine, which supports mitochondrial stability.

Mitochondrial diseases frequently exhibit deficiency of intracellular cysteine and reduced GSH levels, leaving cells vulnerable to reactive oxygen species (ROS), inflammation, and progressive metabolic decline. Because GSH is one of the few antioxidants that reaches the mitochondria, restoring cysteine availability represents a promising therapeutic strategy.

TTI-0102 demonstrated excellent tolerability at doses up to four times higher than immediate-release cysteamine and shows the potential for once-daily dosing and broader tissue distribution. Patent protection is granted in the United States and Europe, with coverage extending to 2038.

Clinical Program Snapshot

1. Nephropathic Cystinosis (Phase 3 planned)

Cysteamine is the standard of care but is limited by GI intolerance, burdensome dosing, and adherence challenges. TTI-0102 aims to materially improve tolerability and reduce dosing frequency, enabling more

consistent cystine control. The planned pivotal program will follow the 505(b)(2) pathway, leveraging extensive cysteamine safety data.

2. Leigh Syndrome Spectrum (Phase 2a, U.S.)

An FDA-cleared IND supports initiation of a two-stage trial: a randomized, placebo-controlled adult/adolescent study followed by a pediatric open-label extension. Dosing incorporates insights from MELAS biomarker responses, targeting restoration of mitochondrial redox balance in a disease with no approved therapies.

3. MELAS (Phase 2, EU)

A randomized, blinded study is ongoing in the Netherlands and France. Interim results showed biological proof-of-concept, including mechanistic biomarker activity consistent with restored mitochondrial function. Final six-month data are expected in early 2026.

4. Pediatric MASH (Phase 2a planned, EU)

EMA scientific advice supports an IMPD submission for an open-label pediatric study. Prior NIH CyNCh data showed fat-reduction signals with low-dose cysteamine; TTI-0102's improved tolerability may enable higher and more sustained dosing to revisit this biology in a better-designed trial.

Regulatory & IP Positioning

TTI-0102 qualifies for the U.S. 505(b)(2) regulatory pathway, enabling accelerated and cost-efficient development. Equivalent hybrid routes in Europe support rapid progression into mid-stage and pivotal studies. Thiogenesis holds issued patents in the U.S. and EU, protecting its asymmetric disulfide prodrug platform through 2038.

Forward Looking Statement

This document contains certain forward-looking statements and forward-looking information within the meaning of Canadian and U.S. securities laws including, without limitation, statements with respect to the future investments by the Company. All statements other than statements of historical fact are forward-looking statements. Undue reliance should not be placed on forward-looking statements, which are inherently uncertain, are based on estimates and assumptions, and are subject to known and unknown risks and uncertainties (both general and specific) that contribute to the possibility that the future events or circumstances contemplated by the forward-looking statements will not occur.