

Jens Nielsen CV

Publications, Presentations and Affiliated Researchers

KEY PUBLICATIONS	2
COMPLETE LIST OF PUBLICATIONS	6
RESEARCH PAPERS IN INTERNATIONAL JOURNALS WITH PEER REVIEW	6
REVIEWS IN INTERNATIONAL JOURNALS WITH PEER REVIEW	33
COMMENTARIES, EDITORIALS AND SHORT PAPERS	36
BOOKS	37
BOOK CHAPTERS	38
PAPERS IN CONFERENCE PROCEEDINGS	39
OTHER PUBLICATIONS	40
LIST OF PRESENTATIONS	42
INVITED CONFERENCE PRESENTATIONS	42
WEBINARS AND OTHER WEB-BASED TALKS (NOT COMPLETE)	47
INVITED SEMINAR PRESENTATIONS (NOT COMPLETE)	47
LIST OF CONFERENCES CO-ORGANIZED	51
CHAIR/CO-CHAIR OF ORGANIZING COMMITTEE (<i>NOT COMPLETE</i>)	51
MEMBER OF ORGANIZING COMMITTEE (<i>NOT COMPLETE</i>)	51
MEMBER OF SCIENTIFIC/ADVISORY COMMITTEE (<i>NOT COMPLETE</i>)	51
RESEARCH SUPERVISION	53
CURRENT POST DOCTORAL RESEARCHERS	53
FORMER POST DOCTORAL RESEARCHERS	53
CURRENT PHD STUDENTS (MAIN SUPERVISOR)	54
GRADUATED PHD STUDENTS (MAIN SUPERVISOR)	55
GRADUATED PHD STUDENTS (EXAMINER)	56
GRADUATED PHD STUDENTS (CO-SUPERVISOR)	56
FORMER VISITING PHD STUDENTS (CO-SUPERVISOR)	57
OTHER FORMER AFFILIATED RESEARCHERS AND STAFF	57

Key Publications

Metabolic Engineering

1. S. Ostergaard; L. Olsson; M. Johnston; **J. Nielsen** (2000) Increasing galactose consumption by *Saccharomyces cerevisiae* through metabolic engineering of the *GAL* gene regulatory network. *Nature Biotechnol.* **18**:1283-1286
2. K.-K. Hong; W. Vongsangnak; G.N. Vemuri; **J. Nielsen** (2011) Unravelling evolutionary strategies of yeast for improving galactose utilization through integrated systems level analysis. *Proc. Nat. Acad. Sci. USA* **108**:12179-12184
3. L. Caspeta; **J. Nielsen** (2013) Economic and environmental impacts of microbial biodiesel. *Nature Biotechnol.* **31**:789-793
4. J.C. Qin; Y.J. Zhou; A. Krivoruchko; M. Huang; L. Liu; S. Khoomrung; V. Siewers; B. Jiang; **J. Nielsen** (2015) Modular pathway rewiring of *Saccharomyces cerevisiae* enables high-level production of L-ornitine. *Nature Com.* **6**:8224
5. M. Huang; Y. Bai; S.L. Sjostrom; B.M. Hallström; Z. Liu; D. Petranovic; M. Uhlen; H.N. Joensson; H. Andersson-Svahn; **J. Nielsen** (2015) Microfluidic screening and whole genome sequencing identifies mutations associated with improved protein secretion by yeast. *Proc. Nat. Acad. Sci. USA* **112**:E4689-96
6. Y. Zhou; N. A. Buijs; Z. Zhu; J. Qin; V. Siewers; **J. Nielsen** (2016) Production of fatty acid derived oleochemicals and biofuels by synthetic yeast cell factories. *Nature Com.* **7**:11709
7. Y. Zhou; N.A. Buijs; Z. Zhu; D.O. Gomez; A. Boonsombuti; V. Siewers; **J. Nielsen** (2016) Harnessing peroxisomes for production of fatty acid-derived biofuels and chemicals in yeast. *J. Am. Chem. Soc.* **138**:15368-15377
8. Z. Zhu; Y.J. Zhou; A. Krivoruchko; M. Grninger; Z.K. Zhao; **J. Nielsen** (2017) Expanding the product portfolio of fungal type I fatty acid synthases. *Nature Chem. Biol.* **13**:360-362
9. M. Huang; J. Bao; B.M. Hallström; D. Petranovic; **J. Nielsen** (2017) Efficient protein production by yeast requires global tuning of metabolism. *Nature Com.* **8**:1131
10. R. Ferreira; P.G. Teixeira; V. Siewers; **J. Nielsen** (2018) Redirection of lipid flux towards phospholipids in yeast increases fatty acid turnover and secretion. *Proc. Nat. Acad. Sci. USA* **115**:1262-1267
11. Z. Dai; M. Huang; Y. Chen; V. Siewers; **J. Nielsen** (2018) Global rewiring of cellular metabolism renders *Saccharomyces cerevisiae* Crabtree-negative. *Nature Com.* **9**:3059
12. T. Yu; Y. Zhou; M. Huang; Q. Liu; R. Pereira; F. David; **J. Nielsen** (2018) Reprogramming yeast metabolism from alcoholic fermentation to lipogenesis. *Cell* **174**:1-10
13. M. Huang; G. Wang; J. Qin; D. Petranovic; **J. Nielsen** (2018) Engineering the protein secretory pathway of *Saccharomyces cerevisiae* enables improved protein production. *Proc. Nat. Acad. Sci. USA* **115**:E11025-E11032
14. Y. Liu; Q. Liu; A. Krivoruchko; S. Khoomrung; **J. Nielsen** (2020) Engineering yeast phospholipid metabolism for *de novo* oleoylethanolamide production. *Nature Chem. Biol.* **16**:197-205
15. Z. Zhu; Y. Hu; P.G. Teixeira; R. Pereira; Y. Chen; V. Siewers; **J. Nielsen** (2020) Multidimensional engineering of *Saccharomyces cerevisiae* for efficient synthesis of medium-chain fatty acids. *Nature Cat.* **3**:64-74
16. J. Qin, A. Krivoruchko; B. Ji; Y. Chen; M. Kristensen, E. Özdemir; J. D. Keasling; M.K. Jensen; **J. Nielsen** (2021) Engineering yeast metabolism for the discovery and production of polyamines and polyamine analogues. *Nature Cat.* **4**:498-509
17. X. Li; Y. Wang; G. Lo; Q. Liu; R. Pereira; Y. Chen; **J. Nielsen** (2021) Metabolic network remodeling enhances yeast's fitness on xylose using aerobic glycolysis. *Nature Cat.* **4**:783-796
18. Q. Liu; Y. Liu; G. Li; O. Savolainen; Y. Chen; **J. Nielsen** (2021) *De novo* biosynthesis of bioactive isoflavonoids by engineered yeast cell factories. *Nature Com.* **2**:6085
19. N. Qin; L. Li; X. Ji; R. Pereira; Y. Chen; S. Yin; C. Li; X. Wan; D. Qiu; J. Jiang; H. Lou; Y. Zhang; G. Dong; Y. Zhang; S. Shi; H.J. Jessen; J. Xia; Y. Chen; C. Larsson; T. Tan; Z. Liu; **J. Nielsen** (2023) Flux regulation through glycolysis and respiration is balanced by inositol pyrophosphates. *Cell* **186**:748-76

Systems Biology

1. J. Förster; I. Famili; P. Fu; B. Ø. Palsson; **J. Nielsen** (2003) Genome-scale reconstruction of the *Saccharomyces cerevisiae* metabolic network. *Genome Res.* **13**:244-253
2. I. Borodina; P. Krabben; **J. Nielsen** (2005) Genome-scale analysis of *Streptomyces coelicolor* A3(2) metabolism. *Genome Res.* **15**:820-829
3. K. R. Patil, **J. Nielsen** (2005) Uncovering transcriptional regulation of metabolism by using metabolic network topology. *Proc. Nat. Acad. Sci.* **102**:2685-2689
4. M. R. Andersen; M. L. Nielsen; **J. Nielsen** (2008) Metabolic model integration of the bibliome, genome, metabolome and reactome of *Aspergillus niger*. *Mol. Systems Biol.* **4**:178
5. M. R. Andersen; W. Vongsangnak; G. Panagiotou; M. P. Salazar; L. Lehmann; **J. Nielsen** (2008) A trispecies *Aspergillus* microarray: Comparative transcriptomics of three *Aspergillus* species. *Proc. Nat. Acad. Sci.* **105**:4387-4392
6. R. Agren; L. Liu; S. Shoaie; W. Vongsangnak; I. Nookaew; **J. Nielsen** (2013) The RAVEN toolbox and its use for generating a genome-scale metabolic model for *Penicillium chrysogenum*. *PLoS Comp. Biol.* **9**:e1002980
7. L. Caspeta; Y. Chen; P. Ghiaci; A. Feizi; S. Buskov; B.M. Hallström; D. Petranovic; **J. Nielsen** (2014) Altered sterol composition renders yeast thermotolerant. *Science* **346**:75-78
8. J.C. Nielsen; S. Grijseels; S. Prigent; B. Ji; J. Dainat; K.F. Nielsen; J.C. Frisvad; M. Workman; **J. Nielsen** (2017) Global analysis of biosynthetic gene clusters reveals vast potential of secondary metabolite production in *Penicillium* species. *Nature Microbiol.* **2**:17044
9. P.-J. Lahtvee; B.J. Sanchez; A. Smialowska; S. Kasvandik; I. Elsemman; F. Gatto; **J. Nielsen** (2017) Absolute quantification of protein and mRNA abundances demonstrate variability in gene-specific translation efficiency in yeast. *Cell Systems* **4**:495-504

10. B.J. Sanchez; C. Zhang; A- Nilsson; P.-J. Lahtvee; E. Kerkhoven; **J. Nielsen** (2017) Improving the phenotype predictions of a yeast genome-scale metabolic model by incorporating enzymatic constraints. *Mol. Systems Biol.* **13**:935
11. Y. Chen; **J. Nielsen** (2019) Energy metabolism controls phenotypes by protein efficiency and allocation. *Proc. Nat. Acad. Sci. USA* **116**:17592-17597
12. H. Lu; F. Li; B.J. Sanchez; Z. Zhu; G. Li; I. Domenzain; S. Marcisaukas; P.M. Anton; D. Lappa; C. Lieven; M.E. Beber; N. Sonnenschein; E.J. Kerkhoven; **J. Nielsen** (2019) A consensus *S. cerevisiae* metabolic model Yeast8 and its ecosystem for comprehensively probing cellular metabolism. *Nature Com.* **10**:3586
13. R. Yu; K. Campbell; R. Pereira; J. Björkeröth; Q. Qi; E. Vorontsov; C. Sihlbom; **J. Nielsen** (2020) Nitrogen limitation reveals large reserves in metabolic and translational capacities of yeast. *Nature Com.* **11**:1881
14. K. Campbell; J. Westholm; S. Kasvendik; F. Di Bartolomeo; M. Mormino; **J. Nielsen** (2020) Building blocks are synthesized on demand during the yeast cell cycle. *Proc. Nat. Acad. Sci. USA* **117**:7575-7583
15. F. Di Bartolomeo; C. Malina; K. Campbell; M. Mormini; J. Fuchs; E. Vorontsov; C.M. Gustafsson; **J. Nielsen** (2020) Absolute yeast mitochondrial proteome quantification reveals trade-off between biosynthesis and energy generation during diauxic shift. *Proc. Nat. Acad. Sci. USA* **117**:7524-7535
16. J. Björkeröth; K. Campbell; C. Malina; R. Yu; F. Di Bartolomeo; **J. Nielsen** (2020) Proteome re-allocation from amino acid biosynthesis to ribosomes enables yeast to grow faster in rich media. *Proc. Nat. Acad. Sci. USA* **117**:21804-21812
17. G. Li; Y. Hu; J. Zrimec; H. Lou; H. Wang; A. Zelezniak; B. Ji; **J. Nielsen** (2021) Bayesian genome scale modeling identifies thermal determinants of yeast metabolism. *Nature Com.* **12**:190
18. Y. Chen; F. Li; J. Mao; Y. Chen; **J. Nielsen** (2021) Yeast optimizes metal utilization based on metabolic network and enzyme kinetics. *Proc. Nat. Acad. Sci. USA* **118**:e2020154118
19. J. Geng; B. Ji; G. Li; F. Lopez-Isunza; **J. Nielsen** (2021) CODY enables quantitatively spatiotemporal predictions on in vivo gut microbial variability induced by diet-intervention. *Proc. Nat. Acad. Sci. USA* **118**:e2019336118
20. Y. Chen; **J. Nielsen** (2021) In vitro turnover numbers do not reflect in vivo activities of yeast enzymes. *Proc. Nat. Acad. Sci. USA* **118**:e2108391118
21. H. Lu; F. Li; L. Yuan; I. Domenzain; R. Yu; H. Wang; G. Li; Y. Chen; B. Ji; E.J. Kerkhoven; **J. Nielsen** (2021) Yeast metabolic innovations emerged via expanded metabolic network and gene positive selection. *Mol. Systems Biol.*, in press
22. G. Li; Y. Hu; J. Zrimec; H. Lou; H. Wang; A. Zelezniak; B. Ji; **J. Nielsen** (2021) Bayesian genome scale modeling identifies thermal determinants of yeast metabolism. *Nature Com.* **12**:190
23. Y. Chen; F. Li; J. Mao; Y. Chen; **J. Nielsen** (2021) Yeast optimizes metal utilization based on metabolic network and enzyme kinetics. *Proc. Nat. Acad. Sci. USA* **118**:e2020154118
24. R. Yu; E. Vorontsov; C. Sihlbom; **J. Nielsen** (2021) Quantifying absolute gene expression profiles reveals distinct regulation of central carbon metabolism genes in yeast. *eLife* **10**:e65722
25. H. Lu; F. Li; L. Yuan; I. Domenzain; R. Yu; H. Wang; G. Li; Y. Chen; B. Ji; E.J. Kerkhoven; **J. Nielsen** (2021) Yeast metabolic innovations emerged via expanded metabolic network and gene positive selection. *Mol. Systems Biol.* **17**:e10427
26. F. Li; L. Yuan; H. Lu; G. Li; Y. Chen; M.K.M. Engqvist; E.J. Kerkhoven; **J. Nielsen** (2022) Deep learning based k_{cat} prediction enables improved enzyme constrained model reconstruction. *Nature Cat.* **5**:662-672
27. F. Li; Y. Chen; Q. Qi; Y. Wang; L. Yuan; M. Huang; I.E. Elseman; A. Feizi; E.J. Kerkhoven; **J. Nielsen** (2022) Improving recombinant protein production by yeast through genome-scale modelling using proteome constraints. *Nature Com.* **13**:2969
28. J. Xia; B.J. Sanchez; Y. Chen; K. Campbell; S. Kasvandik; **J. Nielsen** (2022) Proteome allocation change linearly with specific growth rate of *Saccharomyces cerevisiae* under glucose-limitation. *Nature Com.* **13**:2819
29. I. Domenzain; B. Sanchez; M. Anton; E.J. Kerkhoven; A. Millan-Oropeza; C. Henry; V. Siewers; J.P. Morrissey; N. Sonnenschein; **J. Nielsen** (2022) Reconstruction of a catalogue of genome-scale metabolic models with enzymatic constraints using GECKO2.0. *Nature Com.* **13**:3766

Human Metabolism

1. F. H. Karlsson; F. Fåk; I. Nookaew; V. Tremaroli; B. Fagerberg; D. Petranovic; F. Bäckhed*; **J. Nielsen*** (2012) Symptomatic atherosclerosis is associated with an altered gut metagenome. *Nature Comm.* **3**:1245
2. F. Karlsson; V. Tremaroli; I. Nookaew; G. Bergström; C.J. Behre; B. Fagerberg; **J. Nielsen***; F. Bäckhed* (2013) Gut metagenome in European women with normal, impaired and diabetic glucose control. *Nature* **498**:99-103
3. A. Mardinoglu; R. Agren; C. Kampf; A. Asplund; I. Nookaew; P. Jacobsen; A.J. Walley; P. Froguel; L.M. Carlsson; M. Uhlen; **J. Nielsen** (2013) Integration of clinical data with a genome-scale metabolic model of the human adipocyte. *Mol. Systems Biol.* **9**:649
4. F. Gatto; I. Nookaew; **J. Nielsen** (2014) Chromosome 3p loss of heterozygosity is associated with a unique metabolic network in clear cell renal carcinoma. *Proc. Nat. Acad. Sci.* **111**:E866-E875
5. A. Mardinoglu; R. Agren; K. Kampf; A. Asplund; M. Uhlen; **J. Nielsen** (2014) Genome-scale metabolic modeling of hepatocytes reveals serine deficiency in patients with non-alcoholic fatty liver disease. *Nature Comm.* **5**:3083
6. R. Agren; A. Mardinoglu; C. Kampf; A. Asplund; M. Uhlen; **J. Nielsen** (2014) Identification of anticancer drugs for hepatocellular carcinoma through personalized genome-scale metabolic modeling. *Mol. Systems Biol.* **10**:721
7. M. Uhlen, L. Fagerberg, B.M. Hallström, C. Lindskog, P. Oksvold, A. Mardinoglu, Å. Sivertsson, C. Kampf, E. Sjöstedt, A. Asplund, I. Olsson, K. Edlund, E. Lundberg, S. Navani, C.A.-K. Szigartyo, J. Odeberg, D. Djureinovic, J.O. Takanen, S. Hober, T. Alm, H. Berling, H. Tegel, J. Mulder, J. Rockberg, P. Nilsson, J.M. Schwenk, M. Hamsten, K. von Feilitzen, M. Forsberg, L. Persson, F. Johansson, M. Zwahlen, G. von Heijne, **J. Nielsen**; F. Ponten (2015) Tissue based map of the humane proteome. *Science* **347**:1260419,1-9S

8. Shoaie; P. Ghaffari; P. Kovatcheva-Datchary; A. Mardinoglu; P. Sen; E. Pujos-Guillot; T. de Wouters; C. Juste; S. Rizkalla; J. Chilloux; L. Hoyles; J.K. Nicholson; ANR MicroObese Consortium; J. Dore; M.E. Dumas; K. Clement; F. Bäckhed; **J. Nielsen** (2015) Quantifying diet-induced metabolic changes of the human gut microbiome. *Cell Metabolism* **22**:320-331
9. A. Mardinoglu; S. Shoaie; M. Bergentall; P. Ghaffari; C. Zhang; E. Larsson; F. Bäckhed; **J. Nielsen** (2015) The gut microbiome modulates host amino acid and glutathione metabolism in mice. *Mol. Systems Biol.* **11**:834
10. F. Gatto; I. Nookaew; H. Nilsson; M. Maruzzo; A. Roma; M. E. Johansson; U. Steiner; S. Lundstam; N. Volpi; U. Basso; **J. Nielsen** (2016) Measurements of glycosaminoglycans in plasma and urine for diagnosis of clear cell renal cell carcinoma. *Cell Rep.* **15**:1-15
11. P. Babaei; S. Shoaie; B. Ji; **J. Nielsen** (2018) Challenges in modeling the human gut microbiome. *Nature Biotechnol.* **16**:682-686
12. J.L. Robinson; A. Feizi; M. Uhlen; **J. Nielsen** (2019) A systematic investigation of the malignant functions and diagnostic potential of the cancer secretome. *Cell Rep.* **10**:2622-2635
13. A. Nilsson; E. Björnson; M. Flockhart; F.J. Larsen; **J. Nielsen** (2019) Complex I is bypassed during high intensity exercise. *Nature Com.* **10**:5072
14. J.L. Robinson; P. Kocabas; H. Wang; P.-E. Cholly; D. Cook; A. Nilsson; M. Anton; R. Ferreira; I. Domenzain; V. Billa; A. Limeta; A. Hedin; J. Gustafsson; E.J. Kerkhoven; L.T. Svensson; B.O. Palsson; A. Mardinoglu; L. Hansson; M. Uhlen; **J. Nielsen** (2020) An Atlas of Human Metabolism. *Science Signal.* **13**:eaaz1482
15. A. Nilsson; J.R. Haanstra; M. Engqvist; A. Gerding; B.M. Bakker; U. Klingmüller; B. Teusink; **J. Nielsen** (2020) Quantitative analysis of amino acid metabolism in liver cancer links glutamate excretion to nucleotide synthesis. *Proc. Nat. Acad. Sci. USA* **117**:10294-10304
16. J. Geng; B. Ji; G. Li; F. Lopez-Isunza; **J. Nielsen** (2021) CODY enables quantitatively spatiotemporal predictions on in vivo gut microbial variability induced by diet-intervention. *Proc. Nat. Acad. Sci. USA* **118**:e2019336118
17. H. Wang; J.L. Robinson; P. Kocabas; J. Gustafsson; M. Anton; P.-E. Cholley; S. Huang; J. Gobom; T. Svensson; M. Uhlen; H. Zetterberg; **J. Nielsen** (2021) Genome-scale metabolic network reconstruction of model animals as a platform for translational research. *Proc. Nat. Acad. Sci. USA* **118**:e2102344118

Reviews

1. S. Ostergaard; L. Olsson; **J. Nielsen** (2000) Metabolic engineering of *Saccharomyces cerevisiae*. *Microb. Mol. Biol. Rev.* **64**:34-50
2. **J. Nielsen** (2001) Metabolic engineering. *Appl. Microbiol. Biotechnol.* **55**:263-283
3. K.-K. Hong; **J. Nielsen** (2012) Metabolic engineering of *Saccharomyces cerevisiae*: A key cell factory platform for future biorefineries. *Cell. Mol. Life Sci.* **16**:2671-2690
4. M. Uhlen; B.M. Hallström; C. Lindskog; A. Mardinoglu; F. Ponten; **J. Nielsen** (2016) Transcriptomics resources of human tissues and organs. *Mol. Sys. Biol.* **12**:862
5. **J. Nielsen**; J. Keasling (2016) Engineering Cellular Metabolism. *Cell* **164**:1185-1197
6. **J. Nielsen** (2017) Systems Biology of Metabolism: A Driver for Developing Personalized and Precision Medicine. *Cell Met.* **25**:572-579
7. **J. Nielsen** (2017) Systems Biology of Metabolism. *Ann. Rev. Biochem.* **86**:245-275
8. K. Campbell; J. Xia; **J. Nielsen** (2017) The impact of systems biology on bioprocessing. *Trends Biotechnol.* **35**:1156-1168
9. A. Mardinoglu; J. Boren; U. Smith; M. Uhlen; **J. Nielsen** (2018) Systems biology in hepatology: Approaches and applications *Nature Rev. Gastro. Hep.* **15**:365-377
10. Y. Zhou; E. Kerkhoven; **J. Nielsen** (2018) Barriers and opportunities in bio-based production of hydrocarbons. *Nature Energy* **3**:925-935
11. M. Kumar; B. Ji; K. Zengler; **J. Nielsen** (2019) Modeling approaches for studying the gut microbiota. *Nature Microbiol.* **4**:1253-1267
12. Z. Liu; K. Wang; Y. Chen; T. Tan; **J. Nielsen** (2020) Third-generation biorefineries as a mean to produce fuels and chemicals from CO₂. *Nature Cat.* **3**:274-288
13. H. Lu; E.J. Kerkhoven; **J. Nielsen** (2022) Multiscale models quantifying yeast physiology: towards a whole-cell model. *Trends Biotechnol.* **40**:291-305
14. X. Tan; **J. Nielsen** (2022) The integration of bio-catalysis and electrocatalysis to produce fuels and chemicals from carbon dioxide. *Chem. Soc. Rev.* **51**:4753
15. **J. Nielsen**; C.B. Tillegreen; D. Petranovic (2022) Innovation trends in industrial biotechnology. *Trends Biotechnol.*, in press

Commentaries and Perspectives

1. **J. Nielsen** (2007) Principles of optimal metabolic network operation. *Mol. Sys. Biol.* **3**:126
2. **J. Nielsen** (2011) Transcriptional control of metabolic fluxes. *Mol. Systems Biol.* **7**:478
3. **J. Nielsen** (2011) Chimeric Synthetic Pathways. *Nature Chem. Biol.* **7**:195-196
4. **J. Nielsen**; J. Keasling (2011) Synergies between synthetic biology and metabolic engineering. *Nature Biotechnol.* **29**:693-695
5. **J. Nielsen**; M. Fussenegger; J. Keasling; S.Y. Lee; J.C. Liao; K. Prather; B. Palsson (2014) Engineering synergy in biotechnology. *Nature Chem. Biol.* **10**:319-322
6. **J. Nielsen** (2014) Synthetic Biology for Engineering Acetyl Coenzyme A Metabolism in Yeast. *mBio* **5**:e02153-14
7. J. Pronk; S.Y. Lee; J. Lievense; J. Pierce; B. Palsson; M. Uhlen; **J. Nielsen** (2015) How to set up collaborations between academia and industrial biotech companies. *Nature Biotechnol.* **33**:237-240

8. **J. Nielsen** (2015) Yeast cell factories on the horizon. *Science* **349**:1050-1051
9. **J. Nielsen** (2017) Built on stable catalysts. *Nature Microbiol.* **2**:17085
10. **J. Nielsen** (2019) Designer Microbes Serving Society. *Cell Met.* **29**:50
11. **J. Nielsen** (2019) Cell factory engineering for improved production of natural products. *Nat. Prod. Rep.* **36**:1233
12. **J. Nielsen** (2019) Antibiotic lethality is impacted by nutrient availabilities: New insights from machine learning. *Cell* **177**:1373-1374
13. **J. Nielsen** (2019) A stress-coping strategy for yeast cells. *Nature* **572**:184-185
14. **J. Nielsen** (2022) Bioactive metabolites: The double-edged sword in your food. *Cell* **185**:4469-4471

Complete List of Publications

Research papers in international journals with peer review

1988

1. K. Nikolajsen; **J. Nielsen**; J. Villadsen (1988) In-line flow injection analysis for monitoring lactic acid fermentations. *Anal. Chim. Acta* 214:137-145

1989

2. **J. Nielsen**; K. Nikolajsen; J. Villadsen (1989) FIA for on-line monitoring of important lactic acid fermentation variables. *Biotechnol. Bioeng.* 33:1127-1134
3. **J. Nielsen**; C. Emborg; K. Halberg; J. Villadsen (1989) Compartment model concept used in the design of fermentation with recombinant microorganisms *Biotechnol. Bioeng.* 34:478-486

1990

4. **J. Nielsen**; K. Nikolajsen; S. Benthin; J. Villadsen (1990) Application of flow-injection analysis in the on-line monitoring of sugars, lactic acid, protein, and biomass during lactic acid fermentations. *Anal. Chim. Acta* 237:165-175
5. G. Wehnert; K.-D. Anders; C. Bittner; R. Kammeyer; U. Hübner; **J. Nielsen**; T. Scheper (1990) Ein kombinierter Fluoreszenz-/Streulichtsensor und dessen Einsatz zur Prozessbeobachtung in der Biotechnologie. *Chem.-Ing.-Tech.* 62:211-212

1991

6. S. Benthin; **J. Nielsen**; J. Villadsen (1991) A simple and reliable method for the determination of cellular RNA content. *Biotechnol. Technol.* 5:39-42
7. **J. Nielsen**; K. Nikolajsen; J. Villadsen (1991) Structured modelling of a microbial system 1. A theoretical study of the lactic acid fermentation. *Biotechnol. Bioeng.* 38:1-10
8. **J. Nielsen**; K. Nikolajsen; J. Villadsen (1991) Structured modelling of a microbial system 2. Experimental verification of a structured lactic acid fermentation model. *Biotechnol. Bioeng.* 38:11-23
9. K. Nikolajsen; **J. Nielsen**; J. Villadsen (1991) Structured modelling of a microbial system 3. Growth on mixed substrates. *Biotechnol. Bioeng.* 38:24-29
10. **J. Nielsen**; A. G. Pedersen; K. Strudsholm; J. Villadsen (1991) Modelling fermentations with recombinant microorganisms : Formulation of a structured model. *Biotechnol. Bioeng.* 37:802-808
11. S. Benthin; **J. Nielsen**; J. Villadsen (1991) Characterisation and application of precise and robust flow injection analyzers for on-line measurement during fermentations. *Anal. Chim. Acta* 247:45-50
12. L. H. Christensen; **J. Nielsen**; J. Villadsen (1991) Monitoring of substrates and products during fed-batch penicillin fermentations on complex media. *Anal. Chim. Acta* 249:123-136
13. L. H. Christensen; **J. Nielsen**; J. Villadsen (1991) Delay and dispersion in an in-situ membrane probe for bioreactors. *Chem. Eng. Sci.* 46:3304-3307

1992

14. S. Benthin; **J. Nielsen**; J. Villadsen (1992) Flow Injection Analysis of micromolar concentrations of glucose and lactate in fermentation media. *Anal. Chim. Acta* 261:145-153
15. S. Benthin; **J. Nielsen**; J. Villadsen (1992) Anomeric specificity of glucose uptake systems in *Lactococcus cremoris*, *Escherichia coli* and *Saccharomyces cerevisiae*: Mechanisms, kinetics and implications. *Biotechnol. Bioeng.* 40:137-146
16. **J. Nielsen** (1992) On-line monitoring of microbial processes by flow injection analysis. *Proc. Control Qual.* 2:371-384
17. C. L. Johansen; L. H. Christensen; J. Villadsen; **J. Nielsen** (1992) Monitoring and control of fed-batch penicillin fermentation. *Comp. Chem. Eng.* 16:S297-S304
18. K. Strudsholm; **J. Nielsen**; C. Emborg (1992) Product formation during batch fermentation with recombinant *Escherichia coli* containing a runaway plasmid. *Bioprocess Eng.* 8:173-181

1993

19. G. Pedersen; M. Bundgaard; O. Hassager; **J. Nielsen**; J. Villadsen (1993) Rheological characterization of media containing *Penicillium chrysogenum*. *Biotechnol. Bioeng.* 41:162-164
20. **J. Nielsen** (1993) A simple morphologically structured model describing the growth of filamentous microorganisms. *Biotechnol. Bioeng.* 41:715-727
21. M. Carlsen; L. H. Christensen; **J. Nielsen** (1993) Flow-injection analysis for measurement of penicillin V in fermentation samples. *Anal. Chim. Acta* 274:117-123
22. M. Carlsen; H. Meier; F. Lantreibecq; C. Johansen; R. W. Min; **J. Nielsen** (1993) On-line monitoring of penicillin V during penicillin fermentations : A comparison of two different methods based on FIA. *Anal. Chim. Acta* 279:51-58
23. S. Benthin; **J. Nielsen**; J. Villadsen (1993) Transport of sugars via two anomer-specific sites on mannose-phosphotransferase system in *Lactococcus cremoris* : In vivo study of mechanism, kinetics and adaption. *Biotechnol. Bioeng.* 42:440-448
24. **J. Nielsen** (1993) Simulation of bioreactions. *Comp. Chem. Eng.* 18:S615-S620
25. S. Benthin; **J. Nielsen**; J. Villadsen (1993) Two uptake systems for fructose in *Lactococcus lactis* subsp. *cremoris* FD1 produce glucolytic and gluconeogenic fructose phosphates and induce oscillations of growth and lactic acid formation. *Appl. Environ. Microbiol.* 59:3206-3211

1994

26. S. Benthin; **J. Nielsen**; J. Villadsen (1994) Galactose expulsion during lactose metabolism in *Lactococcus lactis* subsp. *cremoris* FD1 due to dephosphorylation of intracellular galactose-6-phosphate. *Appl. Environ. Microbiol.* 60:1254-1259

27. A. G. Pedersen; M. Bundgaard-Nielsen; **J. Nielsen**; J. Villadsen (1994) Characterization of mixing in stirred tank bioreactors equipped with Rushton turbines. *Biotechnol. Bioeng.* 44:1013-1017
 28. A. G. Pedersen; H. Andersen; **J. Nielsen**; J. Villadsen (1994) A novel technique based on ^{85}Kr for quantification of gas-liquid mass transfer in bioreactors. *Chem. Eng. Sci.* 49:803-810
 29. S. Benthin; U. Schulze; **J. Nielsen**; J. Villadsen (1994) Growth energetics of *Lactococcus cremoris* FD1 during energy-, carbon- and nitrogen limitation in steady state and transient cultures. *Chem. Eng. Sci.* 49:589-610
 30. L. H. Christensen; G. Mandrup; **J. Nielsen**; J. Villadsen (1994) A robust LC method for studying the penicillin fermentation. *Anal. Chim. Acta* 296:51-62
 31. L. H. Christensen; **J. Nielsen**; J. Villadsen (1994) Degradation of penicillin V in fermentation media. *Biotechnol. Bioeng.* 44:165-169
 32. M. A. Hjortso; **J. Nielsen** (1994) A conceptual model of autonomous oscillations in microbial cultures. *Chem. Eng. Sci.* 49:1083-1095
 33. **J. Nielsen**; C. L. Johansen; J. Villadsen (1994) Culture fluorescence measurements during batch and fed-batch cultivations with *Penicillium chrysogenum*. *J. Biotechnol.* 38:51-62
 34. M. Carlsen; J. Marcher; **J. Nielsen** (1994) An improved FIA-system for measuring α -amylase in cultivation media, *Biotechnol. Tech.* 8:479-482
- 1995**
35. H. Jørgensen; **J. Nielsen**; J. Villadsen; H. Mølgaard (1995) Analysis of the penicillin V biosynthesis during fed-batch cultivations with a high yielding strain of *Penicillium chrysogenum*, *Appl. Microbiol. Biotechnol.* 43:123-130
 36. **J. Nielsen**; P. Krabben (1995) Hyphal growth and fragmentation of *P. chrysogenum* in submerged cultures. *Biotechnol. Bioeng.* 46:588-598
 37. **J. Nielsen**; C. L. Johansen; M. Jacobsen; P. Krabben; J. Villadsen (1995) Pellet formation and fragmentation in submerged cultures of *Penicillium chrysogenum* and its relation to penicillin production, *Biotechnol. Prog.* 11:93-98
 38. H. Jørgensen; **J. Nielsen**; J. Villadsen; H. Mølgaard (1995) Metabolic flux distributions in *Penicillium chrysogenum* during fed-batch cultivations. *Biotechnol. Bioeng.* 46:117-131
 39. R. Mørkeberg; M. Carlsen; **J. Nielsen** (1995) Induction and repression of α -amylase production in recombinant and wild-type strains of *Aspergillus oryzae*, *Microbiol.* 141:2449-2454
 40. **J. Nielsen**; H. S. Jørgensen (1995) Metabolic control analysis of the penicillin biosynthetic pathway in a high yielding strain of *Penicillium chrysogenum*, *Biotechnol. Prog.* 11:299-305
 41. R. Lejeune; **J. Nielsen**; G. Baron (1995) Morphology of *Trichoderma reesei* QM 9414 in submerged cultures, *Biotechnol. Bioeng.* 47:609-615
 42. L. H. Christensen; U. Schulze; **J. Nielsen**; J. Villadsen (1995) Acoustic gas analysis for fast and precise monitoring of bioreactors, *Chem. Eng. Sci.* 50:2101-2110
 43. R. Lejeune; **J. Nielsen**; G. Baron (1995) Influence of pH on the morphology of *Trichoderma reesei* QM 9414 in submerged cultures. *Biotechnol. Lett.* 17:341-344
 44. Rong Wei Min; **J. Nielsen**; J. Villadsen (1995) Simultaneous monitoring of glucose, lactic acid and penicillin by Sequential Injection Analysis. *Anal. Chim. Acta* 312:149-156
 45. L. H. Christensen; C. M. Henriksen; **J. Nielsen**; J. Villadsen; M. Egel-Mitani (1995) Continuous cultivation of *P. chrysogenum*. Growth on glucose and penicillin production. *J. Biotechnol.* 42:95-107
 46. M. A. Hjortso; **J. Nielsen** (1995) Population balance models of autonomous microbial oscillations. *J. Biotechnol.* 42:255-269
 47. Rong Wei Min; M. Carlsen; **J. Nielsen**; J. Villadsen (1995) Measurements of α -amylase activity by Sequential Injection Analysis. *Biotechnol. Techn.* 9:765-768
- 1996**
48. M. Carlsen; **J. Nielsen**; J. Villadsen (1996) Kinetic studies of acid-inactivation of α -amylase from *Aspergillus oryzae*. *Chem. Eng. Sci.* 51:37-43
 49. M. Carlsen; A. B. Spohr; **J. Nielsen**; J. Villadsen (1996) Morphology and physiology of an α -amylase producing strain of *Aspergillus oryzae* during batch cultivations, *Biotechnol. Bioeng.* 49:266-276
 50. C. M. Henriksen; L. H. Christensen; **J. Nielsen**; J. Villadsen (1996) Growth energetics and metabolic fluxes in continuous cultures of *Penicillium chrysogenum*, *J. Biotechnol.* 45:149-164
 51. L. H. Christensen; J. Marcher; U. Schulze; M. Carlsen; R. W. Min; **J. Nielsen**; J. Villadsen (1996) Semi-on-line analysis for fast and precise monitoring of bioreaction processes. *Biotechnol. Bioeng.* 52:237-247
 52. C. M. Henriksen; S. S. Holm; H. S. Jørgensen; **J. Nielsen**; J. Villadsen (1997) Kinetic studies of the carboxylation of 6-amino-penicillanic acid to 8-hydroxy-penicillic acid, *Proc. Biochem.* 32:85-91
 53. M. Carlsen; **J. Nielsen**; J. Villadsen (1996) Growth and α -amylase production of *Aspergillus oryzae* during continuous cultivations. *J. Biotechnol.* 45:81-93
 54. Rong Wei Min; **J. Nielsen**; J. Villadsen (1996) On-line monitoring of glucose and penicillin by Sequential Injection Analysis. *Anal. Chim. Acta* 320:199-205
 55. P. de N. Pissarra; **J. Nielsen**; M. J. Bazin (1996) Pathway kinetics and metabolic control analysis of a high-yielding strain of *Penicillium chrysogenum* during fed-batch cultivations. *Biotechnol. Bioeng.* 51:168-176
 56. U. Schulze; G. Liden; **J. Nielsen**; J. Villadsen (1996) Physiological effects of nitrogen starvation in an anaerobic batch culture of *Saccharomyces cerevisiae*. *Microbiology* 142:2299-2310
 57. **J. Nielsen**; H. S. Jørgensen (1996) Kinetic model for the penicillin biosynthetic pathway in *Penicillium chrysogenum*. *Control Eng. Prac.* 4:765-771
 58. C. J. L. Klein, L. Olsson, B. Rønnow, J. D. Mikkelsen, **J. Nielsen** (1996) Alleviation of glucose repression on maltose metabolism by *MIG1* disruption in *Saccharomyces cerevisiae*. *Appl. Environ. Microbiol.* 62:4441-4449

1997

59. **J. Nielsen** (1997) Metabolic control analysis of biochemical pathways based on a thermokinetic description of reaction rates. *Biochem. J.* 321:133-138
60. T. L. Nissen; U. Schulze; **J. Nielsen**; J. Villadsen (1997) Flux distributions in anaerobic, glucose limited continuous cultures of *Saccharomyces cerevisiae*. *Microbiology* 143:203-218
61. K. Schmidt; M. Carlsen; **J. Nielsen**; J. Villadsen (1997) Modelling isotopomer distributions in biochemical networks Using isotopomer mapping matrices. *Biotechnol. Bioeng.* 55:831-840
62. T. C. Zangirolami; C. L. Johansen; **J. Nielsen**; S. B. Jørgensen (1997) Simulation of penicillin production in fed-batch cultivations using a morphologically structured model. *Biotechnol. Bioeng.* 56:593-604
63. P. de N. Pissarra; **J. Nielsen** (1997) Thermodynamics of metabolic pathways for penicillin production: Analysis of thermodynamic feasibility and free energy changes during fed-batch cultivations. *Biotechnol. Prog.* 13:156-165
64. M. Carlsen; K. V. Jøcumssen; C. Emborg; **J. Nielsen** (1997) Modeling the growth and proteinase A production in continuous cultures of recombinant *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 55:447-454
65. P. Krabben; **J. Nielsen**; M. L. Michelsen (1997) Analysis of single hyphal growth and fragmentation in submerged cultures using a population model. *Chem. Eng. Sci.* 52:2641-2652
66. A. B. Spohr; M. Carlsen; **J. Nielsen**; J. Villadsen (1997) Morphological characterization of recombinant strains of *Aspergillus oryzae* producing α -amylase during batch cultivations. *Biotechnol. Letters* 19:257-261
67. L. Olsson; M. E. Larsen; B. Rønnow; J. D. Mikkelsen; **J. Nielsen** (1997) Silencing *MIG1* in *Saccharomyces cerevisiae*: Effects of Antisense *MIG1* Expression and *MIG1* Gene Disruption. *Appl. Environ. Microbiol.* 63:2366-2371
68. B. Aa. Theilgaard; C. M. Henriksen; K. Kristiansen; **J. Nielsen** (1997) Purification and characterization of δ -(L- α -aminoadipyl)-L-cysteinyl-D-valine synthetase (ACVS) from *Penicillium chrysogenum*. *Biochem. J.* 327:185-191

1998

69. **J. Nielsen** (1998) Metabolic Engineering: Techniques for analysis of targets for genetic manipulations. *Biotechnol. Bioeng.* 58:125-132
70. A. Spohr; M. Carlsen; **J. Nielsen**; J. Villadsen (1998) α -Amylase production in recombinant *Aspergillus oryzae* during fed-batch and continuous cultivations. *J. Ferment. Bioeng.* 86:49-56
71. K. Schmidt; A. Marx; A. A. de Graaf; W. Wiechert; H. Sahm; **J. Nielsen**; J. Villadsen (1998) ^{13}C Tracer experiments and metabolite balancing for metabolic flux analysis: Comparing two approaches. *Biotechnol. Bioeng.* 58:254-257
72. T. Agger; A. B. Spohr; M. Carlsen; **J. Nielsen** (1998) Growth and product formation of *Aspergillus oryzae* during submerged cultivations: Verification of a morphologically structured model using fluorescent probes. *Biotechnol. Bioeng.* 57:321-329
73. M. Henriksen; **J. Nielsen**; J. Villadsen (1997) Influence of dissolved oxygen concentration on the penicillin biosynthetic pathway in steady state cultures of *Penicillium chrysogenum*. *Biotechnol. Prog.* 13:776-782
74. A. B. Spohr; C. Dam Mikkelsen; M. Carlsen; **J. Nielsen**; J. Villadsen (1998) On-line study of fungal morphology during submerged growth in a small flow-through cell. *Biotechnol. Bioeng.* 58:541-553
75. S. Ostergaard; H. B. Aa. Theilgaard; **J. Nielsen** (1998) Identification and purification of O-acetyl-L-serine sulphydrylase in *Penicillium chrysogenum*. *Appl. Microbiol. Biotechnol.* 50:663-668
76. K. Klein; L. Olsson; B. Rønnow; J. D. Mikkelsen; **J. Nielsen** (1998) Glucose and maltose metabolism in *MIG1*-disrupted and *MAL*-constitutive strains of *Saccharomyces cerevisiae*. *Food Technol. Biotechnol.* 35:287-292
77. H. P. Smits; A. Cohen; T. Buttler; **J. Nielsen**; L. Olsson (1998) Clean-up and analysis of sugar phosphates in biological extracts by using solid phase extraction and anion-exchange chromatography with pulsed amperometric detection. *Anal. Biochem.* 261:36-42
78. J. Holmalahti; O. Raatikainen; A. von Wright; H. Laatsch; A. Spohr; O. K. Lyngberg; **J. Nielsen** (1998) Production of dihydroabikoviromycin by *Streptomyces anulatus*. Production parameters and chemical characterization of genotoxicity. *J. Appl. Microbiol.* 85:61-68
79. C. J. L. Klein; L. Olsson; **J. Nielsen** (1998) Nitrogen-limited continuous cultivations as a tool to quantify glucose control in *Saccharomyces cerevisiae*. *Enz. Microbial. Technol.* 23:91-100
80. C. M. Henriksen; **J. Nielsen**; J. Villadsen (1998) High exogenous concentrations of phenoxyacetic acid are crucial for a high penicillin V productivity in *Penicillium chrysogenum*. *Microbiol.* 144:2001-2006
81. C. M. Henriksen; **J. Nielsen**; J. Villadsen (1998) Modelling of the protonophoric uncoupling by phenoxyacetic acid of the plasma membrane of *Penicillium chrysogenum*. *Biotechnol. Bioeng.* 60:761-767
82. J. Dynesen; H. P. Smits; L. Olsson; **J. Nielsen** (1998) Carbon catabolite repression of invertase during batch cultivations of *Saccharomyces cerevisiae*: The role of glucose, fructose, and mannose. *Appl. Microbiol. Biotechnol.* 50:579-582

1999

83. K. Schmidt; **J. Nielsen**; J. Villadsen (1999) Quantitative analysis of metabolic fluxes in *E. coli*, using 2 dimensional NMR spectroscopy and complete isotopomer models. *J. Biotechnol.* 71:175-190
84. A. Aleksenko; W. Liu; Z. Gojkovic; **J. Nielsen**; J. Piskur (1999) Structural and transcriptional analysis of the *pyrABCN*, *pyrC*, and *PyrF* genes in *Aspergillus nidulans* and the evolutionary origin of fungal dihydroorotases. *Mol. Microbiol.* 33:599-611
85. H. Pedersen; M. Carlsen; **J. Nielsen** (1999) Identification of enzymes and quantification of metabolic fluxes in the wild type and in a recombinant strain of *Aspergillus oryzae* strain. *Appl. Environ. Microbiol.* 65:11-19
86. A. L. Santerre Henriksen; S. Even; C. Müller; P. J. Punt; C. A. M. J. J. van den Hondel; **J. Nielsen** (1999) Study of the glucoamylase promoter in *Aspergillus niger* using green fluorescence protein. *Microbiol.* 145:729-734
87. T. Christiansen; A. Spohr; **J. Nielsen** (1999) On-line study of growth kinetics of single hyphae of *Aspergillus oryzae* in a flow-through cell. *Biotechnol. Bioeng.* 63:147-153

