





**Supplemental Figure 1: Effect of NaHCO<sub>3</sub>, aldosterone and acetazolamide on CCD cross sectional diameter in wild type and pendrin null mice.** Cross sectional diameter (OD-ID) was measured in CCDs from wild type and pendrin null mice following the treatment models described in Figure 3. As shown, cross sectional diameter was lower in CCDs from pendrin null relative to wild type mice following treatment with aldosterone alone or aldosterone and NaHCO<sub>3</sub>. However, cross sectional diameter was the same when acetazolamide was added to the treatment protocol. Values were compared between pendrin null and wild type mice following each treatment protocol using ANOVA.

