

Local and Bayesian Optimal Designs in Binary Bioassay

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Abstract:

When designing a bioassay experiment, the number of dose levels and the number of assay organisms assigned to those doses profoundly effects the precision (i.e. variance) of the design model parameter estimates, as well as other design criteria. The collaborating statistician can provide a scheme for assigning assay organisms to dose levels such that model design and performance are optimized. This talk will be a review of current and past research on model performance in binary bioassays from an optimal design perspective. Issues such as how many dose levels; where they should be placed; and the number of organisms (weights) at those dose levels will be discussed.