









## REFERENCES

- Dequeker J. NSAIDs/corticosteroids – Primum non nocere. *Adv Exp Med Biol* 1999;455:319-25.
- Maroon JC, Bost JW, Maroon A. Natural anti-inflammatory agents for pain relief. *Surg Neurol Int* 2010;1:80.
- WHO. WHO Traditional Medicine Strategy 2002-2005. World Health Organization; 2002.
- Wealth of India. Raw Materials. Vol. 3. New Delhi: Information and Publication Directorate, CSIR; 1992. p. 78-84.
- Kumar VL, Roy S. *Calotropis procera* latex extract affords protection against inflammation and oxidative stress in Freund's complete adjuvant-induced monoarthritis in rats. *Mediators Inflamm* 2007;2007:47523.
- Alencar NM, Figueiredo IS, Vale MR, Bitencurt FS, Oliveira JS, Ribeiro RA, *et al.* Anti-inflammatory effect of the latex from *Calotropis procera* in three different experimental models: Peritonitis, paw edema and hemorrhagic cystitis. *Planta Med* 2004;70:1144-9.
- Ibrahim SR, Mohamed GA, Shaala LA, Moreno L, Banuls Y, Kiss R, *et al.* Proceraside A, a new cardiac glycoside from the root barks of *Calotropis procera* with *in vitro* anticancer effects. *Nat Prod Res* 2014;28:1322-7.
- Samy RP, Rajendran P, Li F, Anandi NM, Stiles BG, Ignacimuthu S, *et al.* Identification of a novel *Calotropis procera* protein that can suppress tumor growth in breast cancer through the suppression of NF- $\kappa$ B pathway. *PLoS One* 2012;7:e48514.
- Mossa JS, Tariq M, Mohsin A, Ageel AM, al-Yahya MA, al-Said MS, *et al.* Pharmacological studies on aerial parts of *Calotropis procera*. *Am J Chin Med* 1991;19:223-31.
- Ramos MV, Araújo ES, Jucá TL, Monteiro-Moreira AC, Vasconcelos IM, Moreira RA, *et al.* New insights into the complex mixture of latex cysteine peptidases in *Calotropis procera*. *Int J Biol Macromol* 2013;58:211-9.
- Kumar VL, Basu N. Anti-inflammatory activity of the latex of *Calotropis procera*. *J Ethnopharmacol* 1994;44:123-5.
- Ramos MV, Bandeira Gde P, de Freitas CD, Nogueira NA, Alencar NM, de Sousa PA, *et al.* Latex constituents from *Calotropis procera* (R. Br.) display toxicity upon egg hatching and larvae of *Aedes aegypti* (Linn.). *Mem Inst Oswaldo Cruz* 2006;101:503-10.
- Kumar VL, Chaudhary P, Ramos MV, Mohan M, Matos MP. Protective effect of proteins derived from the latex of *Calotropis procera* against inflammatory hyperalgesia in monoarthritic rats. *Phytother Res* 2011;25:1336-41.
- Chaudhary P, Viana CA, Ramos MV, Kumar VL. Anti-edematogenic and anti-oxidant effects of high molecular weight protein fraction of *Calotropis procera* latex proteins in rat. *J Basic Clin Pharm* 2015;6:69-73.
- Ramos MV, Oliveira JS, Figueiredo JG, Figueiredo IS, Kumar VL, Bitencourt FS, *et al.* Involvement of NO in the inhibitory effect of *Calotropis procera* latex protein fractions on leukocyte rolling, adhesion and infiltration in rat peritonitis model. *J Ethnopharmacol* 2009;125:387-92.
- Butler SH, Godefroy F, Besson JM, Weil-Fugazza J. A limited arthritic model for chronic pain studies in the rat. *Pain* 1992;48:73-81.
- Ellman GL. Tissue sulfhydryl groups. *Arch Biochem Biophys* 1959;82:70-7.
- Ohkawa H, Ohishi N, Yagi K. Assay of lipid peroxides in animal tissues by thiobarbituric acid reaction. *Anal Biochem* 1979;95:351-8.
- Anderson GD, Hauser SD, McGarity KL, Bremer ME, Isakson PC, Gregory SA. Selective inhibition of cyclooxygenase (COX)-2 reverses inflammation and expression of COX-2 and interleukin 6 in rat adjuvant arthritis. *J Clin Invest* 1996;97:2672-9.
- Soares PM, Lima SR, Matos SG, Andrade MM, Patrocínio MCA, de Freitas CDT, *et al.* Antinociceptive activity of *Calotropis procera* latex in mice. *J Ethnopharmacol* 2005;99:125-9.
- Freitas AP, Bitencourt FS, Brito GA, de Alencar NM, Ribeiro RA, Lima-Júnior RC, *et al.* Protein fraction of *Calotropis procera* latex protects against 5-fluorouracil-induced oral mucositis associated with downregulation of pivotal pro-inflammatory mediators. *Naunyn Schmiedebergs Arch Pharmacol* 2012;385:981-90.
- Roy S, Sehgal R, Padhy BM, Kumar VL. Antioxidant and protective effect of latex of *Calotropis procera* against alloxan-induced diabetes in rats. *J Ethnopharmacol* 2005;102:470-3.
- Padhy BM, Srivastava A, Kumar VL. *Calotropis procera* latex affords protection against carbon tetrachloride induced hepatotoxicity in rats. *J Ethnopharmacol* 2007;113:498-502.
- Kumar VL, Guruprasad B, Chaudhary P, Fatmi FMA, Oliveira RSB, Ramos MV. Protective effect of proteins derived from *Calotropis procera* latex against acute inflammation in rat. *Auton Autacoid Pharmacol* 2015;35:1-8.
- Trachootham D, Lu W, Ogasawara MA, Nilsa RD, Huang P. Redox regulation of cell survival. *Antioxid Redox Signal* 2008;10:1343-74.
- Kumar VL, Sharma N, Souza IC, Ramos MV, da Silveira Carvalho CP. Proteins derived from *in vitro* culture of the callus and roots of *Calotropis procera* ameliorate acute inflammation in the rat paw. *Appl Biochem Biotechnol* 2015;175:1724-31.
- van Vugt RM, Rijken PJ, Rietveld AG, van Vugt AC, Dijkmans BA. Antioxidant intervention in rheumatoid arthritis: Results of an open pilot study. *Clin Rheumatol* 2008;27:771-5.
- Kaplan MJ. Role of neutrophils in systemic autoimmune diseases. *Arthritis Res Ther* 2013;15:219.



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