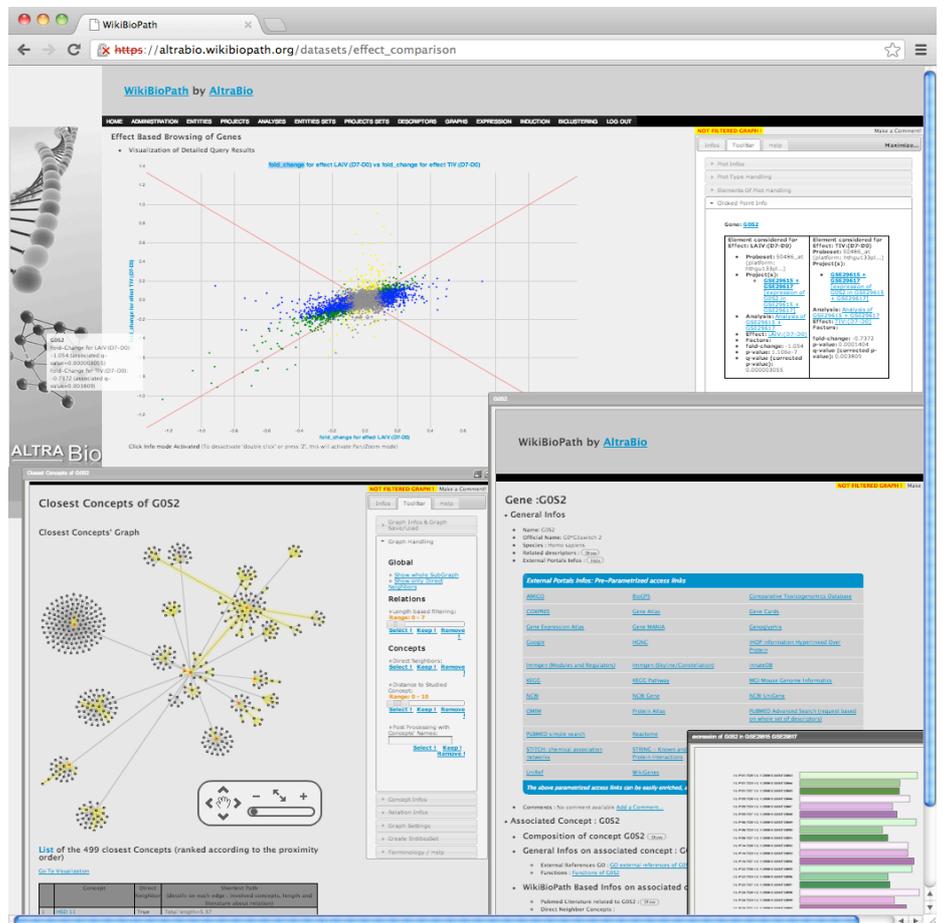


WikiBioPath

BY
ALTRABIO
<http://www.altrabio.com>

<https://altrabio.wikiopath.org>



WikiBioPath, an Integrative Omics Data Analysis Tool

Integration of Knowledge and Data from heterogenous sources is one of the key challenges in academic and industrial life science research. AltraBio* has developed and implemented a range of innovative approaches and proprietary tools that allow integration of experimental data with state-of-the-art knowledge in life sciences. These efforts have led to WikiBioPath.

WikiBioPath is a free web application that combines a graph of life science knowledge with a suite of search and visualization capabilities. WikiBioPath allows users to analyze, integrate, and understand their experimental data (e.g. data derived from gene expression microarrays, etc.).

The backbone of WikiBioPath is formed by a knowledge graph consisting of biological objects and their functional relationships that can be contextualized to particular biological topics of interest.

Using WikiBioPath, one can search for targeted information on genes, proteins and their functional relationships, supported by traceable evidence extracted from unstruc-

tured textual knowledge repositories such as MEDLINE.

WikiBioPath suite of interactive visualization tools for experimental results allows you to:

- quickly identify significant biological entities/entity sets of interest and relevant to the experimental findings,
- contextualize the experimental observations to a specific biological context by applying a filter to the knowledge graph and enriching the graph for the information of interest.

WikiBioPath assists you in biological interpretation and enables you to:

- better understand your experimental results in their context,
- obtain key insights and formulate new hypotheses for the mechanism of action underlying the experimental observations.

WikiBioPath methods and tools have been designed to serve at each step of the research and development process, used by a range of professionals (experimental scientists, bioinformaticians, life science data analysts, etc.) in the concerted effort to turn the vast collection of data (experimental

observations) into strategic and actionable knowledge.

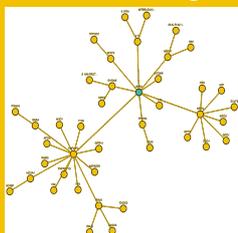
Contact us at: pierre.jouve@altrabio.com

(* AltraBio is a biotechnology company providing comprehensive services and solutions for integrative analysis and exploration of life science data, including molecular data analysis, optimization of pre-clinical and clinical development of candidate compounds, conceptual interpretation of quantitative results, clinical trial design, clinical trial data analysis and database audit, biomarker discovery, life science database and bioinformatics tool design and implementation etc.

WikiBioPath Quick Facts

- High Yield Omics Data Interpretation
- Web Application: [Free Account](#)
request: pierre.jouve@altrabio.com
- Source code release planned
- Collaboration proposals welcome

Text Mining and Knowledge Graph



Unstructured text sources (scientific literature / publications, patents, internal R&D reports / documents, etc.) constitute the bulk of acknowledged biological knowledge.

AltraBio has developed an original solution to extract and structure the information from text repositories (e.g., MEDLINE) and make it accessible to life scientists. AltraBio knowledge base is amenable to intuitive exploration of functional relationships among biological entities such as genes and proteins using the suite of associated search tools.

The updatable knowledge base is created by state-of-the-art TEXT MINING methods and addresses the important issues such as synonym coverage, disambiguation, detection of biological functional relationships etc.

The resulting KNOWLEDGE GRAPH is formed by nodes representing the biological entities (genes/proteins) and edges representing functional relationships among them (e.g., binding, regulation, induction etc.)