## **Supporting Information**



Figure S1. Simulating the effect of estradiol on the inactivation of myometrial  $I_{\text{CaL}}$ . Simulations (left panels) reproduced the experimental data (right panels, [30]) indicating that estradiol effects a leftward shift in voltage-dependent inactivation and a reduction in peak current-voltage (*I-V*) relationship from a holding potential ( $V_h$ ) of -40 mV.  $I_{\text{CaL}}$  in control conditions (*black*) and  $I_{\text{CaL}}$  in estradiol conditions (*green*). A, inactivation steady-states of  $I_{\text{CaL}}$ ; B, I-V relationship from  $V_h = -40 \text{ mV}$ ; C, I-V relationship from  $V_h = -70 \text{ mV}$ .