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Lovastatin

National Cancer Institute

Source

National Cancer Institute. *Lovastatin*. NCI Thesaurus. Code C620.

A lactone metabolite isolated from the fungus *Aspergillus terreus* with cholesterol-lowering and potential antineoplastic activities. Lovastatin is hydrolyzed to the active beta-hydroxyacid form, which competitively inhibits 3-hydroxyl-3-methylglutarylcoenzyme A (HMG-CoA) reductase, an enzyme involved in cholesterol biosynthesis. In addition, this agent may induce tumor cell apoptosis and inhibit tumor cell invasiveness, possibly by inhibiting protein farnesylation and protein geranylgeranylation, and may arrest cells in the G1 phase of the cell cycle. The latter effect sensitizes tumor cells to the cytotoxic effects of ionizing radiation.