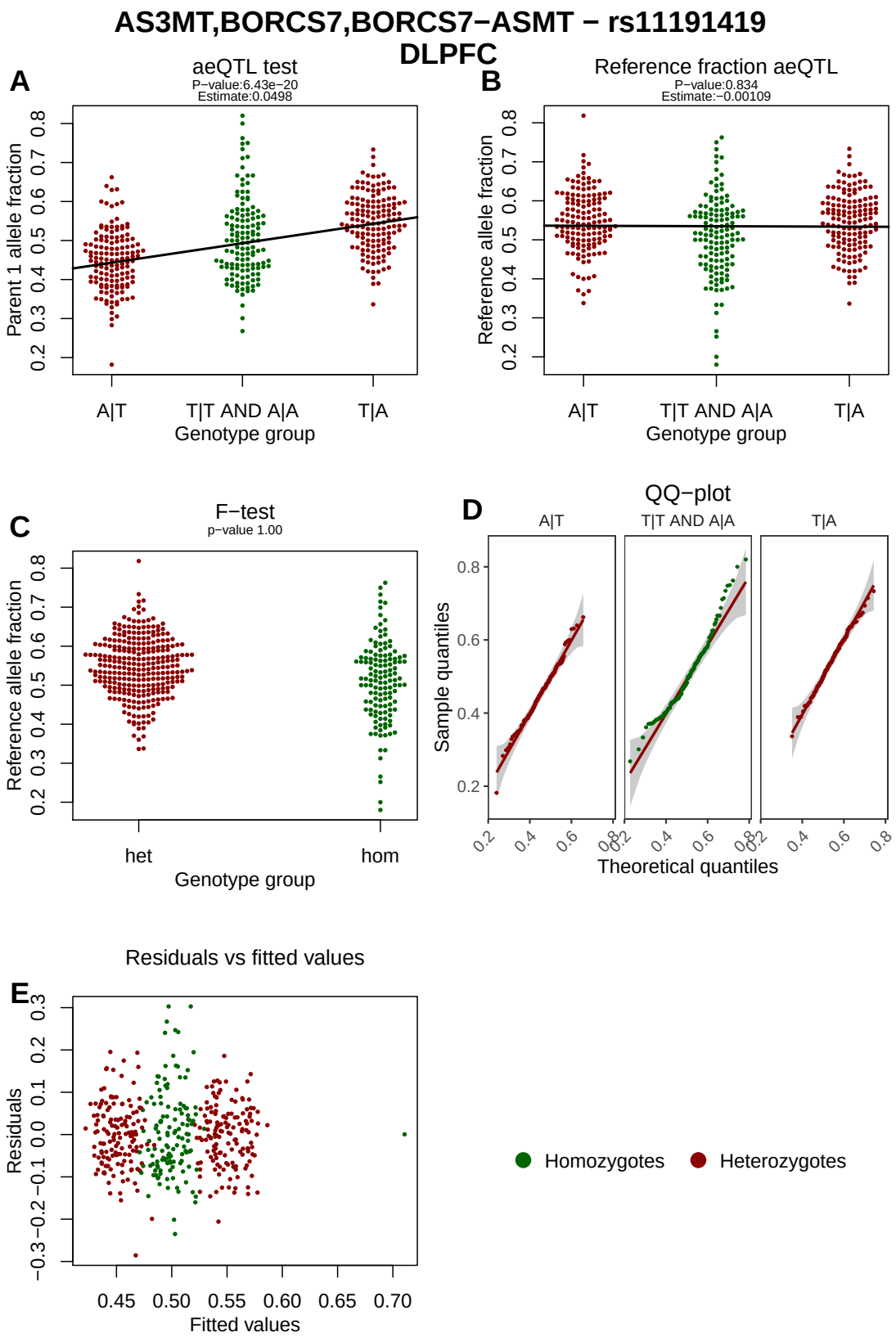
Allelic Imbalance in SZ (Supplemental Material 2)

This is a document containing supplemental figures for the "Comparison of Quantitative Trait Loci Methods: Total Expression and Allelic Imbalance Method in Brain RNA-seq" manuscript. On each page are each gene-snp pair in table 1 in the main manuscript additionally described by graphs and auxillary tests. **A**) Similar to the plot 1B, which is described in the main manuscript. **B**) A regression test of the reference fraction for each genotype group to prove that there is no underlying skew in the distribution of ref/alt alleles, which would bias the aeQTL result. As can be seen in some graphs there is an underlying mapbias where the reference allele has a higher fraction in all genotype groups, but important is that the bias is equally present in each group, and therefore not affecting the aeQTL analysis. **C**) Illustration of the distribution between homozygotes and homozygotes together with a p-value for a one sided variance test as used by Fogarthy et al. The idea is that the heterozygote group should have a higher variance as it is assumed that all fractions from the homozygote genotype groups are supposed to lie close to 0.50 and the heterozygote group to have a deviation from 0.50 and thereby create a higher variance in the heterozygote group. This approach was largely unsuccessful, as no test showed significance, even though we know that we have several aeQTLs present from our regression analysis. **D**) A QQ-plot for each genotype group's parent-1 allele fraction value to its theoretical normal distribution quantiles. The grey shading indicates the confidence bands at alpha=0.05. **E**) A residuals versus fitted values plot based on the aeQTL test on parent-1 allele fraction, to inspect heteroscedasticity/homoscedasticity.



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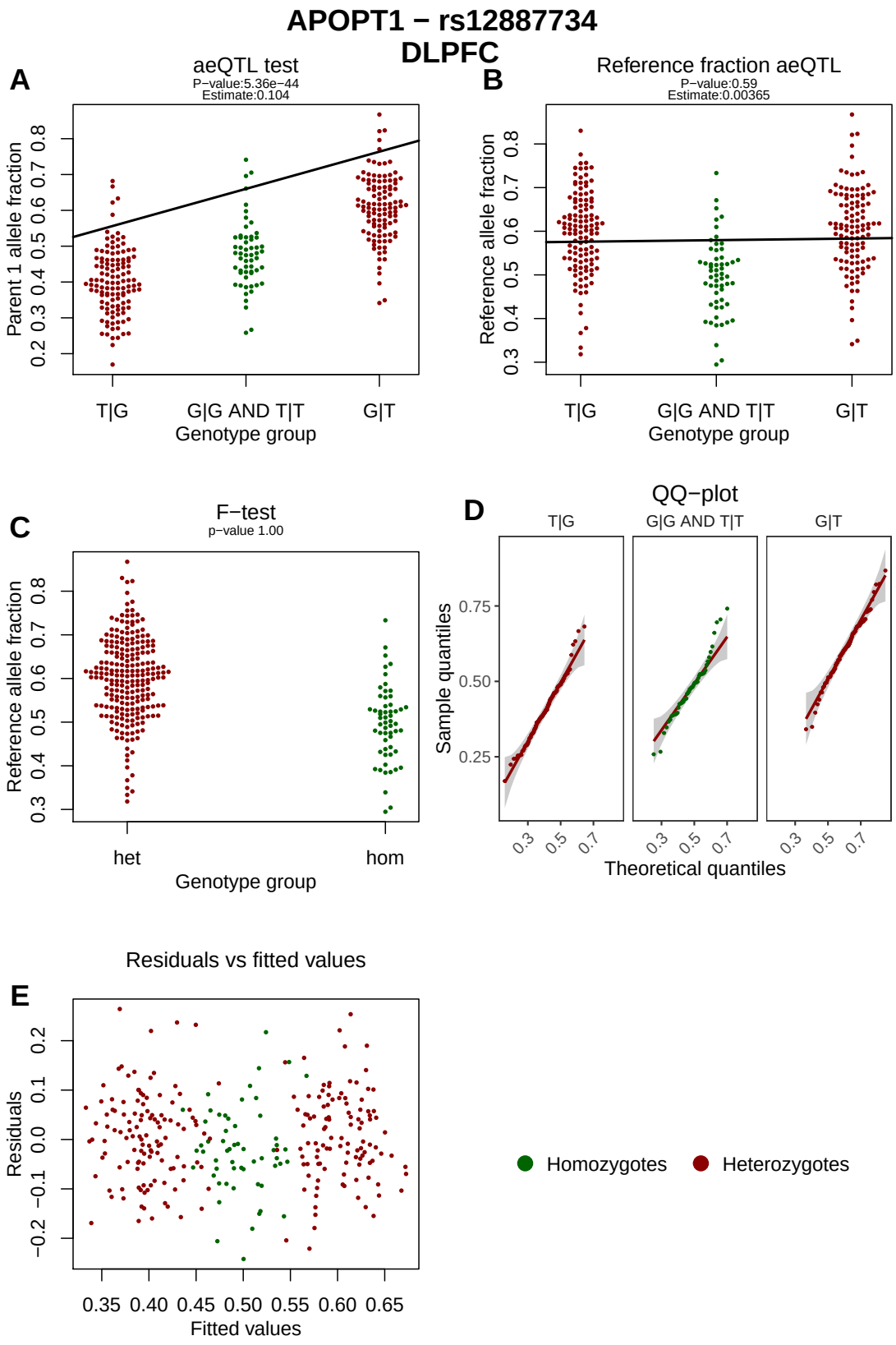

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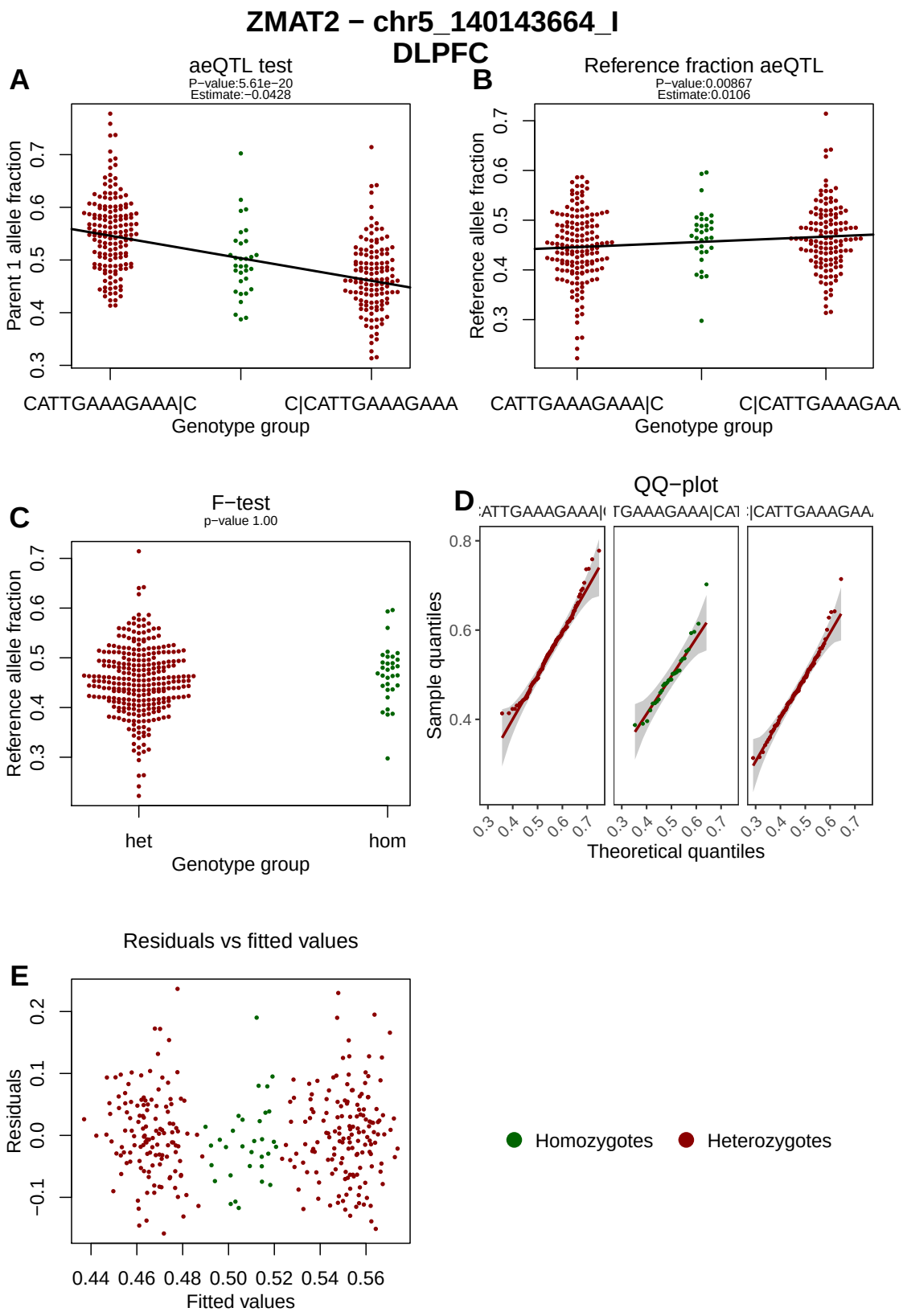

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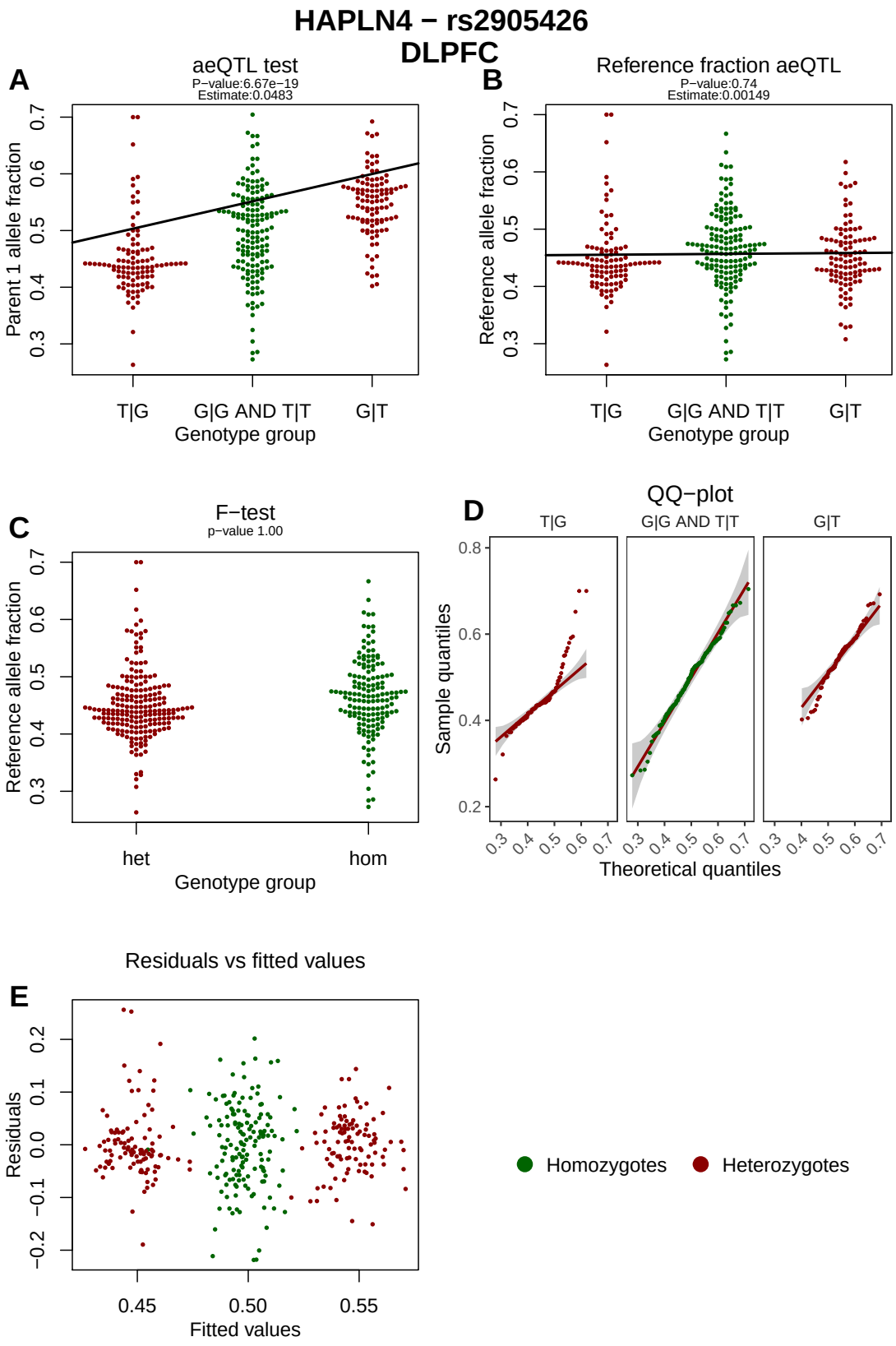

