The Mycoplasma Genome Database

marrying microscopy and genomics

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Overview

1. The Mycoplasma Genus
2. DOME Webtool
   a. Home Page
   b. Gbrowse
   c. Blast
   d. Image Browse
   e. Image Tagging
3. Database
4. Users
5. Future Research
The Mycoplasma Genus

- Parasitic bacteria in animals and humans
- Mollicute class of bacteria
- Rapid evolution
- Unaffected by penicillin
- Phylogenetic separation
Why Mycoplasma?

- Important for study of pathogenesis
- Small genome makes it candidate
  - for genomic study
  - for finding the “minimal cell”
- Rapid adaptation within enclosed clade
  - Physiology, biochemistry, and unusual codon usage
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DOME
Database of Mycoplasma Evolution

Images

Genomes

Organism

Genotype

Phenotype
BLAST

Sequence File

Sequence

Database

Mycoplasma agalactiae

BLAST
Mycoplasma pneumoniae

Motility
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Mycoplasma genitalium, Mycoplasma pneumoniae
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User Levels

**Experts**
- Edit databases
- Approve image tagging and gene annotation
- Upload images and genomes

**Annotators**
- Annotate genes in Gbrowse
- Tag images
- *pending approval from admins

**General Users**
- Gbrowse feature
- BLAST against our Mycoplasma databases
- View images and their tags
- Search by organism
You can select Multiple files at once using Ctrl(Win) or Command(Mac), or you can drag'n'drop your files on this form.
Future Research

- Converting from GBrowse to Jbrowse for quicker searches
- Providing automatic updating of Chado database for the administrator
- Adding annotator level users for gene and image annotation
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