

1023-00-1606

**Stephine L Keeton\*** ([stephine.keeton@fda.hhs.gov](mailto:stephine.keeton@fda.hhs.gov)), 7500 Standish Place HFV-105, Rockville, MD 20855, and **Hanxiang Peng** ([mmpeng@olemiss.edu](mailto:mmpeng@olemiss.edu)), PO Box 1848, The University of Mississippi, Department of Mathematics, University, MS 38677. *The Semiparametric Exchangeable Model.*

We generalize the class of exchangeable parametric distributions and present a unified model. We also propose a semi-parametric regression model and develop procedures of efficient estimation.

Because independence is relaxed to exchangeability, the unified model for exchangeability improves models for which independence is assumed. Semiparametric models, as a modern regression, share the advantages of both parametric and nonparametric models. The proposed semiparametric exchangeable model is anticipated to ameliorate statistical modeling, in particular, in teratology.

The generalized class includes the exchangeable binomial by George and Bowman (1995), the exchangeable negative binomial by Rayner (2005), the exchangeable multinomial by Ding (2006), and the partially exchangeable binomial by Garner(2006). (Received September 26, 2006)