

18.01.2024

# IUF

LEIBNIZ-INSTITUT  
FÜR UMWELT-  
MEDIZINISCHE  
FORSCHUNG

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 pulmonary 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 signaling & environmentally-induced skin damage” at the IUF – Leibniz Research Institute for Environmental Medicine in Düsseldorf is currently looking for

**A student (m/w/d) for a Master Thesis with the title:**

**Impact of aryl hydrocarbon receptor (AHR) activation on wildtype and mutant epidermal growth factor receptor (EGFR) and downstream signal transduction in human epithelial cells.**

**The project:** Recently, a groundbreaking paper published by Hill et al. (Nature 2023; 616(7955):159-167) reported that an exposure to airborne particulate matter (PM) promotes lung tumorigenesis in nonsmokers. PM exposure seems to stimulate the proliferation only of those alveolar cells that carry natural activating mutations in the epidermal growth factor receptor (EGFR) gene. The underlying molecular mechanism is quite unclear, but polycyclic aromatic hydrocarbons (PAHs), which are commonly bound on the surface of combustion-derived PM and known to activate the aryl hydrocarbon receptor (AHR), seem to play a relevant role in this process. Aim of the project is to investigate the effects of AHR activation on EGFR activity and downstream signaling pathways in human epithelial cells, and to understand the potential impact of EGFR gene mutations thereon.

**Your profile:** Our working group is looking for a motivated master student (m/w/d) with a high level of commitment, fun at work, and team spirit. The applicant should have a completed bachelor’s degree in molecular biology, cell biology or a related discipline. Hands-on experience in cell culture and protein biochemistry is a plus. Furthermore, good knowledge of English is mandatory.

**We offer:** An interdisciplinary international team with a pleasant working atmosphere and a thorough training in a highly topical, challenging area of research.

**Start:** As soon as possible

Please address your application by e-mail (letter of motivation, CV, certificates, etc.) with the reference “Master Haarmann-Stemmann” in the subject line to [Bewerbung@IUF-duesseldorf.de](mailto:Bewerbung@IUF-duesseldorf.de)

Dr. Thomas Haarmann-Stemmann  
IUF – Leibniz-Institut für umweltmedizinische Forschung  
c/o Personalstelle  
Auf'm Hennekamp 50  
40225 Düsseldorf

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

