Resource Summary Report

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ImaGene

RRID:SCR_002178 Type: Tool

Proper Citation

ImaGene (RRID:SCR_002178)

Resource Information

URL: https://www.biodiscovery.com/search/node?keys=Imagene

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Description: Software tool as convolutional neural network to quantify natural selection from genomic data. Supervised machine learning algorithm to predict natural selection and estimate selection coefficients from population genomic data. Can be used to estimate any parameter of interest from evolutionary population genetics model.

Resource Type: software application, software resource, data processing software, data analysis software

Defining Citation: PMID:31757205

Keywords: microarray analysis, machine vision, convolutional neural network, quantify natural selection, genomic data, population genomic data, evolutionary population, genetics model, bio.tools

Funding: Imperial College London ; Politecnico di Milano

Availability: Free, Available for download, Freely available

Resource Name: ImaGene

Resource ID: SCR_002178

Alternate IDs: biotools:ImaGene, OMICS_00841

Alternate URLs: https://github.com/mfumagalli/ImaGene, https://bio.tools/ImaGene

Old URLs: http://www.biodiscovery.com/software/imagene/

License: GNU GPL v3

Record Creation Time: 20220129T080212+0000

Record Last Update: 20250502T055317+0000

Ratings and Alerts

No rating or validation information has been found for ImaGene.

No alerts have been found for ImaGene.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 398 mentions in open access literature.

Listed below are recent publications. The full list is available at <u>NIF</u>.

Mensah GA, et al. (2025) Effect of Kinases in Extracellular Vesicles from HIV-1-Infected Cells on Bystander Cells. Cells, 14(2).

van den Belt S, et al. (2025) Fast and accurate deep learning scans for signatures of natural selection in genomes using FASTER-NN. Communications biology, 8(1), 58.

Mandelli AP, et al. (2024) Vaccination with staphylococcal protein A protects mice against systemic complications of skin infection recurrences. Frontiers in immunology, 15, 1355764.

Labarga A, et al. (2024) Integrative Multi-Omics Analysis for Etiology Classification and Biomarker Discovery in Stroke: Advancing towards Precision Medicine. Biology, 13(5).

Fomo KN, et al. (2024) Neuroretinal Cell Culture Model as a Tool for the Development of New Therapeutic Approaches for Oxidative Stress-Induced Ocular Diseases, with a Focus on Glaucoma. Cells, 13(9).

Streng K, et al. (2024) Sentinel chicken surveillance reveals previously undetected circulation of West Nile virus in the Netherlands. Emerging microbes & infections, 13(1), 2406278.

Park SS, et al. (2024) Distribution and impact of p16INK4A+ senescent cells in elderly tissues: a focus on senescent immune cell and epithelial dysfunction. Experimental & molecular medicine, 56(12), 2631.

Jeffrey MP, et al. (2024) A Lacticaseibacillus rhamnosus secretome induces immunoregulatory transcriptional, functional and immunometabolic signatures in human THP-1 monocytes. Scientific reports, 14(1), 8379.

Amin MR, et al. (2024) Digital Image Processing to Detect Adaptive Evolution. Molecular biology and evolution, 41(12).

Peña-Díaz S, et al. (2024) Glycogen synthase kinase 3 inhibition controls Mycobacterium tuberculosis infection. iScience, 27(8), 110555.

Zhou Y, et al. (2024) Effects of inhaled fine particulate matter on the lung injury as well as gut microbiota in broilers. Poultry science, 103(4), 103426.

Degrelle SA, et al. (2024) Understanding bovine embryo elongation: a transcriptomic study of trophoblastic vesicles. Frontiers in physiology, 15, 1331098.

Jan HM, et al. (2024) Galectin-4 Antimicrobial Activity Primarily Occurs Through its C-Terminal Domain. Molecular & cellular proteomics : MCP, 23(5), 100747.

Zhang J, et al. (2024) Targeting CK2 eliminates senescent cells and prolongs lifespan in Zmpste24-deficient mice. Cell death & disease, 15(5), 380.

El-Shesheny R, et al. (2024) Cross-species spill-over potential of the H9N2 bat influenza A virus. Nature communications, 15(1), 3449.

Sukhadia SS, et al. (2024) Machine Learning Enabled Prediction of Biologically Relevant Gene Expression Using CT-Based Radiomic Features in Non-Small Cell Lung Cancer. Cancer medicine, 13(24), e70509.

Boulet N, et al. (2023) Notch activation shifts the fate decision of senescent progenitors toward myofibrogenesis in human adipose tissue. Aging cell, 22(3), e13776.

Cecil RM, et al. (2023) On convolutional neural networks for selection inference: Revealing the effect of preprocessing on model learning and the capacity to discover novel patterns. PLoS computational biology, 19(11), e1010979.

Chestakova IV, et al. (2023) High number of HPAI H5 virus infections and antibodies in wild carnivores in the Netherlands, 2020-2022. Emerging microbes & infections, 12(2), 2270068.

Viviani V, et al. (2023) OpcA and PorB are novel bactericidal antigens of the 4CMenB vaccine in mice and humans. NPJ vaccines, 8(1), 54.