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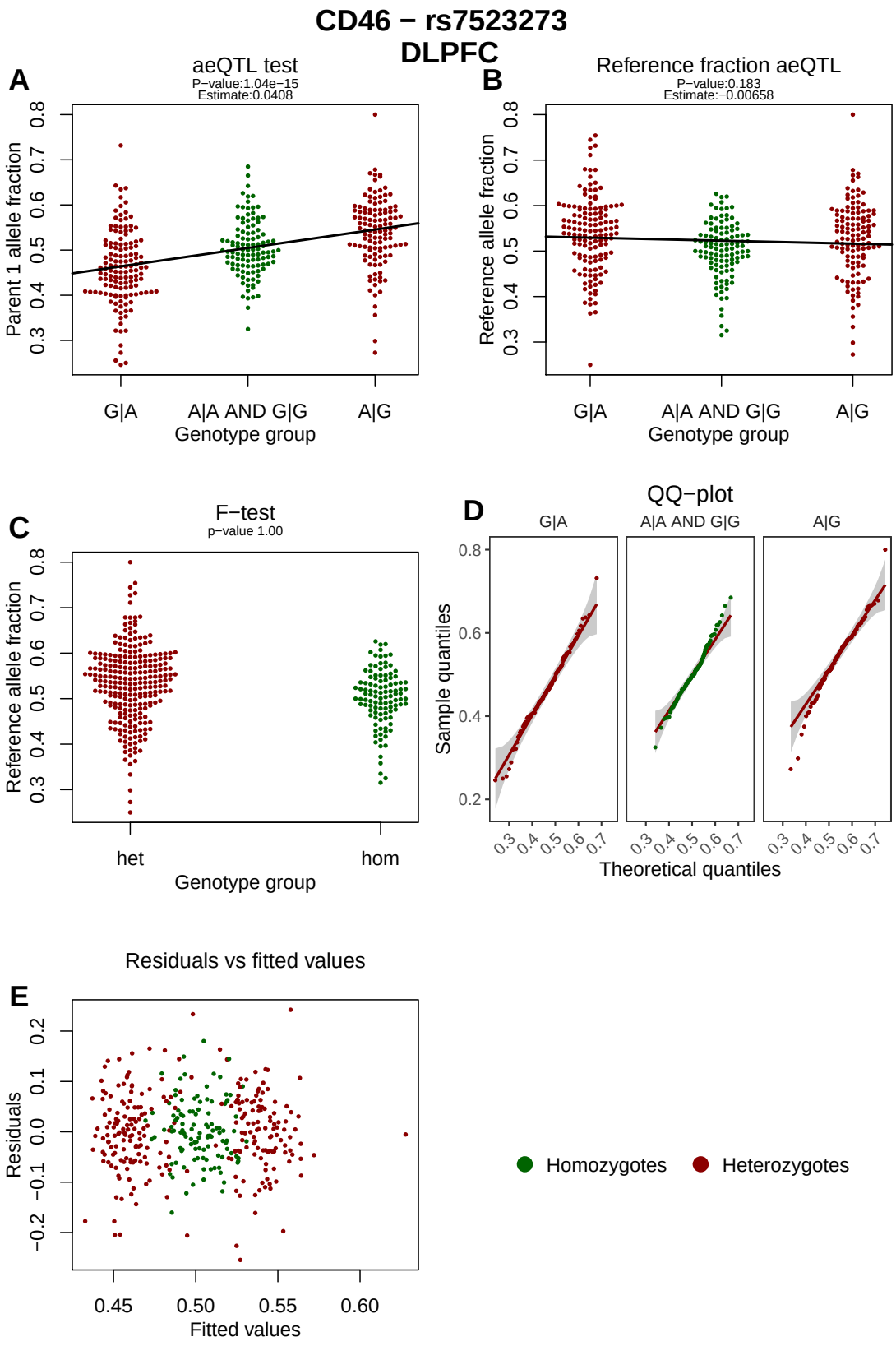

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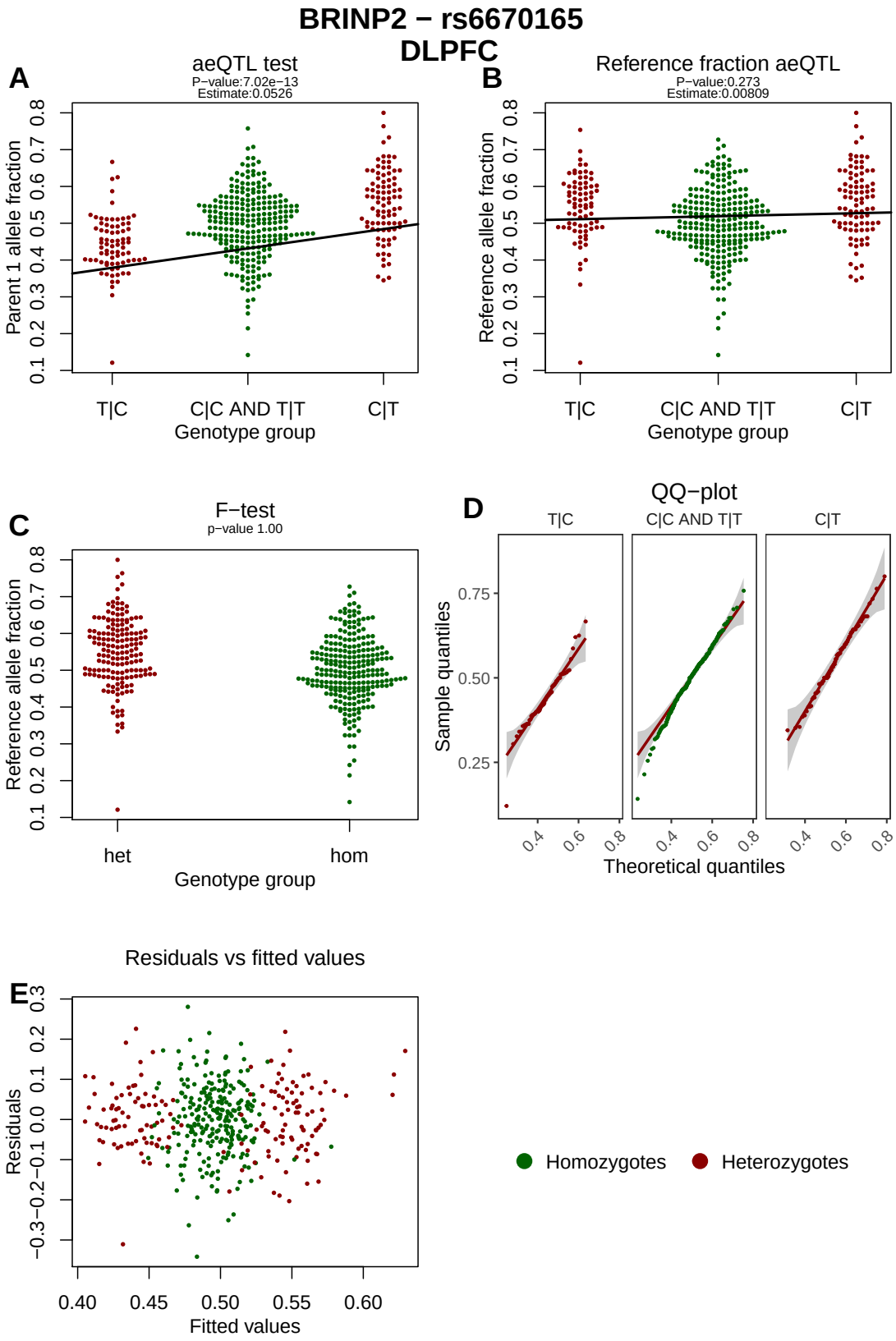

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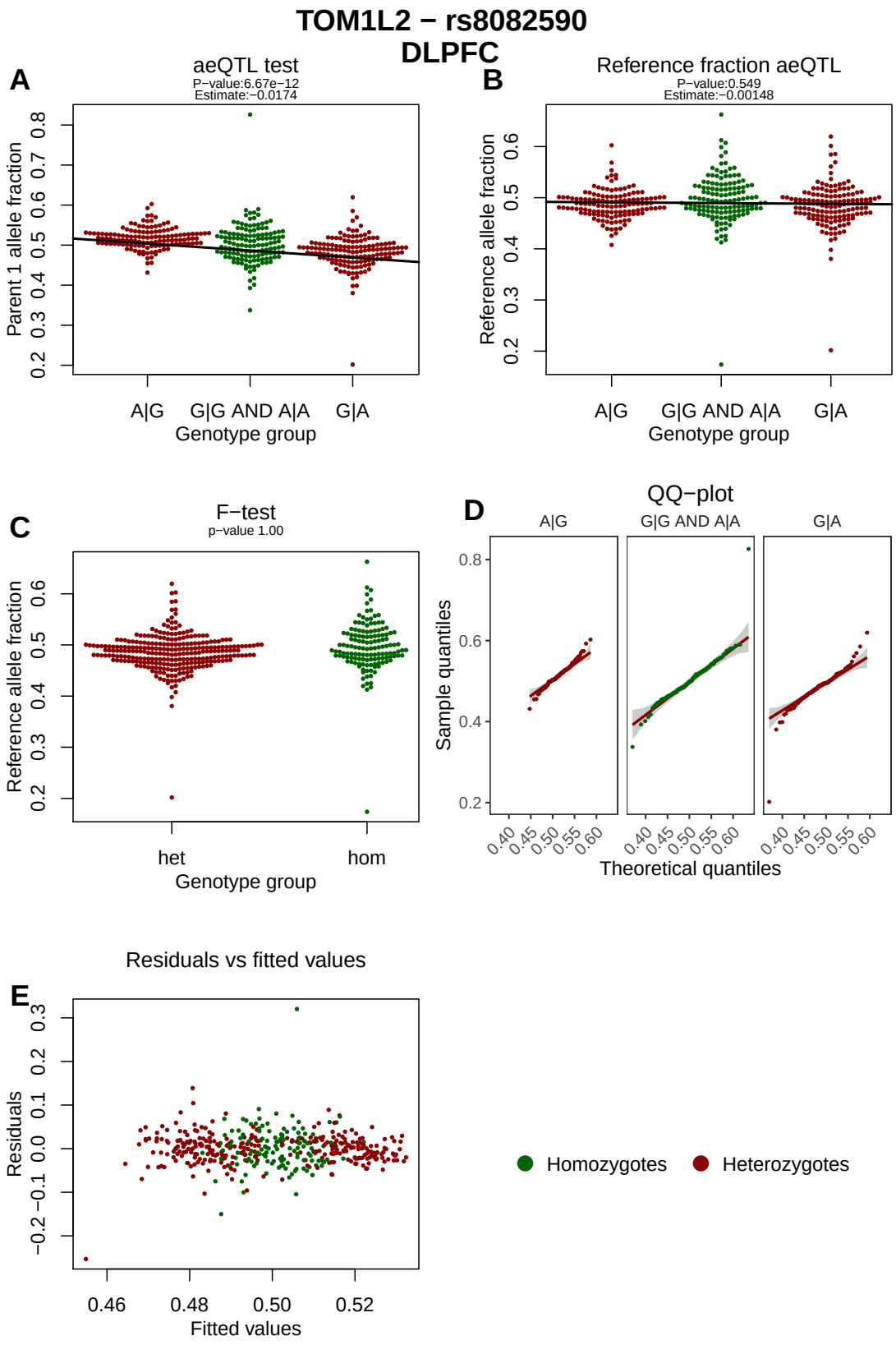

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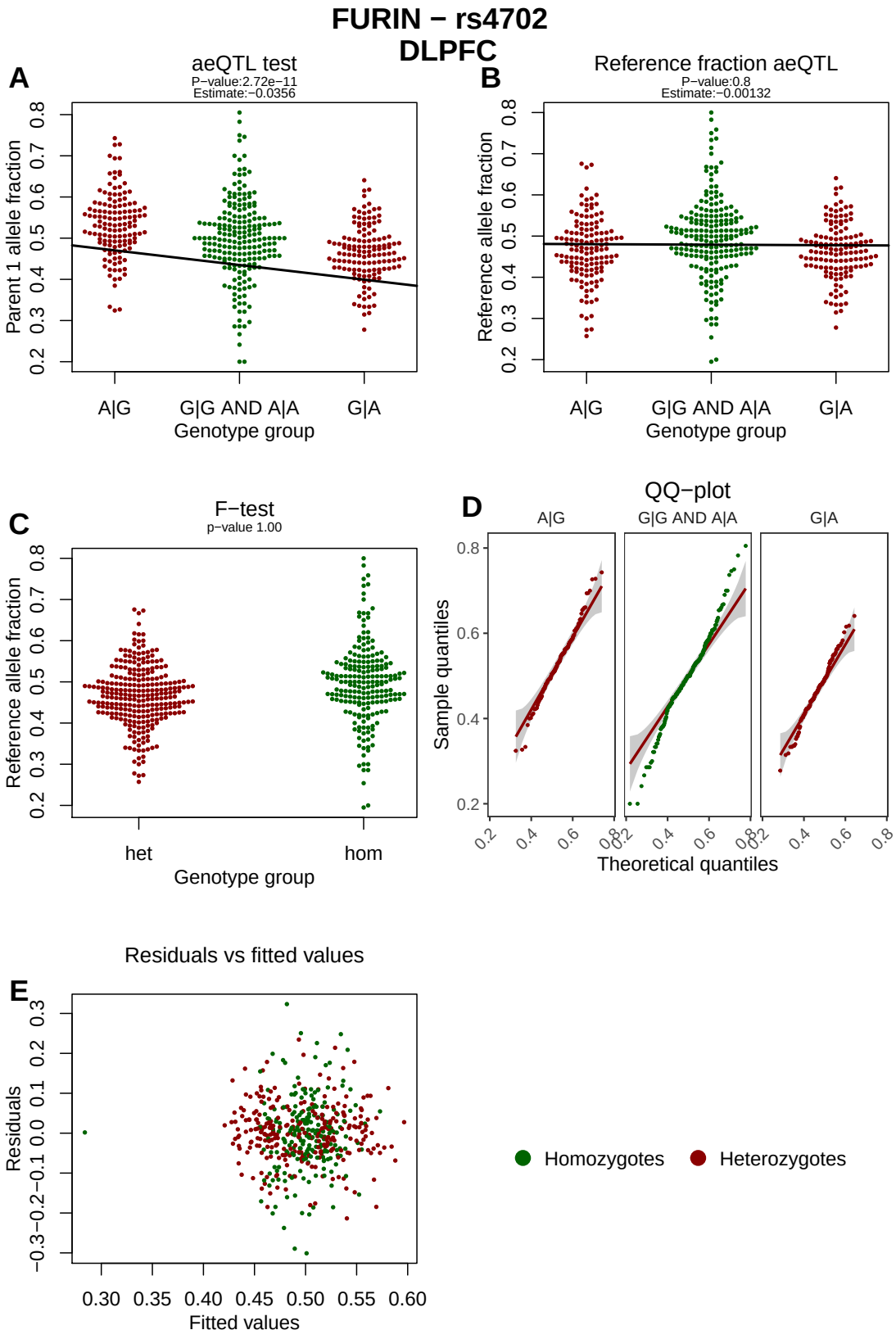

