

Title: Many factors, few prior information – some thoughts, approaches and examples to consider for sample size calculation in preclinical animal trials

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Abstract:

Animal experiments often involve many factors to be simultaneously evaluated, resulting in a factorial design. However, during the planning phase of such experiments sample size calculation is challenging because of sparse prior data. Standard calculation approaches, such as those using unpaired t-tests, thus are possibly of limited validity for the actual animal experiment. So alternative approaches are necessary to get a meaningful number of required animals.

This presentation introduces various simulation scenarios that are based on the information from a two-group comparison and are transferred to a factorial design. Different distribution assumptions and group assignments of the data as well as various interaction pattern are considered.