

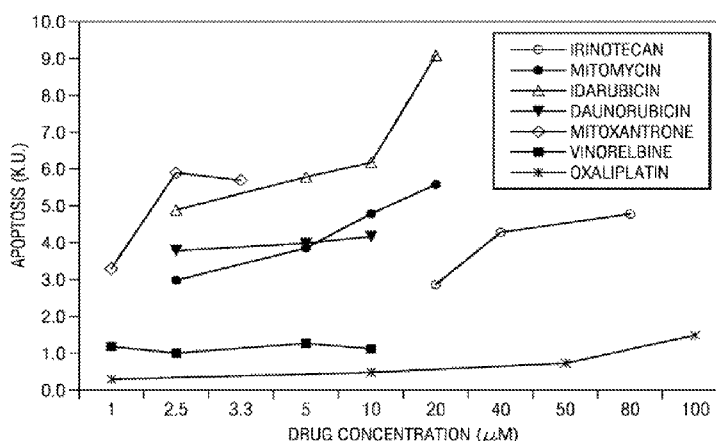
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(54) Title: SYSTEM AND METHOD FOR AUTOMATED DETERMINATION OF THE RELATIVE EFFECTIVENESS OF AN-  
TI-CANCER DRUG CANDIDATES

(57) **Abstract:** A computer system is provided for determining the relative effectiveness of anti-cancer drugs. The interface has selectable options, including an option to manage drug testing parameters, and enables user selection of desired drug testing parameters in relation to a virtual well plate associated with a physical well plate of a spectrophotometer. The computer system causes the spectrophotometer to start a drug test, wherein the physical well plate includes at least one test well containing viable cancer cells; and at least one drug candidate in a predetermined concentration; and at least one control well containing the viable cancer cells alone. The system records the optical density of the well at a predetermined wavelength at selected time intervals for a selected duration of time, and stores the optical density and time measurements in the database. An activity value is calculated from the optical density and time measurements, and a correlation is displayed between the activity value and the drug candidate's ability to induce apoptosis in the cancer cells.

