Open Mutation Miner (OMM) Project
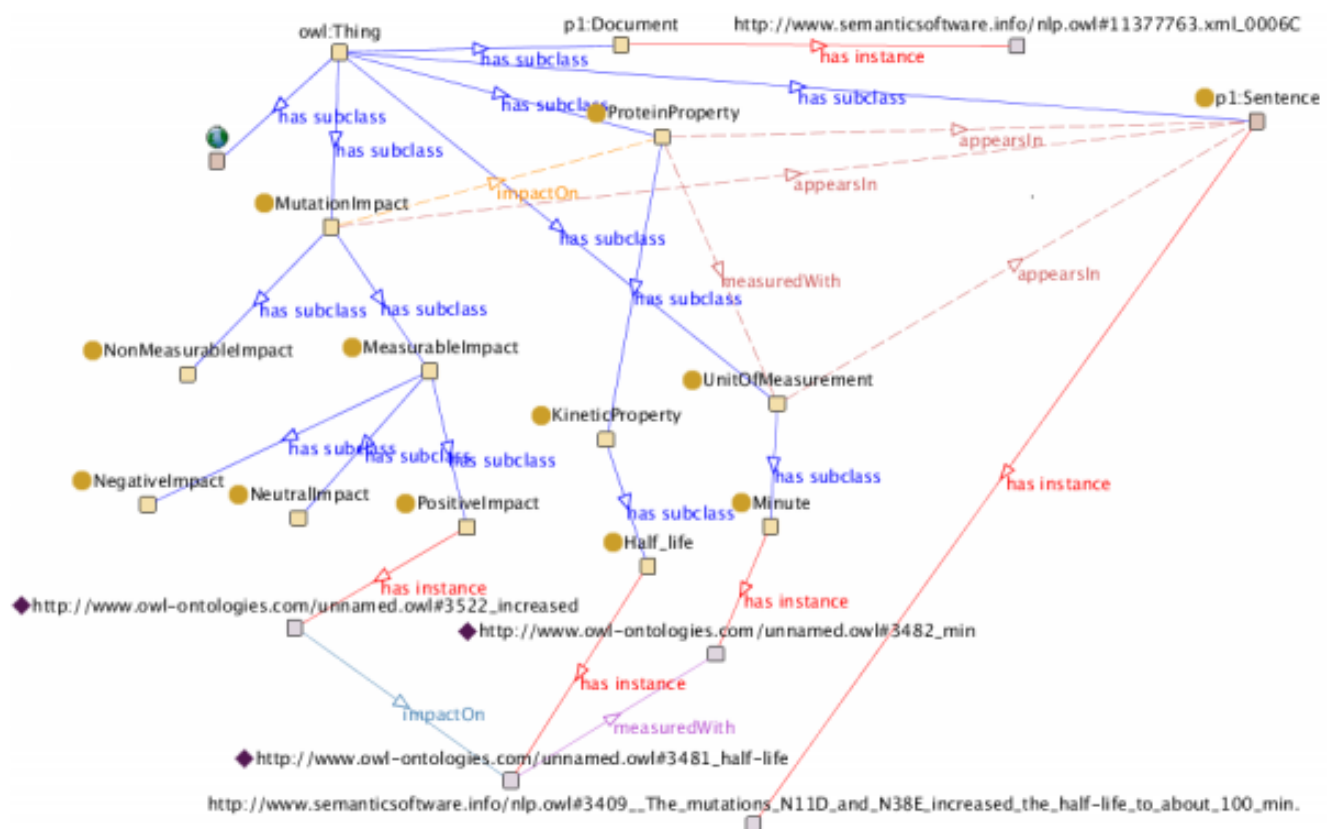
- [Open Mutation Miner](#)
- [Semantic Web](#)
- [Bioinformatics](#)
- [NLP](#)
- [Ontology](#)
- [Text Mining](#)

Overview

OMM Ontology Export: Extracted mutation and impact information, exported through ontology population In the Open Mutation Miner (OMM) project we investigate the combination of NLP, ontologies, and bioinformatics tools for the extraction and analysis of mutations and their impacts from the bibliome. Mutations as sources of evolution have long been the focus of attention in the biomedical literature. Accessing the mutational information and their impacts on protein properties facilitates research in various domains, such as enzymology and pharmacology. However, manually curating the rich and fast growing repository of biomedical literature is expensive and time-consuming. As a solution, we have been working towards text mining approaches for the automatic extraction of mutational information from full-text research papers. While other systems already targeted the detection of single-point mutations (SNPs), our system is the first open source solution that includes detection of mutation impacts, linking them to their respective mutations and recognizing the affected protein properties, in particular kinetic and stability properties together with physical quantities.

The Open Mutation Miner project was started in 2008, as a "reboot" of the older *Mutation Miner* project, which was initiated in 2004 by Christopher J.O. Baker and René Witte. The goal of OMM is to make advanced text mining components, resources, corpora, as well as system tools and services freely available to the research community under standard free/open source licenses.

Project Members

Project supervision

- René Witte

Current Project Members

Nona Naderi
    Organism Tagging, Mutation Impact Analysis

Past Project Members

Thomas Kappler
    Ontology-based Mutation and Organism extraction
Vladislav Ryzhikov
    Mutation NLP Pipeline

Further Information

- The current version of the Open Mutation Miner (OMM) System
- Our online demo query interface to OMM results from the PMC Open Access corpus

Funding

Funding for the Open Mutation Miner project is supplied in part by the Natural Sciences and Engineering Research Council of Canada (NSERC).

Source URL (retrieved on *2026-01-16 01:16*): https://www.semanticsoftware.info/open-mutation-miner-project