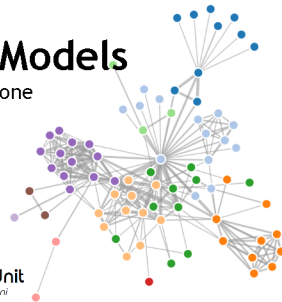


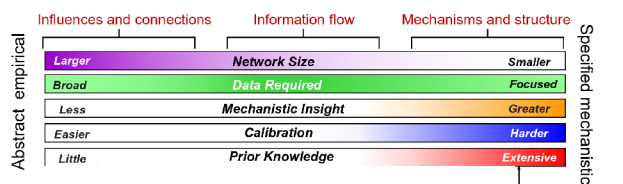
# Continuous Models

Alberto Calderone



Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

## Modelling Spectrum



Kinetic (ODE)  
Models

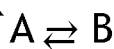
by Peter Sorger

Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

## Reaction Kinetics

Reaction kinetics is the study of how fast chemical reactions take place, what factors influence the rate of reaction, and what mechanisms are responsible.

A chemical reaction is usually depicted in the form of a chemical equation which describes the transformation of one or more reactants into one or more products.

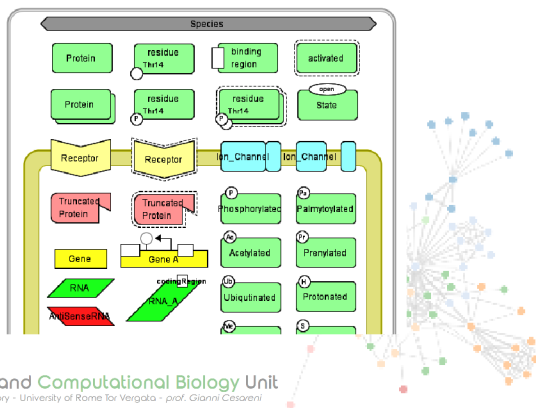


Equilibrium if forward rate equals backward rate

Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

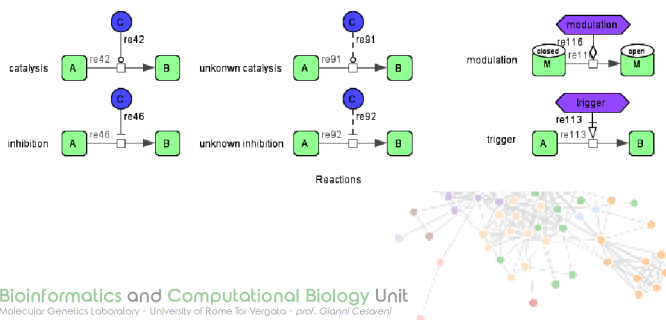


## Reactions Representation



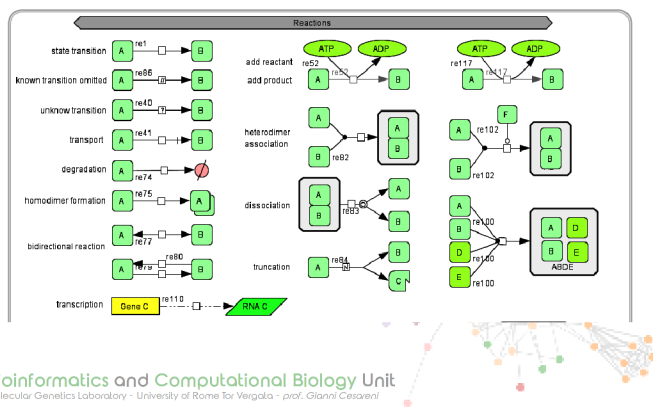
Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

## Reactions Representation



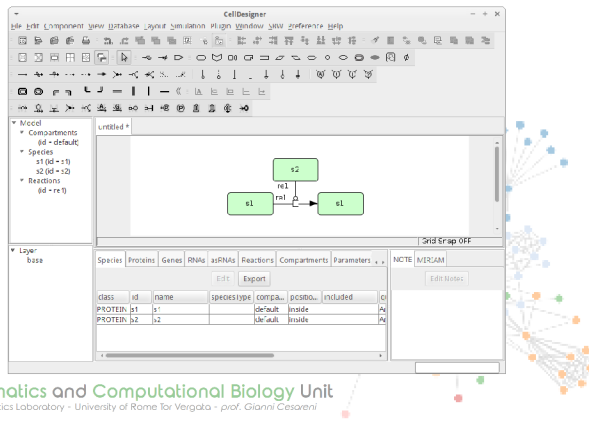
Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

