A057 Activity-guided isolation and characterisation of the anti-complement principles of a methanol extract of the gum of *Boswellia serrata*

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Frankincense, the gum resin of *Boswellia serrata*, is used in traditional medicine for the treatment of inflammatory disorders. For extracts of the gum, hepatoprotective and anti-complement activities and inhibition of leukotriene synthesis have been reported (1). So far, only crude extracts of *Boswellia* were tested for their effects on complement activity (2). The present paper records the isolation and characterisation of the active principles of a methanol extract of the gum of *Boswellia* serrata as well as a study on their mechanism of action.

Guided by the activity on the classical pathway of human complement, 4 compounds with a potent anti-complement activity were identified: α-boswellic acid, β-boswellic acid, acetyl–β-boswellic acid and acetyl–α–boswellic. Of these active principles, acetyl–β-boswellic acid showed the highest inhibitory activity (IC_{50} 4.6 µg/ml). This activity was selective for the classical pathway, no activity was observed towards the alternative pathway. Furthermore, the inhibitory activity was not affected by raising the Ca^{2+} and Mg^{2+} concentration.

Detailed mechanistic studies revealed that acetyl–β-boswellic acid acts at the level of complement component C2.

Acknowledgements: Dr S. Kosasi of Biohorma BV, Elburg, The Netherlands is kindly acknowledged for providing the gum resin of *Boswellia serrata*.

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A058 Action mechanism of *Croton cajucara* Benth in the treatment of gastric ulcer detected by RT-PCR and somatostatin dosage in normal and malnourished rats

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Aim: Analyze the perfomance the anti-ulcerogenic activity of the *Croton cajucara* essential oil in acetic acid and ethanol induced gastric ulcer in normal and malnourished rats, and the "repair" process involved with these ulcers. Serum somatostatin (SMT) was also examined.

Methods: Acetic acid and ethanol-induced gastric ulcer were assayed according to the method of Takagi *et al.* (1) and Morimoto *et al.* (2), respectively. The repair process involved with these ulcers (growth factors by RT-PCR and prostaglandin PGE_2) was performed according to the Konturek *et al.* (3) and Curtis *et al.* (4) methods, respectively. Serum SMT was assayed by Karmely *et al.* (5).

Results: The dates shown that a single oral administration of essential oil (100 mg/kg) accelerated the healing of chronic gastric ulcer (49,37% and 69,82%) in both groups when compared to the control group ($P<0.001$). We also observed that this drug test induced a significantly increase in PGE_2 production by glandular cells (50% compared to control) in both groups. In normal rats exposed to acetic acid, growth factors how EGF was increased several-fold in the gastric lumen compared with the value measured in intact animals. The serum somatostatin value of malnourished animals was increased with or without the use of essential oil ($P<0.001$), and the normal animals had high value of SMT with the essential oil treatment.

Conclusion: The protective and curative effect of essential oil of *C. cajucara* bark on induced gastric lesions was effective in normal and malnourished rats by specific action mechanisms.

Acknowledgements: FAPESP for financial support.

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