



**XIII CONGRESSO DA MUTAGEN-BRASIL**  
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RIBEIRÃO PRETO-SP



# **PROGRAMAÇÃO**

## **Resumos (Abstracts)**

Realização:



**MutaGen-Brasil**

Associação Brasileira de Mutagênese e Genômica Ambiental

Apoio



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**IN VITRO TOXICOLOGICAL PROFILE OF DIFFERENT (ANDIROBA, CARAPA GUIANENSIS AUBLET, MELIACIAE) CRABWOOD SEED OILS****Araujo-Lima CF<sup>1,2</sup>, Fernandes AS<sup>1</sup>, Gomes EM<sup>1</sup>, Oliveira LL<sup>2,3</sup>, Macedo AF<sup>3</sup>, Antoniassi R<sup>4</sup>, Wilhelm AE<sup>4</sup>, Aiub CAF<sup>2</sup>, Felzenszwalb I<sup>1</sup>**

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**Key-words:** *Carapa guianensis*; phenolic compounds; free-radical scavenging; mutagenicity; cytotoxicity; genotoxicity.

*Carapa guianensis* (Aublet), a tree from Meliaceae family commonly known as andiroba. Its seed oil is largely used in Brazilian traditional medicine because of its multiple curative properties. OECD recommends perform at least two *in vitro* toxicological tests before proceeding to *in vivo* assays. Our aim was to evaluate the chemical composition and *in vitro* toxicological aspects and of three *C. guianensis* oils obtained by different extraction methods. Oil 1 was obtained by pressing the dried seeds at room temperature; Oil 2 was obtained by autoclaving at 121°C, drying and pressing; Oil 3 was obtained by soxhlet extraction at 30-60°C using petroleum ether. All of them presented differential yields, physicochemical properties and phenolic contents in each process. The genotoxicity screening demonstrated that Oil 1 was the more cytotoxic to bacterial cells and Oil 2 presented mutagenicity to *Salmonella enterica* typhimurium. Oil 2 was more cytotoxic than the others to CHO-K1 and RAW264.7 cells and induced micronuclei in both cellular types. Oil 3 also induced micronuclei formation. Our data demonstrate that an Oil 1, whose extraction was carried out in the absence of high-temperature, is the safest for its use compared to the other two oils, and presented the highest antioxidant activity.

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