



**Supplemental Figure 1. Selectivity of GTx and AmmTx3.** Voltage protocols are shown as insets. They were designed to facilitate observation and separation of the slowly-inactivating outward current and transient A-type current. A. Currents in response to the test step to -30 mV from -100 mV in control (black), 100 nM GTx (blue) and the GTx-sensitive current (Red: Control – GTx). B. A brief step to -50 mV was used to inactivate the A-type current. Same color scheme as in A. Subtraction of currents from protocol in B from that in A isolated the A-type current as an initial transient current (shown in B). The subtraction removed almost all of the sustained current and GTx had almost no effect on the early peak. C. Scatter plot (mean indicated by horizontal line) summarizing the percent block by GTx of the peak and steady state current (measured at 500 ms). D. Similar protocol to show A-type and sustained current in response to step to -40 mV from -100 mV (A-type current was more easily distinguished from the sustained current at -40 or -30 mV vs. more positive voltages). Current in control (black), 400 nM AmmTx3 (a Kv4 channel blocker: Maffie et al. 2013; red), and the AmmTx3-sensitive current (control – AmmTx3). E. The AmmTx3-sensitive current from D shown in isolation. AmmTx3 selectively blocked the transient A-type current vs. the steady-state current. F. Scatter plot (mean indicated by horizontal line) summarizing experiments with AmmTx3.