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## Comparative study of hepatoprotective properties of artesunate and *A. annua* flavonoids on rat hepatocytes

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Artesunate is a semi-synthetic derivative of artemisinin, the active compound of the Chinese herb *Artemisia annua*. It is a drug commonly used to treat malaria, especially chloroquine resistant malaria. Past works on *A annua* show many hepatoprotectives effects of the plant. Further to these works, the present study was aimed at investigating the fractions in charge of *A annua*'s antihépatotoxics activities and, searching the activities of artesunate on rat's hepatocytes. The antioxidants activities of flavonoïds extract and artesunate was assessed by antiradical and reduction experiments. Free radical scavenging activity was determined by measuring the decrease in the visible absorbance of 2,2-diphenyl-1-picrylhydrazyl (DPPH) and artesunate showed an EC<sub>50</sub> >100 µg/ml. This result was lower than the flavonoïds one (EC<sub>50</sub> = 8, 23 ± 0, 56 µg/ml). Likewise, reduction test showed a poor activity of artesunate. Hepatoprotectives activities were analyzed on two hepatitis models induced. Hepatocyte's viability according to the extract's concentrations was studied by the MTT (3-(4, 5-dimethylthiazolyl-2)-2, 5-diphenyltetrazolium bromide) test, the estimation of ALT activities and the MDA level. There was no significant difference between poisoned cells (by CCL4 and Paracetamol) and cells treated by artesunate contrary to aqueous extracts and flavonoïds extract which showed a significant difference (p<0,001). The outcome suggests that Artesunate toxicity may possibly cause damages to the hepatocytes and liver function; effect contrary to that of *A annua*, who keeps cells alive. *A. annua* has Hepatoprotective effect.

### Biography

Chougouo Kengne R.D has completed her PhD; She is a Pharmacist Officer and Researcher (CER) at the University Mountain Cameroon. She has published more than 20 papers in reputed journals.

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