

Graduate School Course

Molecular studies
Genetic and molecular aspects
Family- and case-control-based genetic studies
Genetic and Molecular Aspects of Alzheimer's Disease
Functional characterization of novel risk genes
Inflammatory aspects
Molecular basics

August 19-20, 2008
Mediteknia Auditorium
University of Kuopio, Kuopio, Finland

Welcome !	<p>This course will cover current topics related to genetic and molecular studies in Alzheimer's disease (AD).</p> <p>The course consists of lectures and small group exercises given by international experts.</p>
Specific topics	<ul style="list-style-type: none"> ■ How to identify novel risk genes in Alzheimer's disease by means of genetics. Although the lectures will concentrate on AD-related applications, the discussed approaches are applicable to other complex diseases as well. ■ How to characterize functional role of genetically identified candidate genes in AD pathogenesis. Lectures will introduce current <i>in vitro</i> and <i>in vivo</i> approaches in the functional characterization of novel AD candidate genes.
Note !	<p>This course is also applicable to post-graduate students and senior researchers.</p>
Director of the course	<p>Research Director Mikko Hiltunen Molecular Genetics and Functional Genomics Department of Neurology, Institute of Clinical Medicine, University of Kuopio mikko.hiltunen(at)uku.fi</p>
Organized by	<ul style="list-style-type: none"> ■ Department of Neurology, Institute of Clinical Medicine, University of Kuopio ■ Graduate School of Molecular Medicine, University of Kuopio ■ Nordic Centre of Excellence - Molecular Mechanisms of Neurodegenerative Diseases
Updated	<p>13.8.2008</p>
Registration	<p>Deadline for registration was August 12, 2008. No registration fee.</p>
Contact information	<p>Course secretary Sari Palviainen sari.palviainen(at)uku.fi</p>

ECTS credits	1,0 (lectures and exercises)
Credits	0,5
See also	Study module contents
Teaching language	English
Study material	Material distributed during the course
Teaching methods and assessment	Lectures 10 h, exercises/problem-based tasks 6 h
Course location	Mediteknia Building , Auditorium (MET)
Accommodation	For Kuopio accommodation info, see http://www.kuopioinfo.fi/english/

Teaching staff	<p>Aleister Saunders, Associate Professor, Drexel University, Philadelphia, USA</p> <p>Lars Bertram, Prof. MGH/Harvard Medical School, USA</p> <p>Stefan Lichtenthaler, Dr. Adolf-Butenandt-Institute, Ludwig-Maximilians-University, Munich, Germany</p> <p>Antero Salminen, Docent Department of Neurology, University of Kuopio, Kuopio, Finland</p> <p>Heikki Tanila, Prof. Department of Neurobiology, A.I.Virtanen Institute for Molecular Sciences, University of Kuopio, Finland</p> <p>Martin Ingelsson, Dr. Department of Public Health and Caring Sciences, Uppsala University, Sweden</p> <p>Mikko Hiltunen, Docent Department of Neurology, Institute of Clinical Medicine, University of Kuopio</p>
-----------------------	--

Final Program August 19-20, 2008

Tuesday 19.8.	GENETICS OF ALZHEIMER'S DISEASE
10.00-10.15	<p>Opening Prof. Hilkka Soininen Head of Department of Neurology, Institute of Clinical Medicine, University of Kuopio, Finland</p>
10.15-10.30	<p>Docent Mikko Hiltunen Director of the course Department of Neurology, Institute of Clinical Medicine, University of Kuopio, Finland</p>
10.30-12.00	<p>Keynote lecture: Family- and case-control-based genetic studies in Alzheimer's disease Prof. Lars Bertram MGH/Harvard Medical School, USA</p>

- 12.00-13.00 *Lunch break*
- 13.00-14.30 **Identification and characterization of amyloid precursor protein metabolism regulators**
Associate Professor **Aleister Saunders**
Drexel University, Philadelphia, USA
- 14.30-15.00 *Coffee break*
- 15.00-18.00 **Exercise: Introduction to statistical analyses used in Alzheimer's disease genetics**

**Wednesday
20.8.**

MOLECULAR ASPECTS OF ALZHEIMER'S DISEASE

- 08.30-09.30 **Molecular basics of Alzheimer's disease; Special emphasis to α -, β -, and γ -secretases**
Dr. **Stefan Lichtenthaler**
Adolf-Butenandt-Institute, Ludwig-Maximilians-University, Munich, Germany
- 09.30-10.30 **Inflammatory aspects of Alzheimer's disease**
Docent **Antero Salminen**
Department of Neurology, Institute of Clinical Medicine, University of Kuopio, Finland
- 10.30-11.30 **Transgenic animal models in Alzheimer's disease**
Prof. **Heikki Tanila**
Department of Neurobiology, A.I. Virtanen Institute for Molecular Sciences, University of Kuopio, Finland
- 11.30-12.30 *Lunch break*
- 12.30-13.30 **Molecular studies related to neuropathological samples in Alzheimer's disease and other dementias**
Dr. **Martin Ingelsson**
Department of Public Health and Caring Sciences, Uppsala University, Sweden
- 13.30-14.30 **Functional characterization of novel risk genes in Alzheimer's disease**
Docent **Mikko Hiltunen**
Department of Neurology, Institute of Clinical Medicine, University of Kuopio, Finland
- 14.30-15.00 *Coffee break*
- 15.00-18.00 **Exercise: Introduction to molecular and cellular biology applications used in Alzheimer's disease**