

# SBMLeditor, toward SBML level 3 and modularisation

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<http://www.ebi.ac.uk/compneur-srv/SBMLeditor.html>



Menu bar  
and tool bar

SBMLeditor - Qu2003\_CellCycle

File Edit SBW Options



model: model\_0000001 (Qu2003\_CellCycle)

- id: model\_0000001
- metaid: metaid\_0000002
- name: Qu2003\_CellCycle

notes :

This model is according to the paper *Dynamics of the Cell Cycle : Checkpoints, Sizers, and Timers*. Figure6B has been reproduced by both SBMLodeSolver online and MathSBML.

This model originates from BioModels Database: A Database of Annotated Published Models. It is copyright (c) 2005-2006 The BioModels Team.  
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Notes of the model  
element

Creators

**Family:** He  
**Given:** Enuo  
**EMAIL:** enuo@caltech.edu  
**Orgname:** BNMC

Links

is  
<http://www.taxonomy.org/#2759>

hasPart  
<http://www.geneontology.org/#GO:0000075>

bqmodel:is  
<http://www.ebi.ac.uk/biomodels/#BIOMD000000110>

bqmodel:isDescribedBy  
<http://www.pubmed.gov/#14645053>

Annotations of the model  
element

Navigation  
tree

- listOfCompartments
  - compartment: compartment\_0000001 (cell)
- listOfSpecies
  - species: x1 (Inactive Cyclin:CDK complex)
  - species: x (Active Cyclin:CDK complex)
  - species: c0 (Total CDK)
  - species: c (Free CDK)
  - species: z0 (Unphosphorylated CDC25)
  - species: z1 (One-site phosphorylated CDC25)
  - species: z2 (Two-site phosphorylated CDC25)
  - species: w0 (Unphosphorylated wee1)
  - species: w1 (phosphorylated wee1)
  - species: u (Active SKP2 or APC)
  - species: i (Free CKI)
  - species: ix (Cyclin:CDK:CKI complex with CKI unphosphorylated)
  - species: ixp (Cyclin:CDK:CKI complex with CKI phosphorylated)
  - species: y (Free cyclin)
  - species: totalCyclin
- listOfParameters
- listOfRules
- listOfReactions
  - reaction: reaction\_0000001 (Free cyclin synthesis)
  - reaction: reaction\_0000002 (Cyclin binding with CDK)
  - reaction: reaction\_0000003 (Cyclin degradation)
  - reaction: reaction\_0000004 (z0 phosphorylation)
  - reaction: reaction\_0000005 (x phosphorylation)
  - reaction: reaction\_0000006 (z1 phosphorylation)

- Java Object based on UML definitions of the SBML elements. → Several parsers possible for the XML file, currently Apache Digester, libSBML and partially Castor.
- User extensions/plug-in (first example on multistate annotations, presented just before by Nicolas Le Novère)

