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## Mining disease integrated ontology

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### Abstract:

Ontology has become a very vital issue to solve important issues regarding human diseases through data integration of chemical and biological data. Mining such data discovers highly important knowledge about diseases can give an important insight to arrive to new drug targets and assist in personalized medicine. In the current paper, a mining technique for diseases is developed based on integrated ontology and association rule mining algorithm. To perform mining, the semantic web, as a knowledge representation methodology is used to integrate data. In addition, an Ontology Association Rule Mining algorithm (OARM) is developed since existing algorithms cannot be applied because of the ontology nature of data containing several types of relations. To test our performance, prostate cancer data is obtained from NCI, which is related to 279 genes and 89 genes (from prostate cancer pathway).

### Keywords:

Association Rule Mining , Disease-related information ontology , Gene Ontology , Semantic Web

### Published In:

IEEE 12th International Conference on Bioinformatics and Bioengineering, Cyprus , , pp. 40- 45