Resource Summary Report

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Biological Expression Language Framework

RRID:SCR_008004
Type: Tool

Proper Citation

Biological Expression Language Framework (RRID:SCR_008004)

Resource Information

URL: http://www.selventa.com/technology/bel-framework

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Description: A markup language and a set of technologies for capturing, storing and operationalizing structured biological knowledge. It also makes the knowledge available to other applications, such as the GTP, as a navigable network of biological facts. The BEL Framework assembles biological facts recorded using BEL syntax. BEL is a use-neutral format for unambiguously capturing biological entities and their inter-relationships and associating them with external vocabularies and ontologies. To facilitate context-based analysis, BEL syntax captures causal (e.g., AKT1 phosphorylates SKP2 at serine 72) and correlative relationships (e.g., increased LRG1 levels in serum are correlated with ovarian cancer) along with the experimental context in which the relationships were observed (e.g., AKT1 phosphorylates SKP2 at serine 72 in HeLa cells) and citations in which the peer reviewed knowledge has been reported (Pubmed ID 19270695 illustrates AKT1 phosphorylation of SKP2 and Pubmed ID 20831812 discusses the correlation between LRG1 and ovarian cancer). The BEL Framework provides an environment for managing and operationalizing biological facts stored in the BEL format (BEL document) and consists of the following components: * A user-friendly, web-based, knowledge-capture and knowledge-management application * A compiler that can assemble composite knowledge networks from multiple sources containing BEL statements from the BEL document store * A portable storage format for compiled BEL statements * Application Programming Interfaces (APIs) to allow applications such as the GTP to access and use the knowledge The BEL Framework is unique in that it is designed to deal with the fundamental contradictions and ambiguities associated with assimilating scientific findings from disparate biological experiments and quality issues associated with manual and algorithm-driven collation methods. Following eight years of development and proprietary use, BEL has proven to be an intuitive and effective language for scientists, supporting the creation of a large knowledgebase used in the interpretation of "omics data sets via causal relationship-based analytics. BEL and supporting tools are now being made publicly available to the research community through the introduction of the BEL Web Portal. The BEL Web Portal provides public access to BEL language specifications, documentation,

knowledge representation examples, and BEL software tools.

Synonyms: BEL Framework

Resource Type: markup language, standard specification, software development tool, interchange format, compiler, data or information resource, software application, software resource, narrative resource

Resource Name: Biological Expression Language Framework

Resource ID: SCR_008004

Alternate IDs: nif-0000-07743

Record Creation Time: 20220129T080244+0000

Record Last Update: 20260815T182341+0000

Ratings and Alerts

No rating or validation information has been found for Biological Expression Language Framework.

No alerts have been found for Biological Expression Language Framework.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 1 mentions in open access literature.

Listed below are recent publications. The full list is available at RRID .

Younesi E, et al. (2013) Biomarker-guided translation of brain imaging into disease pathway models. Scientific reports, 3, 3375.