Become a research detective and help us identify scientific misconduct!

Background
The production of fraudulent research publications by so-called "paper mills" is a serious threat to the integrity of research. Paper mills are for profit companies selling authorships on fake publications, which are subsequently published and pollute the scientific evidence base. One method to identify such fabricated publications is by detecting image duplication: the uncredited and inappropriate (partial) reuse of images, which is increasingly seen in the scientific literature. Image duplication of e.g. images of western blots or tissue histology can occur either within a single publication or across multiple publications. Our research group uses systematic review methodology and AI software to assess the extent to which fraudulent papers affect evidence syntheses of animal research. We offer you the opportunity to join one of our ongoing projects and become an expert in detecting potential scientific misconduct!

Department
You will primarily work at the Depts. of Anaesthesiology and Neurosurgery at the Raboudumc, with at least one primary supervisor from these departments. Another supervisor can be involved depending on the topic of the review, from inside or outside of the Radboudumc. This is a great chance to be involved in an (inter)national collaboration with e.g. the Charité in Berlin or university of Edinburgh. It is possible to partially work from home, but we welcome you to (also) work at the department.

Duration: 6-9 months for MSc internships.

Research question: How does data from publications with image duplications affect the results of preclinical evidence syntheses?

Research objectives ("*what will I be doing?*")
For a set of research publications from an existing systematic review, you will:
1. Extract additional study characteristics and research quality indicators and tabulate them
2. Use visual inspection and AI software to detect image duplication, within and across publications
3. Perform meta-analysis to assess how the study quality indicators affect the pooled effect
4. Interpret the results and formulate directions for future research based on your findings
5. Write your report in publication format, prepare and give an oral presentation

Learning objectives ("*what will I learn from this?*")
You'll join a specialist group of worldwide experts on evidence synthesis of animal studies, and will acquire unique knowledge about how to spot questionable research practices!

In more detail, you'll learn e.g.:
1. To use meta-analysis techniques to assess the effects of misconduct on evidence syntheses
2. To critically reflect on incentives in research culture that may lead to scientific misconduct or questionable research practices
3. To organise your tasks and manage a collaborative research project
4. To interpret the results and present these, in English, in a draft manuscript and presentation

If you are interested, please contact kim.wever@radboudumc.nl or visit www.radboudumc.nl/meta-research-team