

Resource Summary Report

Generated by [SPARC SAWG](#) on Jul 28, 2026

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, software resource, software application, data processing software, 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: 20260728T043445+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 93 mentions in open access literature.

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

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.

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

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.

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).

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.

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.

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).

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.

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.

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.

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.

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.

Zhong C, et al. (2024) Metabolomics reveals changes in soil metabolic profiles during vegetation succession in karst area. *Frontiers in microbiology*, 15, 1337672.

Majzoub ME, et al. (2024) Refining microbial community metabolic models derived from metagenomics using reference-based taxonomic profiling. *mSystems*, 9(9), e0074624.

Devasahayam Arokiya Balaya R, et al. (2024) Role of *Hemigraphis alternata* in wound healing: metabolomic profiling and molecular insights into mechanisms. *Scientific reports*, 14(1), 3872.

Qi L, et al. (2024) Microbiome-metabolome analysis insight into the effects of high-salt diet on hemorheological functions in SD rats. *Frontiers in nutrition*, 11, 1408778.

Liu F, et al. (2024) Effects of taurine on metabolomics of bovine mammary epithelial cells under high temperature conditions. *Frontiers in veterinary science*, 11, 1393276.

Zhang YZ, et al. (2024) Metabolic profiling of idiopathic pulmonary fibrosis in a mouse model: implications for pathogenesis and biomarker discovery. *Frontiers in medicine*, 11, 1410051.

Abdik E, et al. (2024) Transcriptome-based biomarker prediction for Parkinson's disease using genome-scale metabolic modeling. *Scientific reports*, 14(1), 585.