

3rd International Conference on

3D Printing Technology and Innovations

March 25-26, 2019 | Rome, Italy

Trad-MCN in *Tradescantia pallida* for evaluation of urban atmospheric air quality

Aline do Nascimento Rocha

Federal University of Grande Dourados, Brazil

Urban growth, especially in underdeveloped countries, often occurs in an unplanned fashion. Therefore, without a motor vehicle traffic strategy one of the emergency consequences is the quality of the atmospheric air. This can be contaminated by burning fossil fuels such as nitrates and other nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), fluorides, heavy metals and particulate matter. The quality of atmospheric air directly influences the health of citizens. Therefore, monitoring the action of a pollutant in an environment is of great value, mainly for the use of the data by the administrative management of municipalities in the improvement of the quality of life of its inhabitants. One of the monitoring options is biomonitoring or bioindication, which uses biological responses from living organisms exposed to the pollutant. The micronucleus test in *Tradescantia pallida* (Trad-MCN) is one of the most used bioassays for the detection of mutagenic effects caused by contaminants, generating a quick response and lower financial cost to the public coffers. The test is based on the formation of micronuclei, which originate from the chromosomal fragments (clastogenic effect) or whole chromosomes (aneugenic effects) that are caused by mutagenic agents. It is also advantageous to demonstrate the action of the interaction of factors (pollutants x environment) in an organism with active metabolism, a fact that is difficult to express in tests and sensors that use devices with physical and chemical foundations.

aline_2402@hotmail.com