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# Simvastatin

National Cancer Institute

## Source

National Cancer Institute. *Simvastatin*. NCI Thesaurus. Code C29454.

A lipid-lowering agent derived synthetically from a fermentation product of the fungus *Aspergillus terreus*. Hydrolyzed in vivo to an active metabolite, simvastatin competitively inhibits hepatic hydroxymethyl-glutaryl coenzyme A (HMG-CoA) reductase, the enzyme which catalyzes the conversion of HMG-CoA to mevalonate, a key step in cholesterol synthesis. This agent lowers plasma cholesterol and lipoprotein levels, and modulates immune responses by suppressing MHC II (major histocompatibility complex II) on interferon gamma-stimulated, antigen-presenting cells such as human vascular endothelial cells. (NCI04)