Rosetta Therapeutics
Drug Discovery

Contact
Peter Lewis
rtdd@rogers.com
RosettaTherapeutics.com

Technologies
High throughput phenotypic screening, experimental validation coupled w AI technologies

Partners
Cyclica
IBM Drug Discovery
Phenomic AI
Atuka

Use of funds
Preclinical molecule and target discovery for neurodegenerative diseases

Team
Peter N. Lewis CEO
- Professor of Biochemistry UofT
- 50 years of research experience
- 25 years of science leadership

G. Angus McQuibban CSO
- Assoc Professor of Biochemistry UofT
- 25 years of research experience

Naomi Visanji PhD
- Research Scientist TWH
- 20 years of research experience

Guang Shi PhD
- Research Associate Rosetta Therapeutics
- 10 years of research experience

Rosetta Therapeutics is a UofT/MI UTEST startup founded in 2018 for the creation of next generation of neurodegenerative disease drugs to help those suffering Parkinson's, ALS and Alzheimer's disease.

With new technologies in AI, deep learning, and data analysis, meaningful data and outcomes can be generated at much faster rates ever than before. A breakthrough in drug discovery for the cure of Parkinson's would mean reduced treatment time, ultimately resulting in the reduction of healthcare costs for primary and secondary healthcare workers and impacted families.

Novel high throughput phenotypic screens to discover and validate new molecular leads and targets for a cure for Parkinson's disease have been developed. Artificial intelligence techniques will be applied to these new molecular entities to assist with target identification as well as the identification of functionally related molecules through *in silico* screens.

Experimental validation will be applied to the *in silico* generated molecules. Our phenotypic screens are based on cell assays designed to reflect the molecular lesions in mitophagy in a neurodegenerative disease such as Parkinson's. (US patent pending, Nature Communications 2020)

The value proposition is the nexus of experimental and theoretical approaches for discovery and application toward cures for currently incurable Neurodegenerative Diseases.

Our goal is to fill the pipeline for potential cures of Neurodegenerative Diseases in a rapid and cost effective manner.

Professor McQuibban received $2.3M Genome Canada GAPP grant in partnership with Rosetta Therapeutics and Cyclica (Oct 1/19) for Drug Discovery for Parkinson's disease.

We are seeking seed funding of $2M over 3 years to conduct large scale screening and validation to identify lead therapeutics.

High Throughput Phenotypic Screens with Human Cells

Phenotypic screening

Parkinson's Mitophagy

Hits

Validation with animal models

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