

## Author list

Correia, AD.<sup>1,2</sup>

Fernandez-Duran B.<sup>1</sup>

Rocha, A.M.<sup>2</sup>

Nieto, O.<sup>3</sup>

Aboigor J.<sup>3</sup>

Saco-Álvarez L.<sup>3</sup>

Reis-Henriques, MA<sup>1,4</sup>

Beiras, R.<sup>3</sup>

<sup>1</sup>CIIMAR -Centro de Investigação Marinha e Ambiental, Porto, Portugal.

<sup>2</sup> Departamento de Biologia, Universidade do Minho, Braga, Portugal

<sup>3</sup> Departamento de Ecología e Biología Animal, Universidade de Vigo, Galiza, Spain

<sup>4</sup>ICBAS, Porto, Portugal

*Key words:* oil, biomarkers, coastal biomonitoring, *Mytilus galloprovincialis*

## **Assessment of hydrocarbon pollution in NW Iberian Peninsula using bioaccumulation and molecular biomarkers in *Mytilus galloprovincialis*.**

Polycyclic aromatic hydrocarbons (PAH's) are ubiquitous contaminants in marine environment as a result of uncontrolled spills, river transport, surface runoff and atmospheric deposition. A significant amount of industrial activity including shipping and oil refining is located along the NW Iberian Peninsula coast. The use of exposure biomarkers holds out promise due to the incipient state of the cost-effective methodologies for diagnosis and monitoring of oil pollution. This work presents the preliminary results concerning the identification of a set of biomarkers for an early warning detection of PAH toxicity. The bivalve *Mytilus galloprovincialis* was selected due to its ubiquitous distribution along coastline, being used as sentinels in pollution monitoring. This species has also an important value. Four locations in the vicinity of industrial wastewater discharges along the NW Iberian coast were selected and compared with a nearby (reference) site for (i) measurements of PAH body burdens and (ii) levels of enzyme activity: catalase (CAT), superoxide-dismutase (SOD), glutathione peroxidase (GPx), glutathione S-transferase (GST) and Na<sup>+</sup>/K<sup>+</sup>ATPase (ATPase). The results will be discussed on the basis of their potential in providing additional evidence for discriminate between well known polluted and unpolluted sites.

Ana Dulce Correia

CIIMAR- Centro Interdisciplinar de Investigação Marinha e Ambiental

Universidade do Porto

Rua dos Bragas,289

4050-123 Porto

Portugal

phone (+351) 223401800

fax (+351) 223390608