APPROCHE DES RISQUES SANITAIRES PAR ETUDE DU TRANSFERT DE LA CONTAMINATION ET DE LA TOXICITE DES POLLUANTS DE L'ERIKA PAR LA VOIE ALIMENTAIRE

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ABSTRACT

The release of heavy fuel oils containing polycyclic aromatic hydrocarbons (PAHs), in the marine environment after ERIKA's wreck is of concern. Long-term effects due to direct exposure or transfer *via* the food chain can be suspected. Few data are available on the role of invertebrates in the transfer of PAHs or their metabolites towards higher trophic levels and mammals.

The aim of our study is to evaluate the genomic effects in rats, fed with bivalves sampled in the contaminated areas. After two and four weeks of treatment, DNA damage was evaluated by quantifying DNA breaks (COMET assay) and micronuclei. Changes in genomic expression were studied by quantifying the induction of CYP1A1 mRNA and EROD (ethoxyresorufin-O-deethylase) activity, as early biomarker of exposure to PAHs .

Our first results demonstrated significant genotoxic damage in liver of rats fed with bivalves contaminated with 1000 µg PAHs /kg d.w., but no induction in EROD activity has still been detected.

Further experiments will be conducted in order to establish the threshold of contamination in mussels insuring safety in mammals.

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