Nanatinostat

National Cancer Institute

Source

National Cancer Institute. Nanatinostat. NCI Thesaurus. Code C78475.

An orally bioavailable, second-generation hydroxamic acid-based inhibitor of histone deacetylase (HDAC), with potential antineoplastic activity. Nanatinostat targets and inhibits HDAC, resulting in an accumulation of highly acetylated histones, the induction of chromatin remodeling, and the selective transcription of tumor suppressor genes; these events result in the inhibition of tumor cell division and the induction of tumor cell apoptosis. This agent may upregulate HSP70 and downregulate anti-apoptotic Bcl-2 proteins more substantially than some first-generation HDAC inhibitors. HDACs, upregulated in many tumor cell types, are a family of metalloenzymes responsible for the deacetylation of chromatin histone proteins.