

Gusman GS, Campana PR, Castro LC, Castilho RO, Teixeira MM, Braga FC.(2015). Evaluation of the Effects of Some Brazilian Medicinal Plants on the Production of TNF- α and CCL2 by THP-1 Cells. *Evid Based Complement Alternat Med.* 2015;497123.

Several plant species are traditionally used in Brazil to treat various inflammatory diseases. Tumor necrosis factor- (TNF-) α and chemokine (C-C motif) ligand 2 (CCL2) are key inflammatory mediators in diseases like rheumatoid arthritis and atherosclerosis, respectively; nevertheless, only a few extracts have been assayed against these targets. We herein report the effect of 19 plant extracts on TNF- α and CCL2 release by lipopolysaccharide- (LPS-) stimulated THP-1 cells, a human monocytic leukemia cell line, along with their radical scavenging activity on DPPH. The extracts of *Caryocar brasiliense*, *Casearia sylvestris*, *Coccoloba cereifera*, and *Terminalia glabrescens* inhibited TNF- α production in a concentration-dependent manner. Fractionation of these extracts potentiated the anti-TNF- α effect, which was shown to concentrate in polar fractions, mainly composed by polyphenols. Significant CCL2 inhibition was elicited by *Lippia sidoides* and *Terminalia glabrescens* extracts, whose fractionation resulted in highly active low polar fractions. All assayed extracts showed strong radical scavenging activity, but antioxidant activity did not correlate with inhibition of TNF- α or CCL2 production. Our results allowed identifying extracts with selective capacity to block cytokine production; therefore, further purification of these extracts may yield molecules that could be useful in the treatment of chronic inflammatory diseases.