

Resource Summary Report

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MOSAIK

RRID:SCR_005486

Type: Tool

Proper Citation

MOSAIK (RRID:SCR_005486)

Resource Information

URL: <http://code.google.com/p/mosaik-aligner/>

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Description: A reference-guided assembler comprising of two main modular programs: MosaikBuild and MosaikAligner. MosaikBuild converts various sequence formats into Mosaik's native read format. MosaikAligner pairwise aligns each read to a specified series of reference sequences and produces BAMs as outputs. At this time, the workflow consists of supplying sequences in FASTA, FASTQ, Illumina Bustard & Gerald, or SRF file formats and producing results in the BAM format. Unlike many current read aligners, MOSAIK produces gapped alignments using the Smith-Waterman algorithm. MOSAIK is written in highly portable C++ and currently targetted for the following platforms: Microsoft Windows, Apple Mac OS X, FreeBSD, and Linux operating systems. Other platforms can easily be supported upon request. MOSAIK is multithreaded. If you have a machine with 8 processors, you can use all 8 processors to align reads faster while using the same memory footprint as when using one processor. MOSAIK supports multiple sequencing technologies. In addition to legacy technologies such as Sanger capillary sequencing, our program supports next generation technologies such as Roche 454, Illumina, AB SOLiD, and experimental support for the Helicos Heliscope.

Abbreviations: MOSAIK

Synonyms: mosaik-aligner

Resource Type: software resource

Keywords: next-generation sequencing, alignment, smith-waterman algorithm, c++, computational biology, reference guided aligner

Availability: Free, Freely available

Resource Name: MOSAIK

Resource ID: SCR_005486

Alternate IDs: OMICS_00669

Alternate URLs: <https://sources.debian.org/src/mosaik-aligner/>

License: GNU General Public License, v2+, MIT License

Record Creation Time: 20220129T080230+0000

Record Last Update: 20260808T185835+0000

Ratings and Alerts

No rating or validation information has been found for MOSAIK.

No alerts have been found for MOSAIK.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 87 mentions in open access literature.

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

Silva-Córdoba A, et al. (2026) A single genomic region controls primocane fruiting in tetraploid blackberry. *Genetics*, 233(2).

Posukh OV, et al. (2025) DNA and Histone Modifications Identify a Putative Controlling Element (CE) on the X Chromosome of *Sciara coprophila*. *Cells*, 14(16).

Su X, et al. (2023) Delineating the interplay between oncogenic pathways and immunity in anaplastic Wilms tumors. *Nature communications*, 14(1), 7884.

Yoon H, et al. (2023) Clinical importance of weight gain and associated factors in patients with moderate to severe ulcerative colitis: results from the MOSAIK cohort in Korea. *BMC gastroenterology*, 23(1), 405.

Hejda M, et al. (2022) Water availability, bedrock, disturbance by herbivores, and climate determine plant diversity in South-African savanna. *Scientific reports*, 12(1), 338.

Jo IH, et al. (2022) Quality of Life in Newly Diagnosed Moderate-to-Severe Ulcerative Colitis: Changes in the MOSAIK Cohort Over 1 Year. *Gut and liver*, 16(3), 384.

Martins LF, et al. (2022) Motor neurons use push-pull signals to direct vascular remodeling critical for their connectivity. *Neuron*, 110(24), 4090.

Sjöqvist C, et al. (2021) Ecologically coherent population structure of uncultivated bacterioplankton. *The ISME journal*, 15(10), 3034.

Khandagale A, et al. (2021) Severe congenital neutropenia-associated JAGN1 mutations unleash a calpain-dependent cell death programme in myeloid cells. *British journal of haematology*, 192(1), 200.

Murrieta RA, et al. (2021) Impact of extrinsic incubation temperature on natural selection during Zika virus infection of *Aedes aegypti* and *Aedes albopictus*. *PLoS pathogens*, 17(11), e1009433.

Talavera-Aguilar LG, et al. (2021) Infection, dissemination, and transmission efficiencies of Zika virus in *Aedes aegypti* after serial passage in mosquito or mammalian cell lines or alternating passage in both cell types. *Parasites & vectors*, 14(1), 261.

Van den Hoecke S, et al. (2021) In Vivo Therapy with M2e-Specific IgG Selects for an Influenza A Virus Mutant with Delayed Matrix Protein 2 Expression. *mBio*, 12(4), e0074521.

Norouzi-Beirami MH, et al. (2021) CAMAMED: a pipeline for composition-aware mapping-based analysis of metagenomic data. *NAR genomics and bioinformatics*, 3(1), lqaa107.

Pascall DJ, et al. (2021) Virus Prevalence and Genetic Diversity Across a Wild Bumblebee Community. *Frontiers in microbiology*, 12, 650747.

Liu L, et al. (2021) Genetic consequences of long-term small effective population size in the critically endangered pygmy hog. *Evolutionary applications*, 14(3), 710.

Collins DR, et al. (2021) Functional impairment of HIV-specific CD8⁺ T cells precedes aborted spontaneous control of viremia. *Immunity*, 54(10), 2372.

Ghanbari Maman L, et al. (2020) Co-abundance analysis reveals hidden players associated with high methane yield phenotype in sheep rumen microbiome. *Scientific reports*, 10(1), 4995.

Cappai F, et al. (2020) High-Resolution Linkage Map and QTL Analyses of Fruit Firmness in Autotetraploid Blueberry. *Frontiers in plant science*, 11, 562171.

Joshi VR, et al. (2020) Gp41-targeted antibodies restore infectivity of a fusion-deficient HIV-1 envelope glycoprotein. *PLoS pathogens*, 16(5), e1008577.

da Costa AABA, et al. (2019) Genomic profiling in ovarian cancer retreated with platinum based chemotherapy presented homologous recombination deficiency and copy number imbalances of CCNE1 and RB1 genes. *BMC cancer*, 19(1), 422.