

Curriculum vitae JENS NIELSEN

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Personal information

Date of birth: November 17th, 1962.
Place of birth: Horsens, Denmark
Citizenship: Danish
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Education and degrees

1986 M.Sc. in Chemical Engineering, DTU, Denmark
1989 Ph.D. in Biochemical Engineering, Department of Biotechnology, DTU, Denmark
1995 dr.techn., DTU, Denmark

Positions

1986 **Research Assistant**, School of Engineering, University of Western Ontario, Canada
1987-1989 **PhD student**, Department of Biotechnology, DTU, Denmark
1989 **Post doc**, Institut für Technische Chemie, Universität Hannover, Germany
1990-1995 **Associate Research Professor**, Department of Biotechnology, DTU, Denmark
1995-1996 **Visiting Professor**, Department of Chemical Engineering, MIT, USA
1996-1998 **Associate Professor**, Department of Biotechnology, DTU, Denmark
1998-2008 **Professor**, BioCentrum, DTU, Denmark
2005-2011 **Adjunct Professor**, Department of Biotechnology, NTNU, Norway
2008- **Professor**, Department of Chemical and Biological Engineering, Chalmers, Sweden
2011- **Professor & Scientific Director**, Novo Nordisk Foundation Centre for Biosustainability, DTU, Denmark
2012-2017 **Adjunct Professor**, Department of Biotechnology, Royal Institute of Technology (KTH), Sweden
2013- **Chief Science Officer**, Novo Nordisk Foundation Centre for Biosustainability, DTU, Denmark
2015 **Founding Head of Department**, Department of Biology and Biological Engineering, Chalmers, Sweden (served 9 months as Head of Department and structured a department of 150 people)
2016- **Adjunct Professor**, Beijing University of Chemical Technology (BUCT), China

Academic Appointments and Merits

1994-1999 **Founding Chairman**, Danish Biotechnological Forum, Denmark
1995-2000 **Deputy Director**, Center for Process Biotechnology, DTU, Denmark
1995-1998 **Co-ordinator**, Physiological Engineering, Nordic Industrial Fund
1998-2002 **Co-ordinator**, NordPhys, Nordic Industrial Fund
2001-2003 **Director**, Center for Process Biotechnology, DTU, Denmark
2001-2003 **Board Member**, Center for BioProcess Technology, KTH, Sweden
2002 **Evaluation Panel**, Dutch genomics initiative (50 million EUR)
2002-2007 **SAB Member**, Kluywer Center for Genomics of Industrial Fermentations, TU Delft, The Netherlands
2002-2008 **SAB Member**, Max-Planck Institute for Dynamic of Complex Technical Systems, Germany
2003 **Guest Professor**, Tianjin University, China
2004-2007 **Founding Director**, Center for Microbial Biotechnology, DTU, Denmark
2004-2007 **Member of Integrative and Systems Biology Panel**, BBSRC, UK (50 million GPD)
2004- **Advisory Board**, Society for Biological Engineering, USA
2005 **Chairman of Evaluation Committee**, HepatoSys, Germany
2005-2008 **Co-ordinator**, Yeast Systems Biology Network, EU Framework VI
2006-2007 **Founder and Board Member**, Danish Biotechnological Society, Denmark
2008-2011 **Member of Review Panel of SystemsX.ch**, Switzerland (100 million CHF)
2008-2011 **Co-ordinator**, Systems Biology as a Driver for Industrial Biotechnology, EU Framework VII
2009- **SAB Member**, Netherlands Institute for Systems Biology, The Netherlands
2010-2016 **Director Area of Advance Life Science**, Chalmers University of Technology, Sweden
2010- **Member of World Council for Industrial Biotechnology**, World Economic Forum
2011-2012 **Member of Industrial Biotechnology and Bioenergy Strategy Advisory Panel**, BBSRC, UK
2011 **Presidential appointed evaluator of Humbolt University**, Germany
2011 **Member of DoE Evaluation Panel for Joint Bioenergy Institute**, USA

2011-	Swedish Delegate in International Commission of Yeast (ICY)
2011-2015	National Reference Committee , Science for Life Laboratory, Stockholm, Sweden
2012-2014	Scientific Advisory Board Universeum Science Museum, Gothenburg, Sweden
2012-	Founding president of International Metabolic Engineering Society , USA
2012	4th Most cited European researcher in the field of Mycology
2012-2013	Evaluation panel of Academy of Finland , Finland
2012-2014	International Advisory Board , Thailand's National Center for Genetic Engineering and Biotechnology, Bangkok, Thailand
2014	Scientific Advisory Board , Energy Biosciences Institute, UC Berkeley, Berkeley, USA
2015-	Advisory Board , Gothia Forum, Sahlgrenska University Hospital, Gothenburg, Sweden
2016-	Director of Life Science , Beijing Advanced Center for Soft Matter Science and Engineering, Beijing University of Chemical Technology, China
2016-	Advisory Committee , Joint Bioenergy Institute, Lawrence Berkeley Laboratory, USA

