



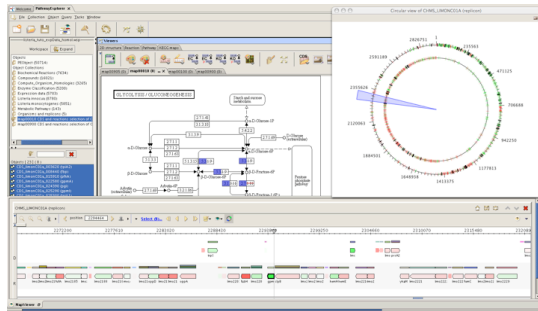
Metabolic Pathway Builder

- Features -

Visualizers & tools for data manipulation

Visualize multiple strains or organisms simultaneously on maps

Visualize chromosomes and plasmids on linear and circular genomic maps



Identify genomic specific regions

Synchronize and zoom to link maps and focus on areas of interest between organisms or strains.

Show genomic features on maps (CDS, tRNAs, rRNAs, signals, GC content and skew etc.)

Visualize the metabolic reactions & pathways in which organism and strain specific genes are implicated

View, sort, filter and export data tables

Visualize and identify specific, common and complementary pathways or sub-pathways between organisms

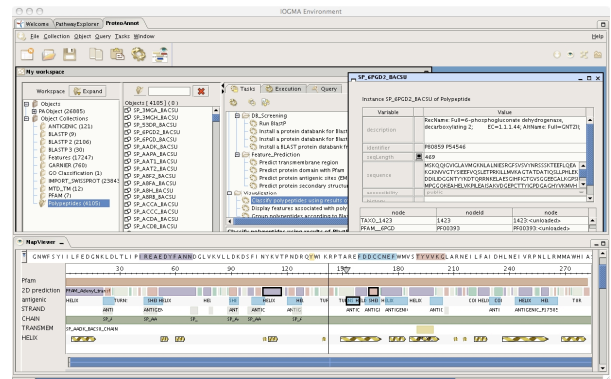
Functional annotation

Predict & confirm ORFs, CDSs

Transfer annotations between CDS

Detect frame shifts

Predict and find Pfam domains



Identify & visualize Pfam domains

Identify and locate transmembrane regions, antigenic sites, and protein secondary structures (EMBOSS methods)

Identify conserved regulatory regions

Predict RNA location

Predict & confirm EC numbers on a set of genes

Add specific identifiers, notes, comments and citations to the genomic features in your data

Comparative annotation

Map & assemble contigs

Compute and visualize SNPs & DIPs

Find syntenies

Compare complete sequences or sets of contigs between multiple genomes

Identify & visualize species or strain-specific genes

Identify genes/CDS that are common to all known strains of a given organism and visualize on genomic maps



Find genes specific to an organism

Extensive Blast options

Visualize and compare specific, common or complementary pathways between organisms

Identify specific or common reactions or compounds

Metabolic pathway analysis and exploration

Predict protein functions & enzymatic activity

Identify & visualize metabolic reactions & pathways in which organism and strain specific genes are implicated

Visualize targeted metabolic pathways using chemical structure searches

Identify and visualize specific, common and complementary pathways between organisms

Predict & identify conserved regulatory regions

Identify, compare & visualize groups of homologous genes

Explore organization of operons and syntenies

Alignment and phylogeny

- ClustalW
- Muscle, MAFT
- Build phylogenetic trees: BIONJ, NJ, UPGMA

Blast and databank searching

Blast – local or distant (BlastN, BlastX, BlastP, tBlastN, tBlastX, psiBlast)

Local or public databank searches – UniProt, Genbank, customized, in-house databanks

Select and add annotations to your local Blast databanks

Store databanks on your desktop or in a shared directory

Contact us if you would like to try Metabolic Pathway Builder

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