

Resource Summary Report

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Roth Laboratory

RRID:SCR_005711

Type: Tool

Proper Citation

Roth Laboratory (RRID:SCR_005711)

Resource Information

URL: <http://llama.mshri.on.ca/>

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Description: The Roth Laboratory is designing and interpreting large-scale experiments to understand pathway structure and its relationship to phenotype and human disease. Software for research focused on a specific research goal is available. Current experimental interests: * Exploiting parallel sequencing technology to phenotype all pairwise gene deletion combinations in *S. cerevisiae*, with initial application to genes involved in transcription. * Generation of *S. cerevisiae* strains carrying dozens of chosen targeted deletions, with initial application to delete all ABC transporters imparting multidrug resistance. * Targeted insertion of gene sets encoding entire human pathways into *S. cerevisiae*, with initial application to genes involved in drug metabolism. Current computational interests: * Systematic analysis of genetic interaction to reveal redundant systems and order of action in genetic pathways * Integrating large-scale studies - including phenotype, genetic epistasis, protein-protein and transcription-regulatory interactions and sequence patterns - to quantitatively assign function to genes and guide experimentation and disease association studies. * Alternative splicing and its relationship to protein interaction networks.

Abbreviations: Roth Lab

Resource Type: software resource, organization portal, laboratory portal, data or information resource, portal

Keywords: gene, pathway, phenotype, disease, transcription, drug metabolism, drug, metabolism, protein-protein interaction, transcription-regulatory interaction, protein interaction, protein

Funding:**Resource Name:** Roth Laboratory**Resource ID:** SCR_005711**Alternate IDs:** nlx_149163**Old URLs:** <http://llama.med.harvard.edu>**Record Creation Time:** 20220129T080232+0000**Record Last Update:** 20250501T080724+0000

Ratings and Alerts

No rating or validation information has been found for Roth Laboratory.

No alerts have been found for Roth Laboratory.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 4 mentions in open access literature.

Listed below are recent publications. The full list is available at [ASWG](#).

Harders AR, et al. (2024) Consequences of a 2-Deoxyglucose Exposure on the ATP Content and the Cytosolic Glucose Metabolism of Cultured Primary Rat Astrocytes. *Neurochemical research*, 49(12), 3244.

Denker N, et al. (2024) Modulation of Pyruvate Export and Extracellular Pyruvate Concentration in Primary Astrocyte Cultures. *Neurochemical research*, 49(5), 1331.

Watermann P, et al. (2024) Differential Effects of Itaconate and its Esters on the Glutathione and Glucose Metabolism of Cultured Primary Rat Astrocytes. *Neurochemical research*, 50(1), 24.

Watermann P, et al. (2023) G6PD β -1 is a Potent Inhibitor of G6PDH and of Pentose Phosphate pathway-dependent Metabolic Processes in Cultured Primary Astrocytes. *Neurochemical research*, 48(10), 3177.