

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.