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The IUF – Leibniz Research Institute for Environmental Medicine investigates the molecular mechanisms through which particles, radiation and environmental chemicals harm human health. The main working areas are environmentally induced aging of the cardiopulmonary system and the skin as well as disturbances of the nervous and immune system. Through development of novel model systems the IUF contributes to the improvement of risk assessment and the identification of novel strategies for the prevention / therapy of environmentally induced health damage. The working group “AHR and UVB-Signaling” at the IUF - Leibniz Research Institute for Environmental Medicine in Düsseldorf is offering a

Master Thesis position (f/m/d).

**Topic: Impact of aryl hydrocarbon receptor signaling on
DNA damage-dependent cellular stress responses.**

Our working group investigates the functional relevance of the aryl hydrocarbon receptor (AHR) signaling pathway for DNA damage-induced stress responses, i.e. DNA repair and apoptosis, in human cells. In our previous work, we have shown that the AHR represses DNA repair and apoptosis in UV radiation-exposed epidermal keratinocytes and thereby critically contributes to skin photocarcinogenesis. In the advertised master project, the identified underlying signaling processes will be reproduced in other cell systems and characterized more deeply by applying various cell and molecular biological methods. The overall aim of the project is to identify target structures and respective compounds that might be suitable candidates for the treatment of certain malignancies. Tasks of the master student include the culture and treatment of human cells and cell-lines, quantitative gene expression analyses, SDS-PAGE/Western blot-based assessment of protein expression/phosphorylation, various apoptosis assays, and DNA damage detection and quantification.

We offer a very friendly and inspiring working atmosphere in an interdisciplinary team consisting of toxicologists, cell biologists and physicians. For this challenging project, we are searching a highly motivated master student of molecular biology, toxicology, molecular oncology or a related discipline with a keen interest in signal transduction, genotoxicity and cancer research. Ideally, the candidate (f/m/d) has first hands-on experience with cell cultures and standard molecular biological and protein biochemical techniques. Expertise in measuring cell death and/or DNA damage is a plus. We are looking for a goal-oriented team player with excellent communication skills in English.

Please send your application as one PDF file incl. cover/motivation and your CV to Christian.Vogele@IUF-Duesseldorf.de

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Application documents submitted by post are not returned. Documents for applicants not considered are destroyed appropriately once the procedure is complete.

