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Translation of biologic models to SBML format

ABSTRACT

Systems biology is one of the important fields of study that is helping medicine with its breakthroughs. Amongst other techniques it uses object oriented modelling and corresponding software tools for creation of such models. University of Ljubljana developed a library, named SysBio, as a vital utility for developing biological models. The library was developed using object oriented Modelica programming language, which is relatively rare in the field of systems biology and its related fields. Therefore a translation to a more known format is necessary to ensure the compatibility with the most popular development tools in this field. There are many different types of formats, however SBML (*Systems Biology Markup Language*) is the most widespread format in systems biology. In the following work we present the development of software, which enables the translation from Modelica language to a SBML format. We demonstrate such translation on a simple model of metabolic pathway, which is successfully converted from Modelica to SBML format.

Key words: systems biology, SysBio, SBML format, Modelica, translation, biologic models