88. A. Heydorn; T. Suhr-Jessen; **J. Nielsen** (1999) Growth and production kinetics of a teicoplanin producing strain of *Actinoplanes teicomyceticus*. *J. Antibio.* 52:40-44
89. H. Aae Theilgaard; **J. Nielsen** (1999) Metabolic control analysis of the penicillin biosynthetic pathway: The influence of the LLD-ACV:bisACV ratio on the flux control. *Antonie van Leeuwenhoek* 75:145-154
90. C. J. L. Klein; J. J. Rasmussen; B. Rønnow; L. Olsson; **J. Nielsen** (1999) Investigation of the impact of *MIG1* and *MIG2* on the physiology of *Saccharomyces cerevisiae*. *J. Biotechnol.* 68:197-212
91. M. Anderlund; T. L. Nissen; **J. Nielsen**; J. Villadsen; J. Rydström; B. Hahn-Hägerdal; M. C. Kielland-Brandt (1999) Expression of the *E. coli pntA* and *pntB* genes encoding nicotinamide nucleotide transhydrogenase in *Saccharomyces cerevisiae* and its effect on product formation during anaerobic glucose fermentation. *Appl. Environ. Microbiol.* 65:2333-2340
92. K. Schmidt; L. C. Nørregaard; B. Pedersen; A. Meissner; J. Ø. Duus; **J. Nielsen**; J. Villadsen (1999) Quantification of intracellular metabolic fluxes from fractional enrichment and ¹³C-¹³C coupling constraints on the isotopomer distribution in labelled biomass components. *Metabol. Eng.* 1:166-179
93. B. Christensen; **J. Nielsen** (1999) Isotopomer analysis using GC-MS. *Metabol. Eng.* 1:282-290
94. A. Santerre Henriksen; M. Carlsen; H. de Bang; **J. Nielsen** (1999) Kinetics of α -amylase secretion in *Aspergillus oryzae*. *Biotechnol. Bioeng.* 65:76-82
95. B. Rønnow; L. Olsson; **J. Nielsen**; J. D. Mikkelsen (1999) Derepression of galactose metabolism in melibiase producing baker's and distillers' yeast *J. Biotechnol.* 72:213-228
96. T. Agger; **J. Nielsen** (1999) Genetically structured modelling of protein production in filamentous fungi. *Biotechnol. Bioeng.* 66:164-170

2000

97. H. Pedersen; **J. Nielsen** (2000) The influence of nitrogen sources on the α -amylase productivity of *Aspergillus oryzae* in continuous culture. *Appl. Microb. Biotechnol.* 53:278-281
98. C. Müller; A. Spohr; **J. Nielsen** (2000) Role of substrate concentration on mitosis and hyphal extension of *Aspergillus*. *Biotechnol. Bioeng.* 67:390-397
99. H. Pedersen; B. Christensen; C. Hjort; **J. Nielsen** (2000) Construction and characterization of an oxalic acid non-producing strain of *Aspergillus niger*. *Metabol. Eng.* 2:34-41
100. H. Pedersen; M. Beyer; **J. Nielsen** (2000) Glucoamylase production in batch, chemostat and fed-batch cultivations by an industrial strain of *Aspergillus niger*. *Appl. Microbiol. Biotechnol.* 53:272-277
101. S. Ostergaard; C. Roca; B. Rønnow; **J. Nielsen**; L. Olsson (2000) Physiological studies in aerobic batch cultivations of *Saccharomyces cerevisiae* strains harbouring the *MEL1* gene. *Biotechnol. Bioeng.* 68:252-259
102. H. Pedersen; C. Hjort; **J. Nielsen** (2000) Cloning and characterization of *oah*, the gene encoding oxaloacetate hydrolase from *Aspergillus niger*. *Mol. Gen. Genetics.* 263:281-286
103. L. Olsson; **J. Nielsen** (2000) The role of metabolic engineering in the improvement of *Saccharomyces cerevisiae*: Utilization of industrial media. *Enz. Microbiol. Technol.* 26:785-792
104. T. L. Nissen; C. W. Hamann; M. C. Kielland-Brandt; **J. Nielsen**; J. Villadsen (2000) Anaerobic and batch cultivations of *Saccharomyces cerevisiae* mutants impaired in glycerol synthesis. *Yeast* 16:463-474
105. T. L. Nissen; M. C. Kielland-Brandt; **J. Nielsen**; J. Villadsen (2000) Optimisation of ethanol production in *Saccharomyces cerevisiae* by metabolic engineering of the ammonia assimilation. *Metabol. Eng.* 2:69-77
106. A. Heydorn; B. O. Pedersen; J. Ø. Duus, S. Bergmann; T. Suhr-Jessen; **J. Nielsen** (2000) Biosynthetic studies of the glycopeptide teicoplanin by ¹H and ¹³C NMR. *J. Biol. Chem.* 275:6201-6206
107. J. P. van Dijken *et al.* (2000) An inter-laboratory comparison of physiological and genetic properties of four *Saccharomyces cerevisiae* strains. *Enz. Microb. Technol.* 26:706-714
108. T. C. Zangirolami; M. Carlsen; **J. Nielsen**; S. B. Jørgensen (2000) Selection and characterization of a high α -amylase-producing variant in glucose-limited continuous cultures of *Aspergillus oryzae*. *Myc. Res.* 104:1241-1249
109. B. Christensen; J. Nielsen (2000) Metabolic network analysis on *Penicillium chrysogenum* using ¹³C-labelled glucose. *Biotechnol. Bioeng.* 68:652-659
110. B. Christensen; J. Thykær; **J. Nielsen** (2000) Metabolic characterization of high and low yielding strains of *Penicillium chrysogenum*. *Appl. Microbiol. Biotechnol.* 54:212-217
111. **J. Nielsen** (2000) The role of metabolic engineering in the improvement of industrial processes. *Thai J. Biotechnol.* 2:14-25
112. H. P. Smits; J. Hauf; S. Müller; T. J. Hobley; F. K. Zimmermann; B. Hahn-Hägerdal; **J. Nielsen**; L. Olsson (2000) Simultaneous over-expression of enzymes of the lower part of glycolysis can enhance the fermentative capacity of *Saccharomyces cerevisiae*. *Yeast* 16:1325-1334
113. L. F. Bautista; M. Hentzer; A. Santerre Henriksen; A. Aleksenko; **J. Nielsen** (2000) Antisense silencing of the *creA* gene in *Aspergillus nidulans*. *Appl. Environ. Microbiol.* 66:4579-4581
114. S. Ostergaard; L. Olsson; M. Johnston; **J. Nielsen** (2000) Increasing galactose consumption by *Saccharomyces cerevisiae* through metabolic engineering of the *GAL* gene regulatory network. *Nature Biotechnol.* 18:1283-1286

2001

115. T. Agger; A. Spohr; **J. Nielsen** (2001) α -Amylase production in high cell density submerged cultivations of *Aspergillus oryzae* and *Aspergillus nidulans*. *Appl. Microbiol. Biotechnol.* 55:81-84
116. H. Aae Theilgaard; M. van den Berg; C. Mulder; R. A. L. Bovenberg; **J. Nielsen** (2001) Quantitative analysis of *Penicillium chrysogenum* Wis54-1255 transformants over-expressed in the penicillin biosynthetic genes. *Biotechnol. Bioeng.* 72:379-388
117. E. Jonsbu; T. Elingsen; **J. Nielsen** (2001) Effects of nitrogen sources on cell growth and production of nystatin by *Streptomyces noursei* *J. Antibiot.* 53:1354-1362

118. M. McIntyre; J. Dynesen; **J. Nielsen** (2001) Morphological characterization of *Aspergillus nidulans*: Growth, septation and fragmentation. *Microbiol.* 147:239-246
 119. A. K. Gombert; M. M. dos Santos; B. Christensen; **J. Nielsen** (2001) Network identification and flux quantification in the central metabolism of *Saccharomyces cerevisiae* at different conditions of glucose repression. *J. Bacteriol.* 183:1441-1451
 120. S. Ostergaard; L. Olsson; **J. Nielsen** (2001) *In vivo* dynamics of galactose metabolism in *Saccharomyces cerevisiae*: Metabolic fluxes and metabolite levels. *Biotechnol. Bioeng.* 73:412-425
 121. S. Ostergaard; K. O. Walløe; C. S. G. Gomes; L. Olsson; **J. Nielsen** (2001) The impact of *GAL6*, *GAL80*, and *MIG1* on glucose control of the *GAL* system in *Saccharomyces cerevisiae*. *FEMS Yeast Research.* 1:47-55
 122. T. L. Nissen; M. Anderlund; M. C. Kielland-Brandt; **J. Nielsen**; J. Villadsen (2001) Expression of a cytoplasmic transhydrogenase in *Saccharomyces cerevisiae* results in formation of 2-oxoglutarate due to depletion of the NADPH pool. *Yeast* 18:19-32
 123. K. Møller; L. D. Tidemand; J. R. Winther; L. Olsson; J. Piskur; **J. Nielsen** (2001) Production of a heterologous proteinase A by *Saccharomyces kluyveri*. *Appl. Microbiol. Biotechnol.* 57:216-219
 124. B. Christensen; T. Christiansen; A. K. Gombert; J. Thykær; **J. Nielsen** (2001) Simple and robust method for estimation of the split between the oxidative pentose phosphate pathway and the Embden-Meyerhof Parnas pathway in microorganisms. *Biotechnol. Bioeng.* 74:517-523
 125. E. Jonsbu; B. Christensen; **J. Nielsen** (2001) Changes in *in vivo* fluxes through central metabolic pathways during production of nystatin by *Streptomyces noursei* in batch culture. *Appl. Microbiol. Biotechnol.* 56:93-100
 126. M. Carlsen; **J. Nielsen** (2001) Influence of carbon source on α -amylase production by *Aspergillus oryzae*. *Appl. Microbiol. Biotechnol.* 57:346-349
 127. J. Robin; M. Jacobsen; M. Beyer; H. Noorman; **J. Nielsen** (2001) Physiological characterisation of *Penicillium chrysogenum* strains expressing the expandase gene from *Streptomyces clavuligerus* during batch cultivations. Growth and adipoyl-7-ADCA production. *Appl. Microbiol. Biotechnol.* 57:357-362
 128. T. C. Zangirolami; M. Carlsen; **J. Nielsen**; S. B. Jørgensen (2002) Growth and enzyme production during continuous cultures of a high amylase-producing variant of *Aspergillus oryzae*. *Brazilian J. Chem. Eng.* 19:55-68
- 2002**
129. T. Agger; J. B. Petersen; S. M. O'Connor; R. L. Murphy; J. M. Kelly; **J. Nielsen** (2002) Physiological characterisation of recombinant *Aspergillus nidulans* strains with different *creA* genotypes expressing *A. oryzae* α -amylase. *J. Biotechnol.* 92:279-285
 130. K. Møller; B. Christensen; J. Förster; J. Piskur; **J. Nielsen**; L. Olsson (2002) Aerobic glucose metabolism of *Saccharomyces kluyveri*: Growth, metabolite production and quantification of metabolic fluxes. *Biotechnol. Bioeng.* 77:186-193
 131. T. Christiansen; B. Christensen; **J. Nielsen** (2002) Metabolic network analysis of *Bacillus clausii* on minimal and semi-rich medium using ^{13}C -labeled glucose. *Metabolic Eng.* 4:159-169
 132. J. Thykær; B. Christensen; **J. Nielsen** (2002) Metabolic network analysis of an adipoyl-7-ADCA producing strain of *Penicillium chrysogenum*: Elucidation of adipate degradation. *Metabolic Eng.* 4:151-158
 133. M. McIntyre; J. Breum; J. Arnau; **J. Nielsen** (2002) Growth physiology and dimorphism of *Mucor circinelloides* (syn. *racemosus*) during submerged batch cultivation. *Appl. Microbiol. Biotechnol.* 58:495-502
 134. T. Christiansen; **J. Nielsen** (2002) Growth energetics of an alkaline serine protease producing strain of *Bacillus clausii* during continuous cultivation. *Bioproc. Biosystems Eng.* 24:329-339
 135. B. Christensen; **J. Nielsen** (2002) Reciprocal ^{13}C -labeling: A method for investigating the catabolism of co-substrates. *Biotechnol. Prog.* 18:163-166
 136. C. Müller; M. McIntyre; K. Hansen; **J. Nielsen** (2002) Metabolic engineering of the morphology of *Aspergillus oryzae* by altering chitin synthesis. *Appl. Environ. Microbiol.* 68:1827-1836
 137. A. G. Vara; A. Hochkoeppler; **J. Nielsen**; J. Villadsen (2002) Production of teicoplanin by *Actinoplanes teichomyceticus* in continuous fermentation. *Biotechnol. Bioeng.* 77:589-598
 138. **J. Nielsen**; L. Olsson (2002) An expanded role for microbial physiology in metabolic engineering and functional genomics: Moving towards systems biology. *FEMS Yeast Res.* 2:175-181
 139. N. B. S. Jensen; B. Christensen; **J. Nielsen**; J. Villadsen (2002) The simultaneous biosynthesis and uptake of amino acids by *Lactococcus lactis* studied by ^{13}C labelling experiments. *Biotechnol. Bioeng.* 78:11-16
 140. K. Møller; C. Bro; J. Piskur; **J. Nielsen**; L. Olsson (2002) Steady-state and transient-state analysis of aerobic fermentation in *Saccharomyces kluyveri*. *FEMS Yeast Res.* 2:233-244
 141. T. Christiansen; **J. Nielsen** (2002) Production of extracellular protease and glucose uptake in *Bacillus clausii* in steady state and transient continuous cultures. *J. Biotechnol.* 97:265-273
 142. J. Förster; A. K. Gombert; **J. Nielsen** (2002) A functional genomics approach using metabolomics and *in silico* pathway analysis. *Biotechnol. Bioeng.* 79:703-712
 143. J. Zaldivar; A. Borges; B. Johansson; H. P. Smits; S. G. Villas-Boas; **J. Nielsen**; L. Olsson (2002) Fermentation performance and intracellular metabolite patterns in laboratory and industrial xylose fermenting *Saccharomyces cerevisiae*. *Appl. Microbiol. Biotechnol.* 59:436-442
 144. C. Müller; C. M. Hjort; K. Hansen; **J. Nielsen** (2002) Altering the expression of two chitin synthase genes differentially affects the growth and morphology of *Aspergillus oryzae*. *Microbiology* 148:4025-4033
 145. B. Christensen; A. K. Gombert; **J. Nielsen** (2002) Analysis of flux estimates based on ^{13}C -labeling experiments. *Eur. J. Biochem.* 269:2795-2800
 146. E. Jonsbu; M. McIntyre; **J. Nielsen** (2002) The influence of carbon sources and morphology on nystatin production by *Streptomyces noursei*. *J. Biotechnol.* 95:133-144

147. M. D. W. Piper; P. Daran-Lapujade; C. Bro; B. Regenber; S. Knudsen; **J. Nielsen**; J. T. Pronk (2002) Reproducibility of oligonucleotide microarray transcriptome analysis: an interlaboratory comparison using chemostat cultures of *Saccharomyces cerevisiae*. *J. Biol. Chem.* 277:37001-37008
- 2003**
148. C. Müller; K. Hansen; P. Szabo; **J. Nielsen** (2003) Effect of deletion of chitin synthesis on mycelial morphology and culture viscosity in *Aspergillus oryzae*. *Biotechnol. Bioeng.* 81:525-534
 149. T. Christiansen; S. Michaelsen; M. Wümpelmann; **J. Nielsen** (2003) Production of Savinase and population viability of *Bacillus clausii* during high cell density fed-batch cultivations. *Biotechnol. Bioeng.* 83:344-352
 150. J. Robin; G. Lettier; M. McIntyre; H. Noorman; **J. Nielsen** (2003) Continuous cultivations of *Penicillium chrysogenum* strain expressing the expandase gene from *Streptomyces clavuligerus*: Growth yields and morphological characterisation. *Biotechnol. Bioeng.* 83:353-360
 151. J. Robin; P. Bruheim; M. L. Nielsen; H. Noorman; **J. Nielsen** (2003) Continuous cultivations of *Penicillium chrysogenum* strain expressing the expandase gene from *Streptomyces clavuligerus*: Kinetics of adipoyl-7-aminodeacetoxycephalosporanic acid and by-product formation. *Biotechnol. Bioeng.* 83:361-368
 152. J. Förster; I. Famili; P. Fu; B. Ø. Palsson; **J. Nielsen** (2003) Genome-scale reconstruction of the *Saccharomyces cerevisiae* metabolic network. *Genome Res.* 13:244-253
 153. T. L. Lübbehüsen; **J. Nielsen**; M. McIntyre (2003) Characterization of the *Mucor circinelloides* life cycle by on-line image analysis. *J. Appl. Microbiol.* 95:1152-1160
 154. J. Robin; S. Bonneau; D. Schipper; H. Noorman; **J. Nielsen** (2003) Influence of the adipate and dissolved oxygen concentrations on the β -lactams production during continuous cultivations of a *Penicillium chrysogenum* strain expressing the expandase gene from *Streptomyces clavuligerus*. *Metabol. Eng.* 5:42-48
 155. N. Gunnarsson; P. Bruheim; **J. Nielsen** (2003) Production of the glycopeptide antibiotic A40926 by *Nonomuraia* sp. ATCC 39727: influence of medium composition in batch fermentation. *J. Ind. Microbiol. Biotechnol.* 30:150-156
 156. J. Dynesen; **J. Nielsen** (2003) Surface hydrophobicity of *Aspergillus nidulans* conidiophores and its role in pellet formation. *Biotechnol. Prog.* 19:1049-1052
 157. M. M. dos Santos; A. K. Gombert; B. Christensen; L. Olsson; **J. Nielsen** (2003) Identification of *in vivo* enzyme activities in the co-metabolism of glucose and acetate by *Saccharomyces cerevisiae* using ^{13}C -labeled substrates. *Eukar. Cell.* 2:599-608
 158. J. Förster; I. Famili; B. Ø. Palsson; **J. Nielsen** (2003) Large-scale Evaluation of *in silico* Gene Deletions in *Saccharomyces cerevisiae*. *Omics J. Integrative Biol.* 7:193-202
 159. T. L. Lübbehüsen; **J. Nielsen**; M. McIntyre (2003) Morphology and physiology of the dimorphic fungus *Mucor circinelloides* (syn. *M. racemosus*) during anaerobic growth. *Mycol. Res.* 107:223-230
 160. C. Roca; **J. Nielsen**; L. Olsson (2003) Metabolic engineering of ammonium assimilation in xylose fermenting *Saccharomyces cerevisiae* improves ethanol production. *Appl. Env. Microbiol.* 69:4732-4736
 161. **J. Nielsen** (2003) It is all about metabolic fluxes. *J. Bacteriol.*, 185:7031-7035
 162. C. Bro; B. Regenber; G. Lagniel; J. Labarre; M. Montero-Lomeli; **J. Nielsen** (2003) Transcriptional, proteomics and metabolic response to lithium in galactose-grown yeast cells. *J. Biol. Chem.* 278:32141-32149
 163. W. Prathumpai; J. B. Gabelgaard; P. Wanchanthuek; P. J. I. van de Vondervoort; M. J. L. de Groot; M. McIntyre; **J. Nielsen** (2003) Metabolic control analysis of xylose catabolism in *Aspergillus*. *Biotechnol. Prog.* 19:1136-1141
 164. H. David; M. Åkesson; **J. Nielsen** (2003) Reconstruction of the central carbon metabolism of *Aspergillus niger*. *Eur. J. Biochem.* 270: 4243-4253
 165. M. M. dos Santos; G. Thygesen; P. Kötter; L. Olsson; **J. Nielsen** (2003) Aerobic physiology of redox-engineered *Saccharomyces cerevisiae* strains modified in the ammonium assimilation for increased NADPH availability. *FEMS Yeast Res.* 4:59-68
 166. I. Famili; J. Förster; **J. Nielsen**; B. Palsson (2003) *Saccharomyces cerevisiae* phenotypes can be predicted using constraint based analysis of a genome-scale reconstructed metabolic network. *Proc. Nat. Acad. Sci.* 100:13134-13139
 167. J. Dynesen; **J. Nielsen** (2003) Branching is coordinated with mitosis in growing hyphae of *Aspergillus nidulans*. *Fungal Gen. Biol.* 40:15-24
 168. S. G. Villas-Boas; D. G. Delicado; M. Åkesson; **J. Nielsen** (2003) Simultaneous analysis of amino and nonamino organic acids as methyl chloroformate derivatives using gas chromatography-mass spectrometry. *Anal. Biochem.* 322:134-138
- 2004**
169. N. Gunnarsson; P. Bruheim; **J. Nielsen** (2004) Glucose metabolism in the antibiotic producing Actinomycete *Nonomuraia* sp. *Biotechnol. Bioeng.* 88: 652-663
 170. T. L. Lübbehüsen, **J. Nielsen**, M. McIntyre (2004) Aerobic and anaerobic ethanol production by *Mucor circinelloides* during submerged growth. *Appl. Microbiol. Biotechnol.* 63:543-548
 171. T. L. Lübbehüsen, V. G. Polo, S. Rossi, **J. Nielsen**, S. Moreno, M. McIntyre, J. Arnau (2004) Protein kinase A is involved in the control of morphology and branching during aerobic growth in *Mucor circinelloides*. *Microbiol.* 150:143-150
 172. C. Bro; B. Regenber; **J. Nielsen** (2004) Genome-wide transcriptional response of a *Saccharomyces cerevisiae* strain with an altered redox metabolism. *Biotechnol. Bioeng.* 85:269-276
 173. W. Prathumpai; M. McIntyre; **J. Nielsen** (2004) The effect of CreA in glucose and xylose catabolism in *Aspergillus nidulans*. *Appl. Microbiol. Biotechnol.* 63:748-753
 174. C. Bro; **J. Nielsen** (2004) Impact of 'Ome' analysis on inverse metabolic engineering. *Met. Eng.* 6:204-211
 175. K. Møller; C. Bro; R. B. Langkjær; J. Piskur; **J. Nielsen**; L. Olsson (2004) Pyruvate decarboxylases from the petite-negative yeast *Saccharomyces kluyveri*. *Mol. Genet. Genomics* 270:558-568

176. T. Grotkjær; M. Åkesson; B. Christensen; A. K. Gombert; **J. Nielsen** (2004) Impact of transamination reactions and protein turnover on labeling dynamics in ^{13}C -labelling experiments. *Biotechnol. Bioeng.* 86:209-216
177. M. Åkesson; J. Förster; **J. Nielsen** (2004) Integration of gene expression data into genome-scale metabolic models. *Met. Eng.* 6:285-293
178. G. G. Larsen; K. F. Appel; A.-M. Wolff; **J. Nielsen**; J. Arnau (2004) Characterization of the *Mucor circinelloides* regulated promoter *gpd1P* and construction of a constitutive derivative. *Curr. Genet.* 45:225-234
179. N. Gunnarsson; U. H. Mortensen; M. Sosio; **J. Nielsen** (2004) Identification of the Entner-Doudoroff pathway in an antibiotic producing actinomycete species. *Mol Microbiol* 52: 895-902
180. N. Eckert-Boulet; P. S. Nielsen; C. Friis; M. M. dos Santos; **J. Nielsen**; M. C. Kielland-Brandt; B. Regenberg (2004) Transcriptional profiling of extracellular amino acid sensing in *Saccharomyces cerevisiae* and the role of *Stp1p* and *Stp2p*. *Yeast* 21: 635-648
181. S. L. Westergaard; C. Bro; L. Olsson; **J. Nielsen** (2004) Elucidation of the role of *Grr1p* on glucose sensing by *Saccharomyces cerevisiae* through genome-wide transcription analysis. *FEMS Yeast Res.* 5:193-204
182. V. Raghevedran; A. K. Gombert; B. Christensen; P. Kötter; **J. Nielsen** (2004) Phenotypic characterization of glucose repression mutants of *Saccharomyces cerevisiae* using experiments with ^{13}C -labelled glucose. *Yeast* 21:769-779
183. T. Grotkjær; **J. Nielsen** (2004) Enhancing yeast transcription analysis through integration of heterogeneous data. *Cur. Genomics* 5:673-686
184. M. M. dos Santos; V. Raghevedran; P. Kötter; L. Olsson; **J. Nielsen** (2004) Manipulation of the malic enzyme in *Saccharomyces cerevisiae* for increasing NADPH production capacity aerobically in different cellular compartments. *Met. Eng.* 6:352-363
185. B. Regenberg; U. Krühne; M. Beyer; L. H. Pedersen; M. Simón; O. R.T. Thomas; **J. Nielsen**; T. Ahl (2004) Use of laminar flow patterning for miniaturised biochemical assays. *Lab. Chip* 4:654-657
186. W. Prathumpai; S. J. Flitter; M. McIntyre; **J. Nielsen** (2004) Lipase production by recombinant strains of *Aspergillus niger* expressing a lipase-encoding gene from *Thermomyces lanuginosus*. *Appl. Microbiol. Biotechnol.* 65:714-719
187. C. Cannizzaro; B. Christensen; **J. Nielsen**; U. von Stockar (2004) Metabolic network analysis on *Phaffia rhodozyma* yeast using ^{13}C -labeled glucose and gas chromatography-mass spectrometry. *Met. Eng.* 6:340-351
- 2005**
188. S. G. Villas-Bôas; J. H. Pedersen; M. Åkesson; J. Smedsgaard; **J. Nielsen** (2005) Global metabolite analysis of yeast: evaluation of sample preparation methods. *Yeast* 22:1155-1169
189. G. Panagiotou, S. G. Villas-Boas, P. Christakopoulos, **J. Nielsen**, L. Olsson (2005) Intracellular metabolite profiling of *Fusarium oxysporum* converting glucose to ethanol. *J. Biotechnol.* 115:425-434
190. J. Smedsgaard, **J. Nielsen** (2005) Metabolite profiling of fungi and yeast: from phenotype to metabolome by MS and informatics. *J. Exp. Bot.* 56:273-286
191. K. R. Patil, **J. Nielsen** (2005) Uncovering transcriptional regulation of metabolism by using metabolic network topology. *Proc. Nat. Acad. Sci.* 102:2685-2689
192. I. Borodina, C. Schöller, A. Eliasson, **J. Nielsen** (2005) Metabolic network analysis of *Streptomyces tenebrarius*, a *Streptomyces* with Entner-Doudoroff pathway. *Appl. Environ. Microbiol.* 71:2294-2302
193. S. G. Villas-Bôas; M. Åkesson; **J. Nielsen** (2005) Biosynthesis of glyoxylate from glycine in *Saccharomyces cerevisiae*. *FEMS Yeast Res.* 5:703-709
194. S. G. Villas-Bôas; J. F. Moxley; M. Åkesson; G. Stephanopoulos; **J. Nielsen** (2005) High-throughput metabolic state analysis: The missing link in integrated functional genomics of yeasts. *Biochem. J.* 388:669-677
195. N. Eckert- Boulet; B. Regenberg; **J. Nielsen** (2005) *Grr1p* is required for transcriptional induction of amino acid permease genes and proper transcriptional regulation of genes in carbon metabolism of *Saccharomyces cerevisiae*. *Curr. Genet.* 47:139-149
196. T. Seker; K. Møller; **J. Nielsen** (2005) Analysis of acyl CoA ester intermediates of the mevalonate pathway in *Saccharomyces cerevisiae*. *Appl. Microbiol. Biotechnol.* 67:199-124
197. I. Borodina; P. Krabben; **J. Nielsen** (2005) Genome-scale analysis of *Streptomyces coelicolor* A3(2) metabolism. *Genome Res.* 15:820-829
198. A. P. Oliveira; **J. Nielsen**; J. Förster (2005) Modeling *Lactococcus lactis* using a genome-scale flux model. *BMC Microbiol.* 5:39
199. C. Bro; S. Knudsen; B. Regenberg; L. Olsson; **J. Nielsen** (2005) Improvement of galactose uptake in *Saccharomyces cerevisiae* through overexpression of phosphoglucomutase: Example of transcript analysis as a tool in inverse metabolic engineering. *Appl. Environ. Microbiol.* 71:6465-6472
200. H. David; A. M. Krogh; C. Roca; M. Åkesson; **J. Nielsen** (2005) CreA influences the metabolic fluxes of *Aspergillus nidulans* during growth on glucose and xylose. *Microbiol.* 151:2209-2221
201. V. Raghevedran; **J. Nielsen**; L. Olsson (2005) Teaching microbial physiology using glucose repression phenomenon in Baker's yeast as an example. *Biochem. Mol. Biol. Edu.* 33:404-410
202. M. C. Jewett; A. P. Oliveira; K. R. Patil; **J. Nielsen** (2005) The role of high-throughput transcriptome analysis in metabolic engineering. *Biotechnol. Bioproc. Eng.* 10:385-399
203. T. Grotkjær; P. Christakopoulos; **J. Nielsen**; L. Olsson (2005) Comparative metabolic network analysis of two xylose fermenting recombinant *Saccharomyces cerevisiae* strains. *Met. Eng.* 7:437-444
204. K. R. Patil; I. Rocha; J. Förster; **J. Nielsen** (2005) Evolutionary programming as a platform for *in silico* metabolic engineering. *BMC Bioinformatics* 6:308
- 2006**
205. T. Cakir; K. R. Patil; Z. I. Önsan; K. Ö. Ülgen; B. Kirdar; **J. Nielsen** (2006) Integration of metabolome data with metabolic networks reveals reporter reactions. *Mol. Systems Biol.* 2:50

206. T. Grotkjær; O. Winther; B. Regenberg; **J. Nielsen**; L. K. Hansen (2006) Robust multi-scale clustering of large DNA microarray datasets with the consensus algorithm. *Bioinformatics* 22:58-67
207. N. Eckert-Boulet; K. Larsson; B. Wu; P. Poulsen; B. Regenberg; **J. Nielsen**; M. Kielland-Brandt (2006) Deletion of *RTS1*, encoding a regulatory subunit of protein phosphatase 2A, results in constitutive amino acid signaling via increased Stp1p processing. *Eukaryotic Cell* 5:174-179
208. C. Bro; B. Regenberg; J. Förster; **J. Nielsen** (2006) *In silico* aided metabolic engineering of *Saccharomyces cerevisiae* for improved bioethanol production. *Met. Eng.* 8:102-111
209. R. Mustachi; S. Hohmann; **J. Nielsen** (2006) Yeast systems biology to unravel the network of life. *Yeast* 23:227-238
210. J. Mogensen; H. B. Nielsen; G. Hofmann; **J. Nielsen** (2006) Transcription analysis using high-density micro-arrays of *Aspergillus nidulans* wild-type and *DcreA* mutant during growth on glucose and ethanol. *Fung. Gen. Bio.* 43:593-603
211. V. Raghevedran; K. R. Patil; L. Olsson; **J. Nielsen** (2006) Hap4 is not essential for activation of respiration at low specific growth rates in *Saccharomyces cerevisiae*. *J. Biol. Chem.* 281:12308-12314
212. R. Usaite; K. R. Patil; T. Grotkjær; **J. Nielsen**; B. Regenberg (2006) Global transcriptional and physiological responses of *Saccharomyces cerevisiae* to ammonium, L-alanine or L-glutamine limitation. *Appl. Environ. Microbiol.* 72:6194-6203
213. A. Diano; S. Bekker-Jensen; J. Dynesen; **J. Nielsen** (2006) Polyol synthesis in *Aspergillus niger*: Influence of oxygen availability, carbon and nitrogen sources on the metabolism. *Biotechnol. Bioeng.* 94:899-908
214. B. Regenberg; T. Grotkjær; O. Winther; A. Fausbøll; M. Åkesson; C. Bro; L. K. Hansen; S. Brunak; **J. Nielsen** (2006) Growth-rate regulated genes have profound impact on interpretation of transcriptome profiling in *Saccharomyces cerevisiae*. *Genome Biol.* 7:R107
215. H. David; G. Hofmann; A. P. Oliveira; H. Jarmer; **J. Nielsen** (2006) Metabolic network driven analysis of genome-wide transcription data from *Aspergillus nidulans*. *Genome Biol.* 7:R108

2007

216. M. J. van der Werf; R. Takors; J. Smedsgaard; **J. Nielsen**; T. Ferenci; J. C. Portais; C. Wittmann; M. Hooks; A. Tomassini; M. Oldiges; J. Fostel; U. Sauer (2007) Standard reporting requirements for biological samples in metabolomics experiments: Microbial and in vitro biology experiments. *Metabolomics* 3:189-194
217. S. L. Westergaard; A. P. Oliveira; C. Bro; L. Olsson; **J. Nielsen** (2007) A systems biology approach to study glucose repression in the yeast *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 96:134-145
218. G. N. Vemuri; M. A. Eiteman; J. E. McEwen; L. Olsson; **J. Nielsen** (2007) Increasing NADH oxidation reduces overflow metabolism in *Saccharomyces cerevisiae*. *Proc. Nat. Acad. Sci.* 104:2402-2407
219. H. J. Pel, J.H. de Winde, D.B. Archer, P.S. Dyer, G. Hofmann, P.J. Schaap, G. Turner, R.P. de Vries, R. Albang, K. Albermann, M.R. Andersen, J.D. Bendtsen, J.A.E. Benen, M. van den Berg, S. Breestraat, M.X. Caddick, R. Contreras, M. Cornell, P.M. Coutinho, E.G.J. Danchin, A.J.M. Debets, P. Dekker, P.W.M. van Dijk, A. van Dijk, L. Dijkhuizen, A.J.M. Driessen, C. d'Enfert, S. Geysens, C. Goosen, G.S.P. Groot, P.W.J. de Groot, T. Guillemette, B. Henrissat, M. Herweijer, J.P.T.W. van den Hombergh, C.A.M.J.J. van den Hondel, R.T.J.M. van der Heijden, R.M. van der Kaaij, F.M. Klis, H.J. Kools, C.P. Kubicek, P.A. van Kuyk, J. Lauber, X. Lu, M.J.E.C. van der Maarel, R. Meulenberg, H. Menke, M.A. Mortimer, **J. Nielsen**, S.G. Oliver, M. Olsthoorn, K. Pal, N.N.M.E. van Peij, A.F.J. Ram, U. Rinas, J.A. Roubos, C.M.J. Sagt, M. Schmoll, J. Sun, D. Ussery, J. Varga, W. Vervecken, P.J.J. van de Vondervoort, H. Wedler, H.A.B. Wösten, A.-P. Zeng, A.J.J. van Ooyen, J. Visser and H. Stam (2007) Genome sequencing and analysis of the versatile cell factory *Aspergillus niger* CBS513.88. *Nature Biotech.* 25:221-231
220. S. Mass; S. G. Villas-Boas; M. E. Hansen; M. Åkesson; **J. Nielsen** (2007) A comparison of direct infusion MS and GC-MS for metabolic footprinting of yeast mutants. *Biotechnol. Bioeng.* 96:1014-1022
221. S. Wattanachaisaarekul; A. Eliasson Lantz; M. L. Nielsen; O. S. Andresson; **J. Nielsen** (2007) Optimization of heterologous production of the polyketide 6-MSA in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 97:893-900
222. C. J. Baxter; H. Redestig; N. Schauer; D. Reipsilber; K. R. Patil; **J. Nielsen**; J. Selbig; J. Liu; A. R. Fernie; L. J. Sweetlove (2007) The metabolic response of heterotrophic *Arabidopsis* cells to oxidative stress. *Plant Phys.* 143:312-325
223. K. Y. Arga; Z. I. Onsan; B. Kirdar; K. O. Ulgen; **J. Nielsen** (2007) Understanding signaling in yeast: Insights from network analysis. *Biotechnol. Bioeng.* 97:1246-1258
224. T. Cakir; B. Kirdar; Z. I. Onsan; K. O. Ulgen; **J. Nielsen** (2007) Effect of carbon source perturbations on transcriptional regulation of metabolic fluxes in *Saccharomyces cerevisiae*. *BMC Systems Biol.* 1:18
225. J. Thykaer; **J. Nielsen** (2007) Evidence, through C13-labelling analysis, of phosphoketolase activity in fungi. *Proc. Biochem.* 42:1050-1055
226. S. Meier; G. Panagiotou; L. Olsson; **J. Nielsen** (2007) Physiological characterization of xylose metabolism in *Aspergillus niger* under oxygen limited conditions. *Biotechnol. Bioeng.* 98:462-475
227. I. Nookaew; A. Meechai; C. Thammarongtham; K. Loateng; V. Ruanglek; S. Cheevadhanarak; **J. Nielsen**; S. Bhumiratana (2007) Identification of flux regulation coefficients from elementary flux modes: A systems biology tool for analysis of metabolic networks. *Biotechnol. Bioeng.* 97:1535-1549
228. M. L. Nielsen; W. A. de Jongh; S. L. Meijer; **J. Nielsen**; U. Mortensen (2007) Transient marker system for iterative gene targeting of a prototrophic fungus. *Appl. Environ. Microbiol.* 73:7240-7245

2008

229. J. Maury; M. A. Asadollahi; K. Møller; M. Schalk; A. Clark; L. R. Formenti; **J. Nielsen** (2008) Reconstruction of a bacterial isoprenoid biosynthetic pathway in *Saccharomyces cerevisiae*. *FEBS Let.* 582:4032-4038
230. R. Usaite; **J. Nielsen**; L. Olsson (2008) Physiological characterization of glucose repression in the strains with *SNF1* and *SNF4* genes deleted. *J. Biotechnol.* 133:73-81

231. R. Usaite; J. Wohlschlegel; J. D. Venable; S. K. Park; **J. Nielsen**; L. Olsson; John R. Yates III (2008) Characterization of global yeast quantitative proteome data generated from the wild type and glucose repression *Saccharomyces cerevisiae* strains: the comparison of two quantitative algorithms. *J. Proteom Res.* 7:266-275
 232. W. de Jongh; **J. Nielsen** (2007) Enhanced citrate production through gene insertion in *Aspergillus niger*. *Met. Eng.* 10:87-96
 233. M. Asadollahi; J. Maury; K. Møller; K. F. Nielsen; M. Schalk; A. Clark; **J. Nielsen** (2008) Production of plant sesquiterpenes in *Saccharomyces cerevisiae*: Effect of *ERG9* repression on sesquiterpene biosynthesis. *Biotechnol. Bioeng.* 99:666-677
 234. M. R. Andersen; M. L. Nielsen; **J. Nielsen** (2008) Metabolic model integration of the bibliome, genome, metabolome and reactome of *Aspergillus niger*. *Mol. Systems Biol.* 4:178
 235. A. P. Oliveira; K. Patil; **J. Nielsen** (2008) Architecture of transcriptional regulatory circuits is knitted over the topology of bio-molecular interaction networks. *BMC Systems Biol.* 2:17
 236. J. Thykaer; K. Rueksomtawin; H. Noorman; **J. Nielsen** (2008) NADPH-Dependent glutamate dehydrogenase in *Penicillium chrysogenum* is involved in regulation of b-lactam production. *Microbiol.* 154:1242-1250
 237. H. David; I. Ozelik; G. Hofmann; **J. Nielsen** (2008) Analysis of *Aspergillus nidulans* metabolism at the genome-scale. *BMC Genomics* 9:163
 238. W. A. de Jongh; C. Bro; S. Ostergaard; B. Regenberg; L. Olsson; **J. Nielsen** (2008) The roles of galactitol, galactose-1-phosphate and phosphoglucosyltransferase in galactose-induced toxicity in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 101:317-326
 239. G. Panagiotou; M. R. Andersen; T. Grotkjær; T. B. Regueira; G. Hofmann; **J. Nielsen**; L. Olsson (2008) Systems analysis unfolds the relationship between the phosphoketolase pathway and growth in *Aspergillus nidulans*. *PLoS One* 3:e2847
 240. M. R. Andersen; W. Vongsangnak; G. Panagiotou; M. P. Salazar; L. Lehmann; **J. Nielsen** (2008) A trispecies *Aspergillus* microarray: Comparative transcriptomics of three *Aspergillus* species. *Proc. Nat. Acad. Sci.* 105:4387-4392
 241. W. Vongsangnak; P. Olsen; K. Hansen; S. Krogsgaard; **J. Nielsen** (2008) Improved annotation through genome-scale metabolic modeling of *Aspergillus oryzae*. *BMC Genomics* 9:245
 242. A. Fazio; M. C. Jewett; P. Daran-Lapujade; R. Mustacchi; R. Usaite; J. Pronk; C. Workman; **J. Nielsen** (2008) Transcription factor control of growth rate dependent genes in *Saccharomyces cerevisiae*: A three factor design. *BMC Genomics* 9:341
 243. S. Wattanachaisaareekul; A. E. Lantz; M. L. Nielsen; **J. Nielsen** (2008) Production of the polyketide 6-MSA in yeast engineered for increased malonyl-CoA supply. *Metabolic Eng.* 10:246-254
 244. I. Nookaew; M. C. Jewett; A. Meecha; C. Thammarongtham; K. Laoteng; S. Cheevadhanarak; **J. Nielsen**; S. Bhumiratana (2008) The genome-scale metabolic model iIN800 of *Saccharomyces cerevisiae* and its validation: a scaffold to query lipid metabolism. *BMC Sys. Biol.* 2:71
 245. F. Pizarro; M. C. Jewett; **J. Nielsen**; E. Agosin (2008) Growth temperature exerts a differential physiological and transcriptional response in laboratory and wine strains of *Saccharomyces cerevisiae*. *Appl. Environ. Microbiol.* 74:6358-6368
 246. I. Borodina; J. Siebring; J. Zhang; C. P. Smith; G. van Keulen; L. Dijkhuizen; **J. Nielsen** (2008) Antibiotic overproduction in *Streptomyces coelicolor* A3(2) mediated by phosphofructokinase deletion. *J. Biol. Chem.* 283:25186-25199
 247. J. Højer-Pedersen; J. Smedsgaard; **J. Nielsen** (2008) The yeast metabolome addressed by electrospray ionization mass spectrometry: Initiation of a mass spectral library and its application for metabolic footprinting by direct infusion mass spectrometry. *Metabolomics* 4:393-405
 248. M. J. Herrgard; N. Swainston; P. Dobson; W.B. Dunn; K.Y. Arga; M. Arvas; N. Blüthgen; S. Borger; R. Costenoble; M. Heinemann; M. Hucka; N. Ke Novere; M. P. Li; W. Liebermeister; M.L. Mo; A.P. Oliveira; D. Petranovic; S. Pettifer; E. Simeonidis; K. Smallbone; I. Spasic; D. Weichart; R. Brent; D. S. Broomhead; H.V. Westerhoff; B. Kirdar; M. Penttilä; E. Klipp; B.O. Palsson; U. Sauer; S.G. Oliver; P. Mendes; **J. Nielsen**; D. B. Kell (2008) A consensus yeast metabolic network obtained from a community approach to systems biology. *Nature Biotechnol.* 26:1155-1160
 249. M. Rocha; P. Maia; R. Mendes; J. P. Pinto; E. C. Ferreira; K. Patil; **J. Nielsen**; I. Rocha (2008) Natural computation meta-heuristics for the *in silico* optimization of microbial strains. *BMC Bioinformatics* 9:499
- 2009**
250. M. Salazar; W. Vongsangnak; G. Panagiotou; M. R. Andersen; **J. Nielsen** (2009) Uncovering transcriptional regulation of glycerol metabolism in *Aspergillus* through genome-wide gene expression data analysis. *Mol. Genet. Genom.* 282:571-586
 251. A. Diano; J. Peeters; J. Dynesen; **J. Nielsen** (2009) Physiology of *Aspergillus niger* in oxygen-limited continuous cultures: Influence of aeration, carbon source concentration and dilution rate. *Biotechnol. Bioeng.* 103:956-965
 252. J. R. Wortman; J.M. Gilson; V. Joardar; J. Deegan; J. Clutterbuck; M.R. Andersen; D. Archer; M. Bencina; G. Braus; P. Coutinho; H. von Döhren; A.J. Driessen; E. Espeso; E. Fekete; M. Flipphi; C.G. Estrada; S. Geysens; G. Goldman; P.W. de Groot; K. Hansen; S.D. Harris; T. Heinekamp; K. Helmstaedt; B. Henrissat; G. Hofmann; T. Homan; T. Horio; H. oriuchi; S. James; M. Jones; L. Karaffa; Z. Karanyi; M. Kato; N. Keller; D.E. Kelly; J.A. Kiel; J.M. Kim; I.J. van der Klei; F.M. Klis; A. Kovalchuk; N. Krasevec; C.P. Kubicek; B. Liu; A. Maccabe; V. Meyer; P. Mirabito; M. Miskei; M. Mos; J. Mullins; D.R. Nelson; **J. Nielsen**; B.R. Oakley; S.A. Osmani; T. Pakula; A. Paszewski; I. Paulsen; S. Pilsyk; I. Pocsj; P.J. Punt; A.F. Ram; Q. Ren; X. Robellet; G. Robinson; B. Seiboth; P. van Solingen; T. Specht; J. Sun; N. Taheri-Talesh; N. Takeshita; D. Ussery; P.A. van Kuyk; H. Visser; P.J. van der Vondervoort; R.P. de Vries; J. Walton; X. Xiang; Y. Xiong; A.P. Zeng; B.W. Brandt; M.J. Cornell; C.A. van den Hondel; J. Visser; S.G. Oliver; G. Turner (2009) The 2008 update of the *Aspergillus nidulans* genome annotation: A community effort. *Fungal Gen. Biol.* 46:S2-S13