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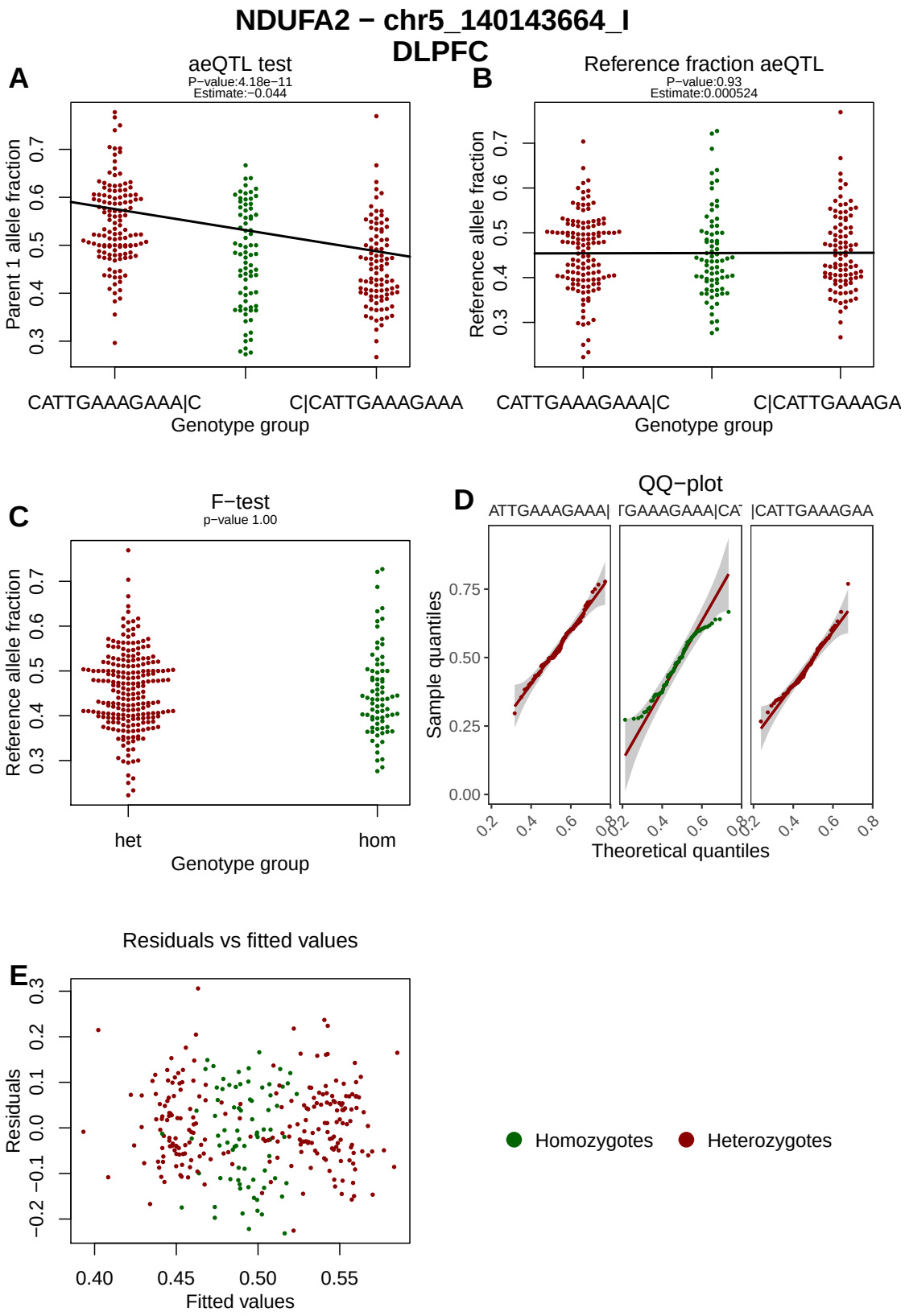

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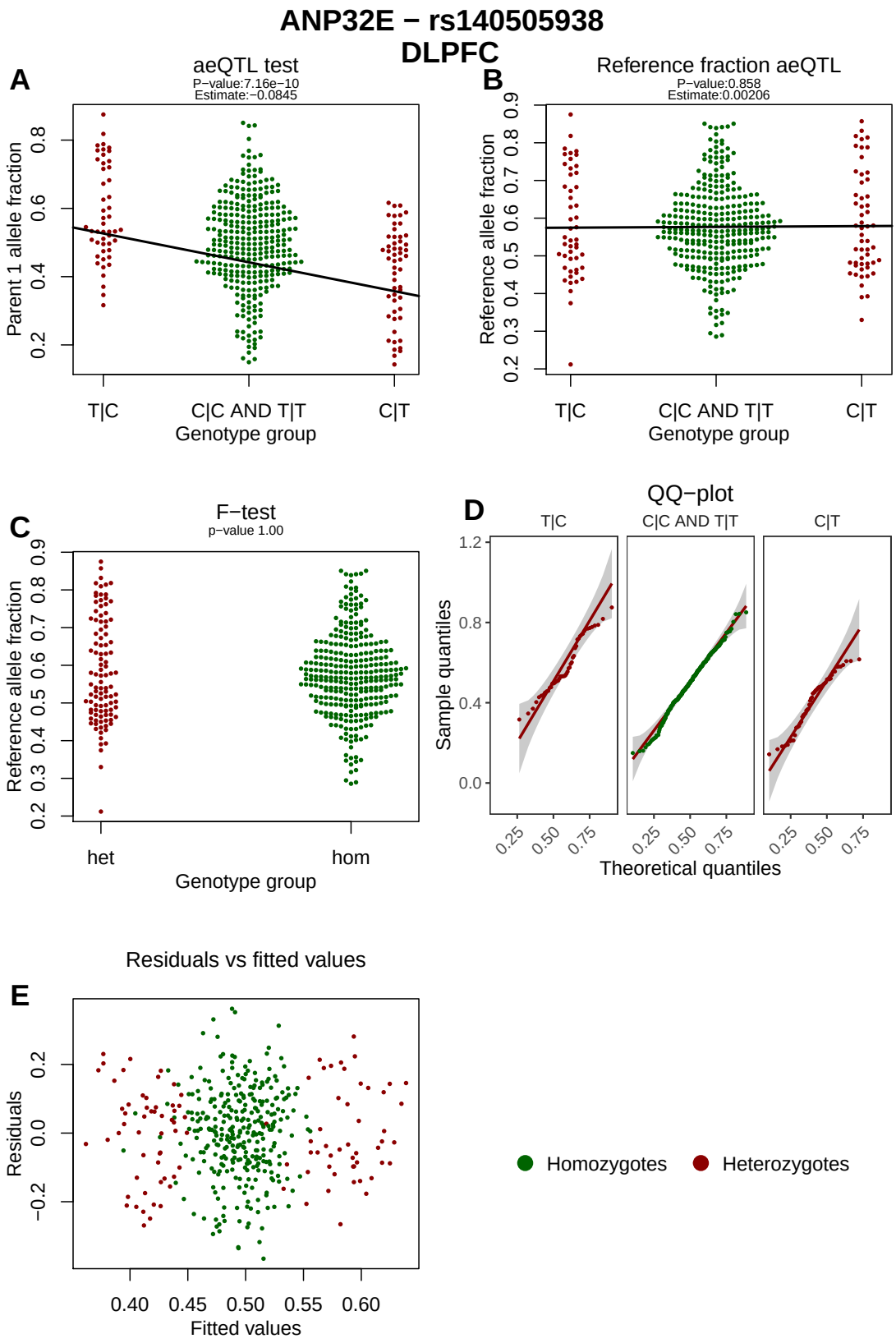

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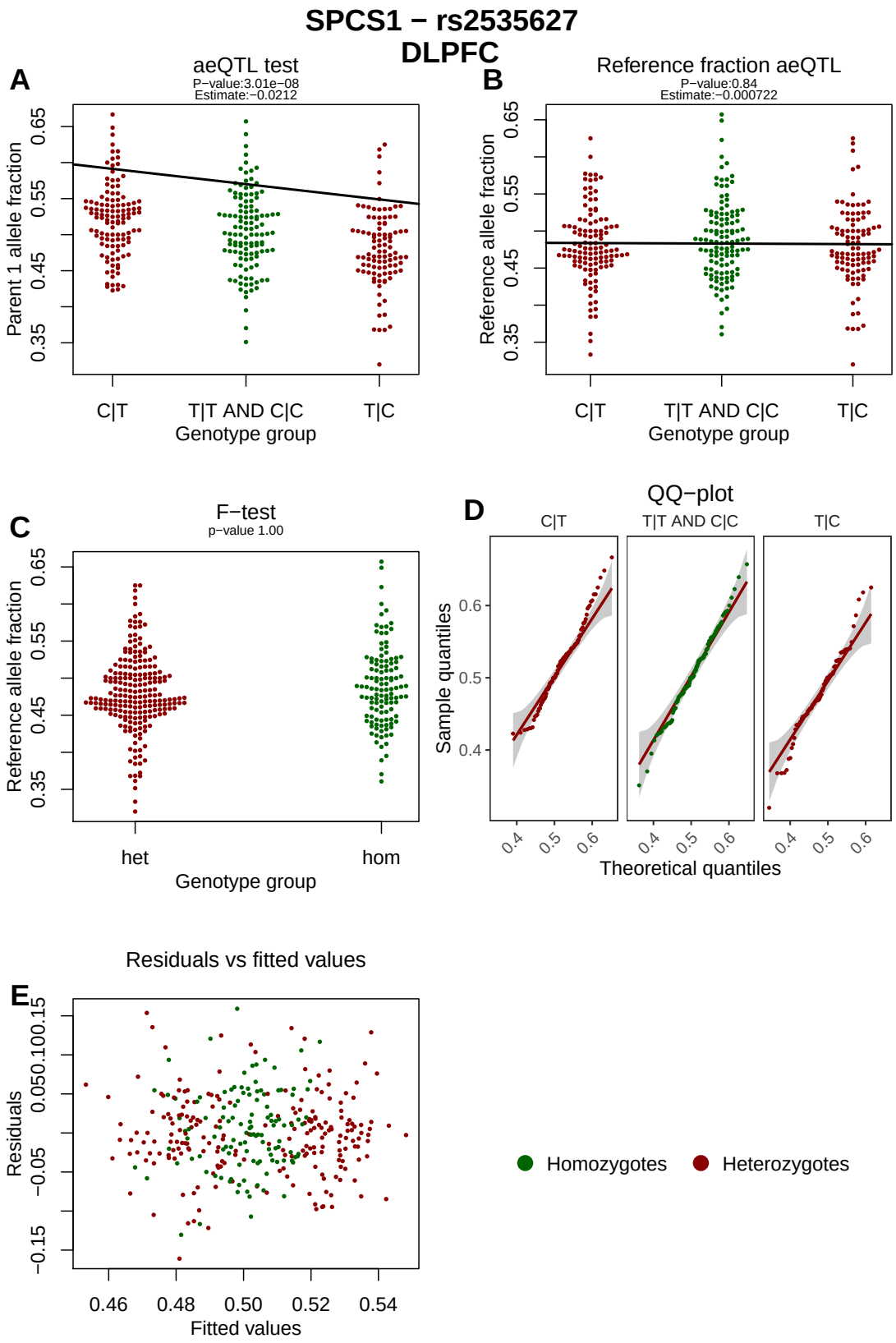

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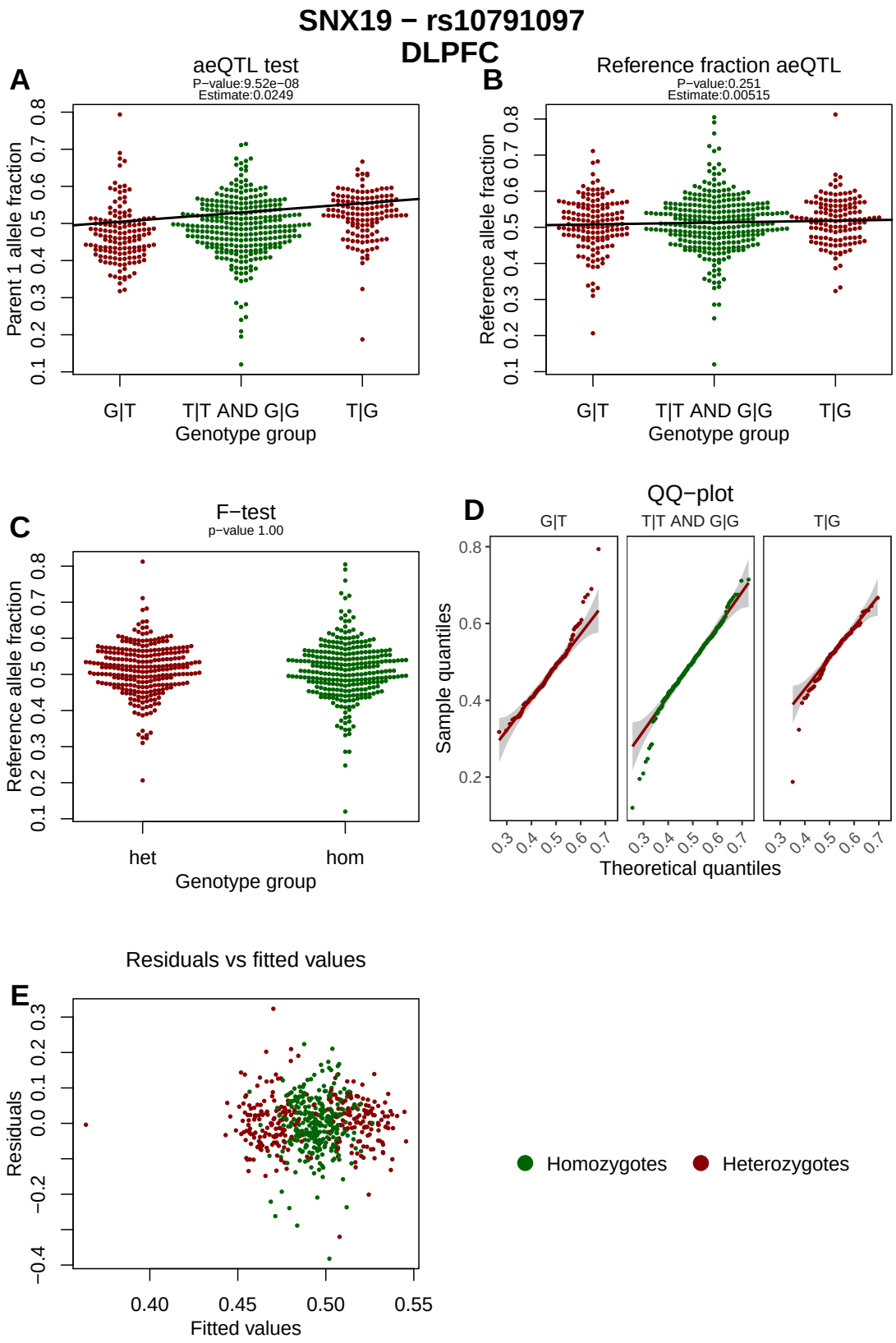

