Resource Summary Report

Generated by FDI Lab - SciCrunch.org on Apr 15, 2025

BeetleBase

RRID:SCR_001955
Type: Tool

Proper Citation

BeetleBase (RRID:SCR_001955)

Resource Information

URL: http://beetlebase.org/

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Description: A centralized sequence database and community resource for Tribolium genetics, genomics and developmental biology containing genomic sequence scaffolds mapped to 10 linkage groups, genetic linkage maps, the official gene set, Reference Sequences from NCBI (RefSeq), predicted gene models, ESTs and whole-genome tiling array data representing several developmental stages. The current version of Beetlebase is built on the Tribolium castaneum 3.0 Assembly (Tcas 3.0) released by the Human Genome Sequencing Center at the Baylor College of Medicine. The database is constructed using the upgraded Generic Model Organism Database (GMOD) modules. The genomic data is stored in a PostgreSQL relational database using the Chado schema and visualized as tracks in GBrowse. The genetic map is visualized using the comparative genetic map viewer CMAP. To enhance search capabilities, the BLAST search tool has been integrated with the GMOD tools. Tribolium castaneum is a very sophisticated genetic model organism among higher eukaryotes. As the member of a primitive order of holometabolous insects, Coleoptera, Tribolium is in a key phylogenetic position to understand the genetic innovations that accompanied the evolution of higher forms with more complex development. Coleoptera is also the largest and most species diverse of all eukaryotic orders and Tribolium offers the only genetic model for the profusion of medically and economically important species therein. The genome sequences may be downloaded.

Abbreviations: BEETLEBASE

Resource Type: data or information resource, service resource, analysis service resource, data analysis service, production service resource, database

Defining Citation: PMID:18362917, PMID:17090595

Keywords: red flour beetle, tribolium castaneum, sequence data, gene, mutant, genetic marker, expressed sequence tag, genome, blast, model organism, insect, developmental biology, genomics, genetics, entomology, development, bio.tools, FASEB list

Funding: NCRR P20 RR16475

Availability: Acknowledgement requested

Resource Name: BeetleBase

Resource ID: SCR_001955

Alternate IDs: nif-0000-02599, biotools:beetlebase

Alternate URLs: https://bio.tools/beetlebase

Old URLs: http://bioinformatics.k-state.edu/BeetleBase/, http://www.bioinformatics.ksu.edu/BeetleBase/

Record Creation Time: 20220129T080210+0000

Record Last Update: 20250412T054641+0000

Ratings and Alerts

No rating or validation information has been found for BeetleBase.

No alerts have been found for BeetleBase.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 81 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.

Aase-Remedios ME, et al. (2022) Amphioxus muscle transcriptomes reveal vertebrate-like myoblast fusion genes and a highly conserved role of insulin signalling in the metabolism of muscle. BMC genomics, 23(1), 93.

Moqtaderi Z, et al. (2021) Genome-wide oscillations in G + C density and sequence

conservation. Genome research, 31(11), 2050.

Yang PJ, et al. (2020) Molecular Characterization and Expression Profiling of Nuclear Receptor Gene Families in Oriental Fruit Fly, Bactrocera Dorsalis (Hendel). Insects, 11(2).

Xie J, et al. (2020) A new neuropeptide insect parathyroid hormone iPTH in the red flour beetle Tribolium castaneum. PLoS genetics, 16(5), e1008772.

Gao S, et al. (2020) Insecticidal Activity of Artemisia vulgaris Essential Oil and Transcriptome Analysis of Tribolium castaneum in Response to Oil Exposure. Frontiers in genetics, 11, 589.

Zhang N, et al. (2020) Broad-complex transcription factor mediates opposing hormonal regulation of two phylogenetically distant arginine kinase genes in Tribolium castaneum. Communications biology, 3(1), 631.

Xie J, et al. (2020) Functional analysis of a novel orthologous small heat shock protein (shsp) hsp21.8a and seven species-specific shsps in Tribolium castaneum. Genomics, 112(6), 4474.

Herndon N, et al. (2020) Enhanced genome assembly and a new official gene set for Tribolium castaneum. BMC genomics, 21(1), 47.

Whittle CA, et al. (2020) Absence of a Faster-X Effect in Beetles (Tribolium, Coleoptera). G3 (Bethesda, Md.), 10(3), 1125.

Ding X, et al. (2019) Genome-Wide Identification and Expression Profiling of Wnt Family Genes in the Silkworm, Bombyx mori. International journal of molecular sciences, 20(5).

Xie J, et al. (2019) Characterization and functional analysis of hsp18.3 gene in the red flour beetle, Tribolium castaneum. Insect science, 26(2), 263.

Vizán-Rico HI, et al. (2019) Patterns and Constraints in the Evolution of Sperm Individualization Genes in Insects, with an Emphasis on Beetles. Genes, 10(10).

Jin S, et al. (2019) Expression of teneurin-m/odd Oz during segmentation in the beetle Tribolium castaneum. Gene expression patterns : GEP, 31, 26.

Wu SY, et al. (2019) BmBlimp-1 gene encoding a C2H2 zinc finger protein is required for wing development in the silkworm Bombyx mori. International journal of biological sciences, 15(12), 2664.

Whittle CA, et al. (2019) Evidence of multifaceted functions of codon usage in translation within the model beetle Tribolium castaneum. DNA research : an international journal for rapid publication of reports on genes and genomes, 26(6), 473.

Evans JD, et al. (2018) Genome of the small hive beetle (Aethina tumida, Coleoptera: Nitidulidae), a worldwide parasite of social bee colonies, provides insights into detoxification and herbivory. GigaScience, 7(12).

Strobl F, et al. (2018) A universal vector concept for a direct genotyping of transgenic organisms and a systematic creation of homozygous lines. eLife, 7.

Wang L, et al. (2018) Inhibition of mitochondrial respiration under hypoxia and increased antioxidant activity after reoxygenation of Tribolium castaneum. PloS one, 13(6), e0199056.

Su HA, et al. (2018) Identification, characterization and expression analysis of transient receptor potential channel genes in the oriental fruit fly, Bactrocera dorsalis. BMC genomics, 19(1), 674.

Julio AH, et al. (2017) Multiple resistance to pirimiphos-methyl and bifenthrin in Tribolium castaneum involves the activity of lipases, esterases, and laccase2. Comparative biochemistry and physiology. Toxicology & pharmacology : CBP, 195, 27.