Modulation of vascular remodeling : a role for the immune system, growth factors, and transcriptional regulation

Seghers, L.

Publications

Peer reviewed publications

Seghers L, Bastiaansen AJNM, van Weel V, Toes REM, de Vries MR, Hellingman AA, van Bergen J, van Hinsbergh VWM, Quax PHA.
Differences in NK gene complex between C57BL/6 and BALB/c mice determine post ischemic blood flow recovery. *Submitted for publication.*

Seghers L, de Vries MR, van Bergen J, Toes REM, van Hinsbergh VWM, Quax PHA.
C57BL/6 NK gene complex involved in vascular remodeling in general. *Submitted for publication.*

Seghers L, de Vries MR, Pardali E, Hoefer IE, Hierck BP, ten Dijke P, Goumans MJ, Quax PHA.
Shear induced collateral artery growth modulated by endoglin, but not by ALK1. *Submitted for publication.*

van Solingen C, de Boer HC, Bijkerk R, Monge M, van Oeveren-Rietdijk AM, **Seghers L**, de Vries MR, van der Veer EP, Quax PH, Rabelink TJ, van Zonneveld AJ.
MicroRNA-126 modulates endothelial SDF-1 expression and mobilization of Sca-1+/Lin- progenitor cells in ischemia. *Cardiovascular Research. 2011 Sep 27 [Epub ahead of print].*

Hellingman AA, Bastiaansen AJ, de Vries MR, **Seghers L**, Lijkwan MA, Löwik CW, Hamming JF, Quax PHA. Variations in surgical procedures for hind limb ischemia mouse models result in differences in collateral formation. *European Journal of Vascular and Endovascular Surgery. 2010 Dec;40(6):796-803*

Eefting D, **Seghers L**, Grimbergen JM, de Vries MR, de Boer HC, Lardenoye JW, Jukema JW, van Bockel JH, Quax PHA. A novel urokinase receptor-targeted inhibitor for plasmin and matrix metalloproteinases suppresses vein graft disease. *Cardiovascular Research 2010 Nov 1;88(2):367-75. Epub 2010 June 17.*

Taherzadeh Z, van Bavel E, de Vos J, Matlung HL, van Montfrans G, Brewster LM, **Seghers L**, Quax PHA, Bakker EN. Strain-dependent susceptibility for hypertension in mice resides in the natural killer gene complex. *American Journal of Physiology – Heart and Circulatory Physiology 2010 Apr;298(4):H1273-82. Epub 2010 Feb 12.*

van Solingen C, **Seghers L**, Bijkerk R, Duijs JM, Roeten MK, van Oeveren-Rietdijk AM, Baelde HJ, Monge M, Vos JB, de Boer HC, Quax PHA, Rabelink TJ, van Zonneveld AJ. Antagomir-mediated silencing of endothelial cell specific microRNA-126 impairs ischemia-induced angiogenesis. *Journal of Cellular and Molecular Medicine. 2009 Aug;13(8A):1577-85*

van Weel V, Toes REM, **Seghers L**, Deckers MM, de Vries MR, Eilers PH, Sipkens J, Schepers A, Eefting D, van Hinsbergh VWM, van Bockel JH, Quax PHA. Natural Killer Cells and CD4+ T-cells modulate collateral artery development. *Arteriosclerosis Thrombosis Vascular Biology. 2007 Nov; 27(11):2310-8. Epub 2007 Aug 23.*

van Weel V, **Seghers L**, de Vries MR, Kuiper EJ, Schlingemann RO, Bajema IM, Lindeman JH, Delis-van Diemen PM, van Hinsbergh VWM, van Bockel JH, Quax PHA. Expression of Vascular Endothelial Growth Factor, Stromal Cell-Derived Factor-1 and CXCR4 in human limb muscle with acute and chronic ischemia. *Arteriosclerosis Thrombosis Vascular Biology. 2007 Jun; 27(6):1426-32 Epub 2007 Mar 15.*

Book chapters

Seghers L, Hellingman AA, Quax PHA, van Weel V. Review: Bone marrow derived cells in arteriogenesis: the role of inflammatory cells. *Published in Deindl E and Schaper W, editors. Arteriogenesis- Molecular Regulation, Pathophysiology and Therapeutics. E-book 2010: 145-154.*

Curriculum vitae

The author of this thesis was born on the 1st of July 1981 in Winterswijk, the Netherlands. In 1999 he graduated from the Willem de Zwijger College (Atheneum) in Papendrecht, and he started his study of medicine at the University of Leiden in 2000.

In 2005 he started with his graduate research project under the direct supervision of professor P.H.A. Quax and professor J.H. van Bockel at TNO Quality of Life and the department of vascular surgery of the Leiden University Medical Center (LUMC), respectively. For this research project he received the KNMG Dick Held Junior Prize in March 2007.

In November 2005 he started as a PhD student on a project of the Dutch Program for Tissue Engineering under joint supervision of Prof. Dr. V.W.M. van Hinsbergh (Institute for Cardiovascular Research, VU Medical Center, Amsterdam), Prof. Dr. P.H.A. Quax and Prof. Dr. J.H. van Bockel (department of vascular surgery LUMC, Leiden).

From December 2009 until October 2011 he performed his internships at the Erasmus Medical Center in Rotterdam and obtained his medical degree in November 2011. At the 1st of December 2011 he will start his training to become a pulmonologist at the Sint Franciscus Gasthuis (SFG) in Rotterdam under the supervision of Dr. A.P. Rietveld and at the Erasmus Medical Center (Erasmus MC) in Rotterdam under the supervision of Prof. Dr. H.C. Hoogsteden.