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## The interplay between TGF- $\beta$ and VEGF signalling in endothelial cell function

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# Curriculum Vitae

Zhen Liu was born on January 24<sup>th</sup>, 1981 in Qingdao, China. She graduated from Qingdao No2 Middle School. From 1999 to 2002, she majored in General biology in the college of life science, HuaZhong Agriculture University, whilst obtained minor in Economy in WuHan University as secondary bachelor. From 2003 to 2005, She attended the master course of molecular biology and bioinformatics in Amsterdam University (UvA). In master program, she performed her first 3-month internship in the department of microbiology at UvA. Thanks to the strong interests in signalling transduction in tumor biology, she was motivated to investigate the LPA signalling as her second internship at NKI under the supervision of Prof. Dr. Wouter Molenaar and Dr. Laurens van Meeteren.

In Sep 2005, Zhen started her PhD study under the supervision of Prof. Dr. Peter ten Dijke at the Leiden University Medical Centre (LUMC). Her research topic was to elucidate the cross talk between TGF- $\beta$  and VEGF signalling on endothelial cell behavior. From Oct 2009 to Dec 2011, she worked as a post-doc fellow in Dr. Metello Innocenti's group at the department of cell biology at Dutch Cancer Institute NKI, with the focus on the role of actin dynamics in cell motility.

Life is full of surprises. Sometimes it is fulfilled with joy, but other times it offers tough time. Due to family reasons, Zhen resigned the post-doc fellowship in Jan 2012 and went back to China for the most important people in her life --- her family! Since Nov 2012, she has been working in the biotech company ACS. Biomarker B.V.

List of publications

# List of publications

- **Liu Z**, Franck Lebrin, Janita A Maring *et al.* Endoglin is dispensable for vasculogenesis, but required for vascular endothelial growth factor induced angiogenesis. PlosOne accepted
- **Liu Z**, Gijs B. Afink, Peter ten Dijke Soluble fms-like tyrosine kinase 1 and soluble endoglin are elevated circulating anti angiogenic factors in pre-eclampsia Pregnancy Hypertension 4: 35-367. doi: 10.1016/j.preghy.2012.06.003; 2008
- Orlova VV, **Liu Z**, Goumans MJ, ten Dijke P.angiogenesis by two unique TGF- $\beta$  type I receptor signalling pathways. Histol Histopathol. 2011 Sep;26(9):1219-30. Review.
- Hawinkels LJ, Kuiper P, Wiercinska E, Verspaget HW, **Liu Z**, Pardali E, Sier CF, ten Dijke P Matrix metalloproteinase-14 (MT1-MMP)-mediated endoglin shedding inhibits tumor angiogenesis. Cancer Res. 2010 May 15;70(10):4141-50. doi: 10.1158/0008-5472.CAN-09-4466.
- **Liu Z**, Kobayashi K, van Dinther M, van Heiningen SH, Valdimarsdottir G, van Laar T, Scharpfenecker M, Löwik CW, Goumans MJ, ten Dijke P, Pardali E.VEGF and inhibitors of TGF- $\beta$  type-I receptor kinase synergistically promote blood-vessel formation by inducing  $\alpha$ 5-integrin expression. J Cell Sci. 2009 Sep 15;122(Pt 18):3294-302. doi: 10.1242/jcs.048942. Epub 2009 Aug 25.
- Goumans MJ, **Liu Z**, ten Dijke P TGF- $\beta$  signalling in vascular biology and dysfunction. Cell Res. 2009 Jan;19(1):116-27. doi: 10.1038/cr.2008.326. Review.
- Scharpfenecker M, van Dinther M, **Liu Z**, van Bezooijen RL, Zhao Q, Pukac L, Löwik CW, ten Dijke P.MMP-9 signals via ALK1 and inhibits bFGF-induced endothelial cell proliferation and VEGF-stimulated angiogenesis. J Cell Sci. 2007 Mar 15;120(Pt 6):964-72. Epub 2007 Feb 20.
- Pardali E, **Liu Z**, Scharpfenecker M, ten Dijke P. TGF- $\beta$  signalling and vascular morphogenesis. In "Transforming Growth Factor- $\beta$  in Cancer Therapy", Beverly Teicher's Methods in Molecular Biology series on "Cancer Drug Discovery and Development". Ed. S. Jakowlev (The Humana Press, Inc.), 2008. Review.

