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Entinostat

National Cancer Institute

Source

National Cancer Institute. *Entinostat*. NCI Thesaurus. Code C1863.

A synthetic benzamide derivative with potential antineoplastic activity. Entinostat binds to and inhibits histone deacetylase, an enzyme that regulates chromatin structure and gene transcription. This agent appears to exert dose-dependent effects in human leukemia cells including cyclin-dependent kinase inhibitor 1A (p21/CIP1/WAF1)-dependent growth arrest and differentiation at low drug concentrations; a marked induction of reactive oxygen species (ROS); mitochondrial damage; caspase activation; and, at higher concentrations, apoptosis. In normal cells, cyclin-dependent kinase inhibitor 1A expression has been associated with cell-cycle exit and differentiation.