Stanford

Lev Tsypin

Postdoctoral Scholar, Pathology

Bio

HONORS AND AWARDS

- Inaugural Stanford Energy Postdoctoral Fellow, Stanford Doerr School of Sustainability (2023-2026)
- Graduate Research Fellow, National Science Foundation (2019-2023)
- Center for Microbial Environmental Interactions Fellow, California Institute of Technology (2017)
- Jacobs Translational Research Fellow, California Institute of Technology (2017)
- Most Innovative Undergraduate Work, International Ciliate Molecular Biology Meeting (2015)
- National Merit Scholar, National Merit Scholarship Corporation (2012-2016)
- Scholar, University of Chicago (2012-2016)

STANFORD ADVISORS

- Ellen Yeh, Postdoctoral Faculty Sponsor
- Arthur Grossman, Postdoctoral Research Mentor

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am working with Botryococcus braunii, a species of freshwater microscopic algae. This organism is unique among plants in that it secretes copious amounts of oil that is chemically analogous to petroleum. This organism may be the key to developing a cheap and sustainable alternative to fossil fuels, but we do not yet have the tools to engineer or optimize its oil production. My work aims to bridge this gap.

LAB AFFILIATIONS

- Ellen Yeh (3/6/2023)
- Arthur Grossman (3/6/2023)

Publications

PUBLICATIONS

- **Inferring gene-pathway associations from consolidated transcriptome datasets: an interactive gene network explorer for Tetrahymena thermophila.** *NAR genomics and bioinformatics*
  Bertagna, M. A., Bright, L. J., Ye, F., Jiang, Y. Y., Sarkar, D., Pradhan, A., Kumar, S., Gao, S., Turkewitz, A. P., Tsypin, L. M.
  2025; 7 (2): lqaf067
- **Inferring gene-pathway associations from consolidated transcriptome datasets: an interactive gene network explorer for Tetrahymena thermophila.** *bioRxiv : the preprint server for biology*

Bertagna, M. A., Bright, L. J., Ye, F., Jiang, Y. Y., Sarkar, D., Pradhan, A., Kumar, S., Gao, S., Turkewitz, A. P., Tsypin, L. M.
2024

- **Genetically dissecting the electron transport chain of a soil bacterium reveals a generalizable mechanism for biological phenazine-1-carboxylic acid oxidation.** *PLoS genetics*
  Tsypin, L. M., Saunders, S. H., Chen, A. W., Newman, D. K.
  2024; 20 (5): e1011064

- **Genetically dissecting the electron transport chain of a soil bacterium reveals a generalizable mechanism for biological phenazine-1-carboxylic acid oxidation.** *bioRxiv : the preprint server for biology*
  Tsypin, L. M., Saunders, S. H., Chen, A. W., Newman, D. K.
  2023

- **An apical membrane complex for triggering rhoptry exocytosis and invasion in Toxoplasma** *EMBO JOURNAL*
  Sparvoli, D., Delabre, J., Penarete-Vargas, D., Mageswaran, S., Tsypin, L. M., Heckendorn, J., Theveny, L., Maynadier, M., Cova, M., Berry-Sterkers, L., Guerin, A., Dubremetz, J., Urbach, et al
  2022; 41 (22): e111158

- **Nitrate Reduction Stimulates and Is Stimulated by Phenazine-1-Carboxylic Acid Oxidation by Citrobacter portucalensis MBL** *MBIO*
  Tsypin, L. M., Newman, D. K.
  2021; 12 (4): e0226521

- **Draft Genome Sequence of the Redox-Active Enteric Bacterium Citrobacter portucalensis Strain MBL** *MICROBIOLOGY RESOURCE ANNOUNCEMENTS*
  Tsypin, L. M., Saunders, S. H., Bar-On, Y., Leadbetter, J. R., Newman, D. K.
  2020; 9 (32)

- **Genetic tool development in marine protists: emerging model organisms for experimental cell biology** *NATURE METHODS*
  Faktorova, D., Nisbet, R. R., Robledo, J., Casacuberta, E., Sudek, L., Allen, A. E., Ares, M., Areste, C., Balestreri, C., Barbrook, A. C., Beardslee, P., Bender, S., Booth, et al
  2020; 17 (5): 481-+

- **The Co-regulation Data Harvester: automating gene annotation starting from a transcriptome database.** *SoftwareX*
  Tsypin, L. M., Turkewitz, A. P.
  2017; 6: 165-171