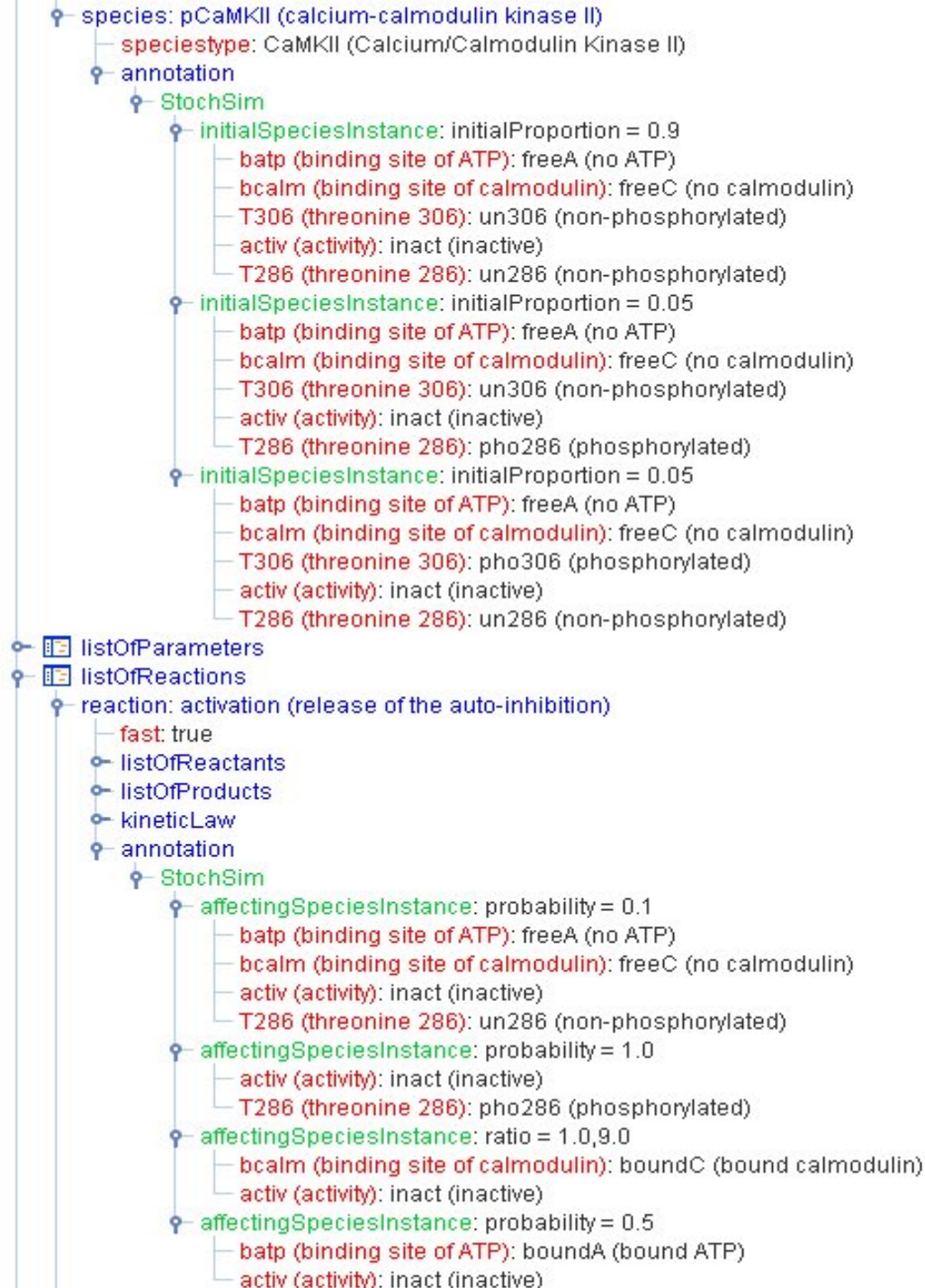


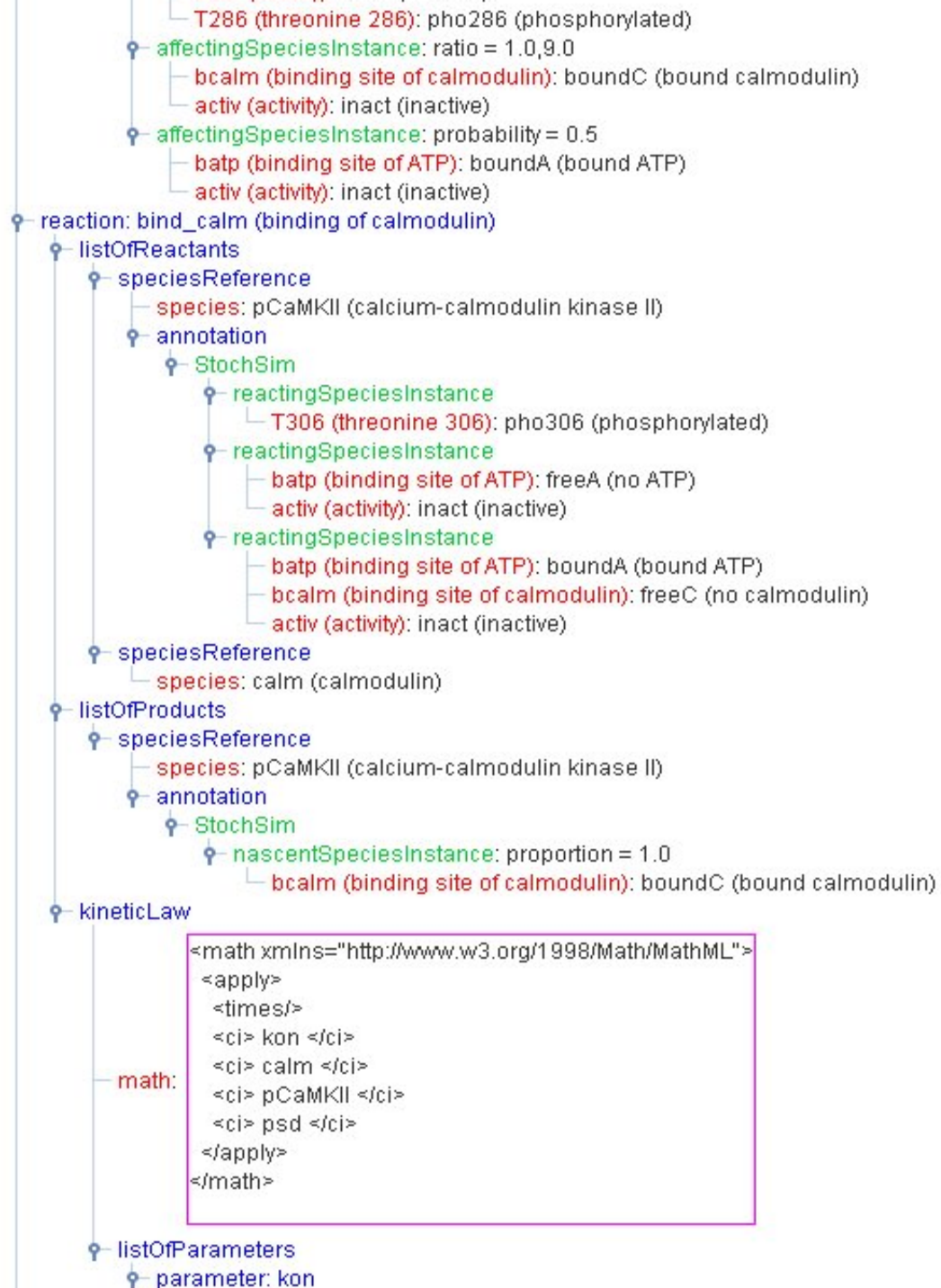
**Goal** : Facilitate the addition of new/modified SBML element by us or external users without having to touch to core.

- Help to support SBML level 3 proposals and/or proprietary annotation that we have no time to support.
- Basic actions add/edit/remove/display define in an XML file.
- Possibility to modify the general SBMLeditor interface









# Thanks

Funded by:

