

*Curriculum vitae***JENS BREDAL NIELSEN, R., PhD, dr.techn.**

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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
 2008-2015 **Professor**, Department of Chemical and Biological Engineering, Chalmers, Sweden
 2011-2019 **Professor**, Novo Nordisk Foundation Centre for Biosustainability, DTU, Denmark
 2012-2017 **Adjunct Professor**, Department of Biotechnology, Royal Institute of Technology (KTH), Sweden
 2013-2019 **CSO**, 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)
 2015- **Professor**, Department of Biology and Biological Engineering, Chalmers, Sweden
 2016-2019 **Adjunct Professor**, Beijing University of Chemical Technology (BUCT), China
 2019- **CEO**, BioInnovation Institute, Copenhagen, Denmark

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
 2009-2014 **SAB Member**, Netherlands Institute for Systems Biology, The Netherlands
 2010-2016 **Director Area of Advance Life Science**, Chalmers University of Technology, Sweden
 2010-2019 **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
2015-2018	Advisory Board, Gothia Forum, Sahlgrenska University Hospital, Gothenburg, Sweden
2016-2019	Director of Life Science, Beijing Advanced Center for Soft Matter Science and Engineering, Beijing University of Chemical Technology, China
2016-2019	Advisory Committee, Joint Bioenergy Institute, Lawrence Berkeley Laboratory, USA
2016-	Committee chairman for Novozymes Award for Excellence in Biochemical and Chemical Engineering, Novozymes, Denmark
2016-	Novozymes Prize award committee, Novo Nordisk Foundation, Denmark (chairman 2018-2019)
2018-	F1000 Faculty, F1000Prime

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
2019	Emil Chr. Hansen's Gold Medal for Microbiological Research, Denmark
2019	Arvid Carlsson Award, Sahlgrenska Science Park, Sweden
2019	James E. Bailey Award, American Institute for Chemical Engineering, USA
2020	Gregory Stephanopoulos Award for Metabolic Engineering, IMES, USA
2021	The Chinese's Government's Friendship Award, Chinese Government, China

Academies

1997	Member of the Academy of Technical Sciences, Denmark
2010	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
2019	National Academy of Sciences, USA
2019	Royal Physiographic Society of Lund, Sweden
2019	Chinese Academy of Engineering, China

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, 2016	Highly Cited Researcher , Thomson Reuter
2017	Honorary Professor , East China University of Science and Technology, Shanghai, China
2017	Adjunct Professor , Jiangnan University, Wuxi, China
2017, 2018	Highly Cited Researcher , Clarivate
2019	Honorary Professor , Jiangnan University, Wuxi, China
2019	Ridder af Dannebrog (Knight of the order of Dannebrog), Queen Margrethe II, Denmark
2019	Honorary Professor , Tianjin University, Tianjin, China
2019	Peiyang Lectureship , Tianjin University, Tianjin, China
2019	Honorary Professor , Nankai University, Tianjin, China
2019-2021	Highly Cited Researcher , Web-of-Science
2020	Most cited researcher on fungi in the World over the period 2010-2020, ExpertScape
2020	The KAIST CBE Global Distinguished Lectureship , KAIST, South Korea

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

Google Scholar: H-factor of 134; >90,000 citations and >46,000 citations since 2017

Web of Science Highly Cited Researcher in 2015-2021

661	Original Papers in Peer Reviewed Journals
129	Review Papers in Peer Reviewed Journals
31	Commentaries in peer reviewed journals
49	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)
36	Patent applications (15 patent families)
233	Invited oral presentations at international conferences
141	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 <i>A. baumannii</i> , 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)
2017-2018	Proof-of-Concept of cancer biomarkers , Knut and Alice Wallenberg Foundation (4.5 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)
2018-2019	Proof-of-Concept of cancer biomarkers , Knut and Alice Wallenberg Foundation (5 MSEK)
2018-2023	CellNova , Vinnova (9 MSEK) (co-PI together)

Editorial Activities

1999	Chemical Engineering Science , Guest editor of special volume
1999-2019	Metabolic Engineering , Editorial Board (1999-2002), Assoc. Editor (2003-2019), Editor-in-Chief (2018-2019)
1999-	Applied Microbiology and Biotechnology , Editorial Board
2000-2018	Bioprocess and Biosystems Engineering , Assoc. Editor (2000-2007), Editorial Board (2007-2018)
2001-	Biotechnology and Bioengineering , Assoc. Editor
2001-2019	FEMS Yeast Research , Editorial Board (2001-2007), Assoc. Editor (2007-2019), Editor-in-Chief (2011-2019)
2004-	Journal of Industrial Microbiology and Biotechnology , Editorial Board (2004-2010), Senior Editor (2010-2015), Editorial Board (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
2015-2020	Cell Systems , Editorial Board
2015-2018	Scientific Reports , Editorial Board
2015-	Synthetic and Systems Biotechnology , Editorial Board
2016-2018	PLOS Computational Biology , Associate Editor (2016-2018)
2016-	Current Opinion of Systems Biology , Editorial Board
2016-2022	Applied and Environmental Microbiology , Editorial Board
2017-	Cell Stress , Editorial Board
2017-	Biotechnology and Bioprocess Engineering , Editorial Board
2019-	Frontiers in Chemical Science and Engineering , Editorial Board
2020-	QRB Discovery , 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	94
Main supervisor of <i>current</i> PhD students	7
Examiner of <i>current</i> PhD students	3
Co-supervisor of graduated PhD students (including visiting PhD students and as Examiner)	50
<i>Former</i> affiliated post docs	108
<i>Current</i> affiliated post docs	4
<i>Former</i> other affiliated staff	46

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); A yeast metabolic engineering company. Founder and involved in raising >25 MEUR in capital, CEO (2002-2004), CSO (2002-2008), Member of BoD (2002-2005 & 2008-2012), Chairman of SAB (2008-2012). The company brought yeast produced resveratrol to the market.
2002-2007	Gothia Yeast Solutions , Sweden, Member of SAB
2006-2011	MycoTeQ A/S , Denmark. An antibiotics discovery company. 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
2011-2018	MetaboGen AB , Sweden. A human gut microbiome company. Founder and Member of BoD; Raised >4 MEUR in capital. Sold to Biogaia AB in 2018
2013-2018	Evolva SA , Switzerland, Member of SAB
2014-	Biopetrolia AB , Sweden. A yeast synthetic biology company. Founder and Chairman of BoD; Raised >1 MEUR in soft funding and through research collaborations.
2014-2018	Novogy Inc. , USA, Member of SAB
2017-	Elypta AB , Sweden. A cancer diagnostic company. Founder, Chairman of BoD (2017-2018) and member of BoD (2018-). Raised >15 MEUR in VC capital and soft funding.
2019-	Chrysea Labs Inc. , Ireland. A yeast synthetic biology company. Raised >9 MEUR in VC capital.

Organization of Conferences

1990-	Member of organizing and scientific committee of more than 50 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)
2017	Metabolic Engineering Summit , Beijing, China (~600 delegates)
2019	Copenhagen Bioscience Conference , Denmark, Chairman (~150 delegates)