



Figure 5 – Supplementary Figure 2. Q-Q plots for association analyses. All estimates (blue dots) were calculated using *SLC24A5*^{A111T}, *SLC45A2*^{L374F}, *OCA2*^{NW273KV}, and sex as covariates. Plotted values are not corrected for statistic inflation. Statistic inflation appears to exceed that predicted from the median when using LMM approaches, for our dataset. Red line shows expected values; dashed red line shows expected values based on statistic inflation (lambda) calculated from median. A) Linear regression with 10 principal components (PCs) included as covariates, Lambda = 1.342; B) Linear Mixed Model (LMM) with no PCs, standard Genetics Related Matrix (GRM), Lambda = 1.024; C) LMM with 10 PCs, standard GRM, Lambda = 1.031; D) LMM with 10 PCs, REAP GRM. Lambda = 1.068.