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(54) Title: NOVEL FLUORESCENT REPORTER MOLECULES AND THEIR APPLICATIONS INCLUDING ASSAYS FOR CASPASES

(57) Abstract

The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter molecules and assay processes can be used in drug screening procedures to identify compounds which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic drugs. The present invention also relates to novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, dipeptidyl peptidase IV, calpain, aminopeptidase, HIV protease, adenovirus protease, HSV–1 protease, HCMV protease and HCV protease.