Wheat3BMine
a data warehouse dedicated to wheat 3B chromosome data

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Plan

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URGI is a research unit in genomics and bioinformatics dedicated to plants and crop parasites.

https://urgi.versailles.inra.fr/

GnpIS is the URGI information system dedicated to genetic and genomic data for plant and especially for wheat.

http://wheat-urgi.versailles.inra.fr/
transPLANT is a European-Union funded e-infrastructure to support computational analysis of genomic data from crop and model plants.

http://www.transplantdb.eu/

- Wheat3BMine: robust data warehouse centered on wheat genomics

The transPLANT project is funded by the European Commission within its 7th Framework Programme, under the thematic area "Infrastructures", contract number 283496.
Why Intermine?

- Open source data warehouse
- Dedicated to integration and analyse of complex biological data
- Fast, flexible and user friendly access to integrated data

http://intermine.github.io/intermine.org/
Data types

Wheat3BMine contains:

- Genomic annotation data (genes, mRNA, transposable elements...)
- Genetic mapping data (QTL, metaQTL)
- Polymorphisms data (markers)
- Phenotyping data (Germplasm, evaluation data)
Wheat3Bmine overview

You can get data using:

- A powerful QuickSearch with wildcard and operators (AND, OR...)
- A QueryBuilder which allow you to make complex queries
- A Region form using genomic positions
- Templates which facilitates data querying
- A dedicated API (Java, Python...)
- Store and analyse your favourite features with Lists
Wheat3Bmine overview

Easy data querying:

✓ An online documentation
✓ A dedicated account to store your favourite queries/lists.

Wheat3BMine Documentation

Wheat3BMine is a data warehouse which contains wheat 3B chromosome data. It allows you to perform complex queries, making lists of your favorite features or search for features using a range of positions.

Wheat3bMine is developed using InterMine:
  - here a video presenting InterMine’s features → http://intermine.github.io/intermine.org/
  - here the technical documentation → https://intermine.readthedocs.org/en/latest/

Wheat3BMine content

Wheat3bMine allows retrieving information/data from:
  - Annotation of the 3b chromosome (mrnas, genes and polypeptides)
  - ontologies like the Gene Ontology
  - polymorphisms data (transposable elements or markers)
  - phenotyping data (accessions, evaluation data)
Online demonstration

http://urgi.versailles.inra.fr/Wheat3BMine/

Use cases:

1. Search for a Dart marker in the **QuickSearch**
2. Find genes located on strand 1 with a function coverage > 80 thanks to the **QueryBuilder**
3. Get all features located on genomic regions of interest and export results in the **Region form**

Find more use cases into the online documentation.
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