

Prof. Dr. Peter Neubauer  
Fachgebiet Bioverfahrenstechnik  
Institut für Biotechnologie  
Fakultät III - Prozeßtechnologie  
Technische Universität Berlin  
Ackerstr. 71-76, ACK24  
D- 13355 Berlin, Germany  
E-Mail: peter.neubauer@tu-berlin.de, Tel. +49 30 314 72269

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## 1 Scientific career

since 2008: Professor for Bioprocess Engineering at the Technische Universität Berlin, Germany

2000-2008: Full Professor for Bioprocess Engineering at the University of Oulu, Department of Process and Environmental Engineering, Finland

1995 - 2000: Senior researcher / head of fermentation group at Martin-Luther-Universität Halle-Wittenberg, Institute of Biotechnology (Prof. Dr. R. Rudolph).

1993 - 1995: Postdoc at the Royal Institute of Technology, Department of Biochemistry and Biotechnology, Stockholm, Sweden in the group of Prof. Dr. S.-O. Enfors (DAAD-Stipendium)

1988 - 1993: PhD student / research assistant at the Institute of Microbiology at the Ernst-Moritz-Arndt-Universität Greifswald (PD Dr. K. Hofmann, Prof. Dr. M. Hecker); Dissertation as Dr. rer. nat. finished April 30<sup>th</sup> 1992 ("Application of inducible host-vector systems in *Escherichia coli* under fermentation conditions ")

1983 - 1988: Study of Biology at the Ernst-Moritz-Arndt-Universität in Greifswald, specialisation in technical microbiology (diploma thesis: "Development of a fermentation process for production of pBR322 DNA in *E. coli relA* strains")

## 2 Grants and invited guest professorships

2010: DFG Research scholarship for the CSIR, Pretoria, South Africa

2008-2009: Guest professor at the University of Oulu, Finland, Department of Process and Environmental Engineering.

2007, 2008: Guest professor at the Technische Universität Berlin in Bioprocess Engineering

2006: Research scholarship from the Alfried Krupp von Bohlen und Halbach Foundation´s Collegiate Program "Life sciences – Medicine, Life and Health sciences" in Greifswald, Dept. Pharmaceutical Biotechnology"

1995: Post doctoral grant for support of the research work by the "Fond der Chemischen Industrie"

1993 - 1994: DAAD-Stipendium, Subject: "Influence of concentration gradients in large bioreactors on the plasmid stability and expression of recombinant genes in *Escherichia coli*". Royal Institute of Technology, Department for Biochem. & Biotechnol., Stockholm, Sweden (Prof. S.-O. Enfors)

1990: Grant of the "Swedish Institute" for research at the Department of Biotechnology, University of Lund, Sweden (Prof. B. Mattiasson, Doc. Dr. O. Holst)

## 3 Scientific projects/funding

Actual projects

2011 "Cultivation of heterotrophic marine microalgae", industrial research project

2010-2013 "Metabolic responses to bioreactor inhomogeneities: Understanding the flux to modified branched chain amino acids", DFG project

2011-2012 "A Novel bio-production system for a therapeutic peptide effective against HIV", BMBF project 10034229, Cooperation with CSIR, South Africa

2009-2013 Partner in the DFG-Excellence cluster "Unifying concepts of catalysis", coordinator TU Berlin

2011 "Development of computational tools for studying dynamics of industrial fed-batch processes in a novel two-compartment scale down reactor", DFG project for Dr. V. Lyubenova,

## Curriculum vitae: Peter Neubauer

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Bulgarian Academy of Sciences for a research visit at TU Berlin.

- 2011- „MultiSens- Teilprojekt1: Charakterisierung von Inhomogenitäten im Kern der Flüssigphase  
2013 von Gärprozessen“ BMU Project FKZ 03KB059A
- 2011 "Entwicklung eines Kits zur Hochzelldichtekultivierung von E.coli zur Plasmidisolierung für automatisierte Hochdurchsatzverfahren“ Transferbonus Projekt no. 1208 with industrial partner
- 2011 „Entwicklung von Hochzelldichtekultivierungsmethoden für Pichia Hefen" Transferbonus Projekt no. 1161 with industrial partner
- 2011 „Nucleocat“, Cooperation project with VLB

