



## Genotoxic Effect of Aqueous Extracts from South American *Achyrocline* and *Gnaphalium* Species (Asteraceae: Gnaphalieae) on Human Lymphocytes

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**SUMMARY.** Crude drug and different extracts of *Achyrocline satureioides* (Lam.) DC., *A. tomentosa* Rusby, *Gnaphalium cheiranthifolium* Lam. and *G. gaudichaudianum* DC. (Gnaphalieae: Asteraceae) are widely used in South America mainly as digestives and hepatics. These are raw material for phytotherapies preparations and the manufacture of traditional bitter drinks. In order to establish some aspects on their safety, we have evaluated four different concentrations (1, 10, 100, and 1000  $\mu\text{L}\cdot\text{mL}^{-1}$ ) of the aqueous extracts of these plants against Single Cell Gel Electrophoresis Assay (SCGEA) in human peripheral blood lymphocytes. Results show a significant increase in damage index ( $p < 0.001$ ) for all aqueous extracts concentrations assayed of the four plant species, in relation to negative control values. This is a contribution to the development of screenings related to the potential health risk associated with the consumption of South American medicinal plants, especially taking in mind that these plants are widely used as over-the-counter herbs.

**KEY WORDS:** *Achyrocline*, Comet assay, DNA damage, Genotoxicity, *Gnaphalium*.

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