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**In vitro anti-inflammatory activity and in vivo antinociceptive of Uvaria comperei stem crude extract and fractions****Marguerite Simo<sup>1</sup>, Gael Siwe<sup>2</sup>, Fabrice Fekam<sup>3</sup>, Guglielmina Froidi<sup>4</sup>**<sup>1</sup>Department of Biochemistry, Faculty of Sciences, University of Yaoundé I, Yaoundé, Cameroon<sup>2</sup>Department of Biological Sciences, Faculty of Sciences, University of Maroua, Maroua, Cameroon<sup>3</sup>Department of Animal Biology and Physiology, Faculty of Sciences, University of Yaoundé Yaounde, Cameroon<sup>4</sup>Department of Pharmaceutical and Pharmacological Sciences, University of Padova, Padova, Italy

Uvaria comperei is a plant of Annonaceae family listed as one of the most diverse plant families in tropical forests. The present study was undertaken to investigate the anti-inflammatory activity of methanolic extracts and fractions from stem of Uvaria comperei. Crude extracts were obtained by maceration of powder in methanol and fractions by vacuum chromatography from stem methanolic extract of Uvaria comperei. Methods used for the anti-inflammatory studies were in vitro Red blood cell lysis inhibition assay and albumin denaturation inhibition and in vivo measurement of rat paw edema induced by carrageenan in wistar rat and formalin-induced pain in albino mice. The crude extract of Uvaria comperei (Uvcst) showed 100% of percentage of inhibition at 250 and 500 µg/mL for denaturation of albumin and 75.55% of inhibition of heat blood cell lysis at 500 µg/mL. The tested fractions displayed significant anti-inflammatory activity with percentage of inhibition of 60.46, 67.44 and 100% at 500µg/mL respectively for fraction 128-136, fraction 10-11 and fraction 56-62. Concerning the heat blood cell lysis, fractions presented the percentage of inhibition of 66.34, 79.84 and 95.41% at 500µg/mL respectively for fraction 10-11(F1), fraction 56-62(F2) and fraction 128-136(F3). Pretreatment with F2 (25, 50 and 100 mg/kg, p.o.) produced dose-dependent ( $P < 0.05$ ) inhibition of formalin-induced pain in two phases with High values of 60.21% at 50 mg/kg in neurogenic phase and 70.17% of inhibition at 25 mg/kg in inflammatory phase. Similarly, the time-dependent increase in paw circumference induced by carrageenan was inhibited by F2 pretreatment with peak effect (50% of inhibition,  $P < 0.05$  at 25 mg/kg after 1/2 h and 96.50% of inhibition at 25 mg/kg after 6h), which was high than those of indometacine treated. F2 presented the best analgesic property at 50mg/kg where as it presented a highest anti-inflammatory property at 25 mg/kg. Crude extract and fractions from Uvaria comperei stem showed the highest anti-inflammatory properties so they could be used as source of anti-inflammatory molecules to prevent or treat inflammatory process

**Biography**

Marguerite Simo Kamdem has completed his PhD in 2019 at 37 years from University of Yaounde I, Cameroon. She is a Lecturer of Biochemistry in Department of Biological Sciences at University of Maroua since 2020. She has published around 06 papers in reputed journals and has been member of many scientific organizations.