

ANALGESIC, ANTI-INFLAMMATORY AND ANTICANCER ACTIVITIES OF COMBRETIN A AND COMBRETIN B ISOLATED FROM COMBRETUM FRAGRANS F. HOFFM (COMBRETACEAE) LEAVES

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Pharmacological and phytochemical research shows that *Combretum fragrans* F. Hoffm (Combretaceae) is a plant possessing numerous therapeutic virtues and rich in active secondary compounds. In this study, we investigate the *in vivo* (antinociceptive, anti-inflammatory) and *in vitro* (anti-cancer, anti-TNF α , ROS and NO inhibitor) capacity of Combretin A and Combretin B, the triterpenes (cycloartane-type) isolated from *Combretum fragrans*. ROS production from phagocytes, TNF- α production, NO production, anticancer and cytotoxicity assay were done by using chemiluminescence technique, ELISA kit, colorimetric method, MCF-7 Cells and MTT assay, respectively. Antinociceptive and anti-inflammatory activity was estimated using a model of acetic acid, formalin and carrageenan. Combretin

A and Combretin B significantly ($p < 0.001$) inhibited extracellular ROS production. These compounds also possess significant ($p < 0.001$) reduced TNF- α and NO production. The compound decreased cell viability in MCF-7 cells. Concerning the pain induced by acetic acid and formalin as acute inflammation in rat induced by carrageenan, Combretin A and Combretin B exhibited significantly ($p < 0.001$) antinociceptive and anti-inflammatory activity. Antinociceptive, anti-inflammatory and anticancer potential associated with inhibitors effect on ROS, TNF α and NO production revealed in this study approve that, Combretin A and Combretin B are considered as a promising chemotherapeutic agent in breast cancer treatment and inflammatory disease.

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