

Einladung zum Biometrischen Kolloquium

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EXPERIMENTAL REPLICATIONS IN ANIMAL TRIALS

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Host: Susanne Strohmaier

ABSTRACT:

The recent discussion on reproducibility of scientific results is particularly relevant for preclinical research with animal models. Within certain areas of preclinical research there exists the tradition to repeat an experiment at least twice to demonstrate replicability. If the results of the first two experiments do not coincide then the experiment might be repeated a third time. Sometimes data of one representative experiment are shown, sometimes data from different experiments are pooled. We will illustrate the pervasiveness of this problem by looking at a recent volume from a top journal of immunology. The current practice is quite direful from a statistical point of view and there exist hardly any guidelines how to plan animal trials with a prespecified number of experimental replications. We will provide a thorough statistical analysis of preplanned experimental replications as they are currently often applied in practice and give some recommendations how to improve on study design and statistical analysis.