Gossypol acetic acid (GA) exhibits anticancer chemotherapeutic, pro-oxidative, antioxidative, and antibacterial activities. GA inhibits Bcl-2/Bcl-xl, enhancing TRAIL/mitochondria-induced apoptosis in breast cancer cells. In animal models, GA delayed the onset of androgen-independent prostate cancer. In macrophages, GA increases production of ROS, upregulates expression of caspases 3 and 9, and decreases the mitochondrial membrane potential, inducing apoptosis. GA increases activity of glutathione peroxidase and inhibits lipid peroxidation but also increases generation of ROS and induces DNA damage. This compound also exhibits antibiotic activity, inhibiting growth of gram negative bacteria such as Edwardsiella. Additionally, GA has been studied as a male contraceptive; it inhibits sialyl transferase activity in seminal plasma, decreases tubulin content and spermatocyte mobility, and reversibly inhibits spermatogenesis in vivo.

References


Sharma S, Kumar M, Goyal RB, et al. Reversible antispermatogenic effect of gossypol in langur monkeys (Presbytis entellus

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.