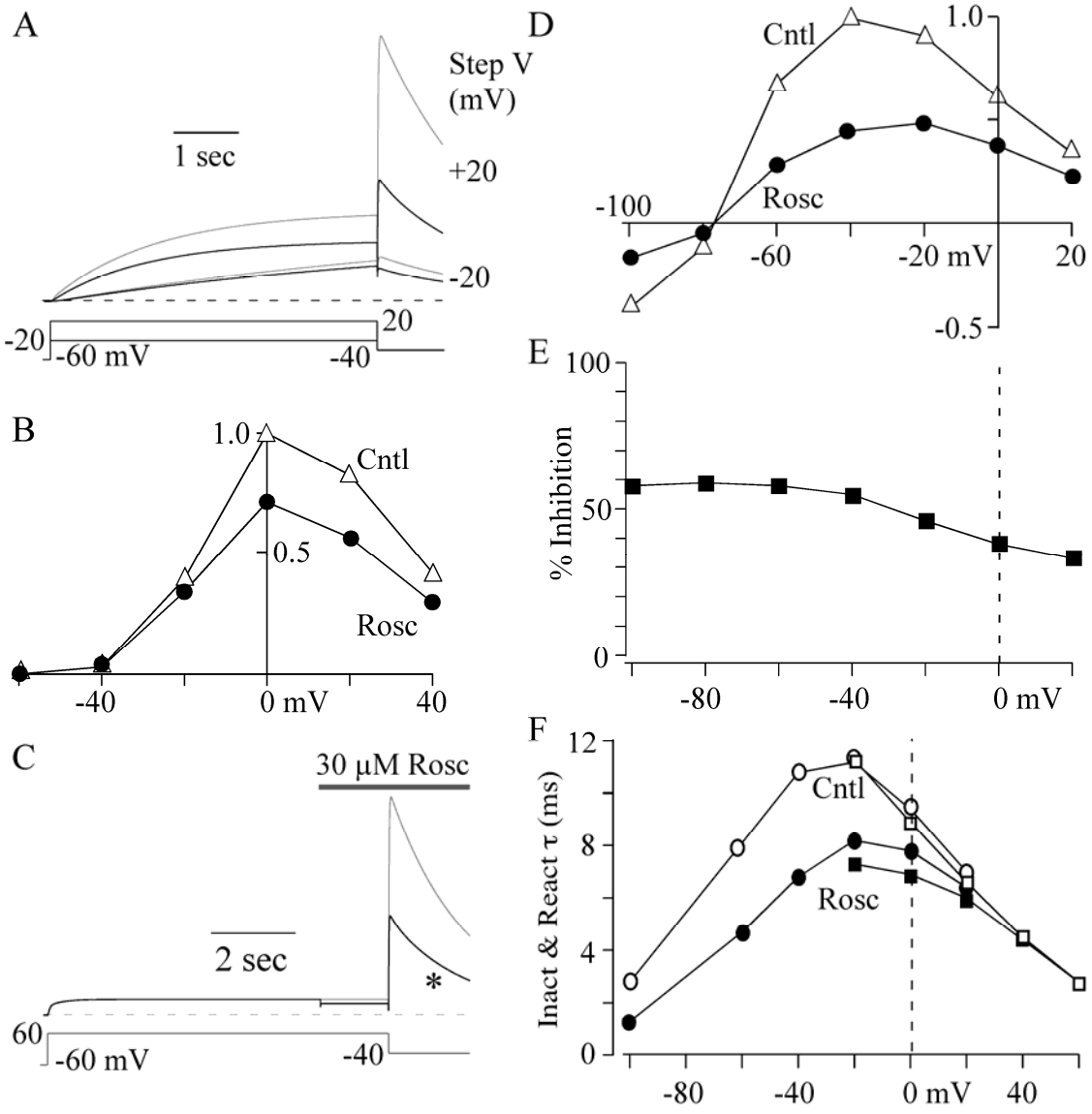

Supplemental figure 1. Additional results from model simulations. A) Simulated currents are shown for 4-sec voltage steps to -20 and +20 mV for control (gray traces) and 30 µM Rosc (black traces). Note the smaller Rosc-induced inhibition at -20 mV. **B)** Simulated currents measured at the end of the 4 sec step ranging from -60 to +40 mV (20 mV increments) are plotted vs. the step voltage. Relative currents (normalized to 0 mV in control) are shown for control (upward triangles) and 30 µM Rosc (solid circle). **C)** Inactivated channels are relatively less sensitive to Rosc block. Simulated current was

elicited by an 8-sec step to +60 mV and tail currents were elicited at –40 mV. 30 µM Rosc was applied during the +60 mV step and was continued into the tail (*). Rosc decreased current during the step by 33% (cf. 14 ± 7% for HERG current), but strongly blocked the tail current (55**%** compared with 29% ± 7% for HERG current). **D)** Peak simulated tail currents were measured at voltages ranging from 20 to -100 mV (20 mV increments) following a 1 sec step to 60 mV (Tail I-V), and are plotted vs. tail voltage for control (upward triangle) and 30 µM Rosc (solid circle). **E)** Percent inhibition by 30 µM Rosc was calculated from simulated tail currents in panel D and plotted vs. tail voltage. **F)** Rosc decreases inactivation kinetics primarily at intermediate voltages. The recovery from inactivation τ (circles) was measured (single exponential equation) from the raising phase of simulated tail currents upon hyperpolarization from +60 mV to the indicated voltage (x-axis). The development of inactivation τ (squares) was measured from a triple pulse protocol where voltage was stepped to +60 (500 ms), -100 (5 ms) and the indicated voltage (x-axis) for 250 ms. A single exponential equation was used to fit inactivation during the third voltage step. Data are shown for control and during the application of 30 µM Rosc (open and closed symbols, respectively).