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Mitotic Enzyme Modulator

National Cancer Institute

Source

National Cancer Institute. *Mitotic Enzyme Modulator*. NCI Thesaurus. Code C67443.

A class of compounds that modulate the activity of mitotic enzymes. Mitotic enzymes regulate various mitotic events including centrosome separation, mitotic spindle assembly, chromosome alignment, phosphorylation of tubulin and cell-cycle regulators, and interaction with mitotic kinesins; other roles include facilitating the progression through and the exit from mitosis as well as regulating cytokinesis. Agents that modulate the activity of mitotic enzymes, specifically those that inhibit cytokinesis, may produce an anti-mitotic effect resulting from the aberrant formation of abnormal or polyploid cells and their subsequent exit from mitosis, which triggers apoptosis-an effect unrelated to the classical mitotic arrest described with other anti-mitotic compounds.