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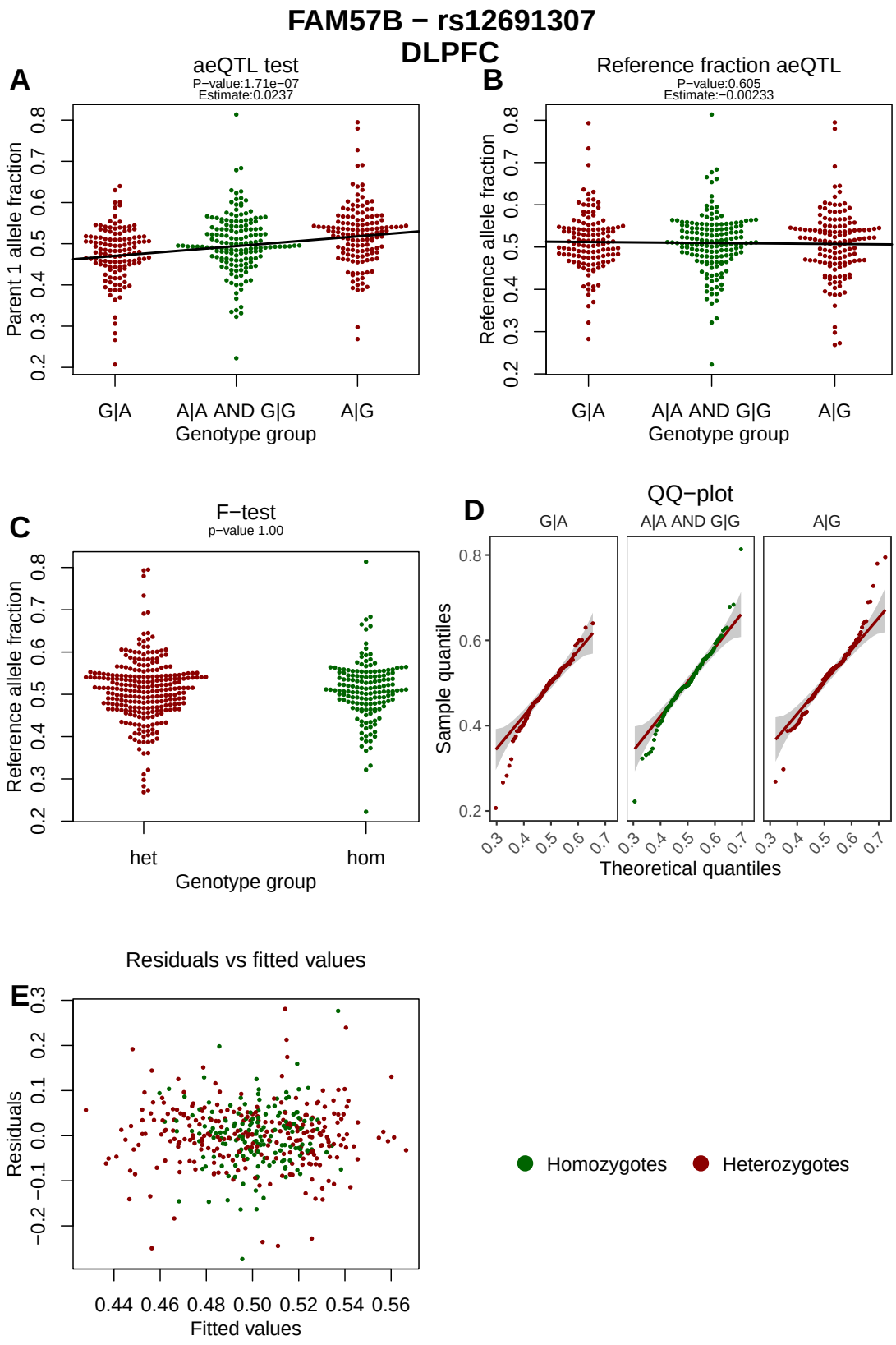

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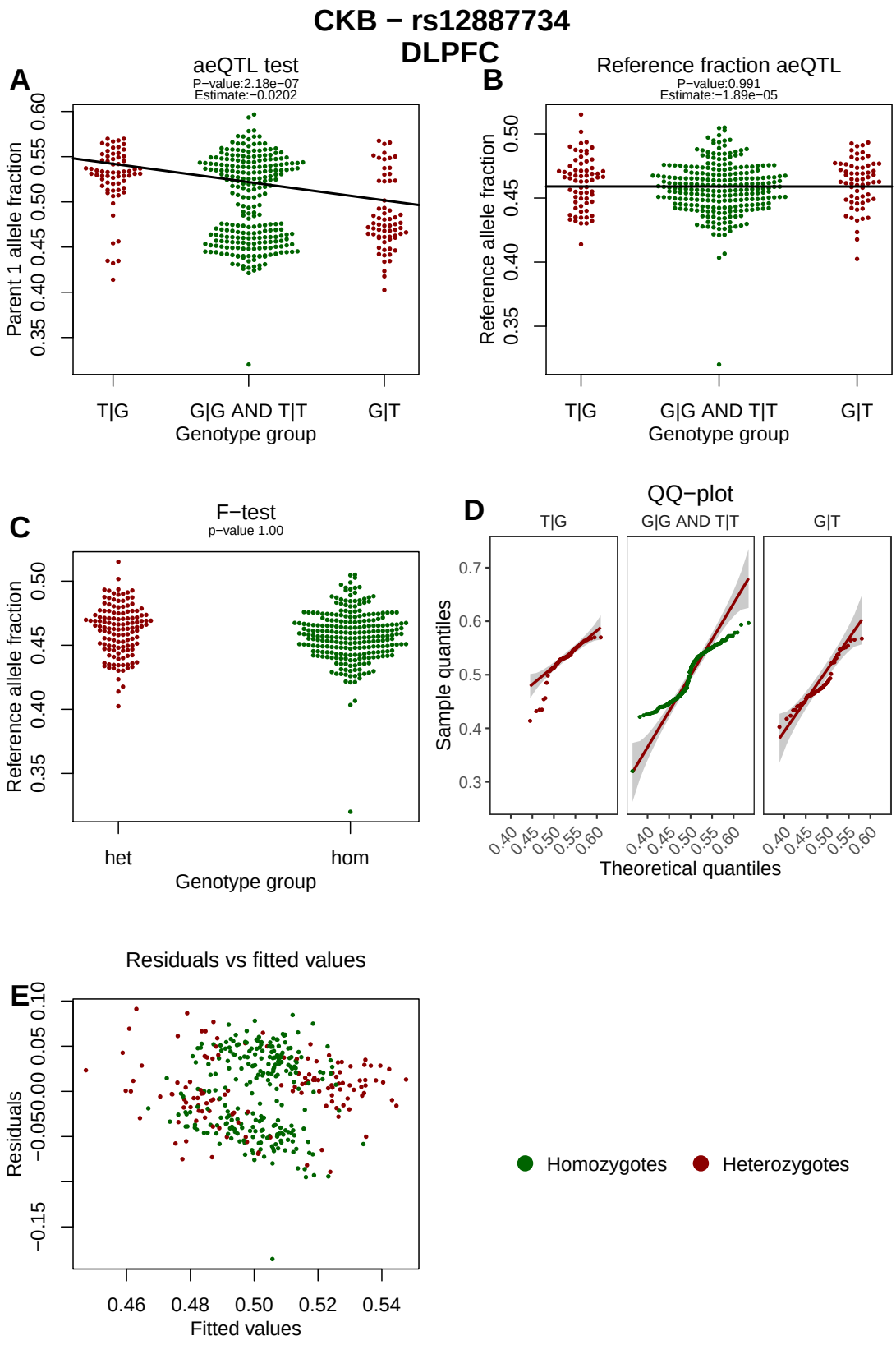

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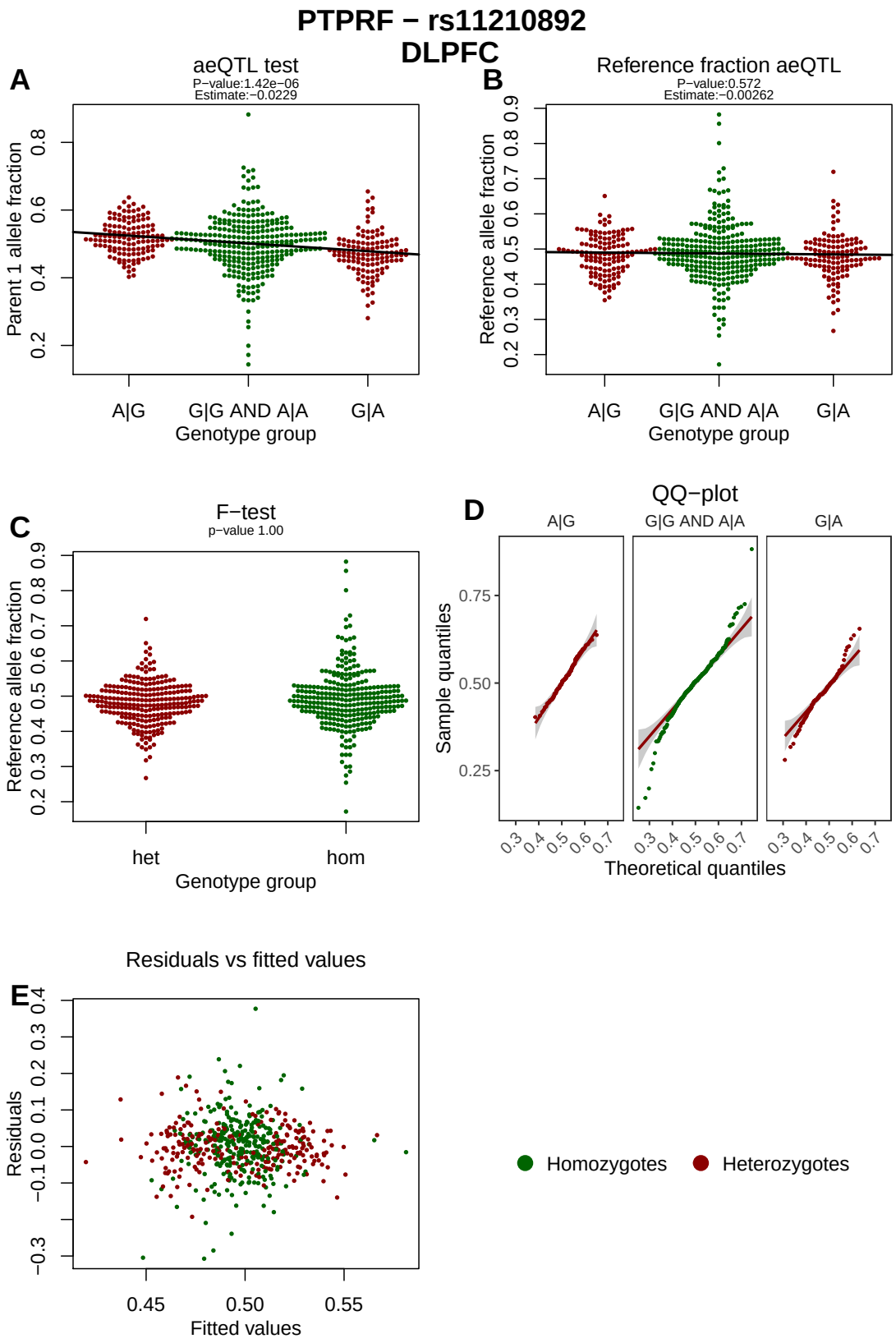

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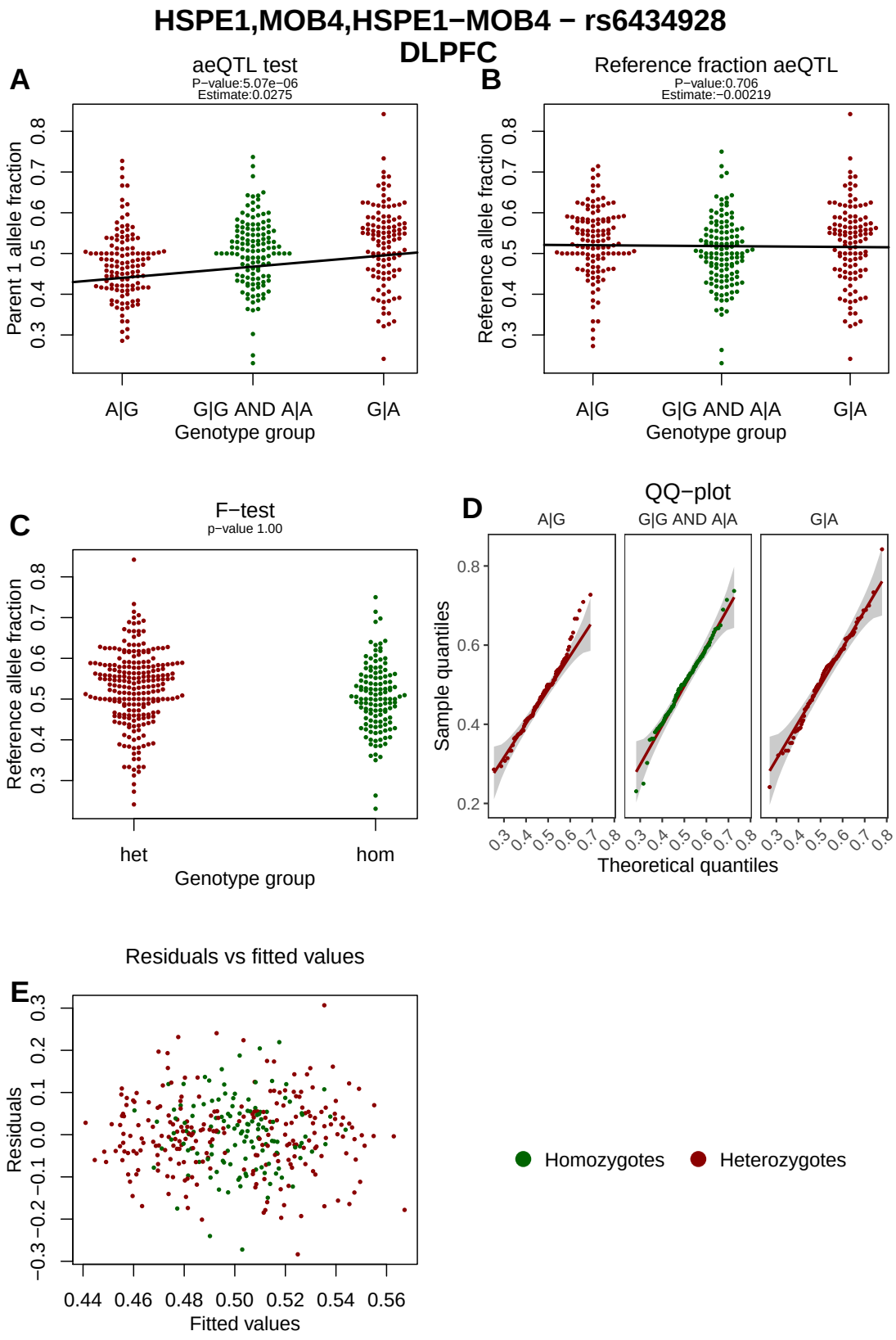

