

Screening of Synergic Interactions of Anti-Angiogenic and Anti-Tumor Compounds

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Solid cancers have several common characteristics that Hanahan & Weinberg named as the hallmarks of cancer. Angiogenesis is an essential hallmark of cancer because tumor cells need oxygen and nutrients delivered by the vascular system. In fact, tumor growth and metastasis are angiogenesis dependent, and microvascular endothelial cells recruited by tumors have become an important target in cancer therapy.

Combinations of drugs with different modes of action may lead to enhanced antitumor and antiangiogenic effects without injuring the host. The combined use of two drugs may sometimes produce enhanced, unchanged or diminished effects in comparison with their individual effects. These three different types of behaviour of the interacting drugs are called synergy, additive/indifferent and antagonistic effects.

In the present work, we analyze 105 paired combinations of 15 compounds, some described by our research group as potent antiangiogenic compounds, and others currently used in clinical therapy. Our results show synergistic effects of several paired combinations using the MTT assay.

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