

Resource Summary Report

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Rosetta

RRID:SCR_015701

Type: Tool

Proper Citation

Rosetta (RRID:SCR_015701)

Resource Information

URL: <https://www.rosettacommons.org/home>

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Description: Molecular modeling software package for 3D structure prediction and high resolution design of proteins, nucleic acids, and non natural polymers. Used in computational biology, including de novo protein design, enzyme design, ligand docking, and structure prediction of biological macromolecules and macromolecular complexes.

Synonyms: Rosetta modeling software

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

Defining Citation: [PMID:28430426](#), [PMID:21829626](#), [PMID:18442991](#)

Keywords: Molecular modeling, structure prediction, computational modeling, protein analysis, enzyme design, macromolecular complexes

Funding: Hertz Foundation Fellowship ;
NCI F32 CA189246;
NIGMS GM078221;
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NIGMS GM114961;
NIGMS GM117189;
NIGMS GM73141;
NSF Graduate Research Fellowship ;
NSF BMAT 1507736;
Simons Foundation

Availability: Restricted

Resource Name: Rosetta

Resource ID: SCR_015701

Record Creation Time: 20220129T080327+0000

Record Last Update: 20260912T195829+0000

Ratings and Alerts

No rating or validation information has been found for Rosetta.

No alerts have been found for Rosetta.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 216 mentions in open access literature.

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

Schüß C, et al. (2026) The pathway-independent positive allosteric modulator C1 allows for the identification of active Y4 receptor relevant positions. Cellular and molecular life sciences : CMLS, 83(1), 74.

Cisneros AF, et al. (2026) Paralog interference contributes to the preservation of genetic redundancy. Current biology : CB, 36(6), 1373.

Huang J, et al. (2026) Cryo-EM structures of antibodies elicited by germline-targeting HIV MPER epitope scaffolds. Cell reports, 45(1), 116818.

Ishii M, et al. (2026) Intensity modulation of trichromatic split fluorescent proteins for live cell mapping. Cell reports methods, 6(4), 101363.

Gunning V, et al. (2026) Mechanistic design of cell-penetrating disruptors for phospho-dependent TACC3-CHC interaction. Structure (London, England : 1993), 34(6), 915.

Richard AC, et al. (2025) Using Short Molecular Dynamics Simulations to Determine the Important Features of Interactions in Antibody-Protein Complexes. Proteins, 93(4), 812.

Smith AM, et al. (2025) The HIV-1 nuclear export complex reveals the role of RNA in CRM1 cargo recognition. Molecular cell, 85(16), 3108.

Wicke D, et al. (2024) The previously uncharacterized RnpM (YlxR) protein modulates the activity of ribonuclease P in Bacillus subtilis in vitro. Nucleic acids research, 52(3), 1404.

Yang R, et al. (2024) Structural basis for nuclear import of hepatitis B virus (HBV) nucleocapsid core. *Science advances*, 10(2), eadi7606.

Au CW, et al. (2024) The Mutagenic Plasticity of the Cholera Toxin B-Subunit Surface Residues: Stability and Affinity. *Toxins*, 16(3).

Bursch KL, et al. (2024) Cancer-associated polybromo-1 bromodomain 4 missense variants variably impact bromodomain ligand binding and cell growth suppression. *The Journal of biological chemistry*, 300(4), 107146.

Eirich P, et al. (2024) The release of host-derived antibodies bound to the variant surface glycoprotein (VSG) of *Trypanosoma brucei* cannot be explained by pH-dependent conformational changes of the VSG dimer. *Open research Europe*, 4, 87.

Lolicato F, et al. (2024) Disulfide bridge-dependent dimerization triggers FGF2 membrane translocation into the extracellular space. *eLife*, 12.

Pandey A, et al. (2024) Therapeutic Targeting and Structural Characterization of a Sotorasib-Modified KRAS G12C-MHC I complex Demonstrates the Antitumor Efficacy of Hapten-Based Strategies. *Cancer research*.

Ray R, et al. (2024) Eliciting a single amino acid change by vaccination generates antibody protection against group 1 and group 2 influenza A viruses. *Immunity*, 57(5), 1141.

Braxton JR, et al. (2023) The p97/VCP adaptor UBXD1 drives AAA+ remodeling and ring opening through multi-domain tethered interactions. *Nature structural & molecular biology*, 30(12), 2009.

Song J, et al. (2023) Noncovalent antibody catenation on a target surface greatly increases the antigen-binding avidity. *eLife*, 12.

Krebs AS, et al. (2023) Molecular architecture and conservation of an immature human endogenous retrovirus. *Nature communications*, 14(1), 5149.

Reimer JM, et al. (2023) Structure of LRRK1 and mechanisms of autoinhibition and activation. *Nature structural & molecular biology*, 30(11), 1735.

Veggi D, et al. (2023) Effective Multivalent Oriented Presentation of Meningococcal NadA Antigen Trimers by Self-Assembling Ferritin Nanoparticles. *International journal of molecular sciences*, 24(7).