

Quality control measures for biomedical animal studies

SUPERVISORS

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FUNDING

Marginal employment for 12 months with a payment of 485.85 Euro per month.

BACKGROUND

Awareness is increasing that a large proportion of results which are published in preclinical research cannot be confirmed in replication studies. There are a number of reasons contributing to this lack of internal validity of animal trials, including shortcomings in study designs, inappropriate statistical analysis and poor reporting of results. In order to make accurate assessments of the translational value of preclinical data, it is crucial to reduce such systematic methodological shortcomings.

GENERAL AIM

We want to compare proposals for animal trials with resulting publications. Deviations from reporting as specified in the protocol may lead to outcome reporting bias which can be an important source of non-reproducibility. The main goal is to establish a data base which includes crucial information both from animal ethics proposals as well as from the respective scientific articles. This database will later be used to investigate to which extent publications reflect key indicators from underlying applications.

SPECIFIC TASK

The master student will create a database to store the relevant information from proposals and research papers, where all animal research applications of the last 10 years from the Medical University of Vienna are available. The assessment of the applications and publications will be aided by a rating tool originally developed by the BIQMR study group from the University of Zurich. This shiny app needs to be adapted by the master student to be applicable for the current project. The rating tool should work as follows: Publications and applications in pdf-format for which author names and affiliation have been redacted will be displayed and a series of rating questions are asked where the rater has to answer by clicking in check boxes. Publications appear in random but reproducible order and data extraction on these publications is made efficient, reproducible and reliable. The master student will work in parallel with a second master student who will be responsible for performing the rating and thus filling the database with content. Close collaboration with this second master student of medicine is expected.