

DNA Damage & DNA Repair module

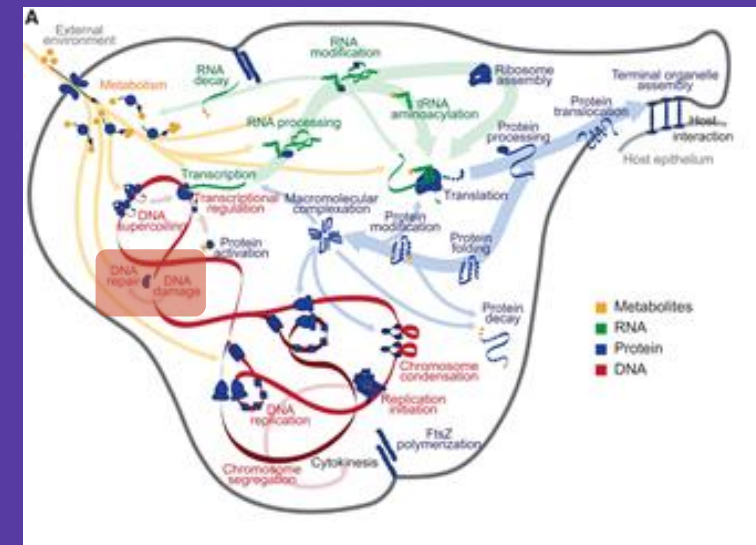
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Whole-cell summer school, 9th-13th March – Rostock | Germany

BioModels Database is a repository of computational models of biological processes. Models described from literature are manually curated and enriched with cross-references. All models are provided in the Public Domain. More information about BioModels Database can be found in the [FAQ](#).

Models published in the literature

Browse

[Manually curated](#)
(548 models)



[Non curated](#)
(664 models)

Alternative access

Gene Ontology
classification
(new)



Gene Ontology
tree



Advanced search

Models automatically generated from pathway resources ([Path2Models](#))*Browse*

[Metabolic](#) (112,898 models)
[Non-metabolic](#) (27,531 models)
[Whole genome metabolism](#) (2,641 models)

Alternative access

Taxonomy



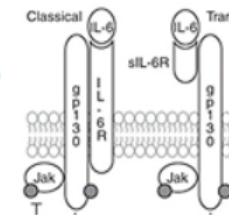
Dedicated search

Model of the month



September, 2014

A mathematical model describing the inhibition of IL6 signalling in Crohn's Disease is presented here. Several antibody ligands were simulated with different targets and their varied effects upon IL6 signalling is observed.



[Access this model of the month.](#)

News




 **16 Sep 2014** [28th BioModels Database release](#)

The resource now provides a total of 144,282 models and introduces additional features and an easier access to its content thanks to an updated homepage. See the [release notes](#) for more details.

 **8 August 2014** [Updated homepage, model access and display](#)

[BioModels' homepage](#) has been updated to provide a clearer view of the content of the repository. Also, a [GO classification](#) is a new browsing tool for models from the literature. Finally, various updates have been implemented for [non-curated models](#).

 **25 April 2014** [Our recent diabetes review most downloaded in April on CPT:PSP](#)

Our recent review "[The impact of mathematical modeling on the understanding of diabetes and related complications](#)" has been the most downloaded this month from the [CPT: Pharmacometrics & Systems Pharmacology](#) website!

Initial Plan before the start of the summer school

- Identify interface entities (input/output) of the two modules
- Extraction of reactions and building SBGN (using Cell designer/Vanted) map.
- List ChEBI, EC and GO term ids that is needed for annotating the model.