253. K. R. Kjeldsen; **J. Nielsen** (2008) *In silico* genome-scale reconstruction and validation of the *Corynebacterium glutamicum* metabolic network. *Biotechnol. Bioeng.* 102:583-597
 254. P. M. Coutinho; M.R. Andersen; M. K. Kolenova; P.A. van Kuyk; I. Benott; B.S. Gruben; B. Trejo-Aguilar; P. van Solingen; T. Pakula; B. Seiboth; E. Battaglia; G. Aguilar-Osorio; J.F. de Jong; R.A. Ohm; M. Aguilar; B. Henrissat; **J. Nielsen**; H. Stålbrandt; R.P. de Vries (2009) Post-genomic insights into the plant polysaccharide degradation potential of *Aspergillus nidulans* and comparison to *Aspergillus niger* and *Aspergillus oryzae*. *Fungal Gen. Biol.* 46:S161-S169
 255. G. Hofmann; A. Diano; **J. Nielsen** (2009) Recombinant bacterial haemoglobin alters metabolism of *Aspergillus niger*. *Met. Eng.* 11:8-12
 256. J. Thykaer; K. Rueksomtawin; H. Noorman; **J. Nielsen** (2009) Disruption of the NADPH-dependent Glutamate Dehydrogenase Affects the Morphology of Two Industrial Strains of *Penicillium chrysogenum*. *J. Biotechnol.* 139:280-282
 257. T. S. Christensen; A. P. Oliviera; **J. Nielsen** (2009) Reconstruction and logical modeling of glucose repression signaling pathways in *Saccharomyces cerevisiae*. *BMC Systems Biol.* 3:7
 258. S. Meijer; J. Otero; M. R. Andersen; L. Olsson; **J. Nielsen** (2009) Overexpression of isocitrate lyase – glyoxylate bypass influence on metabolism in *Aspergillus niger*. *Metabolic Eng.* 11:107-116
 259. D. Cimini; K. R. Patil; C. Shiraldi; **J. Nielsen** (2009) Global transcriptional response of *Saccharomyces cerevisiae* to the deletion of SDH3. *BMC Systems Biol.* 3:17
 260. J. F. Moxley; M. C. Jewett; M. R. Antoniewicz; S. G. Villas-Boas; H. Alper; R. T. Wheeler; L. Tong; A. G. Hinnebusch; T. Ideker; **J. Nielsen**; G. Stephanopoulos (2009) Linking high-resolution metabolic flux phenotypes and transcriptional regulation in yeast modulated by the global regulator Gcn4p. *Proc. Nat. Acad. Sci.* 106:6477-6482
 261. G. Panagiotou; M. R. Andersen; T. Grotkjær; T. B. Regueira; **J. Nielsen**; L. Olsson (2009) Studies of the production of fungal polyketides in *Aspergillus nidulans* by using systems biology tools. *Appl. Environ. Microbiol.* 75:2212-2220
 262. S. Meijer; M. L. Nielsen; L. Olsson; **J. Nielsen** (2009) Gene deletion of cytosolic ATP:Citrate lyase leads to altered organic acid production in *Aspergillus niger*. *J. Ind. Microbiol. Biotechnol.* 36:1275-1280
 263. M. R. Andersen; L. Lehmann; **J. Nielsen** (2009) Systemic analysis of the response of *Aspergillus niger* to ambient pH. *Genome Biol.* 10:R47
 264. M. A. Asadollahi; J. Maury; K. R. Patil; M. Schalk; A. Clark; **J. Nielsen** (2009) Enhancing sesquiterpene production in *Saccharomyces cerevisiae* through *in silico* driven metabolic engineering. *Met. Eng.* 11:328-334
 265. D. Rossouw; R. Olivares-Hernandes; **J. Nielsen**; F.F. Bauer (2009) A comparative 'omics' approach to investigate differences in wine yeast physiology and metabolism during fermentation. *Appl. Environ. Microbiol.* 75:6600-6612
 266. S. Meijer; W.A. de Jongh; L. Olsson; **J. Nielsen** (2009) Physiological characterization of *acuB* deletion in *Aspergillus niger*. *Appl. Microbiol. Biotechnol.* 84:157-167
 267. D. B. Flagfeldt; V. Siewers; L. Huang; **J. Nielsen** (2009) Characterization of chromosomal integration sites for heterologous gene expression in *Saccharomyces cerevisiae*. *Yeast* 26:545-551
 268. V. Siewers; X. Chen; L. Huang; J. Zhang; **J. Nielsen** (2009) Heterologous production of the non-ribosomal peptide LLD-ACV in *Saccharomyces cerevisiae*. *Met. Eng.* 11:391-397
 269. R. Usaite; M. C. Jewett; A. P. Oliveira; J. R. Yates III; L. Olsson; **J. Nielsen** (2009) Reconstruction of the yeast Snf1 kinase regulatory network reveals its role as a global energy regulator. *Mol. Sys. Biol.* 5:319
 270. W. Vongsangnak; M. Salazar; K. Hansen; **J. Nielsen** (2009) Genome-wide analysis of maltose utilization and regulation in *Aspergillus niger*. *Microbiol.* 155:3893-3902
- 2010**
271. J.M. Otero; W. Vongsangnak; M.A. Asadollahi; R. Olivares-Hernandes; J. Maury; L. Farinelli; L. Barlocher; M. Østerås; M. Schalk; A. Clark; **J. Nielsen** (2010) Whole genome sequencing of *Saccharomyces cerevisiae*: from genotype to phenotype for improved metabolic engineering applications. *BMC Genomics* 11:723
 272. M. A. Asadollahi; J. Maury; M. Schalk; A. Clark; **J. Nielsen** (2010) Enhancement of farnesyl diphosphate pool as direct precursor of sesquiterpenes through metabolic engineering of the mevalonate pathway in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 106:86-96
 273. K. van Eunen; J. Bouwman; P. Daran-Lapujade; J. Postmus; A. B. Canelas; F. I. Monsenides; R. Orij; I. Tuzun; J. van den Brink; G. J. Smits; W. M. van Gulik; S. Brul; J. J. Heijnen; J. H. de Winder; M. J. Teixeira de Mattos; C. Kettner; **J. Nielsen**; H. V. Westerhoff; B. M. Bakker (2010) Measuring enzyme activities under standardized in-vivo like conditions for systems biology. *FEBS J.* 277:749-760
 274. W. Vongsangnak; I. Nookaew; M. Salazar; **J. Nielsen** (2010) Analysis of genome-wide co-expression and co-evolution of *Aspergillus oryzae* and *Aspergillus niger*. *Omics J.* 14:165-175
 275. S. Bordel; **J. Nielsen** (2010) Identification of flux control in metabolic networks using non-equilibrium thermodynamics. *Met. Eng.* 12:369-377
 276. V. Siewers; R. San-Bento; **J. Nielsen** (2010) Implementation of communication-mediating domains for non-ribosomal peptide production in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 106:841-844
 277. I. Rocha; P. M. P. Evangelista; P. Vilça; S. Soares; J. P. Pinto; **J. Nielsen**; K. R. Patil; E. C. Ferreira; M. Rocha (2010) OptFlux: an open-source software platform for in silico metabolic engineering. *BMC Systems Biol.* 4:45
 278. J. Thykaer; **J. Nielsen**; W. Wohlleben; T. Weber; M. Gutknecht; A. E. Lantz; E. Stegmann (2010) Increased glycopeptides production after overexpression of shikimate pathway genes being part of the balhimycin biosynthetic gene cluster. *Met. Eng.* 12:455-461
 279. M. Cvijovic; R. Olivares-Hernandez; R. Agren; W. Vongsangnak; I. Nookaew; K. R. Patil; **J. Nielsen** (2010) BioMet Toolbox: Genome-wide analysis of metabolism. *Nuc. Acid Res.* 38:W144-W149
 280. S. K. Nandy; P. Joutten; **J. Nielsen** (2010) Reconstruction of the yeast protein-protein interaction network involved in nutrient sensing and global metabolic regulation. *BMC Sys. Biol.* 4:68

281. J. Zhang; L. Olsson; **J. Nielsen** (2010) The β -subunits of the Snf1 kinase in *Saccharomyces cerevisiae*, Gal83 and Sip2, but not Sip1, are redundant in glucose derepression and regulation of sterol biosynthesis. *Mol. Microbiol.* 77:371-383
282. S. Bordel; R. Agren; **J. Nielsen** (2010) Sampling the solution space in genome-scale metabolic networks reveals transcriptional regulation in key enzymes. *PLoS Comp. Biol.* 6:e100859
283. I. Nookaew; B. G. Gabrielsson; A. Holmång; A.-S. Sandberg; **J. Nielsen** (2010) Identifying molecular effects of diet through systems biology: Influence of herring diet on sterol metabolism and protein turnover in mice. *PLoS One* 5:e12361
284. M. Papini; I. Nookaew; G. Scalcinati; V. Siewers; **J. Nielsen** (2010) Phosphoglycerate mutase knock-out mutant *Saccharomyces cerevisiae*: Physiological investigation and transcriptome analysis. *Biotechnol. J.* 5:1016-1027
285. R. Olivares-Hernandez; R. Usaite; **J. Nielsen** (2010) Integrative analysis using proteome and transcriptome data from yeast to unravel regulatory patterns at post-transcriptional level. *Biotechnol. Bioeng.* 107:865-875
286. R. Olivares-Hernandez; H. Sunner; J. C. Frisvad; L. Olsson; **J. Nielsen**; G. Panagiotou (2010) Combining substrate specificity analysis with support vector classifiers reveals feruloyl esterase as a phylogenetically informative protein group. *PLoS One* 5:e12781
287. S. Partow; V. Siewers; S. Björn; **J. Nielsen**; J. Maury (2010) Characterization of different promoters for designing a new expression vector in *Saccharomyces cerevisiae*. *Yeast* 27:955-964
288. J.M. Otero; M.A. Papadakis; D.B.R.K. Gupta Udatha; **J. Nielsen**; G. Panagiotou (2010) Yeast biological networks unfold the interplay of antioxidants, genome and phenotype, and reveal a novel regulator of the oxidative stress response. *PLoS One* 5:e13606
289. A.Canelas; N.Harrison; A.Fazio; J.Zhang; J.-P. Pitkänen, J. van den Brink, B.M. Bakker, L. Bogner, J. Bouwman, J.I. Castrillo, A. Cankorur, P. Chumnanpuen, P. Daran-Lapujade, D. Dikicioglu, K. van Eunen, J.C. Ewald, J. J. Heijnen, B. Kirdar, I. Mattila, F.I.C. Mensonides, A. Niebel, M. Penttilä, J.T. Pronk, M. Reuss, L. Salusjärvi, U. Sauer, D. Sherman, M. Siemann-Herzberg, H. Westerhoff, J. de Winde, D. Petranovic, S.G. Oliver, C.T. Workman, N. Zamboni and **J. Nielsen** (2010) Integrated multilaboratory systems biology reveals differences in protein metabolism between two reference yeast strains. *Nature Comm.* 1:145
- 2011**
290. P. Chumnanpuen; C. Brackmann; S.K. Nandy; S. Chatzipapadopoulos; **J. Nielsen**; A. Enejder (2011) Lipid biosynthesis monitored at single cell level in *Saccharomyces cerevisiae*. *Biotechnol. J.* 6:1-8
291. W. Vongsangnak; K. Hansen; **J. Nielsen** (2011) Integrated analysis of the global transcriptional response to α -amylase over-production in *Aspergillus oryzae*. *Biotechnol. Bioeng.* 108:1130-1139
292. L. Albertsen; Y. Chen; L.S. Bach; S. Rattleff; J. Maury; S. Brix; **J. Nielsen**; U. Mortensen (2011) Diversion of flux toward sesquiterpene production in *Saccharomyces cerevisiae* by fusion of host and heterologous enzymes. *Appl. Environ. Microbiol.* 77:1033-1040
293. R. Ruenwai; A. Neiss; K. Laoteng; W. Vongsangnak; A.B. Dalfard; S. Cheevadhanarak; D. Petranovic; **J. Nielsen** (2011) Heterologous production of polyunsaturated fatty acids in *Saccharomyces cerevisiae* causes a global transcriptional response resulting in reduced proteasomal activity and increased oxidative stress. *Biotechnol. J.* 6:343-356
294. R. Olivares-Hernandez; S. Bordel; **J. Nielsen** (2011) Codon usage variability determines the correlation between proteome and transcriptome fold changes. *BMC Systems Biol.* 5:33
295. S. Pabinger; R. Rader; R. Agren; **J. Nielsen**; Z. Trajanoski (2011) MEMOSys: Bioinformatics platform for genome-scale metabolic models. *BMC Systems Biol.* 5:20
296. T.B. Regueira; K.R. Kildegaard; B.G. Hansen; U.H. Mortensen; C. Hertweck; **J. Nielsen** (2011) Molecular basis for mycophenolic acid biosynthesis of *Penicillium brevicompactum*. *Appl. Environ. Microbiol.* 77:3035-3043
297. B.G. Hansen; B. Salomonsen; M.T. Nielsen; N. B. Hansen; J.B. Nielsen; K.F. Nielsen; T.B. Regueira; **J. Nielsen**; K.R. Patil; U.H. Mortensen (2011) Versatile enzyme expression and characterization system for *Aspergillus nidulans* with the *Penicillium brevicompactum* polyketide synthase gene from the mycophenolic acid gene cluster as a test case. *Appl. Environ. Microbiol.* 77:3044-3051
298. S.E. van Mulders; C. Stassen; L. Daenen; B. Devreese; V. Siewers; R.G.E. van Eijdsden; **J. Nielsen**; F.R. Delvaux; R. Willaert (2011) The influence of microgravity on invasive growth in *Saccharomyces cerevisiae*. *Astrobiol.* 11:45-55
299. F.H. Karlsson; D.W. Ussery; **J. Nielsen**; I. Nookaew (2011) A closer look at *Bacteroides*: Phylogenetic relationship and genomic implications of a life in the human gut. *Microb. Ecol.* 61:473-485
300. M.R. Andersen; M.P. Salazar; P.J. Schaap, P.J.I. van de Vondervoort, D. Culley, J. Thykaer, J.C. Frisvad, K.F. Nielsen, R. Albarg, K. Albermann, R.M. Berka, G.H. Braus, S.A. Braus-Stromeier, L.M. Corrochano, Z. Dai, P.W.M. van Dijck, G. Hofmann, L.L. Lasure, J.K. Magnuson, H. Menke, M. Meijer, S.L. Meijer, J.B. Nielsen, M.L. Nielsen, A.J.J. van Ooyen, H.J. Pel, L. Poulsen, R. A. Samson, H. Stam, A. Tsang, J.M. van den Brink, A. Atkins, A. Aerts, H. Shapiro, J. Pangilinan, A. Salamov, Y. Lou, E. Lindquist, S. Lucas, J. Grimwood, I.V. Grigoriev, C.P. Kubicek, D. Martinez, N.N.M.E. van Peij, J.A. Roubous, **J. Nielsen**; Scott Baker (2011) Comparative genomics of citric-acid producing *Aspergillus niger* ATCC 1015 versus enzyme-producing CBS 513.88. *Genome Res.* 21:885-897
301. K.M. Madsen; G.D.B.R.K. Udatha; S. Semba; J.M. Otero; P. Koetter; **J. Nielsen**; Y. Ebizuka; T. Kushiro; G. Panagiotou (2011) Linking genotype and phenotype of *Saccharomyces cerevisiae* strains reveals metabolic engineering targets and leads to triterpene hyper-producers. *PLoS One* 6:e14763
302. W.A. Rodriguez-Limas; K.E.J. Tyo; **J. Nielsen**; O.T. Ramirez; L.A. Palomares (2011) Molecular and process design for rotavirus-like particle production in *Saccharomyces cerevisiae*. *Microbial. Cell Factory* 10:33
303. M.P. Piddocke; A. Fazio; W. Vongsangnak; M.L. Wong; H.P. Heldt-Hansen; C. Workman; **J. Nielsen**; L. Olsson (2011) Revealing the beneficial effect of protease supplementation to high gravity beer fermentations using “-omics” techniques. *Microbial Cell Factory* 10:27

304. M. Lindqvist; I. Nookaew; I. Brinkenber; E. Samuelson; K. Thörn; **J. Nielsen**; A.M.Harandi (2011) Unraveling molecular signatures of immunostimulatory adjuvants in the female genital tract through systems biology. *PLoS One* 6:e20448
 305. K.-K. Hong; W. Vongsangnak; G.N. Vemuri; **J. Nielsen** (2011) Unravelling evolutionary strategies of yeast for improving galactose utilization through integrated systems level analysis. *Proc. Nat. Acad. Sci. USA* 108:12179-12184
 306. J.S. Rokem; W. Vongsangnak; **J. Nielsen** (2011) Comparative metabolic capabilities for *Micrococcus luteus* NCTC 2665, the “Fleming” Strain, and Actinobacteria. *Biotechnol. Bioeng.* 108:2770-2775
 307. J. Zhang; S. Vaga; P. Chumnapuen; R. Kumar; G.N. Vemuri; R. Aebershold; **J. Nielsen** (2011) Mapping the interaction of Snf1 with Tor1 in *Saccharomyces cerevisiae*. *Mol. Systems Biol.* 7:545
- 2012**
308. L. Pedersen; K. Hansen; **J. Nielsen**; A. Eliasson Lantz; J. Thykaer (2012) Industrial glucoamylase fed-batch benefits from oxygen limitation and high osmolarity. *Biotechnol. Bioeng.* 109:116-120
 309. L. Pedersen; K. Hansen; **J. Nielsen**; A.E. Lantz; J. Thykaer (2012) Industrial glucoamylase fed-batch benefits from oxygen limitation and high osmolarity. *Biotechnol. Bioeng.* 109:116-124
 310. E. Larsson; V. Tremaroli; Y.S. Lee; O. Koren; I. Nookaew; A. Fricker; **J. Nielsen**; R. E. Ley; F. Bäckhed (2012) Analysis of the gut microbial regulation of host gene expression along the length of the gut and regulation of gut microbial ecology through MyD88. *Gut* doi:10.1136/gutjnl-2011-301104
 311. W. Vongsangnak; L.F. Figueiredo; J. Förster; T. Weber; J. Thykaer; E. Stegmann; W. Wohlleben; **J. Nielsen** (2012) Genome-scale metabolic representation of *Amycolatopsis balharmycina*. *Biotechnol. Bioeng.* 109:1798-1807
 312. L. Zihé; K.E.J. Tyo; J.L. Martinez; D. Petranovic; **J. Nielsen** (2012) Different expression systems for production of recombinant proteins in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 109:1259-1268
 313. K.E.J. Tyo; L. Zihé; D. Petranovic; **J. Nielsen** (2012) Imbalance of heterologous protein folding and disulfide bond formation rates yields runaway oxidative stress. *BMC Biol.* 10:16
 314. J. Hou; K.E.J. Tyo; Z. Liu; D. Petranovic; **J. Nielsen** (2012) Engineering of vesicle trafficking improves heterologous protein secretion in *Saccharomyces cerevisiae*. *Met. Eng.* 14:120-127
 315. G. Scalcinati; C. Knuf; S. Partow; Y. Chen; J. Maury; M. Schalk; L. Daviet; **J. Nielsen**; V. Siewers (2012) Dynamic control of gene expression in *Saccharomyces cerevisiae* engineered for the production of plant sesquiterpene α -santalene in a fed-batch mode. *Met. Eng.* 14:91-103
 316. M. Papini; I. Nookaew; V. Siewers; **J. Nielsen** (2012) Physiological characterization of recombinant *Saccharomyces cerevisiae* expressing the *Aspergillus nidulans* phosphoketolase pathway: validation of activity through ^{13}C -based metabolic flux analysis. *Appl. Microbiol. Biotechnol.* 95:1001-1010
 317. S. Shi; J.O. Valle-Rodriguez; S. Khoomrung; V. Siewers; **J. Nielsen** (2012) Functional expression and characterization of five wax ester synthases in *Saccharomyces cerevisiae* and their utility for biodiesel production. *Biotechnol. Biofuels* 5:7
 318. L. Caspeta; S.; R. Agren; I. Nookaew; **J. Nielsen** (2012) Genome-scale metabolic reconstructions of *Pichia stiiidis* and *Pichia pastoris* and *in silico* evaluation of their potentials. *BMC Systems Biol.* 6:24
 319. J.F. Nijkamp; M. van den Broek; E. Datema, S. de Kok; L. Bosman; M.A. Luttik; P. Daran-Lapujade; W. Vongsangnak; **J. Nielsen**; W.H.M. Heijne; P. Klaassen; C.J. Paddon; D. Platt; P. Kötter; R.C. van Ham; M.J.T. Reinders; J.T. Pronk; D. de Ridder; J.-M. Daran (2012) De novo sequencing, assembly and analysis of the genome of the laboratory strain *Saccharomyces cerevisiae* CEN.PK113-7D, a model for modern industrial biotechnology. *Microb. Cell Factories* 11:36
 320. G. Scalcinati; J. Otero; J. van Vleet; T. Jeffries; L. Olsson; **J. Nielsen** (2012) Evolutionary engineering of *Saccharomyces cerevisiae* for efficient xylose consumption. *FEMS Yeast Res.* 12:582-597
 321. R. Agren; S. Bordel; A. Mardinoglu; N. Pornputtpong; I. Nookaew; **J. Nielsen** (2012) Reconstruction of genome-scale active metabolic networks for 69 human cell types and 16 cancer types using INIT. *PLoS Comp. Biol.* 8:e1002518
 322. Y. Chen; S. Partow; G. Scalcinati; V. Siewers; **J. Nielsen** (2012) Enhancing the copy number of episomal plasmids in *Saccharomyces cerevisiae* for improved protein production. *FEMS Yeast Res.* 12:598-607
 323. S. Khoomrung; P. Chumnapuen; S. Jansa-ard; I. Nookaew; **J. Nielsen** (2012) Fast and accurate preparation fatty acid acid methyl esters by microwave-assisted derivatization in the yeast *Saccharomyces cerevisiae*. *Appl. Microbiol. Biotechnol.* 94:1637-1646
 324. P. Chumnapuen; J. Zhang; I. Nookaew; **J. Nielsen** (2012) Integrated analysis of transcriptome and lipid profiling reveals the co-influences of inositol-choline and Snf1 in controlling lipid analysis in yeast. *Mol. Genetics Genom.* 287:541-554
 325. K.-K. Hong; J. Hou; S. Shoaie; **J. Nielsen**; S. Bordel (2012) Dynamic ^{13}C -labelling experiments prove important differences in protein turnover rate between two *Saccharomyces cerevisiae* strains. *FEMS Yeast Res.* 12:741-747
 326. M. R. Andersen; M. G. Jacobsen; R. P. de Vries; **J. Nielsen** (2012) Mapping the polysaccharide degradation potential of *Aspergillus niger*. *BMC Genomics* 13:313
 327. I. Nookaew; M. Papini; N. Pornputtpong; G. Scalcinati; L. Fagerberg; M. Uhlen; **J. Nielsen** (2012) A comprehensive comparisons of RNA-Seq based transcriptome analysis from reads to differential gene expression and cross comparison with microarrays: A case study in *Saccharomyces cerevisiae*. *Nucleic Acid Res.* 40:10084-10097
 328. Y. Chen; V. Siewers; **J. Nielsen** (2012) Profiling of cytosolic and peroxisomal acetyl-CoA metabolism in *Saccharomyces cerevisiae*. *PLoS One* 7:e42475
 329. K.-K. Hong; **J. Nielsen** (2012) Recovery of phenotypes obtained by adaptive evolution through inverse metabolic engineering. *Appl. Environ. Microbiol.* 78:7579-7586
 330. G. Scalcinati; S. Partow; V. Siewers; M. Schalk; L. Daviet; **J. Nielsen** (2012) Combined metabolic engineering of precursor and co-factor supply to increase α -santalene production by *Saccharomyces cerevisiae*. *Microb. Cell Fac.* 11:117

331. M. Papini; I. Nookaew; M. Uhlen; **J. Nielsen** (2012) *Scheffersomyces stipitis*: a comparative systems biology study with the Crabtree positive yeast *Saccharomyces cerevisiae*. *Microb. Cell Fac.* 11:136
332. K. Kocharin; Y. Chen; V. Siewers; **J. Nielsen** (2012) Engineering of acetyl-CoA metabolism for the improved production of polyhydroxybutyrate in *Saccharomyces cerevisiae*. *AMB Express* 2:52
333. C. Geijer; I. Pirkov; W. Vongsangnak; A. Ericsson; **J. Nielsen**; M. Krantz; S. Hohmann (2012) Time course gene expression profiling of yeast spore germination reveals a network of transcription factors orchestrating the global response. *BMC Genomics* 13:554
334. F. H. Karlsson; F. Fåk; I. Nookaew; V. Tremaroli; B. Fagerberg; D. Petranovic; F. Bäckhed*; **J. Nielsen*** (2012) Symptomatic atherosclerosis is associated with an altered gut metagenome. *Nature Comm.* 3:1245
335. J. K. Michener; **J. Nielsen**; C. D. Smolke (2012) Identification and treatment of heme depletion attributable to overexpression of a lineage of evolved P450 monooxygenases. *Proc. Nat. Acad. Sci.* 109:19504-19509
336. S. Partow; V. Siewers; L. Daviet; M. Schalk; **J. Nielsen** (2012) Reconstruction and evaluation of the synthetic bacterial MEP pathway in *Saccharomyces cerevisiae*. *PLoS One* 7(12):e52498
- 2013**
337. J. Hou; T. Österlund; L. Zihe; D. Petranovic; **J. Nielsen** (2012) Heat shock response improves heterologous protein production in *Saccharomyces cerevisiae*. *Appl. Microbiol. Biotechnol.* 97:3559-3568
338. I. Nookaew; P.-A. Svensson; P. Jacobsen; M. Jernås; M. Taube; I. Larsson; J.C. Andersson-Assarsson; L. Sjöström; P. Froguel; A. Walley; **J. Nielsen***; L.M.S. Carlsson* (2013) Adipose tissue resting energy expenditure and expression of genes involved in mitochondrial function are higher in women than in men. *J. Clin. Endocrin. Met.* 98:E370-E378
339. Y. Chen; L. Daviet; M. Schalk; V. Siewers; **J. Nielsen** (2013) Establishing a platform cell factory through engineering of yeast acetyl-CoA metabolism. *Met. Eng.* 15:48-54
340. J.M. Otero; D. Cimini; K.R. Patil; S.G. Poulsen; L. Olsson; **J. Nielsen** (2013) Industrial systems biology of *Saccharomyces cerevisiae* enables novel succinic acid cell factory. *PLoS One* 8:e54144
341. L. Zihe; J. Hou; J.L. Martinez; D. Petranovic; **J. Nielsen** (2013) Correlation of cell growth and heterologous protein production by *Saccharomyces cerevisiae*. *Appl. Microbiol. Biotechnol.* 97:3559-3568
342. K.-K. Hong; **J. Nielsen** (2013) Adaptively evolved yeast mutants on galactose show trade-offs in carbon utilization on glucose. *Metabolic Eng.* 16:78-86
343. K. Sanli; F. Karlsson; I. Nookaew; **J. Nielsen** (2013) FANTOM: Functional and taxonomic analysis of metagenomes. *BMC Bioinformatics* 14:38
344. L. Våremo; **J. Nielsen**; I. Nookaew (2013) Enriching the gene set analysis of genome-wide data by incorporating directionality of gene expression and combining statistical hypotheses and methods. *Nucleic Acid Res.* 41:4378-4391
345. I. Thiele; Neil Swainston; R.M.T. Fleming, A. Hoppe, S. Sahoo, M.K. Aurich, H. Haraldsdottir, M.L. Mo, O. Rolfsson, M.D. Stobbe, S.G. Thorleifsson, R. Agren, C. Bölling, S. Bordel, A.K. Chavali, P. Dobson, W.B. Dunn, L. Endler, D. Hala, M. Hucka, D. Hull, D. Jameson, N. Jamshidi, J.J. Jonsson, N. Juty, S. Keating, I. Nookaew, N. Le Novère, N. Malys, A. Mazein, J.A. Papin, N.D. Price, E. Selkov, Sr, M.I. Sigurdsson, E. Simeonidis, N. Sonnenschein, K. Smallbone, A. Sorokin, J.H.G.M. van Beek, D. Weichart, I. Goryanin, **J. Nielsen**; Hans V. Westerhoff; D. B. Kell; P. Mendes; B. Palsson (2013) A community-driven global reconstruction of human metabolism. *Nature Biotechnol.* 31:419-425
346. L. Caspeta; N.A.A. Buijs; **J. Nielsen** (2013) The role of biofuels in the future energy supply. *Energy Environ. Sci.* 6:1077-108
347. A. Mardinoglu; R. Agren; C. Kampf; A. Asplund; I. Nookaew; P. Jacobsen; A.J. Walley; P. Froguel; L.M. Carlsson; M. Uhlen; **J. Nielsen** (2013) Integration of clinical data with a genome-scale metabolic model of the human adipocyte. *Mol. Systems Biol.* 9:649
348. L. Zihe; T. Österlund; J. Hou; D. Petranovic; **J. Nielsen** (2013) Anaerobic α -amylase production and secretion with fumarate as the final electron acceptor in yeast. *Appl. Environ. Microbiol.* 79:2962-2967
349. S. E. F. Borgos; S. Bordel; H. Sletta; H. Ertesvåg; Ø. Jacobsen; P. Bruheim; T. E. Ellingsen; **J. Nielsen**; S. Valla (2013) Mapping global effects of the anti-sigma factor MucA in *Pseudomonas fluorescens* SBW25 through genome-scale metabolic modeling. *BMC Systems Biol.* 7:19
350. R. Agren; L. Liu; S. Shoaie; W. Vongsangnak; I. Nookaew; **J. Nielsen** (2013) The RAVEN toolbox and its use for generating a genome-scale metabolic model for *Penicillium chrysogenum*. *PLoS Comp. Biol.* 9:e1002980
351. K. Kocharin; J. Nielsen (2013) Specific growth rate and substrate dependent polyhydroxybutyrate production in *Saccharomyces cerevisiae*. *AMB Express* 3:18
352. K. Kocharin; V. Siewers; **J. Nielsen** (2013) Improved polyhydroxybutyrate production by *Saccharomyces cerevisiae* through the use of the phosphoketolase pathway. *Biotechnol. Bioeng.* 110:2216-2224
353. F. Karlsson; V. Tremaroli; I. Nookaew; G. Bergström; C.J. Behre; B. Fagerberg; **J. Nielsen***; F. Bäckhed* (2013) Gut metagenome in European women with normal, impaired and diabetic glucose control. *Nature* 498:99-103
354. E. Petelenz-Kirdziel; C. Kuehn; B. Nordlander; D. Klein; K.-K. Hong; T. Jacobson; P. Dahl; J. Schaber; **J. Nielsen**; S. Hohmann; E. Klipp (2013) Quantitative analysis of glycerol accumulation, glycolysis and growth under hyper osmotic stress. *PLoS Comp. Biol.* 9:e1003084
355. T. Osterlund; I. Nookaew; S. Bordel; **J. Nielsen** (2013) Mapping condition dependent regulation of metabolism in yeast through genome-scale modeling. *BMC Systems Biol.* 7:36
356. P. Chumnapuen; I. Nookaew; **J. Nielsen** (2013) Integrated analysis, transcriptome-lipidome, reveals the effects of INO-level (INO2 and INO4) on lipid metabolism in yeast. *BMC Systems Biol.* 7 Suppl 2:S7
357. L. Caspeta; **J. Nielsen** (2013) Economic and environmental impacts of microbial biodiesel. *Nature Biotechnol.* 31:789-793
358. R.G.E. van Eijsden; C. Stassen; L. Daenen; S.E. van Mulders; P.M. Bapat; V. Siewers; K.V. Gossens; **J. Nielsen**; F.R. Delvaux; P. van Hummelen; B. Devreese; R.G. Willaert (2013) A universal fixation method based on quaternary

- ammonium salts (RNAlater) for omics-technologies: *Saccharomyces cerevisiae* as a case study. *Biotechnol. Lett.* 35:891-900
359. R. Agren; J. M. Otero; **J. Nielsen** (2013) Genome-scale metabolic modeling enables metabolic engineering of *Saccharomyces cerevisiae* for succinic acid production. *J. Ind. Microbiol. Biotechnol.* 40:735-747
 360. A. Krivorucho; C. Serrano-Amatriain; Y. Chen; V. Siewers; **J. Nielsen** (2013) Improving biobutanol production in engineered *Saccharomyces cerevisiae* by manipulation of acetyl-CoA metabolism. *J. Ind. Microbiol. Biotechnol.* 40:1051-1056
 361. C. Knuf; I. Nookaew; S. Brown; M. McCulloch; A. Berry; **J. Nielsen** (2013) Investigation of malic acid production in *Aspergillus oryzae* under nitrogen starvation conditions. *Appl. Environ. Microbiol.* 79:6050-6058
 362. S. Shoaie; F. Karlsson; A. Mardinoglu; I. Nookaew; S. Bordel; **J. Nielsen** (2013) Elucidating the interactions between bacteria in the human gut through metabolic modeling. *Sci. Rep.* 3:2532
 363. A. Feizi; T. Österlund; D. Petranovic; S. Bordel; **J. Nielsen** (2013) Genome-scale modeling of the protein secretory machinery in yeast. *PLOS One* 8:e63284
 364. M.C. Jewett; C.T. Workman; I. Nookaew; F.A. Pizarro; E. Agosin; L.I. Hellgren; **J. Nielsen** (2013) Mapping condition dependent regulation of lipid metabolism in *Saccharomyces cerevisiae*. *G3* 3:1979-1995
 365. J. Anfelt; B. Hallström; **J. Nielsen**; M. Uhlen; E.P. Hudson (2013) Using transcriptomics to improve butanol tolerance in cyanobacteria. *Appl. Environ. Microbiol.* 79:7419-7427
 366. S. Khoomrung; P. Chumnanpuen; S. Jansa-Ard; M. Ståhlman; I. Nookaew; J. Boren; **J. Nielsen** (2013) Rapid quantification of yeast lipid using microwave-assisted total lipid extraction and HPLC-CAD. *Anal. Chem.* 85:4912-4919
 367. A. Hussain; I. Nookaew; S. Khoomrung; L. Andersson; I. Larsson; L. Hulthén; N. Jansson; R. Jakubowicz; S. Nilsson; A.-S. Sandberg; **J. Nielsen**; A. Holmäng (2013) A maternal diet of fatty fish reduces body fat of offspring compared with a maternal diet of beef and post-weaning diet of fish improves insulin sensitivity and lipid profile in adult C57BL/6 male mice. *Acta Physiol.* 209:220-234
 368. I. Nookaew; K. Thorell; K. Worah; E. Wang; M.L. Hibberd; H. Sjövall; S. Pettersson; **J. Nielsen**; S. B. Lundin (2013) Transcriptome signatures in *Helicobacter pylori* infected mucosa identifies acidic mammalian chitinase loss as a corpus atrophy marker. *BMC Med. Genomics* 6:41
- 2014**
369. N. Pornputtpong; K. Wanichthanarak; A. Nilsson; I. Nookaew; **J. Nielsen** (2014) A dedicated database system for handling multi-level data in systems biology. *Source Code Biol. Med.* 9:17
 370. A. Mardinoglu; R. Agren; K. Kampf; A. Asplund; M. Uhlen; **J. Nielsen** (2014) Genome-scale metabolic modeling of hepatocytes reveals serine deficiency in patients with non-alcoholic fatty liver disease. *Nature Comm.* 5:3083
 371. P. Chumnanpuen; M.A. Edberg; Jörn Smedsgaard; **J. Nielsen** (2014) Dynamic metabolic footprinting reveals the key components of metabolic networks in yeast *Saccharomyces cerevisiae*. *Int. J. Genomics* 894296:1-14
 372. J.O. Valle-Rodriguez; S. Shi; V. Siewers; **J. Nielsen** (2014) Metabolic engineering of *Saccharomyces cerevisiae* for production of fatty acid ethyl esters, an advanced biofuel, by eliminating non-essential fatty acid utilization pathways. *Appl. Energy* 115:226-232
 373. L. Liu; J.L. Martinez; D. Petranovic; **J. Nielsen** (2014) Balanced globin protein expression and heme biosynthesis improves production of human hemoglobin in *Saccharomyces cerevisiae*. *Met. Eng.* 21:9-16
 374. N. Jensen; T. Strucko; K. Kildegaard; D. Florian; J. Maury; U. Mortensen; J. Forster; **J. Nielsen**; I. Borodina (2013) EasyClone: method for iterative chromosomal integration of multiple genes in *Saccharomyces cerevisiae*. *FEMS Yeast Res.* 14:238-248
 375. R. Ledesma-Amaro; E.J. Kerkhoven; J.L. Revuelta; **J. Nielsen** (2014) Genome-scale metabolic modeling of the riboflavin overproducer *Ashbya gossypii*. *Biotechnol. Bioeng.* 111:1191-1199
 376. S.L. Sjostrom; Y. Bai; M. Huang; Z. Liu; **J. Nielsen**; H.N. Joensson; H.A. Svahn (2014) High-throughput screening for industrial enzyme production hosts by droplet microfluidics. *Lab. Chip.* 14:806-813
 377. L. Fagerberg; B.M. Hallstrom; P. Oksvold; C. Kampf; D. Djureinovic; J. Odeberg; M. Habuka; S. Tahmasebpour; A. Danielsson; K. Edlund; A. Asplund; E. Sjøstedt; E. Lundberg; C. Al-Khalili Szigyarto; M. Skogs; J. O. Takanen; H. Berling; H. Tegel; J. Mulder; P. Nilsson; J. M. Schwenk; C. Lindskog; F. Danielsson; A. Mardinoglu; A. Sivertsson; K. von Felitzen; M. Forsberg; M. Zwahlen; I.M. Olsson; S. Navani; M. Huss; **J. Nielsen**; F. Ponten; M. Uhlen (2014) Analysis of the human tissue-specific expression by genome-wide integration of transcriptomics and antibody-based proteomics. *Mol. Cell. Proteomics* 13:397-406
 378. Y. Chen; J. Bao; I.-K. Kim; V. Siewers; **J. Nielsen** (2014) Coupled incremental precursor and co-factor supply improves 3-hydroxypropionic acid production by *Saccharomyces cerevisiae*. *Met. Eng.* 22:104-109
 379. F. Gatto; I. Nookaew; **J. Nielsen** (2014) Chromosome 3p loss of heterozygosity is associated with a unique metabolic network in clear cell renal carcinoma. *Proc. Nat. Acad. Sci.* 111:E866-E875
 380. B.W. de Jong; S. Shi; V. Siewers; **J. Nielsen** (2014) Improved production of fatty acid ethyl esters in *Saccharomyces cerevisiae* through up-regulation of the ethanol degradation pathway and expression of the heterologous phosphoketolase pathway. *Microb. Cell Fac.* 13:39
 381. R. Agren; A. Mardinoglu; C. Kampf; A. Asplund; M. Uhlen; **J. Nielsen** (2014) Identification of anticancer drugs for hepatocellular carcinoma through personalized genome-scale metabolic modeling. *Mol. Systems Biol.* 10:721
 382. C. Kampf; A. Mardinoglu; L. Fagerberg; B.M. Hallström; K. Edlund; E. Lundberg; F. Ponten; **J. Nielsen**; M. Uhlen (2014) The human liver-specific proteome defined by transcriptomics and antibody-based profiling. *FASEB J.* 28:2901-2914
 383. J. L. Martinez; S. Bordel; K.-K. Hong; **J. Nielsen** (2014) Gcn4p and the Crabtree effect of yeast: Drawing the causal effect of the Crabtree effect of *Saccharomyces cerevisiae* and explaining evolutionary trade-offs of adaptation to galactose through systems biology. *FEMS Yeast Res.* 14:654-662

384. S. Shi; J. O. Valle-Rodriguez; V. Siewers; **J. Nielsen** (2014) Engineering of chromosomal wax ester synthase integrated *Saccharomyces cerevisiae* mutants for improved biosynthesis of fatty acid ethyl esters. *Biotechnol. Bioeng.* 111:1740-1747
385. I.E. El-Semman; F.H. Karlsson; S. Shoaie; I. Nookaew; T.H. Soliman; **J. Nielsen** (2014) Genome-scale metabolic reconstructions of *Bifidobacterium adolescent* L2-32 and *Faecalibacterium prausnitzii* A2-165 and their interaction using CommunityML. *BMC Systems Biol.* 8:41
386. S. Shi; Y. Chen; V. Siewers; **J. Nielsen** (2014) Improving production of malonyl-CoA derived metabolites by abolishing Snf1 dependent regulation of Acc1. *mBio* 5:e01130-14
387. C. Knuf; I. Nookaew; I. Remmers; S. Khoomrung; S. Brown; A. Berry; **J. Nielsen** (2014) Physiological characterization of the high malic acid-producing *Aspergillus oryzae* strain 2103a-68. *Appl. Microbiol. Biotechnol.* 98:3517-3527
388. K.E.J. Tyo; Z. Liu; Y. Magnusson; D. Petranovic; **J. Nielsen** (2014) Impact of protein uptake and degradation on recombinant protein secretion in yeast. *Appl. Microbiol. Biotechnol.* 98:7149-7159
389. M. Garcia-Albornoz; S. Thankaswamy-Kosalia; A. Nilsson; L. Våremo; I. Nookaew; **J. Nielsen** (2014) BioMet Toolbox 2.0: Genome-wide analysis of metabolism and omics data. *Nuc. Acid Res.* 42:W175-W181
390. F.H. Karlsson; I. Nookaew; **J. Nielsen** (2014) Metagenomic data utilization and analysis and construction of a global gut microbial gene catalogue. *PLOS Comp. Biol.* 10:e1003706
391. J. Hou; H. Tang; L. Zihe; T. Österlund; **J. Nielsen**; D. Petranovic (2014) Management of the endoplasmic reticulum stress by activation of the heat shock response in yeast. *FEMS Yeast Res.* 14:481-494
392. L. Liu; A. Feizi; T. Österlund; C. Hjort; **J. Nielsen** (2014) Genome-scale analysis of the high-efficient protein secretion system of *Aspergillus oryzae*. *BMC Systems Biol.* 8:73
393. L. Zihe; L. Liu; T. Österlund; J. Hou; M. Huang; L. Fagerberg; D. Petranovic; M. Uhlen; **J. Nielsen** (2014) Improved production of a heterologous amylase by *Saccharomyces cerevisiae* by inverse metabolic engineering. *Appl. Environ. Microbiol.* 80:5542-5550
394. C. Kampf; A. Mardinoglu; L. Fagerberg; B.M. Hallström; A. Danielsson; **J. Nielsen**; F. Ponten; M. Uhlen (2014) Defining the gall bladder proteome by transcriptomics and affinity proteomics. *Proteomics* 14:2498-2507
395. P.-J.P. Aspuria; S.Y. Lunt; L. Våremo; L. Vergnes; M. Gozo; J.A. Beach; B. Salumbides; K. Reue; W.R. Wiedemeyer; **J. Nielsen**; B.Y. Karlan; S. Orsulic (2014) Succinate dehydrogenase inhibition leads to epithelial-mesenchymal transition and reprogrammed carbon metabolism. *Cancer Met.* 4:21
396. A. Mardinoglu; C. Kampf; A. Asplund; L. Fagerberg; B. Hallström; K. Edlund; M. Blüher; F. Ponten; M. Uhlen; **J. Nielsen** (2014) Defining the human adipose tissue proteome to reveal metabolic alterations in obesity. *J. Prot. Res.* 11:5106-5119
397. K. Kildegaard; B. M. Hallström; T.H. Blicher; N. Sonnenschein; S. Sherstyk; N.B. Jensen; S. Harrison; J. Maury; M. Herrgård; A. Juncker; J. Förster; **J. Nielsen**; I. Borodina (2014) Evolution reveals a cyclic glutathione-dependent mechanism of 3-hydroxypropionic acid detoxification. *Met. Eng.* 26:57-66
398. L. Våremo; F. Gatto; **J. Nielsen** (2014) Kiwi: a tool for integration and visualization of network topology and gene-set analysis. *BMC Bioinform.* 15:408
399. L. Caspeta; Y. Chen; P. Ghiaci; A. Feizi; S. Buskov; B.M. Hallström; D. Petranovic; **J. Nielsen** (2014) Altered sterol composition renders yeast thermotolerant. *Science* 346:75-78
400. C. Navarrete; V. Siewers; **J. Nielsen** (2014) Enhanced ethanol production and reduced glycerol formation in *fps1* mutants of *Saccharomyces cerevisiae* engineered for improved redox balancing. *AMB Express* 4:86
- 2015**
401. M. Uhlén, L. Fagerberg, B.M. Hallström, C. Lindskog, P. Oksvold, A. Mardinoglu, Å. Sivertsson, C. Kampf, E. Sjöstedt, A. Asplund, I. Olsson, K. Edlund, E. Lundberg, S. Navani, C.A.-K. Szgyarto, J. Odeberg, D. Djureinovic, J.O. Takanen, S. Hober, T. Alm, H. Berling, H. Tegel, J. Mulder, J. Rockberg, P. Nilsson, J.M. Schwenk, M. Hamsten, K. von Feilitzen, M. Forsberg, L. Persson, F. Johansson, M. Zwahlen, G. von Heijne, **J. Nielsen**; F. Ponten (2015) Tissue based map of the humane proteome. *Science* 347:1260419,1-9
402. J. L. Martinez; L. Lifang; D. Petranovic; **J. Nielsen** (2015) Engineering the oxygen sensing regulation results in an enhanced recombinant human hemoglobin production by *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 112:181-188
403. N.A. Buijs; Y.J. Zhou; V. Siewers; **J. Nielsen** (2015) Long-chain alkane production by the yeast *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* 112:1275-1279
404. P. Ghaffari; A. Mardinoglu; A. Asplund; S. Shoaie; C. Kampf; M. Uhlen; **J. Nielsen** (2015) Identifying anti-growth factors for human cancer cell lines through genome-scale metabolic modeling. *Sci. Rep.* 5:8183
405. I. Borodina; K. Kildegaard; N.B. Jensen; T.H. Blicher; J. Maury; S. Sherstyk; K. Schneider; P. Lamosa; M.J. Herrgård; I. Rosenstand; F. Öberg; J. Förster; **J. Nielsen** (2015) Establishing a synthetic pathway for high-level production of 3-hydroxypropionic acid in *Saccharomyces cerevisiae* via beta-alanine. *Met. Eng.* 27:57-64
406. C. Zhang; B. Ji; A. Mardinoglu; **J. Nielsen**; Q. Hua (2015) Logical transformation of genome scale metabolic models for genetic applications and analysis. *Bioinform.* 31:2324-2331
407. B. de Jong; S. Shi; J.O. Valle-Rodriguez; V. Siewers; **J. Nielsen** (2015) Metabolic pathway engineering for fatty acid ethyl ester production in *Saccharomyces cerevisiae* using stable chromosomal integration. *J. Ind. Microbiol. Biotechnol.* 42:477-486
408. Y. Chen; Y. Zhang; V. Siewers; **J. Nielsen** (2015) Ach1 is involved in shutting mitochondrial acetyl units for cytosolic C2 provision in *Saccharomyces cerevisiae* lacking pyruvate carboxylase. *FEMS Yeast Res.* 15:fov015
409. R. Nicastro; F. Tripodi; C. Guzzi; V. Reghellin; S. Khoomrung; C. Airoldi; **J. Nielsen**; L. Alberghina; P. Cocetti (2015) Enhanced amino acid utilization sustains growth of cells lacking Snf1/AMPK. *BBA Mol. Cell Res.* 1853:1615-1625
410. K.V.Y. Gossens; F.S. Ielasi; I. Nookaew; I. Stals; L. Alonso-Sarduy; L. Daenen; S.E. Van Mulders; R.G.E. van Eijnden; C. Stassen; V. Siewers; F.R. Delvaux; S. Kasas; **J. Nielsen**; B. Devreese; R.G. Willaert (2015) Molecular mechanisms of flocculation self-recognition in yeast and its role in mating and survival. *mBio* 6:e00427-15