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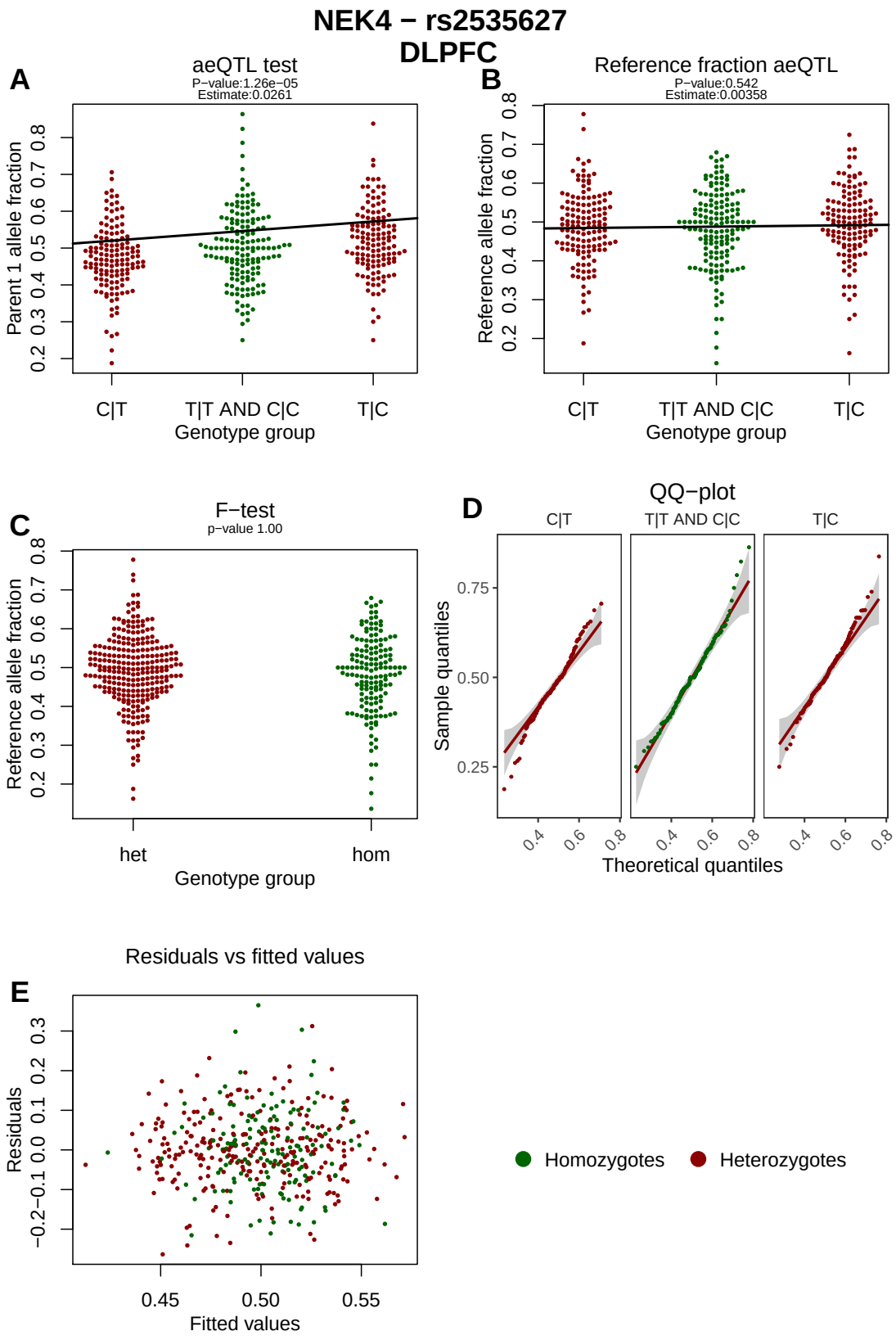

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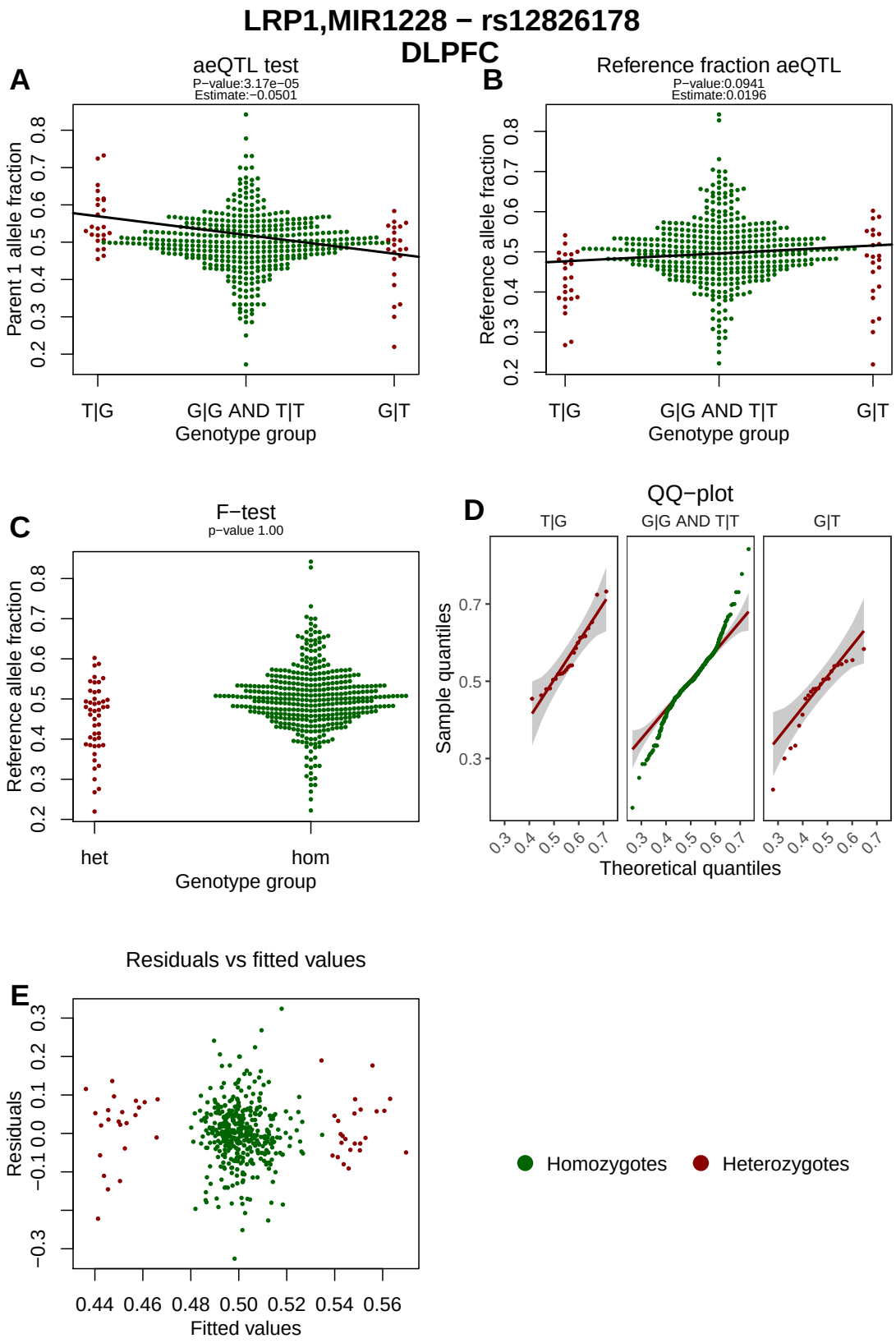

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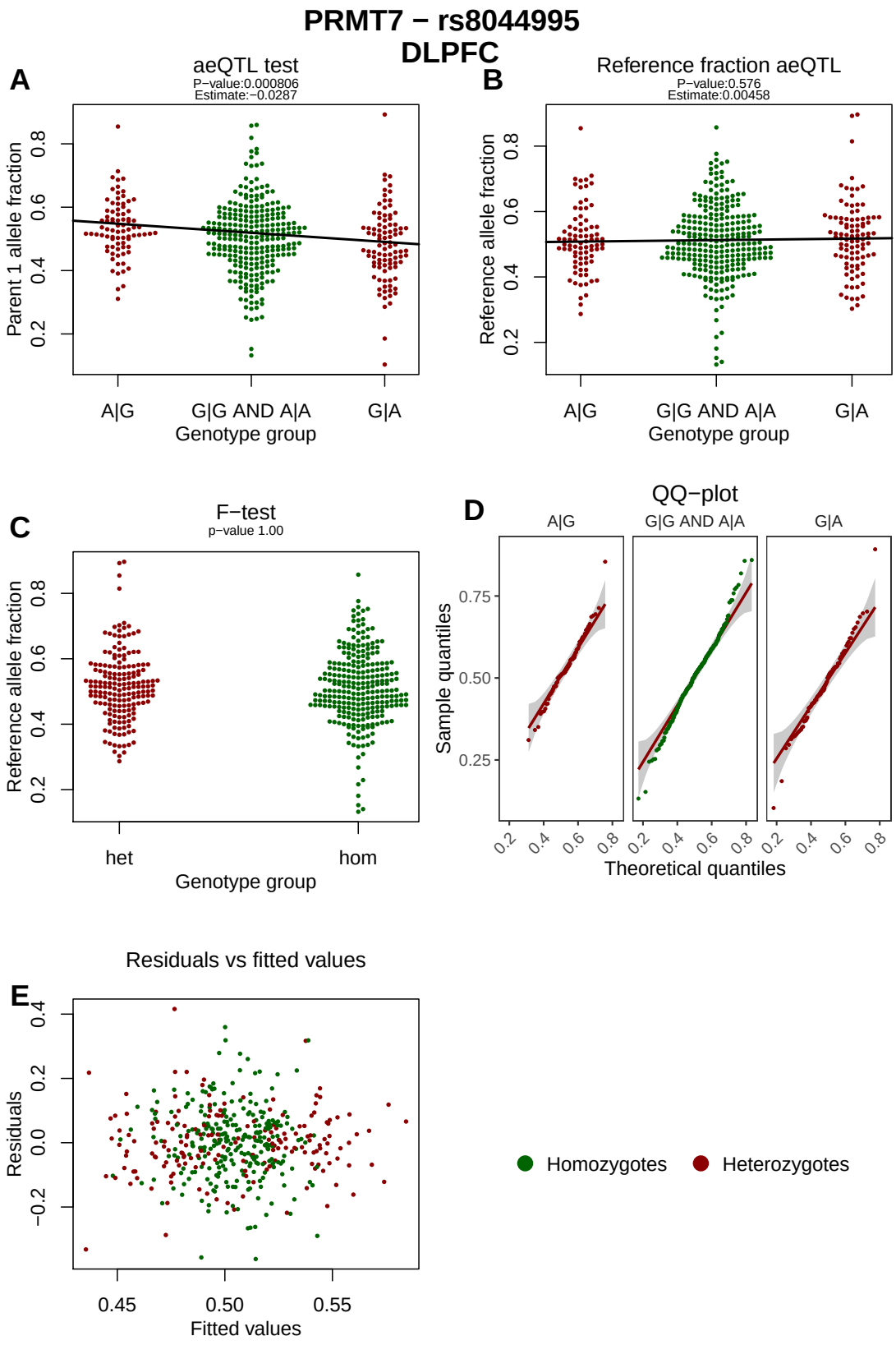

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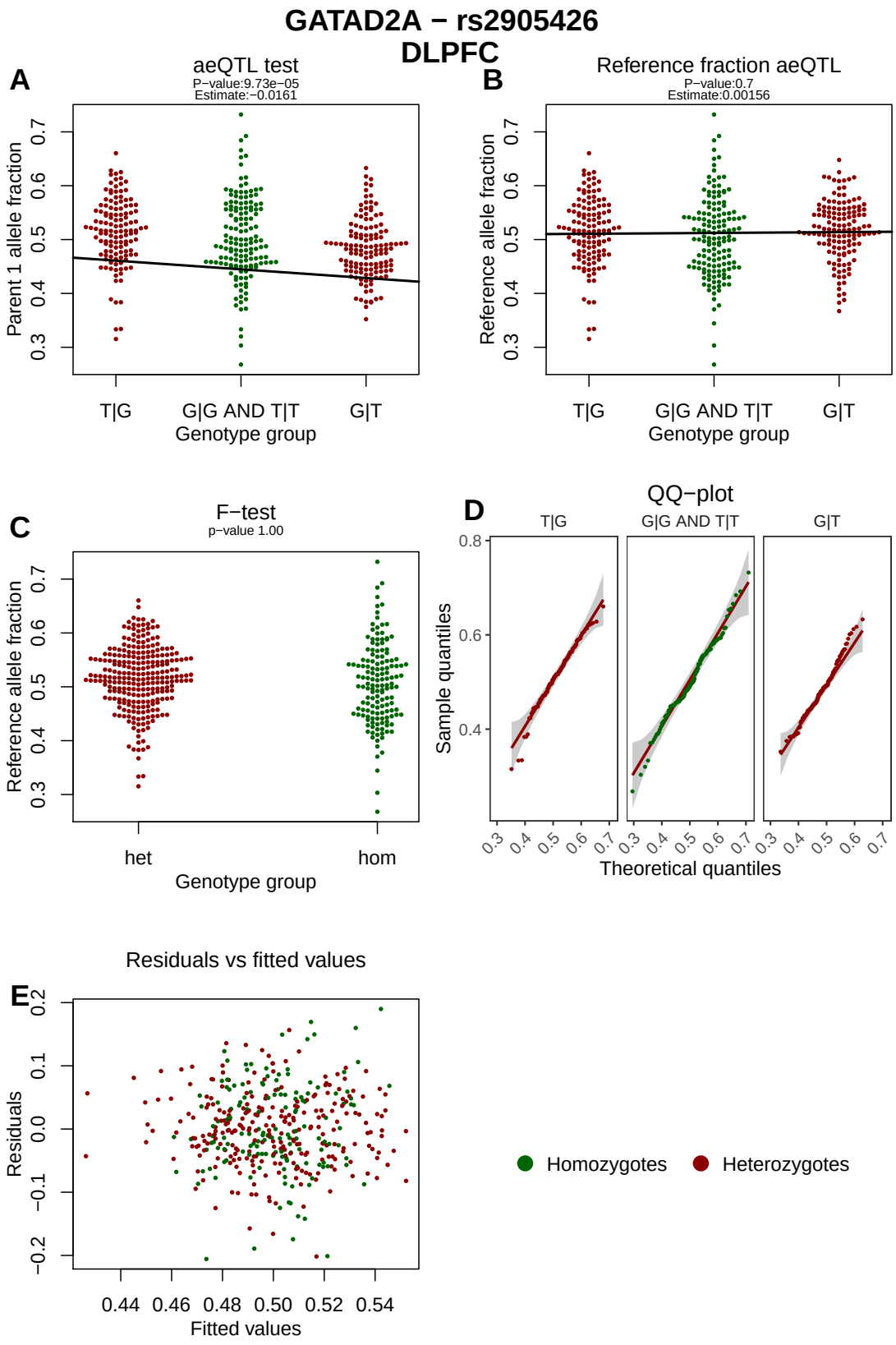

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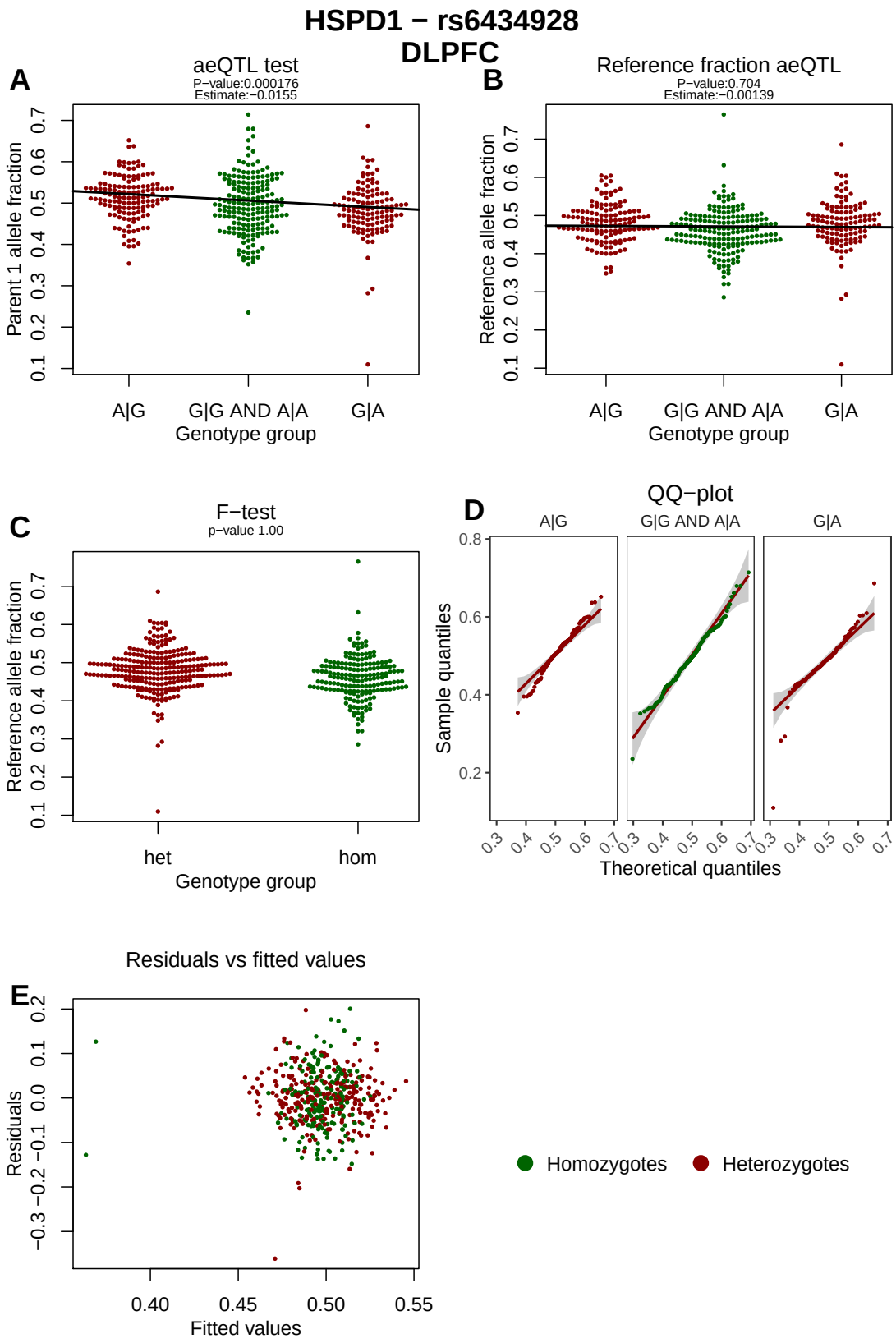