### Earlier key projects

- 2009- "Fermentation Process for Heterologous Peptide Production in *Bacillus halodurans*", DFG  
2010 project, Cooperation with CSIR, South Africa
- 2007- "Modular biocatalyst platform for chiral synthesis of chemical compounds by structure-based  
2010 directed evolution (BIOCAT)", Academy of Finland (Keiju program). Project Coordinator.
- 2008- "Enrichment and starter cultures for production and sensitive diagnostics (ENRICH)" TEKES  
2009 project no. 40254/07, Project coordinator.
- 2007- "Small-scale high cell density cultivation by enzyme based substrate delivery for high  
2009 throughput screening (MicroFedBatch)", Academy of Finland.
- 2005- EU RTD Project (FP6) "Electrical Bio Sensor Arrays for Analyses of Harmful Micro Organisms  
2007 and Microbial Toxins eBIOSENSE". Proj. no. 512009 Project partner.
- 2007- "Low cost disposable sensor platform for home diagnostics and health care and wellness  
2008 management systems" (WELFARE2, TEKES project); Project partner.
- 2006- "High throughput screening and scale-up bioprocessing HTS-Bio". Regional key project of  
2007 the Oulu region. Coordinator and key scientist.
- 2005- Project partner in the TEKES project: "Biocatalysts for producing pharmaceutical nucleoside  
2007 analogues (BioCatNuc)" (coordinator Prof. S. Lapinjoki, Univ. Kuopio).
- 2005- Partner in TEKES project (coordinator Markku Känkäkoski, VTT Electronics): Low cost  
2006 disposable sensor platform for home diagnostics and health care and wellness management systems (WELFARE, TEKES Dno 1106/31/04).
- 2004- Bioworld I project "BioPilot Plant for Oulu". Regional key project of the Oulu region.  
2006 Coordinator and key scientist.
- 2004- Project coordinator "Novel Diagnostic Platform for Pathogenic Microorganisms – Case Study:  
2006 Sensitive Assay for Mycobacteria in the Meat Production Chain", TEKES project MYCOBAC, Dnro 2265/31/03.
- 2003- "Control of biofouling in power plant and paper machine environment", Project partner.  
2006 Coordinator M. Salkinoja-Salonen, Helsinki, TEKES project no. 40302/03.
- 2004- "Platform for control and optimization of recombinant protein production in different cell  
2006 factories" TEKES project CORF(project no. 70042/02), Project coordinator.
- 2005- „SENBIT – wireless system for monitoring and control of small-scale microbial cultivations  
2006 and cell cultures“ (TEKES project 3184/31/04), Project coordinator.
- 2003- "Biosystem approach for fermentation state analysis and optimisation of collagen production  
2005 in *Pichia pastoris* (no. 203839)", Project leader, Academy of Finland
- 2002- Project leader of project: "Kealases – new engineered enzymes for stereoselective synthesis  
2005 of chiral  $\alpha$ -hydroxyaldehydes (no. 53923)", Coordinator and project leader, Academy of Finland.
- 2002- "DNA Arrays as New Tools for Contaminant Analysis in Brewery Processes (CONTAB)",  
2003 Project leader, TEKES no. 70042/02
- 2001- "New production strategies for biologically active disulfide-bond containing proteins in  
2003 *Escherichia coli* (no. 52477)", Project leader, Academy of Finland

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- 2001-2004 Project partner in the European RTD project QLK3-CT2001-01275 "Stem cell – Cellular production of Wnts, secreted growth and differentiation factors and their use as coordinators of organ specific stem cells", Coordinator: Prof. Seppo Vainio, University of Oulu, Finland.
- 2001-2004 "Rapid monitoring of the decontamination potential of microbial populations in industrial and environmental habitats (no. 52796)", Coordinator and project leader, SUNARE programme of the Academy of Finland
- 2001-2004 Project partner in the project "Natural product formation by plants: enhancement, analysis and processing", SUNARE programme of the Academy of Finland, Coordinator: Dr. A. Hohtola, University of Oulu, Finland
- 2000-2003 Project partner within the European RTD project QLRT-1999-00533 (DG12) "Electric DNA chips for bioprocess control - Bioprocess chips". (Coordinator S.-O. Enfors, Royal Institute of Technology, Stockholm, Sweden.
- 1998-2000 Project partner within the European project BIO4-CT98-0167 (DG12) "Control and optimisation of cellular bottlenecks in recombinant protein production"
- 1996-1999 Project partner within the European project BIO-CT95-0028 "Bioprocess scale-up strategy based on integration of microbial physiology and fluid dynamics"
- 1996-1999 Project partner within the European project BIO-CT96-0436 "Cellular factors which facilitate protein folding and disulphide bond formation: Novel machinery for improved protein production by cell factories"
- 1990-1991 BMFT-Project "E. coli *relA* strains – new save hosts for cloning and expression" (BEO 0319893A)
- 1989-1990 "Expression of viral antigens in bacteria" (development of a process for production of the FMDV coat protein, together with "Tierseuchen-Forschungsinstitut Insel Riems")

### 4 Supervisor of diploma theses and PhD theses

Supervisor of 8 finalized PhD theses and >50 diploma and master theses

Promoter of 4 finalized PhD theses and >10 diploma theses at TU Berlin (from 2009 onwards)

### 5 Publications

Author of >90 scientific papers in international peer-reviewed journals, 14 patents, author/coauthor of 11 textbooks/reviews; over 200 invited lectures and poster presentations at scientific conferences.

### 6 Others

**Scientific/professional organisations:** *Dechema*, Germany since 2008; *Vereinigung für Allgemeine und Angewandte Mikrobiologie (VAAM)*, Germany, since 1991; *Institut für Technische Biochemie e.V. Halle*, Germany. 1996-2001; personal member of the *European Federation of Biotechnology*, Microbial Physiology section, since 1996; *Deutscher Hochschullehrer Verband (DHV)* since 2000, *American Society of Microbiology (ASM)* since 2006.

**Founder/Cofounder of companies:** (I) Scanbec Oy 2000, (II) BioSilta Oy 2007 and its spin-off BioSilta Europe GmbH (2010)

**Scientific councils:** Member of scientific advisory board of the Leibnitz-Institut für Naturstoff-Forschung und Infektionsbiologie – Hans-Knöll-Institut, Jena, Germany (since 2009, for 4 years), Chairmen of the Scientific Advisory Board of the Competence Center of Food and Fermentation Technology, Tallinn, Estonia (since 2009)

**Journals:** *Microbial Cell Factories* (editor since 2002); *Biotechnology Journal* (editor since 2009), *Frontiers in MicroBioTechnology* and *Industrial Microbiology* (Associate Editor since 2011),

### 7 Personal

Born May 1962 in Halle (Saale), Germany. grown up in Plauen (Vogtland), Germany, Married to Dr. Antje Neubauer, three children (Robert, Max, Friederike).

Berlin, August 11, 2011