



4th International Conference "Biomaterials, Tissue Engineering & Medical Devices"



Brief biographical note

Professor Heimo Ylänen is a materials science engineer who obtained his Bachelor and Master's degree from the Åbo Akademi University, Turku Finland. After M.Sc. he worked for 17 years in a big international pharmaceutical company on different levels activities dealing with marketing of medicines. After that, Ylänen returned to Academia and obtained his Ph.D. from the same Åbo Akademi University, subject of the Thesis dealing with clinical applications of bioactive glasses. His opponent was Professor Larry Hench, a pioneer of bioactive glasses. During the studies, Ylänen established a research group which focused on development of a computerized program for controlling of chemical bioactivity of bioactive glasses. This group generated totally 5 Ph.D. Theses, several patents and tens of publications. In 2004, he was invited to begin as a director of Turku Biomaterials Centre at University of Turku. In September 2008, Ylänen was invited to start as a Professor at the Department of Biomedical Engineering, Tampere University of Technology.

His professional and scientific activity comprises: Chapters in handbooks/textbooks (2); Chief Editor of a Handbook to be published in 2010, papers published in scientific journals (46); papers published in the proceedings of international or national conferences (16); patents (11); member of the scientific committee of different international meetings (5); head of the organizing committee for different international conferences (2); President of the Finnish Society for Biomaterials since 2004, Fellow of Biomaterials Science and Engineering, FBSE, by Society for Biomaterials, 2008, referee of scientific journals (4); official opponent for doctoral dissertation (2); scientific pre examiner for doctoral dissertation (3)

Name , salutation: Professor Heimo Olavi Ylänen

Current appointment

Department of Biomedical Engineering
Faculty of Science and Environmental Engineering
Tampere University of Technology, Tampere, Finland





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Educational Background:

- **Professor**, Tampere University of Technology, 1.2.2009-
- **Senior Researcher**, Tampere University of Technology, 1.11.2008-31.1.2009.
- **Docent (Adjunct Professor)**, Åbo Akademi University, 26.05. 2003-
- **Ph.D.**, Chemistry, Åbo Akademi University, 12.3. 2001.
- **Doctoral Dissertation**, *with honor*: Bone Ingrowth into Porous Bodies Made by Sintering Bioactive Glass Microspheres. Referred by Professor Larry Hench, and Academy Professor Pertti Törmälä, Opponent Professor Hench, 2000.
- **Certificate on perfect command of Swedish**, 1996.
- **Certificate on Coastal Skipper (Yachting)**, Yachting Club of Rauma in association with the Naval School of Rauma, 1985.
- **Certificate on Medicine Consultant**, LIF (Swedish Association of the Pharmaceutical Industry), 1977.
- **Lieutenant** (guerilla, obligatory military service) Finnish Army 10/1974-9/1975.
- **M.Sc. (Chem)**, Åbo Akademi University, 31.5. 1974
- **B.Sc.**, Åbo Akademi University, 8.3. 1974

Experience:

- Professor, Tampere University of Technology, the Department of Biomedical Engineering 1.2.2009-
- Senior Researcher, Tampere University of Technology, the Department of Biomedical Engineering, 1.11.2008- 31.1.2009
- Director, Turku Biomaterials Centre 1.6.2004-31.10.2008
- Docent (Adjunct Professor), Åbo Akademi University, Process Chemistry Centre 21.05.2003-
- Project Manager (Bioactive Glasses for Clinical Applications), 1.1. 1999-30.5.2004, Åbo Akademi University, Process Chemistry Centre, Combustion and Materials Chemistry.
- Research Associate, 1.6. 1997-31.12. 1998, Laboratory for Inorganic Chemistry, Åbo Akademi University.
- Teaching assistant, 9.10. 1995-31.5. 1997, Laboratory for Inorganic Chemistry, Åbo Akademi University.
- Area Sales Manager, 1.6. 1985-30.9. 1995, Suomen Astra Oy, Finland.
- Sales Director, 1.1. 1984-31.5. 1985, Fisons Pharmaceuticals, Finland.
- Medical Representative, Product Specialist, Sales Supervisor, 8.8. 1977- 31.12. 1983, Astra Pharmaceuticals, Finland.
- Master of mathematics, physics and chemistry 1.8. 1976-31.7. 1977, Coeducational School of Rauma, Finland.
- Master of chemistry, 1.8. 1975-31.7. 1976, Naval School of Rauma, Finland.
- Chemistry, mathematic and physics teacher 1.9. 1973-31.7.1976, Coeducational School of Rauma, Finland.



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Research/clinical interest

Research activity in the field of development of bioactive glasses for clinical applications. Also, composites manufactured of biodegradable polymers and bioactive glasses.

- Development of tailor made bioactive glasses for a variety of clinical applications
- Project manager in a group which developed a computerized program for control of chemical and *in vivo* bioactive of a glass as a function of the chemical composition of the glass
- Research on the development of porous, biodegradable and bioactive load bearing material made of polymer and bioactive glass
- Research on the development of a drug delivery device with electrically controlled release of pharmaceuticals.
- Creation of collaboration in biomaterials and tissue engineering between Finnish universities and Zhongshan hospital of Fudan university, Shanghai, China

Present Areas of Activities

Expanding the collaboration started in Shanghai.

Widening of the international collaboration between Tampere University of Technology and some selected universities in India and Kenya.

Starting of collaboration with two universities and one company partner in Kyoto, Japan

Expanding the research to proactive healthcare.

Title of your BIOMMEDD 2010 lecture:

From Biomaterials and Tissue Engineering to Biomedical Engineering

and

From Crisis Management to Proactive Medicine