

Resource Summary Report

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BioCAT

RRID:SCR_001440

Type: Tool

Proper Citation

BioCAT (RRID:SCR_001440)

Resource Information

URL: <https://www.bio.aps.anl.gov/>

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Description: Biomedical technology research center and training resource for the study of the structure of partially ordered biological molecules, complexes of biomolecules and cellular structures under conditions similar to those present in living cells and tissues. The goal of research at BioCAT is to determine the detailed structure and mechanism of action of biological systems at the molecular level. The techniques used are X-ray fiber diffraction, X-ray solution scattering and X-ray micro-emission and micro-absorption spectroscopy, with an emphasis on time-resolved studies and the development of novel techniques.

Abbreviations: BioCAT

Synonyms: Biophysics Collaborative Access Team

Resource Type: biomedical technology research center, training resource

Keywords: biological system, structure, function, molecule, complex, cellular structure, cell, tissue, x-ray, fiber diffraction, solution scattering, micro-emission, micro-absorption spectroscopy, time-resolved, x-ray micro-imaging, macromolecule, structural biology technology center, photon, microprobe

Funding: NCRR U41RR008630

Resource Name: BioCAT

Resource ID: SCR_001440

Alternate IDs: nlx_152666

Alternate URLs: <http://www.bio.aps.anl.gov/>

Record Creation Time: 20220129T080207+0000

Record Last Update: 20260805T044023+0000

Ratings and Alerts

No rating or validation information has been found for BioCAT.

No alerts have been found for BioCAT.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 928 mentions in open access literature.

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

Kraege A, et al. (2026) Undermining the cry for help: the phytopathogenic fungus *Verticillium dahliae* secretes an antimicrobial effector protein to undermine host recruitment of antagonistic *Pseudomonas* bacteria. *The New phytologist*, 249(1), 406.

Liu Y, et al. (2026) Integrated scFv identification and CAR T cell generation for AML targeting in vivo. *International journal of cancer*, 158(4), 994.

Jin S, et al. (2026) Microbial collagenase activity is linked to oral-gut translocation in advanced chronic liver disease. *Nature microbiology*, 11(1), 211.

Mittendorff C, et al. (2025) Thrombin receptor PAR4 cross-activates the tyrosine kinase c-met in atrial cardiomyocytes. *Naunyn-Schmiedeberg's archives of pharmacology*, 398(3), 2783.

Van der Pijl RJ, et al. (2025) Increased cardiac myosin super-relaxation as an energy saving mechanism in hibernating grizzly bears. *Molecular metabolism*, 92, 102084.

Kostelac A, et al. (2025) Shifting the substrate scope of dimeric pyranose oxidase from monosaccharide to glycoside preference through oligomeric state modification. *The FEBS journal*, 292(9), 2323.

Kunz L, et al. (2025) Avirulence depletion assay: Combining R gene-mediated selection with bulk sequencing for rapid avirulence gene identification in wheat powdery mildew. *PLoS pathogens*, 21(1), e1012799.

Choezom D, et al. (2025) The Ceramide-Dependent EV Secretome Differentially Affects Prostate Cancer Cell Migration. *Cells*, 14(7).

Glossner L, et al. (2025) Tumor clusters with divergent inflammation and human retroelement expression determine the clinical outcome of patients with serous ovarian

cancer. *Molecular oncology*.

Baral R, et al. (2025) A general mechanism for initiating the bacterial general stress response. *eLife*, 13.

Dreute J, et al. (2025) Synergistic targeting of cancer cells through simultaneous inhibition of key metabolic enzymes. *Cell death and differentiation*.

Sommer M, et al. (2025) Unveiling the structure, function and dynamics of StmPr1 in *Stenotrophomonas maltophilia* virulence. *Scientific reports*, 15(1), 20193.

Köhler S, et al. (2025) Structure of fungal tRNA ligase Trl1 with RNA reveals conserved substrate-binding principles. *Nature structural & molecular biology*, 32(9), 1657.

Newman AG, et al. (2025) Glial reactivity and cognitive decline follow chronic heterochromatin loss in neurons. *Nature communications*, 16(1), 7325.

Heller JLL, et al. (2025) A common polymorphism in the human immunoreceptor NKp65 determines ligand interaction, cell surface expression and function. *PloS one*, 20(8), e0329454.

Mekkaoui K, et al. (2025) Transcriptomics and trans-organellar complementation reveal limited signaling of 12-cis-oxo-phytodienoic acid during early wound response in *Arabidopsis*. *Nature communications*, 16(1), 6684.

Dicke AK, et al. (2025) NXT2 is a key component of the RNA nuclear export factor complex in the human testis and essential for spermatogenesis. *Nature communications*, 16(1), 6254.

Rhodehamel M, et al. (2025) ATP directly modulates thick filament structure and function in porcine myocardium. *Biophysical journal*, 124(15), 2553.

Lüchtrath C, et al. (2025) Small-scale fed-batch cultivations of *Vibrio natriegens*: overcoming challenges for early process development. *Bioprocess and biosystems engineering*, 48(6), 1007.

Fuchs ACD, et al. (2025) Enzymatic protein fusions with 100% product yield. *eLife*, 13.