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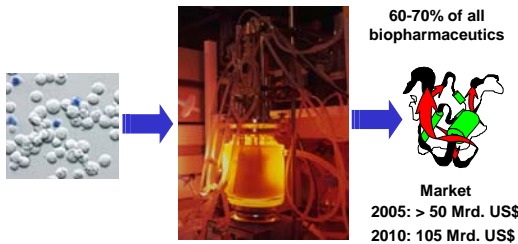


Project term:
Financed by:

2008 – 2011
 BMBF (Forsys Partner)

Description:

Cell culture products are the major sources of new medicines and diagnostics. The pipeline for new biopharmaceutical therapeutics targets a huge number of diseases, most of them for cancer therapy, infectious diseases, autoimmune diseases, or AIDS/HIV. To date, these therapeutics are expressed by cell lines established for a long time, especially by CHO. Due to needs for cost reduction, higher productivity, cell source documentation, more appropriate glycosylation pattern etc., new production cell lines are entering the market.

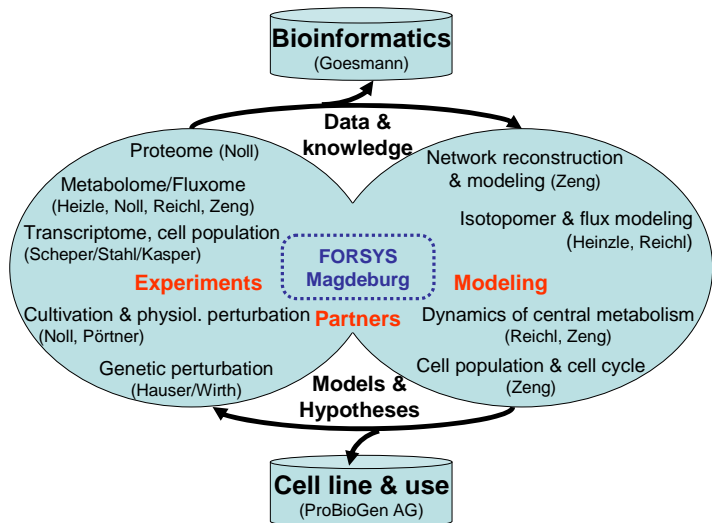


More efficient cell line and process from systems biology!

This project aims at adaptation and development of systems biological methods and tools for the mathematical modeling and analysis of key metabolic and regulatory processes in mammalian cell culture. Specifically, the dynamics of central metabolism and the cell cycle during growth and product formation of a novel human cell line will be studied so that the performance of cells under varied physiological conditions or with genetic modifications can be modeled and eventually predicted.

References

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 F. He, A.-P. Zeng (2006) *BMC Bioinformatics* 7:69
 R. Pörtner, Th. Schäfer Th (1996) *J. Biotechnol.* 49: 119-135



Work-packages and their interaction

The project partners

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