1086-92-2341   **Abra Brisbin*** (`abrisbin@gmail.com`), **Liewei Wang** and **Brooke Fridley**. *Model choice for gene pathway-based priors in Bayesian association studies.*

Gene pathways encode a wealth of information that could be used to improve power in genetic association studies. For example, researchers may wish to utilize the prior belief that more closely connected genes have more correlated effects on the trait. In this work, we compare Bayesian models for encoding network structure, by placing priors on either the covariance matrix or the inverse covariance matrix (CAR models) of gene effects. We also compare two approaches for choosing a model, DIC and detection rate, and find that these approaches frequently support different models. (Received September 25, 2012)