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# Beloranib

National Cancer Institute

## Source

National Cancer Institute. *Beloranib*. NCI Thesaurus. Code C90656.

A fumagillin analogue and inhibitor of methionine aminopeptidase 2 (METAP2), with potential antiangiogenic and anti-obesity activity. As an irreversible inhibitor, beloranib blocks METAP2's functions, which include both protecting eukaryotic initiation factor 2 from inhibitory phosphorylation during translation, and by removing the amino-terminal methionine residue from nascent protein permitting the conversion of an inactive or non-functional protein to an active one. As a result, this agent prevents endothelial cell growth and inhibits tumor angiogenesis. In addition, METAP2 inhibition also down-regulates ERK1/2 signaling pathway, which is usually overactive in the fat tissues of obese people. Therefore, at a much lower dose, beloranib can induce liver fat utilization and reduce cholesterol and fatty acid synthesis. METAP2, a member of the dimetallohydrolase family, plays an important role during angiogenesis and is over-expressed in various cancers.