

“Accounting for Population Structure in GWAS studies: On the Relationship between the Mixed Model and Principal Components Regression”

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ABSTRACT

Genome-wide association studies (GWAS) can be confounded by population stratification, family structure or cryptic relatedness (Price et al., 2010). Principal components regression and mixed models are commonly used to control for population structure in GWAS. These two methods are strongly related; indeed, we will show that the mixed model can be viewed as a (penalized) regression on (all) principal components. In this seminar I will show this duality and discuss its implications for GWAS.

Price A.L. et al. (2010) New approaches to population stratification in genome-wide association studies. *Nature Reviews Genetics* 11:459-463.