



Special Lecture :

**Professor SEPPO YLÄ-HERTTUALA, MD,
PhD**

Department of Biotechnology and Molecular Medicine
University of Eastern Finland

**„Genetic Molecular Therapies for the
Heart“**

Monday, 29th June, 2015

Lecture Hall H, 17:00 s.t.

Host: Prof. Dr. Jörg Heineke, Katrin Eichler (phone 5162)



Abstract

Professor SEPPO YLÄ-HERTTUALA has shown vasculoprotective effect of VEGF gene therapy, characterized angiogenic and lymphangiogenic effects of the members of the VEGF family (VEGF-A, VEGF-B, VEGF-C, VEGF-D, VEGF-E, PLGF and their receptors) and identified several new candidate genes for the treatment of vascular diseases using DNA array and deep sequencing techniques. In phase II clinical gene therapy studies he has shown that VEGFadenovirus can improve vascularity in leg muscles and improve perfusion in myocardium. Also, in a phase II and III studies Professor YLÄ-HERTTUALA shown that adenovirus thymidine kinase gene therapy can significantly improve the life expectancy of malignant glioma patients. In addition, several significant improvements have been made in gene therapy vectors, including the first demonstration that promoter-targeted siRNAs can upregulate target gene expression via epigenetic mechanisms. This new approach has been named "Epigenetherapy".