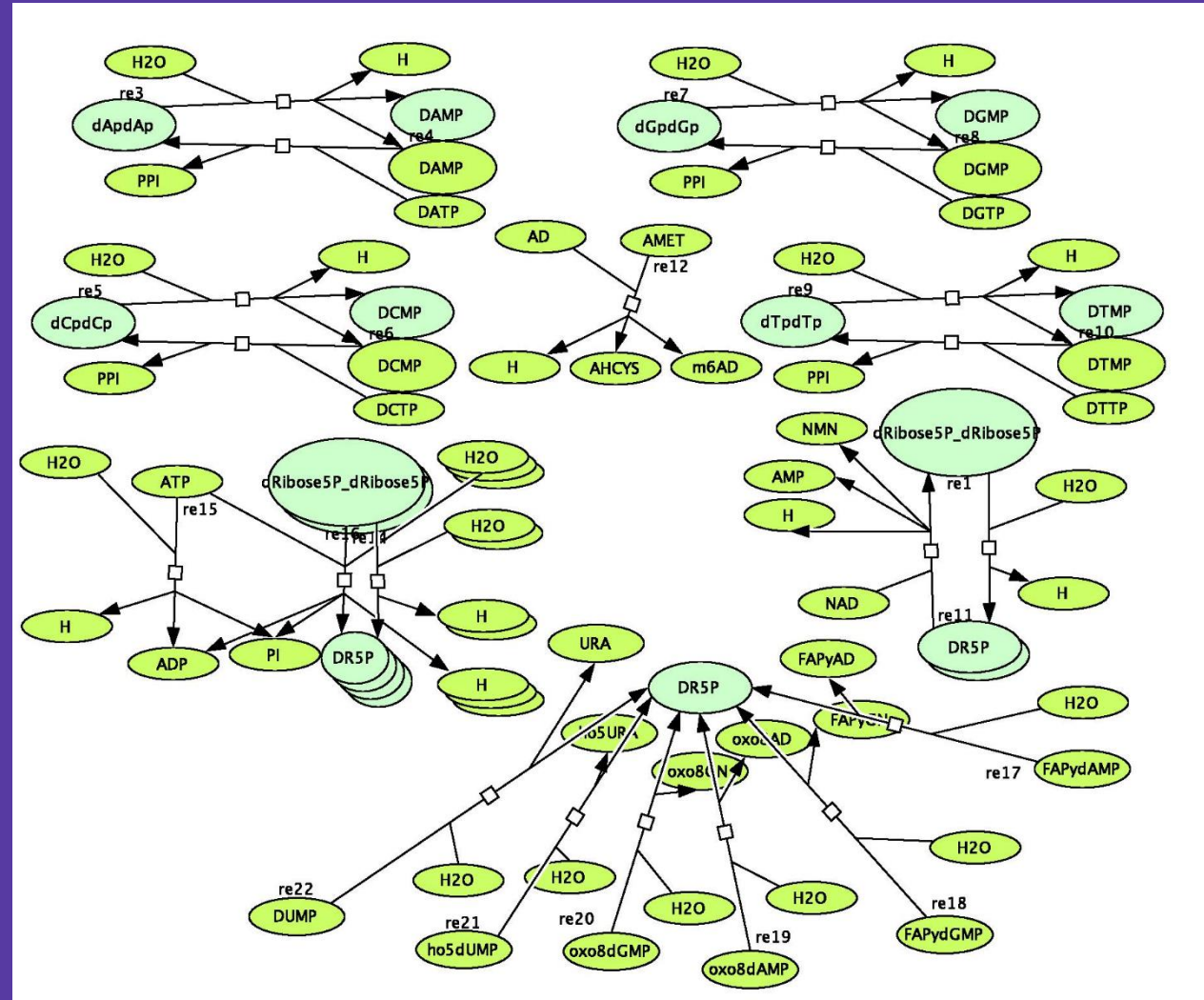
So far...

- Extracted information associated with DNA Damage and DNA Repair modules from Table S3.
- Arne developed a matlab code to extract the information from the table.
- Generated a template SBML and SBGN map for both the modules.

SBGN

DNA Repair module – SBGN map

Working on fixing errors



Things not clear...

- Values of variables and parameters, and i/os not clear
- Poisson distribution (random numbers) – SBML array and distrib package – What tools handle these packages?
- SED-ML – sequential simulation

More to learn... during the workshop

