

Resource Summary Report

Generated by [NIF](#) on Aug 18, 2026

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: simulation software, software toolkit, software resource, software application

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

Funding: European Research Council ;
Swedish eScience Research Center ;
Stream Computing Performance Engineers ;
Nvidia ;
Swedish Research Council ;
Swedish Foundation for Strategic Research ;
Swedish National Infrastructure for Computing ;
Swedish Foundation for International Cooperation in Research and Higher Education

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

Record Creation Time: 20220129T080321+0000

Record Last Update: 20260819T044348+0000

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 9367 mentions in open access literature.

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

Ding XW, et al. (2027) Evolution of alcohol oxidase for improved methanol bioconversion and formaldehyde tolerance. Synthetic and systems biotechnology, 15, 22.

Zhang X, et al. (2026) Synergistic mechanical and therapeutic modulation of engineered tumor cell-derived microparticles for enhanced cancer treatment. Cell reports. Medicine, 7(2), 102591.

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.

Furukawa K, et al. (2026) Mitochondrial fission during mitophagy requires both inner and outer mitofissins. EMBO reports, 27(4), 853.

Xiao W, et al. (2026) Metabolite-gated vascular contractility switch: OXGR1 activation mechanism enables agonist therapy for rosacea erythema. Cell, 189(7), 1990.

Lei G, et al. (2026) Experimental evolution to thermal stress indicates climate resilience in a cosmopolitan arthropod. eLife, 15.

Cortolezzis Y, et al. (2026) RPA hyperphosphorylation hinders the resolution of R-loops and G-quadruplex-associated R-loops during RAS-driven senescence. Nucleic acids research, 54(7).

Yan L, et al. (2026) The Erlin1/2 complex is a dynamic scaffold for membrane microdomain assembly on the endoplasmic reticulum. Molecular cell, 86(7), 1362.

Azadi A, et al. (2026) Encapsulation of colistin using hyaluronic acid and PVA-PSS polymeric nanocarriers for enhanced drug delivery: a molecular dynamics simulation study. *Scientific reports*, 16(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).

Tyagi M, et al. (2026) Arc mediates intercellular tau transmission via extracellular vesicles. *Cell*, 189(15), 4706.

Choo SMT, et al. (2026) Exploring the role of zolpidem in alleviating cognitive and motor impairments in chronic cerebral hypoperfusion: a rat model study with in vivo and in silico insights. *Experimental animals*, 75(1), 23.

Han M, et al. (2026) Andrographolide alleviates type 2 diabetic nephropathy through suppressing PI3K/AKT1/RRM2-triggered oxelptosis. *Journal of advanced research*, 85, 1051.

Lin B, et al. (2026) O-GlcNAcylation of UGDH regulates its activity and remodels the extracellular matrix to facilitate tumor growth. *Cell death and differentiation*, 33(3), 574.

Mtulo YB, et al. (2026) Computational Evaluation of Statin Analogs Targeting HMG-CoA Reductase for Coronary Artery Disease Treatment. *ChemistryOpen*, 15(4), e202500533.

Sun Y, et al. (2026) A Dynamic Gate Enables Regioselective Hydroxylation of Free Arginine by a Non-Canonical Heme Enzyme. *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*, 13(6), e13032.

Ho TH, et al. (2026) From Molecular Interactions to Nanocarrier Design: Coarse-Grained Modeling of PEG Self-Assembly and Hindsilactone Encapsulation. *The journal of physical chemistry. B*, 130(2), 841.

Li S, et al. (2026) G-quadruplex structures are key regulators of mammalian spermatogenesis. *Cellular & molecular biology letters*, 31(1), 15.

Xue Z, et al. (2026) Cepharanthine as a potential Fis inhibitor enhances Enrofloxacin efficacy against *Pasteurella multocida*. *BMC microbiology*, 26(1), 110.

Scrutton AM, et al. (2026) Structure and organization of AMPA receptor-TARP complexes in the mammalian cerebellum. *Science (New York, N.Y.)*, 391(6792), 1361.