Title: Downstream Oxidative Effects of the Endothelin B Receptor in the Pulmonary Endothelium

In this study, we hypothesized that the upregulation of the human endothelin B Receptor, specifically in the pulmonary endothelium in vivo, would reduce oxidative stress and development of the pulmonary hypertension phenotype in hypoxia challenged mice. Our specific aims were thus:

**Specific Aim 1:** To create an adenoviral vector to express ET-B receptor in the pulmonary endothelium of mice.

**Specific Aim 2:** To demonstrate the ability to over-express ET-B receptor in the pulmonary endothelium of mice and characterize the effects of this receptor on lung morphology and response to hypoxia challenge.

**Specific Aim 3:** To apply this vector model containing increased ET-B receptor in the pulmonary endothelium and measure the downstream changes in indicators of oxidative stress and antioxidant enzymes.