

Resource Summary Report

Generated by [nidm-terms](#) on Sep 23, 2026

GOEAST - Gene Ontology Enrichment Analysis Software Toolkit

RRID:SCR_006580

Type: Tool

Proper Citation

GOEAST - Gene Ontology Enrichment Analysis Software Toolkit (RRID:SCR_006580)

Resource Information

URL: <http://omicslab.genetics.ac.cn/GOEAST/>

Proper Citation: GOEAST - Gene Ontology Enrichment Analysis Software Toolkit (RRID:SCR_006580)

Description: Gene Ontology Enrichment Analysis Software Toolkit (GOEAST) is a web based software toolkit providing easy to use, visualizable, comprehensive and unbiased Gene Ontology (GO) analysis for high-throughput experimental results, especially for results from microarray hybridization experiments. The main function of GOEAST is to identify significantly enriched GO terms among give lists of genes using accurate statistical methods. Compared with available GO analysis tools, GOEAST has the following unique features: * GOEAST supports analysis for data from various resources, such as expression data obtained using Affymetrix, illumina, Agilent or customized microarray platforms. GOEAST also supports non-microarray based experimental data. The web-based feature makes GOEAST very user friendly; users only have to provide a list of genes in correct formats. * GOEAST provides visualizable analysis results, by generating graphs exhibiting enriched GO terms as well as their relationships in the whole GO hierarchy. * Note that GOEAST generates separate graph for each of the three GO categories, namely biological process, molecular function and cellular component. * GOEAST allows comparison of results from multiple experiments (see Multi-GOEAST tool). The displayed color of each GO term node in graphs generated by Multi-GOEAST is the combination of different colors used in individual GOEAST analysis. Platform: Online tool

Abbreviations: GOEAST

Synonyms: Gene Ontology Enrichment Analysis Software Toolkit, Gene Ontology Enrichment Analysis Software Toolkit (GOEAST)

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

Defining Citation: [PMID:18487275](https://pubmed.ncbi.nlm.nih.gov/18487275/)

Keywords: statistical analysis, gene ontology, high-throughput, microarray, hybridization, gene, visualization, bio.tools

Funding: National Natural Science Foundation of China 30725014;
National Natural Science Foundation of China 90612019;
Ministry of Science and Technology of China 2007CB946901;
Chinese Academy of Sciences KSCX2-YW-R-134;
Chinese Academy of Sciences KSCX2-YW-N-024

Availability: Free for academic use

Resource Name: GOEAST - Gene Ontology Enrichment Analysis Software Toolkit

Resource ID: SCR_006580

Alternate IDs: biotools:goeast, nlx_149248

Alternate URLs: <https://bio.tools/goeast>

Record Creation Time: 20220129T080237+0000

Record Last Update: 20260919T195658+0000

Ratings and Alerts

No rating or validation information has been found for GOEAST - Gene Ontology Enrichment Analysis Software Toolkit.

No alerts have been found for GOEAST - Gene Ontology Enrichment Analysis Software Toolkit.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 40 mentions in open access literature.

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

Miao X, et al. (2023) Comparative analysis of alternative splicing events in skeletal muscle of different sheep. Heliyon, 9(11), e22118.

Yu Y, et al. (2022) Potential Material Basis of Yupingfeng Powder for the Prevention and Treatment of 2019 Novel Coronavirus Pneumonia: A Study Involving Molecular Docking and Molecular Dynamic Simulation Technology. BioMed research international, 2022, 7892397.

- Wang P, et al. (2020) The genome evolution and domestication of tropical fruit mango. *Genome biology*, 21(1), 60.
- Li Y, et al. (2020) Exosomal prostate-specific G-protein-coupled receptor induces osteoblast activity to promote the osteoblastic metastasis of prostate cancer. *Translational cancer research*, 9(10), 5857.
- Sun RZ, et al. (2019) Comparative physiological, metabolomic, and transcriptomic analyses reveal developmental stage-dependent effects of cluster bagging on phenolic metabolism in Cabernet Sauvignon grape berries. *BMC plant biology*, 19(1), 583.
- Millan-Cubillo AF, et al. (2019) Proteomic characterization of primary cultured myocytes in a fish model at different myogenesis stages. *Scientific reports*, 9(1), 14126.
- Suhail A, et al. (2019) DeSUMOylase SENP7-Mediated Epithelial Signaling Triggers Intestinal Inflammation via Expansion of Gamma-Delta T Cells. *Cell reports*, 29(11), 3522.
- Sun L, et al. (2019) Identification of Long Non-coding and Messenger RNAs Differentially Expressed Between Primary and Metastatic Melanoma. *Frontiers in genetics*, 10, 292.
- Wang H, et al. (2018) Identification and characterization of miRNAs in the gills of the mud crab (*Scylla paramamosain*) in response to a sudden drop in salinity. *BMC genomics*, 19(1), 609.
- Sun W, et al. (2018) Integrative analysis of super enhancer SNPs for type 2 diabetes. *PloS one*, 13(1), e0192105.
- Ling L, et al. (2018) Long noncoding RNA ENSRNOG00000037522 is involved in the podocyte epithelial-mesenchymal transition in diabetic rats. *International journal of molecular medicine*, 41(5), 2704.
- Xu J, et al. (2017) Genomic Basis of Adaptive Evolution: The Survival of Amur Ide (*Leuciscus waleckii*) in an Extremely Alkaline Environment. *Molecular biology and evolution*, 34(1), 145.
- Zhang H, et al. (2017) Investigating the microRNA-mRNA regulatory network in acute myeloid leukemia. *Oncology letters*, 14(4), 3981.
- da Silva Menegasso AR, et al. (2017) Profiling the proteomics in honeybee worker brains submitted to the proboscis extension reflex. *Journal of proteomics*, 151, 131.
- Shukla SK, et al. (2017) Differential gene expression in *Mycobacterium bovis* challenged monocyte-derived macrophages of cattle. *Microbial pathogenesis*, 113, 480.
- Wang Y, et al. (2017) Label-free quantitative secretome analysis of *Xanthomonas oryzae* pv. *oryzae* highlights the involvement of a novel cysteine protease in its pathogenicity. *Journal of proteomics*, 169, 202.
- Haase D, et al. (2016) Comparative transcriptomics of stickleback immune gene responses upon infection by two helminth parasites, *Diplostomum pseudospathaceum* and *Schistocephalus solidus*. *Zoology (Jena, Germany)*, 119(4), 307.

Kim MC, et al. (2016) An Integrated Analysis of the Genome-Wide Profiles of DNA Methylation and mRNA Expression Defining the Side Population of a Human Malignant Mesothelioma Cell Line. *Journal of Cancer*, 7(12), 1668.

Zhang Q, et al. (2016) The chromatin remodeler DDM1 promotes hybrid vigor by regulating salicylic acid metabolism. *Cell discovery*, 2, 16027.

De Wit P, et al. (2016) Selection on oxidative phosphorylation and ribosomal structure as a multigenerational response to ocean acidification in the common copepod *Pseudocalanus acuspes*. *Evolutionary applications*, 9(9), 1112.