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# Fascin Inhibitor NP-G2-044

National Cancer Institute

## Source

National Cancer Institute. *Fascin Inhibitor NP-G2-044*. NCI Thesaurus. Code C142086.

An orally available inhibitor of the protein fascin, with potential antineoplastic activity. Upon oral administration, NP-G2-044 targets and binds to fascin, thereby preventing the interaction of fascin with actin filaments, thereby preventing actin bundling and filopodia formation. By preventing actin cytoskeletal reorganization, the dynamic changes in cell shape that are necessary for tumor cell migration and invasion to occur are impaired, and tumor cell migration and metastasis are inhibited. Fascin, the main actin cross-linker protein in filopodia, is upregulated in many types of metastatic tumor cells while its expression is low or absent in normal adult epithelial cells; its expression is correlated with aggressive phenotypes, poor prognosis, and shorter survival. Filopodia, finger-like plasma membrane protrusions that are formed upon remodeling of the actin cytoskeleton, are found at a high frequency in metastatic tumor cells and their presence is correlated with tumor cell invasiveness.