The Combination of Different Types of Antitumor Topoisomerase
II Inhibitors, ICRF-193 and VP-16, Has Synergistic and Antagonistic
Effects on Cell Survival, Depending on Treatment Schedule.

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VP-16 and ICRF-193 are different types of antitumor topoisomerase II inhibitors, being
cleavable and non-cleavable complex-stabilizing types, respectively. To examine the possibility of
enhancing the efficacy of combination chemotherapy. When KB cells were exposed continually to
low concentrations of the drugs, the effects were synergistic. In contrast, when the cells were
 treated with high concentrations of the drugs, the VP-16-induced cytotoxicity was prevented by
ICRF-193. The antagonistic or synergistic effects of ICRF-193 and VP-16 depended on the concen-
tration of the drug, as it may be critical as to how many molecules of cellular topoisomerase
II interact with the drugs.

TNF-α participates in an IgE-mediated cutaneous reaction in mast
cell deficient, WBB6F1-W/W' mice.

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Mice were passively sensitized by monoclonal anti-dinitrophenol IgE, and their ears chal-
 lenged with dinitrofluorobenzene 24h later in WBB6F1-W/W' (W/W') mice. The cutaneous reaction
reached a peak 48-72h (LPR) after the antigen challenge and a increase of tumor necrosis factor
(TNF)-α mRNA was detected. A monoclonal anti-TNF-α antibody inhibited LPR. Prednisolone
inhibited LPR and TNF-α -induced cutaneous reaction but not affect the expression of TNF-α-
mRNA. These results that TNF-α plays a role in LPR in W/W' mice and that prednisolone inhib-
its the cutaneous reaction in part by inhibiting the action of TNF-α.

Effect of Chinese herbal medicine, Sho-fu-san, on IgE antibody-
mediated biphasic cutaneous reaction in mice.

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The effects of some traditional Chinese herbal medicines on monoclonal anti-dinitrophenyl
IgE-mediated biphasic cutaneous reaction were studied in Balb/c mice. This cutaneous reaction
was inhibited by Sho-fu-san but not Jumi-haidoku-to and Oren-gedoku-to. Sho-fu-san suppressed
the edema induced by histamine and TNF-α in mouse ears. The expression of TNF-α and IL-1
β mRNA caused by antigen challenge in passively sensitized mouse ears was not affected by Sho-
 fu-san. These results suggest that Sho-fu-san inhibited this cutaneous reaction due to the suppres-
sion of histamine- and TNF-α-induced cutaneous reactions.