

Pattaraporn Tusto was my PhD. student at Mahidol University whose research I directed over the period 2011-2015, and is now a Lecturer in Bangkok; Montip Tiensuwan is our colleague at Mahidol University. This publication resulted from part of Pattaraporn's dissertation thesis. The full reference is: Tusto, P., O'Brien, T.E., and Tiensuwan, M., 2016, Optimal Design Strategies for Relative Potency Using the Log-Logistic Model, *Model Assisted Statistics and Applications*, 11(2), 109-123.

## Optimal Design Strategies for Relative Potency using the Two-Parameter Log-Logistic Model

Pattaraporn Tusto<sup>1,3</sup>, Timothy E. O'Brien<sup>2</sup>, Montip Tiensuwan<sup>1,3,\*</sup>

<sup>1</sup>Department of Mathematics, Mahidol University, Bangkok 10400, Thailand

<sup>2</sup>Department of Mathematics and Statistics, Loyola University, Chicago, Illinois 60660, USA

<sup>3</sup>Center of Excellence in Mathematics, CHE, Si Ayutthaya Road, Bangkok 10400, Thailand

\*Corresponding author: e-mail: montip.tie@mahidol.ac.th

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### Abstract

In this paper, we focus on the D- and  $D_s$ -optimal designs for two-parameter log-logistic (LL2) relative potency model where the response variables are normal and binomial distributions. The D- and  $D_s$ -optimal designs are obtained by using D-optimal design and nesting strategy criteria, respectively. Furthermore, the general equivalence theorem is used to guarantee the D- and  $D_s$ -optimal designs. The results show that we obtain four support points for D-optimal designs and two support points for  $D_s$ -optimal designs.

*AMS (2000) subject classifications:* Primary 62K05; secondary 62B15

*Keywords and phrases:* General equivalence theorem, optimal design, relative potency, two-parameter log-logistic model.

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