

Cellular activity of paralytic shellfish samples extracted from *Semele proficua* and *Senilia senilis*

Paralytic shellfish poisoning (PSP) is the human illness associated with the consumption of contaminated seafood products with the toxins known as saxitoxins. Saxitoxin (STX) are produced by dinoflagellates, generally by the genus *Gymnodinium*, *Alexandrium* and *Pyrodinium*. But between 2007 and 2008 episodes of PSPs contaminations in bivalves has occurred in Angola where there is not monitoring program for shellfish contamination with marine biotoxins. Ten samples extracted from the *Semele proficua* from Luanda Bay and *Senilia senilis* from Mussulo Bay, were analyzed by HPLC and STX, dcSTX and other four compounds that have an unusual profile different to the known hydrophilic PSP toxins were found in different amounts and combinations. These unknown compounds were not autofluorescent, and they presented much stronger response after peroxide oxidation than after periodate oxidation. Electrophysiological studies developed to elucidate their effects at cellular level lead to conclude that they have different activities, some of the isolated compounds bind to voltage-gated sodium channels and block the passage of sodium ions across the membrane, similarly to STX, thus, contributing to the STX activity while others did not show activity on sodium channels