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## ARE E-CIGS SAFE? AN EVALUATION OF CYTOTOXIC AND CYTOGENETIC DAMAGE IN BUCCAL MUCOSA

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Electronic cigarettes also known as e-cigarettes, e-vaporizers or electronic nicotine delivery systems are devices that promote the vaporization of nicotine without the burning of tobacco. The aim of this study was to investigate cytogenetic and cytotoxic damage through the evaluation of micronuclei frequency and metanuclear anomalies in the oral mucosa of users of electronic cigarette users compared to smokers of conventional cigarettes, ex-smokers and non-smokers. The patients were divided into four groups: control; e-cig; smokers and ex-smokers. The samples were collected by means of exfoliative cytology of the lateral region of the tongue and floor of the mouth. The smears obtained were fixed and the slices stained by the Feulgen method for investigation of micronuclei and metanuclear anomalies. A significant difference was observed only between the smoking and control groups in the frequency of micronuclei. As for metanuclear anomalies, comparisons in karyolysis were significant between: smokers and control, e-cig and control, as well as e-cig and ex-smokers; karyorrhexis: only between smoker and control groups; binucleation: between e-cig and ex-smoker groups and e-cig and control groups; broken eggs: between e-cig and all other groups; nuclear bud: between e-cig and ex-smokers, as well as e-cig and control. e-cig users, most ex-smokers of conventional cigarettes and alcohol users, presented genotoxicity and cytotoxicity in the cells of the oral mucosa.

## BIOGRAPHY

Janete Dias Almeida has completed her PhD at the age of 33 years from São Paulo State University, Brazil. She is Full time Professor at Institute of Science and Technology, São José dos Campos, Department of Biosciences and Diagnosis, São José dos Campos, Brazil. She has published papers on her research in reputed journals.

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