

Resource Summary Report

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BROCCOLI

RRID:SCR_014093

Type: Tool

Proper Citation

BROCCOLI (RRID:SCR_014093)

Resource Information

URL: <http://www.nitrc.org/projects/broccoli/>

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Description: A software package written in OpenCL (Open Computing Language) that can be used for parallel analysis of fMRI data on a large variety of hardware configurations. If BROCCOLI is running on a GPU, it can perform non-linear spatial normalization to a 1 mm brain template in 4-6 s and run a second level permutation test with 10,000 permutations.

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

Keywords: software package, parallel analysis, fmri, non linear spatial normalization, brain

Availability: Free

Resource Name: BROCCOLI

Resource ID: SCR_014093

Alternate URLs: <https://github.com/wanderine/BROCCOLI/>

License: GNU General Public License

Record Creation Time: 20220129T080319+0000

Record Last Update: 20260801T190831+0000

Ratings and Alerts

No rating or validation information has been found for BROCCOLI.

No alerts have been found for BROCCOLI.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 21 mentions in open access literature.

Listed below are recent publications. The full list is available at [T1D](#).

Zhang RG, et al. (2025) SOI: robust identification of orthologous synteny with the Orthology Index and broad applications in evolutionary genomics. *Nucleic acids research*, 53(7).

He C, et al. (2025) Large-scale Genome Analyses Provide Insights into Hymenoptera Evolution. *Molecular biology and evolution*, 42(10).

Piovani L, et al. (2025) The genomic origin of the unique chaetognath body plan. *Nature*, 645(8082), 964.

Zheng R, et al. (2025) Genomic signatures of SnRKs highlighted conserved evolution within orchids and stress responses through ABA signaling in the *Cymbidium ensifolium*. *BMC plant biology*, 25(1), 277.

Kogay R, et al. (2024) Co-evolution of gene transfer agents and their alphaproteobacterial hosts. *Journal of bacteriology*, 206(2), e0039823.

Hamada HT, et al. (2024) Optogenetic activation of dorsal raphe serotonin neurons induces brain-wide activation. *Nature communications*, 15(1), 4152.

Wittouck S, et al. (2024) SCARAP: scalable cross-species comparative genomics of prokaryotes. *Bioinformatics (Oxford, England)*, 41(1).

Ferlazzo GM, et al. (2023) Genome-wide screening in pluripotent cells identifies Mtf1 as a suppressor of mutant huntingtin toxicity. *Nature communications*, 14(1), 3962.

Healey AL, et al. (2023) Newly identified sex chromosomes in the *Sphagnum* (peat moss) genome alter carbon sequestration and ecosystem dynamics. *Nature plants*, 9(2), 238.

Cicconardi F, et al. (2023) Evolutionary dynamics of genome size and content during the adaptive radiation of *Heliconiini* butterflies. *Nature communications*, 14(1), 5620.

Matthey-Doret C, et al. (2022) Chromosome-scale assemblies of *Acanthamoeba castellanii* genomes provide insights into *Legionella pneumophila* infection-related chromatin reorganization. *Genome research*, 32(9), 1698.

Deutekom ES, et al. (2021) Benchmarking orthology methods using phylogenetic patterns defined at the base of Eukaryotes. *Briefings in bioinformatics*, 22(3).

Xu H, et al. (2021) Comparative Genomics Sheds Light on the Convergent Evolution of Miniaturized Wasps. *Molecular biology and evolution*, 38(12), 5539.

Peng Y, et al. (2021) Combining protein and RNA quantification to evaluate promoter activity by using dual-color fluorescent reporting systems. *Bioscience reports*, 41(9).

He R, et al. (2020) The Combination of Selenium and LED Light Quality Affects Growth and Nutritional Properties of Broccoli Sprouts. *Molecules (Basel, Switzerland)*, 25(20).

Teulière J, et al. (2020) The Distribution of Genes Associated With Regulated Cell Death Is Decoupled From the Mitochondrial Phenotypes Within Unicellular Eukaryotic Hosts. *Frontiers in cell and developmental biology*, 8, 536389.

Vaden KI, et al. (2020) Cingulo-opercular adaptive control for younger and older adults during a challenging gap detection task. *Journal of neuroscience research*, 98(4), 680.

Wylie GR, et al. (2019) Fatigue in Gulf War Illness is associated with tonically high activation in the executive control network. *NeuroImage. Clinical*, 21, 101641.

Grandjean J, et al. (2019) A brain-wide functional map of the serotonergic responses to acute stress and fluoxetine. *Nature communications*, 10(1), 350.

Eklund A, et al. (2014) BROCCOLI: Software for fast fMRI analysis on many-core CPUs and GPUs. *Frontiers in neuroinformatics*, 8, 24.