Awards

1989	Direktør Gorm Petersen's Mindelegat , Denmark
1994	Ulrik Brinch og Hustru Marie Brinch's legat , Denmark
1996	STVFs Jubilæumspris , Statens Teknisk Videnskabelige Forskningsråd, Denmark
2001	Aksel Tovborg Jensens Legat , Bjerrum-Brøndsted-Lang Lecture, Carlsberg Foundation, Denmark
2002	Villum Kann Rasmussen's Årslegat , Villum Kann Rasmussen Fonden, Denmark
2004	Merck Award for Metabolic Engineering , USA
2011	Amgen Biochemical Engineering Award , USA
2012	Charles D. Scott Award 2012 , Symposium on Biotechnology for Fuels and Chemicals, USA
2012	Nature Award for Mentoring , Nature Publishing Group, UK
2013	Norblad-Exstrand Medalj , The Swedish Chemical Society, Sweden
2016	Gaden Award , American Chemical Society, USA
2016	Novozymes Prize , Novo Nordisk Foundation, Denmark
2017	ENI Award , ENI, Italy
2017	Gold Medal , Royal Swedish Academy of Engineering Sciences, Sweden
2017	Eric and Sheila Samson Prime Ministers Prize for Innovation in Alternative Fuels for Transportation , Fuels and Smart Mobility Initiative, Israel

Academies

1997	Member of the Academy of Technical Sciences , Denmark
2010	Foreign Member of the National Academy of Engineering , USA
2010	Member of the Royal Danish Academy of Science and Letters , Denmark
2010	Member of the Royal Swedish Academy of Engineering Sciences , Sweden
2011	College of Fellows of American Institute for Medical and Biological Engineering , USA
2012	Member of Royal Society of Arts and Sciences in Gothenburg , Sweden
2012	Fellow of the American Academy of Microbiology , USA
2014	Member of the Royal Swedish Academy of Sciences , Sweden

Other Honors

1995	Fulbright Fellow , USA
2002	Sunner Memorial Lecture , Lund University, Sweden
2004	Hough Memorial Lecture , Birmingham University, UK
2010	Appointed as Wallenberg Scholar , Sweden
2014	William Chalmers Lecture , Chalmers University of Technology, Sweden
2014	Honorary Professor , Beijing University of Chemical Technology, Beijing, China
2015	Zhang Dayu Lectureship , Dalian Institute for Chemical Physics, Chinese Academy of Science, China
2015	Honorary Professor , Dalian Institute for Chemical Physics, Chinese Academy of Science, China
2015	Thomson Reuter Highly Cited Researcher
2016	Thomson Reuter Highly Cited Researcher
2017	Honorary Professor , East China University of Science and Technology, Shanghai, China
2017	Adjunct Professor , Jiangnan University, Wuxi, China

Memberships in Societies

1986-	The Danish Society for Engineers , Denmark
1996-	Member of American Association for the Advancement of Science , USA
2001-	Society for Industrial Microbiology , USA
2004-	American Chemical Society , USA

2004- **Society for Biological Engineering, USA**
 2006- **American Society for Microbiology, USA**
 2012- **International Metabolic Engineering Society, USA**

Publications, Patents, Presentations and Citations

Web of Science: H-factor of 77; >26,000 citations and >3,500 citations in 2016

Google Scholar: H-factor of 103; >45,000 citations and >5,400 citations in 2016

Web of Science Highly Cited Researcher in 2015 and 2016

506 **Original Papers in Peer Reviewed Journals**
 98 **Review Papers in Peer Reviewed Journals**
 25 **Commentaries in peer reviewed journals**
 46 **Book Contributions**
 3 **Text books:** Bioreaction Engineering Principles (1994,2003,2011) (English & Chinese), Metabolic Engineering (1998) (English, Chinese & Japanese), Metabolome Analysis (2007)
 1 **Monograph**
 4 **Edited books**
 38 **Issued patents (8 patent families)**
 30 **Patent applications (15 patent families)**
 190 **Invited oral presentations at international conferences**
 103 **Invited seminars at universities and companies**

