
Curriculum Vitae – Arto Heiskanen



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Academic background:

1983-1987 B.Sc. Biochemistry, Åbo Akademi University, Åbo, Finland

1997-2001 B.Sc. Chemistry, University of the Philippines, Quezon City, Philippines

2002-2004 M.Sc. Analytical Chemistry, Lund University, Lund, Sweden

Ph.D. Analytical Chemistry, Lund University, Lund, Sweden

2004-2009 Thesis:

Monitoring of cellular dynamics with focus on electrochemical techniques

Academic positions:

2003 Research Assistant, Analytical Chemistry, Lund University, Lund, Sweden

2009-2011 Ørsted Postdoctoral Fellow, DTU Nanotech, Lyngby, Denmark

2011- Postdoctoral Fellow, Bioanalytics, DTU Nanotech, Denmark (Until Dec. 31, 2011)

2012- Lundbeck Foundation Postdoctoral Fellow, DTU Nanotech, Lyngby, Denmark

Project Management:

Work package Leader "Design and development of micro and nanostructures for electrochemical study of living cells in microfluidic culture devices", FP7 EU project – EXCELL (NMP4-SL-2008-214706)

Executive Board FP7 EU project EXCELL (NMP4-SL-2008-214706)

Teaching and supervision:

2005-2008 Teaching Assistant, Analytical Chemistry, Lund University, Sweden

2010- Co-organizer of PhD course "Potential applications of current electrochemical methods in micro- and nanotechnology", DTU Nanotech, Denmark

2011- Lecturers in impedance spectroscopy for course "Advanced Electrochemistry", Lund University, Sweden

2004- Supervisor of 10 Master students (graduated)

2009- Co-supervisor of 6 PhD students (on-going projects)

Titles:

- Designing polymeric microfluidic platforms for biomedical applications
- Real-time monitoring of stem cell differentiation in brain tissue using microfluidic on-line culture systems
- Development of biomimetic membrane array sensors
- 3D carbon electrodes for biofuel cell applications
- Development of safer non-viral gene transfection vectors
- Immunological sensors for on-line measurement of pesticides in water

Awards and honors:

- 1998-2001** University Scholar, University of the Philippines, Quezon City, Phil.
2000 The Alumni Association Award for the Best Incoming Senior Student, University of the Philippines, Quezon City, Phil.
2001 Magna Cum Laude (1st Honor), University of the Philippines, Quezon City, Phil.
2009 The Phabian Award 2009 for the best PhD thesis in pharmaceutical sciences, Swedish Academy of Pharmaceutical Sciences

Research grants:

- 2009** Ørsted Scholarship for Postdoctoral Research
Project:
Mutiparameter detection and optimization of stem cell differentiation and integration into brain tissue as a means to treat Parkinson's disease Two-year salary
- 2011** Lundbeck Foundation grant for Postdoctoral Research (co-financed by DTU Nanotech) Total budget:
Project: DKK 3 200 000
Real-time monitoring of pathogenesis of Parkinson's disease – Applications for drug discovery

Focus of scientific research:

Electrochemical monitoring

- Cellular redox metabolism (mediated amperometry)
- Exocytosis of dopamine (amperometry on modified electrodes)
- Cellular adhesion, spreading, proliferation, differentiation (impedance spectroscopy)

Design and fabrication of microfluidic systems

- Cell culturing (yeast and mammalian/human cells)
- Tissue culturing

Design and fabrication of micro- and nanoelectrode chips for electrochemical study

- Microbes
- Mammalian/human cells

Reviewer:

Analytical Chemistry, Analytical and Bioanalytical Chemistry, Analytical Methods, Bioelectrochemistry, BioTechniques, Electrochemistry Communications, Lab on a Chip, Sensors, Sensors and Actuators B

Dissemination:

H-index	7
Total number of citations	131
Peer reviewed publications (incl. proceedings)	18
Conference contributions	16
Book chapters	3
Invited lectures	4
