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Angiogenic activity of *Curcuma longa* originated from Brazil

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In this work, angiogenic activity of *Curcuma longa* L. (Zingiberacea) oil extract was evaluated, considering traditional use and medicinal properties associated to this plant. Oil extract was obtained with the *Curcuma longa* originated from Brazil, state of Goiás, in September 2012, and through layer chromatography, we identified presence of curcumin. Experimental protocol with animals used in this study was approved by the Research Ethics Committee of the Federal University of Goias. Chorioallantoic membrane (CAM) of 30 embryonated eggs were used to evaluate angiogenic activity. Effect of vascular proliferation was evaluated by morphometric analysis to fresh fragment and blood vessels count of CAM to planimetry by point counting. Results were submitted to statistical treatment by use of GraphPad InStat software (Version 3.05 for Windows). From the Kolmogorov-Smirnov test for normality, the CAM data were evaluated by Unpaired or Mann-Whithey test. Angiogenic activity to extract oil was evidenced both by morphometry ($p<0.0001$) as increase in the number of blood vessels ($p=0.01$).

From results obtained in this work, we can conclude that the *Curcuma longa* presented positive effect on angiogenesis characterized by the induction of neovascularization. This effect can demonstrate use in further studies on process of wound healing, since angiogenesis is a step in the repair process.

Biography

Veterinary Medicine, Federal University of Viçosa (1990). She specializes in Science, Federal University of Goiás (UFG) (2000). She obtained master's degree in Biology, concentration area-Animal Physiology by UFG (2004) and Ph.D. in Animal Science, concentration area-Pathology and Surgery by UFG (2008). She has experience in veterinary medicine, with emphasis on veterinary clinic and complementary veterinary medicine. She specializes in Herbal Medicine, Faculty of Pharmacy, UFG (2010). It is scholarship Postdoctoral of Scientific and Technological Development Fund (2010-2013), which conducts research to evaluate healing wound activity and ticks control with medicinal plants. It is scholarship postdoctoral of Coordination of Improvement of Higher Education Personnel Fund (CAPES) (2013-2015), which conducts research to test effect of herbal shampoo for dogs. She is related to OMICS Groups and Brazilian Animal Science.

Antioxidant, antimicrobial and cytotoxic activity of feijoa (*Acca sellowiana*)

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The feijoa (*Feijoa sellowiana, synonym, Acca sellowiana*) is a species of the family Myrtaceae. It is native to Brazil but also grows in others countries of South America. It is known that feijoa has bioactive products related to antioxidant and antimicrobial activity. Phenolic compounds are widely distributed in nature and act as pharmacologically active constituents in many herbal medicines. They have multiple biological properties. In the present study, an attempt to correlate the phenolic composition of peel and pulp of *Acca sellowiana* with antioxidant, antimicrobial and cytotoxic activities was undertaken. The total polyphenol content ranged from 2.6 to 4.4 mg GAE/gDW among different extracts. Gallic acid, catechin, epicatechin, chlorogenic acid, resveratrol and quercetin were identified and quantified by HPLC. DPPH assays showed high antioxidant activity of peel and pulp extract (about 95%). The extracts showed strong antimicrobial activity against *Pseudomona aeruginosa, Salmonella enteric, Listeria monocytogenes and Escherichia coli*. All the extracts exhibited dose-dependent cytotoxic effects against MCF-7 cancer cells. This study shows the biological potential of *Acca sellowiana* extracts and their relation to content of specific polyphenolic compounds.