411. T. Österlund; S. Bordel; **J. Nielsen** (2015) Controllability analysis of transcriptional regulatory networks reveals circular control patterns among transcription factors. *Integr. Biol.* 7:560-568
412. S. Tymoshenko; R.D. Oppenheim; R. Agren; **J. Nielsen**; D. Soldati-Favre; V. Hatzimanikatis (2015) Metabolic needs and capabilities of *Toxoplasma gondii* through combined computational and experimental analysis. *PLOS Comp. Biol.* 11:e1004261
413. L. Våremo; C. Scheele; C. Broholm; A. Mardinoglu; C. Kampf; A. Asplund; I. Nookaew; M. Uhlen; B.K. Pedersen; **J. Nielsen** (2015) Transcriptome and proteome driven reconstruction of the human myocyte metabolic network and its use for identification of markers for diabetes. *Cell Rep.* 11:1-13
414. M. Engqvist; **J. Nielsen** (2015) ANT: Software for generating and evaluating degenerate codons for natural and expand genetic codes. *ACS Synthetic Biol.* 4:935-938
415. A. Feizi; A. Banaei-Esfahani; **J. Nielsen** (2015) HCSD: the human cancer secretome database. *Database* bav051:1-8
416. J. Lopez; K. Essus; I.-K. Kim; R. Pereira; J. Herzog; V. Siewers; **J. Nielsen**; E. Agosin (2015) Production of β -ionone by combined expression of carotenogenic and plant CCD1 genes in *Saccharomyces cerevisiae*. *Microb. Cell Fac.* 14:84
417. Y. Zhang; Z. Dai; A. Krivoruchko; Y. Chen; V. Siewers; **J. Nielsen** (2015) Functional pyruvate formate lyase pathway expressed in different electron donors in *Saccharomyces cerevisiae* at aerobic growth. *FEMS Yeast Res.* 15:fov024
418. F. Gatto; H. Miess; A. Schulze; **J. Nielsen** (2015) Flux balance analysis predicts essential genes in clear cell renal cell carcinoma metabolism. *Sci. Rep.* 5:10738
419. C. Lindskog; J. Linne; L. Fagerberg; B.M. Hallström; C.-J. Sundberg; M. Lindholm; M. Huus; C. Kampf; H. Choi; A. Liem; P. Ping; L. Våremo; A. Mardinoglu; **J. Nielsen**; E. Larsson; F. Ponten; M. Uhlen (2015) The human cardiac and skeletal muscle proteome defined by transcriptomics and antibody-based profiling. *BMC Genom.* 16:475
420. S. Shoaie; P. Ghaffari; P. Kovatcheva-Datchary; A. Mardinoglu; P. Sen; E. Pujos-Guillot; T. de Wouters; C. Juste; S. Rizkalla; J. Chilloux; L. Hoyles; J.K. Nicholson; ANR MicroObese Consortium; J. Dore; M.E. Dumas; K. Clement; F. Bäckhed; **J. Nielsen** (2015) Quantifying diet-induced metabolic changes of the human gut microbiome. *Cell Metabolism* 22:320-331
421. L. Caspeta; **J. Nielsen** (2015) Thermotolerant yeast strains adapted by laboratory evolution show trade-off at ancestral temperatures to other stresses. *mBio* 6:e00431-15
422. V. Tremaroli; F. Karlsson; M. Welin; M. Ståhlman; P. Kovatcheva-Datchary; T. Olbers; L. Fändriks; C. W. le Roux; **J. Nielsen**; F. Bäckhed (2015) Roux-en-Y Gastric Bypass and Vertical Banded Gastroplasty Induce Long-Term Changes on the Human Gut Microbiome Contributing to Fat Mass Regulation. *Cell Metabolism* 22:228-238
423. N. Pornputtaporn; I. Nookaew; **J. Nielsen** (2015) Human metabolic atlas: An online resource for human metabolism. *Database* bav068:1-9
424. M. Garcia-Albornoz; **J. Nielsen** (2015) Finding directionality and gene-disease predictions in disease associations. *BMC Systems Biol.* 9:35
425. M.H. Medema; R. Kottmann; P. Yilmaz; M. Cummings; J.B. Biggins; K. Blin; I. de Bruijn; Y.H. Chooi; J. Claesen; R.C. Coates; P. Cruz-Morales; S. Duddela; S. Düsterhus; D.J. Edwards; D.P. Fewer; N. Garg; C. Geiger; J.P. Gomez-Escribano; A. Greule; M. Hadjithomas; A.S. Haines; E.J.N. Helfrich; M.L. Hillwig; K. Ishida; A.C. Jones; C.S. Jones; K. Jungmann; C. Kegler; H.U. Kim; P. Kötter; D. Krug; J. Masschelein; A.V. Melnik; S.M. Mantovani; E.A. Monroe; M. Moore; N. Moss; H.-W. Nützmann; G. Pan; A. Pati; D. Petras; J. Reen; F. Rosconi; Z. Rui; Z. Tian; N.J. Tobias; Y. Tsunematsu; P. Wiemann; E. Wyckoff; X. Yan; G. Yim; F. Yu; Y. Xie; B. Aigle; A.K. Apel; C.J. Balibar; E.P. Balskus; F. Barona-Gómez; A. Bechthold; H.B. Bode; R. Borriss; S.F. Brady; A.A. Brakhage; P. Caffrey; Y.-Q. Cheng; J. Clardy; R.J. Cox; R. De Mot; S. Donadio; M.S. Donia; W.A. van der Donk; P.C. Dorrestein; S. Doyle; A.J.M. Driessen; M. Ehling-Schulz; K.-D. Entian; M.A. Fischbach; L. Gerwick; W.H. Gerwick; H. Gross; B. Gust; C. Hertweck; M. Höfte; S.E. Jensen; J. Ju; L. Katz; L. Kayser; J.L. Klassen; N.P. Keller; J. Kormanec; O.P. Kuipers; T. Kuzuyama; N.C. Kyrpides; H.-J. Kwon; S. Lautru; R. Lavigne; C. Lee; B. Linqun; X. Liu; W. Liu; A. Luzhetskyy; T. Mahmud; Y. Mast; C. Méndez; M. Metsä-Ketelä; J. Micklefield; D.A. Mitchell; B.S. Moore; L.M. Moreira; R. Müller; B.A. Neilan; M. Nett; **J. Nielsen**; F. O'Gara; H. Oikawa; A. Osbourn; M.S. Osburne; B. Ostash; S.M. Payne; J.-L. Pernodet; M. Petricek; J. Piel; O. Ploux; J.M. Raaijmakers; J.A. Salas; E.K. Schmitt; B. Scott; R.F. Seipke; B. Shen; D.H. Sherman; K. Sivonen; M.J. Smanski; M. Sosio; R.D. Süßmuth; K. Tahlan; C.M. Thomas; Y. Tang; A.W. Truman; M. Viaud; J.D. Walton; C.T. Walsh; T. Weber; G.P. van Wezel; B. Wilkinson; J.M. Willey; W. Wohlleben; G.D. Wright; N. Ziemert; C. Zhang; S.B. Zotchev; R. Breitling; E. Takano; F.O. Glöckner (2015) The Minimum Information about a Biosynthetic Gene cluster (MIBiG) specification. *Nature Chem. Biol.* 11:625-631
426. L. Liu; Y. Zhang; Z. Liu; D. Petranovic; **J. Nielsen** (2015) Improving heterologous protein secretion at aerobic conditions by activating hypoxia induced genes in *Saccharomyces cerevisiae*. *FEMS Yeast Research* 15:fov070
427. Y. Zhang; G. Liu; M.K.M. Engqvist; A. Krivoruchko; B.M. Hallström; Y. Chen; V. Siewers; **J. Nielsen** (2015) Adaptive mutations in sugar metabolism restores growth on glucose in a pyruvate decarboxylase negative yeast strain. *Microb. Cell Fac.* 14:116
428. J.C. Qin; Y.J. Zhou; A. Krivoruchko; M. Huang; L. Liu; S. Khoomrung; V. Siewers; B. Jiang; **J. Nielsen** (2015) Modular pathway rewiring of *Saccharomyces cerevisiae* enables high-level production of L-ornitine. *Nature Com.* 6:8224
429. A. Rodriguez; K.R. Kildegaard; M. Li; I. Borodina; **J. Nielsen** (2015) Establishment of a yeast platform strain for production of p-coumaric acid through metabolic engineering of aromatic amino acid biosynthesis. *Met. Eng.* 31:181-188
430. M. Huang; Y. Bai; S.L. Sjöström; B.M. Hallström; Z. Liu; D. Petranovic; M. Uhlen; H.N. Joensson; H. Andersson-Svahn; **J. Nielsen** (2015) Microfluidic screening and whole genome sequencing identifies mutations associated with improved protein secretion by yeast. *Proc. Nat. Acad. Sci. USA* 112:E4689-96
431. M. Li; K.R. Kildegaard; Y. Chen; A. Rodriguez; I. Borodina; **J. Nielsen** (2015) De novo production of resveratrol from glucose or ethanol by engineered *Saccharomyces cerevisiae*. *Met. Eng.* 32:1-11

432. E. Fletcher; A. Feizi; S. Kim; V. Siewers; **J. Nielsen** (2015) RNAseq analysis of *Pichia anomala* reveals important mechanisms required for survival at low pH. *Mic. Cell Fac.* 14:143
433. A. Mardinoglu; J. Helker; D. Gärtner; E. Björnson; M.R. Schön; G. Flehmig; N. Klötting; M. Fasshauer; M. Stumvoll; **J. Nielsen**; M. Blüher (2015) Extensive weight loss reveals distinct gene expression changes in human subcutaneous and visceral adipose tissue. *Sci. Rep.* 5:14841
434. A. Mardinoglu; S. Shoaie; M. Bergentall; P. Ghaffari; C. Zhang; E. Larsson; F. Bäckhed; **J. Nielsen** (2015) The gut microbiome modulates host amino acid and glutathione metabolism in mice. *Mol. Systems Biol.* 11:834
435. E. Björnson; B. Mukhopadhyay; A. Asplund; N. Pristovsek; R. Cinar; S. Romeo; M. Uhlen; G. Kunos; **J. Nielsen**; A. Mardinoglu (2015) Stratification of Hepatocellular Carcinoma Patients based on Acetate Utilization. *Cell Rep.* 13:2014-2026
436. S. Khoomrung; J.L. Martinez; S. Tippmann; S. Jansa-Ard; M. Buffing; R. Nicastro; **J. Nielsen** (2015) Expanded metabolite coverage of *Saccharomyces cerevisiae* extract through improved chemical derivatization. *Anal. Chem. Res.* 6:9-16
437. K.R. Kildegaard; Y. Chen; Z. Wang; **J. Nielsen**; I. Borodina (2015) Production of 3-hydroxypropionic acid from glucose and xylose by metabolically engineered *Saccharomyces cerevisiae*. *Met. Eng. Com.* 2:132-136
438. J. Anfelt; D. Kaczmarzyk; K. Shabestary; B. Renberg; J. Rockberg; **J. Nielsen**; M. Uhlen; E.P. Hudson (2015) Genetic and nutrient modulation of acetyl-CoA levels in *Synechocystis* for n-butanol production. *Mic. Cell Fac.* 14:167
- 2016**
439. Z.A. Irani; E. Kerkhoven; S.A. Shojaosadati; **J. Nielsen** (2015) Genome-scale metabolic model of *Pichia pastoris* with native and humanized glycosylation of recombinant proteins. *Biotechnol. Bioeng.* 113:961-969
440. E. Kerkhoven; K. Pmoraning; S. Baker; **J. Nielsen** (2015) Regulation of amino acid metabolism controls flux to lipid accumulation in *Yarrowia lipolytica*. *npj Systems Biol. Appl.* 2:16005
441. S. Shi; J. Haichuan; V. Siewers; **J. Nielsen** (2015) Improved production of fatty acids by *Saccharomyces cerevisiae* through screening a cDNA library from the oleaginous yeast *Yarrowia lipolytica*. *FEMS Yeast Res.* 16:fv108
442. B. de Jong; V. Siewers; **J. Nielsen** (2016) Physiological and transcriptional characterization of *Saccharomyces cerevisiae* engineered for production of fatty acid ethyl esters. *FEMS Yeast Res.* Fov105:1-9
443. S. Tippmann; G. Scalcinati; V. Siewers; **J. Nielsen** (2015) Production of farnesene and santalane by *Saccharomyces cerevisiae* using fed-batch cultivations with RQ-controlled feed. *Biotechnol. Bioeng.* 113:72-81
444. S. Tippmann; **J. Nielsen**; S. Khoomrung (2016) Improved quantification of farnesene during microbial production from *Saccharomyces cerevisiae* in two-liquid-phase fermentations. *Talanta* 146:100-106
445. F. David; **J. Nielsen**; V. Siewers (2016) Flux control at the malonyl-CoA node through hierarchical dynamic pathway regulation in *Saccharomyces cerevisiae*. *ACS Syn. Biol.* 5:224-233
446. L. Pedersen; M. Idorn; G.H. Olofsson; B. Lauenborg; I. Nookaew; R.H. Hansen; H.H. Johannesen; J.C. Becker; K.S. Pedersen; C. Dethlefsen; **J. Nielsen**; J. Gehl; B.K. Pedersen; P.T. Straten; P. Hojman (2016) Voluntary running suppresses tumor growth through epinephrine- and IL-6-dependent NK cell mobilization and redistribution. *Cell Met.* 23:1-9
447. J. Maury; S.M. Germann; S.A.B. Jacobsen; N.B. Jensen; K.R. Kildegaard; M.J. Heergård; K. Schneider; A. Koza; J. Förster; **J. Nielsen**; I. Borodina (2016) EasyCloneMulti: A set of vectors for simultaneous and multiple genomic integrations in *Saccharomyces cerevisiae*. *PLOS One* 0150394:1-22
448. F. Gatto; **J. Nielsen** (2016) Systematic analysis of overall survival and interactions between tumor metabolism and drug treatment. *J. Hematology Oncology* 9:15
449. A. Nilsson; **J. Nielsen** (2016) Metabolic trade-offs in yeast are caused by F1F0-ATP synthase. *Sci. Rep.* 6:22264
450. K. Kildegaard; N.B. Jensen; K. Schneider; E. Czarnotta; E. Özdemir; T. Klein; J. Maury; B.E. Ebert; H.B. Christensen; Y. Chen; I.-K. Kim; M.J. Herrgård; L.M. Blank; J. Forster; **J. Nielsen**; I. Borodina (2016) Engineering and systems-level analysis of *Saccharomyces cerevisiae* for production of 3-hydroxypropionic acid via malonyl-CoA reductase-dependent pathway. *Microb. Cell Fac.* 15:53
451. Y. Zhou; N. A. Buijs; Z. Zhu; J. Qin; V. Siewers; **J. Nielsen** (2016) Production of fatty acid derived oleochemicals and biofuels by synthetic yeast cell factories. *Nature Com.* 7:11709
452. I. E. Elsemman; A. Mardinoglu; S. Shoaie; T.H. Soliman; **J. Nielsen** (2016) Systems biology analysis of metabolism reveals the role of copy number increase in parts of chromosome 1q in hepatitis C virus associated hepatocellular carcinoma. *Mol. Biosystems* 12:1496-1506
453. G. Liu; D. Bergenholm; **J. Nielsen** (2016) Genome-wide mapping of binding sites reveals multiple biological functions of the transcription factor Cst6p in *Saccharomyces cerevisiae*. *mBio* 7:e00559-16
454. F. Gatto; N. Volpi; H. Nilsson; I. Nookaew; M. Maruzzo; A. Roma; M. E. Johansson; U. Steiner; S. Lundstam; U. Basso; **J. Nielsen** (2016) Glycosaminoglycan Profiling in Patients' Plasma and Urine Predicts the Occurrence of Metastatic Clear Cell Renal Cell Carcinoma. *Cell Rep.* 15:1-15
455. S.L. Svahn; L. Våremo; B. Gabrielsson; E. Peris; I. Nookaew; L. Grahnmö; A.-S. Sandberg; I.W. Asterholm; J.-O. Jansson; **J. Nielsen**; M.E. Johansson (2016) Six tissue transcriptomics reveals specific immune suppression in spleen by dietary polyunsaturated fatty acids. *PLOS One* 11:e0155099
456. R. Pereira; **J. Nielsen**; I. Rocha (2016) Improving the flux distributions simulated with genome-scale metabolic models of *Saccharomyces cerevisiae*. *Met. Eng. Com.* 3:153-163
457. S. Lee; M. Kilicarslan; C. Zhang; E. Björnson; B.M. Hallström; A.K. Groen; E. Ferrannini; M. Laakso; M. Blüher; M. Uhlen; **J. Nielsen**; U. Smith; J. Boren; M. Serlie; A. Mardinoglu (2016) Integrated network analysis reveals an association between increased plasma mannose levels and insulin resistance and secretion. *Cell Met.* 24:172-184
458. L. Caspeta; Y. Chen; **J. Nielsen** (2016) Thermotolerant yeasts selected by adaptive evolution express heat stress response at 30C. *Sci. Rep.* 6:27003
459. S. Lee; A. Marginoglu; C. Zhang; D. Lee; **J. Nielsen** (2016) Dysregulated signaling hubs of liver metabolism reveal hepatocellular carcinoma pathogenesis. *Nuc. Acid Res.* 44:5529-5539

460. S. Busti; V. Mapelli; F. Tripodi; R. Sanvito; F. Magni; M.C. Jewett; **J. Nielsen**; L. Alberghina; M. Vanoni (2016) Respiratory metabolism and calorie restriction relieve persistent endoplasmic reticulum stress induced by calcium shortage in yeast. *Sci. Rep.* **6**:27942
461. F. Gatto; A. Schultze; **J. Nielsen** (2016) Systematic analysis reveals that cancer mutations converge on deregulated metabolism of arachinodate and xenobiotics. *Cell Rep.* **16**:878-895
462. P.-J. Lahtvee; R. Kumar; B.M. Hallström; **J. Nielsen** (2016) Adaption to different types of stress converge on mitochondrial metabolism. *Mol. Biol. Cell* **27**:2505-2514
463. A.S. Rajkumar; G. Liu; D. Bergenholm; D. Arsovska; M. Kristensen; **J. Nielsen**; M.K. Jensen; J.D. Keasling (2016) Engineering of synthetic, stress sensitive yeast promoters. *Nuc. Acid Res.* **44**:e136
464. J.L. Martinez; E. Meza; D. Petranovic; J. Nielsen (2016) The impact of respiration and oxidative stress response on recombinant α -amylase production by *Saccharomyces cerevisiae*. *Metab. Eng. Com.* **3**:205-210
465. S. Grijseels; J.C. Nielsen; M. Randelovic; **J. Nielsen**; K.F. Nielsen; M. Workman; J.C. Frisvad (2015) *Penicillium arizonense*, a new, genome sequenced fungal species, reveals a high chemical diversity in secreted metabolites. *Sci. Rep.* **6**:35112
466. J. Casey; A. Mardinoglu; **J. Nielsen**; D. Kari (2016) Adaptive evolution of phosphorous metabolism in *Prochlorococcus*. *mSystems* **11**:e00065-16
467. Y. Zhou; N.A. Buijs; Z. Zhu; D.O. Gomez; A. Boonsombuti; V. Siewers; **J. Nielsen** (2016) Harnessing peroxisomes for production of fatty acid-derived biofuels and chemicals in yeast. *J. Am. Chem. Soc.* **138**:15368-15377
468. M. Li; K.R. Kildegaard; Y. Chen; A. Rodriguez; I. Borodina; **J. Nielsen** (2016) Engineering yeast for high-level production of stilbenoid antioxidants. *Sci. Rep.* **6**:36827
469. E. Fletcher; A. Feizi; B. Hallström; M. Bisschops; S. Koomrung; V. Siewers; **J. Nielsen** (2016) Evolutionary engineering reveals divergent paths when yeast is adapted to different acidic environments. *Met. Eng.* **113**:1164-1170
470. F. Gatto; M. Maruzzo; C. Magro; U. Basso; **J. Nielsen** (2016) Prognostic value of plasma and urine glycosaminoglycan scores in clear cell renal cell carcinoma. *Front. Oncol.* **6**:253
471. A. Bergman; V. Siewers; **J. Nielsen**; Y. Chen (2016) Functional expression and evaluation of heterologous phosphoketolases in *Saccharomyces cerevisiae*. *AMB Express* **6**:115
- 2017**
472. Z. Zhu; Y.J. Zhou; A. Krivoruchko; M. Grininger; Z.K. Zhao; **J. Nielsen** (2017) Expanding the product portfolio of fungal type I fatty acid synthases. *Nature Chem. Biol.* **13**:360-362
473. L. Wenning; T. Yu; F. David; **J. Nielsen**; V. Siewers (2016) Establishing very long-chain fatty alcohol and wax ester biosynthesis. *Biotechnol. Bioeng.* **114**:1025-1035
474. Y. Wei; V. Siewers; **J. Nielsen** (2017) Cocoa butter-like lipid production ability of non-oleaginous and oleaginous yeasts under nitrogen limited culture conditions. *Appl. Microbiol. Biotechnol.* **101**:13577-3585
475. A. Nilsson; A. Mardinoglu; **J. Nielsen** (2017) Predicting growth of the healthy infant using a genome-scale metabolic model. *npj Systems Biol. Appl.* **3**:3
476. A. Mardinoglu; E. Bjornson; C. Zhang; M. Klevstig; S. Söderlund; M. Ståhlman; M. Adiels; A. Hakkarainen; N. Lundbom; M. Kilcarslan; B.M. Hallström; J. Lundbom; B. Verges; P.H.R. Barret; G.F. Watts; M. Serlie; **J. Nielsen**; M. Uhlen; U. Smith; H.-U. Marschall; M.-R. Taskine; J. Boren (2017) Personalized genome-scale modeling identifies NAD⁺ and glutathione metabolism as a target for treatment of NAFLD. *Mol. Sys. Biol.* **13**:916
477. Y. Wei; M. Gossing; D. Bergenholm; V. Siewers; **J. Nielsen** (2017) Increasing cocoa butter-like lipid production of *Saccharomyces cerevisiae* by expression of selected cocoa genes. *AMB Express* **7**:34
478. S. Tippmann; R. Ferreira; V. Siewers; **J. Nielsen**; Y. Chen (2017) Effects of acetoacetyl-CoA synthase expression on production of farnesene in *Saccharomyces cerevisiae*. *J. Ind. Biotechnol. Microbiol.* **44**:911-922
479. S. Tippmann; J. Anfelt; F. David; J.M. Rand; V. Siewers; M. Uhlen; **J. Nielsen**; E.P. Hudson (2017) Affibody scaffold improve sesquiterpene production in *Saccharomyces cerevisiae*. *ACS Syn. Biol.* **6**:19-28
480. E.L. Bredeweg; K.R. Pomraning; Z. Dai; **J. Nielsen**; E. Kerkhoven; S.E. Baker (2017) A molecular genetic toolbox for *Yarrowia lipolytica*. *Biotechnol. Biofuels* **10**:2
481. Y. Chen; Y. Wang; **J. Nielsen** (2017) Systematic inference of functional phosphorylation events in yeast metabolism. *Bioinformatics* **33**:1995-2001
482. P.-J. Lahtvee; B.J. Sanchez; A. Smialowska; S. Kasvandik; I. Elsemman; F. Gatto; **J. Nielsen** (2017) Absolute quantification of protein and mRNA abundances demonstrate variability in gene-specific translation efficiency in yeast. *Cell Systems* **4**:495-504
483. Y. Hu; J. Zhou; J. Bao; L. Huang; **J. Nielsen**; A. Krivoruchko (2017) Metabolic engineering of *Saccharomyces cerevisiae* for production of germacrene A, a precursor of beta-elemene. *J. Ind. Microbiol. Biotechnol.* **44**:1065-1072
484. T. Yu; Y.J. Zhou; L. Wenning; Q. Liu; A. Krivoruchko; V. Siewers; **J. Nielsen**; F. David (2017) Metabolic engineering of *Saccharomyces cerevisiae* for production of very long chain fatty acid-derived chemicals. *Nature Com.* **8**:15587
485. P.G. Teixeira; R. Ferreira; Y.J. Zhou; V. Siewers; **J. Nielsen** (2017) Dynamic regulation of fatty acid pools for improved production of fatty alcohols in *Saccharomyces cerevisiae*. *Microb. Cell Fac.* **16**:45
486. E.D. Jensen; R. Ferreira; T. Jakociunas; D. Arsovska; L. Ding; J.D. Smith; F. David; **J. Nielsen**; M.K. Jensen; J.D. Keasling (2017) Transcriptional reprogramming in yeast using dCas9 and combinatorial gRNA strategies. *Microb. Cell Fac.* **16**:46
487. R. Babazadeh; P.-J. Lahtvee; C. Beck; M. Goksör; **J. Nielsen**; S. Hohmann (2017) The yeast osmostress response is carbon source dependent. *Sci. Rep.* **7**:990
488. M.-K. Kang; Y. Zhou; N.A. Buijs; **J. Nielsen** (2017) Functional screening of aldehyde decarboxylases for long-chain alkane production by *Saccharomyces cerevisiae*. *Microb. Cell Fac.* **16**:74

489. L. Väre; T.I. Henriksen; C. Scheele; C. Broholm; M. Pedersen; M. Uhlen; B.K. Pedersen; **J. Nielsen** (2017) Type 2 diabetes and obesity are independently associated with similar inherent transcriptional reprogramming in human myocytes. *Genome Med.* **9**:47
490. J.C. Nielsen; S. Grijseels; S. Prigent; B. Ji; J. Dainat; K.F. Nielsen; J.C. Frisvad; M. Workman; **J. Nielsen** (2017) Global analysis of biosynthetic gene clusters reveals vast potential of secondary metabolite production in *Penicillium* species. *Nature Microbiol.* **2**:17044
491. J. Bao; M. Huang; D. Petranovic; **J. Nielsen** (2017) Moderate expression of *SEC16* increases protein secretion by *Saccharomyces cerevisiae*. *Appl. Environ. Microbiol.* **83**:e03400-16
492. E.J. Kerkhoven; Y.-M. Kim; S. Wei; C.D. Nicora; T.L. Fillmore; S.O. Purvine; B.-J. Webb-Robertson; R.D. Smith; S.E. Baker; T.O. Metz; **J. Nielsen** (2017) Leucine biosynthesis is involved in regulating high lipid accumulation in *Yarrowia lipolytica*. *mBio* **6**:e00857-17
493. P. Sen; A. Mardinoglu; **J. Nielsen** (2017) Selection of complementary foods based on optimal nutrition values. *Sci. Rep.* **7**:5413
494. A. Rodriguez; T. Strucko; S.G. Stahlhut; M. Kristensen; D.K. Svenssen; J. Forster; **J. Nielsen**; I. Borodina (2017) Metabolic engineering of yeast for fermentative production of flavonoids. *Biores. Technol.* **245**:1645-1654
495. A. Feizi; F. Gatto; M. Uhlen; **J. Nielsen** (2017) Human protein secretory pathway genes are expressed in a tissue-specific pattern to match secretion demand. *Systems Biol. Appl.* **3**:22
496. B.J. Sanchez; C. Zhang; A. Nilsson; P.-J. Lahtee; E. Kerkhoven; **J. Nielsen** (2017) Improving the phenotype predictions of a yeast genome-scale metabolic model by incorporating enzymatic constraints. *Mol. Systems Biol.* **13**:935
497. K. Thorell; J. Bengtsson-Palme; O. Liu; R.V. Gonzales; I. Nookaew; L. Rabeneck; L. Paszat; D. Graham; **J. Nielsen**; S. Lundin; Å. Sjöling (2017) *In vivo* analysis of the viable microbiota and *Helicobacter pylori* transcriptome in gastric infection and early stages of carcinogenesis. *Infect. Immun.* **85**:e00031-17
498. S. Lee; C. Zhang; Z. Liu; M. Klevstig; B. Mukhopadhyay; M. Bergentall; R. Cinar; M. Ståhlman; N. Sikanic; J.K. Park; S. Deshmukh; A.M. Pour; T. Kuijpers; M. Grøtli; S.J. Elsässer; B.D. Piening; M. Snyder; **J. Nielsen**; F. Bäckhed; G. Kunos; M. Uhlen; J. Boren; A. Mardinoglu (2017) Network analysis identify liver-specific targets for treating liver diseases. *Mol. Sys. Biol.* **13**:938
499. M. Huang; J. Bao; B.M. Hallström; D. Petranovic; **J. Nielsen** (2017) Efficient protein production by yeast requires global tuning of metabolism. *Nature Com.* **8**:1131
500. G. Liu; Y. Chen; N. Færgeman; **J. Nielsen** (2017) Elimination of the last reactions in ergosterol biosynthesis alters the resistance of *Saccharomyces cerevisiae* to multiple stress. *FEMS Yeast Res.* **17**:fox063
501. R. Ferreira; F. Gatto; **J. Nielsen** (2017) Exploiting off-targeting in guide-RNAs for CRISPR systems for editing of multiple genes. *FEBS Let.* **591**:3288-3295
502. Z. Zhu; Y.J. Zhou; M.-K. Kang; A. Krivoruchko; N.A. Buijs; **J. Nielsen** (2017) Enabling the synthesis of medium chain alkanes and 1-alkenes in yeast. *Met. Eng.* **44**:81-88
503. S. Grijseels; J.C. Nielsen; **J. Nielsen**; T.O. Larsen; J.C. Frisvad; K.F. Nielsen; R. Frandsen; M. Workman (2017) Physiological characterization of secondary metabolite producing *Penicillium* cell factories. *Fungal Biol. Biotechnol.* **4**:8
504. A. Rodriguez; Y. Chen; S. Khoomrung; E. Özdemir; I. Borodina; **J. Nielsen** (2017) Comparison of the metabolic response to over-production of p-coumaric acid in two yeast strains. *Met. Eng.* **44**:265-272
- 2018**
505. S. Lee; C. Zhang; A. Muhammad; L. Zhengtao; R. Benfeitas; G. Bidkhor; S. Deshmukh; M.A. Shobky; A. Lovric; J. Boren; **J. Nielsen**; M. Uhlen; A. Mardinoglu (2018) TCSBN: a database of tissue and cancer specific biological networks. *Nucl. Acid. Res.* **46**:D595-D600
506. E. Brunk; S. Sahoo; D.C. Zielinski; A. Altunkaya; A. Dräger; N. Mih; F. Gatto; A. Nilsson; G.A.P. Gonzalez; M.K. Aurich; A. Prlic; A. Sastry; A.D. Danielsdottir; A. Heinken; A. Noronha; P.W. Rose; S.K. Burley; R.M.T. Fleming; **J. Nielsen**; I. Thiele; B.O. Palsson (2018) Recon3D enables a three-dimensional view of gene variation in human metabolism. *Nature Biotechnol.* **36**:272-281
507. R. Ferreira; C. Skrekas; **J. Nielsen**; F. David (2018) Multiplexed CRISPR/Cas9 genome editing and gene regulation using Csy9 in *Saccharomyces cerevisiae*. *ACS Syn. Biol.* **7**:10-15
508. Y. Hu; Z. Zhu; **J. Nielsen**; V. Siewers (2018) Transporter engineering for improved fatty alcohol secretion in yeast. *Meg. Eng.* **45**:51-58
509. D. Bergenholm; M. Gossing; Y. Wei; V. Siewers; **J. Nielsen** (2018) Modulation of saturation and chain length of fatty acids in *Saccharomyces cerevisiae* for production of cocoa butter-like lipids. *Biotechnol. Bioeng.* **115**:932-942
510. A. Mardinoglu; H. Wu; E. Bjornson; C. Zhang; A. Hakkarainen; S.M. Räsänen; S. Lee; R.M. Mancina; M. Bergentall; K.H. Pietiläinen; S. Söderlund; N. Matikainen; M. Ståhlman; P.-O. Bergh; M. Adiels; B.D. Piening; M. Graner; N. Lundbom; K.J. Williams; S. Romeo; **J. Nielsen**; M. Snyder; M. Uhlen; G. Bergström; R. Perkins; H.-U. Marschall; F. Bäckhed; M.-R. Taskinen; J. Boren (2018) An integrated understanding of the rapid metabolic benefits of a carbohydrate restricted diet on hepatic steatosis in humans. *Cell Metab.* **27**:559-571
511. Y. Zhou; Y. Hu; Z. Zhu; V. Siewers; **J. Nielsen** (2018) Engineering of 1-alkene biosynthesis and secretion by dynamic regulation in yeast. *ACS Syn. Biol.* **7**:584-590
512. R. Ferreira; P.G. Teixeira; V. Siewers; **J. Nielsen** (2018) Redirection of lipid flux towards phospholipids in yeast increases fatty acid turnover and secretion. *Proc. Nat. Acad. Sci. USA* **115**:1262-1267
513. P. Jenjaroenpun; T. Wongsurawat; R. Pereira; P. Patumcharoenpol; D.W. Ussery; **J. Nielsen**; I. Nookaew (2018) Complete genomic and transcriptional landscape analysis using third generation sequencing: A case study of *Saccharomyces cerevisiae* CEN.PK113-7D. *Nuc. Acid Res.* **46**:e38

514. A. Azimi; S. Caramuta; R. Jafari; B.S. Ludlow; J. Boström; J. Robinson; F. Edfors; R. Tuominen; **J. Nielsen**; J. Hansson; S.E. Brage; M. Altun; J. Lehtiö; M. Uhlen; G. Maddalo (2018) Targeting CDK2 overcomes melanoma resistance against BRAF and Hsp90 inhibitors. *Mol. Systems Biol.* **14**:e7858
515. Y. Wei; D. Bergenholm; M. Gossing; V. Siewers; **J. Nielsen** (2018) Expression of cocoa genes in *Saccharomyces cerevisiae* improves cocoa butter production. *Microb. Cell Fac.* **17**:11
516. R. Ferreira; P.G. Teixeira; M. Gossing; F. David; V. Siewers; **J. Nielsen** (2018) Metabolic engineering of *Saccharomyces cerevisiae* for overproduction of triacylglycerols. *Met. Eng. Com.* **6**:22-27
517. D. Carmona-Gutierrez; M.A. Bauer; A. Zimmermann; A. Aguilera; N. Austriaco; K. Ayscough; R. Balzan; S. Bar-Nun; A. Barrientos; P. Belenky; M. Blondel; R.J. Braun; M. Breitenbach; W.C. Burhans; S. Büttner; D. Cavalieri; M. Chang; K.F. Cooper; M. Côte-Real; V. Costa; C. Cullin; I. Dawes; J. Dengjel; M.B. Dickman; T. Eisenberg; B. Fahrenkrog; N. Fasel; K.-U. Fröhlich; A. Gargouri; S. Giannattasio; P. Goffrini; C.W. Gourlay; C.M. Grant; M.T. Greenwood; N. Guaragnella; T. Heger; J. Heinisch; E. Herker; J.M. Herrmann; S. Hofer; A. Jiménez-Ruiz; H. Jungwirth; K. Kainz; D.P. Kontoyiannis; P. Ludovico; S. Manon; E. Martegani; C. Mazzoni; L.A. Megeney; C. Meisinger; **J. Nielsen**; T. Nyström; H.D. Osiewacz; T.F. Outeiro; H.-O. Park; T. Pendl; D. Petranovic; S. Picot; P. Polčić; T. Powers; M. Ramsdale; M. Rinnerthaler; P. Rockenfeller; C. Ruckentuh; R. Schaffrath; M. Segovia; F.F. Severin; A. Sharon; S.J. Sigrist; C. Sommer-Ruck; M.J. Sousa; J.M. Thevelein; K. Thevissen; V. Titorenko; M.B. Toledano; M. Tuite; F.-N. Vögtle; B. Westermann; J. Winderickx; S. Wissing; S. Wölfl; Z.J. Zhang; R.Y. Zhao; B. Zhou; L. Galluzzi; G. Kroemer; F. Madeo (2018) Guidelines and recommendations on yeast cell death nomenclature. *Microb. Cell* **5**:4-31
518. J. Bao; M. Huang; D. Petranovic; **J. Nielsen** (2018) Balanced trafficking between the ER and the Golgi apparatus increases protein secretion in yeast. *AMB Express* **8**:37
519. P. Das; B. Ji; P. Kovatcheva-Datchary; F. Bäckhed; **J. Nielsen** (2018) *In vitro* co-cultures of human gut bacterial species as predicted from co-occurrence network analysis. *PLOS One* **13**:e0195161
520. F. Gatto; K.A. Blum; S.S. Hosseini; M. Ghanaat; M. Kashan; F. Maccari; F. Galeotti; J. Hsieh; N. Volpi; A.A. Hakimi; **J. Nielsen** (2018) Plasma glycosaminoglycans as diagnostic and prognostic biomarkers in surgically treated renal cell carcinoma. *Eur. Urol. Onc.* **1**:364-377
521. J. Maury; S. Kannan; N.B. Jensen; F.K. Öberg; K.R. Kildegaard; J. Förster; **J. Nielsen**; C.T. Workman; I. Borodina (2018) Glucose-dependent promoters for dynamic regulation of metabolic pathways. *Fron. Bioeng. Biotechnol.* **6**:63
522. P. Teixeira; F. David; V. Siewers; **J. Nielsen** (2018) Engineering lipid droplet assembly mechanisms for improved triacylglycerols accumulation in *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **18**:foy060
523. S. Prigent; J.C. Nielsen; J.C. Frisvad; **J. Nielsen** (2018) Reconstruction of 24 *Penicillium* genome-scale metabolic models shows diversity based on their secondary metabolism. *Biotechnol. Bioeng.* **115**:2604-2612
524. Z. Dai; M. Huang; Y. Chen; V. Siewers; **J. Nielsen** (2018) Global rewiring of cellular metabolism renders *Saccharomyces cerevisiae* Crabtree-negative. *Nature Com.* **9**:3059
525. G. Bidkhorji; R. Benfeitas; E. Elmas; M.N. Karadoudi; M. Arif; M. Uhlen; **J. Nielsen**; A. Mardinoglu (2018) Metabolic network-based identification and prioritization of anti-cancer targets based on expression data in hepatocellular carcinoma. *Fron. Phys.* **9**:916
526. T. Yu; Y. Zhou; M. Huang; Q. Liu; R. Pereira; F. David; **J. Nielsen** (2018) Reprogramming yeast metabolism from alcoholic fermentation to lipogenesis. *Cell* **174**:1-10
527. D. Bergenholm; G. Liu; P. Holland; **J. Nielsen** (2018) Reconstruction of a global transcriptional regulatory network for control of lipid metabolism in yeast using ChIP-exo. *mSystems* **3**:e00215-17
528. P. Babaei; S. Shoaie; B. Ji; **J. Nielsen** (2018) Challenges in modeling the human gut microbiome. *Nature Biotechnol.* **16**:682-686
529. M. Kumar; B. Ji; P. Babaei; P. Das; D. Lappa; G. Ramakrishnan; T.E. Fox; R. Haque; W.A. Petri Jr.; F. Bäckhed; **J. Nielsen** (2018) Gut microbiota dysbiosis is associated with malnutrition and reduced plasma amino acid levels: Lessons from genome-scale metabolic modeling. *Met. Eng.* **49**:128-142
530. T.M. Souza-Moreira; C. Navarrete; X. Chen; C.F. Zanelli; S.R. Valentini; M. Furlan; **J. Nielsen**; A. Krivoruchko (2018) Screening of 2A peptides for polycistronic gene expression in yeast. *FEMS Yeast Res.* **18**:foy036
531. L. Ouyang; P. Holland; H. Lu; D. Bergenholm; **J. Nielsen** (2018) Integrated analysis of the yeast NADPH-regulator Stb5 reveals distinct differences in NADPH requirements and regulation in different states of yeast metabolism. *FEMS Yeast Res.* **18**:foy091
532. M. Gossing; A. Smialowska; **J. Nielsen** (2018) Impact of forced fatty acid synthesis on metabolism and physiology of *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **18**:foy096
533. H. Wang; S. Marcisauskas; D. Hermansson; R. Agren; **J. Nielsen**; E. Kerkhoven (2018) The RAVEN Toolbox 2.0: A versatile platform for metabolic network reconstruction and a case study on *Streptomyces coelicolor*. *PLOS Comp. Biol.* **14**:e1006541
534. M. Huang; G. Wang; J. Qin; D. Petranovic; **J. Nielsen** (2018) Engineering the protein secretory pathway of *Saccharomyces cerevisiae* enables improved protein production. *Proc. Nat. Acad. Sci. USA* **115**:E11025-E11032
535. K. Pomraning; E. Bredeweg; E. Kerkhoven; K. Berrie; S. Haridas; H. Hundley; K. LaButti; A. Lipzen; M. Yan; J. Magnuson; B. Simmons; I. Grigoriev; **J. Nielsen**; S. Baker (2018) Regulation of yeast to hyphae transition in *Yarrowia lipolytica*. *mSphere* **3**:e00541-18
536. G. Bidkhorji; R. Benfeitas; M. Klevstig; **J. Nielsen**; M. Uhlen; J. Boren; A. Mardinoglu (2018) Metabolic network stratification of the hepatocellular carcinoma reveals three distinct tumor subtypes. *Proc. Nat. Acad. Sci. USA* **115**:E11874-E11883
537. Z.P. Guo; S. Khoomrung; **J. Nielsen**; L. Olsson (2018) Changes in lipid metabolism convey acid tolerance in *Saccharomyces cerevisiae*. *Biotechnol. Biofuels* **11**:297

538. S. Grijseels; C. Pohl; J.C. Nielsen; Z. Wasil; Y. Nygård; **J. Nielsen**; J.C. Frisvad; K.F. Nielsen; M. Workman; T.O. Larsen; A.J.M. Driessen; R.J.N. Frandsen (2018) Identification of the decumbenone biosynthetic gene cluster in *Penicillium decumbens* and the importance for production of calbistrin. *Fun. Biol. Biotechnol.* **5**:18
- 2019**
539. T. Ma; B. Shi; Z. Ye; X. Li; M. Liu; Y. Chen; J. Xia; **J. Nielsen**; Z. Deng; T. Liu (2018) Lipid engineering combined with systematic metabolic engineering of *Saccharomyces cerevisiae* for high-yield production of lycopene. *Met. Eng.* **52**:134-142
 540. P. Holland; **J. Nielsen**; T.D.G.A. Mondeel; M. Barberis (2019) Coupling cell division to metabolic pathways through transcription. *Encyclopedia Bioinf. Comp. Biol.* **3**:74-92
 541. B.J. Sanchez; F. Li; E. Kerkhoven; **J. Nielsen** (2019) SLIMER: Probing flexibility of lipid metabolism in yeast with an improved constraint-based modeling framework. *BMC Systems Biol.* **13**:4
 542. C. Börlin; N. Cvetesic; P. Holland; D. Bergenholm; V. Siewers; B. Lenhard; **J. Nielsen** (2019) *Saccharomyces cerevisiae* displays a stable transcription start site landscape in multiple conditions. *FEMS Yeast Res.* **19**:foy128
 543. R. Benfeitas; G. Bidkhor; B. Mukhopadhyay; M. Klevstig; M. Arif; C. Zhang; S. Lee; R. Cinar; **J. Nielsen**; M. Uhlen; J. Boren; G. Kunos; A. Mardinoglu (2019) Characterization of heterogeneous redox responses in hepatocellular carcinoma patients using network analysis. *E Biomed.* **40**:471-487
 544. Z. Liu; C. Zhang; S. Lee; W. Kim; M. Klevstig; A.M. Harzandi; N. Sikanic; M. Arif; M. Ståhlman; **J. Nielsen**; M. Uhlen; J. Boren; A. Mardinoglu (2019) Pyruvate kinase L/R is a regulator of lipid metabolism and mitochondrial function. *Met. Eng.* **52**:263-272
 545. D. Bergenholm; G. Liu; D. Hansson; **J. Nielsen** (2019) Construction of mini-chemostats for high-throughput strain characterization. *Biotechnol. Bioeng.* **116**:1029-1038
 546. A. Bergman; J. Hellgren; T. Moritz; V. Siewers; **J. Nielsen**; Y. Chen (2019) Heterologous phosphoketolase expression redirects flux towards acetate, perturbs sugar phosphate pools and increases respiratory demand in *Saccharomyces cerevisiae*. *Microb. Cell Fac.* **18**:25
 547. P. Kovatcheva-Datchary; S. Shoaie; S. Lee; A. Wahlström; I. Nookaew; A. Hallen; R. Perkins; **J. Nielsen**; F. Bäckhed (2019) Simplified intestinal microbiota to study microbe-diet-host interactions in a mouse model. *Cell Rep.* **26**:3772-3783
 548. J.L. Robinson; A. Feizi; M. Uhlen; **J. Nielsen** (2019) A systematic investigation of the malignant functions and diagnostic potential of the cancer secretome. *Cell Rep.* **10**:2622-2635
 549. Y. Wei; B. Ji; V. Siewers; D. Xu; B.A. Halkier; **J. Nielsen** (2019) Identification of genes involved in shea butter biosynthesis from *Vitellaria paradoxa* fruits through transcriptomics and functional heterologous expression. *Appl. Mic. Biotechnol.* **103**:3727-3736
 550. L. Wenning; C.S. Ejsing; F. David; R.R. Sprenger; **J. Nielsen**; V. Siewers (2019) Increasing jojoba-like wax ester production in *Saccharomyces cerevisiae* by enhancing very long-chain, monosaturated fatty acid synthesis. *Microb. Cell Factories* **18**:49
 551. P. Das; P. Babaei; **J. Nielsen** (2019) Metagenomic analysis of microbe-mediated vitamin metabolism in the human gut microbiome. *BMC Genom.* **20**:208
 552. J.C. Nielsen; S. Prigent; S. Grijseels; M. Workman; B. Ji; **J. Nielsen** (2019) Comparative transcriptome analysis shows conserved metabolic regulations during production of secondary metabolites in filamentous fungi. *mSystems* **4**:e00012-19
 553. G. Wang; G. S.M. Björk; M. Huang; Q. Liu; K. Campbell; **J. Nielsen**; H.N. Jönsson; D. Petranovic (2019) RNAi expression tuning, microfluidic screening, and genome recombineering for improved protein production in *Saccharomyces cerevisiae*. *Proc. Nat. Acad. Sci. USA* **116**:9324-9332
 554. A. Bergman; D. Vitay; J. Hellgren; Y. Chen; **J. Nielsen**; V. Siewers (2019) Effects of overexpression of *STB5* in *Saccharomyces cerevisiae* on fatty acid biosynthesis, physiology and transcriptome. *FEMS Yeast Res.* **19**:foz027
 555. P. Holland; D. Bergenholm; C. Börlin; G. Liu; **J. Nielsen** (2019) Predictive models of eukaryotic transcriptional regulation reveals changes in transcription factor roles and promoter usage between metabolic conditions. *Nuc. Acid Res.* **47**:4986-5000
 556. R. Pereira; P. Vilaca; P. Maia; **J. Nielsen**; I. Rocha (2019) TDPS – Turnover dependent phenotypic simulation: a quantitative constraint-based simulation method that accommodates all main strain design strategies. *ACS Syn. Biol.* **8**:976-988
 557. I.A. Tiukova; M.E. Pettersson; M.P. Hoepfner; R.-A. Olsen; M. Käller; **J. Nielsen**; J. Dainat; H. Lantz; J. Söderberg; V. Passoth (2019) Chromosomal genome assembly of the ethanol production strain CBS 11270 indicates a highly dynamic genome structure in the yeast species *Bretanomyces bruxellensis*. *PLOS One* **14**:e0215077
 558. I.A. Tiukova; J. Brandenburg; J. Blomqvist; S. Samples; N. Mikkelsen; M. Skaugen; M.Ø. Arntzen; **J. Nielsen**; M. Sandgren; E.J. Kerkhoven (2019) Proteome analysis of xylose metabolism in *Rhodotorula toruloides* during lipid production. *Biotechnol. Bioeng.* **12**:137
 559. T.I. Henriksen; L.V. Wigge; **J. Nielsen**; B.K. Pedersen; M. Sandri; C. Scheele (2019) Dysregulated autophagy in muscle precursor cells from humans with type 2 diabetes. *Sci. Rep.* **9**:8169
 560. P. Das; S. Marcisauskas; B. Ji; **J. Nielsen** (2019) Metagenomic analysis of bile salt biotransformation in the human gut microbiome. *BMC Genom.* **20**:517
 561. T.D.G.A. Mondeel; P. Holland; **J. Nielsen**; M. Barberis (2019) ChIP-exo analysis highlights Fkh1 and Fkh2 transcription factors as hubs that integrate multi-scale networks in budding yeast. *Nuc. Acid Res.* **47**:7825-7841
 562. H. Lu; F. Li; B.J. Sanchez; Z. Zhu; G. Li; I. Domenzain; S. Marcisauskas; P.M. Anton; D. Lappa; C. Lieven; M.E. Beber; N. Sonnenschein; E.J. Kerkhoven; **J. Nielsen** (2019) A consensus *S. cerevisiae* metabolic model Yeast8 and its ecosystem for comprehensively probing cellular metabolism. *Nature Com.* **10**:3586
 563. Y. Dabirian; P.G. Teixeira; **J. Nielsen**; V. Siewers; F. David (2019) FadR-based biosensor assisted screening for genes enhancing fatty acyl-CoA pools in *Saccharomyces cerevisiae*. *ACS Syn. Biol.* **8**:1788-1800

