Enhancing QTL detection power in multiparental populations

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We present a strategy to enhance power to detect QTL in multiparental populations. We leverage findings in one multiparental cohort to inform mapping methods in a second multiparental cohort. We demonstrate our approach in studies with Diversity Outbred and Collaborative Cross mice. We complement our analyses with simulation studies to assess statistical power to detect QTL. We also discuss implications for experimental design with multiparental populations.