

Resveratrol effects on Breast Cancer

What is RES?

Resveratrol (RES) is a polyphenolic compound found in 72 different plant species. Grape skins, red wine, berries, pomegranates, soybeans and peanuts are excellent sources. RES is more bioavailable in whole food form than supplemental.



RES was shown to alter the gene expression in breast cancer cells (MCF7 and MDA-MB-231) and fibrocystic breast cells (MCF10a) which differed from cell to cell. MCF7 and MCF-7 breast cancer cells showed significant increase in apoptosis (cell death). RES was a metastasis (spreading of cancer) suppressor in MCF10a and had antimetastatic effects in MDA-MB-231. Inhibition of angiogenesis (growth of new blood vessels to tumors) was experienced in MDA-MB-231 and MCF10a cells. RES may also help lower elevated levels of estrogen, which can lead to breast, by competing with estrogen at estrogen receptors in MB-231 and MCF-7. Finally, RES had a down regulation of fatty acid synthase which in turn increase expression of pro-apoptotic genes DAPK2 and BNIP3 resulting in cell death of cancer stem-like cells such as MDA-MB-231.