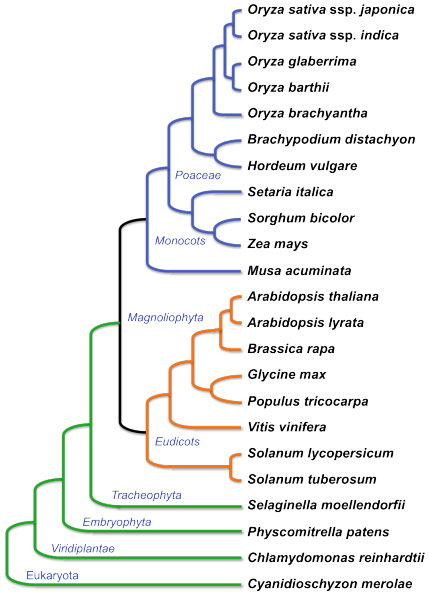


23 complete genomes, including crops, model organisms and lower plants

Genomes

As of January of 2013, Gramene hosts a total of 23 complete and 13 partial genomes. Major and interim releases are used to update both genome builds and the Ensembl genome browser to the latest released versions.

Diversity

The Gramene Genetic Diversity module integrates genotype, phenotype, and germplasm data from several plant species, with an emphasis on rice, maize and *Arabidopsis*. The Diversity module aims to facilitate study of genetic variation within and between populations of plants, and, to help illuminate how genetic diversity relates to observable traits and evolutionary patterns. Gramene Diversity houses a growing number of large-scale SNP chip datasets, and offers tools to query and analyze data, such as GDPC and TASSEL.

Germplasm

Gramene's germplasm database is targeted at plant breeders. It attempts to summarize all of Gramene's information in the context of known stocks. In its initial release, it focuses on rice, only, but it will be expanded in the future.

Genes

The genes database includes descriptions of genes and alleles associated with morphological, developmental and agronomically important phenotypes, variants of physiological characters, biochemical functions and isozymes.

Markers, Sequences and Maps

Gramene holds about 1M plant sequences and genetic markers from GenBank and various projects and important mapping studies in crop research. We add or update our database every release and work closely with plant researchers to publish new data in many useful formats.

Web Services

- DAS for sequence alignments
- Diversity data via TASSEL and GDPC
- Public MySQL server

Funding

Current work is being supported by the NSF Plant Genome Research Resource grant award #1127112.

GRAMENE

An Internet resource for comparative plant genomics that offers genome browsers, genes, proteins, QTL, genetic diversity data, biological pathways, ontologies, and genetic markers and sequences in addition to BLAST, BioMart and FTP interfaces to a wealth of plant data.

Web:

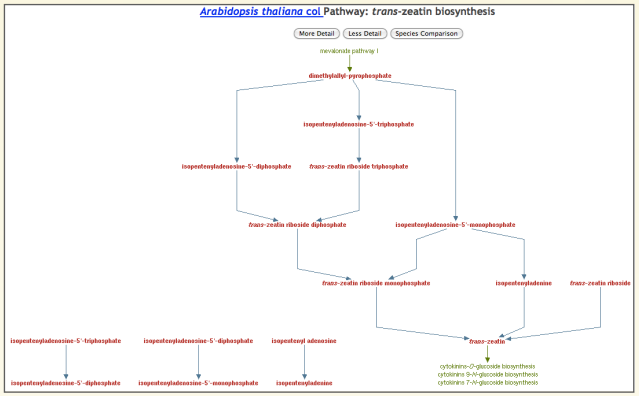
http://www.gramene.org/

Email:

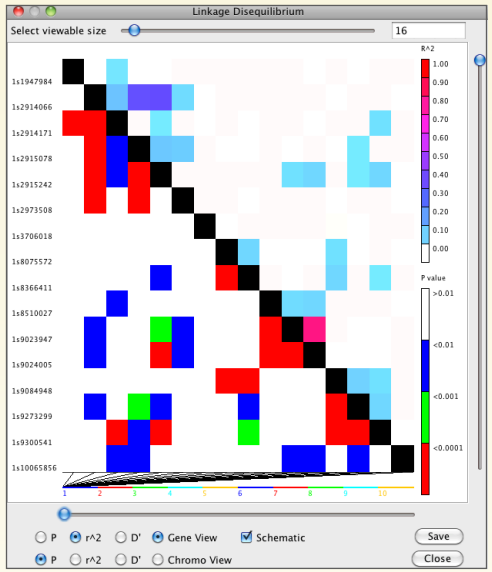
gramene@gramene.org

RSS:

