

Resource Summary Report

Generated by [SPARC SAWG](#) on Aug 8, 2026

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., THIS RESOURCE IS NO LONGER IN SERVICE. Documented on September 16, 2025.

Resource Type: software resource, software application, data analysis software, data processing 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: THIS RESOURCE IS NO LONGER IN SERVICE

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: 20260808T190228+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 405 mentions in open access literature.

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

Zhang M, et al. (2025) Antarctic ice-free terrestrial microbial functional redundancy in core ecological functions and microhabitat-specific microbial taxa and adaptive strategy. Environmental microbiome, 20(1), 70.

Gallo-Soljancic P, et al. (2025) Dynamic Changes in Oxidative Stress and Epigenetic Modifications in the Ventral Mesencephalon and Striatum of MPTP-Treated Mice: Implications for Parkinson's Disease Pathogenesis. Neurotoxicity research, 43(4), 30.

Tran LN, et al. (2025) ConfuseNN: Interpreting convolutional neural network inferences in population genomics with data shuffling. bioRxiv : the preprint server for biology.

Guan C, et al. (2025) Targeting glial fibrillary acidic protein in glaucoma: a monoclonal antibody approach to modulate glial reactivity and neuroinflammation for neuroprotection. Journal of neuroinflammation, 22(1), 159.

Vezzani G, et al. (2025) Isolation of human monoclonal antibodies from 4CMenB vaccinees reveals PorB and LOS as the main OMV components inducing cross-strain protection. Frontiers in immunology, 16, 1565862.

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.

Ye JL, et al. (2025) Development of a microarray based telomerase binding assay reveals unusual binding of a cytochalasin derivative. Scientific reports, 15(1), 19515.

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

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.

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

Witt KE, et al. (2024) Computational Genomics and Its Applications to Anthropological Questions. *American journal of biological anthropology*, 186 Suppl 78(Suppl 78), e70010.

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.

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

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

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.