

## Review

## Therapeutic potential of the biscoclaurine alkaloid, cepharanthine, for a range of clinical conditions

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## Abstract:

Cepharanthine (CEP) is a naturally occurring alkaloid extracted from the plant *Stephania cepharantha* Hayata. It has been widely used in Japan for more than 40 years to treat a wide variety of acute and chronic diseases. CEP inhibits tumor necrosis factor (TNF)- $\alpha$ -mediated NF $\kappa$ B stimulation, plasma membrane lipid peroxidation and platelet aggregation and suppresses cytokine production. It has also been shown to scavenge free radicals and to have a protective effect against some of the responses mediated by pro-inflammatory cytokines such as TNF- $\alpha$ , interleukin (IL)-1 $\beta$  and IL $\delta$ . CEP has successfully been used to treat a diverse range of medical conditions, including radiation-induced leukopenia, idiopathic thrombocytopenic purpura, alopecia areata, alopecia pityrodes, venomous snakebites, xerostomia, sarcoidosis, refractory anemia and various cancer-related conditions. No safety issues have been observed with CEP, and side effects are very rarely reported.

## Key words:

cepharanthine, leukopenia, alopecia, snakebites, multiple myeloma, sarcoidosis, anemia, cancer

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