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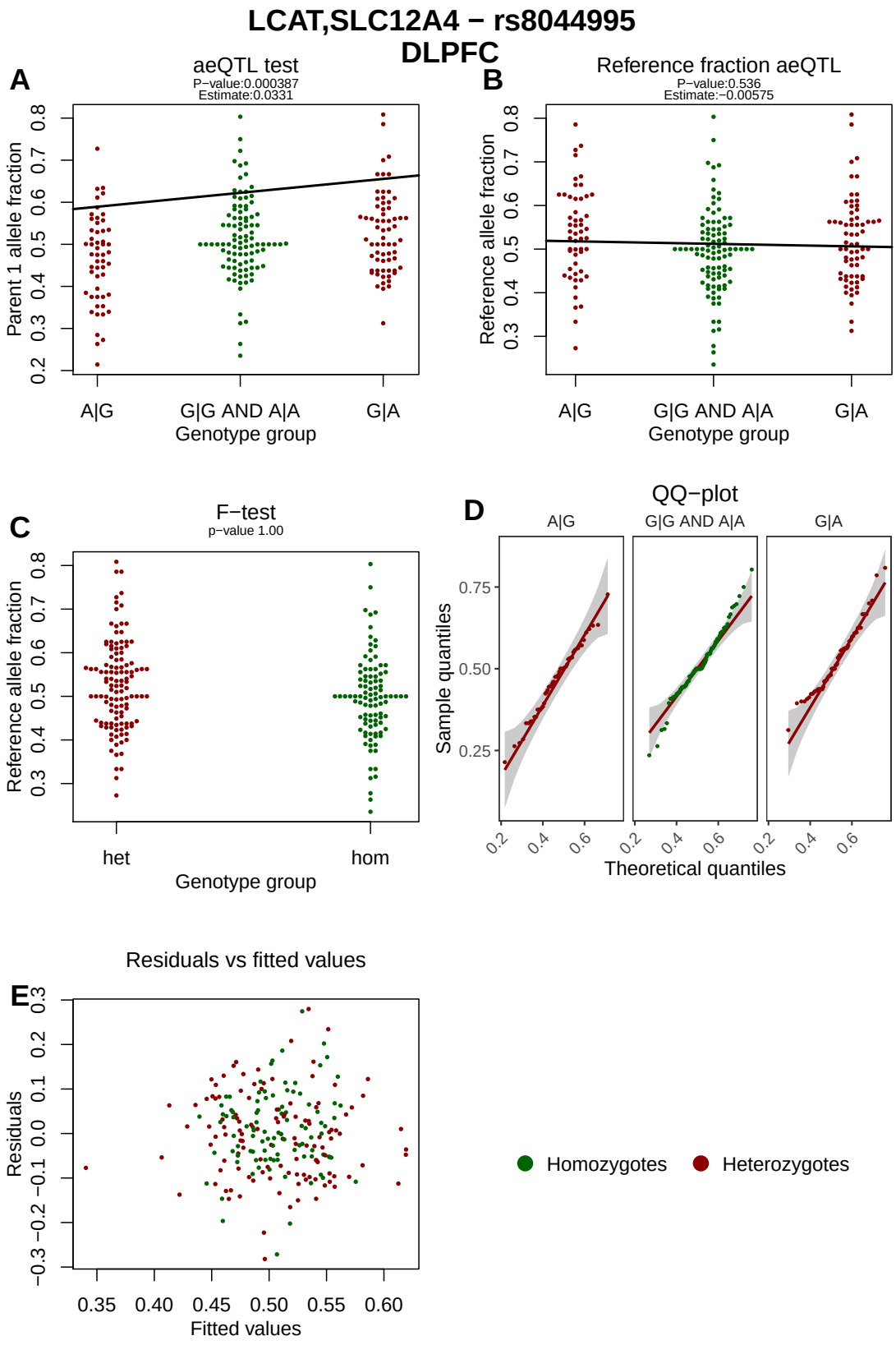

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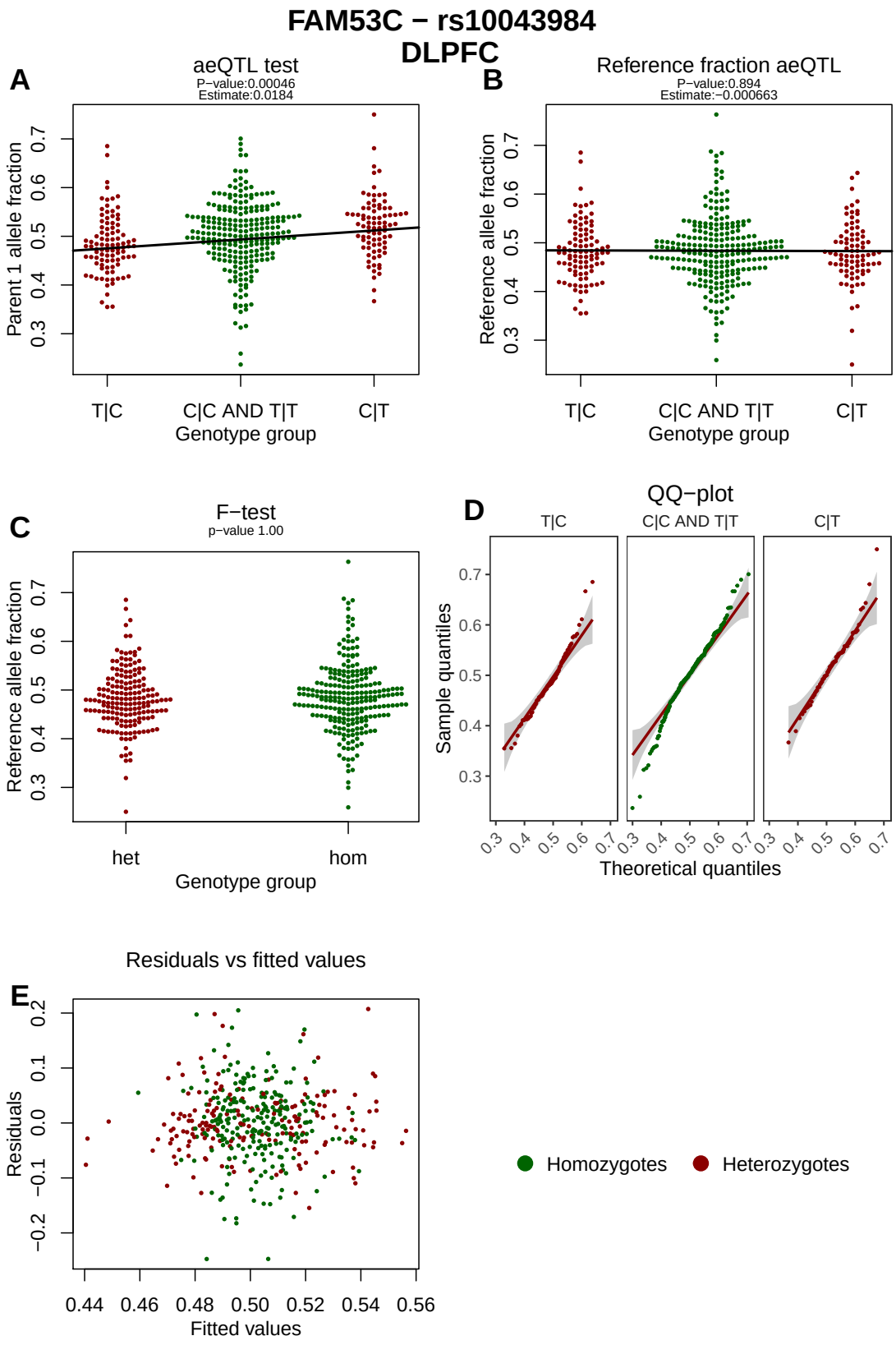

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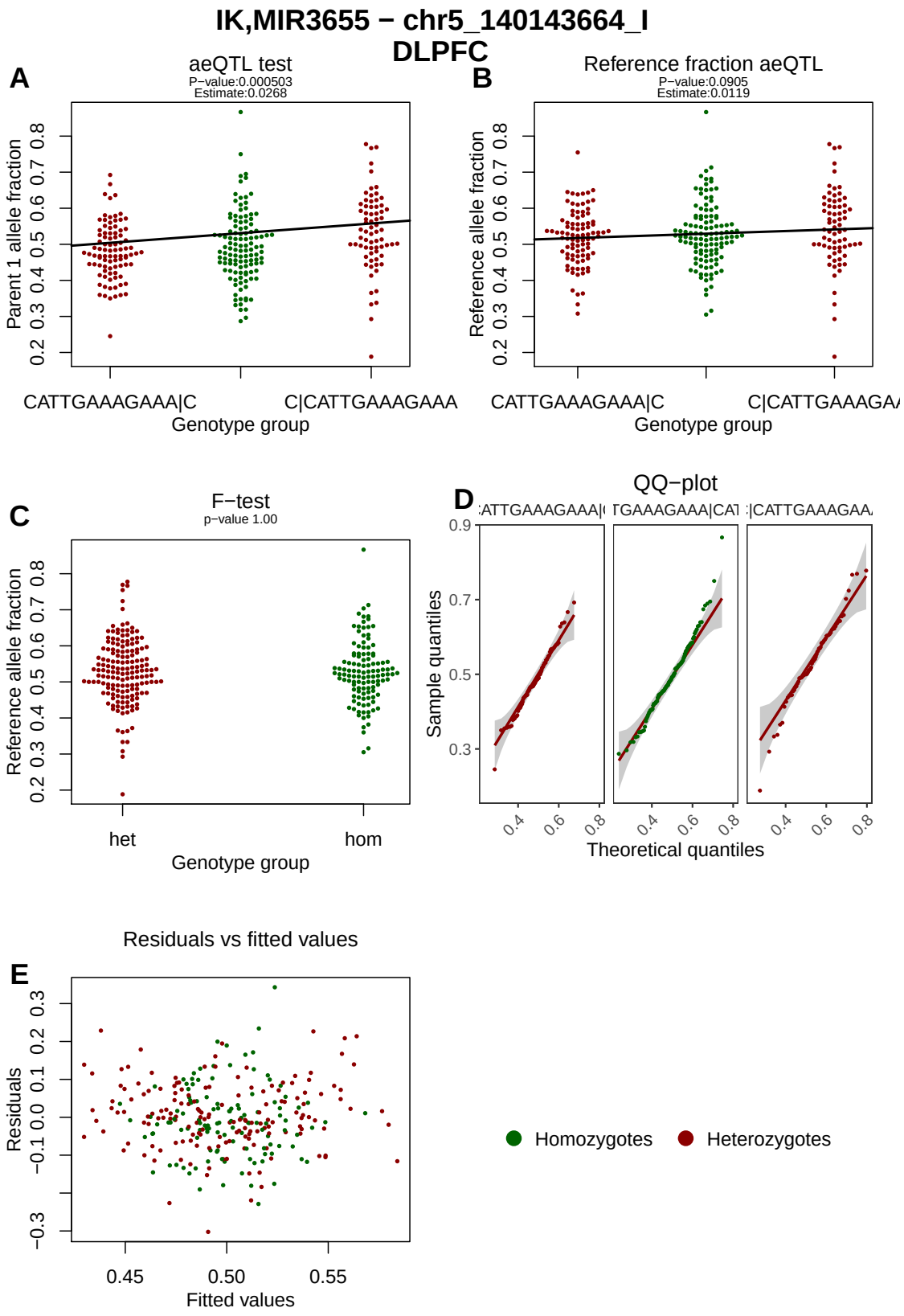

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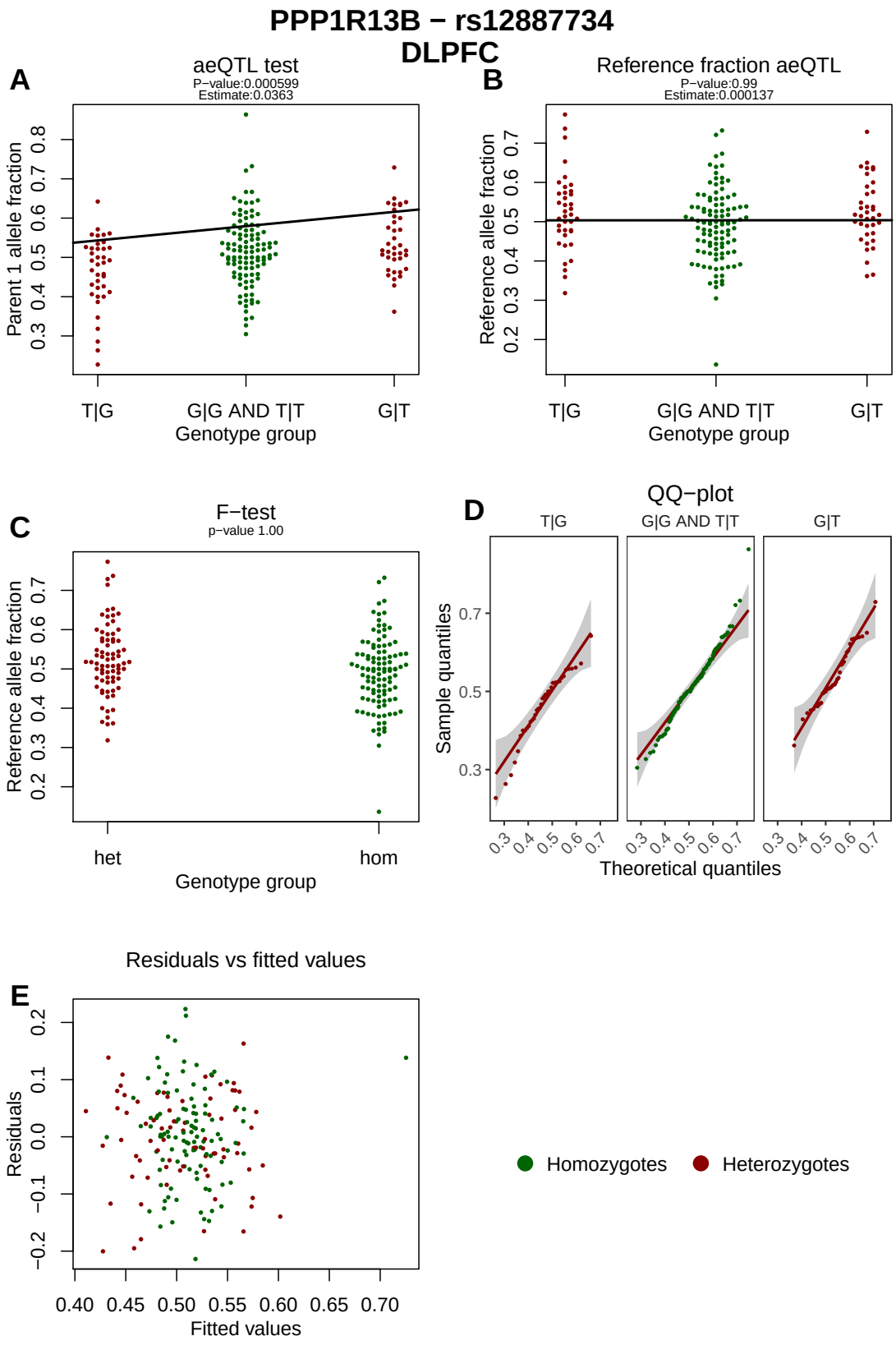

