

Bioluminescence of *Vibrio fischeri*: A Novel Application for PSP Quantification

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Paralytic Shellfish Poisoning (PSP) are the most harmful neurotoxins create a serious public health problem. It is important to assess PSP in Shellfish destined for human consumption. However, recommended methods have some limitations for example in the case of Mouse Bioassay (MBA) showed a low sensitivity and reproducibility, and undesirability for ethical reasons; while physicochemical techniques rest expensive and time-consuming. The main objective of this study, after discovering that PSP inhibited the luminescence of *Vibrio fischeri*, was the quantification of PSP by using Bioluminescence Inhibition Assay (BIA), and comparing the results obtained with those determined by MBA and LC-MS. Bivalve used were collected from Corniche Martil, Kabila, and Oued Laou, along with the Mediterranean coast of Morocco. Results showed a weak correlation between LC-MS and MBA with $r = 0.11$, while, the correlation between LC-MS and BIA was very strong with $r = 0.97$, which suggests that, BIA could offer an interesting additional assessment of PSP risk. In addition, after seen its rapidity, ease, reliability, sensitivity, reproducibility, and cost-effectiveness, it would be eligible to use for monitoring in surveillance programs.

Biography:

M. Blaghen is the Director of Laboratory of Microbiology, Biotechnology and Environment. He received from Strasbourg, Louis Pasteur University his first Ph.D.degree in Biochemistry with an emphasis in Toxicology and his second Ph.D.degree in Biotechnology with a an emphasis on Microbiology.