

Resource Summary Report

Generated by [FDI Lab - SciCrunch.org](http://FDI.Lab) on May 2, 2025

bioPIXIE

RRID:SCR_004182

Type: Tool

Proper Citation

bioPIXIE (RRID:SCR_004182)

Resource Information

URL: <http://avis.princeton.edu/pixie/index.php>

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Description: bioPIXIE is a general system for discovery of biological networks through integration of diverse genome-wide functional data. This novel system for biological data integration and visualization, allows you to discover interaction networks and pathways in which your gene(s) (e.g. BNI1, YFL039C) of interest participate. The system is based on a Bayesian algorithm for identification of biological networks based on integrated diverse genomic data. To start using bioPIXIE, enter your genes of interest into the search box. You can use ORF names or aliases. If you enter multiple genes, they can be separated by commas or returns. Press "submit". bioPIXIE uses a probabilistic Bayesian algorithm to identify genes that are most likely to be in the same pathway/functional neighborhood as your genes of interest. It then displays biological network for the resulting genes as a graph. The nodes in the graph are genes (clicking on each node will bring up SGD page for that gene) and edges are interactions (clicking on each edge will show evidence used to predict this interaction). Most likely, the first results to load on the results page will be a list of significant Gene Ontology terms. This list is calculated for the genes in the biological network created by the bioPIXIE algorithm. If a gene ontology term appears on this list with a low p-value, it is statistically significantly overrepresented in this biological network. As you move the mouse over genes in the network, interactions involving these genes are highlighted. If you click on any of the highlighted interactions graph, evidence pop-up window will appear. The Evidence pop-up lists all evidence for this interaction, with links to the papers that produced this evidence - clicking these links will bring up the relevant source citation(s) in PubMed. You may need to download the Adobe Scalable Vector Graphic (SVG) plugin to utilize the visualization tool (you will be prompted if you need it).

Abbreviations: bioPIXIE

Synonyms: biological Process Inference from eXperimental Interaction Evidence

Resource Type: data analysis service, service resource, analysis service resource, production service resource

Defining Citation: [PMID:16420673](#)

Keywords: prediction, bayesian network, probabilistic, interaction, network

Funding: NHGRI T32 HG003284;
NIGMS R01 GM071966;
NHGRI R01 HG003471;
NIGMS P50 GM071508;
NSF DGE-9972930;
NSF IIS-0513552

Resource Name: bioPIXIE

Resource ID: SCR_004182

Alternate IDs: nlx_20893

Record Creation Time: 20220129T080223+0000

Record Last Update: 20250502T055452+0000

Ratings and Alerts

No rating or validation information has been found for bioPIXIE.

No alerts have been found for bioPIXIE.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 1 mentions in open access literature.

Listed below are recent publications. The full list is available at [FDI Lab - SciCrunch.org](#).

Petti AA, et al. (2012) Combinatorial control of diverse metabolic and physiological functions by transcriptional regulators of the yeast sulfur assimilation pathway. Molecular biology of the cell, 23(15), 3008.