

# Computational modelling of cellular level metabolism

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## Abstract

The quest for understanding cellular level metabolic processes stems from the fundamental role of metabolism in many physiological and diseased conditions. Understanding the metabolic processes behind different conditions can ultimately help, e.g., to prevent or find cures for metabolic related diseases or conditions, such as diabetes.

Computational models for cellular level metabolism can give important insight in understanding the metabolic processes. Cellular level metabolic models typically contain a large number of parameters, whereas the data is usually scarce and may have large variance. The inverse problem is often identifying the large set of parameters and/or the state of the system using the scarce data and available prior information.

In this talk, some models and computational challenges for cellular level metabolism are outlined and a practical approach for modelling by developing an integrated simulation and research tool is introduced.

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