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*Stephania rotunda*: Cepharanthine and fangchinoline

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Antioxidant Activity of Bisbenzylisoquinoline Alkaloids from  
Stephania rotunda: Cepharanthine and fangchinoline

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For

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## ABSTRACT

In the present study, we determined the antioxidant activity of cepharanthine and fangchinoline from *Stephania rotunda* by performing different in vitro antioxidant assays including 1,1-diphenyl-2-picrylhydrazyl free radical (DPPH $\cdot$ ) scavenging, 2,2'-azino-bis(3-ethylbenzthiazoline-6-sulfonic acid) (ABTS) radical scavenging activity, N,N-dimethyl-p-phenyl-enediamine dihydrochloride (DMPD) radical scavenging, superoxide anion (O $_2^{\cdot-}$ ) radical scavenging, hydrogen peroxide scavenging, total antioxidant activity, reducing power and ferrous ions (Fe $^{2+}$ ) chelating activities. Cepharanthine and fangchinoline showed 94.6 and 93.3% inhibition on lipid peroxidation of linoleic acid emulsion at 30  $\mu$ g/mL concentration, respectively. On the other hand, butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT),  $\alpha$ -tocopherol and trolox indicated inhibition of 83.3, 92.2, 72.4 and 81.3% on peroxidation of linoleic acid emulsion at the same concentration (30  $\mu$ g/mL), respectively. According to the results, cepharanthine and fangchinoline had effective antioxidant and radical scavenging activity.

Keywords: Antioxidant activity; Cepharanthine; Fangchinoline; *Stephania rotunda*; Alkaloid; Radical scavenging

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