Resource Summary Report

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Developmental Therapeutics Program

RRID:SCR_003057
Type: Tool

Proper Citation

Developmental Therapeutics Program (RRID:SCR_003057)

Resource Information

URL: http://www.dtp.nci.nih.gov

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Description: Portal for preclinical information and research materials, including web-accessible data and tools, NCI-60 Tumor Cell Line Screen, compounds in vials and plates, tumor cells, animals, and bulk drugs for investigational new drug (IND)-directed studies. DTP has been involved in the discovery or development of more than 70 percent of the anticancer therapeutics on the market today, and will continue helping the academic and private sectors to overcome various therapeutic development barriers, particularly through supporting high-risk projects and therapeutic development for rare cancers. Initially DTP made its drug discovery and development services and the results from the human tumor cell line assay publicly accessible to researchers worldwide. At first, the site offered in vitro human cell line data for a few thousand compounds and in vitro anti-HIV screening data for roughly 42,000 compounds. Today, visitors can find: * Downloadable in vitro human tumor cell line data for some 43,500 compounds and 15,000 natural product extracts * Results for 60,000 compounds evaluated in the yeast assay * In vivo animal model results for 30,000 compounds * 2-D and 3-D chemical structures for more than 200,000 compounds * Molecular target data, including characterizations for at least 1,200 targets, plus data from multiple cDNA microarray projects In addition to browsing DTP's databases and downloading data, researchers can request individual samples or sets of compounds on 96-well plates for research, or they can submit their own compounds for consideration for screening via DTP's online submission form. Once a compound is submitted for screening, researchers can follow its progress and retrieve data using a secure web interface. The NCI has collected information on almost half a million chemical structures in the past 50 years. DTP has made this information accessible and useful for investigators through its 3-D database, a collection of three-dimensional structures for more than 200,000 drugs. Investigators use the 3-D database to screen compounds for anticancer therapeutic activity. Also available on DTP's website are 127,000 connection tables for anticancer agents. A connection table is a

convenient way of depicting molecular structures without relying on drawn chemical structures. As unique lists of atoms and their connections, the connection tables can be indexed and stored in computer databases where they can be used for patent searches, toxicology studies, and precursor searching, for example.

Abbreviations: DTP

Synonyms: Developmental Therapeutics Program NCI/NIH

Resource Type: topical portal, funding resource, service resource, portal, data or information resource

Keywords: cell line, drug discovery, drug development, drug, treatment, therapy, biopharmaceutical, bortezomib, paclitaxel, romidepsin, eribulin, sipuleucel-t, anticancer therapeutic, compound, natural product extract, animal model, in vivo, in vitro, chemical structure, chemical, structure, anti-hiv, anticancer, molecular structure, database, chemotherapeutic agent, testing, drug synthesis, chemistry, grant, contract, information technology, molecular pharmacology, natural product, pharmaceutical, screening technology, toxicology, pharmacology, screening, FASEB list

Related Condition: Cancer, Tumor

Funding: NCI

Availability: Public

Resource Name: Developmental Therapeutics Program

Resource ID: SCR_003057

Alternate IDs: nif-0000-30447

Record Creation Time: 20220129T080216+0000

Record Last Update: 20250430T055202+0000

Ratings and Alerts

No rating or validation information has been found for Developmental Therapeutics Program.

No alerts have been found for Developmental Therapeutics Program.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 539 mentions in open access literature.

Listed below are recent publications. The full list is available at ASWG.

Tóth O, et al. (2025) Identification of new reference genes with stable expression patterns for cell cycle experiments in human leukemia cell lines. Scientific reports, 15(1), 1052.

Song Z, et al. (2025) NFKB1 as a key player in Tumor biology: from mechanisms to therapeutic implications. Cell biology and toxicology, 41(1), 29.

Warner EF, et al. (2025) Modulation of Nrf2 expression by targeting i-motif DNA. Communications chemistry, 8(1), 5.

Lizardo MM, et al. (2024) Pharmacologic Inhibition of EIF4A Blocks NRF2 Synthesis to Prevent Osteosarcoma Metastasis. Clinical cancer research : an official journal of the American Association for Cancer Research, 30(19), 4464.

Bertoli RM, et al. (2024) The DNA Methyltransferase Inhibitor 5-Aza-4'-thio-2'-Deoxycytidine Induces C>G Transversions and Acute Lymphoid Leukemia Development. Cancer research, 84(15), 2518.

Chan AKN, et al. (2024) Therapeutic targeting Tudor domains in leukemia via CRISPR-Scan Assisted Drug Discovery. Science advances, 10(8), eadk3127.

Wilson RB, et al. (2024) Elongation factor 1A1 regulates metabolic substrate preference in mammalian cells. The Journal of biological chemistry, 300(3), 105684.

Youssif BGM, et al. (2024) Benzimidazole-Based Derivatives as Apoptotic Antiproliferative Agents: Design, Synthesis, Docking, and Mechanistic Studies. Molecules (Basel, Switzerland), 29(2).

Helmy SW, et al. (2024) Targeting apoptosis; design, synthesis and biological evaluation of new benzoxazole and thiazole based derivatives. BMC chemistry, 18(1), 1.

Ding J, et al. (2024) MYC Drives mRNA Pseudouridylation to Mitigate Proliferation-Induced Cellular Stress during Cancer Development. Cancer research, 84(23), 4031.

Tsokas P, et al. (2024) KIBRA anchoring the action of PKM? maintains the persistence of memory. Science advances, 10(26), eadl0030.

Aziz HA, et al. (2024) Design, synthesis and mechanistic study of N-4-Piperazinyl Butyryl Thiazolidinedione derivatives of ciprofloxacin with Anticancer Activity via Topoisomerase I/II inhibition. Scientific reports, 14(1), 24101.

Sun NY, et al. (2024) Identification of DLK1, a Notch ligand, as an immunotherapeutic target and regulator of tumor cell plasticity and chemoresistance in adrenocortical carcinoma. bioRxiv : the preprint server for biology.

Ellward GL, et al. (2024) A Screen of Traditional Chinese Medicinal Plant Extracts Reveals 17 Species with Antimicrobial Properties. Antibiotics (Basel, Switzerland), 13(12).

Tlemsani C, et al. (2024) Sarcoma_CellminerCDB: A tool to interrogate the genomic and functional characteristics of a comprehensive collection of sarcoma cell lines. iScience, 27(6), 109781.

Finlay D, et al. (2024) Detection of Genomic Structural Variations Associated with Drug Sensitivity and Resistance in Acute Leukemia. Cancers, 16(2).

Dong H, et al. (2024) Targeting PRMT9-mediated arginine methylation suppresses cancer stem cell maintenance and elicits cGAS-mediated anticancer immunity. Nature cancer, 5(4), 601.

DiPeri TP, et al. (2024) Utilizing Patient-derived Xenografts to Model Precision Oncology for Biliary Tract Cancer. Clinical cancer research : an official journal of the American Association for Cancer Research.

Wilson RB, et al. (2024) Elongation factor 1A1 inhibition elicits changes in lipid droplet size, the bulk transcriptome, and cell type-associated gene expression in MASLD mouse liver. American journal of physiology. Gastrointestinal and liver physiology, 327(4), G608.

Vizvari Z, et al. (2024) Reproducibility analysis of bioimpedance-based self-developed live cell assays. Scientific reports, 14(1), 16380.