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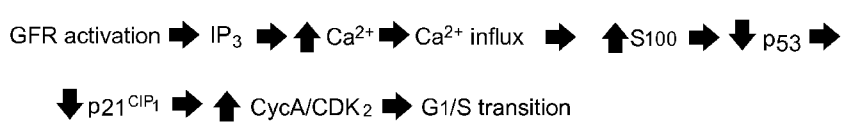
(54) Title: T-TYPE CALCIUM CHANNEL INHIBITORS FOR TREATMENT OF CANCER




(57) Abstract: Presented herein are compounds that inhibit T-type $Ca^{2+}$ channel activity in a cell when the cell membrane potential is about -90 mV. Preferred compounds inhibit T-type $Ca^{2+}$ channel activity with an $IC_{50}$ of 10 μM or less at a membrane potential of about -90 mV. Preferred compounds show selectivity for inhibiting T-type $Ca^{2+}$ channel activity at about -90 mV, relative to inhibition of T-type $Ca^{2+}$ channel activity at about -30 mV to -60 mV, of 10: 1 or less. Also provided are methods for identifying compounds that inhibit T-type $Ca^{2+}$ channel activity in a cell when the cell membrane potential is about -90 mV, and compounds identified by such methods.