564. Y. Chen; **J. Nielsen** (2019) Energy metabolism controls phenotypes by protein efficiency and allocation. *Proc. Nat. Acad. Sci. USA* **116**:17592-17597
 565. C. Börlin; D. Bergenholm; P. Holland; **J. Nielsen** (2019) A bioinformatics pipeline to analyze ChIP-exo datasets. *Biol. Meth. Protoc.* **4**:bpz011
 566. Y. Dabirian; X. Li; Y. Chen; F. David; **J. Nielsen**; V. Siewers (2019) Expanding the dynamic range of a transcription factor-based biosensor in *Saccharomyces cerevisiae*. *ACS Syn. Biol.* **8**:1968-1975
 567. I. Tiukova; S. Prigent; **J. Nielsen**; M. Sandgren; E.J. Kerkhoven (2019) Genome-scale model of *Rhodotorula toruloides* metabolism. *Biotechnol. Bioeng.* **116**:3396-3408
 568. R. Pereira; Y. Wei; E. Mohamed; M. Radi; C. Malina; M.J. Herrgård; A.M. Feist; **J. Nielsen**; Y. Chen (2019) Adaptive laboratory evolution of tolerance to dicarboxylic acids in *Saccharomyces cerevisiae*. *Met. Eng.* **56**:130-141
 569. G. Li; B. Ji; **J. Nielsen** (2019) The pan-genome of *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **19**:foz064
 570. R. Ferreira; C. Skrekas; A. Hedin; B. Sanchez; V. Siewers; **J. Nielsen**; F. David (2019) Model-assisted fine-tuning of central carbon metabolism in yeast through dCas9-based regulation. *ACS Syn. Biol.* **8**:2457-2463
 571. G. Li; K.S. Rabe; **J. Nielsen**; M.K.M. Engqvist (2019) Machine learning applied to predicting microorganism growth temperatures and enzyme catalytic optima. *ACS Syn. Biol.* **8**:1411-1420
 572. Q. Liu; T. Yu; X. Li; Y. Chen; K. Campbell; **J. Nielsen**; Y. Chen (2019) Rewiring carbon metabolism in yeast for high level production of aromatic chemicals. *Nature Com.* **10**:4976
 573. S. Marcisauskas; B. Ji; **J. Nielsen** (2019) Reconstruction and analysis of a *Kluyveromyces marxianus* genome-scale metabolic model. *BMC Bioinform.* **20**:551
 574. I. Tiukova; I. Møller-Hansen; Z.M. Belew; D. Darbani; E. Boles; E. Nour; H. Hussam; T. Linder; **J. Nielsen**; I. Borodina (2019) Identification and characterization of two high-affinity glucose transporters from the spoilage yeast *Brettanomyces bruxellensis*. *FEMS Lett.* **366**:fnz222
 575. I.A. Tiukova; H. Jiang; J. Dainat; M.P. Hoepfner; H. Lantz; J. Piskur; M. Sandgren; **J. Nielsen**; Z. Gu; V. Passoth (2019) Assembly and analysis of the genome sequence of the yeast *Brettanomyces naardenensis* CBS7540. *Microorganisms* **7**:489
 576. G.M. Borja; A. Rodriguez; K. Campbell; I. Borodina; Y. Chen; **J. Nielsen** (2019) Metabolic engineering and transcriptomic analysis of *Saccharomyces cerevisiae* producing p-coumaric acid from xylose. *Microb. Cell Fac.* **18**:191
 577. M. Uhlen; H. Tegel; Å. Sivertsson; C.-C. Kuo; J.M. Gutierrez; N. Lewis; B. Forsström; M. Dannemeyer; L. Fagerberg; J. Rockberg; M. Malm; H. Vunk; F. Edfors; A. Hober; E. Sjöstedt; J. Mulder; A. Mardinoglu; J. Schwenk; P. Nilsson; M. Zwahlen; K. von Feilitzen; C. Lindskog; F. Ponten; **J. Nielsen**; B.G. Voldborg; B.O. Palsson; A.-L.R. Volk; M. Lundqvist; A. Berling; A.-S. Svensson; S. Kanje; H. Enstedt; D. Afshari; S. Ekblad; J. Scheffel; L. Xu; R. Mihai; L. Bremer; M. Westin; M. Muse; L. Mayr; S. Knight; S. Göpel; R. Davies; P. Varley; D. Hutton; J.O. Takanen; L.H. Schiavone; S. Hober (2019) The human secretome. *Science Signaling* **12**:eaaz0274
 578. L. Ye; P. Das; P. Li; B. Ji; **J. Nielsen** (2019) Carbohydrate active enzymes are affected by diet transition from milk to solid food in infant gut microbiota. *FEMS Microb. Eco.* **95**:fiz159
 579. G. Othoum; S. Prigent; A. Derouiche; L. Shi; A. Bokhari; S. Alamoudi; S. Bougouffa; X. Gao; R. Hoehndorf; S.T. Aroid; T. Gojobori; H. Hirt; F.F. Lafi; **J. Nielsen**; V.B. Bajic; I. Mijakovic; M. Essack (2019) Comparative genomics study reveals Red Sea *Bacillus* with characteristics associated with potential microbial cell factories (MCFs). *Sci. Rep.* **9**:19254
 580. A. Nilsson; E. Björnson; M. Flockhart; F.J. Larsen; **J. Nielsen** (2019) Complex I is bypassed during high intensity exercise. *Nature Com.* **10**:5072
- 2020**
581. N. Raethong; H. Wang; **J. Nielsen**; W. Vongsangnak (2020) Optimizing cultivation of *Cordyceps militaris* for fast growth and cordycepin overproduction using rational design of synthetic media. *Comp. Struc. Biotechnol. J.* **18**:1-8
 582. J. Gutierrez; A. Feizi; S. Li; T. Kallehauge; G.M. Lee; B. Palsson; **J. Nielsen**; N. Lewis (2020) Genome-scale reconstruction of the mammalian secretory pathway predicts metabolic costs and limitations of protein secretion. *Nature Com.* **11**:68
 583. F. Gatto; R. Ferreira; **J. Nielsen** (2020) Pan-cancer analysis of the metabolic reaction network. *Met. Eng.* **57**:51-62
 584. Y. Liu; Q. Liu; A. Krivoruchko; S. Khoomrung; **J. Nielsen** (2020) Engineering yeast phospholipid metabolism for *de novo* oleoylethanolamide production. *Nature Chem. Biol.* **16**:197-205
 585. S. Khoomrung; I. Nookaew; P. Sen; T. Olafsdottir; J. Persson; T. Moritz; P. Andersen; A. Harandi; **J. Nielsen** (2019) Metabolic profiling and compound-class identification reveal alterations in serum triglyceride levels in mice immunized with human vaccine adjuvant Alum. *J. Prot. Res.* **19**:269-278
 586. K. Lieven; M.E. Beber; B.G. Olivier; F.T. Bergmann; M. Ataman; P. Babaei; J.A. Bartell; L.M. Blank; S. Chauhan; K. Correia; C. Diener; A. Dräger; B.E. Ebert; J.N. Edirisinghe; J.P. Faria; A. Feist; G. Fengos; R.M.T. Fleming; B. García-Jiménez; V. Hatzimanikatis; W. van Helvoirt; C.S. Henry; H. Hermjakob; M.J. Herrgård; A. Kaafarani; H.U. Kim; Z. King; J.J. Koehorst; M. König; S. Klamt; E. Klipp; M. Lakshmanan; D.-Y. Lee; S.Y. Lee; S. Lee; N.E. Lewis; F. Liu; H. Ma; D. Machado; R. Mahadevan; P. Maia; A. Mardinoglu; G.L. Medlock; J.M. Monk; **J. Nielsen**; L.K. Nielsen; J. Nogales; I. Nookaew; O. Resendis-Antonio; B.O. Palsson; J.A. Papin; K.R. Patil; M. Poolman; N.D. Price; A. Richelle; I. Rocha; B.J. Sánchez; P.J. Schaap; R.S.M. Sheriff; S. Shoaie; N. Sonnenschein; B. Teusink; P. Vilaça; J.O. Vik; J.A.H. Wodke; J.C. Xavier; Q. Yuan; M. Zakhartsev; C. Zhang (2019) Memote for standardized genome-scale metabolic model testing. *Nature Biotechnol.* **38**:272-276
 587. Z. Zhu; Y. Hu; P.G. Teixeira; R. Pereira; Y. Chen; V. Siewers; **J. Nielsen** (2020) Multidimensional engineering of *Saccharomyces cerevisiae* for efficient synthesis of medium-chain fatty acids. *Nature Cat.* **3**:64-74
 588. S. Lam; S. Doran; H. Yuksel; O. Altay; H. Turkez; **J. Nielsen**; J. Boren; M. Uhlen; A. Mardinoglu (2020) Addressing the heterogeneity in liver diseases using biological networks. *Brief. Bioinform.* Bbaa002

589. X. Li; B. Turanli; K. Juszczak; W. Kim; M. Arif; Y. Sato; S. Ogawa; H. Turkez; **J. Nielsen**; J. Boren; M. Uhlen; C. Zhang; A. Mardinoglu (2020) Classification of clear renal cell carcinoma based on *PKM* alternative splicing. *Heliyon* **6**:e03440
590. K. Campbell; J. Westholm; S. Kasvendik; F. Di Bartolomei; M. Mormino; **J. Nielsen** (2020) Building blocks are synthesized on demand during the yeast cell cycle. *Proc. Nat. Acad. Sci. USA* **117**:7575-7583
591. F. Di Bartolomeo; C. Malina; K. Campbell; M. Mormini; J. Fuchs; E. Vorontsov; C.M. Gustafsson; **J. Nielsen** (2020) Absolute yeast mitochondrial proteome quantification reveals trade-off between biosynthesis and energy generation during diauxic shift. *Proc. Nat. Acad. Sci. USA* **117**:7524-7535
592. C. Zhang; E. Björnson; M. Arif; A. Tebani; A. Lovric; R. Benfeitas; M. Ozcan; K. Juszczak; W. Kim; J.T. Kim; G. Bidkhori; M. Ståhlman; P.-O. Bergh; M. Adiels; H. Turkez; M.-R. Taskinen; J. Bosley; H.-U. Marschall; **J. Nielsen**; M. Uhlen; J. Boren; A. Mardinoglu (2020) The acute effect of naturally occurring metabolic cofactor supplementation. *Mol. Systems Biol.* **16**:e9495
593. D.J. Cook; J. Kallus; R. Jörnsten; **J. Nielsen** (2020) Molecular natural history of breast cancer: leveraging transcriptomics to predict breast cancer diagnosis and aggressiveness. *Cancer Med.* **9**:3551-3562
594. K.S. Pedersen; F. Gatto; B. Zerahn; **J. Nielsen**; B.K. Pedersen; P. Hojman; J. Gehl (2020) Exercise-mediated lowering of glutamine availability suppresses tumor growth and attenuates muscle wasting. *iScience* **23**:100978
595. J.L. Robinson; P. Kocabas; H. Wang; P.-E. Cholly; D. Cook; A. Nilsson; M. Anton; R. Ferreira; I. Domenzain; V. Billa; A. Limeta; A. Hedin; J. Gustafsson; E.J. Kerkhoven; L.T. Svensson; B.O. Palsson; A. Mardinoglu; L. Hansson; M. Uhlen; **J. Nielsen** (2020) An Atlas of Human Metabolism. *Science Signal.* **13**:eaaz1482
596. A. Nilsson; J.R. Haanstra; M. Engqvist; A. Gerding; B.M. Bakker; U. Klingmüller; B. Teusink; **J. Nielsen** (2020) Quantitative analysis of amino acid metabolism in liver cancer links glutamate excretion to nucleotide synthesis. *Proc. Nat. Acad. Sci. USA* **117**:10294-10304
597. R. Yu; K. Campbell; R. Pereira; J. Björkeroth; Q. Qi; E. Vorontsov; C. Sihlbom; **J. Nielsen** (2020) Nitrogen limitation reveals large reserves in metabolic and translational capacities of yeast. *Nature Com.* **11**:1881
598. T.W. Doughty; I. Domenzain; A. Millan-Oropeza; N. Montini; P.A. de Groot; R. Pereira; **J. Nielsen**; C. Henry; J.-M.G. Daran; J.-E. Siewers; J.P. Morrissey (2020) Stress-induced expression is enriched for evolutionarily young genes in diverse budding yeasts. *Nature Com.* **11**:2144
599. L. Dzanaeva; B. Kruk; J. Ruchala; **J. Nielsen**; A. Sibirny; K. Dmytruk (2020) The role of peroxisomes in xylose alcoholic fermentation in the engineered *Saccharomyces cerevisiae*. *Cell Biol. Int.* **44**:1606-1615
600. S. Vieira-Silva; G. Falony; E. Belda; T. Nielsen; J. Aron-Wisniewsky; R. Chakaroun; S.K. Forslund; K. Assmann; M. Valles-Colomer; T.T.D. Nguyen; S. Proost; E. Prifti; V. Tremaroli; N. Pons; E. Le Chatelier; F. Andreelli; J.-P. Bastard; L.P. Coelho; N. Galleron; T.H. Hansen; J.-S. Hulot; C. Lewinter; H.K. Pedersen; B. Quinquis; C. Rouault; H. Roume; J.-E. Salem; N.B. Søndertoft; S. Touch; MetaCardis Consortium*, M.-E. Dumas; S.D. Ehrlich; P. Galan; J.P. Gøtze; T. Hansen; J.J. Holst; L. Køber; I. Letunic; **J. Nielsen**; J.-M. Oppert; M. Stumvoll; H. Vestergaard; J.-D. Zucker; P. Bork; O. Pedersen; F. Bäckhed; K. Clément; J. Raes (2020) Statin therapy is associated with a lower prevalence of gut microbiota dysbiosis. *Nature* **581**:310-315
601. J. Hou; C. Gao; L. Guo; **J. Nielsen**; Q. Ding; W. Tang; G. Hu; X. Chen; L. Liu (2020) Rewiring carbon flux in *Escherichia coli* using a bifunctional molecular switch. *Met. Eng.* **61**:47-57
602. C. Börlin; **J. Nielsen**; V. Siewers (2020) The transcription factor Leu3 shows differential binding behavior in response to changing leucine availability. *FEMS Lett.* **367**:fnaa107
603. M. Babaei; G.B. Zamfir; X. Chen; H.B. Christensen; M. Kristensen; **J. Nielsen**; I. Borodina (2020) Metabolic engineering of *Saccharomyces cerevisiae* for rosmarinic acid production. *ACS Syn. Biol.* **9**:1978-1988
604. J. Björkeroth; K. Campbell; C. Malina; R. Yu; F. Di Bartolomeo; **J. Nielsen** (2020) Proteome re-allocation from amino acid biosynthesis to ribosomes enables yeast to grow faster in rich media. *Proc. Nat. Acad. Sci. USA* **117**:21804-21812
605. A.A.-Haleem; V. Ravikumar; B. Ji; K. Mineta; X. Gao; **J. Nielsen**; T. Gojobori; I. Mijakovic (2020) Integrated metabolic modeling, culturing and transcriptomics explains enhanced virulence of *V. cholerae* during co-infection with ETEC. *mSystems* **5**:e00491-20
606. J. Zhang; S. Petersen; T. Radivojevic; A. Ramirez; A. Perez-Manriquez; E. Abeliuk; B. Sanchez; Z. Costello; Y. Chen; M. Fero; M.G. Martin; **J. Nielsen**; J. Keasling; M. Jensen (2020) Combining mechanistic and machine learning models for predictive engineering and optimization of tryptophan metabolism. *Nature Com.* **11**:4880
607. Y. Hu; Z. Zhu; D. Gradischnig; M. Winkler; **J. Nielsen**; V. Siewers (2020) Engineering carboxylic acid reductase for selective synthesis of medium-chain fatty alcohols in yeast. *Proc. Nat. Acad. Sci. USA* **17**:22974-22983
608. S. Vaga; S. Lee; B. Ji; A. Andreasson; N.J. Talley; L. Agreus; G. Bidkhori; P. Kovatcheva-Datchary; J. Park; D. Lee; G. Proctor; D. Eherlich; **J. Nielsen**; L. Engstrand; S. Shoaie (2020) Composition and functional differences of the mucosal microbiota along the intestine of healthy individuals. *Sci. Rep.* **10**:14977
609. J. Hellgren; A. Godina; O. Vidalin; **J. Nielsen**; V. Siewers (2020) Promiscuous phosphoketolase and metabolic rewiring enables non-oxidative glycolysis in yeast for high yield production of acetyl-CoA products. *Met. Eng.* **62**:150-160
610. J. Gustafsson; F. Held; J. Robinson; E. Björnson; R. Jörnsten; **J. Nielsen** (2020) Sources of variation in cell-type RNA-seq profiles. *PLOS One* **15**:e0239495
611. Q. Qi; F. Li; R. Yu; M.K.M. Engqvist; V. Siewers; J. Fuchs; **J. Nielsen** (2020) Different routes of protein folding converge on improved protein production in *Saccharomyces cerevisiae*. *mBio* **11**:e02743-20
612. R. Pereira; E. Mohamed; M. Radi; M.J. Herrgård; A.M. Feist; **J. Nielsen**; Y. Chen (2020) Elucidating aromatic acid tolerance at low pH in *Saccharomyces cerevisiae* using adaptive laboratory evolution. *Proc. Nat. Acad. Sci. USA* **117**:27954-27961
613. Y. Zhang; M. Su; N. Qin; **J. Nielsen**; Z. Liu (2020) Expressing a cytosolic pyruvate dehydrogenase complex to increase free fatty acid production in *Saccharomyces cerevisiae*. *Microb. Cell Fac.* **19**:226

614. A. Limeta; B. Ji; M. Levin; F. Gatto; **J. Nielsen** (2020) Meta-analysis of the gut microbiota in predicting response to cancer immunotherapy in metastatic melanoma. *J. Clin. Inv. Insight* **5**:e140940
 615. M. Malm; R. Saghaei; M. Lundqvist; M. Giudici; V. Chotteau; R. Field; P.G. Varley; D. Hatton; L. Grassi; T. Svensson; **J. Nielsen**; J. Rockberg (2020) Evolution from adherent to suspension – systems biology of HEK293 cell line development. *Sci. Rep.* **10**:18996
 616. A. Molinaro; P.B. Lassen; M. Henricsson; H. Wu; S. Adriouch; E. Belda; R. Chakaroun; T. Nielsen; P.-O. Bergh; C. Rouault; S. André; F. Marquet; F. Andreelli; J.-E. Salem; K. Assmann; J.-P. Bastard; S. Forslund; E. Le Chatelier; G. Falony; N. Pons; E. Prifti; B. Quinquis; H. Roume; S. Vieira-Silva; T.H. Hansen; H.K. Pedersen; C. Lewinter; N.B. Sønderskov; MetaCardis Consortium; L. Køber; H. Vestergaard; T. Hansen; J.-D. Zucker; P. Galan; M.-E. Dumas; J. Raes; J.-M. Oppert; I. Letunic; **J. Nielsen**; P. Bork; S. Dusko Ehrlich; M. Stumvoll; O. Pedersen; J. Aron-Wisniewsky; K. Clément; F. Bäckhed (2020) Imidazole propionate is increased in diabetes and associated with dietary patterns and altered microbial ecology. *Nature Com.* **11**:5881
 617. M. Zhao; Y. Zhao; Q. Hu; H. Iqbal; M. Yao; H. Liu; B. Qiao; C.A.E. Skovbjerg; J.C.F. Nielsen; **J. Nielsen**; R.J.N. Frandsen; Y. Yuan; J.D. Boeke (2020) Pathway engineering in yeast for synthesizing the complex polyketide bikaverin. *Nature Com.* **11**:6197
 618. J. Zrimec; C. Börlin; F. Buric; A.S. Muhammad; R. Chen; V. Siewers; V. Verendel; **J. Nielsen**; M. Töpel; A. Zelezniak (2020) Deep learning suggests that gene expression is encoded in all parts of a co-evolving interacting gene regulatory structure. *Nature Com.* **11**:6141
 619. J. Gustafsson; J. Robinson; J.I. Diaz; E. Björnsson; R. Jörnsten; **J. Nielsen** (2020) DSAVE: Detection of misclassified cells in single-cell RNA-seq data. *PLOS ONE* **15**:e0243360
 620. N. Qin; L. Li; X. Ji; X. Li; Y. Zhang; C. Larsson; Y. Chen; **J. Nielsen**; Z. Liu (2020) Rewiring central carbon metabolism ensures increased provision of acetyl-CoA and NADPH required for 3-OH-propionic acid production. *ACS Syn. Biol.* **9**:3236-3244
 621. C. Ye; N. Xu; C. Gao; G. Liu; J. Xu; W. Zhang; X. Chen; **J. Nielsen**; L. Liu (2020) Comprehensive understanding of *Saccharomyces cerevisiae* with whole-cell model WM_S288C. *Biotechnol. Bioeng.* **117**:1562-1574
- 2021**
622. C.C. van Olden; A.W. van de Laar; A.S. Meijnikman; O. Aydin; N. van Olst; J. Hoozemans; L.M. de Brauw; S.C. Bruin; Y.I.Z. Acherman; J. Verheij; M. Hoogendoorn; **J. Nielsen**; T. Schwartz; A.K. Groen; V.E.A. Gerdes; F. Bäckhed; M. Nieuwdorp (2020) Systems Biology and Gut Microbiota in understanding the metabolic effects of Bariatric Surgery: The BARIA Longitudinal Cohort Study. *J. Int. Med.* **289**:340-354
 623. G. Li; Y. Hu; J. Zrimec; H. Lou; H. Wang; A. Zelezniak; B. Ji; **J. Nielsen** (2021) Bayesian genome scale modeling identifies thermal determinants of yeast metabolism. *Nature Com.* **12**:190
 624. H.G. Blitzblau; A. Consiglio; P. Teixeira; D.V. Crabtree; S. Chen; O. Konzokck; G. Chifamba; A. Su; A. Kamineni; K.M.S. MacEwen; M. Hamilton; V. Tsakraklides; **J. Nielsen**; V. Siewers; J. Shaw (2021) Production of 10-methyl branched fatty acids in yeast. *Biotechnol. Biofuels* **14**:12
 625. S. Blasche; Y. Kim; R. Mars; D. Machado; M. Maansson; E. Kafkia; A. Milanese; G. Zeller; B. Teusink; **J. Nielsen**; V. Benes; R. Neves; U. Sauer; K.R. Patil (2021) Metabolic cooperation and spatiotemporal niche partitioning in a kefir microbial community. *Nature Microbiol.* **6**:196-208
 626. X. Li; W. Kim; M. Arif; C. Gao; A. Hober; D. Kotol; L. Strandberg; B. Forsström; A. Sivertsson; P. Oksvold; H. Turkez; M. Grottl; Y. Sato; H. Kume; S. Ogawa; J. Boren; **J. Nielsen**; M. Uhlen; Z. Chang; A. Mardinoglu (2021) Discovery of functionally spliced PKM transcripts in human cancers. *Cancers* **13**:348
 627. B.J. Sanchez; P.-J. Lahtvee; K. Campbell; S. Kasvandik; R. Yu; I. Domenzain; A. Zelezniak; **J. Nielsen** (2021) Benchmarking accuracy and precision of intensity-based absolute quantification of protein abundances in *Saccharomyces cerevisiae*. *Proteomics* **21**:2000093
 628. J. Qin; A. Krivoruchko; B. Ji; Y. Chen; M. Kristensen; E. Özdemir; J. D. Keasling; M.K. Jensen; **J. Nielsen** (2021) Engineering yeast metabolism for the discovery and production of polyamines and polyamine analogues. *Nature Cat.* **4**:498-509
 629. L. Baumann; T. Doughty; V. Siewers; **J. Nielsen**; E. Boles; M. Oreb (2021) Transcriptomic response of *Saccharomyces cerevisiae* to octanoic acid production. *FEMS Yeast Res.* **21**:foab011
 630. Y. Zhao; Y. Zhang; **J. Nielsen**; Z. Liu (2021) Production of β -carotene in *Saccharomyces cerevisiae* through altering yeast lipid metabolism. *Biotechnol. Bioeng.* **118**:2043-2052
 631. Y. Chen; F. Li; J. Mao; Y. Chen; **J. Nielsen** (2021) Yeast optimizes metal utilization based on metabolic network and enzyme kinetics. *Proc. Nat. Acad. Sci. USA* **118**:e2020154118
 632. G.B. Ferraro; A. Ali; A. Luengo; D.P. Kodack; A. Deik; K.K. Abbott; D. Bezwada; L. Blanc; B. Prideaux; X. Jin; J.M. Possada; J. Chen; C.R. Chin; Z. Amoozgar; R. Ferreira; I. Chen; K. Nexerova; C. Ng; A.M. Westermarck; M. Duquette; S. Roberge; N.I. Lindeman; C.A. Lyssiotis; **J. Nielsen**; D.E. Housman; D.G. Duda; E. Brachtel; T.R. Golub; L.C. Cantley; J.M. Asara; S.M. Davidson; D. Fukumura; V.A. Dartois; C.B. Clish; R.K. Jain; M.G. Vander Heiden (2021) Fatty acid synthesis is required for breast cancer brain metastasis. *Nature Cancer* **2**:414-428
 633. P. Li; D. Sundh; B. Ji; D. Lappa; L. Ye; **J. Nielsen**; M. Lorentzon (2021) Metabolic alterations in older women supplemented with *Lactobacillus reuteri* or with low bone mineral density. *JBM R Plus* **5**:e10478
 634. J. Geng; B. Ji; G. Li; F. Lopez-Isunza; **J. Nielsen** (2021) CODY enables quantitatively spatiotemporal predictions on in vivo gut microbial variability induced by diet-intervention. *Proc. Nat. Acad. Sci. USA* **118**:e2019336118
 635. Y. Chen; E. van Pelt-KleinJan; B. van Olst; S. Douwenga; S. Boeren; H. Bachmann; D. Molenaar; **J. Nielsen**; B. Teusink (2021) Proteome constraints reveal targets for improving microbial fitness in nutrient-rich environments. *Mol. Systems Biol.* **17**:e10093
 636. R. Yu; E. Vorontsov; C. Sihlbom; **J. Nielsen** (2021) Quantifying absolute gene expression profiles reveals distinct regulation of central carbon metabolism genes in yeast. *eLife* **10**:e65722

637. L. Österberg; I. Domenzain; J. Münch; **J. Nielsen**; S. Hohmann; M. Cvijovic (2021) A novel hybrid modeling framework integrating Boolean and enzyme constrained networks enables exploration of the interplay between signaling and metabolism. *PLOS Comp. Biol.* **17**:e1008891
 638. R. Saghaleyni; M.A. Sheikh; P. Bangalore; **J. Nielsen**; J.L. Robinson (2021) Machine learning-based investigation of the cancer protein secretory pathway. *PLOS Comp. Biol.* **17**:e1008898
 639. H.O. Altay; C. Zhang; H. Turkez; **J. Nielsen**; M. Uhlen; A. Mardinoglu (2021) Revealing the metabolic alterations during biofilm development of *Burkholderia cenocepacia* based on genome-scale metabolic modeling. *Metabolites* **11**:221
 640. S. Marcisauskas; Y. Kim; S. Blasche; K.R. Patil; B. Ji; **J. Nielsen** (2021) Draft genome sequences of five fungal strains isolated from Kefir. *Microb. Res. Announcements* **10**:e0019521
 641. D. Tamburro; S. Bratulic; S.A. Shameh; N.K. Soni; A. Bacooni; F. Maccari; F. Galeotti; K. Mattsson; N. Volpi; **J. Nielsen**; F. Gatto (2021) Analytical performance of a standardized kit for mass spectrometry-based measurements of human glycosaminoglycans. *J. Chromat. B* **1177**:122761
 642. J. Gustafsson; J. Robinson; **J. Nielsen**; L. Pachter (2021) BUTTERFLY: Addressing the pooled amplification paradox with unique molecular identifiers in single-cell RNA-seq. *Genom. Biol.* **22**:174
 643. O. Altay; M. Arif; X. Li; H. Yang; M. Aydin; G. Alkurt; W. Kim; D. Akyol; C. Zhang; G. Dinler-Doganay; H. Turkez; S. Shoaie; **J. Nielsen**; J. Boren; O. Olmuscelik; L. Doganay; M. Uhlen; A. Mardinoglu (2021) Combined metabolic activators (CMA) accelerates recovery in mild-to-moderate COVID-19. *Adv. Science* **8**:2101222
 644. D. Bergenholm; Y. Dabirian; R. Ferreira; V. Siewers; F. David; **J. Nielsen** (2021) Rational gRNA design based on transcription factor binding data (2021) *Syn. Biol.* **6**:1-7
 645. G. Gong; Y. Zhang; Z. Wang; L. Liu; S. Shi; V. Siewers; Q. Yuan; **J. Nielsen**; X. Zhang; Z. Liu (2021) GTR 2.0: gRNA-tRNA Array and Cas9-NG based genome disruption and single-nucleotide conversion in *Saccharomyces cerevisiae*. *ACS Syn. Biol.* **10**:1328-1337
 646. G. Li; J. Zrimec; B. Ji; J. Geng; J. Larsbrink; A. Zelezniak; **J. Nielsen**; M.K.M. Engqvist (2021) Performance of regression models as a function of experiment noise. *Bioinf. Biol. Insights* **15**:1-10
 647. S. Alseekh; A. Aharoni; Y. Brotman; K. Contrepolis; J. D'Auria; J. Ewald; J. Ewald; P. Frase; P. Giavalisco; R. Hall; M. Heinemann; H. Link; J. Luo; S. Neumann; **J. Nielsen**; L.P. de Souza; K. Saito; U. Sauer; F. Schroeder; S. Schuster; G. Siuzdak; A. Skirycz; L. Sumner; M. Snyder; H. Tang; T. Tohge; Y. Wang; W. Wen; S. Wu; G. Xu; N. Zamboni (2021) Mass spectrometry-based metabolomics: A guide for annotation, quantification and best report practices. *Nature Met.* **18**:747-756
 648. X. Li; W. Kim; K. Juszczak; M. Arif; Y. Sato; H. Kume; S. Ogawa; H. Turkez; J. Boren; **J. Nielsen**; M. Uhlen; C. Zhang; A. Mardinoglu (2021) Stratification of clear cell renal cell carcinoma patients to facilitate drug repositioning. *iScience* **24**:102772
 649. H. Wang; J.L. Robinson; P. Kocbas; J. Gustafsson; M. Anton; P.-E. Cholley; S. Huang; J. Gobom; T. Svensson; M. Uhlen; H. Zetterberg; **J. Nielsen** (2021) Genome-scale metabolic network reconstruction of model animals as a platform for translational research. *Proc. Nat. Acad. Sci. USA* **118**:e2102344118
 650. Y. Wang; X. Li; X. Chen; **J. Nielsen**; D. Petranovic; V. Siewers (2021) Expression of antibody fragments in *Saccharomyces cerevisiae* strains evolved for enhanced protein secretion. *Mic. Cell Fac.* **20**:134
 651. X. Li; Y. Wang; G. Lo; Q. Liu; R. Pereira; Y. Chen; **J. Nielsen** (2021) Metabolic network remodeling enhances yeast's fitness on xylose using aerobic glycolysis. *Nature Cat.* **4**:783-796
 652. Y. Chen; **J. Nielsen** (2021) In vitro turnover numbers do not reflect in vivo activities of yeast enzymes. *Proc. Nat. Acad. Sci. USA* **118**:e2108391118
 653. T.W. Doughty; R. Yu; L. F.-I. Chao; Z. Qin; V. Siewers; **J. Nielsen** (2021) A single chromosome strain of *S. cerevisiae* exhibits diminished ethanol metabolism and tolerance. *BMC Genom.* **22**:688
 654. L. Caspeta; E.J. Kerkhoven; A. Martinez; **J. Nielsen** (2021) The yeastGemMap: A process diagram to assist yeast systems-metabolic studies. *Biotechnol. Bioeng.* **118**:4800-4814
 655. C. Malina; F. Di Barolomeo; E. Kerkhoven; **J. Nielsen** (2021) Constraint-based modeling of yeast mitochondria reveals the dynamics of protein import and iron-sulfur cluster biogenesis. *iScience* **24**:103294
 656. M. Zeybel; H. Yang; O. Altay; M. Arif; C. Fredolini; M. Akyildiz; B. Saglam; M.G. Gonenli; D. Ural; W. Kim; X. Li; J.M. Schwenk; C. Zhang; S. Shoaie; **J. Nielsen**; M. Uhlen; J. Boren; A. Mardinoglu (2021) Combined metabolic cofactor supplementation ameliorates liver fat in NAFLD. *Mol. Systems Biol.* **17**:e10459
 657. H. Lu; F. Li; L. Yuan; I. Domenzain; R. Yu; H. Wang; G. Li; Y. Chen; B. Ji; E.J. Kerkhoven; **J. Nielsen** (2021) Yeast metabolic innovations emerged via expanded metabolic network and gene positive selection. *Mol. Systems Biol.* **17**:e10427
 658. Q. Liu; Y. Liu; G. Li; O. Savolainen; Y. Chen; **J. Nielsen** (2021) De novo biosynthesis of bioactive isoflavonoids by engineered yeast cell factories. *Nature Com.* **2**:6085
 659. S.K. Forslund; R. Chakaroun; M. Zimmermann-Kogadeeva; L. Markó; J. Aron-Wisnewsky; T. Nielsen; L. Moitinho-Silva; T.S.B. Schmidt; G. Falony; S. Vieira-Silva; S. Adrichouch; R.J. Alves; K. Assmann; J.-P. Bastard; T. Birkner; R. Caesar; J. Chilloux; L.P. Coelho; L. Fezeu; N. Galleron; G. Helft; R. Isnard; B. Ji; M. Kuhn; E. Le Chatelier; A. Myridakis; L. Olsson; N. Pons; E. Prifti; B. Quinquis; H. Roume; J.-E. Salem; N. Sokolovska; V. Tremaroli; M. Valles-Colomer; C. Lewinter; N.B. Søndertoft; H.K. Pedersen; T.H. Hansen; The MetaCardis Consortium; J.P. Gøtzte; L. Køber; H. Vestergaard; T. Hansen; J.-D. Zucker; S. Herberg; J.-M. Oppert; I. Letunic; **J. Nielsen**; F. Bäckhed; S.D. Ehrlich; M.-E. Dumas; J. Raes; O. Pedersen; K. Clément; M. Stumvoll; P. Bork (2021) Combinatorial, additive and dose-dependent drug-microbiome associations. *Nature* **600**:500-505
- 2022**
660. X. Liu; M. Liu; J. Zhang; Y. Chang; Z. Cui; B. Ji; **J. Nielsen**; Q. Qi; J. Hou (2022) Mapping of non-homologous end joining mediated integration facilitates genome-scale trackable mutagenesis in *Yarrowia lipolytica*. *ACS Syn. Biol.* **11**:216-227

661. S. Bratulic; A. Limeta; F. Maccari; F. Galeotti; M. Levin; N. Volpi; **J. Nielsen**; F. Gatto (2022) Analysis of normal levels of free glycoaminoglycans in urine and plasma in adults. *J. Biol. Chem.* **298**:101575
662. S. Fromentin; S.K. Forslund; K. Chechi; J. Aron-Wisniewsky; R. Chakaroun; T. Nielsen; V. Tremaroli; B. Ji; E. Prifti; A. Myridakis; J. Chilloux; A. Petros; Y. Fan; M. T. Olanipekun; R. Alves; S. Adiouch; N. Bar; Y. Talmor-Barkan; E. Belda; R. Caesar; L.P. Coelho; G. Falony; S. Fellahi; P. Galan; N. Galleron; G. Helft; L. Hoyles; R. Isnard; E. Le Chatelier; H. Julienne; L. Olsson; H.K. Pedersen; N. Pons; B. Quinquis; C. Rouault; H. Roume; J.-E. Salem; T.S.B. Schmidt; S. Vieira-Silva; P. Li; M. Zimmermann-Kogadeeva; C. Lewinter; N.B. Søndertoft; T.H. Hansen; D. Gauguier; J.P. Götze; L. Køber; R. Kornowski; H. Vestergaard; T. Hansen; J.-D. Zucker; S. Hercberg; I. Letunic; F. Bäckhed; J.-M. Oppert; **J. Nielsen**; J. Raes; P. Bork; M. Stumvoll; E. Segal; K. Clément; M.-E. Dumas; S.D. Ehrlich; O. Pedersen (2022) Microbiome and metabolome features of the cardiometabolic disease spectrum. *Nature Med.* **28**:303-314
663. M. Zeybel; M. Arif; X. Li; O. Altay; M. Shi; M. Akyildiz; B. Saglam; M.G. Gonenli; B. Yigit; B. Ulukan; D. Ural; S. Shoaie; H. Turkez; **J. Nielsen**; C. Zhang; M. Uhlen; J. Boren; A. Mardinoglu (2022) Multi-omics analysis reveals the impact of microbiota on host metabolism in hepatic steatosis. *Adv. Sci.* **9**:2104373
664. N. Montini; T.W. Doughty; I. Domenzain; D.A. Fenton; P.V. Baranov; R. Harrington; **J. Nielsen**; V. Siewers; J.P. Morrissey (2022) Identification of novel gene required for competitive growth at high temperature in the thermotolerant yeast *Kluyveromyces marxianus*. *Microbiol.* **168**:001148
665. I. Elsemman; A.R. Prado; P. Grigaitis; M. Garcia-Abomoz; V. Harman; S. Holman; J. Van Heerden; F. Bruggemann; M. Bisschops; N. Sonnenschein; S. Hubbard; R. Beynon; P. Daran-Lapujade; **J. Nielsen**; B. Teusink (2022) Whole-cell modelling in yeast predicts compartment-specific proteome constraints that drive metabolic strategies. *Nature Com.* **13**:801
666. E. Belda; L. Volland; V. Tremaroli; G. Falony; S. Adriouch; K.E. Assmann; E. Prifti; J. Aron-Wisniewsky; J. Debedat; T. Le Roy; T. Nielsen; C. Amouyal; S. Andre; F. Andreelli; M. Blüher; R. Chakaroun; J. Chilloux; L.P. Coelho; M.C. Dao; P. Das; S. Fellahi; S. Forslund; N. Galleron; T.H. Hansen; B. Holmes; B. Ji; H.K. Pedersen; P. Le; E. Le Chatelier; C. Lewinter; L. Mannerås-Holm; F. Marquet; A. Myridakis; V. Pelloux; N. Pons; B. Quinquis; C. Rouault; H. Roume; J.-E. Salem; N. Sokolovska; N.B. Søndertoft; S. Touch; S. Vieira-Silva; MetaCardis Consortium; P. Galan; J. Holst; J.P. Götze; L. Køber; H. Vestergaard; T. Hansen; S. Hercberg; J.-M. Oppert; **J. Nielsen**; I. Letunic; M.-E. Dumas; M. Stumvoll; O.B. Pedersen; P. Bork; S.D. Ehrlich; J.-D. Zucker; F. Bäckhed; J. Raes; K. Clement (2022) Impairment of gut microbial biotin metabolism and host biotin status in severe obesity: effect of biotin and prebiotic supplementation on improved metabolism. *Gut* **71**:2463-2480
667. R. Saghaei; M. Malm; N. Moruzzi; J. Zimec; R. Razavi; N. Wistbacka; H. Thorell; A. Pintar; A. Hober; F. Edfors; V. Chotteau; P.-O. Berggren; L. Grassi; A. Zelezniak; T. Svensson; D. Hatton; **J. Nielsen**; J. Robinson; J. Rockberg (2022) Enhanced metabolism and negative regulation of ER stress support higher erythropoietin production in HEK293 cells. *Cell Rep.* **39**:110936
668. X. Li; K. Shong; W. Kim; M. Yuan; H. Yang; Y. Sato; H. Kume; S. Ogawa; H. Turkez; S. Shoaie; J. Boren; **J. Nielsen**; M. Uhlen; C. Zhang; A. Mardinoglu (2022) Prediction of drug candidates for clear cell renal carcinoma using a systems biology-based drug repositioning approach. *eBioMedicine* **78**:103963
669. A.S. Meijnikman; D. Lappa; H. Herrema; O. Aydin; K.A. Krautkramer; V. Tremaroli; L.E. Olofsson; A. Lundqvist; S. Bruin; Y. Acherman; Dutch liver Pathology Panel; J. Verheij; S. Hjort; V.E.A. Gerdes; T.W. Schwartz; M. Nieuwdorp; A.K. Groen; **J. Nielsen**; F. Bäckhed (2022) A systems biology approach to study non-alcoholic fatty liver (NAFL) in women with obesity. *iScience* **25**:104828
670. F. Li; L. Yuan; H. Lu; G. Li; Y. Chen; M.K.M. Engqvist; E.J. Kerkhoven; **J. Nielsen** (2022) Deep learning based k_{cat} prediction enables improved enzyme constrained model reconstruction. *Nature Cat.* **5**:662-672
671. F. Li; Y. Chen; Q. Qi; Y. Wang; L. Yuan; M. Huang; I.E. Elsemman; A. Feizi; E.J. Kerkhoven; **J. Nielsen** (2022) Improving recombinant protein production by yeast through genome-scale modelling using proteome constraints. *Nature Com.* **13**:2969
672. J. Xia; B.J. Sanchez; Y. Chen; K. Campbell; S. Kasvandik; **J. Nielsen** (2022) Proteome allocation change linearly with specific growth rate of *Saccharomyces cerevisiae* under glucose-limitation. *Nature Com.* **13**:2819
673. T. Xie; M. Chen; **J. Nielsen**; J. Xia (2022) Multi-omics analyses of the transition to the Crabtree effect in *S. cerevisiae* reveals a key role for the citric acid shuttle. *FEMS Yeast Res.* **22**:foac030
674. O.P. Ishchuk; I. Domenzain; B.J. Sanchez; F. Muniz-Paredes; J.L. Martinez; **J. Nielsen**; D. Petranovic (2022) Genome-scale modelling drives 70-fold improvement of intracellular heme production in *Saccharomyces cerevisiae*. *Proc. Nat. Acad. Sci. USA* **119**:e2108245119
675. I. Domenzain; B. Sanchez; M. Anton; E.J. Kerkhoven; A. Millan-Oropeza; C. Henry; V. Siewers; J.P. Morrissey; N. Sonnenschein; **J. Nielsen** (2022) Reconstruction of a catalogue of genome-scale metabolic models with enzymatic constraints using GECKO2.0. *Nature Com.* **13**:3766
676. F. Gatto; S. Dabestani; S. Bratulic; A. Limeta; F. Maccari; F. Galeotti; N. Volpi; U. Steiner; **J. Nielsen**; S. Lundstam (2022) Plasma and urine free glucosaminoglycans as monitoring biomarkers in nonmetastatic renal cell carcinoma – A prospective cohort study. *Eur. Urol. Open Sci.* **42**:30-39
677. N. Begum; S. Lee; T.J. Portlock; A. Pellon; S.D.S. Nasab; **J. Nielsen**; M. Uhlen; D.L. Moyes; S. Shoaie (2022) Integrative functional analysis uncovers metabolic differences between *Candida* species. *Comms. Bio.* **5**:1013
678. J. Zimec; X. Fu; A.S. Muhammad; C. Skrekas; V. Jauniskis; N.K. Speicher; C.S. Börlin; V. Verendel; M.H. Chehreghani; D. Dubhashi; V. Siewers; F. David; **J. Nielsen**; A. Zelezniak (2022) Controlling gene expression with deep generative design of regulatory DNA. *Nature Com.*, in press
679. C. Zhang; M. Shi; W. Kim; M. Arif; M. Kleivstig; X. Li; H. Yang; C. Bayram; I. Bolat; Ö.Ö. Tozlu; H. Hacimuftuoglu; S. Yildirim; J. Sebhaoui; S. Iqbal; Y. Wei; X. Shi; **J. Nielsen**; H. Turkez; M. Uhlen; J. Boren; A. Mardinoglu (2022) Discovery of therapeutic agents targeting *PKLR* for NAFLD using drug repositioning. *eBioMed.*, in press