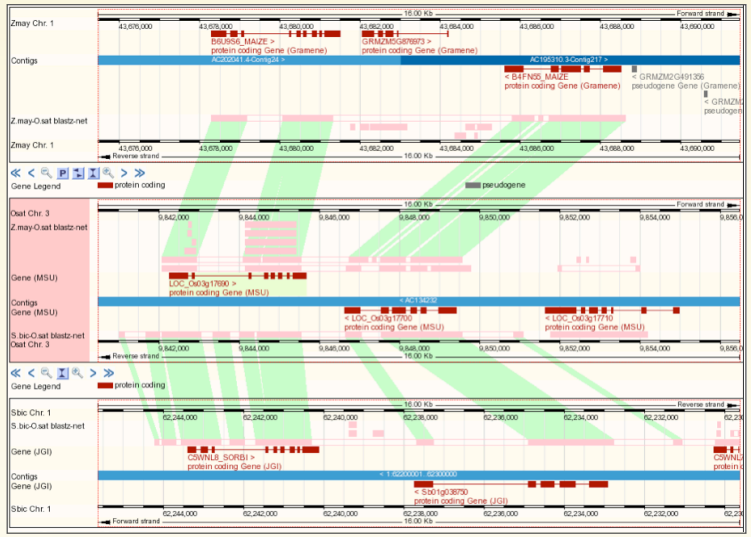
http://news.gramene.org/



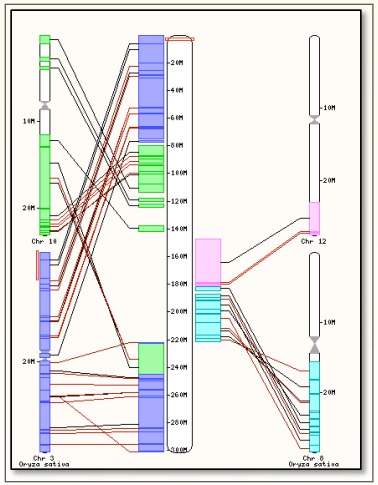
Gramene has biological pathways for 10 plant species, including *Arabidopsis thaliana, Oryza sativa,* and *Zea mays*, and a reference plant pathway database (PlantCyc)



The Tassel program can be used to analyze Gramene's diversity data, generate LD plots, run MLM/GLM analyses, and more

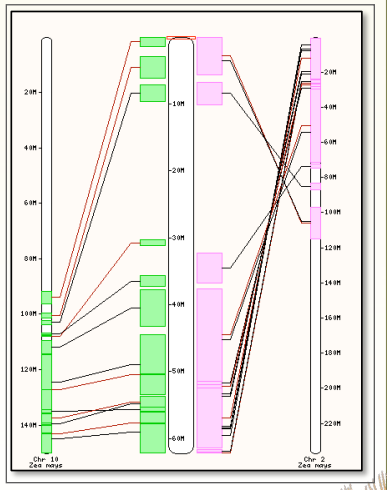


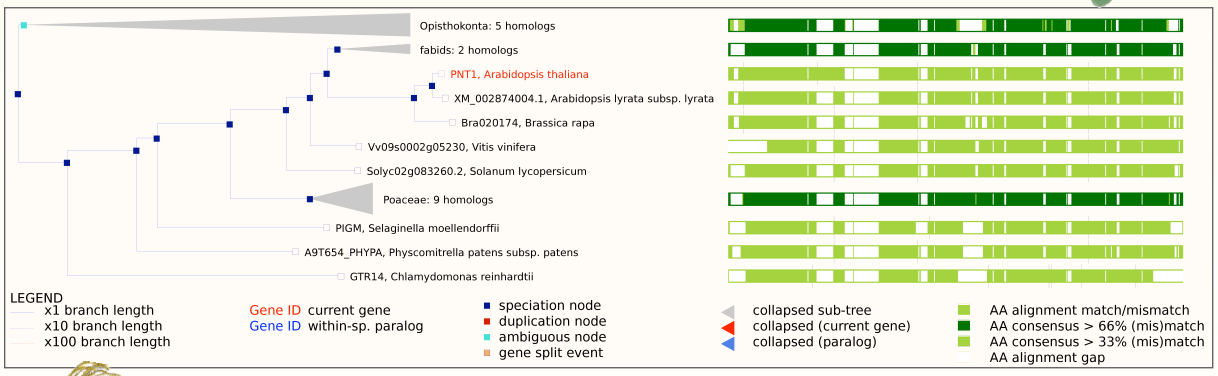
The multi-species view shows alignments in the context of gene annotations across multiple species



Maize *vs* Rice
Cross-browse to orthologous region in other genomes

Sorghum *vs* Maize
Cross-browse to homeologous duplicated region in maize





Phylogenetic tree for *Arabidopsis* gene PNT1, a glycosyltransferase, showing conservation throughout the eukaryotic lineage.

New

GO terms now available in gene trees.

At Gramene you can compare over 200 maps from 29 plant species