Meta-research: critical appraisal and synthesis of animal research for human health

Learn all about evidence synthesis of animal studies, and acquire unique knowledge about what makes animal research reliable!

Background
Animal research is highly polarising, both championed as essential and criticised as unethical and ineffective. Over the past decade, our team has specialized in the use of systematic review of animal studies to uncover both the successes and the limitations of animal studies in various fields of research, including anaesthesiology, neurosurgery, cardiovascular disease, reproductive medicine and many more. Our work has been used to inform experimental design and reporting guidelines and has helped establish systematic review as a tool to reduce research waste, improve reproducibility, and advance the 3Rs (replacement, reduction and refinement). We offer you the opportunity to join one of our ongoing systematic review projects and become an expert in research robustness!

Department
You will primarily work at the Dept. of Anaesthesiology at the Raboudumc, with at least one (primary) supervisor from this department. A second 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 UMCU or university of Edinburgh. It is possible to partially work from home, but we welcome you to (also) work at the department.

Duration: flexible, e.g. 3 months for BSc internships, or 6-9 months for MSc internships.

Research question: We currently have ongoing projects on post-operative pain, hearing loss, early life stress, research integrity and many more. Contact us for more information.

Research objectives ("*what will I be doing?*")
1. Develop and perform a systematic literature search. Gather, assess and select all relevant studies.
2. Extract study characteristics and relevant outcome measure data.
3. Define, extract and interpret indicators of study quality and risk of bias.
4. Perform meta-analysis on extracted data, assess effect modifiers and publication bias.
5. Interpret the results and formulate directions for future research based on your findings
6. 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 what makes animal research reliable!

In more detail, you'll learn:
1. How to design and perform a systematic literature search based on a specified review question
2. How to define in- and exclusion criteria for a specific review question
3. To extract study characteristics and data for relevant outcome measures
4. To critically reflect on a broad range of study designs and to identify risk of bias
5. 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