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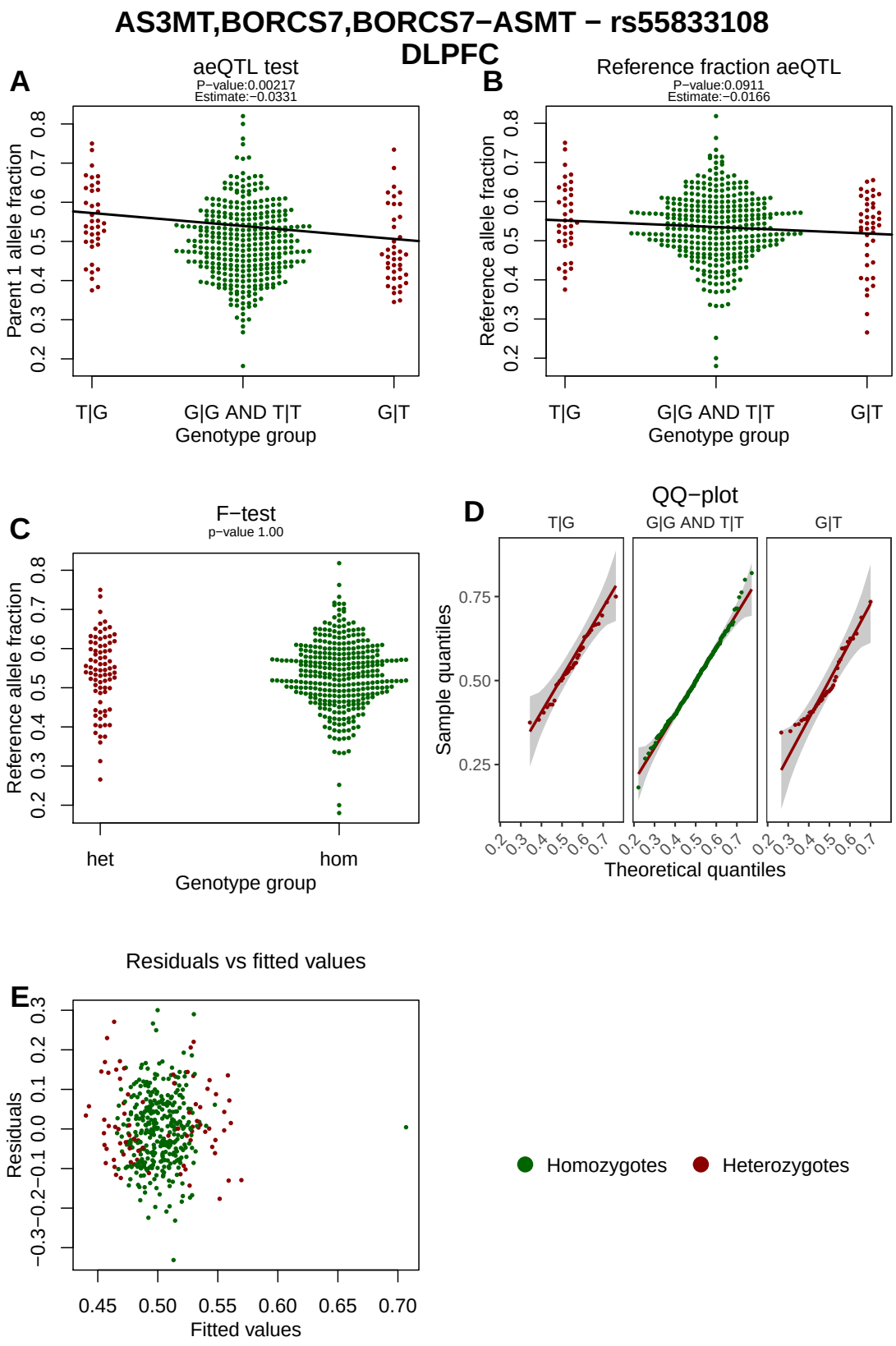

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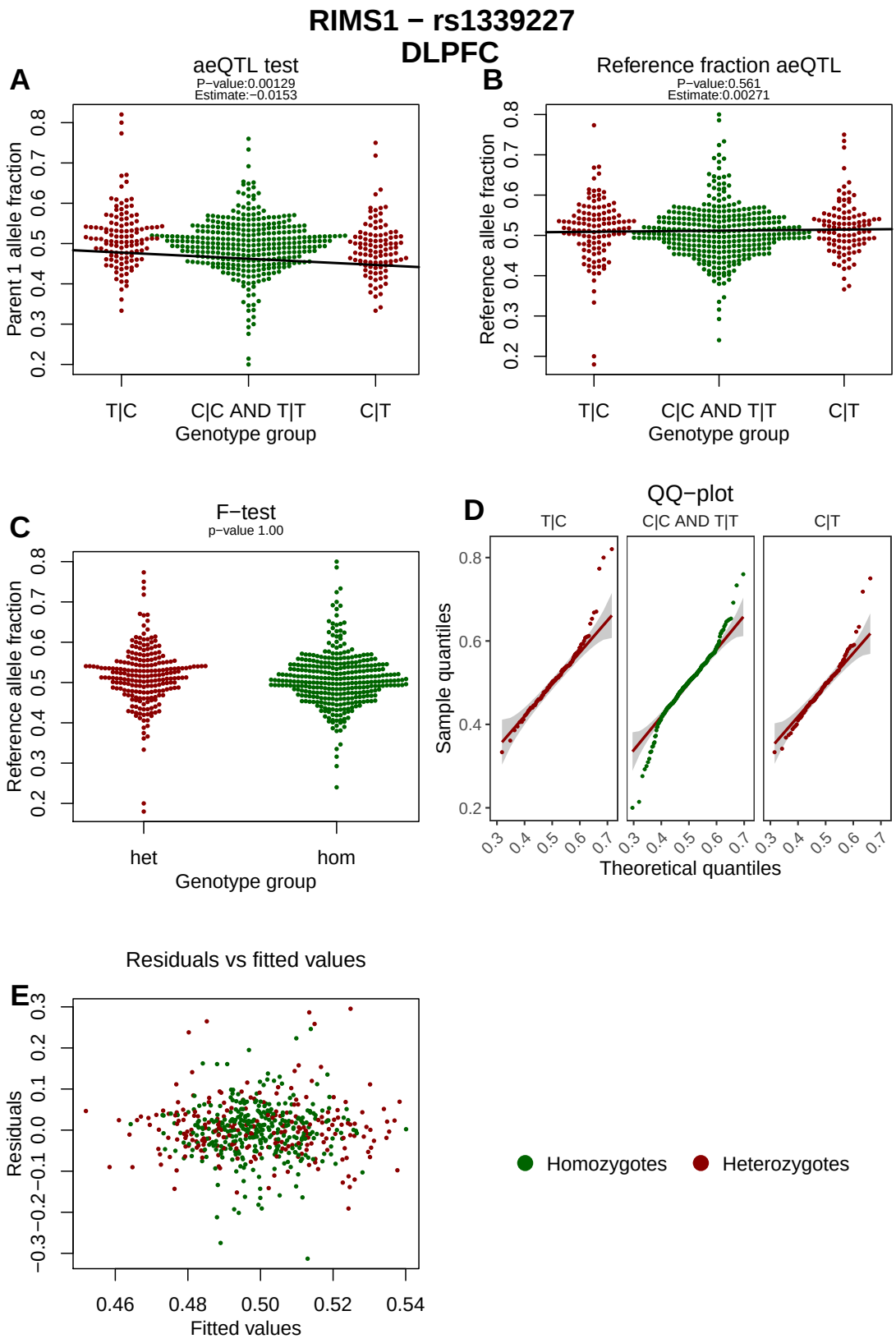

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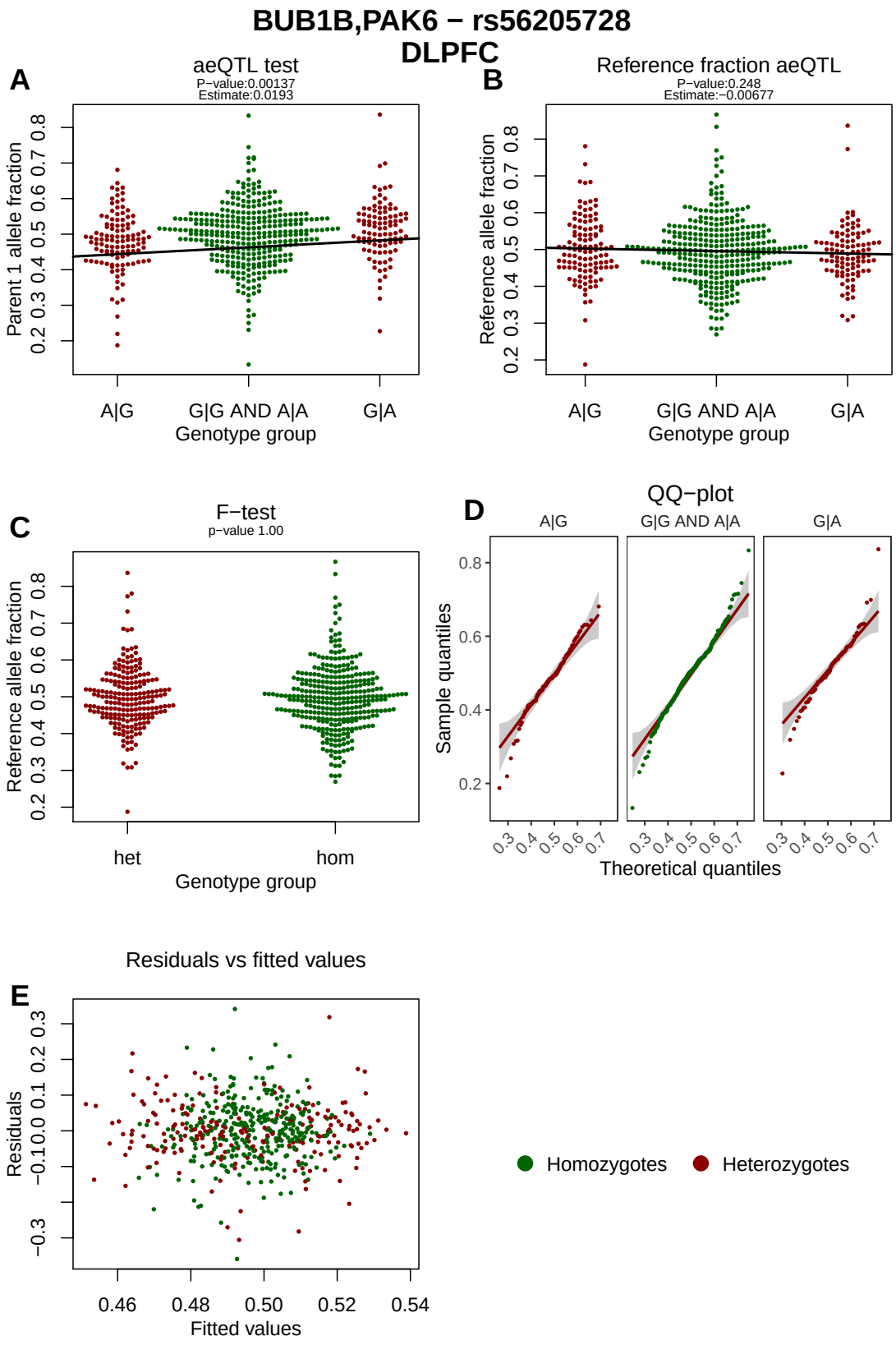

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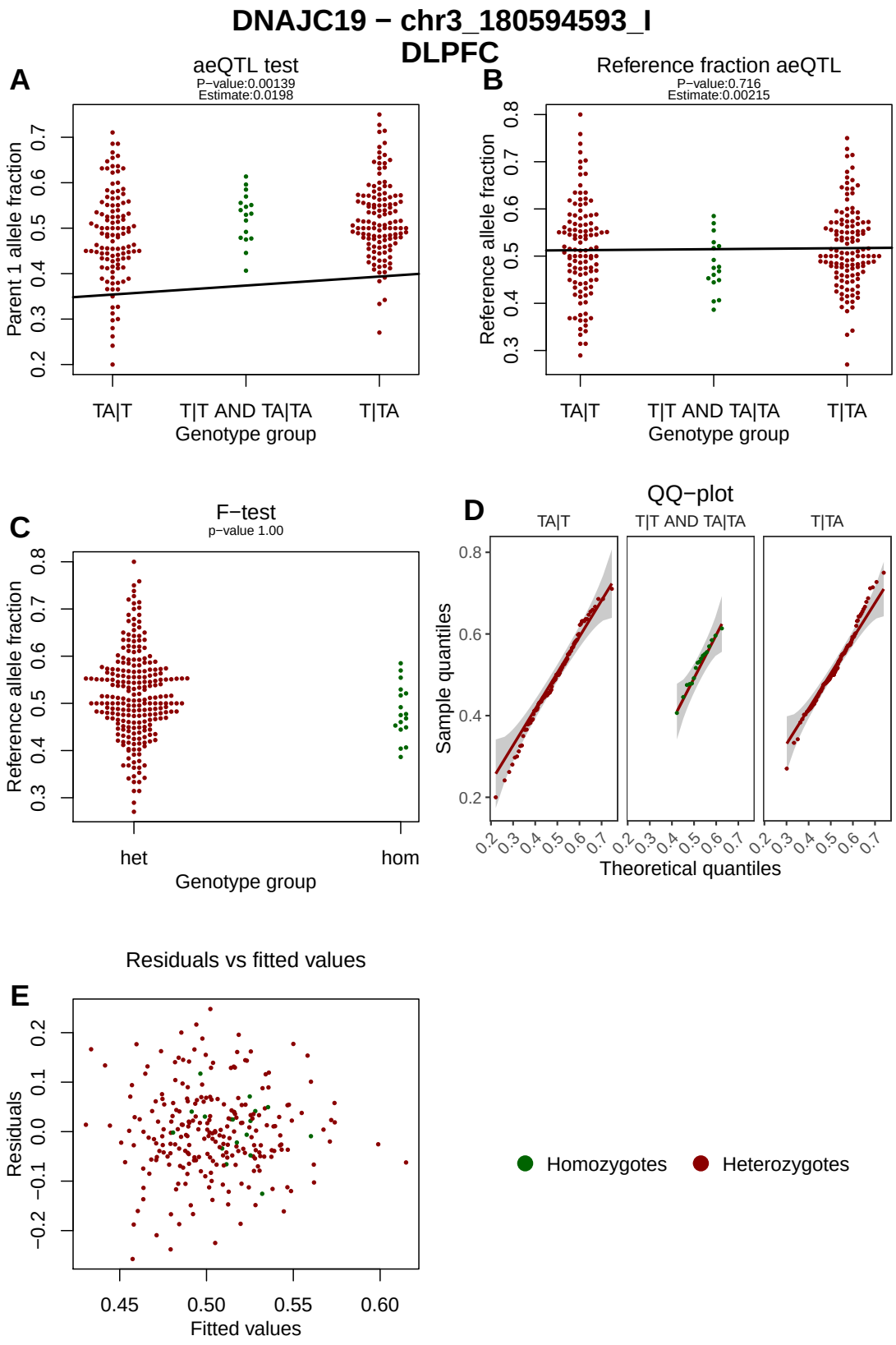

