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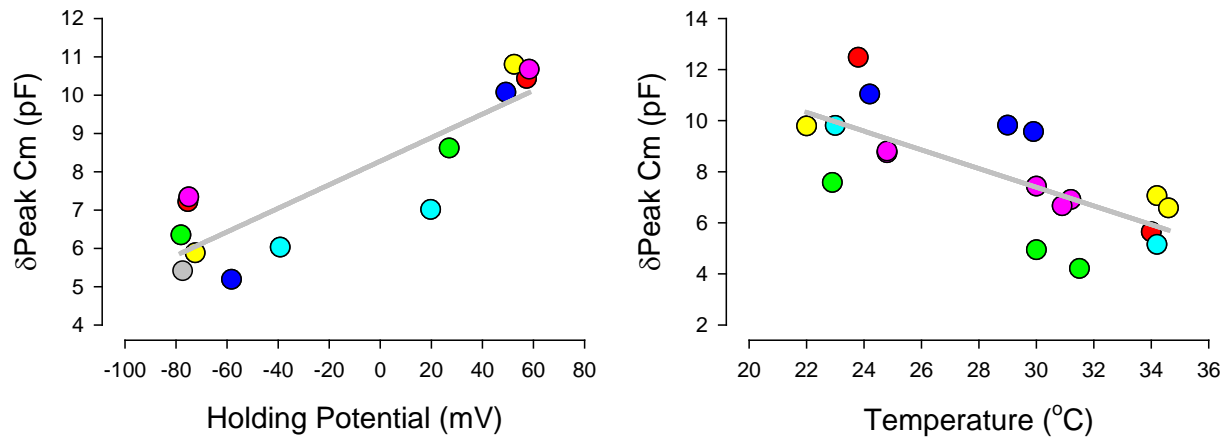
**Supporting Material**

**Conformational state-dependent anion binding in prestin: evidence for allosteric modulation**

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## Supplemental Figure 1



**Supplemental Fig. 1 Regression analysis of individual cell data.** In Figure 2, we showed the response of individual cells to salicylate insult with the manipulation of membrane holding potential and temperature. Statistics were significant when groups of cells were pushed to the somewhat extreme conditions to secure a relatively uniform prestin state. In the case of changing membrane potential, +60 and -80 mV holding potentials are applied. However when approaching these holding potentials, the whole-cell patch configuration is becoming increasingly unstable. Therefore only a handful of few cells were successfully recorded under both extreme conditions. In some cases, we have to sacrifice holding potentials for stable recordings. Those unused data are pooled here as intermediate results. Although statistics are not available in those groups, the scatter plots give a good indication of the trend. From the scatter plots, the reductions of nonlinear peak capacitance due to salicylate (1 mM) insults depend on both membrane holding potential (left panel) and temperature (right panel). Individual cells are color coded and linear fits to the pool of all individual recordings are presented (grey line). Cells held at negative membrane potentials are more resistant to salicylate insult. The effectiveness of salicylate insult (reduction of NLC) fell at a rate of 0.366 pF/ $^{\circ}\text{C}$  with increases in temperature. Elevated temperature shows similar result to hyperpolarization. The effectiveness of salicylate insult (reduction of NLC) fell at a rate of 0.029 pF/mV with hyperpolarization.