680. G. Zhang; C. Zhang; Z. Wang; Q. Wang; **J. Nielsen**; Z. Dai (2022) Dual b-oxidation pathway and transcription factor engineering methyl ketones production in *Saccharomyces cerevisiae*. *Met. Eng.*, in press
681. T. Yu; Q. Liu; X. Wang; X. Liu; V. Siewers; Y. Chen; **J. Nielsen** (2022) Metabolic reconfiguration enable synthetic reductive metabolism. *Nature Met.* **4**:1551-1559
682. A.S. Meijnikman; M. Davids; H. Herrema; O. Aydin; V. Tremaroli; M. Rios-Morales; H. Levels; S. Bruin; M. de Brauw; J. Verheij; M. Kemper; A.G. Holleboom; M. Tushuizen; T.W. Schwartz; **J. Nielsen**; D. Brandjes; E. Dirinck; J. Weyler; A. Verrijken; C. De Block; L. Vonghia; S. Francque; U. Beuers; V.E.A. Gerdes; F. Bäckhed; A.K. Groen; M. Nieuwdorp (2022) Microbiome-derived ethanol in non-alcoholic fatty liver disease. *Nature Med.* **28**:2100-2106
683. Y. Zhao; K. Meng; J. Fu; S. Xu; G. Cai; G. Meng; **J. Nielsen**; Z. Liu; Y. Zhang (2022) Protein engineering of invertase for enhancing yeast dough fermentation under high sucrose concentrations. *Folia Microbiologica*, in press
684. P. Li; B. Ji; H. Lou; D. Sundh; M. Lorentzon; **J. Nielsen** (2022) One-year supplementation with *Lactobacillus reuteri* ATCC PTA 6475 counteracts a degradation of gut microbiota in older women with low bone mineral density. *NPJ Biofilms & Microbiomes* **8**:84
685. G. Li; F. Buric; J. Zrimec; S. Viknander; **J. Nielsen**; A. Zelezniak; M.K.M. Engqvist (2022) Learning deep representations of enzyme thermal adaptation. *Prot. Sci.* **31**:e4480
686. H. Lu; E. Kerkhoven; **J. Nielsen** (2022) A pan-draft metabolic model reflects evolutionary diversity across 332 yeast species. *Biomolecules* **12**:1632
687. F. Gatto; S. Bratulic; E. Jonasch; A. Limeta; F. Maccari; F. Galeotti; N. Volpi; S. Lundtam; **J. Nielsen**; U. Steiner (2022) Plasma and urine free glycosaminoglycans as monitoring and predictive biomarkers in metastatic renal cell carcinoma: A prospective cohort study. *JCO Precision Oncol.* **42**:30-39
688. M.S.S. Guman; J.B. Hoozemans; S. Haal; P.A. de Jonge; Ö. Aydin; D. Lappa; A.S. Meijnikman; F. Westerink; Y. Acherman; F. Bäckhed; M. de Brauw; **J. Nielsen**; M. Nieuwdorp; A.K. Groen; V.E.A. Gerdes (2022) Adipose Tissue, Bile Acids, and Gut Microbiome Species Associated With Gallstones After Bariatric Surgery. *J Lipid Res.* **63**:100280
- 2023**
689. F. Li; Y. Chen; M. Anton; **J. Nielsen** (2023) GotEnzymes: An extensive database of enzyme parameter predictions. *Nuc. Acid Res.* **51**:D583-D586
690. X. Cao; W. Yu; Y. Chen; S. Yang; Z.K. Zhao; **J. Nielsen**; H. Luan; Y.J. Zhou (2023) Engineering yeast for high-level production of diterpenoid sclareol. *Met. Eng.* **75**:19-28
691. D. Lappa; A.S. Meijnikman; K.A. Krautkramer; L.M. Olsson; Ö. Aydin; A.-S. van Rijswijk; Y.I.Z. Acherman; M.L. De Brauw; V. Tremaroli; L.E. Olofsson; A. Lundqvist; S.A. Hjorth; B. Ji; V.E.A. Gerdes; A.K. Groen; T.W. Schwartz; M. Nieuwdorp; F. Bäckhed; **J. Nielsen** (2023) Self-organized metabotyping of obese individuals identifies clusters responding differently to bariatric surgery. *PLOS One*, in press
692. H. Lou; P. Li; B. Ji; **J. Nielsen** (2023) Modeling the metabolic dynamics at the genome-scale by optimized yield analysis. *Met. Eng.*, in press
693. N. Qin; L. Li; X. Ji; R. Pereira; Y. Chen; S. Yin; C. Li; X. Wan; D. Qiu; J. Jiang; H. Lou; Y. Zhang; G. Dong; Y. Zhang; S. Shi; H.J. Jessen; J. Xia; Y. Chen; C. Larsson; T. Tan; Z. Liu; **J. Nielsen** (2023) Flux regulation through glycolysis and respiration is balanced by inositol pyrophosphates. *Cell* **186**:748-763
694. S. Rahimi; D. van Leeuwen; F. Roshanzamir; S. Pandit; L. Shi; N. Sasanian; **J. Nielsen**; E.K. Esbjörner; I. Mijakovic (2023) Ginsenoside Rg3 reduces the toxicity of graphene oxide used for pH-responsive delivery of doxorubicin to liver and breast cancer cells. *Pharmaceutics* **15**:391
695. Z. Yao; Y. Guo; H. Wang; Z. Liu; Z. Dai; **J. Nielsen** (2023) A highly efficient transcriptome-based biosynthesis of non-ethanol chemicals in Crabtree negative *Saccharomyces cerevisiae*. *Biotechnol. Biofuels*, in press
696. J.O. Valle; V. Siewers; **J. Nielsen**; S. Shi (2023) Directed evolution of a wax ester synthase for production of fatty acid ethyl esters in *Saccharomyces cerevisiae*. *Appl. Microbiol. Biotechnol.* **107**:2921-2932
697. F. Gatto; S. Bratulic; E. Jonasch; A. Limeta; F. Maccari; F. Galeotti; N. Volpi; S. Lundtam; **J. Nielsen**; U. Steiner (2023) Plasma and urine free glucosaminoglycans as monitoring and predictive biomarkers in metastatic renal cell carcinoma: A prospective cohort study. *JCO Precision Onc.*, in press
698. K. Wang; Y. Dai; H. Bi; Y. Liu; B. Chen; M. Wang; Z. Liu; **J. Nielsen**; T. Tan (2023) A one-carbon chemicals conversion strategy to produce precursor of biofuels with *Saccharomyces cerevisiae*. *Renewable Energy* **208**:331-340
699. P. Adrikopoulos; J. Aron-Wisniewsky; R. Charkaroun; A. Myridakis; S.K. Forslund; T. Nielsen; S. Adriouch; B. Holmes; J. Chilloux; S. Vieira-Silva; G. Falony; J.-E. Salem; F. Andreelli; E. Belda; J. Kieswich; K. Chechi; F. Puig-Castellvi; M. Chevalier; E. Le Chatelier; M.T. Olanipekun; L. Hoyles; R. Alves; G. Helft; R. Isnard; L. Køber; L.P. Coelho; C. Rouault; D. Gauguier; J.P. Götze; E. Prifti; MetaCardis Consortium; J.-D. Zucker; F. Bäckhed; H. Vestergaard; T. Hansen; J.-M. Oppert; M. Blüher; **J. Nielsen**; J. Ras; P. Bork; M.M. Yaqoob; M. Stumvoll; O. Pedersen; S.D. Ehrlich; K. Clement; M.-E. Dumas (2023) Evidence of causal and modifiable relationship between kidney function and circulating trimethylamine N-oxide. *Nature Com.*, in press
700. L. Yuan; H. Lu; F. Li; **J. Nielsen**; E.J. Kerkhoven (2023) HGTphlyoDetect facilitating the identification of phylogenetic analysis of horizontal gene transfer. *Brif. Bioinform.* **24**:bbad035
701. M. Chen; T. Xie; H. Li; Y. Zhuang; J. Xia; **J. Nielsen** (2023) Increased glycolytic flux in yeast is accompanied by decreased metabolite regulation and lower protein phosphorylation. *Proc. Nat. Acad. Sci. USA*, in press
702. H. Yang; X. Li; H. Jin; H. Turkez; G. Ozturk; H.L. Doganay; C. Zhang; **J. Nielsen**; M. Uhlen; J. Boren; A. Mardinoglu (2023) Longitudinal metabolomics analysis reveals the acute effect of cysteine and NAC included in the combined metabolic activators. *Free Radical Biol. Med.* **204**:347-358
703. M.-E. Dumas; P. Adrikopoulos; J. Aron-Wisniewsky; R. Charkaroun; A. Myridakis; S. Forslund; T. Nielsen; S. Adriouch; B. Holmes; J. Chilloux; S. Vieira-Silva; G. Falony; J.-E. Salem; F. Andreelli; E. Belda; J. Kieswich; K. Chechi; F. Puig-Castellvi; M. Chevalier; E. Le Chatelier; M. Olanipekun; L. Hoyles; R. Alves; G. Helft; R. Isnard; L. V. Køber; L.P. Coelho; C. Rouault; D. Gauguier; J. Götze; E. Prifti; J.-D. Zucker; F. Bäckhed; H. Vestergaard; T. Hansen; J.-M. Oppert; M. Blüher; **J. Nielsen**; J. Raes; P. Bork; M. Yaqoob; M. Stumvoll; O. Pedersen; S. Ehrlich; K.

- Clement; MetaCardis Consortium (2023) Evidence of a causal and modifiable relationship between kidney function and circulating trimethylamine N-oxide. *Nature Com.*, in press
704. J. Mao; M.T. Mohedano; J. Fu; X. Li; Q. Liu; **J. Nielsen**; V. Siewers; Y. Chen (2023) Fine-tuning of p-coumaric acid synthesis to increase (2S)-naringenin production in yeast. *Met. Eng.* **79**:192-202

Reviews in international journals with peer review

1. **J. Nielsen**; J. Villadsen (1992) Modelling of microbial kinetics. *Chem. Eng. Sci.* **47**:4225-4270
2. **J. Nielsen** (1996) Modelling the morphology of filamentous microorganisms. *Trends Biotechnol.* **14**:438-443
3. L. Olsson; **J. Nielsen** (1997) Studies of on-line and *in-situ* measuring methods for biomass concentration. *Trends Biotechnol.* **15**:517-522
4. C. Klein; L. Olsson; **J. Nielsen** (1998) Glucose control in *Saccharomyces cerevisiae*. The role of *MIG1* on metabolic functions. *Microbiol.* **144**:13-24
5. L. Olsson; U. Schulze; **J. Nielsen** (1998) On-line bioprocess monitoring - an academic discipline or an industrial tool? *Trends Anal. Chem.* **17**:88-95
6. C. M. Henriksen; **J. Nielsen**; J. Villadsen (1998) Cyclization of α -aminoadipic acid into the δ -lactam 6-oxo-piperidine-2-carboxylic acid by *Penicillium chrysogenum*. *J. Antibio.* **51**:99-106
7. **J. Nielsen** (1998) The role of metabolic engineering in the production of secondary metabolites. *Curr. Opin. Microbiol.* **1**:330-336
8. S. Ostergaard; L. Olsson; **J. Nielsen** (2000) Metabolic engineering of *Saccharomyces cerevisiae*. *Microb. Mol. Biol. Rev.* **64**:34-50
9. A. K. Gombert; **J. Nielsen** (2000) Mathematical modelling of metabolism. *Curr. Opinion Biotechnol.* **11**:180-186
10. **J. Nielsen** (2001) Metabolic engineering. *Appl. Microbiol. Biotechnol.* **55**:263-283
11. J. Zaldivar; **J. Nielsen**; L. Olsson (2001) Fuel ethanol production from lignocellulose: A challenge for metabolic engineering and process integration. *Appl. Microbiol. Biotechnol.* **56**:17-34
12. J. Thykaer; **J. Nielsen** (2003) Metabolic engineering of β -lactam production. *Metabolic Eng.* **5**:56-69
13. G. Hofmann; M. McIntyre; **J. Nielsen** (2003) Fungal genomics beyond *Saccharomyces cerevisiae*. *Curr. Op. Biotechnol.* **14**:226-231
14. K. Patil; M. Åkesson; **J. Nielsen** (2004) Use of genome scale microbial models for metabolic engineering. *Curr. Op. Biotechnol.* **15**:64-69
15. I. Borodina; **J. Nielsen** (2005) From genomes to *in silico* cells via metabolic networks. *Curr. Op. Biotechnol.* **16**:1-6
16. S. G. Villas-Bôas; S. Mas; M. Åkesson; J. Smedsgaard; **J. Nielsen** (2005) Mass spectrometry in metabolome analysis. *Mass Spec. Rev.* **24**:613-646
17. **J. Nielsen**; S. Oliver (2005) The next wave in metabolome analysis. *Trends Biotechnol.* **23**:544-546
18. M. C. Jewett; G. Hofmann; **J. Nielsen** (2006) Fungal metabolite analysis in genomics and phenomics. *Curr. Op. Biotechnol.* **17**:1-7
19. S. Rokem; A. Eliasson; J. Nielsen (2007) Systems biology of secondary metabolism in microorganisms. *Nat. Prod. Rep.* **24**:1262-1287
20. **J. Nielsen**; M. Jewett (2008) Impact of systems biology on metabolic engineering of *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **8**:122-131
21. V. Mapelli; L. Olsson; **J. Nielsen** (2008) Metabolic footprinting in microbiology: methods and applications in functional genomics and biotechnology. *Trends Biotechnol.* **26**:490-497
22. D. Petranovic; **J. Nielsen** (2008) Can yeast systems biology contribute to the understanding of human disease? *Trends Biotechnol.* **26**:584-590
23. M. R. Andersen; **J. Nielsen** (2009) Current status of systems biology in Aspergilli. *Fun. Gen. Biol.* **46**:S180-S190
24. G. Panagiotou; **J. Nielsen** (2009) Nutritional systems biology: Definitions and approaches. *Annual Rev. Nutr.* **29**:329-339
25. **J. Nielsen** (2009) Systems biology of lipid metabolism: From yeast to human. *FEBS Lett.* **583**:3905-3913
26. J. M. Otero; **J. Nielsen** (2010) Industrial Systems Biology. *Biotechnol. Bioeng.* **105**:439-460
27. K. Tyo; K. Kocharin; **J. Nielsen** (2010) Toward Design-based Engineering of Industrial Microbes. *Curr. Op. Microbiol.* **13**:255-262
28. L. Liu; R. Agren; S. Bordel; **J. Nielsen** (2010) Use of genome-scale metabolic models for understanding microbial physiology. *FEBS Lett.* **584**:2556-2564
29. J. Zhang; G. Vemuri; **J. Nielsen** (2010) Systems biology of energy homeostasis in yeast. *Curr. Op. Microbiol.* **13**:382-388
30. D. Petranovic; K. Tyo; G.N. Vemuri; **J. Nielsen** (2010) Prospects of yeast systems biology for human health: integrating lipid, protein and energy metabolism. *FEMS Yeast Res.* **10**:1046-1059
31. A. Krivoruchko; V. Siewers; **J. Nielsen** (2011) Opportunities for yeast metabolic engineering: Lessons from synthetic biology. *Biotechnol. J.* **6**:262-276
32. S. Shi; J.O. Valle-Rodriguez; V. Siewers; **J. Nielsen** (2011) Prospects for microbial biodiesel production. *Biotechnol. J.* **6**:277-285
33. F. H. Karlsson; I. Nookaew; D. Petranovic; **J. Nielsen** (2011) Prospects for systems biology and modeling of the gut microbiome. *Trends Biotechnol.* **29**:251-258
34. M. Cvijovic; S. Bordel; **J. Nielsen** (2011) Mathematical models of cell factories: Moving towards the cores of industrial biotechnology. *Microbiol. Biotechnol.* **4**:572-584

35. T. Österlund; I. Nookaew; **J. Nielsen** (2012) Fifteen years of large scale metabolic modeling of yeast: Developments and impacts. *Biotechnol. Adv.* **30**:979-988
36. B. de Jong; V. Siewers; **J. Nielsen** (2012) Systems biology of yeast: enabling technology for development of cell factories for production of advanced biofuels. *Curr. Opin. Biotechnol.* **23**:1-7
37. I.-K. Kim; A. Roldao; V. Siewers; **J. Nielsen** (2012) A system-level approach for metabolic engineering of yeast cell factories. *FEMS Yeast Res.* **12**:228-248
38. A. Mardinoglu; **J. Nielsen** (2012) Systems medicine and metabolic modeling. *J. Int. Med.* **271**:142-154
39. K.-K. Hong; **J. Nielsen** (2012) Metabolic engineering of *Saccharomyces cerevisiae*: A key cell factory platform for future biorefineries. *Cell. Mol. Life Sci.* **16**:2671-2690
40. J. L. Martinez; L. Liu; D. Petranovic; **J. Nielsen** (2012) Pharmaceutical protein production by yeast: towards production of human blood proteins by microbial fermentation. *Curr. Opin. Biotechnol.* **23**:965-971
41. J. Hou; K. E. J. Tyo; Z. Liu; D. Petranovic; **J. Nielsen** (2012) Metabolic engineering of recombinant protein secretion by *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **12**:491-510
42. C. Knuf; **J. Nielsen** (2012) Aspergilli: Systems biology and industrial applications. *Biotechnol. J.* **7**:1147-1155
43. **J. Nielsen** (2013) Production of biopharmaceutical proteins by yeast. Advances through metabolic engineering. *Bioengineered* **4**:207-211
44. Y. Chen; **J. Nielsen** (2013) Advances in metabolic pathway and strain engineering paving the way for sustainable production of chemical building blocks. *Curr. Opin. Biotechnol.* **24**:965-972
45. A. Mardinoglu; F. Gatto; **J. Nielsen** (2013) Genome-scale modeling of human metabolism. *Biotechnol. J.* **8**:985-996
46. L. Caspeta; **J. Nielsen** (2013) Toward systems metabolic engineering of *Aspergillus* and *Pichia* species for the production of chemicals and biofuels. *Biotechnol. J.* **8**:534-544
47. **J. Nielsen**; C. Larsson; A. van Maris; J. Pronk (2013) Metabolic engineering of yeast for production of fuels and chemicals. *Curr. Opin. Biotechnol.* **24**:398-404
48. N. A. Buijs; V. Siewers; **J. Nielsen** (2013) Advanced biofuel production by the yeast *Saccharomyces cerevisiae*. *Curr. Opin. Chem. Biol.* **17**:480-488
49. F. Karlsson; V. Tremaroli; **J. Nielsen**; F. Bäckhed (2013) Assessing the human gut microbiota in metabolic diseases. *Diabetes* **62**:3341-3349
50. M. A. Garcia-Albornoz; **J. Nielsen** (2013) Application of genome-scale metabolic models in metabolic engineering. *Ind. Biotechnol.* **9**:203-214
51. S. Tippmann; Y. Chen; V. Siewers; **J. Nielsen** (2013) From flavors and pharmaceuticals to advanced biofuels: Production of isoprenoids in *Saccharomyces cerevisiae*. *Biotechnol. J.* **8**:1435-1444
52. L. Våremo; I. Nookaew; **J. Nielsen** (2013) Novel insights into obesity and diabetes through genome-scale metabolic modeling. *Fron. Physiology* **4**:92
53. M. Huang; J. Bao; **J. Nielsen** (2014) Biopharmaceutical protein production by *Saccharomyces cerevisiae*: Current state and future prospects. *Pharmaceut. Bioprocessing* **2**:167-182
54. I. Borodina; **J. Nielsen** (2014) Advances in metabolic engineering of yeast *Saccharomyces cerevisiae* for production of chemicals. *Biotechnol. J.* **9**:609-620
55. J. Almquist; M. Cvijovic; V. Hatzimanikatis; **J. Nielsen**; M. Jirstrand (2014) Kinetic models in industrial biotechnology – improving cell factory performance. *Met. Eng.* **24**:38-60
56. S. Shuai; **J. Nielsen** (2014) Elucidating the interactions between the human gut microbiota and its host through metabolic modeling. *Fron. Genetics* **5**:86
57. G. Liu; A. Marras; **J. Nielsen** (2014) The future of genome-scale modeling of yeast through integration of a transcriptional regulatory network. *Quan. Biol.* **2**:30-46
58. Y.J. Zhou; N.A. Buijs; V. Siewers; **J. Nielsen** (2014) Fatty acid-derived biofuels and chemicals production in *Saccharomyces cerevisiae*. *Front. Synth. Biol.* **2**:32
59. E.J. Kerkhoven; P.-J. Lahtvee; **J. Nielsen** (2014) Application of computational modeling in metabolic engineering of *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **15**:1-13
60. B. Ji; **J. Nielsen** (2015) New insight into the gut microbiome through metagenomics. *Adv. Genom. Genet.* **5**:77-91
61. A. Krivoruchko; Y. Zhang; V. Siewers; **J. Nielsen** (2015) Microbial acetyl-CoA metabolism and metabolic engineering. *Met. Eng.* **28**:28-42
62. A. Krivoruchko; **J. Nielsen** (2015) Production of natural products through metabolic engineering of *Saccharomyces cerevisiae*. *Curr. Opin. Biotechnol.* **35**:7-15
63. A. Mardinoglu; **J. Nielsen** (2015) New paradigms for metabolic modeling of human cells. *Curr. Opin. Biotechnol.* **34**:91-97
64. B. Pflieger; M. Gossing; **J. Nielsen** (2015) Metabolic engineering strategies for microbial production of oleochemicals. *Met. Eng.* **29**:1-11
65. D. Julleson; F. David; B. Pflieger; **J. Nielsen** (2015) Impact of Synthetic Biology and Metabolic Engineering on Industrial Production of Fine Chemicals. *Biotechnol. Adv.* **33**:1395-1402
66. B. J. Sanchez; **J. Nielsen** (2015) Genome-scale models of yeast: Towards standardized evaluation and consistent omic integration. *Integrative Biol.* **7**:846-858
67. O. Kayikci; **J. Nielsen** (2015) Glucose repression in *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **15**:fov068
68. Z. Dai; **J. Nielsen** (2015) Advancing metabolic engineering through systems biology of industrial microorganisms. *Curr. Opin. Biotechnol.* **36**:8-15
69. P.N. Ghaffari; A. Mardinoglu; **J. Nielsen** (2015) Cancer metabolism: A modeling perspective. *Front. Physiol.* **6**:Article 382
70. L. Caspeta; T. Castilio; **J. Nielsen** (2015) Modifying yeast tolerance to inhibitory conditions of ethanol production. *Fron. Bioeng. Biotechnol.* **3**:Article 184

71. B. Ji; **J. Nielsen** (2015) From next-generation sequencing to systematic modeling of the gut microbiome. *Front. Genet.* **6**:219
72. E. Fletcher; A. Krivoruchko; **J. Nielsen** (2016) Industrial systems biology and its impact on synthetic biology of yeast cell factories. *Biotechnol. Bioeng.* **113**:1164-1170
73. J.L. Martinez; D. Petranovic; **J. Nielsen** (2016) Heme metabolism in stress regulation and protein production: From cinderella to key player. *BioEngineered* **7**:112-115
74. F. Gatto; **J. Nielsen** (2016) In search for symmetries in the metabolism of cancer. *WIREs Systems Biol. Med.* **8**:23-35
75. **J. Nielsen**; J. Keasling (2016) Engineering Cellular Metabolism. *Cell* **164**:1185-1197
76. M. Uhlen; B.M. Hallström; C. Lindskog; A. Mardinoglu; F. Ponten; **J. Nielsen** (2016) Transcriptomics resources of human tissues and organs. *Mol. Sys. Biol.* **12**:862
77. M. Kumar; P. Babaei; B. Ji; **J. Nielsen** (2016) Human gut microbiota and healthy ageing: Recent developments and future perspective. *Nutr. Healthy Ageing* **4**:3-16
78. J. Robinson; **J. Nielsen** (2016) Integrative analysis of human omics data using biomolecular networks. *Mol. BioSystems* **12**:2953-2964
79. Y. Chen; **J. Nielsen** (2016) Biobased organic acid production by metabolically engineered microorganisms. *Curr. Op. Biotechnol.* **37**:165-172
80. Y. Chen; **J. Nielsen** (2016) Flux control through protein phosphorylation in yeast. *FEMS Yeast Res.* **16**:fow096
81. M.-K. Kang; **J. Nielsen** (2017) Biobased production of alkanes and alkenes through metabolic engineering of microorganisms. *J. Ind. Microbiol. Biotechnol.* **44**:613-622
82. A. Nilsson; **J. Nielsen** (2017) Genome-scale metabolic modeling of cancer. *Met. Eng.* **43**:103-112
83. L.J. Sweetlove; **J. Nielsen**; A.R. Fernie (2017) Engineering central metabolism – a grand challenge for plant biologists. *Plant J.* **90**:749-763
84. J. Geng; **J. Nielsen** (2017) *In silico* analysis of human metabolism: Reconstruction, contextualization and application. *Curr. Op. Systems Biol.* **2**:28-37
85. **J. Nielsen** (2017) Systems Biology of Metabolism: A Driver for Developing Personalized and Precision Medicine. *Cell Met.* **25**:572-579
86. J.C. Nielsen; **J. Nielsen** (2017) Development of fungal cell factories for the production of secondary metabolites: linking genomics and metabolism. *Synth. Systems Biotechnol.* **2**:5-12
87. G. Wang; M. Huang; **J. Nielsen** (2017) Exploring the potential of *Saccharomyces cerevisiae* for biopharmaceutical protein production. *Curr. Opin. Biotechnol.* **48**:77-84
88. **J. Nielsen** (2017) Systems Biology of Metabolism. *Ann. Rev. Biochem.* **86**:245-275
89. J.L. Robinson; **J. Nielsen** (2017) Anticancer drug discovery through genome-scale metabolic modeling. *Curr. Opin. Syst. Biol.* **4**:1-8
90. **J. Nielsen**; J. Archer; V. Bajic; T. Gojobori; I. Mijakovic (2017) Building a biobased industry in the Middle East through harnessing the potential of the Red Sea biodiversity. *Appl. Microbiol. Biotechnol.*, in press
91. D. Cook; **J. Nielsen** (2017) Genome-scale metabolic models applied to human health and disease. *WIRE Systems Biol. Med.* **9**:e1393
92. X. Chen; C. Gao; L. Guo; G. Hu; Q. Luo; J. Liu; **J. Nielsen**; J. Chen; L. Liu (2018) DCEO Biotechnology: Tools to Design, Construct, Evaluate and Optimize the Metabolic Pathway for Biosynthesis of Chemicals. *Chem. Rev.* **118**:4-72
93. R. Benfeitas; M. Uhlen; **J. Nielsen**; A. Mardinoglu (2017) New challenges to study heterogeneity in cancer redox metabolism. *Fron. Cell Develop. Biol.* **5**:65
94. J. Bosley; C. Boren; S. Lee; M. Grøtli; **J. Nielsen**; M. Uhlen; J. Boren; A. Mardinoglu (2017) Improving economics of NASH/NAFLD treatment through the use of systems biology. *Drug Discov. Today* **22**:1532-1538
95. Z. Gong; **J. Nielsen**; Y. Zhou (2017) Engineering robustness of microbial cell factories. *Biotechnol. J.* **12**:1700014
96. K. Campbell; J. Xia; **J. Nielsen** (2017) The impact of systems biology on bioprocessing. *Trends Biotechnol.* **35**:1156-1168
97. Y. Zhang; **J. Nielsen**; Z. Liu (2017) Engineering yeast metabolism for production of terpenoids for use a perfume ingredients, pharmaceuticals, and biofuels. *FEMS Yeast Res.* **17**:fox080
98. A. Mardinoglu; J. Boren; U. Smith; M. Uhlen; **J. Nielsen** (2018) Systems biology in hepatology: Approaches and applications *Nature Rev. Gastro. Hep.* **15**:365-377
99. R. Ferreira; F. David; **J. Nielsen** (2018) Advancing biotechnology with CRISPR/Cas9: Recent applications and patent landscape. *J. Ind. Microbiol. Biotechnol.* **45**:467-480
100. F.R. Pinu; N. Granucci; J. Daniell; T.-L. Han; S. Carneiro; I. Rocha; **J. Nielsen**; S.G. Villas-Boas (2018) Metabolite secretion in microorganisms: The theory of metabolic overflow put to the test. *Metabolomics* **14**:43
101. C. Malina; C. Larsson; **J. Nielsen** (2018) Yeast mitochondria: An overview of mitochondrial biology and the potential of mitochondrial systems biology. *FEMS Yeast Res.* **18**:foy040
102. B. Turanli; M. Grøtli; J. Boren; **J. Nielsen**; M. Uhlen; K.Y. Arga; A. Mardinoglu (2018) Drug repositioning for effective prostate cancer treatment. *Fron. Physiol.* **9**:500
103. Y. Zhang; **J. Nielsen**; L. Zihe (2018) Metabolic engineering of *Saccharomyces cerevisiae* for production of fatty acid derived hydrocarbons. *Biotechnol. Bioeng.* **115**:2139-2147
104. Y. Zhou; E. Kerkhoven; **J. Nielsen** (2018) Barriers and opportunities in bio-based production of hydrocarbons. *Nature Energy* **3**:925-935
105. R. Ferreira; A. Limeta; **J. Nielsen** (2019) Tackling cancer with yeast based technologies. *Trends Biotechnol.* **37**:592-603
106. L. Zihe; Y. Zhang; **J. Nielsen** (2019) Synthetic biology of yeast. *Biochem.* **58**:1511-1520
107. X. Li; Y. Chen; **J. Nielsen** (2019) Harnessing xylose pathways for biofuels production. *Curr. Opin. Biotechnol.* **57**:56-65
108. **J. Nielsen** (2019) Yeast Cell Factory: Model Organism and Cell Factory. *Biotechnol. J.* **14**:1800421

109. T. Yu; Y. Dabirian; Q. Liu; V. Siewers; **J. Nielsen** (2019) Challenges and strategies for metabolic rewiring. *Curr. Op. Systems Biol.* **15**:30-38
110. Y. Hu; Z. Zhu; **J. Nielsen**; V. Siewers (2019) Engineering *Saccharomyces cerevisiae* cells for production of fatty acid derived biofuels and chemicals. *Open Biol.* **9**:190049
111. M. Kumar; B. Ji; K. Zengler; **J. Nielsen** (2019) Modeling approaches for studying the gut microbiota. *Nature Microbiol.* **4**:1253-1267
112. Y. Liu; **J. Nielsen** (2019) Recent trends in metabolic engineering of microbial chemical factories. *Curr. Op. Biotechnol.* **60**:188-197
113. B. Turanli; O. Altay; J. Boren; H. Turkez; **J. Nielsen**; M. Uhlen; K.Y. Arga; A. Mardinoglu (2019) Systems biology based drug repositioning for development of cancer therapy. *Sem. Cancer Biol.* **10**:1016
114. R. Yu; **J. Nielsen** (2019) Big data in yeast systems biology. *FEMS Yeast Res.* **19**:foz070
115. M. Palmnäs; C. Brunius; L. Shi; A. Rostgaard-Hansen; N.E. Torres; R. Gonzalez-Dominguez; R. Zamra-Ros; Y. Lingqun; J. Halkjær; A. Tjønneland; G. Riccardi; T. Giacco; G. Costabile; C. Vetrani; **J. Nielsen**; C. Andres-Lacueva; R. Landberg (2019) Metabotyping: A potential personalized nutrition strategy for precision prevention of cardiometabolic disease. *Adv. Nutrition* **11**:524-532
116. S. Bratulic; F. Gatto; **J. Nielsen** (2019) The translational status of cancer liquid biopsies. *Reg. Eng. Transl. Med.* S40883-019-00141-2
117. R. Yu; **J. Nielsen** (2019) Yeast systems biology in understanding principles of physiology underlying complex human diseases. *Curr. Op. Biotechnol.* **121**:1-9
118. Z. Liu; K. Wang; Y. Chen; T. Tan; **J. Nielsen** (2020) Third-generation biorefineries as a mean to produce fuels and chemicals from CO₂. *Nature Cat.* **3**:274-288
119. Q. Liu; Y. Liu; Y. Chen; **J. Nielsen** (2020) Current state of aromatics production using yeast: Achievements and challenges. *Curr. Opin. Biotechnol.* **65**:65-74
120. Z. Lin; **J. Nielsen**; Z. Liu (2020) Bioprospecting through cloning of whole natural product biosynthetic gene clusters. *Fron. Bioeng. Biotechnol.* Fbio.2020.00526
121. E. Mohammadi; R. Benfeitas; H. Turkez; J. Boren; **J. Nielsen**; M. Uhlen; A. Mardinoglu (2020) Applications of genome-wide screening and systems biology approaches in drug repositioning. *Cancers* **12**:2694
122. Y. Zhang; Z. Liu; **J. Nielsen** (2021) Yeast based biorefineries for oleochemical production. *Curr. Op. Biotechnol.* **67**:26-34
123. Z. Liu; Z. Lin; **J. Nielsen** (2021) Expression of fungal biosynthetic gene clusters in *S. cerevisiae* for natural product discovery. *Syn. Systems Biotechnol.* **6**:20-22
124. Y. Chen; **J. Nielsen** (2021) Mathematical modeling of proteome constraints within metabolism. *Curr. Op. Systems Biol.* **25**:50-56
125. C. Zhan; X. Li; Y. Yang; **J. Nielsen**; Z. Bai; Y. Chen (2021) Strategies and challenges with the microbial conversion of methanol to high-value chemicals. *Biotechnol. Bioeng.* **118**:3655-3668
126. J. Wang; **J. Nielsen**; Z. Liu (2021) Synthetic biology advanced natural product discovery. *Metabolites* **11**:785
127. H. Lu; E.J. Kerkhoven; **J. Nielsen** (2022) Multiscale models quantifying yeast physiology: towards a whole-cell model. *Trends Biotechnol.* **40**:291-305
128. S. Shi; N. Qi; **J. Nielsen** (2022) Microbial production of chemicals driven by CRISPR-Cas systems. *Curr. Op. Biotechnol.* **73**:34-42
129. Z. Liu; J. Wang; **J. Nielsen** (2022) Yeast synthetic biology advances biofuel production. *Curr. Op. Microbiol.* **67**:33-39
130. Y. Chen; F. Li; **J. Nielsen** (2022) Genome-scale modeling of yeast metabolism: retrospective and perspectives. *FEMS Yeast Res.*, in press
131. X. Tan; **J. Nielsen** (2022) The integration of bio-catalysis and electrocatalysis to produce fuels and chemicals from carbon dioxide. *Chem. Soc. Rev.* **51**:4753
132. **J. Nielsen**; C.B. Tillegreen; D. Petranovic (2022) Innovation trends in industrial biotechnology. *Trends Biotechnol.*, in press
133. P. Li; H. Lou; B. Ji; **J. Nielsen** (2022) Machine learning for data integration in human gut microbiome. *Microb. Cell Fac.* **21**:241
134. G. Zou; **J. Nielsen**; Y. Wei (2022) Harnessing synthetic biology for mushroom farming. *Trends. Biotechnol.* **41**:480-483
135. P. Li; S. Roos; H. Lou; B. Ji; **J. Nielsen** (2023) Metabolic engineering in human gut microbiome: recent developments and future perspectives. *Met. Eng.*, in press
136. A. Limeta; F. Gatto; M.J. Herrgård; B. Ji; **J. Nielsen** (2023) Leverating high-resolution omics data for predicting response and adverse events to immune checkpoint inhibitors. *Comp. Struc. Biotechnol. J.*, in press
137. A. Limeta; F. Gatto; M.J. Herrgård; B. Ji; **J. Nielsen** (2023) Leveraging high-resolution omics data for predicting responses and adverse events to immune checkpoint inhibitors. *Comp. Struc. Biotechnol. J.* **21**:3912-3919
138. P. Li; S. Roos; H. Lou; B. Ji; **J. Nielsen** (2023) Metabolic engineering of human gut microbiome: Recent developments and future perspectives. *Met. Eng.* **79**:1-13
139. Z. Liu; S. Shi; Y. Ji; K. Wang; T. Tan; **J. Nielsen** (2023) Opportunities of CO₂-based biorefineries for production of fuels and chemicals. *Green Carbon* **1**:75-84

Commentaries, Editorials and Short Papers

1. B. Hahn-Hägerdal; K. van Dam; I. Spencer-Martins; **J. Nielsen** (1998) Le dédale du métabolisme. *Biofutur* **184**:81-82

2. J. Thykaer; B. Christensen; **J. Nielsen** (2001) The application of metabolic network analysis in metabolic engineering. *BIOforum International* **5**:228-231
3. J. M. Otero; L. Olsson; **J. Nielsen** (2007) Industrial biotech meets systems biology. *Genetic Eng. News* **1**:28-31
4. **J. Nielsen** (2007) Principles of optimal metabolic network operation. *Mol. Sys. Biol.* **3**:126
5. G. Vemuri; **J. Nielsen** (2008) Systems biology: Is the hope worth the hype. *SIM News* **58**:178-188
6. **J. Nielsen** (2009) Vintage paper Introduction. *Biotechnol. Bioeng.* **103**:1
7. **J. Nielsen** (2009) Quantification of flux control in metabolic pathways, *Biotechnol. Bioeng.* **104**: 1-2
8. **J. Nielsen**; M. Vidal (2010) Systems biology of microorganisms. *Current Opin. Microbiol.* **13**:335-336
9. **J. Nielsen** (2011) Transcriptional control of metabolic fluxes. *Mol. Systems Biol.* **7**:478
10. **J. Nielsen** (2011) Chimeric Synthetic Pathways. *Nature Chem. Biol.* **7**:195-196
11. **J. Nielsen**; J. Keasling (2011) Synergies between synthetic biology and metabolic engineering. *Nature Biotechnol.* **29**:693-695
12. **J. Nielsen** (2012) Translational and systems medicine. *J. Int. Med.* **271**:108-110
13. **J. Nielsen**; S. Y. Lee (2012) Systems Biology: The “new biotechnology”. *Current Opinion Biotechnol.* **23**:583-584
14. M. Cvijovic; J. Almquist; J. Hagmar; M. Heinemann; S. Hohmann; H.-M. Kaltenbach; E. Klipp; M. Krantz; P. Mendes; S. Nelander; **J. Nielsen**; A. Pagnani; N. Przulj; A. Raue; J. Stelling; S. Stoma; F. Tobin; J. Wodke; R. Zecchina; M. Jirstrand (2014) Bridging the gaps in systems biology. *Mol. Gen. Genom.* **289**:727-734
15. **J. Nielsen**; M. Fussenegger; J. Keasling; S.Y. Lee; J.C. Liao; K. Prather; B. Palsson (2014) Engineering synergy in biotechnology. *Nature Chem. Biol.* **10**:319-322
16. **J. Nielsen** (2014) Maintaining a strong yeast research community. *FEMS Yeast Res.* **14**:527-528
17. **J. Nielsen** (2014) Synthetic Biology for Engineering Acetyl Coenzyme A Metabolism in Yeast. *mBio* **5**:e02153-14
18. J. Pronk; S.Y. Lee; J. Lievense; J. Pierce; B. Palsson; M. Uhlen; **J. Nielsen** (2015) How to set up collaborations between academia and industrial biotech companies. *Nature Biotechnol.* **33**:237-240
19. L. Våremo; **J. Nielsen** (2015) Networking in metabolism and human disease. *Oncotarget* **6**:18
20. A. Ebrahim; E. Almaas; E. Bauer; A. Bordbar; A.P. Burgard; R.L. Chang; A. Dräger; I. Famili; A.M. Feist; R.M.T. Fleming; S.S. Fong; V. Hatzimanikatis; M.J. Herrgård; A. Holder; M. Hucka; D. Hyduke; N. Jamshidi; S.Y. Lee; N. Le Novère; J.A. Lerman; N.E. Lewis; D. Ma; R. Mahadevan; C. Maranas; H. Nagarajan; A. Navid; **J. Nielsen**; L.K. Nielsen; J. Nogales; A. Noronha; C. Pal; B.O. Palsson; J.A. Papin; K.R. Patil; N.D. Price; J.L. Reed; M. Saunders; R.S. Senger; N. Sonnenschein; Y. Sun; I. Thiele (2015) Do genome-scale models need exact solvers or clearer standards? *Mol. Sys. Biol.* **11**:831
21. **J. Nielsen** (2015) Yeast cell factories on the horizon. *Science* **349**:1050-1051
22. D. Fraenkel; **J. Nielsen** (2016) Trehalose-6-phosphate synthase and stabilization of yeast glycolysis. *FEMS Yeast Res.* **16**:fov100
23. **J. Nielsen** (2016) All you need is mentorship: A journey of equals. *Cell* **164**:1093
24. A. Mardinoglu; **J. Nielsen** (2016) The impact of systems medicine on human health and disease. *Fron. Physiol.* **7**:552
25. **J. Nielsen** (2017) Built on stable catalysts. *Nature Microbiol.* **2**:17085
26. A. Nilsson; **J. Nielsen**; B. Palsson (2017) Metabolic models of protein allocation call for the Kinetome. *Cell Systems* **5**:538-541
27. A. Nilsson; J.R. Haanstra; B. Teusink; **J. Nielsen** (2018) Metabolite depletion affects flux profiling of cell lines. *Trends Biochem. Sci.* **43**:395-397
28. **J. Nielsen** (2019) Designer Microbes Serving Society. *Cell Met.* **29**:509
29. **J. Nielsen** (2019) Cell factory engineering for improved production of natural products. *Nat. Prod. Rep.* **36**:1233-1236
30. **J. Nielsen** (2019) Antibiotic lethality is impacted by nutrient availabilities: New insights from machine learning. *Cell* **177**:1373-1374
31. **J. Nielsen** (2019) A stress-coping strategy for yeast cells. *Nature* **572**:184-185
32. **J. Nielsen** (2022) Bioactive metabolites: The double-edged sword in your food. *Cell* **185**:4469-4471
33. **J. Nielsen** (2023) Engineering yeast to produce plant-derived anti-obesity agent. *Nature Chem.* **15**:1204-1205

Books

1. M. Y. Andersen *et al.* (1991) Bioreaktionsteknik. Metoder til fortolkning af data fra bioreaktorer. Akademiet for Tekniske Videnskaber, Lyngby
2. **J. Nielsen**; J. Villadsen (1994) Bioreaction Engineering Principles. Plenum Press, New York
3. **J. Nielsen** (1997) Physiological Engineering Aspects of *Penicillium chrysogenum*. World Scientific Publishing Co., Singapore
4. G. Stephanopoulos; A. Aristodou; **J. Nielsen** (1998) Metabolic Engineering. Academic Press, San Diego
5. **J. Nielsen** (2001) (editor) Metabolic Engineering. Advances in Biochemical Engineering/Biotechnology, Vol. 73, Springer Verlag, Heidelberg
6. **J. Nielsen**; J. Villadsen; G. Liden (2003) Bioreaction Engineering Principles, 2. ed., Kluwer Plenum, New York
7. **J. Nielsen** (2006) (editor) Frontiers in Biotechnology. Advances in Biochemical Engineering/Biotechnology, Vol. 100, Springer Verlag, Heidelberg
8. S. G. Villas-Boas; U. Roessner; M. A. E. Hansen; J. Smedsgaard; **J. Nielsen** (2007) Metabolome Analysis. An Introduction, Wiley, Hoboken
9. **J. Nielsen**; M. C. Jewett (2008) (editors) Metabolomics. Topics in Current Genetics, Vol. 18, Springer Verlag, Heidelberg
10. J. Villadsen; **J. Nielsen**; G. Liden (2011) Bioreaction Engineering Principles, 3. ed., Springer, New York
11. **J. Nielsen**; S. Hohmann (2017) Systems Biology. Advanced Biotechnology, Vol. 5, Wiley VCH, Mannheim

