Resource Summary Report

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CellChat

RRID:SCR_021946
Type: Tool

Proper Citation

CellChat (RRID:SCR_021946)

Resource Information

URL: https://github.com/sqjin/CellChat

Proper Citation: CellChat (RRID:SCR_021946)

Description: Software R toolkit for inference, visualization and analysis of cell-cell communication from single cell data.Quantitatively infers and analyzes intercellular communication networks from single-cell RNA-sequencing data. Predicts major signaling inputs and outputs for cells and how those cells and signals coordinate for functions using network analysis and pattern recognition approaches. Classifies signaling pathways and delineates conserved and context specific pathways across different datasets.

Resource Type: software toolkit, software resource

Defining Citation: PMID:33597522

Keywords: inference, visualization, analysis, cell-cell communication, single cell data, intercellular communication networks, single-cell RNA-sequencing data

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Pew Charitable Trust ;
LEO Foundation ;
UC Irvine ;
Howard Hughes Medical Institute

Availability: Free, Available for download, Freely available

Resource Name: CellChat

Resource ID: SCR_021946

Alternate URLs: http://www.cellchat.org/

License: GNU General Public License v3.0

Record Creation Time: 20220421T050137+0000

Record Last Update: 20260729T044521+0000

Ratings and Alerts

No rating or validation information has been found for CellChat.

No alerts have been found for CellChat.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 536 mentions in open access literature.

Listed below are recent publications. The full list is available at kravitz2 .

Zhang G, et al. (2026) Ubiquitylation-oxaliplatin-related prognosis signature reveals the landscapes of immune responses, cell communication, and therapeutic sensitivity for colorectal cancer. Anti-cancer drugs, 37(1), 67.

Xiong LL, et al. (2026) Single-Nucleus RNA Sequencing Reveals Mid-Gestational Neurodevelopment Features in the Superior Temporal Plane from Fetuses with Nonsyndromic Cleft Lip and Palate. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 13(1), e04191.

Su K, et al. (2026) Mendelian Randomization and ScTranscriptomics Reveal a Lipid Low Malignant Cells Driving Immunosuppression and Matrix Remodeling in Oral squamous cell carcinoma. International dental journal, 76(1), 104009.

Galvani RGA, et al. (2026) Single-cell landscape of peripheral and tumor-infiltrating immune cells in HPV-negative HNSCC. Oncoimmunology, 15(1), 2605741.

Chen J, et al. (2026) Integrating single cell- and spatial- resolved transcriptomics unravels the inter-tumor heterogeneity and immunosuppressive landscape in HBV- and Clonorchis sinensis-associated hepatocellular carcinoma. Molecular cancer, 25(1), 3.

Hu X, et al. (2026) Pan-cancer bone metastasis atlas at single-cell resolution identifies a distinct tumor-associated macrophage subset for mediating Denosumab-induced immunosensitization in lung cancer bone metastasis. International journal of biological sciences, 22(1), 365.

Liang Y, et al. (2026) SLC39A10 drives M2 macrophage polarization and gastric cancer progression through the MAPK14(p38?) pathway. iScience, 29(1), 114400.

Kukreja B, et al. (2026) Spatial transcriptomics of the developing mouse brain immune landscape reveals effects of maternal immune activation and microbiome depletion. Nature neuroscience.

Li J, et al. (2025) Exosome-Mediated Lectin Pathway and Resistin-MIF-AA Metabolism Axis Drive Immune Dysfunction in Immune Thrombocytopenia. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 12(10), e2412378.

Lehrich BM, et al. (2025) Precision targeting of ?-catenin induces tumor reprogramming and immunity in hepatocellular cancers. Nature communications, 16(1), 5009.

Ji P, et al. (2025) Single-cell delineation of the microbiota-gut-brain axis: Probiotic intervention in Chd8 haploinsufficient mice. Cell genomics, 5(2), 100768.

Wang X, et al. (2025) The Critical Role of APOE+ Macrophages in the Immune Microenvironment and Prognosis of Lung Adenocarcinoma. Journal of cellular and molecular medicine, 29(15), e70731.

Luna Buitrago D, et al. (2025) The loss of microRNA-26b promotes aortic calcification through the regulation of cell-specific target genes. Cardiovascular research, 121(11), 1778.

Akita S, et al. (2025) Increased expression of the PIEZO2 mechanoreceptor in fibroblasts and endothelial cells within the lymphatic and vascular vessels of keloids. The Journal of pathology, 267(1), 105.

Liang L, et al. (2025) Integrative multi-omics analysis reveals the interaction mechanisms between gut microbiota metabolites and ferroptosis in rheumatoid arthritis. Frontiers in immunology, 16, 1608262.

Han Y, et al. (2025) A Human Immuno-Lung Organoid Model to Study Macrophage-Mediated Lung Cell Senescence Upon SARS-CoV-2 Infection. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 12(36), e03932.

Davis JL, et al. (2025) Cocaine perturbs neurodevelopment and increases neuroinflammation in a prenatal cerebral organoid model. Translational psychiatry, 15(1), 94.

Kim H, et al. (2025) PTN activity in quiescent neural stem cells mediates Shank3 overexpression-induced manic behavior. Nature communications, 16(1), 2435.

González-Sastre R, et al. (2025) Protocol for generating human cerebral organoids from two-dimensional cultures of pluripotent stem cells bypassing embryoid body aggregation. STAR protocols, 6(1), 103678.

Zhao R, et al. (2025) Blocking ITGA5 potentiates the efficacy of anti-PD-1 therapy on glioblastoma by remodeling tumor-associated macrophages. Cancer communications (London, England), 45(6), 677.