

Resource Summary Report

Generated by [ASWG](#) on Aug 3, 2026

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

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

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: 20260803T040431+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 5 mentions in open access literature.

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

Fernandez Flores LC, et al. (2025) Multiple Antibody-Coated Gold Nanoparticle-Based ExoAssay for Rapid Isolation of CNS-Specific Exosomes From Blood. Journal of neurochemistry, 169(10), e70263.

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.