

CRASSOSTREA RHIZOPHORAE: A MORFOLOGICAL AND ULTRASTRUCTURAL STUDY.

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Hemocytes are cells with an important role in homeostatic functions and immune responses in bivalve mollusks. The characterization of these cell types is very important to studies involving environmental contaminants and was the aim of this study. For light microscopy observations, we fixed hemocyte monolayers of the oyster *Crassostrea rhizophorae* and stained them with Giemsa/May-Grunwald. We recognized three hemocyte types: a small hyalinocyte with $3.5 \pm 0.9 \mu\text{m}$ diameter (D) and $1.8 \pm 0.3 \mu\text{m}$ nucleus diameter (ND); a large hyalinocyte with $7.3 \pm 2.2 \mu\text{m}$ D and $2.5 \pm 0.6 \mu\text{m}$ ND; and a large granulocyte with $11.9 \pm 2.6 \mu\text{m}$ D and $2.8 \pm 0.4 \mu\text{m}$ ND. Our results show bigger granulocytes and smaller hyalinocytes than previously reported in the literature for the same specie. Transmission electron microscopy showed electron dense granules stored in membranous vacuoles, which X-ray microanalysis revealed to have a phosphorous-sulphur composition. Moreover, we observed membranous structures in the cytoplasm of all hemocyte types, from the small hyalinocytes to the large granulocytes, where they host the granules. In several granulocytes we could see channels connecting the vacuoles. Our results suggest that different hemocyte types might be actually hemocytes in different stages of maturation.

Keywords: *Crassostera rhizophorae*, oyster, hemocytes, X-ray microanalysis