## Reactions Representation



Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

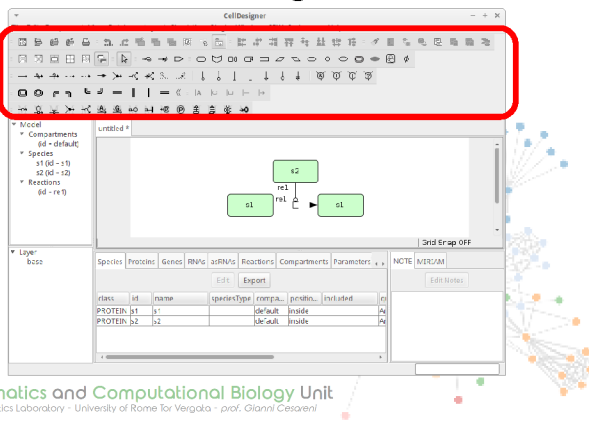
# CellDesigner



Bioinformatics and Computational Biology Unit

Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesaroni

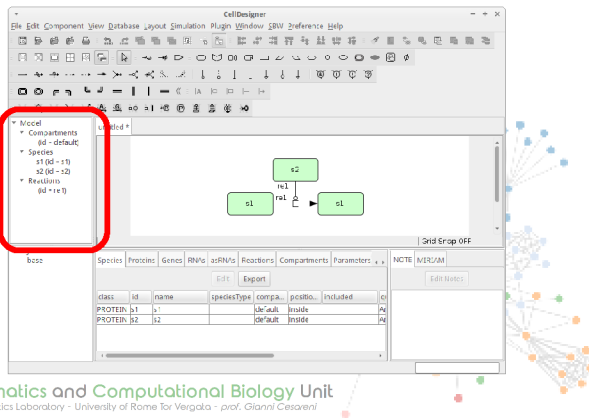
# CellDesigner



Bioinformatics and Computational Biology Unit

Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesaroni

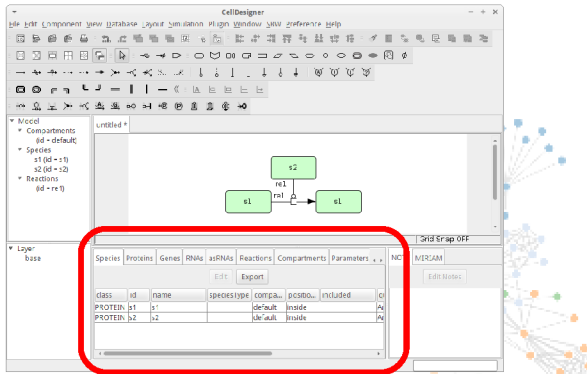
# CellDesigner



Bioinformatics and Computational Biology Unit

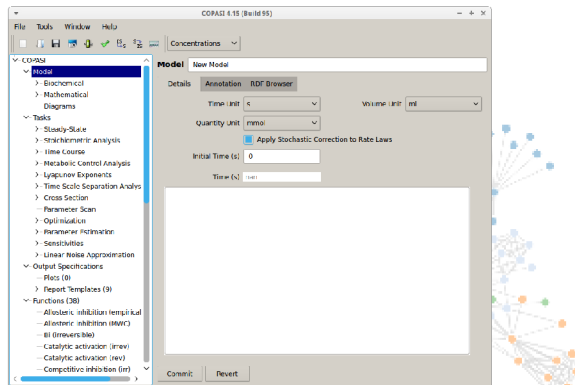
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesaroni

# CellDesigner



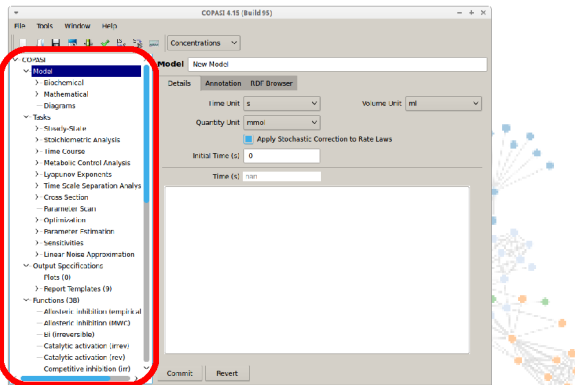
Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

# COPASI



Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

# COPASI



Bioinformatics and Computational Biology Unit  
Molecular Genetics Laboratory - University of Rome Tor Vergata - prof. Gianni Cesareni

# COPASI

