

# **A critical review of PASBio's argument structures for biomedical verbs**

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## **Abstract**

Propositional representations of biomedical knowledge are a critical component of most aspects of semantic mining in biomedicine. However, the proper set of propositions has yet to be determined. Recently, the PASBio project proposed a set of propositions and argument structures for biomedical verbs. This initial set of representations presents an opportunity for evaluating the suitability of predicate-argument structures as a scheme for representing verbal semantics in the biomedical domain. Here, we quantitatively evaluate several dimensions of the initial PASBio propositional structure repository. We propose a number of metrics and heuristics related to arity, role labelling, argument realization, and corpus coverage for evaluating large-scale PAS proposals; apply them to PASBio 1.0; and conclude that PASBio demonstrates the suitability of PAS for representing aspects of the semantics of biomedical verbs.