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Triamcinolone

National Cancer Institute

Source

National Cancer Institute. *Triamcinolone*. NCI Thesaurus. Code C901.

A synthetic glucocorticoid with anti-inflammatory and immunomodulating properties. Upon cell entry, triamcinolone binds to and activates the glucocorticoid receptor, which leads to translocation of the ligand-receptor complex to the nucleus and induces expression of glucocorticoid-responsive genes such as lipocortins. Lipocortins inhibit phospholipase A2, thereby blocking the release of arachidonic acid from membrane phospholipids and preventing the synthesis of prostaglandins and leukotrienes, both mediators of inflammation. In addition, pro-inflammatory cytokine production, including interleukin (IL)-1 and IL-6, and the activation of cytotoxic T-lymphocytes is also inhibited. T-cells are prevented from making IL-2 and proliferating. This agent also decreases the number of circulating lymphocytes, induces cell differentiation, and stimulates apoptosis through increasing I κ B expression and curtailing activation of nuclear factor (NF) κ B.