Book Chapters

1. **J. Nielsen** (1992) Modelling the growth of filamentous fungi. *Adv. Biochem. Eng./Biotechnol.* **46**:187-223
2. **J. Nielsen**; J. Villadsen (1993) Bioreactors : Description and modelling. pp. 77-104, Chap. 5 in *Biotechnology* Vol. 3 (2. ed.). Eds. H.-J. Rehm; G. Reed (volume editor G. Stephanopoulos), VCR Verlag
3. **J. Nielsen**; M. Carlsen (1996) Fungal Pellets. pp. 273-293, Chap. 13. In: *Immobilised living cell systems: Modelling and experimental methods*. Eds. G. Baron, R. Willaert; L. De Backer, John Wiley & Sons, Chichester
4. P. Krabben; **J. Nielsen** (1998) Modeling the mycelium morphology of *Penicillium* species in submerged cultures. *Adv. Biochem. Eng./Biotechnol.* **60**:125-152
5. A. B. Spohr, T. Agger; M. Carlsen; **J. Nielsen** (1998) Quantitative morphology of filamentous microorganisms. pp. 373-410, Chap. 14. In: *Digital analysis of Microbes*. Eds. M. H. F. Wilkinson; F. Schut, John Wiley & Sons
6. **J. Nielsen** (1999) Fermentation monitoring, design and optimization. pp. 1147-1157. In: *The Encyclopedia of Bioprocess Technology: Fermentation, Biocatalysis & Bioseparations*. Eds. M. C. Flickinger; S. W. Drew, John Wiley & Sons
7. **J. Nielsen** (1999) Fermentation kinetics. pp. 69-119, Chap. 4. In: *Modern Concepts in Fermentation Biotechnology*. Eds. M. El-Mansi, Bryce, Taylor and Francis, London
8. B. Christensen; **J. Nielsen** (1999) Metabolic network analysis – powerful tool in metabolic engineering. *Adv. Biochem. Eng./Biotechnol.* **66**:209-231
9. **J. Nielsen** (2001) Microbial Process Kinetics. pp. 127-149, Chap. 6. In: *Basic Biotechnology*. 2. Edition. Eds. C. Ratledge, B. Kristiansen, Cambridge University Press, Cambridge
10. **J. Nielsen** (2002) Metabolic Turnover. In: *Encyclopaedia of Life Sciences*. John Wiley and Sons, Ltd., London (www.els.net)
11. T. Agger; **J. Nielsen** (2001) Mathematical modelling of microbial processes – Motivation and means. pp. 61-75. In: *Engineering and Manufacturing for Biotechnology*. Eds. M. Hofman, P. Thonart, Kluwer Academic Publishers, Dordrecht
12. S. Ostergaard; L. Olsson; **J. Nielsen** (2001) Metabolic Pathway Analysis of *Saccharomyces cerevisiae*. pp. 75-85. In: *Applied Microbiology. Focus on Biotechnology* Vol. 2. Eds. M. Hofman, P. Thonart, Kluwer Academic Publishers, Dordrecht
13. M. McIntyre; C. Müller; J. Dynesen; **J. Nielsen** (2001) Metabolic engineering of the morphology of *Aspergillus*. *Adv. Biochem. Eng./Biotechnol.* **73**:103-128
14. **J. Nielsen** (2002) Metabolic Engineering. pp. 391-406. In: *Encyclopedia of Physical Science and Technology*, Vol. 9. Academic Press, San Diego
15. M. M. dos Santos; M. Åkesson; **J. Nielsen** (2003) Metabolic Flux Analysis in the post genomics area. pp. 89-105. In: *Metabolic Engineering in the Post Genomic Era*. Eds. B. Kholodenko; H. Westerhoff, Horizon Scientific Press, Norfolk
16. C. Bro; B. Regenberg; **J. Nielsen** (2003) Yeast Functional Genomics and Metabolic Engineering; Past, present and future. pp. 331-360. In: *Functional Genetics of Industrial Yeast*. Ed. H. de Winde, Springer, Heidelberg
17. A. Gombert; **J. Nielsen** (2003) Quantification of metabolic fluxes. In: *Encyclopaedia of Life Sciences*. Nature Publishing Group, London (www.els.net)
18. N. Gunnarsson, A. Eliasson, **J. Nielsen** (2004) Control of fluxes towards antibiotics and the role of primary metabolism in production of antibiotics. *Adv. Biochem. Eng./Biotechnol.* **88**:137-178
19. **J. Nielsen**, A. Eliasson (2005) From glucose to antibiotics: What controls the fluxes? pp. 195-214. In: *Biocombinatorial Approaches for Drug Finding*. Ed. W. Wohlleben, T. Spelling, B. Müller-Tiemann, Springer, Heidelberg
20. H. David, **J. Nielsen** (2005) Modelling of fungal metabolism. Pp. 195-214. In: *Metabolome Analysis. Strategies for Systems Biology*. Ed. S. Vaidyanathan, G. G. Harrigan, R. Goodacre, Springer, New York
21. J. Maury, M. A. Asadollahi, K. Møller, A. Clark, **J. Nielsen** (2005) Microbial isoprenoid production: An example of green chemistry through metabolic engineering. *Adv. Biochem. Eng./Biotechnol.* **100**:19-51
22. J. Højer-Pedersen; J. Smedsgaard; **J. Nielsen** (2006) Elucidating the mode-of-action of compounds from metabolite profiling studies, Pp. 103-130. In: *Systems Biological Approaches in Infectious Diseases. Progress in Drug Research* Vol. 64. Ed. H. I. Boshoff, C. E. Barry III, Birkhäuser, Berlin
23. **J. Nielsen** (2006) Microbial Process Kinetics. pp. 155-180, Chap. 6. In: *Basic Biotechnology*. 3. Edition. Eds. C. Ratledge, B. Kristiansen, Cambridge University Press, Cambridge
24. **J. Nielsen** (2006) Fermentation Kinetics. pp. 69-120. Chap. 4. In: *Fermentation Microbiology and Biotechnology*. Eds. E. M. T. El-Mansi, C. F. A. Bryce, A. L. Demain, A. R. Allman, Taylor and Francis, London
25. I. Rocha; J. Förster, **J. Nielsen** (2007) Design and application of genome-scale reconstructed metabolic models, Pp. 409-431. In: *Methods in Molecular Biology*, Vol. 416: Gene Essentiality. Ed. S. Y. Gerdes, A. L. Osterman, Humana Press Inc., Totowa, USA
26. W. de Jongh, **J. Nielsen** (2007) Filamentous fungi as cell factories for metabolite production, Pp. 163-182. In: *Food Mycology. A multifaceted approach to fungi and food*. Ed. J. Dijksterhuis, R. A. Samson, CRC Press, Boca Raton, USA
27. A. P. Oliveira; M. C. Jewett; **J. Nielsen** (2007) From gene expression to metabolic fluxes, Pp. 37-66. In: *Introduction to Systems Biology*. Ed. S. Choi, Humana Press, Totowa, USA
28. M. C. Jewett; **J. Nielsen** (2008) The role of Metabolomics in systems biology. Pp. 1-10. In: *Metabolomics. Topics in Current Genetics*. Eds. J. Nielsen and M. C. Jewett, Vol. 18, Springer Verlag, Heidelberg

29. M. C. Jewett; M. A. E. Hansen; **J. Nielsen** (2008) Data acquisition, analysis, and mining: Integrative tools for discerning metabolic function in *Saccharomyces cerevisiae*. Pp. 159-188. In: *Metabolomics. Topics in Current Genetics*. Eds. J. Nielsen and M. C. Jewett, Vol. 18, Springer Verlag, Heidelberg
30. W. Vongsangnak; **J. Nielsen** (2009) Bioinformatics and systems biology of *Aspergillus*. Pp. 61-84. In: *Aspergillus. Molecular Biology and Genomics*. Eds. M. Machida and K. Gomi. Caister Academic Press, UK
31. G. Vemuri; **J. Nielsen** (2009) Yeast as a prototype for systems biology. Pp. 287-354. In: *Systems biology and synthetic biology*. Eds. P. Fu and S. Panke, Wiley, Hoboken, USA
32. V. Siewers; U. H. Mortensen; **J. Nielsen** (2010) Genetic engineering tools for *Saccharomyces cerevisiae*. Pp. 287-301. In: *Manual of Industrial Microbiology and Biotechnology* (3.ed). Eds. R. H. Baltz, A. L. Demain and J. E. Davies. ASM Press, Washington, USA
33. J. M. Otero; **J. Nielsen** (2010) Industrial Systems Biology. Pp. 79-148. In: *Industrial Biotechnology*. Eds. W. Soetaert and E. J. Vandamme. Wiley VCH, Weinheim, Germany
34. M. R. Andersen; K. Rucksomtawin; G. Hofmann; **J. Nielsen** (2010) Metabolic Engineering of filamentous fungi. Pp. 25.1-25.30. In: *The Metabolic Pathway Engineering Handbook*. Ed. C. D. Smolke. CRC Press, Boca Raton, USA
35. I. Borodina; A. Eliasson; **J. Nielsen** (2010) Metabolic Engineering of Streptomyces. Pp. 24.1-24.30. In: *The Metabolic Pathway Engineering Handbook*. Ed. C. D. Smolke. CRC Press, Boca Raton, USA
36. **J. Nielsen** (2010) Developing appropriate hosts for metabolic engineering. Pp. V.1-V.8. In: *The Metabolic Pathway Engineering Handbook*. Ed. C. D. Smolke. CRC Press, Boca Raton, USA
37. K. R. Patil; P. M. Bapat; **J. Nielsen** (2010) Structure and flux analysis of metabolic networks. Pp. 17.1-17.18. In: *The Metabolic Pathway Engineering Handbook*. Ed. C. D. Smolke. CRC Press, Boca Raton, USA
38. M. Papini; M. Salazar; **J. Nielsen** (2010) Systems Biology of Industrial Microorganisms. *Adv. Biochem. Eng./Biotechnol.* **120**:51-99
39. V. Siewers; **J. Nielsen**; U. Mortensen (2010) Genetic engineering tools for *Saccharomyces cerevisiae*. Chap. 20, Pp. 287-301. In *Manual of Industrial Microbiology and Biotechnology*, 3rd ed., Eds. R. H. Baltz, J. E. Davies, A. Demain, American Society for Microbiology, USA
40. A. Roldao; I.-K. Kim; **J. Nielsen** (2012) Bridging Omics Technologies with Synthetic Biology in Yeast Industrial Biotechnology. Chap. 9, Pp. 271-327. In *Systems Metabolic Engineering*, Eds. C. Wittmann and S. Y. Lee, Springer, Dordrecht, The Netherlands
41. J. Maury; M. Asadollahi; R. L. Formenti; M. Schalk; **J. Nielsen** (2013) Metabolic engineering of isoprenoid production: Reconstruction of multi step heterologous pathways in tractable hosts. Chap. 6. In *Isoprenoid synthesis in plants and microorganisms*. Eds. T. J. Bach and M. Rohmer, Springer, Germany
42. W. Vongsangnak; **J. Nielsen** (2013) Systems biology methods and developments of filamentous fungi in relation to the production of food ingredients. Chap. 2. In *Microbial production of food ingredients, enzymes and nutraceuticals*. Eds. B. McNeil, D. Archer, I. Giavasis and L. Harvey, Woodhead Publishing, Cambridge, UK
43. R. Kumar; P.-J. Lahtvee; **J. Nielsen** (2014) Systems Biology: Developments and Applications. Chap. 4. In *Molecular Mechanisms in Yeast Carbon Metabolism*. Eds. Jure Piskur and Concetta Compagno, Springer, Berlin, Germany
44. **J. Nielsen**; S. Bordel; I. Nookaew (2014) Genome-scale metabolic models: A link between bioinformatics and systems biology. Chap. 6.11. Pp. 165-173. In *Comprehensive Biomedical Physics*. Ed. A. Brahme, Elsevier, Amsterdam, The Netherlands
45. Y. Chen; Y. J. Zhou; V. Siewers; **J. Nielsen** (2015) Enabling technologies to advance microbial isoprenoid production. *Adv. Biochem. Eng./Biotechnol.* **148**:143-160
46. J. Kim; **J. Nielsen** (2017) Bioproduction of Fuels: An Introduction. Pp. 1-22. In *Handbook of hydrocarbons and lipid microbiology series. Consequences of microbial interactions with hydrocarbons, oils and lipids*. Ed. S. Y. Lee
47. M. Huang; H. Joensson **J. Nielsen** (2018) High-throughput microfluidics for screening of yeast libraries. *Methods Mol. Biol.* **1671**:307-317
48. Q. Liu; T. Yu; K. Campbell; **J. Nielsen**; Y. Chen (2018) Modular pathway rewiring of yeast for amino acid production. *Meth. Enz.* **608**:417-439
49. Y. Chen; G. Li; **J. Nielsen** (2019) Genome-scale metabolic modeling from yeast to human cell models of complex diseases: Latest advances and challenges. *Methods Mol. Biol.* **2049**:329-345

Papers in Conference Proceedings

1. **J. Nielsen**; K. Nikolajsen; J. Villadsen (1989) Computer controlled system for on-line monitoring of a fermentation process. pp. 53-57. In *Computer Applications in Fermentation Technology. Modelling and Control of Biotechnological Processes*, eds. N. M. Fish; R. I. Fox; N. F. Thornhill, Elsevier Applied Science, London
2. J. Villadsen; **J. Nielsen** (1990) Modelling of fermentation kinetics. pp. 259-266. *Proc. V'th European Congress on Biotechnology*, Lyngby
3. **J. Nielsen** (1991) Application of structured fermentation models. pp. 843-848. *Proc. European Simulation Multiconference*, Copenhagen
4. S. Benthin; **J. Nielsen**; J. Villadsen (1992) Transmembrane transport systems, studied on actively growing cells. pp. 351-355. In *Harnessing Biotechnology for the 21st Century (Proc. IX'th International Biotechnology Symposium, Crystal City)*, eds. M. R. Ladisch; A. Rose,
5. **J. Nielsen** (1993) Modelling of filamentous microorganisms. pp. 45-52. In *Computer Applications in Fermentation Technology. Modelling and Control of Biotechnological Processes*, eds. M. N. Karim; G. Stephanopoulos, Pergamon Press
6. H. S. Jørgensen; H. Møllgaard; **J. Nielsen**; J. Villadsen (1993) Identification of rate controlling enzymes in the metabolic pathway of penicillin in a high yielding strain of *P. chrysogenum*. pp. 251-254. In *Computer Applications in*

- Fermentation Technology. Modelling and Control of Biotechnological Processes, eds. M. N. Karim; G. Stephanopoulos, Pergamon Press
7. **J. Nielsen** (1993) Modelling the morphology of filamentous fungi. pp. 131-142. Proc. Bioreactor Performance, eds. U. Mortensen; H. J. Noorman, Elsingore
 8. S. Frandsen; **J. Nielsen**; J. Villadsen (1993) Application of regimen analysis of yeast fermentation for down-scaling. pp. 171-179. Proc. Bioreactor Performance, eds. U. Mortensen; H. J. Noorman, Elsingore
 9. S. Frandsen; **J. Nielsen**; J. Villadsen (1993) Dynamics of *Saccharomyces cerevisiae* in continuous culture. pp. 887-890. In Progress in Biotechnology, Vol. 9. Proc. VI'th European Congress on Biotechnology, Florence. Elsevier
 10. A. G. Pedersen; **J. Nielsen**; J. Villadsen (1993) Characterization of bioreactors using isotope techniques. pp. 931-934. In Progress in Biotechnology, Vol. 9. Proc. VI'th European Congress on Biotechnology, Florence. Elsevier
 11. **J. Nielsen** (1994) Physiological Engineering - Towards a new science. pp. 30-38. In Proc. The 1994 IChemE Research Event, London, Vol. I
 12. M. Carlsen; A. Spohr; R. Mørkeberg; **J. Nielsen**; J. Villadsen (1994) Growth and protein formation of recombinant *Aspergillus*: Utility of morphological characterization by image analysis. pp. 197-202. In Proc. Advances in Bioprocess Engineering, Cuernavaca. Kluwer Academic Publishers
 13. **J. Nielsen** (1994) Physiological aspects of *Penicillium chrysogenum*. pp. 15-18. Proc. Modelling of filamentous fungi, Otocek.
 14. G. Lidén; U. Schulze; **J. Nielsen**; J. Villadsen (1995) On the optimization of ethanol production in nitrogen limited yeast fermentations. In Proc. VII'th European Congress on Biotechnology, Nice
 15. **J. Nielsen**; H. Jørgensen (1995) A kinetic model for the penicillin biosynthetic pathway in *Penicillium chrysogenum*. pp. 136-141. In Proc. Computer Application in Biotechnology 6, Garmisch-Partenkirchen
 16. P. N. Pissarra; M. J. Bazin; K. Schmidt; **J. Nielsen** (1995) A user-friendly and interactive methodology for simulation and non-linear parameter estimation of biotechnological process models using SIMULINK. Proc. Nordic Matlab Conference '95, Stockholm
 17. K. Schmidt; P. N. Pissarra; **J. Nielsen** (1995) The evolutionary strategy: A simple and straightforward optimization algorithm for parameter estimation in structured biochemical models. Proc. Nordic Matlab Conference '95, Stockholm
 18. **J. Nielsen** (1995) Metabolic control analysis of the penicillin biosynthetic pathway. Proc. National Biotechnology and Bioengineering Conference, Ixtapa, Mexico
 19. U. Schulze; T. L. Nissen; **J. Nielsen**; J. Villadsen (1996) Application of Metabolic Flux Analysis in physiological studies. Proc. V'th World Congress on Chemical Engineering, San Diego, USA
 20. P. de N. Pissarra; **J. Nielsen** (1996) Kinetic and thermodynamic analysis of the penicillin biosynthetic pathway. Proc. V'th World Congress on Chemical Engineering, San Diego, USA
 21. D. L. Bogle et al. (1996) Process synthesis, design and simulation of integrated biochemical processes. Proc. V'th World Congress on Chemical Engineering, San Diego, USA
 22. **J. Nielsen**; I. Spencer Martins (1997) Metabolic Engineering. Proc. European Cell Factory Conference, Lund, Sweden
 23. S. Østergaard; L. Olsson; **J. Nielsen** (1998) Metabolic control analysis of the Leloir pathway in *Saccharomyces cerevisiae*. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden
 24. H. Aae Theilgaard; **J. Nielsen** (1998) The influence of the LLD-ACV:bisACV ration on a MCA of the penicillin biosynthetic pathway in *Penicillium chrysogenum*. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden
 25. **J. Nielsen** (1998) Mathematical modelling of biochemical pathways. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden

Other Publications

1. **J. Nielsen** (1990) Post doc på Universitt Hannover. Dansk Kemi **5**:178-179
2. **J. Nielsen** (1990) On-line mling af biomasse i bioreaktorer. Dansk Kemi **8**:260-265
3. **J. Nielsen**; J. Gram; L. Foldager (1990) Bioreaktionsteknik: Kendte metoder anvendt p nye processer. Dansk Kemi **12**:430-431
4. **J. Nielsen** (1993) Physiological Engineering. Dansk Kemi **11**:14-17
5. **J. Nielsen**; A. G. Pedersen; M. Bundgaard-Nielsen; H. Andersen (1994) Anvendelse af radioaktive isotoper til karakterisering af bioreaktorer. Dansk Kemi **4**:28-31
6. **J. Nielsen** (1995) Doktorafhandling om industriel penicillinproduktion. Dansk Kemi **11**:20-23
7. **J. Nielsen** (1995) Penicillinets historie. Dansk Kemi **12**:24-28
8. U. Schulze; **J. Nielsen** (1997) Massachusetts Institute of Technology. Dansk Kemi
9. T. Agger; **J. Nielsen** (1999) Optimering af enzymproduktion med skimmelsvampe. Dansk Kemi **1**:14-15
10. B. Christensen; **J. Nielsen** (1999) Metabolisk flux analyse – en kvantitativ beskrivelse af mikroorganismers primre metabolisme. Dansk Kemi **1**:16-18
11. **J. Nielsen** (1999) Functional genomics og dens rolle i udviklingen af fremtidige bioteknologiske processer. Dansk Kemi **1**:20-27
12. C. Bro; B. Regenber; **J. Nielsen** (2001) DNA Arrays. Dansk Kemi **1**:18-20
13. M. R. Andersen; M. L. Nielsen; **J. Nielsen** (2006) Genomet – systembiologiens rygrad. Dansk Kemi **3**:15-17
14. J. Hjer-Pedersen; J. Smedsgaard; **J. Nielsen** (2006) Metabolomet: Et indirekte produkt af genomet. Dansk Kemi **3**:18-20
15. F. Gatto; **J. Nielsen** (2014) Srskild metabolisme i klarcellig njurcellscancer. Onkologi i Sverige **3**:76-80
16. A.W. Lykke; B. Palsson; **J. Nielsen** (2017) Why microbes rule the world – and our industries. BioZoom **2**:4-5

17. B. Palsson; **J. Nielsen** (2017) Biobased production of chemicals – A transformation of a USD3T industry. *BioZoom* **2**:6-9

List of Presentations

Invited conference presentations

1. Modelling of fermentation kinetics, European Congress on Biotechnology 5, Lyngby (1990)
2. Modelling of the lactic acid fermentation, European Congress on Biotechnology 5, Lyngby (1990)
3. Modelling of fermentation processes, European Simulation Multiconference, Copenhagen (1991)
4. On-line monitoring of microbial processes, FACSS, Anaheim, California (1991)
5. Modelling the growth of filamentous microorganisms, IFAC/ICCAFT, Keystone, Colorado (1992)
6. On-line monitoring of fermentation processes, Bioreactor Performance, Annual Conference of a Nordic Industrial programme, Stockholm, Sweden (1992)
7. On-line måling af bioprocesser, 2. Danske Symposium i Analytisk Kemi, Lyngby, Denmark (1992)
8. On-line monitoring of penicillin fermentations, AnaBiotec'92, Noordwijkerhout, Holland (1992)
9. Modelling the morphology of filamentous fungi, Bioreactor Performance, Elsingore, Denmark (1993)
10. Simulation of bioreactions, ESCAPE-3, Graz, Austria (1993)
11. Pellet formation, Process Integration in Biochemical Engineering, European Science Foundation Workshop, Sitges, Spain (1993)
12. Physiological Engineering - Towards a new science, The 1994 IChemE Research Event, London (1994)
13. Modelling the growth and product formation of *Penicillium chrysogenum*, IUMS Congresses '94, Prague (1994)
14. Mathematical models: An excellent tool in physiological studies of filamentous fungi, International conference on Modelling of filamentous fungi, Otocek, Slovenien (1994)
15. In-situ and on-line analysis of cultivation processes, International seminar on Analyses in biomass conversion to ethanol, Lund, Sweden (1994)
16. A kinetic model for the penicillin biosynthetic pathway in *Penicillium chrysogenum*, 6th International conference on Computer Application in Biotechnology, Garmisch-Partenkirchen, Germany (1995)
17. Modelling the growth of filamentous fungi, National Biotechnology and Bioengineering Conference, Ixtapa, Mexico (1995)
18. Metabolic Control Analysis of the penicillin biosynthetic pathway, National Biotechnology and Bioengineering Conference, Ixtapa, Mexico (1995)
19. Metabolic Control Analysis of the penicillin biosynthetic pathway, Pacificchem'95, Honolulu, USA (1995)
20. Fungal Morphology. Measurements and modelling, 6th Netherlands Biotechnology Congress, Amsterdam, The Netherlands (1996)
21. Metabolic Flux Analysis of filamentous fungi, DECHEMA Jahrestagungen'96, Wiesbaden, Germany (1996)
22. Metabolic Engineering: The analysis part, rDNA Biotechnology: Focus on Metabolic Engineering, Engineering Foundation, Danvers, USA (1996)
23. What can we learn from metabolic flux analysis? VW-symposium on Metabolic fluxes, Hannover, Germany (1997)
24. Metabolic engineering, Danish Biotechnology Conference III, Vejle, Denmark (1997)
25. Metabolic control analysis of the penicillin biosynthetic pathway based on a kinetic model and on a thermokinetic description of reaction rates, ESF Conference on Control of Metabolic Flux, Giens, France (1997)
26. Physiological Engineering, European Congress on Biotechnology 8, Budapest, Hungary (1997)
27. Mathematical modelling of biochemical pathways, 8th BTK meeting, Fiskebäckskil, Sweden (1998)
28. Enzyme production by *Aspergillus*, SGM meeting, Norwich, UK (1998)
29. Metabolic engineering of *Saccharomyces cerevisiae* for the improvement of industrial processes, Yeast as a cell factory, Vlaardingen, The Netherlands (1998)
30. The role of mathematical models in kinetic studies of hyphal growth, Analysis of microbial cells at the single cell level, Como, Italy (1999)
31. The role of mathematical models in microbial physiology, Annual Meeting of Swedish Society of Microbiology, Lund, Sweden (1999)
32. Modeling of cellular processes, European Congress on Biotechnology 9, Brussels, Belgium (1999)
33. The application of mathematical models in molecular physiology, European Congress on Biotechnology 9, Brussels, Belgium (1999)
34. Metabolic engineering of *Saccharomyces cerevisiae* for the improvement of ethanol production, IEA Bioenergy Workshop, Itala Game Reserve, South Africa (1999)
35. Yeast mixed sugar metabolism, Cell Factory Area. Grand Finale, Graz, Austria (1999)
36. The role of metabolic engineering in the improvement of industrial processes, APBioChEC'99, Phuket, Thailand (1999)
37. Transgenic microorganisms and industrial strain enhancement, Perspectives and limitations of biotechnology in developing countries, San José, Costa Rica (2000)
38. Metabolic engineering of enzyme production by filamentous fungi, 4th International Congress on Biochemical Engineering, Stuttgart, Germany (2000)
39. Metabolic Engineering of *Saccharomyces cerevisiae*, XIII SINAIFERM, Teresopolis, Brasilien (2000)
40. Metabolome analysis: A powerful tool in metabolic engineering and functional genomics, Metabolic Engineering III, Colorado Springs, USA (2000)
41. Metabolome analysis: A powerful tool in functional genomics, WFCS Symposium on Genomics, Wageningen, The Netherlands (2000)

42. Genome wide expression monitoring of metabolically engineered strains of *S. cerevisiae* with improved ethanol yield, PacificChem2000, Honolulu, USA (2000)
43. Metabolome analysis: A powerful tool in metabolic engineering and functional genomics, MTBio Workshop, Dresden, Germany (2001)
44. The role of functional genomics in metabolic engineering, SIM Annual Meeting, St. Louis, USA (2001)
45. Metabolic engineering for improved β -lactam production, Recent Advances in Fermentation Technology IV, Long Beach, USA (2001)
46. The role of yeast in modern biotechnology, International Specialized Symposium on Yeast 2002, Pilansberg, South Africa (2002)
47. Metabolic engineering and functional genomics: Moving towards systems biology, SGM Annual Meeting, Warwick, UK (2002)
48. Impact of Systems Biology on Modern Biotechnology, Danish Biotechnology Conference VIII, Vejle, Denmark (2002)
49. Metabolic engineering for improvement of β -lactam production, Genetics of Industrial Microorganisms 2002, South Korea (2002)
50. Carbon metabolism in *Aspergillus* and *Penicillium*, International Mycology Congress 7, Oslo, Norway (2002)
51. From the Genome to the Fluxome: A Metabolic Engineering challenge, ASM Annual Meeting, Washington DC, USA (2003)
52. Systems Biology of glucose repression in *S. cerevisiae*, Yeast Genetics and Molecular Biology, Gothenburg, Sweden (2003)
53. From Genomics to Industrial Bioprocesses: A Metabolic Engineering challenge, European Congress on Biotechnology 11, Basel, Switzerland (2003)
54. Systems Biology of *S. cerevisiae*, First International Workshop on Yeast Systems Biology, St. Louis, USA (2003)
55. From Glucose to Antibiotics – what controls the flux, Ernst Schering Foundation Research Workshop, Berlin, Germany (2004)
56. Systems Biology of *S. cerevisiae*, South Africa Microbial Society's annual meeting, Stellenbosch, South Africa (2004)
57. *Aspergillus* – the Ultimate Cell Factory for Production of Chemicals, European Congress on Fungal Genetics 7, Copenhagen, Denmark (2004)
58. Microorganisms – the Chemical Factories of the Future, ETIF Conference, Lund, Sweden (2004)
59. Grøn Kemi, Konference om Ansvarlig Bioteknologi, Copenhagen, Denmark (2004)
60. Integration of Metabolic Models and Ome Data: Lessons from *S. cerevisiae*, ASM Conference on Integration of Metabolism and Genomics, Montreal, Canada (2004)
61. Green Chemistry – the New S-curve in Biotechnology, 35th R³ Nordic Symposium and Exhibition, Elsingore, Denmark (2004)
62. Metabolic Engineering, European Symposium on Biochemical Engineering Science 5, Stuttgart, Germany (2004)
63. Metabolic Engineering: Impacts of Functional Genomics, Metabolic Engineering V, Lake Tahoe, USA (2004)
64. From gene expression to metabolic fluxes, International Congress on Systems Biology 2004, Heidelberg, Germany (2004)
65. Integration of the metabolism of *S. coelicolor* through genome-scale modelling, Streptomyces Dissemination Meeting, University of Surrey, UK (2005)
66. Design af cellefabrikker til production af nye levnedsmiddelingredienser, LMC Congress, Lyngby, Denmark (2005)
67. White Biotechnology: From gene expression to metabolic fluxes, DECHEMA Bioperspectives, Wiesbaden, Germany (2005)
68. Identification of global regulatory structures in cellular metabolism, Biochemical Engineering XIV, Harrison Hot Springs, Canada (2005)
69. Genome-scale models of fungi, 13th International Meeting on Microbial Genomes (2005)
70. The role of chemical engineering in modern biotechnology, CHEMPOR 2005, Braga, Portugal (2005)
71. Systems biology of the yeast *Saccharomyces cerevisiae*, The Norwegian Biochemical Society, 42. Contact Meeting, Storefjell, Norway (2006)
72. Model driven data integration in yeast systems biology, Genomes to Systems Conference 2006, Manchester, UK (2006)
73. Systems Biology of Industrial Microbes, American Society for Microbiology 106th General Meeting, Orlando, USA (2006)
74. Impacts of systems biology on industrial biotechnology, Danish Conference on Molecular Biology and Biotechnology, Munkebjerg, Denmark (2006)
75. Reporter features: A tool for mapping of global control in metabolism through model driven analysis of ome data, ISSY25 Systems Biology of Yeasts – from Models to Applications, Helsinki, Finland (2006)
76. Yeast as a versatile cell factory, Genetics of Industrial Microorganisms, Prague, Czech Republic (2006)
77. Metabolism of *Aspergillus*: Lessons from Genomics, Society for Industrial Microbiology Annual Meeting, Baltimore, USA (2006)
78. Production of engineered haemoglobin from yeast, International Visions on Blood Substitutes, Parma, Italy (2006)
79. Systems biology of lipid metabolism in *Saccharomyces cerevisiae*: Mapping of global regulatory structures, Keystone conference on Bioactive Lipids, Taos, New Mexico, USA (2007)
80. Yeast as a versatile chemical factory, ASM Annual Meeting, Toronto, Canada (2007)
81. Integrated analysis of yeast metabolism, ASM Annual Meeting, Toronto, Canada (2007)
82. Systems biology of the cell factory *Aspergillus niger*, International Conference on Biorefinery, Beijing, China (2007)
83. The role of chemical engineering in modern biotechnology, European Congress on Chemical Engineering 6, Copenhagen, Denmark (2007)
84. Integrated analysis of yeast metabolism, FOSBE2007, Stuttgart, Germany (2007)

85. Integrated analysis of yeast metabolism, 9th Functional Genomics Conference: Synthetic Biology, Gothenburg, Sweden
86. Systems biology of the cell factory *Aspergillus niger*, RAFT VII, St. Petersburg, Florida, USA (2007)
87. Systems Biology as a driver for industrial biotechnology, 2008 BERN meeting, University College London, UK (2008)
88. Comparative metabolic analysis of Aspergilli at the genome level, European Conference on Fungal Genetics 9, Edinburgh, UK (2008)
89. The role of Snf1/AMPK on regulation of lipid metabolism: Lessons from yeast, Danish Conference on Molecular Biology and Biotechnology II, Munkebjerg, Denmark (2008)
90. Modeling of microbial metabolic networks, Tutzing Symposium 2008, Tutzing, Germany (2008)
91. Systems Biology of the cell factories *A. niger* and *A. oryzae*, FEBS2008, Athens, Greece (2008)
92. Systems Biology of the yeast *Saccharomyces cerevisiae*, International Congress on Genetics 2008, Berlin, Germany (2008)
93. Systems Biology of lipid and energy metabolism in yeast, International Conference on Yeast, Kiev, Ukraine (2008)
94. Industrial systems biology: Yeast and Aspergilli as cell factories for sustainable production of chemicals, International Conference on Systems Biology 2008, Gothenburg, Sweden (2008)
95. Production of fine chemicals by yeast and Aspergilli, International Biotechnology Symposium 2008, Dalian, China (2008)
96. Integrated analysis of yeast metabolism, 61st Annual Symposium on Cancer Research: Systems Biology of Cancer, Houston, USA (2008)
97. The metabolic networks of Aspergilli, Asperfest, Asilomar, USA (2009)
98. Metabolism of Aspergilli at the genome level, 25th Fungal Genetics Conference, Asilomar, USA (2009)
99. Systems biology of lipid metabolism: Mapping of global regulatory structures, 9th Yeast Lipid Conference, Berlin, Germany (2009)
100. Integrated analysis of metabolism; From yeast to human, Nobel Symposium on Systems Biology, Stockholm, Sweden (2009)
101. Industrial Systems Biology: Identification of metabolic engineering targets using metabolic networks, Foundation of Engineering in Systems Biology 2009, Denver, USA (2009)
102. From omics data to phenotype through integrative systems biology, ISSY 27, Paris, France (2009)
103. Systems biology of metabolism: From yeast to mammals, European Congress on Biotechnology 14, Barcelona, Spain (2009)
104. Yeast Metabolomics, Metabolomics Conference, University of Copenhagen, Copenhagen, Denmark (2009)
105. Prospects of Systems Biology for advancing our understanding of global regulation of metabolism, Annual INRA Conference, Genoscope, France (2010)
106. Genome-Scale Modeling of Fungi: Expansion from Metabolism to Protein Production, PYFF4, Rotterdam, The Netherlands (2010)
107. Yeast as a Platform Cell Factory for the Production of Fuels and Chemicals, MEVIII, Jeju Island, South Korea (2010)
108. Metabolism of Filamentous Fungi at the Genome Level, FEBS2010, Gothenburg, Sweden (2010)
109. Insight into Metabolic Diseases through Systems Biology, 8th Aegian Conference on Pathways, Networks and Systems, Rhodes, Greece (2010)
110. Genome-Scale Metabolic Models: The Core of Industrial Systems Biology, Industrial Systems Biology 2010, Gothenburg, Sweden (2010)
111. Yeast as a platform cell factory for production of fuels and chemicals. International Biotechnology Symposium 2010, Rimini, Italy (2010)
112. Yeast as a platform cell factory. Power of Microbes in Industry and Environment 2010, Island Krk, Croatia (2010)
113. The application of genome-scale metabolic models in industrial biotechnology, ICSB2010, Edinburgh, UK (2010)
114. Synthetic biology and industrial biotechnology, Green Chem Conference, Lund, Sweden (2010)
115. Development of yeast as a platform cell factory, 3rd International Conference on Biomolecular Engineering, San Francisco, USA (2011)
116. Engineering of the Biocatalyst in Biorefineries, 3rd International Symposium for Innovation Bioproduction Kobe, Kobe, Japan (2011)
117. The Art of Making Yeast to Produce Biodiesel, Chalmers Energy Conference 2011, Gothenburg, Sweden (2011)
118. Yeast as Platform Cell Factories in Future Biorefineries, AAAS Annual Symposium 2011, Washington, USA (2011)
119. Yeast as Platform Cell Factories in Future Biorefineries, Asian Congress on Biotechnologyn 2011, Shanghai, China (2011)
120. Nutritional Systems Biology, Experimental Biology 2011, Washington, USA (2011)
121. Yeast as Platform Cell Factories in Future Biorefineries, Danish Conference on Biotechnology 6, Munkebjerg, Denmark (2011)
122. Towards the Human Metabolic Atlas, 8th Key Symposium, Stockholm, Sweden (2011)
123. Application of Genome Scale Metabolic Models in Industrial Biotechnology, 1st COBRA Conference, Reykavik, Iceland (2011)
124. Metabolic Engineering, Synthetic Biology, Systems Biology, ... what is the role of Biochemical Engineering, Biochemical and Biomolecular Engineering XVII, Seattle, USA (2011)
125. Integration of Metabolomics Data into Metabolic Networks, Metabomeeting 2011, Helsinki, Finland (2011)
126. Gut Metagenomics and its relation to Systems Medicine, Science for Life Laboratory Annual Conference 2012, Uppsala, Sweden (2012)
127. Synthetic Biology and Metabolic Engineering of Yeast, EFB Applied Synthetic Biology in Europe, Barcelona, Spain (2012)
128. Yeast as a Platform Cell Factory for Biorefineries, APCChE2012, Singapore (2012)
129. Prospects for systems biology and modelling of the gut microbiome, MetaHit, Paris, France (2012)

130. Systems Biology of Metabolism: Impact of Human Health and Industrial Biotechnology, Molecular Frontiers Symposium, Singapore (2012)
131. Systems biology of industrially important filamentous fungi, 11th European Congress on Fungal Genetics, Marburg, Germany (2012)
132. Modeling and Engineering of Protein Secretion by Yeast, Microbial Stress: From Molecules to Systems, Belgrate, Italy (2012)
133. Systems Biology of Metabolism: Enabling Technologies for Metabolic Engineering of Yeast, Metabolic Engineering IX, Biarritz, France (2012)
134. Genome-Scale Metabolic Models: A Bridge Between Bioinformatics and Systems Biology, Nordic Bioinformatics Conference, Stockholm (2012)
135. Towards a Human Metabolic Atlas, Nordic Clinical Chemistry Conference, Reykjavic, Iceland (2012)
136. Genome-Scale Metabolic Models: A Bridge Between Bioinformatics and Systems Biology, ICSB2012, Toronto, Canada (2012)
137. Systems Biology of *Saccharomyces cerevisiae* Metabolism: Impact on Cell Factory Design, ICY2012, Madison, USA, 2012
138. Systems Biology and its Application in Nutritional Studies, IVA Symposium “Mat som Medicin”, Gothenburg, Sweden (2012)
139. The Sense of Biofuels, IVA Symposium “Technologies for the Future – Visions and Opportunities”, Stockholm, Sweden (2012)
140. Yeast as a Platform Cell Factory in Future Biorefineries, 4th International Conference on Biomolecular Engineering, Fort Lauderdale, USA (2013)
141. Systems Biology: Yeast as a platform cell factory, Annual B-Basic Conference, Nordwijkerhout, The Netherlands (2013)
142. Yeast as a platform cell factory in future biorefineries, Copenhagen Bioscience Conference on Biosustainability, Hillerød, Denmark
143. Advancing metabolic engineering of fungal cell factories through systems biology, PYFF5, Montpeiller, France (2013)
144. Developing yeast cell factories for sustainable production of chemicals, Biochemical and Molecular Engineering XVIII, Beijing, China (2013)
145. Role of Systems and Synthetic Biology in Metabolic Engineering, Tsinghua Mini-Symposium on Synthetic Biology, Beijing, China (2013)
146. Yeast as a platform cell factory in future biorefineries, Genetics of Industrial Microorganisms 2013, Cancun, Mexico (2013)
147. Engineering of yeast cell factories for the production of advanced biofuels, Genetics of Industrial Microorganisms 2013, Cancun, Mexico (2013)
148. From metagenomics to systems biology of the gut ecosystem, Metagenopolis Conference 2013, Jouy-en-Josas, France (2013)
149. Genome scale modelling for unravelling the mechanisms of cancer, Chalmers Conference on Life Science Engineering, Gothenburg, Sweden (2013)
150. Regulation of the yeast metabolome, ICSB2013, Copenhagen, Denmark (2013)
151. Engineering of yeast cell factories for production of advanced biofuels, Lignofuels 2013, London, UK (2013)
152. Metabolic engineering of yeast for production of fuels and chemicals, Industrial Biotechnology: Meeting the challenges, Lund, Sweden (2013)
153. Use of genome-scale metabolic models for integrative analysis, SILS Conference, Öresundsbro, Sweden (2013)
154. Systems Biology: From microbe to man. Putting microbial genomes to work, Delft, The Netherlands (2013)
155. Yeast as a platform cell factory for production of fuels and chemicals. AMBC2014, Bangkok, Thailand (2014)
156. Systems biology for identification of novel metabolic engineering targets. Metabolic Engineering X, Vancouver, Canada (2014) (also available on-line at www.aiche.org/sbe/)
157. Systems biology and metabolic engineering of yeast. IUMS2014, Montreal, Canada (2014)
158. Genome wide reprogramming of human metabolism to obesity and cancer. International Summer Symposium on Systems Biology, INMEGEN, Mexico City, Mexico (2014)
159. Combining systems biology and adaptive laboratory evolution for mapping genotype-phenotype relationships in yeast. Frontiers in Fungal Systems Biology, EMB, Heidelberg, Germany (2014)
160. Studies of metabolic diseases and cancer through genome-scale metabolic modelling of human metabolism, Cell Symposia: Systems Approach to Metabolic Diseases, Chicago, USA (2014)
161. Acquiring novel phenotypes of yeast through adaptive laboratory evolution, ISSY31, Nova Gorica, Slovenia (2014)
162. Impacts of systems biology on synthetic biology of yeast, International Symposium on Synthetic Biology, Beijing, China (2014)
163. Integrative analysis of lipid metabolism through genome-scale metabolic modelling, Keystone Symposium on Systems Biology of Lipid Metabolism, Breckenridge, USA (2015)
164. New insights into cancer and obesity related diseases through systems biology of human metabolism, Systems Biology: Networks, Cold Spring Harbor Laboratory, Cold Spring Harbor, USA (2015)
165. Identifying genome-level metabolic reprogramming in cancer cells, DFG Hinterzartener Kreis für Krebsforschung, Lago de Como, Italy (2015)
166. Yeast as a platform cell factory for production of fatty acid derived products, Copenhagen Bioscience Conference on Biosustainability, Hillerød, Denmark (2015)
167. Metagenome analysis of the human gut microbiome, Nobel Symposium, Gothenburg, Sweden (2015)
168. Combining systems biology and adaptive laboratory evolution for mapping genotype-phenotype relations in yeast, Ho-Am Forum, Seoul, South Korea (2015)

169. Impact of synthetic biology on metabolic engineering of yeast, Eukaryotic Synthetic Biology, EMBO/EMBL Symposium, Heidelberg, Germany (2015)
170. Studies of metabolic diseases and cancer through genome-scale metabolic modelling of human metabolism, 11th International Conference on Pathways, Networks and Systems Medicine, Aegean Conferences, Crete, Greece (2015)
171. Acquiring novel phenotypes of yeast through adaptive laboratory evolution, Adler Symposium, University of Gothenburg, Gothenburg, Sweden (2015)
172. Mathematical modelling of yeast: A driver for innovation in biotechnology and medicine. 27th International Conference on Yeast Genetics and Molecular Biology, Levico Terme, Italy (2015)
173. Global regulation of yeast metabolism. 27th International Conference on Yeast Genetics and Molecular Biology, Levico Terme, Italy (2015)
174. Metabolism of the gut microbiome: New insights through genome-scale metabolic modelling. 4th Conference on Constraint Based Reconstructon and Analysis, Heidelberg, Germany (2015)
175. Systems biology of yeast metabolism. IMYA11, Porto, Portugal (2015)
176. Metabolism of the gut microbiome: New insights through genome-scale metabolic modelling. Copenhagen Bioscience Conference on Metabolism, Hillerød, Denmark (2015)
177. Integrative analysis of omics data for studying metabolism in human disease. BILS Annual Meeting, Stockholm, Sweden
178. Meabolism of the gut microbiome: New insights through genome-scale metabolic modelling. The First KSSEA Workshop, Stockholm, Sweden (2015)
179. Advancing the Design-Build-Test Cycle for Metabolic Engineering. Metabolic Engineering Summit 2015, Beijing, China (2015)
180. Systems biology for mapping genotype-phenotype relations in yeast. KAUST Research Conference on Computational and Experimental Interfaces of Big Data and Biotechnology, KAUST, Saudi Arabia (2016)
181. Systems Biology of yeast metabolism. Jahrestagung der Vereinigung für Allgemeine und Angewandte Mikrobiologie (VAAM), Jena, Germany (2016)
182. Metabolic engineering of yeast. Biosystems Design 2.0, A-Star, Singapore (2016)
183. Yeast as a platform cell factory. Gaden Award Lecture, ACS Annual Meeting, San Diego, USA (2016)
184. Assessing the human gut microbiota in metabolic disease. FEAM Workshop on Precision Medicine, Bern, Switzerland (2016)
185. Metabolic engineering of yeast. Metabolic Engineering 12, Awaji Island, Japan (2016)
186. Engineering yeast metabolism for production of fuels and chemicals. European Congress on Biotechnology, Krakow, Poland (2016)
187. Systems biology of yeast metabolism. ICY2016, Awaji Island, Japan (2016)
188. Systems biology of yeast metabolism. FISV2016, Rome, Italy (2016)
189. Systems biology of industrial microorganisms. 13th International Symposium on the Genetics of Industrial Microorganisms, Wuhan, China (2016)
190. Genome-scale metabolic modelling of yeast. The International Conference on Metabolic Science, Shanghai, China (2016)
191. Biobased production of fuels and chemicals: Barriers and opportunities. International Forum on Innovation and Emerging Industries Development (IEID), Shanghai, China (2016)
192. A systems biology approach to measuring human-microbiome interactions. Microbiome Drug Development Summit Europe, Paris (2017)
193. Biomarker and diagnostics development using omics integration into human metabolic networks. 12th Biomarker Congress, Manchester, UK (2017)
194. Assessing the human gut microbiota in metabolic diseases. Symbiosis in Evolution, Biology and Human Health. IBPS International Symposium, Paris, France (2017)
195. Systems Biology of Metabolism. BioSB 2017, Lunteren, The Netherlands (2017)
196. Systems Biology of Yeast Metabolism. 12th International Meeting on Yeast Apoptosis, Bari, Italy (2017)
197. Systems Biology of Yeast Lipid Metabolism. 13th Yeast Lipid Conference, Paris, France (2017)
198. Controlling Metabolism: From Microorganisms to Human. Molecular Frontiers Symposium, Royal Swedish Academy of Science, Stockholm, Sweden (2017)
199. Metabolic engineering of yeast for production of fuels and chemicals. 14th International Conference on Renewable Resources and Biorefineries, Wroclaw, Poland (2017)
200. Solving environmental challenges using life science, Where is Life Science, Stockholm, Sweden (2017)
201. Quantifying global rewiring of metabolism in cancer through genome scale modelling. Feeding the beast – the metabolic landscape of the tumour and its host, Glasgow, Scotland (2017)
202. Systems metabolic engineering of yeast. 28th International Conference on Yeast Genetics and Molecular Biology, Prague, Czech Republic (2017)
203. Systems biology of yeast metabolism. Emerging Topics in Biological Networks and Systems Biology, Uppsala, Sweden (2017)
204. Synthetic biology of yeast. 6th International Conference of the International Chemical Biology Society, Shanghai, China (2017)
205. Systems biology of yeast metabolism. Metabolic Engineering Summit 2017, Beijing, China (2017)
206. Engineering yeast for production of advanced biofuels. Fuel Choices and Smart Mobility Summit 2017. Tel Aviv, Israel (2017)
207. Quantifying global rewiring of metabolism in cancer through genome-scale modelling. The 1st International Symposium for Trans-Omics, University of Tokyo, Japan (2017)
208. Metabolic engineering of yeast for production of fuels and chemicals. SynBio UK 2017, Manchester, UK (2017)
209. Metabolic engineering of yeast. Sino-Swedish Workshop, Shandong University, Qingdao, China (2018)