Key Grants

1993-1996 **Nordic Project on Physiological Engineering**, Nordic Industrial Fund (>20 MDKK)
 1995-2002 **4 Projects**, EU Framework VI (about 8 MDKK)
 1996-1999 **Center for Process Biotechnology**, Danish Technical Research Council (20 MDKK)
 1997-2000 **Nordic network NordPhys**, Nordic Industrial Fund (4 MDKK)
 1999-2003 **DABIC**, Danish Technical Research Council (18 MDKK)
 2000-2007 **6 Projects**, EU Framework V (about 15 MDKK)
 2003-2007 **Heterologous production of polyketides**, Danish Technical Research Council (2.8 MDKK)
 2004-2008 **Center for Microbial Biotechnology**, Danish Technical Research Council (36 MDKK)
 2005-2009 **3 Projects**, EU Framework VI (about 8.5 MDKK)
 2005-2008 **Genome sequencing of *A. balhamycina***, Lundbeck Foundation (1.2 MDKK)
 2005-2008 **Yeast Systems Biology Network**, EU Framework VI (1.3 MEUR)
 2006-2008 **Yeast in No Gravity**, European Space Agency (2.7 MDKK)
 2007-2009 **Systems Biology: From model organisms to application**, NORDFORSK (0.8 MNOK)
 2008-2011 **Systems Biology as a Driver for Industrial Biotechnology**, EU Framework VII (1 MEUR)
 2008-2013 **UNICELLSYS**, EU Framework VII (5.4 MSEK)
 2009-2011 **Regulation of lipid metabolism in eukaryotic cells**, Vetenskapsrådet (3 MSEK)
 2010-2014 **Industrial Systems Biology**, European Research Council (2.5 MEUR)
 2010-2013 **Systems Biology of Metabolism**, NORDFORSK (0.6 MNOK)
 2011-2020 **Wallenberg Scholar**, Knut and Alice Wallenberg Foundation (15 MSEK+15 MSEK)
 2011-2020 **NNF Center for Biosustainability**, Novo Nordisk Foundation (60 MDKK)
 2012-2015 **Engineering of Acetyl-CoA Metabolism in Yeast**, Vetenskapsrådet (6.4 MSEK)
 2012-2014 **Platform for studying metagenomes and metabolic diseases**, Torsten Söderbergs Stiftelse (5 MSEK)
 2012-2017 **BioVacSafe**, Innovative Medicines Initiative, EU (10.0 MSEK)
 2012-2016 **Excellence Center for Metabolic Engineering**, FORMAS (25 MSEK)
 2012-2017 **MetaCardis**, EU Framework VII (7.5 MSEK)
 2012-2017 **Advanced Biofuel Production by Oleagenous Yeast**, Department of Energy, USA (2 MUSD)
 2013-2016 **Biobased production of diesel and jetfuel**, Vetenskapsrådet (17 MSEK)
 2014-2016 **Mathematical modelling of tissue metabolism in response to malnutrition**, Bill & Melinda Gates Foundation (1 MUSD)
 2014-2017 **YeastCell**, ITN Marie Curie, EU Framework VII(3 MSEK)
 2014-2017 **QuantFung**, ITN Marie Curie, EU Framework VII (5 MSEK)
 2015-2018 **3 Projects**, ERA-SysApp and ERA-Pathogen, EU Framework VII (9 MSEK)
 2015-2019 **Biotechnological Production of High-Value Added Ingredients**, Stiftelsen for Strategisk Forskning (32 MSEK)
 2016-2019 **Genome-scale transcriptional regulation in yeast**, Vetenskapsrådet (4.4 MSEK)
 2016-2021 **Gut-microbiome effect on CVD**, Novo Nordisk Foundation (9 MDKK)
 2016-2019 **Wallenberg Center for Protein Research**, Knut and Alice Wallenberg Foundation (20 MSEK)
 2016-2020 **CHASSY**, Horizon2020 (7 MSEK)
 2016-2020 **DD-DeCaF**, Horizon2020 (8.5 MSEK)

2016-2020	PacMEN , ITN Marie Curie, Horizon2020 (6 MSEK)
2017-2020	Biobased production of diesel and jetfuels , Energimyndigheten (4 MSEK)
2017-2023	Systems biology of the eukaryal protein secretion pathway , Stiftelsen for Strategisk Forskning (34 MSEK)
2018-2023	CellNova , Vinnova (9 MSEK) (co-PI together)

