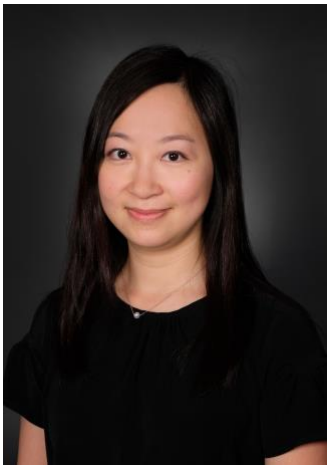

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- Lab (Under construction)
- Interview article: https://projects.croucher.org.hk/news/molecular-biology-quest-to-reduce-maternal-deaths

Education

2005	Ph.D.	Pharmacology, The Chinese University of Hong Kong
2002	M.Phil.	Biology, The Chinese University of Hong Kong
1999	B.S.	Biology, The Chinese University of Hong Kong

Professional Positions

2019-Present	Research Assistance Professor, Department of Ob/Gyn and Reproductive Sciences, University of Vermont
2015-2019	Postdoctoral Associate, Department of Ob/Gyn and Reproductive Sciences, University of Vermont
2009-2011	Postdoctoral Fellow, Department of Pathology and Laboratory Medicine, University of Kansas Medical Center, Kansas, US
2006-2008	Postdoctoral Fellow, Epidemiology and Physiopathology of Oncogenic Viruses, Pasteur Institute, Paris, France

Research Interests

My research focuses on the mechanisms of maternal uterine vascular adaptation in healthy vs. diseased pregnancy and the long-term goal is to develop novel strategies to prevent pregnancy complications caused by impaired uteroplacental blood flow.

Recently, we are studying (1) Piezo1 – a shear stress-sensitive cation channel – and its specific role within maternal uterine circulation; and (2) the communication between vein and artery in response to fetoplacental factors and uterine hemodynamics, and how it affects the vascular remodeling process during pregnancy.

Research Grants

National Institute of Health (NHLBI) R01 HL134371 “Shear Stress-induced maternal uterine vascular remodeling during pregnancy”, PI: N.L. Ko
7/1/19-6/30/20 Active

Preeclampsia Foundation Vision Grant “Piezo1 mechanotransduction in the gestational uterine circulation”, PI: N.L. Ko
1/1/19-12/31/2020 Active

Awards and Honors

2019 Career Development Workshop Travel Award, Society for Reproductive Investigation
2018 Early Career Research Award, Cardiovascular Research Institute, University of Vermont

Publications

Morris EA, Mandalà M, **Ko NL**, Osol G. Postpartum Persistence of Maternal Uterine Vascular Gestational Adaptation in Rodents. Reprod Sci. 2020 Jan 8;. doi: 10.1007/s43032-019-00062-z. [Epub ahead of print] PubMed PMID: 31916096.

Osol G, **Ko NL**, Mandalà M. Plasticity of the Maternal Vasculature During Pregnancy. Annu Rev Physiol. 2019 Feb 10;81:89-111. doi: 10.1146/annurev-physiol-020518-114435. PubMed PMID: 30742784; PubMed Central PMCID: PMC6571171.

Gelinne A, Brown L, **Ko NL**, Osol G, Brown S. Pregnancy-Induced Physiologic Adaptation of the Abdominal Aorta Is Associated with Changes in Gene Expression and Genomic Methylation. J Vasc Res. 2018;55(5):319-327. doi: 10.1159/000493682. Epub 2018 Oct 22. PubMed PMID: 30347403.

John L, **Ko NL**, Gokin A, Gokina N, Mandalà M, Osol G. The Piezo1 cation channel mediates uterine artery shear stress mechanotransduction and vasodilation during rat pregnancy. Am J Physiol Heart Circ Physiol. 2018 Oct 1;315(4):H1019-H1026. doi: 10.1152/ajpheart.00103.2018. Epub 2018 Jul 13. PubMed PMID: 30004235; PubMed Central PMCID: PMC6230896.

Ko NL, Mandalà M, John L, Gelinne A, Osol G. Venoarterial communication mediates arterial wall shear stress-induced maternal uterine vascular remodeling during pregnancy. Am J Physiol Heart Circ Physiol. 2018 Sep 1;315(3):H709-H717. doi: 10.1152/ajpheart.00126.2018. Epub 2018 May 18. PubMed PMID: 29775414; PubMed Central PMCID: PMC6172634.

Osol G, **Ko NL**, Mandalà M. Altered Endothelial Nitric Oxide Signaling as a Paradigm for Maternal Vascular Maladaptation in Preeclampsia. Curr Hypertens Rep. 2017 Sep 23;19(10):82. doi: 10.1007/s11906-017-0774-6. Review. PubMed PMID: 28942512.

Complete List of Publications on PubMed:
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