

Resource Summary Report

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MBRole

RRID:SCR_014684

Type: Tool

Proper Citation

MBRole (RRID:SCR_014684)

Resource Information

URL: <http://csbg.cnb.csic.es/mbrole/>

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Description: Software program for overrepresentation (enrichment) analysis of categorical annotations for a set of compounds. These categorical annotations correspond to biological and chemical information found in public databases and software. Annotations can be biological (pathways, enzyme interactions, pharmacological action) or chemical (taxonomy and chemical groups).

Resource Type: data analysis software, data processing software, software application, software resource, web application

Defining Citation: [PMID:21208985](#)

Keywords: metabolomics, metabolomics tool, overrepresentation analysis, enrichment analysis, chemical annotation, biological annotation, enzyme interactions, pharmacological action, chemical taxonomy, data analysis, software, FASEB list

Availability: Freely available

Resource Name: MBRole

Resource ID: SCR_014684

Record Creation Time: 20220129T080321+0000

Record Last Update: 20260905T132749+0000

Ratings and Alerts

No rating or validation information has been found for MBRole.

No alerts have been found for MBRole.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 102 mentions in open access literature.

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

Zhan L, et al. (2026) Single-bacterium metabolome revealing heterogeneous cellular states in bacterial populations. *Nature communications*, 17(1).

Yan Y, et al. (2026) Untargeted Metabolomics Reveals Region-Specific Metabolic Signatures and Discriminative Markers in Goji Berry (*Lycium barbarum* L.). *Metabolites*, 16(5).

Diboun I, et al. (2026) A Multi-Omics Approach Uncovers Divergent Mechanisms of Asthma in Normal Weight and Obese Children. *Metabolites*, 16(5).

Sajid S, et al. (2026) A Multi-Organ Atlas Links Gut Microbial Metabolites to Systemic Redox Changes in Aging Mice. *Aging cell*, 25(3), e70433.

Buck CO, et al. (2026) Urine Metabolism Biomarkers Predict Preterm Infant Adiposity at Hospital Discharge. *Molecular nutrition & food research*, 70(6), e70431.

Jiang F, et al. (2026) Long-Term Elevated CO₂ Improves Soil Health and Rice Yields in Paddy Fields. *Advanced science* (Weinheim, Baden-Wurttemberg, Germany), 13(11), e03190.

Alves V, et al. (2026) Caspofungin Reshapes the Extracellular Vesicles Metabolome of *Candidozyma* (*Candida*) *auris*, Altering Amino Acid and Nucleotide Metabolism. *Journal of fungi* (Basel, Switzerland), 12(2).

Huang S, et al. (2025) Metabolomic Analysis Reveals the Diversity of Defense Metabolites in Nine Cereal Crops. *Plants* (Basel, Switzerland), 14(4).

Kan Y, et al. (2025) Transcript and Lipid Profile Alterations in Astrocyte-Neuron Mitochondrial Transfer Under Lipopolysaccharide Exposure: An In Vitro Study. *Journal of neurochemistry*, 169(2), e70003.

Lai CQ, et al. (2025) Metabolite Genome-Wide Association in Hispanics with Obesity Reveals Genetic Risk and Interactions with Dietary Factors for Type 2 Diabetes. *Metabolites*, 15(11).

Jin S, et al. (2025) Host plants selection of *Centranthera grandiflora* Benth. and nontargeted metabolomics analysis of its parasitic and non-parasitic samples. *PloS one*, 20(2), e0310786.

Gu Y, et al. (2025) *Trichoderma asperellum* Ta1 Alleviates Root Rot Caused by *Fusarium solani* and Promotes the Growth of *Panax notoginseng*. *Journal of fungi* (Basel,

Switzerland), 11(12).

Luo Y, et al. (2025) RUNX1/SLAMF3 Axis Drives Immunosuppression to Contribute to Colorectal Cancer Liver Metastasis by Blocking Phagocytosis and Depleting C1QC+ Tumor-Associated Macrophages. *Advanced science* (Weinheim, Baden-Wurttemberg, Germany), 12(32), e06641.

Khan SR, et al. (2025) Reduced circulating sphingolipids and CERS2 activity are linked to T2D risk and impaired insulin secretion. *Science advances*, 11(2), eadr1725.

Amrutha S, et al. (2025) Network pharmacology and metabolomics analysis of *Tinospora cordifolia* reveals BACE1 and MAOB as potential therapeutic targets for neuroprotection in Alzheimer's disease. *Scientific reports*, 15(1), 8103.

Luo Q, et al. (2025) Transcriptomics integrated with metabolomics reveals the defense response of insect-resistant *Zea mays* infested with *Spodoptera exigua*. *Heliyon*, 11(4), e42565.

Hua Y, et al. (2025) Metabonomics and physiology revealed the critical function of 5-Phosphoribosylamine and antioxidant enzymes in enhancing aged oat seed germination. *BMC plant biology*, 25(1), 28.

Cirelli C, et al. (2025) Metabolic Profile Associated With Encystation in *Acanthamoeba*. *The Journal of eukaryotic microbiology*, 72(5), e70034.

Zhou X, et al. (2024) Biomarker identification and risk assessment of cardiovascular disease based on untargeted metabolomics and machine learning. *Scientific reports*, 14(1), 25755.

Cao R, et al. (2024) Disordered Gut Microbiome and Alterations in Metabolic Patterns Are Associated With Hypertensive Left Ventricular Hypertrophy. *Journal of the American Heart Association*, 13(19), e034230.