



Apresentações Internas do CIIMAR

Data: 21/02/2005

Horário: 14:00 – 15:00

Local: Auditório CIIMAR, Rua dos Bragas 289

Coordenador: Dr. Rodrigo Ozorio

Programa:

14:00 - 14:15 Enzymatic systems of the mussel *Mytilus gallprovincialis* as biomarkers of environmental contamination in the North coast of Portugal.

Inês Lima - Laboratório de Ecotoxicologia

14:20 - 14:35 Under Pressure: physiological effects of hydrostatic pressure on fish

Alfredo Damasceno-Oliveira - Laboratório de Ecofisiologia

14:40 - 14:55 Bioplatfrom: Thematic Network for Biodiversity Research in Europe

Rainer Mussner – Laboratorio de Biodiversidade Costeira

Resumos:

Enzymatic systems of the mussel *Mytilus gallprovincialis* as biomarkers of environmental contamination in the North coast of Portugal

Inês Lima. Laboratório de Ecotoxicologia. CIMAR. Universidade do Porto.

Petroleum derived products are considered to be one of the main pollution problems in the aquatic ecosystems, particularly in estuaries and coastal areas. Oil spills from petrochemical plants and navigation accidents are two of the main entries of these contaminants into the environment. Since the biological effects of these chemicals are usually first displayed in the organism at the molecular/biochemical level, the use of biochemical alterations as environmental biomarkers make possible to anticipate and predict effects that may occur later at higher levels of organisation (population, community and ecosystem levels) allowing the adoption of protective measures. In order to evaluate the response of the enzymatic systems of the marine mussel *Mytilus galloprovincialis* to petrochemical products, a biomonitoring program is being carried out along the North coast of Portugal. Seasonal variations in neurotransmission, metabolism and oxidative stress related parameters are being determined and related with the mussel reproductive cycle.

Under Pressure: physiological effects of hydrostatic pressure on fish

Alfredo Damasceno-Oliveira. Laboratório de Ecofisiologia. CIMAR. Universidade do Porto.

Pressure is an important (but rarely studied) thermodynamic and environmental factor that affects a large diversity of biological processes. The physiological effects of pressure on the living whole organisms can be studied by using teleost fish as models, where it is possible to study the pressure effects *per se*. Additionally, many teleosts species could be faced with a wide range of hydrostatic pressures in their natural habitats and rhythmic vertical migration (and associated pressure changes) is also a widespread feature among fish. At the Ecophysiology Lab - CIMAR we have developed the techniques to perform long-term hydrostatic pressure studies on living adult fish, either with constant or with cyclic conditions. The main objectives of our work are to study the effects of cyclic and constant hydrostatic pressure on the CNS, on the brain-pituitary-gonad axis and on some physiological processes like osmoregulation. Some results will be presented and discussed.

Bioplatform: Thematic Network for Biodiversity Research in Europe

Rainer Mussner – Laboratorio de

Bioplatform is a Thematic Network in the 5th Framework Programme of the EU to support the "European Platform for Biodiversity Research Strategy" (EPBRS). It is a network of scientists and policy makers that work in different fields of Biodiversity all over Europe and aims at improving the effectiveness and relevance of European biodiversity research. The general background for the creation of Bioplatform as well as EPBRS is the fact, that on the one hand research on biodiversity is essential to help the European Union and its Member States to implement the Convention on Biological Diversity and several other biodiversity related directives and on the other hand, Biodiversity Research in Europe is not well structured. Therefore, there is a need for co-ordination between researchers working in this field, the policy-makers that need the research results and the organisations that fund research in this field.

Bioplatform has partners from 28 countries and is coordinated by CIMAR. Its activities include the preparation and organisation of bi-annual conferences on different biodiversity topics in the country

that hosts the EU presidency; the conduction of electronic conferences; the establishment of National Biodiversity Platforms and the overall support for the above mentioned EPBRS.

The current paper will present the organisation of the consortium, the way it is working and the activities that have been conducted in recent years. A short review on its main outcomes and impact to the European Research Area (ERA) will be given and perspectives for the future of science-policy interfaces like Bioplatform and EPBRS will be discussed.