210. Systems biology of yeast metabolism. Advancing Synthetic Biology, Beijing University of Chemical Technology, Beijing, China (2018)
211. Systems biology of yeast metabolism. Metabolic Engineering 12, Munich, Germany (2018)
212. Genome-scale modelling of yeast. COBRA5, Seattle, USA (2018)
213. Systems biology of yeast metabolism. EMBO Workshop on Experimental Approaches to Evolution and Ecology Using Yeast and Other Model Systems, Heidelberg, Germany (2018)
214. Engineering yeast metabolism using synthetic biology. 2018 World Life Science Conference, Beijing, China (2018)
215. Systems biology of yeast metabolism. Nature Conference on Cellular Metabolism, Xiamen, China (2019)
216. Entrepreneurship in Biotechnology. Danish Biotechnology Conference 14, Munkelbjerg, Denmark (2019)
217. Systems Biology of Yeast Metabolism. Emerging Applications of Microbes, VIB Conferences, Leuven, Belgium (2019)
218. Synthetic Biology of Yeast. XXIX International Conference on Yeast Genetics and Molecular Biology, Gothenburg, Sweden (2019)
219. Metabolic Engineering of Yeast. Metabolic Engineering Summit 2019, Tianjin, China (2019)
220. Synthetic Biology of Yeast. Green Manufacturing International Conference, Beijing, China (2019)
221. Systems Biology of Metabolism: Role in Production of Advanced Biofuels, Obesity and Cancer. James E. Bailey Award lecture, AIChE Annual Meeting, Orlando, USA (2019)
222. Systems Biology of Metabolism. Trumping the Trumps. Symposium in honor of Prof. Hans Westerhof. Free University of Amsterdam, The Netherlands (2020)
223. The power of microbes. Global Summit, Hello Tomorrow, Paris (2020)
224. Synthetic Biology of yeast. Biocatalysis Open Day 2020, Virtual (2020)
225. Systems Biology of Metabolism. 7th Conference on Constraint Based Reconstruction and Analysis. IMES/AIChE, Virtual (2021)
226. Metabolic Engineering of Yeast. Symposium on Synthetic Biology and Natural Product Biosynthesis, Chinese Academy of Chinese Medical Sciences, Beijing, China (2021)
227. Engineering of yeast for production of food ingredients. International Summit Forum on Future Food and Biotechnology 2021, Wuxi, China (2021)
228. Metabolic Engineering of Yeast. 43rd Symposium on Biomaterials, Fuels and Chemicals, SIMB, Virtual (2021)
229. From Science to Market. Metabolic Engineering 14, Viirtual (2021)
230. Systems Biology of Yeast Metabolism. Metabolic Engineering 14, Virtual (2021)
231. Systems Biology of Yeast Metabolism. 61st meeting of Italian Society for Biochemistry and Molecular Biology, Viirtual (2021)
232. Metabolic engineering of yeast. Brazilian Conference on Biotechnology and Bioengineering. Virtual (2021)
233. Synthetic Biology of Yeast for Production of Food Ingredients. 2021 MiFFI, Copenhagen, Denmark (2021)
234. Systems Biology of Yeast Metabolism. Major Ideas in Quantitative Biology, Copenhagen, Denmark (2022)
235. Systems Biology of Metabolism. EMBO Annual Conference, Heidelberg, Germany (2022)
236. BioInnovation Institute. MiXii Conference, Jerusalem, Israel (2022)
237. Innovation trends in metabolic engineering. ME13, Singapore (2023)
238. Systems biology of yeast metabolic. European Congress on Chemical Engineering, Berlin, Germany (2023)

Webinars and other web-based talks (not complete)

1. *Industrial Systems Biology*, Society for Biological Engineering, 2009. www.aiche.org/sbe/
2. *Impact of systems biology on metabolic engineering*, in H. Kitano (Ed), Systems Biology: The Biomedical and Life Science Collection, Henry Stewart Talks Ltd., London, 2014. <http://hstalks.com/?t=BL1893791-Nielsen>
3. *Advancing the design-build-test cycle for metabolic engineering of yeast*. SBE Webinar, AIChE, USA
4. *Systems Biology of Yeast Metabolism*. CHASSY Webinar, University of Cork, Ireland

Invited seminar presentations (not complete)

1. Design of an on-line monitoring system for lactic acid fermentations, Ciba Geigy, Basel, Switzerland (1987)
2. Automation of laboratory fermentors, Technical University of Denmark, Lyngby (1987)
3. On-line monitoring of lactic acid fermentation, Department of Chemical Engineering, Caltech, Pasadena, California (1988)
4. Application of FIA for on-line monitoring of fermentation processes, Technion, Lund, Sweden (1988)
5. Structured modelling of microbial systems, Technical University of Denmark, Lyngby (1989)
6. Experimentally verification of fermentation models, University of Lund, Sweden (1990)
7. Structural models for fermentation processes, Departmental seminar, Institut für Biotechnologie, Technische Universität Graz, Austria (1990)
8. Modelling and on-line monitoring of fermentation processes, Departmental seminar, Institut für Technische Chemie, Universität Hannover, Germany (1990)
9. Verification of structured models for fermentation processes, Departmental seminar, Kemisk Reaktionsteknik, Chalmers Tekniska Högskola, Gothenburg, Sweden (1991)
10. Modelling of filamentous microorganisms, Department of Chemical Engineering, University of Michigan, Ann Arbor, Michigan (1992)
11. On-line monitoring and modelling of microbial processes, Departmental seminar, Department of Biochemical Engineering, Indian Institute of Technology, New Delhi (1992)

12. Growth of filamentous fungi - An engineers perspective, Seminar at University of Manchester, Manchester (1992)
13. On-line monitoring of filamentous fungi fermentations, Meeting of EFB Working Party on "Measurement and Control", Florence (1993)
14. Modelling of filamentous growth, Meeting of DECHEMA Working Party on "Messung und Regelung in Biotechnologie", Frankfurt (1993)
15. Industriel anvendelse af skimmelsvampe, Dansk Ingeniørforening, Copenhagen (1994)
16. Metabolic flux analysis of the penicillin fermentation, Institute of Chemical Metalurgy, Chinese Academy of Science, Beijing (1994)
17. Mathematical models - An excellent tool in physiological studies of filamentous fungi, Department of Chemical Engineering, University of Minnesota, Minneapolis (1994)
18. Physiological Engineering of filamentous fungi, Departmental Seminar, Department of Chemical Engineering, MIT, Cambridge (1994)
19. Physiological Engineering. The integration of microbial physiology and chemical engineering, Department of Chemical Engineering, MIT, Cambridge, USA (1996)
20. Modelling the growth of filamentous microorganisms, Departmental seminar, Department of Chemical Engineering, Tufts University, Medford, USA (1996)
21. Modelling the growth of filamentous microorganisms, Departmental seminar, Department of Chemical and Biochemical Engineering, University of Western Ontario, London, Canada (1996)
22. Modelling the growth of filamentous fungi, Department of Chemical Engineering, MIT, Cambridge (1996)
23. Metabolic Engineering, University of Shandong, Jinan (1996)
24. Metabolic flux analysis of filamentous fungi, BASF, Ludwigshafen (1996)
25. Metabolic Flux Analysis, Departmental seminar, Department of Chemical Engineering, Xinghua University, Beijing, China (1996)
26. Biochemical analysis of the penicillin biosynthetic pathway, Departmental Seminar, Department of Microbiology, Technical University of Denmark, Lyngby, Denmark (1997)
27. Biochemical characterization of the penicillin biosynthetic pathway, Departmental Seminar, Institut für Biotechnologie, ETH, Zürich, Switzerland (1997)
28. Metabolic engineering. Methods and applications, Institute seminar, Institut für Biotechnologie, Forschungszentrum Jülich, Germany (1998)
29. Enzyme production by *Aspergillus*. Biochemical engineering methods for fundamental research and process optimisation, Seminar, Carlsberg Laboratory, Copenhagen, Denmark (1999)
30. Metabolomics, Seminar, Biologisk Selskab, Copenhagen, Denmark (2000)
31. Metabolic Engineering and Functional Genomics, Seminar, Novo Nordisk, Bagsværd, Denmark (2000)
32. Metabolic Engineering and Functional Genomics, Seminar, Chr. Hansen, Hørsholm, Denmark (2000)
33. Metabolic Engineering and Functional Genomics, Bjerrum-Brøndsted-Lang lecture, Carlsberg Laboratory, Denmark (2000)
34. Metabolic engineering of *Penicillium chrysogenum* for improved β -lactam production, Seminar, Microbia, Cambridge, USA (2001)
35. Analysis of metabolism: Control of fluxes, Seminar, BASF, Ludwigshafen, Germany (2001)
36. The role of Functional Genomics in Metabolic Engineering, Seminar, EPFL, Lausanne, Switzerland (2001)
37. Metabolomics, Seminar, Genomics in Food Science, KVL, Denmark (2002)
38. From quantitative physiology to metabolic engineering and systems biology, Sunner Memorial Lecture, Lund University, Lund, Sweden (2002)
39. Hough Memorial Lecture, University of Birmingham, Birmingham, UK (2004)
40. Metabolic engineering: Impacts of functional genomics, Seconda Università degli Studi di Napoli, Naples, Italy (2005)
41. Linking the transcriptome and the metabolome through genome-scale metabolic models, University Milano-Bicocca, Milan, Italy (2005)
42. Systems Biology: Current status and future challenges, NTNU, Trondheim, Norway (2005)
43. Systems Biology of Yeasts: Impacts on Metabolic Engineering and Basic Sciences, The National Hellenic Research Foundation, Athens, Greece (2006)
44. Impacts of systems biology on biotech process based on yeast, Merck, West Point, USA (2006)
45. The role of metabolic engineering in the improvement of industrial processes, BIOTEC, Bangkok, Thailand (2006)
46. Yeast systems biology: A vehicle for medical and biotechnological research, Department of Chemical and Biological Engineering, Chalmers University of Technology, Gothenburg, Sweden (2007)
47. Yeast as a model organism for studying nutrigenomic, Department of Systems Biology, ETH Zürich, Switzerland (2007)
48. Systems Biology and Synthetic Biology, Beijing University of Chemical Technology, Beijing, China (2007)
49. Systems Biology of lipid metabolism in yeast, Department of Biotechnology, University of Graz, Austria (2008)
50. Systems Biology as a driver for industrial biotechnology, Department of Chemical Engineering, Catholic University of Chile, Santiago, Chile (2008)
51. Systems Biology of Lipid Metabolism, Departmental Seminar, Institute for Molecular Biosciences, Universität Graz, Austria (2008)
52. Industrial systems biology: Yeast and *Aspergillus* as cell factories for sustainable production of chemicals, Sandoz, Kundl, Austria (2008)
53. Industrial Systems Biology: Yeast and Filamentous Fungi as Cell Factories for Sustainable Production of Chemicals, Departmental Seminar, Department of Chemical Engineering, Rice University, Houston, Texas, USA (2008)
54. Yeast systems biology: Does this have any medical relevance? Wallenberg Laboratory, Sahlgrenska Academy, Gothenburg, Sweden (2008)

55. Industrial systems biology, Amyris, Berkeley, USA (2009)
56. Understanding the function of biological networks through systems biology, Faculty of Science and Mathematics, University of Zagreb, Zagreb, Croatia (2009)
57. Systems biology of metabolism: From yeast to mammals, Department of Bioengineering, UC San Diego, California, USA (2009)
58. Industrial systems biology, Genomatica, San Diego, USA (2009)
59. Industrial systems biology: Yeast and Aspergilli as cell factories for sustainable production of chemicals. CJ Company, Seoul, South Korea (2010)
60. Engineering the metabolism of yeast cell factories, Novo Nordisk Foundation, Denmark (2010)
61. Development of yeast as a platform cell factory for production of fuels and chemicals through industrial systems biology, Tufts University, Boston, USA (2010)
62. Impact of systems biology on synthetic biology, Yale University, New Haven, USA (2010)
63. Yeast Systems Biology, Carlsberg Laboratory, Copenhagen, Denmark (2010)
64. Biorefinery. Cell Factory Design and Implementation, World Council of Industrial Biotechnology meeting, Beijing, China (2010)
65. Development of Yeast as a Platform Cell Factory, Joint Bioenergy Institute, Berkeley, USA (2011)
66. Insights into Metabolic Diseases through Systems Biology, SomaLogic, Boulder, USA (2011)
67. Systems Biology: Integrated Analysis of Human Metabolism through the Human Metabolic Atlas, Rigshospitalet, Copenhagen, Denmark (2011)
68. Yeast as a Cell Factory Platform for Production of Fuels and Chemicals, University of Umeå, Umeå, Sweden (2011)
69. Biochemical Engineering as the Foundation of Systems Biology, Synthetic Biology and Metabolic Engineering, Seminar in connection with Prof. Reuss, University of Stuttgart, Germany (2011)
70. Systems Biology, Synthetic Biology and Metabolic Engineering of Yeast, Genomatica, San Diego, USA (2011)
71. The role of DNA and RNA sequencing in systems biology, University of Gothenburg, Gothenburg, Sweden (2012)
72. Metabolic modelling applied to metabolic engineering and systems medicine, Departmental Seminar, Department of Chemical Engineering, MIT, Cambridge, USA (2012)
73. Systems biology of yeast, Gevo, Denver, USA (2012)
74. Production of recombinant proteins by yeast, Department of Chemical and Biological Engineering, Chalmers University of Technology, Gothenburg, Sweden (2012)
75. The Human Metabolic Atlas: A novel resource for studying cancer metabolism, Dana Faber Center for Cancer Systems Biology, Boston, USA (2012)
76. Genome-scale metabolic models as a scaffold for integrative analysis of metabolomics data, Umeå University, Umeå, Sweden (2013)
77. Systems biology: Yeast as a platform cell factory, Shanghai Jiao Tong University, Shanghai, China (2013)
78. The Human Metabolic Atlas: A novel resource for studying metabolic diseases and cancer, Astra-Zeneca Bioinformatics Seminar, Mölndal, Sweden (2014)
79. Yeast systems biology, Odense University, Odense, Denmark (2014)
80. Yeast as a platform cell factory for production of fuels and chemicals, Genomics Science, UNAM, Mexico City, Mexico (2014) (Webinar)
81. Metabolism and its role in production of advanced biofuels, obesity and cancer. KVVVS, Gothenburg, Sweden (2014)
82. Systems Biology: From microbe to man. Department of Genetics and Microbiology, Trinity College Dublin, Ireland (2014)
83. Systems Biology: From Microbe to Man. Department of Chemistry, EPFL, Lausanne, Switzerland (2014)
84. Systems Biology of Metabolism: A Journey from Yeast to Cancer. Svenska Kemistsamfundet, Gothenburg, Sweden (2014)
85. Impact of Systems Biology on Industrial Biotechnology. Systems Biology and Systems Medicine, Lake Como School of Advanced Studies, Como, Italy (2014)
86. Genome wide reprogramming of human metabolism in response to obesity and cancer. Systems Biology and Systems Medicine, Lake Como School of Advanced Studies, Como, Italy (2014)
87. Genome wide reprogramming of human metabolism in response to obesity and cancer. Kemiska Institutet, Ljubljana, Slovenia (2014)
88. From metagenomics to systems biology of the gut ecosystem. MetaCardis Annual Meeting, Gothenburg, Sweden (2014)
89. Metabolic Engineering and Systems Biology of Yeast. School of Life Sciences, Tsinghua University, Beijing, China (2014)
90. Yeast as a platform cell factory in future biorefineries. Institute of Biotechnology, Wuhan University, Wuhan, China (2014)
91. Metabolic engineering and synthetic biology of yeast. Energy Biosciences Institute, UC Berkeley, USA (2014)
92. Prospects for systems biology and modelling of the gut microbiome. EPFL, Switzerland (2015)
93. The Human Metabolic Atlas: A resource for studying metabolic diseases. SciLifeLab Day, Karolinska Institute, Stockholm, Sweden (2015)
94. Metabolic engineering and synthetic biology of yeast. Chung-Ang University, Seoul, South Korea (2015)
95. Genome scale modelling of human metabolism. University of Ljubljana, Ljubljana, Slovenia (2015)
96. Mapping Genotype Phenotype Relations in Yeast through Systems Biology. Novozymes Symposium, Copenhagen, Denmark (2015)
97. Yeast as a Platform Cell Factory for Production of Fuels and Chemicals. Zhang Dayu Lectureship, Dalian Institute for Chemical Physics, Chinese Academy of Science, Dalian, China (2015)

98. Impacts of Systems Biology on Metabolic Engineering. Department of Chemical Engineering, University of Princeton, Princeton, USA (2015)
99. Big data in life science: Cancer and gut microbiome research. Big Data Seminar, Chalmers University of Technology, Gothenburg, Sweden (2016)
100. Yeast as a platform cell factory for the production of fuels and chemical, Novozymes Prize Lecture, Chalmers University of Technology, Gothenburg, Sweden (2016)
101. Metabolic engineering, synthetic biology and microbiome, Ajinomoto, Tokyo, Japan (2016)
102. Metabolic engineering of yeast, Beijing University of Chemical Technology, Beijing, China (2016)
103. Metabolic engineering of yeast, Tian Gong Symposium, Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences, Tianjin, China (2016)
104. Systems Biology of Metabolism. Volterra Lecture, Norwegian University of Life Sciences, Ås, Norway (2017)
105. Studies of metabolic diseases and cancer using genome-scale metabolic models for human metabolism. Astra Zeneca, Mölndal, Sweden (2017)
106. Systems biology of yeast metabolism. Manchester Institute for Biotechnology, Manchester University, UK (2017)
107. Yeast as a platform cell factory for the production of fuels and chemicals. Shanghai Institute for Plant Physiology and Ecology, Chinese Academy of Science, Shanghai, China (2017)
108. Yeast as a platform cell factory for the production of fuels and chemicals. East China University of Science and Technology, Shanghai, China (2017)
109. Yeast as a platform cell factory for the production of fuels and chemicals. Jiangnan University, Wuxi, China (2017)
110. Metabolic engineering of yeast for production of fuels and chemicals. Department of Life Science, Swedish Agricultural University, Uppsala, Sweden
111. Towards biobased production of fuels and chemicals. Politecnico di Torino, Torino, Italy (2017)
112. Towards biobased production of fuels and chemicals. Università degli Studi della Basilicata, Potenza, Italy (2017)
113. Metabolic engineering of yeast for production of fuels and chemicals. Department of Molecular Sciences, Swedish University of Agricultural Sciences, Uppsala, Sweden (2017)
114. What does biofuels and cancer have in common? Royal Academy of Engineering Sciences, Stockholm, Sweden (2017)
115. Assessing the human gut microbiota in metabolic disease. Royal Academy of Engineering Sciences, Stockholm, Sweden (2017)
116. Research leadership, mentoring, publishing and innovation. Copenhagen Bioscience Lectures, the Novo Nordisk Foundation, Copenhagen, Denmark (2018)
117. Systems biology of yeast metabolism. Tartu University, Tartu, Estonia (2018)
118. Systems biology of yeast metabolism. EPLF, Lausanne, Switzerland (2018)
119. Systems biology of yeast metabolism. Technical University of Denmark, Lyngby, Denmark (2018)
120. Systems biology of yeast metabolism. China National Gene Bank, Shenzhen, China (2018)
121. Metabolic engineering of yeast. Chinese Academy of Traditional Chinese Medicines, Beijing, China (2018)
122. Metabolic engineering of yeast. Beijing Technology and Management University, Beijing, China (2018)
123. Systems biology of yeast metabolism. Zymergen, Emeryville, USA (2018)
124. Metabolic modelling of the human gut microbiome. SERES Pharmaceuticals, Cambridge, USA (2018)
125. Systems biology of yeast metabolism. Ginko Bioworks, Boston, USA (2018)
126. Quantifying cancer metabolism through genome-scale metabolic modelling, Koch Institute, MIT, Cambridge, USA (2018)
127. Systems biology of yeast metabolism. Joint BioEnergy Institute, Emeryville, USA (2018)
128. Systems biology of metabolism. California Institute of Technology, Pasadena, USA (2018)
129. Systems biology of yeast metabolism. Provivi, Santa Monica, USA (2018)
130. Systems biology of yeast metabolism. Jiangnan University, Wuxi, China (2019)
131. Systems biology of yeast metabolism. Steve Fest, University of Cambridge, Cambridge, UK (2019)
132. Systems Biology of Yeast Metabolism. Peiyang Lecture, Tianjin University, Tianjin, China (2019)
133. Metabolic Engineering of Yeast. Nankai University, Tianjin, China (2019)
134. How studying metabolism can impact production of biofuels and identifying novel cancer biomarkers. PhD student Day, Department of Biology, University of Copenhagen, Denmark (2019)
135. Systems Biology of Metabolism. NYU School of Medicine, Institute for Systems Genetics, USA (2020)
136. Systems Biology: A Driver for Metabolic Engineering. Department of Chemical and Biomolecular Engineering, KAIST, South Korea (2020)
137. Systems biology of human metabolism. Department of Chemical and Biomolecular Engineering, KAIST, South Korea (2020)
138. Systems Biology of Yeast Metabolism. University of Texas, Virtual (2021)
139. Systems Biology of Yeast. Pacific Northern National Laboratory, Virtual (2021)
140. Systems biology of yeast metabolism. NNF Center for Biosustainability annual meeting, Elsinore, Denmark (2021)
141. Life Science Innovation. NNF Center for Biosustainability, DTU, Lyngby, Denmark (2021)
142. Systems biology of Human metabolism. FEBS Course, Stockholm, Sweden (2022)
143. Systems Biology of Metabolism. Sahlgrenska Academy, Gothenburg, Sweden (2023)
144. Systems Biology of Metabolism. Center for Basic Metabolic Research, University of Copenhagen, Denmark (2023)

List of Conferences co-organized

Chair/Co-Chair of Organizing Committee (*not complete*)

1. Danish Biotechnology Conference I, Munkebjerg, Denmark (1995) (130 participants) **Chair**
2. Danish Biotechnology Conference II, Munkebjerg, Denmark (1996) (130 participants) **Chair**
3. Danish Biotechnology Conference III, Munkebjerg, Denmark (1997) (180 participants) **Chair**
4. Danish Biotechnology Conference IV, Munkebjerg, Denmark (1998) (130 participants) **Chair**
5. Danish Biotechnology Conference V, Munkebjerg, Denmark (1999) (120 participants) **Chair**
6. European Symposium on Biochemical Engineering Science 3, Copenhagen, Denmark (2000) (300 participants) **Chair**
7. Metabolic Engineering IV, Il Ciocco, Italy (2002) (250 participants) **Chair**
8. 7th European Conference on Fungal Genetics, Copenhagen, Denmark (2003) (800 participants) **Co-Chair**
9. European Congress on Biotechnology 12, Copenhagen, Denmark (2005) **Chair of Scientific Committee**
10. Swedish Bioinformatics Workshop, Gothenburg, Sweden (2010) (100 participants) **Chair**
11. Gothenburg Life Science Conference XI, Gothenburg, Sweden (2010) (150 participants) **Chair**
12. Key Symposium on Translational and Systems Medicine, Stockholm, Sweden (2011) (150 participants) **Chair**
13. Copenhagen Bioscience Conference on Biosustainability, Hillerød, Denmark (2013) (150 participants). **Co-chair**
14. Copenhagen Bioscience Conference on Biosustainability, Hillerød, Denmark (2015) (150 participants). **Chair**
15. Copenhagen Bioscience Conference on Biosustainability, Hillerød, Denmark (2019) (150 participants) **Chair**

Member of Organizing Committee (*not complete*)

1. Danish Biotechnology Conference VI, Munkebjerg, Denmark (2000)
2. Danish Biotechnology Conference VII, Munkebjerg, Denmark (2001)
3. Symposium on Physiology of Yeast and Filamentous Fungi, Hindsø, Denmark (2001)
4. Danish Biotechnology Conference VIII, Munkebjerg, Denmark (2002)
5. 2nd International Conference on Analysis of Microbial Cells at the Single Cell Level, Munkebjerg, Denmark (2002)
6. Danish Biotechnology Conference IX, Munkebjerg, Denmark (2003)
7. Danish Biotechnology Conference X, Munkebjerg, Denmark (2004)
8. The 9th International Conference on Systems Biology, Gothenburg, Sweden (2008)
9. 35th FEBS Congress, Gothenburg, Sweden (2010)
10. Industrial Systems Biology 2010, Gothenburg, Sweden (2010)
11. Key Symposium on Systems Medicine, Salsjöbaden, Sweden (2011)
12. Copenhagen Bioscience Conference, Hillerød, Denmark (2013)
13. Eukaryotic Synthetic Biology, Heidelberg, Germany (2015)
14. Copenhagen Bioscience Conference, Hillerød, Denmark (2015)
15. Metabolic Engineering Summit, Beijing, China (2017)

Member of Scientific/Advisory Committee (*not complete*)

1. Modeling for Improved Bioreactor Performance II, Otocec, Slovenia (1994)
2. Yeast as a Cell Factory, Vlaardingen, The Netherlands (1998)
3. ISSY22: Yeast fermentations and other yeast bioprocesses, Pilansberg, South Africa (2002)
4. European Symposium on Biochemical Engineering Science 4, Delft, The Netherlands (2002)
5. Metabolic Engineering V, Taos, USA (2004)
6. European Symposium on Biochemical Engineering Science 5, Stuttgart, Germany (2004)
7. Biochemical Engineering XIV, Harrison Hot Springs, Canada (2005)
8. 8th European Conference on Fungal Genetics, Vienna, Austria (2006)
9. Metabolic Engineering VI, Noordwijkerhout, The Netherlands (2006)
10. ISSY25: Systems Biology of Yeasts – from Models to Applications, Espoo, Finland (2006)
11. FOSBE 2007, Stuttgart, Germany (2007)

12. 9th European Conference on Fungal Genetics, Edinburgh, UK (2008)
13. Metabolic Engineering VII, Puerto Vallarta, Mexico (2008)
14. 13th International Biotechnology Symposium and Exhibition, Dalian, China (2008)
15. 12th International Congress on Yeasts, Kiev, Ukraine (2008)
16. FOSBE 2009, Englewood, USA (2009)
17. ISSY27: Yeast for health and biotechnologies, Paris, France (2009)
18. PYFF4, Rotterdam, The Netherlands (2010)
19. Metabolic Engineering VIII, Jeju Island, South Korea (2010)
20. 10th European Conference on Fungal Genetics, Leiden, The Netherlands (2010)
21. 14th International Biotechnology Symposium and Exhibition, Rimini, Italy (2010)
22. Microbial Stress: From Molecules to Systems, Beligiate, Italy (2012)
23. Metabolic Engineering IX, Biarritz, France (2012)
24. Metabolic Engineering X, Vancouver, Canada (2014)
25. Metabolic Engineering Summit, Beijing, China (2015)
26. Metabolic Engineering 11, Ajaw Island, Japan (2016)
27. ISSY33, Cork, Ireland (2017)
28. Metabolic Engineering 12, Munich, Germany (2018)

Research Supervision

Current Post Doctoral Researchers

1. Peishun Li, Chalmers (2022-)
2. Hao Wang (2017-)

Former Post Doctoral Researchers

1. Lars Højlund Christensen, DTU (1992-1994)
2. Gunnar Liden, DTU (1993-1994)
3. Lisbeth Olsson, DTU (1994-1996)
4. Morten Carlsen, DTU (1995-1997)
5. Anne Santerre Henriksen, DTU (1995-1999)
6. Aradhana Srivastava, DTU (1996-1998)
7. Hans Peter Smits, DTU (1996-1999; 2000-2001)
8. Alexei Aleksenko, DTU (1997-2001)
9. Philippe Duboc, DTU (1997-1999)
10. Fernando Bautista, DTU (1998-1999)
11. Uffe Mortensen, DTU (1999-2002)
12. Ana Borges, DTU (1999-2001)
13. Bjarke Christensen, DTU (1999-2001)
14. Mhairi Workman, DTU (1999-2004)
15. Birgitte Regenber, DTU (1999-2005)
16. Anna Eliasson Lantz, DTU (2000-2002)
17. Christian Müller, DTU (2001-2002)
18. Vsevolod Serebrianyi, DTU (2001-2002)
19. Mats Åkesson, DTU (2001-2003)
20. Kasper Møller, DTU (2001-2003)
21. Per Bruheim, DTU (2002)
22. Vasimon Ruanglek, DTU (2002)
23. Tamay Seker, DTU (2002-2003)
24. Sandrine Mas, DTU (2002-2005)
25. Gerald Hofmann, DTU (2004-2006)
26. Roberta Mustachi, DTU (2004-2007)
27. Jerome Maury, DTU (2004-2008)
28. Isabel Rocha, DTU (2004)
29. Jette Thykær, DTU (2005-2007)
30. Dongmei Bai, DTU (2005-2007)
31. Michael Jewett, DTU (2005-2008)
32. Goutham Vemuri, DTU (2006-2007)
33. Manuel Quiros Asensio, DTU (2006-2008)
34. Prashant Bapat, DTU (2006-2008)
35. Sven Even Borgos, DTU (2007)
36. Dina Petranovic, DTU (2007-2008)
37. Subir Kumar Nandy, Chalmers (2008-2010)
38. Keith Tyo, Chalmers (2008-2010)
39. Marija Cvijovic, Chalmers (2008-2010)
40. Andrea Neiss, Chalmers (2009-2010)
41. Wanwipa Vongsangnak, Chalmers (2010)
42. Liming Liu, Chalmers (2009-2010)
43. Sergio Bordel Velasco (2008-2010)
44. Intawat Nookaew (2008-2012)
45. Jin Hou, Chalmers (2010-2012)
46. Fredrik Öberg, DTU (2011-2012)
47. Shuobo Shi, Chalmers (2009-2012)
48. Luis Caspeta, Chalmers (2009-2013)
49. Il-Kwon Kim, Chalmers (2010-2013)
50. Rahul Kumar, Chalmers (2010-2013)
51. Antonio Roldao, Chalmers (2010-2013)
52. Adil Mardinoglu, Chalmers (2010-2015)
53. Marina Sanchez Martinez, Chalmers (2011-2013)
54. Manuel Garcia, Chalmers (2012-2014)
55. Clara Navarrete, Chalmers (2013-2014)

56. Zheng Wang, Chalmers (2013-2014)
57. Subazini Thankaswamy, Chalmers (2013-2014)
58. Martin Engqvist, Chalmers (2014-2015)
59. Anastasia Krivoruchko, Post doc, Chalmers (2010-2016)
60. Jose L. Martinez, Chalmers (2011-2015)
61. Agata Smialowska, Chalmers (2014-2015)
62. Sunjae Lee, Chalmers (2014-2015)
63. Petri-Jaan Lahtvee, Chalmers (2013-2015)
64. Eugene Fletcher, Chalmers (2014-2015)
65. Hülya Karaca Gencer, Chalmers (2014-2015)
66. Silveira Wendel, Chalmers (2015-2016)
67. Min-Kyoung Kang, Chalmers (2014-2016)
68. Guodong Liu, Chalmers (2013-2016)
69. Mark Bisschops, Chalmers (2014-2016)
70. Ömür Kayikci, Chalmers (2014-2016)
71. Tatiana Moreira, Chalmers (2015-2016)
72. Yongjin Zhou, Chalmers (2012-2016)
73. Yongjun Wei, Chalmers (2014-2016)
74. Amir Feizi, Chalmers (2016)
75. Mingtao Huang, Chalmers (2012-2017)
76. Zongjie Dai, Chalmers (2013-2017)
77. Partho Sarathi Sen, Chalmers (2014-2017)
78. Sakda Khoomrung, Chalmers (2011-2017)
79. Michael Gossing, Chalmers (2014-2017)
80. Francesco Gatto, Chalmers (2015-2017)
81. Yi Liu, Chalmers (2015-2020)
82. JinHo Kim, Chalmers (2016-2018)
83. Manish Kumar, Chalmers (2015-2018)
84. Petter Holland, Chalmers (2016-2018)
85. Sylvain Prigent, Chalmers (2015-2018)
86. Ibrahim El-Semman, DTU (2015-2018)
87. Francesca Di Bartolomeo, Chalmers (2017-2019)
88. Lucy Fang-I Chao, Chalmers (2017-2019)
89. Zhiwei Zhu, Chalmers (2014-2019)
90. Tao Yu, Chalmers (2014-2019)
91. Tyler Doughty, Chalmers (2017-2019)
92. Ling-Qun Ye, Chalmers (2017-2019)
93. Yeping Zhang, BUCT (2017-2019)
94. Kate Campbell, Chalmers (2016-2020)
95. Jonathan Robinson, Chalmers (2016-2020)
96. Rui Pereira, Chalmers (2016-2020)
97. Xiaowei Li, Chalmers (2016-2020)
98. Quanli Liu, Chalmers (2016-2020)
99. Daniel Cook, Chalmers (2017-2020)
100. Ievgeniia Tiukova, Chalmers (2018-2020)
101. Hongzhong Lu, Chalmers (2017-2020)
102. Pinar Kocabas, Chalmers (2017-2020)
103. Jun Geng, Chalmers (2015-2020)
104. Jiufu Qin, Chalmers & DTU (2015-2020)
105. Boyang Ji, Chalmers (2013-2020)
106. Yiming Zhang, BUCT (2016-2021)
107. Rosemary Yu, Chalmers (2017-2021)
108. Sinisa Bratulic, Chalmers (2018-2022)
109. Yu Chen, Chalmers (2018-2022)
110. Rasool Saghaleyni, Chalmers (2021-2022)
111. Feiran Li, Chalmers (2021-2022)
112. Yu Chen, Chalmers (2018-2023)
113. Rasool Saghaleyni, Chalmers (2021-2023)
114. Feiran Li, Chalmers (2021-2023)

Current PhD Students (main supervisor)

1. Lingyun Li, BUCT (2018-)
2. Angelo Limeta, Chalmers (2019-)
3. Mihail Petre Anton, Chalmers (2021-)

Graduated PhD Students (main supervisor)

1. Henrik Jørgensen, DTU (1991-1993)
2. Claus Lindvad Johansen, DTU (1991-1993)
3. Morten Carlsen, DTU (1992-1995)
4. Rong Wei Min, DTU (1992-1995)
5. Anders Spohr, DTU (1993-1996)
6. Preben Krabben, DTU (1993-1997)
7. Claus Maxel Henriksen, DTU (1993-1996)
8. Christoffer Klein, DTU (1995-1998)
9. Karsten Schmidt, DTU (1995-1998)
10. Torben Nissen, DTU (1995-1998)
11. Henrik Pedersen, DTU (1996-1999)
12. Bjarke Christensen, DTU (1996-1999)
13. Teit Agger, DTU (1996-1999)
14. Hanne Theilgaard, DTU (1996-1999)
15. Simon Østergaard, DTU (1997-2000)
16. Wai Prathumpai, DTU (1998-2001)
17. Tina Lübbehüsen, DTU (1998-2001)
18. Jens Dynesen, DTU (1998-2001)
19. Torben Christiansen, DTU (1998-2001)
20. Christian Müller, DTU (1998-2001)
21. Jarno Robin, DTU (1998-2002)
22. Jochen Förster, DTU (1999-2002)
23. Michael Lyng Nielsen, DTU (1999-2003)
24. Jette Thykær, DTU (2000-2005)
25. Nina Gunnarsson, DTU (2000-2003)
26. Margarida Moreira dos Santos, DTU (1999-2003)
27. Christoffer Bro, DTU (2000-2003)
28. Gerald Hofmann, DTU (2001-2004)
29. Helga David, DTU (2001-2005)
30. Thomas Grotkjær, DTU (2001-2004)
31. Nadine Eckert-Boulet, DTU (2001-2004)
32. Vijay Raghevendrabn, DTU (2001-2005)
33. Steen Lund Westergaard, DTU (2002-2005)
34. Wian de Jongh, DTU (2002-2005)
35. Silas Granato Villas-Boas, DTU (2002-2005)
36. Kiran Patil, DTU (2003-2006)
37. Songsak Wattanachaisaerekul, DTU (2003-2007)
38. Audrey Diano, DTU (2003-2007)
39. Torsten Bak Reguira, DTU (2003-2007)
40. Irina Borodina, DTU (2004-2008)
41. Susan Meijer, DTU (2004-2007)
42. Ana Paula Oliveira, DTU (2004-2008)
43. Mohammad Asahollahi, DTU (2004-2008)
44. Mikael Rørdam Andersen, DTU (2004-2008)
45. Jesper Højer Pedersen, DTU (2004-2008)
46. Kjeld Kjeldsen, DTU (2005-2008)
47. Wanwipa Vongsangnak, Chalmers (2005-2009)
48. Jose Manuel Otero, Chalmers (2005-2009)
49. Margarita Salazar Pena, Chalmers (2006-2010)
50. Jie Zhang, Chalmers (2007-2011)
51. Roberto Olivares, Chalmers (2006-2011)
52. Pramote Chumnapuen, Chalmers (2008-2012)
53. Marta Papini, Chalmers (2008-2012)
54. Gionata Scalcinati, Chalmers (2008-2012)
55. Siavash Partow, Chalmers (2008-2012)
56. Kuk-Ki Hong, Chalmers (2008-2012)
57. Liu Zihe, Chalmers (2008-2012)
58. Kanokarn Kocharin, Chalmers (2009-2013)
59. Rasmus Ågren, Chalmers (2008-2013)
60. Tobias Österlund, Chalmers (2009-2014)
61. Fredrik Karlsson, Chalmers (2009-2014)
62. Christoph Knuf, Chalmers (2009-2014)
63. Natapol Pornputtpong, Chalmers (2010-2014)
64. Lifang Liu, Chalmers (2010-2014)
65. Bouke de Jong, Chalmers (2010-2015)

66. Yiming Zhang, Chalmers (2010-2015)
67. Francesco Gatto, Chalmers (2012-2015)
68. Saeed Shoaie, Chalmers (2011-2015)
69. Amir Feizi, Chalmers (2011-2016)
70. Leif Väre, Chalmers (2011-2016)
71. Nicolaas Buijs, Chalmers (2011-2016)
72. Mingji Li, DTU (2013-2016)
73. Edith Angelica Rodriguez Prado, DTU (2013-2016)
74. Stefan Tippmann, Chalmers (2012-2016)
75. Pouyan Ghaffari Nouran, Chalmers (2013-2017)
76. Jens Christian F. Nielsen, Chalmers (2014-2018)
77. Paulo Teixeira, Chalmers (2013-2018)
78. Jichen Bao, Chalmers (2013-2018)
79. Alexandra Bergman, Chalmers (2013-2019)
80. Avlant Nilsson, Chalmers (2014-2019)
81. Benjamín José Sánchez Barja, Chalmers (2014-2019)
82. David Bergenholm, Chalmers (2014-2020)
83. Parizad Babaei, Chalmers (2015-2019)
84. Promi Das, Chalmers (2015-2019)
85. Raphael Ferreira, Chalmers (2015-2019)
86. Gang Li, Chalmers (2016-2020)
87. Simonas Marčišauskas, Chalmers (2015-2020)
88. Christoph Börlin, Chalmers (2016-2020)
89. Rasool Saghaei, Chalmers (2016-2021)
90. Carl Melina, Chalmers (2016-2021)
91. Ning Qin, BUCT (2016-2021)
92. Qi Qi, Chalmers (2017-2021)
93. Feiran Li, Chalmers (2017-2021)
94. Yijin Zhao, BUCT (2017-2021)
95. Peishun Li, Chalmers (2018-2022)
96. Johan Gustafsson, Chalmers (2017-2022)
97. Hao Lou, Chalmers (2018-2022)
98. Dimitra Lappa, Chalmers (2016-2023)
99. Juan Octavo Valle (2012-2023)
100. Ivan Domenzain Del Castillo Cerecer (2017-2023)

Graduated PhD Students (Examiner)

1. Joachim Almquist, FCC, Sweden (2010-2017)
2. Yasaman Dabirian, Chalmers (2016-2021)
3. Oliver Konzock, Chalmers (2018-2022)
4. Christos Skrekas, Chalmers (2018-2022)
5. Maximilian Otto, Chalmers (2018-2022)
6. Dany Liu, Chalmers (2019-2023)

Graduated PhD Students (Co-supervisor)

1. Lars Højlund Christensen, DTU (1989-1992)
2. Stig Benthin, DTU (1989-1992)
3. Annemarie Gade Pedersen, DTU (1990-1992)
4. Simone de Jong Frandsen, DTU (1991-1993)
5. Ulrik Schultze, DTU (1992-1995)
6. Teresa Zangorilami, DTU (1994-1998)
7. Kasper Møller, DTU (1998-2001)
8. Mikkel Nordkvist, DTU (2001-2005)
9. Renata Usaite, DTU (2004-2008)
10. Lasse Pedersen, DTU (2007-2010)
11. Kanchana Rueksomtawin Kildegaard, DTU (2004-2011)
12. Xiao Chen, DTU (2007-2011)
13. Kwanjeera Wanichthanarak, Chalmers (2010-2014)
14. Kaisa Thorell, Gothenburg University, Sweden (2010-2014)
15. Leonie Wenning, Chalmers (2014-2018)
16. Yating Hu, Chalmers (2015-2019)
17. Elias Björnson, Gothenburg University (2014-2021)
18. John Hellgren, Chalmers (2017-2022)

Former Visiting PhD Students (co-supervisor)

1. Robert Lejeune, Free University of Brussels (1994-1995)
2. Pedro N. Pissarra, Kings College London (1994-1995)
3. Einar Jonsbu, NTNU (1999-2000)
4. Andreas Karoly Gomberg, Sao Paulo University (1998-2000)
5. Joel Forest Moxley, MIT (2003-2005)
6. Tunahan Cakir, Bogazici University (2004-2005)
7. Kazim Yalcin Arga, Bogacizi University (2004-2005)
8. Intawat Nookaew, KMUTT (2005-2006)
9. Goutham Vemuri, University of Georgia (2005-2006)
10. Donatella Cimini, University of Napoli (2006)
11. Valeria Mapelli, University Milan-Bicocca (2006-2007)
12. Paula Jouhten, Technical University of Helsinki (2008-2009)
13. Raphael Aggio, University of Auckland (2009)
14. William Alfonso Rodriguez Limas, National University of Mexico (2009-2010)
15. Kantida Kusonmano, UMIT (2011)
16. Akarin Boonsombuti, Mahasarakham University (2011-2012)
17. Jorge Alberto Vasquez Castillo, Antioquia University (2011-2012)
18. Josh Michener, Caltech/Stanford (2011)
19. Ibrahim E. El-Semman, Assiut University (2012-2014)
20. Jiufu Qin, Jiangnan University, China (2011-2014)
21. Rui Pereira, University of Minho, Portugal (2012-2014)
22. Cheng Zhang, East China Univesity of Science and Technology, China (2013-2015)
23. John Casey, University of Hawaii, USA (2014)
24. Jacqueline Rand, University of Wisconsin, USA (2014)
25. Zahra Azim Zadeh Irani, Tarbiat Modares University, Iran (2014-2015)
26. Yu Chen, East China University of Science and Technology, China (2015-2017)
27. Chinh Bkrong Nguyen, Oslo University, Norway (2017-2018)
28. Zhengming Zhu, Jiangnan University, China (2017-2018)
29. Chunjun Zhan, Jiangnan University, China (2017-2018)
30. Zeinab Hefny, Katholiek University of Leuven, Belgium (2017-2019)

Other Former Affiliated Researchers and Staff

1. Tina Johansen, Research Engineer, DTU (1990-2008)
2. Lene Christiansen, Research Engineer, DTU (1992-2008)
3. Martin Hjortso, Visiting Professor, DTU (1992-1993, 2002-2003)
4. Susanne Sloth Larsen, Head of Administration, DTU (1995-1999)
5. Jette Mortensen, Laboratory Technician, DTU (1996-2008)
6. Birgitte Karsbøl, Administrative Assistant, DTU (1996-2008)
7. Kirsten Nielsen, Administrative Assistant, DTU (1998-2005)
8. Trine Bro, Head of Administration, CMB, DTU (1999-2008)
9. Lars K. Nielsen, Visiting Professor, DTU (2004)
10. Stefan Rokem, Visiting Professor, DTU (2004-2005)
11. Eduardo Agosin, Visiting Professor, DTU (2005)
12. Verena Siewers, Senior Researcher & Docent, DTU & Chalmers (2006-2020)
13. Yun Chen, Resarcher & Docent, Chalmers (2008-2020)
14. Marie Nordqvist, Research Engineering and Lab Manager (2008-2017)
15. Marie-Louise Wennerhag, Financial Officer, Chalmers (2008-2018)
16. Martina Butorac (2008-2020)
17. Malin Nordvall, Research Engineer, Chalmers (2009-2014)
18. Stefan Rokem, Visiting Professor, Chalmers (2010)
19. Pegah Khorramzadeh, Research Engineering, Chalmers (2010-2011)
20. Sergio Bordel Velasco, Assistant Professor (2010-2014)
21. Suwanee Jansa-Ard, Research Engineer, Chalmers (2011-2014)
22. Martin Markström, Co-Director AoA, Chalmers (2011-2014)
23. Ximena Rozo Sevilla, Research Engineer, Chalmers (2011-2015)
24. Danilo Porro, Visiting Professor, Chalmers (2012)
25. Emma Ribbenhed, Research Engineer, Chalmers (2013-2015)
26. Antonio Marras, Research Assistant Chalmers (2013-2015)
27. Eduard Kerkhoven, Researcher, Chalmers (2013-2020)
28. Shaghayegh Hosseini, Data Manager, Chalmers (2013-2019)
29. Gheorge Manuel Borja Zamfir, PhD student, DTU (2013-2019)

30. Brian Pflieger, Visiting Professor, Chalmers (2014)
31. Julia Karlsson, Research Engineer, Chalmers (2014-2016)
32. Matthias Nilsson, Research Engineer, Chalmers (2015-2016)
33. Daniel Hermansson, Research Engineer, Chalmers (2016)
34. Xiaojun Ji, Visiting Researcher (2016-2017)
35. Jianye Xia, Visiting Professor, Chalmers (2016-2017)
36. Liming Quyang, Visiting Professor, Chalmers (2016-2017)
37. Takayoshi Fujii, Visiting Researcher, Chalmers (2016-2018)
38. Fredrik Schubert, Chalmers (2016-2019)
39. Joakim Norbeck, Researcher & Docent, Chalmers (2015-2020)
40. Johan Björkeröth, PhD student, Chalmers (2016-2020)
41. Erica Dahlin, Chalmers (2008-2020)
42. Angelica Ardehed (Lab Manager), Chalmers (2016-2020)
43. Emilie Lindquist, Chalmers (2017-2020)
44. Pierre-Etienne Cholley, Chalmers (2017-2020)
45. Virinchi Billa, Chalmers (2017-2019)
46. Mihail Anton, Chalmers (2017-2020)
47. Felipe Lopez-Isunza, Visiting Professor, Chalmers (2019)