

[Open Peer Review on Qeios](#)

# Imetelstat

National Cancer Institute

## Source

National Cancer Institute. *Imetelstat*. NCI Thesaurus. Code C49084.

A synthetic lipid-conjugated, 13-mer oligonucleotide N3'-P5'-thio-phosphoramidate with potential antineoplastic activity. Complementary to the template region of telomerase (hTR) RNA, imetelstat acts as a competitive enzyme inhibitor that binds and blocks the active site of the enzyme (a telomerase template antagonist), a mechanism of action which differs from that for the antisense oligonucleotide-mediated inhibition of telomerase activity through telomerase mRNA binding. Inhibition of telomerase activity in tumor cells by imetelstat results in telomere shortening, which leads to cell cycle arrest or apoptosis.