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## Supplemental Figure 1. Effect of PAH therapy on ORP values in male and female PAH patients.

The plasma ORP values were compared between treatment-naïve patients and patients on PAHspecific therapies. PAH therapy produced no effect on plasma redox status in male or female patient cohorts, regardless of whether all treatment options were analyzed together (**A**) or separately (**B**). The data are presented as boxplots; whiskers show min to max values. Treatmentnaïve females - N=26; total females on therapy - N= 73; females on monotherapy – 31; females on dual therapy – 32; females on triple therapy – 10. Treatment-naïve males - N=12; total males on therapy - N= 29; males on monotherapy – 13; males on dual therapy – 12; males on triple therapy – 4.





Supplemental Figure 2. ORP distribution in male and female PAH patients.

ORP analyzed in male (N=41) and female (N=100) PAH patient cohorts revealed normal and equal distribution in both sexes.

## Supplemental Figure 3



## Supplemental Figure 3. Analysis of ORP-dependent cytokines by immunoblotting.

Three cytokines were selected as representatives for each group -1) cytokines that similarly upregulate in male and female samples with high plasma ORP (IL1 $\beta$ , **A**); 2) cytokines that precisely elevates in the low ORP samples in males (IL-6, **B**); and 3) cytokines that elevate explicitly in the high ORP samples in females (IL-13, **C**) were analyzed by Western blot analysis. The data confirm the results obtained by multiplex assay. IL-6 in females and IL-13 do not show redox sensitivity (significantly elevated in Low- and High-ORP groups). The rest of the cytokines specifically upregulate in only one redox condition. The data are presented as boxplots; whiskers are showing min to max values. \*indicate significance (p<0.05) between Control and PAH subjects; N=6-7 in all groups.