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**Robust and efficient designs for the Michaelis-Menten model.** (English) Zbl 1040.62065

*J. Am. Stat. Assoc.* 98, No. 463, 679-686 (2003).

Summary: For the Michaelis-Menten model, we determine designs that maximize the minimum of the  $D$ -efficiencies over a certain interval for the nonlinear parameter. The best two-point designs can be found explicitly, and a characterization is given when these designs are optimal within the class of all designs. In most cases of practical interest, the determined designs are highly efficient and robust with respect to misspecification of the nonlinear parameter. The results are illustrated and applied in an example of hormone receptor assays.

**MSC:**

**62K25** Robust parameter designs

**62P10** Applications of statistics to biology and medical sciences; meta analysis

Cited in **23** Documents

**Keywords:**

local  $D$ -optimality; robust optimal designs

**Full Text:** [DOI](#)