Editorial Activities

1999	Chemical Engineering Science , Guest editor of special volume
1999-	Metabolic Engineering , Editorial Board (1999-2002), Assoc. Editor (2003-)
1999-	Applied Microbiology and Biotechnology , Editorial Board
2000-	Bioprocess and Biosystems Engineering , Assoc. Editor (2000-2007), Editorial Board (2007-)
2001-	Biotechnology and Bioengineering , Assoc. Editor
2001-	FEMS Yeast Research , Editorial Board (2001-2007), Assoc. Editor (2007-2010), Editor-in-Chief (2011-)
2004-2015	Journal of Industrial Microbiology and Biotechnology , Editorial Board (2004-2010), Senior Editor (2010-2015)
2004-	Advances in Biochemical Engineering/Biotechnology , Editorial Board
2008-	Microbial Cell Factories , Advisory Board
2009-	Microbial Biotechnology , Editorial Board
2010-	Biotechnology Journal , Editorial Board
2012-	ACS Synthetic Biology , Editorial Board
2013-	Wiley-Blackwell Advanced Biotechnology Book series (3. Edition), Editor-in-Chief
2015-	Cell Systems , Editorial Board
2015-	Scientific Reports , Editorial Board
2015-	Synthetic and Systems Biotechnology , Editorial Board
2016-	Current Opinion of Systems Biology , Editorial Board
2016-	Applied and Environmental Microbiology , Editorial Board
2017-	Cell Stress , Editorial Board
2017-	Biotechnology and Bioprocess Engineering , Editorial Board

Teaching

Jens Nielsen has organized more than 15 advanced courses on metabolic engineering and systems biology in Denmark, Sweden, Thailand, China and Chile, and he has been teaching in several different courses at all levels in the areas of biotechnology, fermentation technology, bioreaction engineering, metabolic engineering and systems biology. Currently examiner of the MSc courses KMG060 Systems Biology and KKR063 Metabolic Engineering at Chalmers. Prof Nielsen has extensive experience with developing, organizing and running new courses and he has been actively involved in the design of new teaching programs at both the BSc and MSc level in the field of biotechnology and systems biology.

Mentoring

Main supervisor of <i>graduated</i> PhD students	75
Main supervisor of <i>current</i> PhD students	20
Co-supervisor of graduated PhD students (including visiting PhD students)	39
Current co-supervisor of PhD students	1
Former affiliated post docs	73
Current affiliated post docs and senior researchers	28

Business Experience

1992-	Collaboration with industry ; collaborated with more than 15 different companies in Austria, Denmark, France, Germany, The Netherlands, Sweden, Switzerland and USA. Cumulative funding from industry to my research group exceeds 30 MSEK.
1996-	Consultant for several internationally leading biotech and pharmaceutical companies
1997-2001	N&N Biotechn Aps , Denmark, Founder and CEO (acquired by Fluxome A/S)
2002-2005	Symbion Venture Capital , Denmark, Member of Scientific Advisory Board
2002-2012	Fluxome A/S , Denmark (major activities acquired by Evolva SA in 2012); Founder and involved in raising more than 25 MEUR in capital, CEO (2002-2004), CSO (2002-2008), Member of BoD (2002-2005 & 2008-2012), Chairman of SAB (2008-2012)
2002-2007	Gothia Yeast Solutions , Sweden, Member of SAB
2006-2011	MycoTeQ A/S , Denmark, Founder and Chairman of BOD (raised about 1 MEUR in capital, one novel antibiotic identified)
2008-2010	GlycoFi, Inc. , USA, Member of SAB

2008-2015 **Genomatica, Inc.**, USA, Member of SAB
2011- **MetaboGen AB**, Sweden, Founder and Member of BoD
2013- **Evolva SA**, Switzerland, Member of SAB
2014- **Biopetrolia AB**, Sweden, Founder and Chairman of BoD
2014- **Novogy Inc.**, USA, Member of SAB
2017- **Elypta AB**, Sweden, Founder and Chairman of BoD

Organization of Conferences Organization of Conferences

1990- Member of organizing and scientific committee of more than 35 conferences
2000 **ESBES3**, Denmark, Chairman (~300 delegates)
2002 **Analysis of Microbial Cells at the Single Cell Level**, Denmark, Co-Chair (~100 delegates)
2002 **Metabolic Engineering IV**, Italy, Chairman (~250 delegates)
2004 **European Conference on Fungal Genetics VI**, Denmark, Co-Chair (~800 delegates)
2005 **ECB12**, Denmark, Chairman of Scientific Committee (~1200 delegates)
2008 **ICSB2008**, Sweden, Member of Organizing Committee (~1000 delegates)
2010 **FEBS2010**, Sweden, Member of Organizing Committee (~2000 delegates)
2010 **Industrial Systems Biology 2010**, Sweden, Chairman (~200 delegates)
2011 **Key Symposium on Systems Medicine**, Sweden, Chairman (~100 delegates)
2013 **Copenhagen Bioscience Conference**, Denmark, Co-Chairman (~150 delegates)
2015 **Copenhagen Bioscience Conference**, Denmark, Chairman (~150 delegates)