

## **Biomonitoring of Marine Environment by Using a Bioindicator *Donax trunculus* (Mollusca, Bivalvia) from the Gulf of Annaba (Algeria): Biomarkers Responses**

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**Abstract :** Annaba gulf is the most important touristic and economic area located on the east coast of Algeria. However, these fishery resources are threatened by the pollution due to the progress of economic activity. As part of a biomonitoring program on the quality of waters of the Gulf of Annaba, the specific activity of two biomarkers, acetylcholinesterase (AChE) and glutathion S-transferase (GST) has been measured in edible bivalve *Donax trunculus*. The samples have been collected during the year 2013 in two sites: El Battah, distant from polluted sources, and Sidi Salem, located near the harbor and different industrial waste. The results showed a significant inhibition of AChE activity and a significant increase in the activity of the GST in samples collected from Sidi Salem as compared to El Battah. The inhibition of the AChE and the increase of the GST in Sidi Salem are in relation with the level of exposition of this site to the pollution.

**Keywords :** *Donax trunculus*, annaba gulf, acetylcholinesterase, glutathion s-transferase, biomonitoring, pollution

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