



**Name:** Dr. Jennifer Krupp, MD

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**Major Professor:** Dr. Ian Bird

**Degree Objective:** MS. Endocrinology and Reproductive Physiology

**Background:** BS Nursing Univ Alaska, Anchorage, MS Nursing, Marquette Univ, Milwaukee Wi, MD Univ Wi Madison, SMPH.

**Current Research Project:**

Normal pregnancy is associated with endothelial cell changes in calcium signaling and nitric oxide (NO) production which lead to vasodilation. Direct imaging of the human umbilical vein endothelial (HUVE) cells in situ demonstrates calcium responses and associated nitric oxide production. The purpose of my study is to demonstrate, in preeclampsia, if there is a decreased ability of the endothelial cell to signal calcium responses and no nitric oxide production, therefore, diminishing normal vasodilation.

**Honors:**

Ben Peckham Award, Obstetrics & Gynecology Residency Program, University of Wisconsin School of Medicine & Public Health

**Grants Received:**

Dept OBGyn Research grant, 2009. Endothelial dysfunction in preeclamptic pregnancy.

**Publications:**

**National Presentations:**

Krupp J, Shah D, Bird IM, Yi FX (2008), Human Umbilical Vein Endothelium: Calcium Responses and Nitrous Oxide Production in Normal Pregnancy and in Preeclampsia. Society MFM 2008. Abstract.

Yi FX, Krupp J, Shah D, Bird IM. (2008). Direct imaging of intact vessels shows that reduced Ca<sup>2+</sup> responses in Human Umbilical Vein Endothelium of preeclamptic pregnancy are temporally associated with a blunted Nitric Oxide (NO) production. Society Gynecologic Investigation. 55th Annual Meeting Abstract.

Yi FX, Krupp J, Kerrick HA, Shah D, Magness RR and Bird IM (2010). Comparison of [Ca<sup>2+</sup>]<sub>i</sub> and NO responses in vascular endothelium from pregnant sheep uterine artery and human preeclamptic umbilical vein. Society Gynecologic Investigation. 57th Annual Meeting Abstract.



Krupp, J, Boeldt, DS, Yi, FX, Shah, D, Bird, IM (2011). Human Umbilical Vein Endothelium Function and Dysfunction in Normal and Preeclamptic Pregnancy: Endothelial cells maintained in primary culture retain disease related dysfunction in HUVEC cell signaling. Society of Maternal Fetal Medicine Annual Pregnancy Meeting February 2011. Dallas, Texas. Submitted August 2010.

## **Other Presentations:**

“Vascular Function and Dysfunction in Diabetes and Preeclampsia”. University of Wisconsin School of Medicine & Public Health, Department of Obstetrics & Gynecology, Madison, Wisconsin. Grand Rounds, Meriter Hospital. Mar 18, 2010

“Human Umbilical Vein Endothelial Cells and Preeclampsia”. University of Wisconsin School of Medicine & Public Health, Department of Obstetrics & Gynecology, Madison, Wisconsin. Senior Resident Research Presentation Day, Meriter Hospital. May 28, 2009

## **ERP Service:**