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Ethnobotany, phytochemistry and pharmacology of *Stephania rotunda* Lour

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Stephania rotunda Lour. (Menispermaceae) is an important traditional medicinal plant that is grown in Southeast Asia. The stems, leaves, and tubers have been used in the Cambodian, Lao, Indian and Vietnamese folk medicine systems for years to treat a wide range of ailments, including asthma, headache, fever, and diarrhoea. The traditional uses of *Stephania rotunda* were recorded in countries throughout Southeast Asia (Cambodia, Vietnam, Laos, and India). Different parts of *Stephania rotunda* were used in traditional medicine to treat about twenty health disorders. Phytochemical analyses identified forty alkaloids. The roots primarily contain l-tetrahydropalmatine (l-THP), whereas the tubers contain cepharanthine and xylopinine. Furthermore, the chemical composition differs from one region to another and according to the harvest period. The alkaloids exhibited approximately ten different pharmacological activities. The main pharmacological activities of *Stephania rotunda* alkaloids are antiplasmodial, anticancer and immunomodulatory effects. Sinomenine, cepharanthine, and l-stepholidine are the most promising components and have been tested in humans. The pharmacokinetic parameters have been studied for seven compounds, including the three most promising compounds. The toxicity has been evaluated for liriodenine, roemerine, cycleanine, l-tetrahydropalmatine, and oxostephanine. Pharmacological investigations have validated different uses of *Stephania rotunda* in folk medicine. The three most promising compounds of *Stephania rotunda*, sinomenine, cepharanthine, and l-stepholidine could constitute potential leads in various medicinal fields, including malaria and cancer.

Biography

Desgrouas Camille has completed his PhD at the age of 28 years from Aix-Marseille University and is actually in Postdoctoral fellowship at the Faculty of Agriculture of Kasetsart University, Bangkok. She has published 9 papers.

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