Mitomycin C is an alkaloid initially produced by *Streptomyces* that exhibits antibiotic, immunomodulatory, and anticancer chemotherapeutic activities. Mitomycin C increases heart allograft transplant survival rates by decreasing activation of CD4+ T cells and lymph nodes and increasing the number of circulating Treg cells. Mitomycin C inhibits thioredoxin reductase and induces DNA cross-linking at CpG sequences. Clinically, mitomycin C is used as a combination therapy to treat cancers; it suppresses cell growth by preventing DNA strand break repair.

**References**

