

Lauri Eklund – CV

Education and positions

- 1995 Laboratory training, Max Planck Institut für Biochemie, Martinsried, Germany.
- 1998 M.Sc. degree, University of Oulu, Department of Biology.
- 2001 Ph.D. degree, University of Oulu, Department of Medical Biochemistry.
- 2002 - 2005 EMBO Research Fellow and Post-Doctoral training, Department of Cell Biology, Harvard Medical School, MA, USA.
- 2002 - 2006 Senior Assistant, Department of Medical Biochemistry and Molecular Biology, University of Oulu.
- 2007 - 2009 Post-doctoral researcher project, Academy of Finland.
- 2009 - 2015 Academy Research Fellow, Academy of Finland.
- 2007 - Principal Investigator, Department of Medical Biochemistry and Molecular Biology, University of Oulu.
- 2008 - Group leader in Oulu Center for Cell-Matrix Research consortium.
- 2010 - Responsible scientists for the Light Microscopy Core Facility of Biocenter Oulu.
- 2012 - 2017 Group leader in Finnish Centre of Excellence in Cell-Extracellular Matrix Research, Academy of Finland.

Selected scientific advisory functions

- 2000 - 2002 Member of the Board for the Transgenic Mouse Unit, Laboratory Animal Centre, University of Oulu, Finland.
- 2007 - Member of the Departmental Council, Department of Medical Biochemistry and Molecular Biology, University of Oulu.
- 2007 - Biocenter Oulu Graduate School Thesis Follow-up group member.
- 2009 - Corresponding applicant of Biocenter Oulu in the consortium proposal to Biocenter Finland from the Light Microscopy Consortium of the National Imaging Infrastructure.
- 2009 - Co-evaluator of Faculty of 1000.
- 2004 - Invited Ad hoc referee for scientific journals: Cell & Tissue Research, Matrix Biology, Acta Cardiologica, Angiogenesis, FASEB J, BBA - Reviews on Cancer, Experimental Biology and Medicine, Journal of Cancer Science & Therapy, Neoplasia.
- 2012 External reviewer for project proposal (The Landsteiner Foundation, the Netherlands).
- 2013 Corresponding applicant of Biocenter Oulu in the consortium proposal of Finnish BioImaging to the Euro-BioImaging ESFRI initiative.
- 2007 Referee for Doctoral Dissertation, University of Helsinki, Finland.
- 2012 Opponent for Doctoral Dissertation, de Duve Institute, Belgium.

Honors and awards

- 2011 University Oulu reward for distinguished research work.

Selected publications

Eklund L, Piihola J, Komulainen J, Sormunen R, Ongvarrasopone C, Fässler R, Muona A, Ilves M, Ruskoaho H, Takala TES & Pihlajaniemi T. Lack of type XV collagen causes a skeletal myopathy and cardiovascular defects in mice. *Proc Natl Acad Sci USA* 98: 1194-1199, 2001.

*Fukai N, *Eklund L, *Marneros AG, Oh SK, Keene D.R, Tamarkin L, Li E, Pihlajaniemi T & Olsen BR. Lack of collagen XVIII/endostatin results in eye abnormalities. *Equal contribution. *EMBO J* 21: 1535-1544, 2002.

Hurskainen M, Eklund L, Hagg PO, Fruttiger M, Sormunen R, Ilves M & Pihlajaniemi T. Abnormal maturation of the retinal vasculature in type XVIII collagen/endostatin deficient mice and changes in retinal glial cells due to lack of collagen types XV and XVIII. *FASEB J* 19:1564-1566, 2005.

*Saharinen P, *Eklund L, Miettinen J, Wirkkala R, Anisimov A, Winderlich M, Nottebaum A, Vestweber D, Deutsch U, Koh GY, Olsen BR & Alitalo K. Angiopoietins assemble distinct Tie2 signalling complexes in endothelial cell-cell and cell-matrix contacts. *Equal contribution. *Nature Cell Biol* 10: 527-537, 2008.

*Limaye N, *Wouters V, #Uebelhoer M, #Tuominen M, Wirkkala R, Mulliken JB, Eklund L, Boon LM & Vikkula M. Somatic Mutations in the Angiopoietin-Receptor TIE2 Cause Both Solitary and Multiple Sporadic Venous Malformations. * and #, equal contribution. *Nature Genetics* 41: 118-124, 2009.

Rasi K, Piuholta J, Czabanka M, Sormunen R, Ilves M, Leskinen H, Rysä J, Kerkelä R, Janmey P, Heljasvaara R, Peuhkurinen K, Vuolteenaho O, Ruskoaho H, Vajkoczy P, Pihlajaniemi T & Eklund L. Collagen XV is necessary for modeling of the extracellular matrix and its deficiency predisposes to cardiomyopathy. *Circ Res* 107:1241-1252, 2010.

Holopainen T, Saharinen P, D'Amico G, Lampinen A, Eklund L, Sormunen R, Anisimov A, Zarkada G, Lohela M, Heloterä H, Tammela T, Benjamin LE, Ylä-Herttua S, Leow CC, Koh GY, Alitalo K. Effects of Angiopoietin-2 blocking antibody on endothelial cell-cell junctions and lung metastasis. *J Natl Cancer Inst.* 104:461-475, 2012.

Pietilä R, Nätyynki M, Tammela T, Kangas J, Pulkki KH, Limaye N, Vikkula M, Koh GY, Saharinen P, Alitalo K, Eklund L. Ligand oligomerization state controls Tie2 receptor trafficking and Angiopoietin-2 ligand-specific responses. *J Cell Science.* 125: 2212-2223, 2012.

Uebelhoer M, Nätyynki M, Kangas J, Soblet J, Mendola A, Godfraind C., Boon LM, Eklund L, Limaye N, Vikkula M. Venous malformation-causing TIE2-mutations lead to AKT-mediated downregulation of PDGFB. *Hum Mol Genet.* 22:3438-3448, 2013.

Eklund L, Bry M, Alitalo K. Mouse models for studying angio- and lymphangiogenesis in cancer. *Mol Oncol.* 7:259-82, 2013.

Eklund L, Saharinen P. Angiopoietin signaling in the vasculature. *Exp Cell Res.* 319:1271-1280, 2013.

Kaakinen M*, Huttunen S*, Paavolainen L, Marjomäki V, Heikkilä J, Eklund L. Automatic detection and analysis of cell motility in phase-contrast time-lapse images using a combination of maximally stable extremal regions and Kalman filter approaches. *J Microscopy.* *Equal contribution. In Press, 2013.