

Resource Summary Report

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GROMACS

RRID:SCR_014565

Type: Tool

Proper Citation

GROMACS (RRID:SCR_014565)

Resource Information

URL: <http://www.gromacs.org>

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Description: Software package created to perform molecular dynamics. Molecular dynamics package mainly designed for simulations of proteins, lipids, and nucleic acids. Can also be used for research on non-biological systems, such as polymers.

Synonyms: Gromacs

Resource Type: software application, simulation software, software toolkit, software resource

Defining Citation: [PMID:26620784](#), [DOI:10.1016/0010-4655\(95\)00042-E](#)

Keywords: simulation, molecular dynamics, software package, software toolkit, biochemical, molecule, protein, lipid, nucleic acid, bond interaction, bio.tools

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Availability: Free, Available for download

Resource Name: GROMACS

Resource ID: SCR_014565

Alternate IDs: biotools:gromacs, OMICS_05081

Alternate URLs: <https://bio.tools/gromacs>, <https://sources.debian.org/src/gromacs/>, <https://github.com/gromacs/gromacs>

License: GNU Lesser General Public License version 2.1

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Ratings and Alerts

No rating or validation information has been found for GROMACS.

No alerts have been found for GROMACS.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 8264 mentions in open access literature.

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

Parnandi VA, et al. (2026) A small Candida glabrata protein promotes hyphal growth in C. albicans during mixed-species invasive candidiasis. Current biology : CB, 36(1), 1.

Pinto CS, et al. (2026) Actin arginylation alters myosin engagement and F-actin patterning despite structural conservation. The Journal of cell biology, 225(1).

Kamran Z, et al. (2026) In silico design of a matrix (M) protein-based vaccine candidate against Newcastle disease virus. Poultry science, 105(1), 106101.

Lerche M, et al. (2026) Regulation of cell dynamics by rapid integrin transport through the biosynthetic pathway. The Journal of cell biology, 225(2).

Cheng W, et al. (2026) Multifunctional macrophage mimetic nanoplatform modulates vascular and epithelial double gut barriers to alleviate ulcerative colitis. Theranostics, 16(1), 58.

Li X, et al. (2026) Dynamic adaptive coassembled sericin protein orchestrating stem cell development for nucleus pulposus regeneration. Science advances, 12(1), eadx2768.

Rui M, et al. (2026) Tumor microenvironment-responsive conformational activation of apoA-I mimetic peptides for targeted cancer therapy. Drug delivery, 33(1), 2604086.

Zhou P, et al. (2026) Exploring the role of cytochrome P450 family 1 subfamily B member 1 and quercetin in modulating neuropathic pain after spinal cord injury. Molecular medicine reports, 33(1).

de Araujo Neto MF, et al. (2026) Development of a Novel *Aedes aegypti* Repellent: An Integrated Approach Combining In Silico and Bioassays. *Chemistry & biodiversity*, 23(1), e01251.

Ali-Ahmad A, et al. (2026) Structure and dynamics of 2x(CENP-A/H4)₂ octasome reveal a possible intermediate in centromeric chromatin. *Life science alliance*, 9(3).

Zhang P, et al. (2026) Resurrection and characterization of ancestral xylose transporters enhance the capability of xylose uptake in the mixed sugar co-fermentation of Recombinant *Saccharomyces cerevisiae*. *Bioresources and bioprocessing*, 13(1), 1.

Lund VK, et al. (2026) A Syd and RUFY dynein adaptor complex mediates axonal circulation of dense core vesicles. *The Journal of cell biology*, 225(3).

Gao X, et al. (2026) Salvianolic acid A from *Salvia miltiorrhiza* identified as a cap-dependent endonuclease inhibitor for pathogenic arenaviruses. *Acta pharmacologica Sinica*, 47(1), 173.

Cheng M, et al. (2026) Targeting p38 MAPK signaling pathway: Quercetin as a novel therapy for TMJ synovitis. *International journal of molecular medicine*, 57(1).

Nishimuta H, et al. (2026) Molecular mechanistic insights into the OX40-OX40L complex from biophysical and computational analyses. *Protein science : a publication of the Protein Society*, 35(1), e70404.

Bermudes-Contreras JD, et al. (2026) Molecular dynamics simulation of thermal activation of human TRPV1. *Molecular biology research communications*, 15(1), 39.

Li Y, et al. (2026) Calpain-1 Potentiates Periodontal Regeneration via PHLPP1-ERK-Driven Osteogenesis in Periodontal Ligament Stem Cells. *International dental journal*, 76(1), 109309.

Wei X, et al. (2026) Decoding Hydrogen-Bond Network of Electrolyte for Cryogenic Durable Aqueous Zinc-Ion Batteries. *Nano-micro letters*, 18(1), 127.

Li Z, et al. (2025) Phased high-quality genome of the gymnosperm Himalayan Yew assists in paclitaxel pathway exploration. *GigaScience*, 14.

Borar P, et al. (2025) Dual-specific autophosphorylation of kinase IKK2 enables phosphorylation of substrate I β B β through a phosphoenzyme intermediate. *eLife*, 13.