



Rosetta Therapeutics

Contact

Peter Lewis, PhD - CEO
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Website

www.rosettatherapeutics.com

Strategic partners

Cyclica
J&J Janssen

Funding

0.25 M bootstrap
\$2.4 M Genome Canada [GAPP](#) grant
partnered with Cyclica
\$0.1 K support from the NRC IRAP IAP

Location

JLabs Toronto

Financial “ask”

\$2M Seed investment for lead IND ready

Use of funds

Lead small molecule drug candidate
Lead optimization
PD/PK, pharmacology
IND-enabling studies
IND filing (Q4 2022)

Team

[Peter N. Lewis](#) CEO
Prof. Biochemistry University of Toronto
50 years of research experience
25 years of science leadership

[G. Angus McQuibban](#) CSO

Assoc Prof. Biochemistry
University of Toronto
25 years of research experience

[John Reid](#) EIR

30 years of drug discovery and business
development experience

Collaborators

[Naomi Visanji](#)

Research Scientist TWH
20 years of research experience

Research & Clinical Advisors

[Jonathan Brotchie](#)
[Lakshmi Kotra](#)

Rosetta Therapeutics discovers and develops small molecule drugs that activate the power of mitochondria to maintain neuronal health and survival for the treatment of neurodegenerative diseases.

The Need

There are over 10 M people worldwide suffering from neurodegenerative disease including Parkinson's. There are no effective treatments to cure neurodegenerative diseases. Rosetta aims to develop drugs that will stop, slow down or prevent Parkinson's Disease.

The Problem

Multiple studies have shown that damaged mitochondria and defective mitochondrial quality control are broadly associated with neurodegenerative diseases. Mitochondria are essential for brain health. Brain cells die when mitochondria are damaged and accumulate in neurons. In healthy cells, the mitophagy pathway removes damaged mitochondria and maintains quality control. The mitophagy pathway is controlled by enzymes, including parkin and pink1, which must be activated to work in damaged neurons.

The Solution

Drugs that activate mitophagy have the potential to restore damaged cells to their normal state and thereby prevent disease progression. Rosetta has developed an AI-enabled, high content imaging, cell-based screening platform and has used this technology to discover small molecules that activate parkin in the mitophagy process, without damaging healthy mitochondria. (US patent pending & [Nature Comm. 2020](#)).

Pipeline

Rosetta was the first to discover the mitophagy-enhancing activity of 3 known drugs, which were previously approved for other indications. In partnership with Cyclica, work is underway to rapidly repurpose/redesign these drugs for clinical testing. In parallel, new chemical entities derived from high throughput screening are being developed.

Business model. Rosetta has secured ~\$2M in grant funding to discover and validate new mitophagy-targeting drug leads. We are seeking additional \$2M seed funding to take a lead compound to an IND within 30-36 months. Our strategic partnerships will help speed up the development of proprietary or repurposed compounds.

Competitive position. Following the discovery of defective mitochondria in Parkinson's Disease a few years ago, the mitophagy pathway is emerging as an active area for drug discovery. Rosetta's scientific leadership and AI-driven mitophagy discovery platform is starting to generate significant interest from major investors and pharmaceutical companies.