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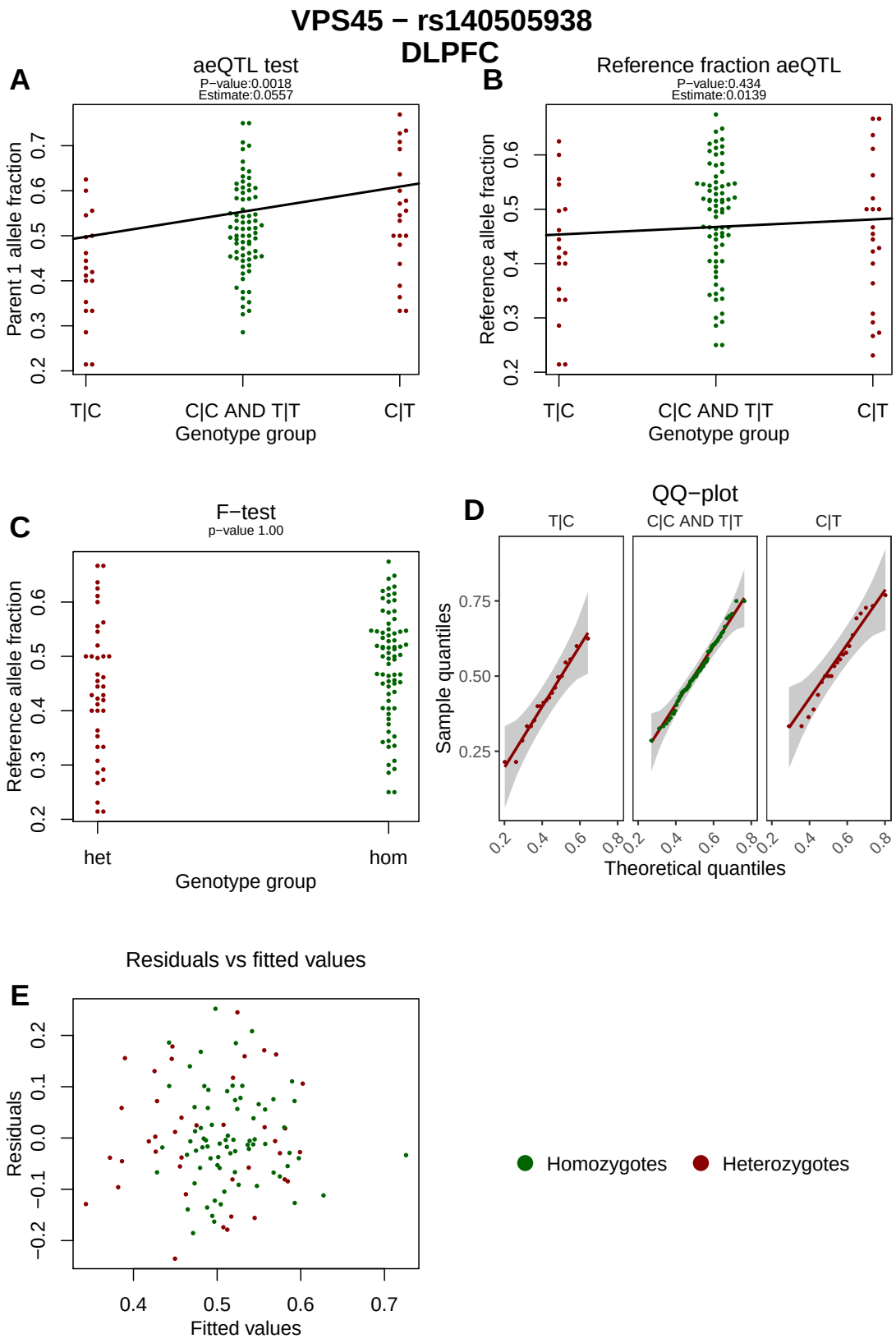

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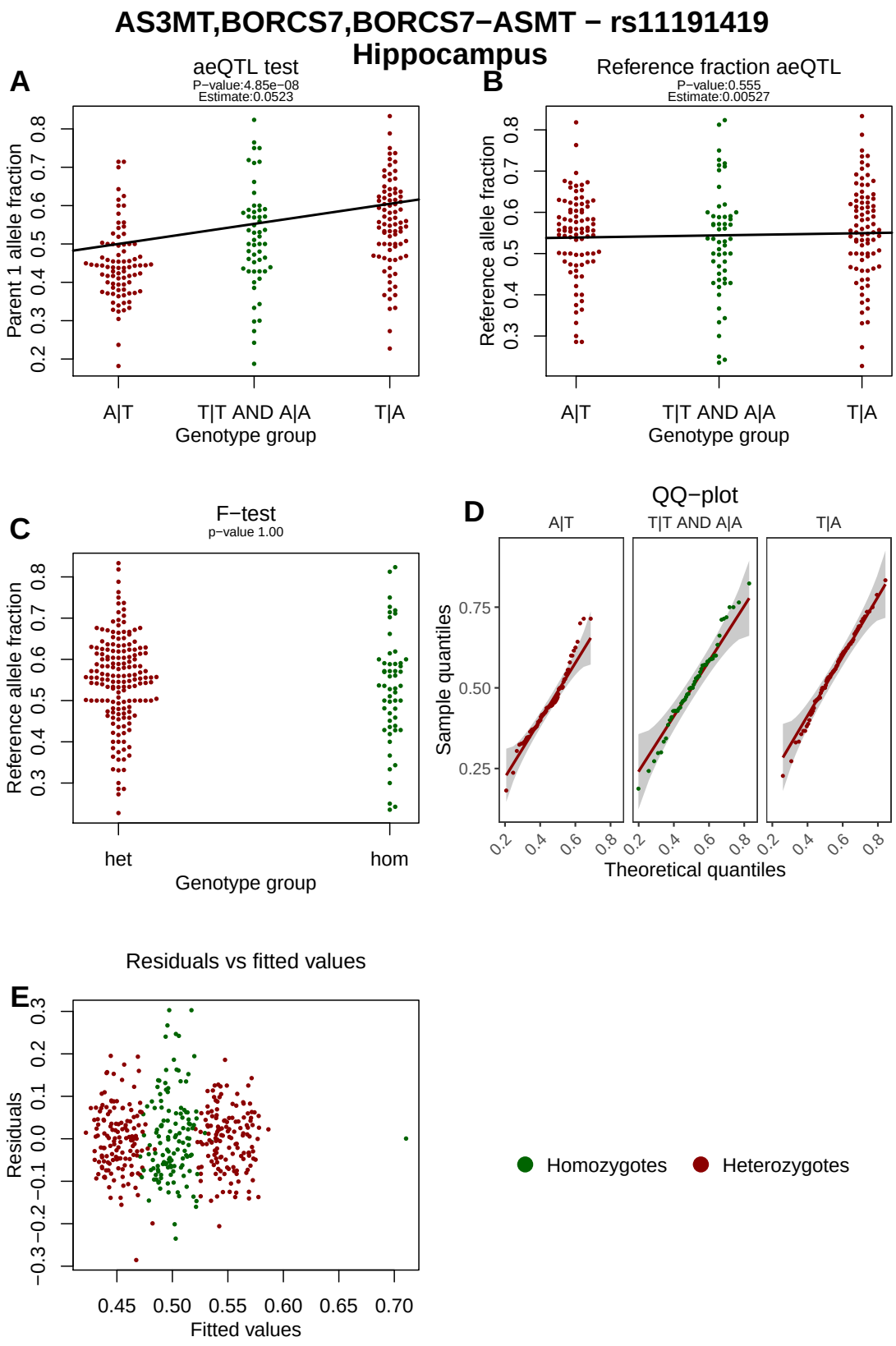

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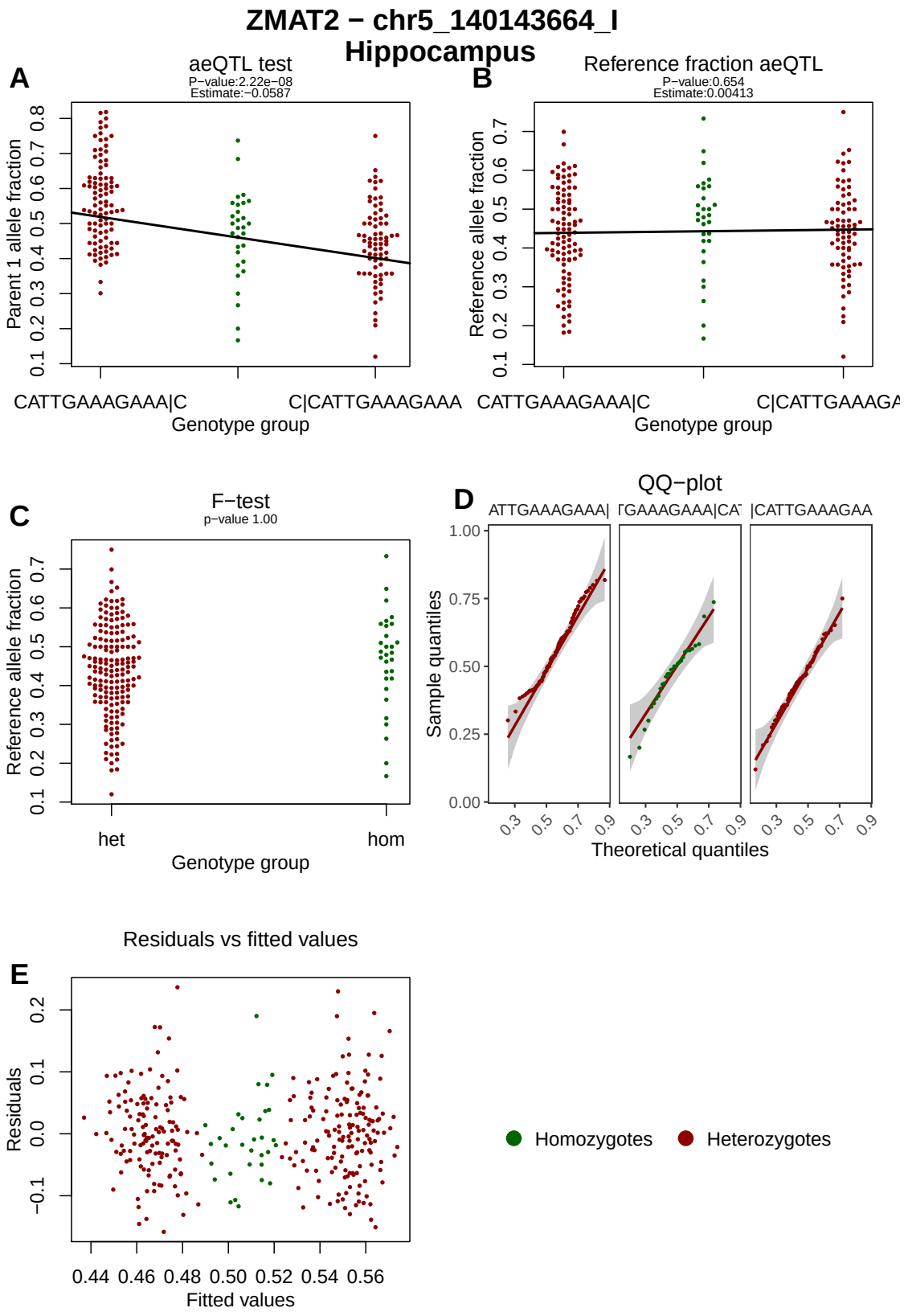

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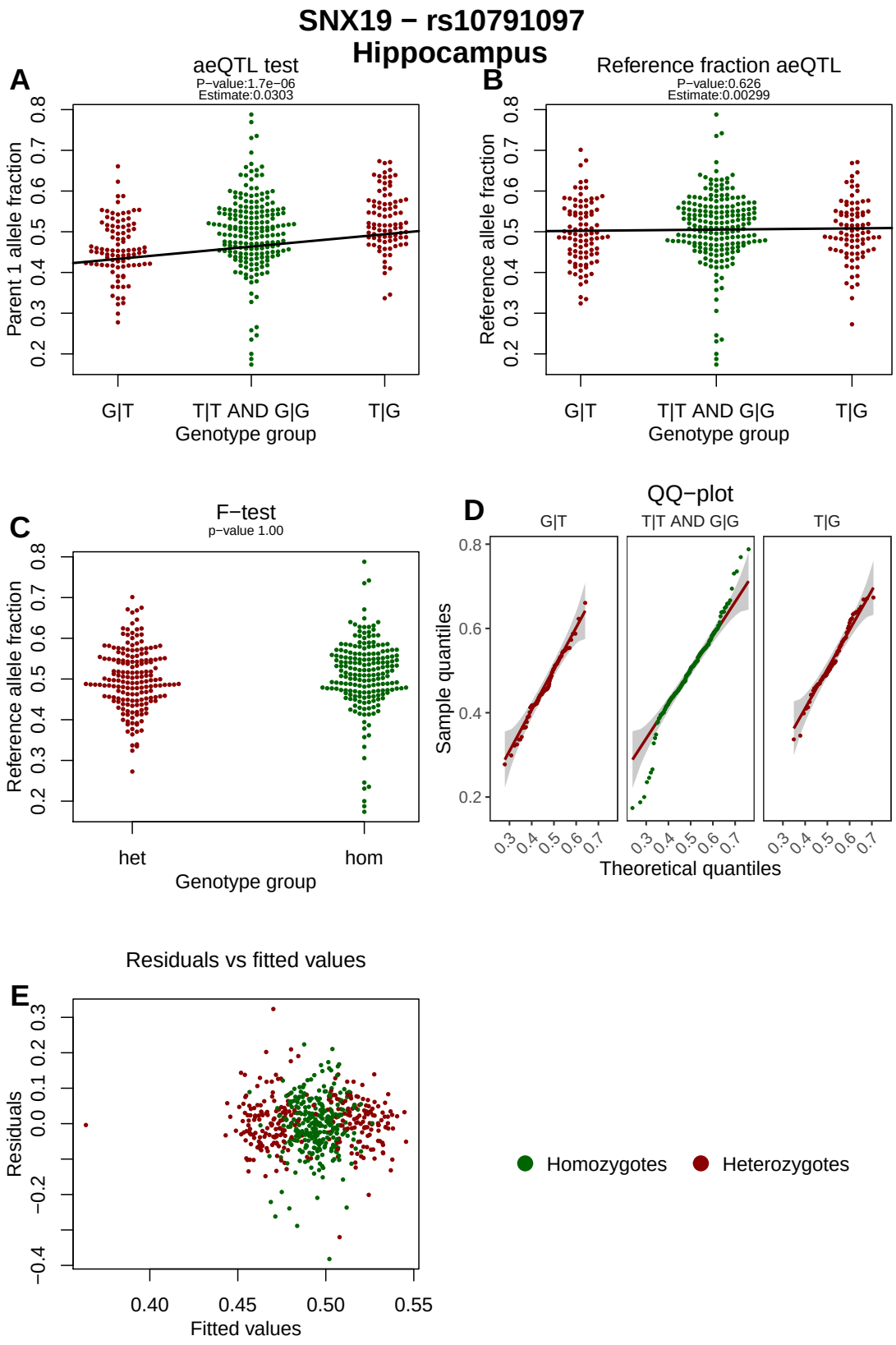

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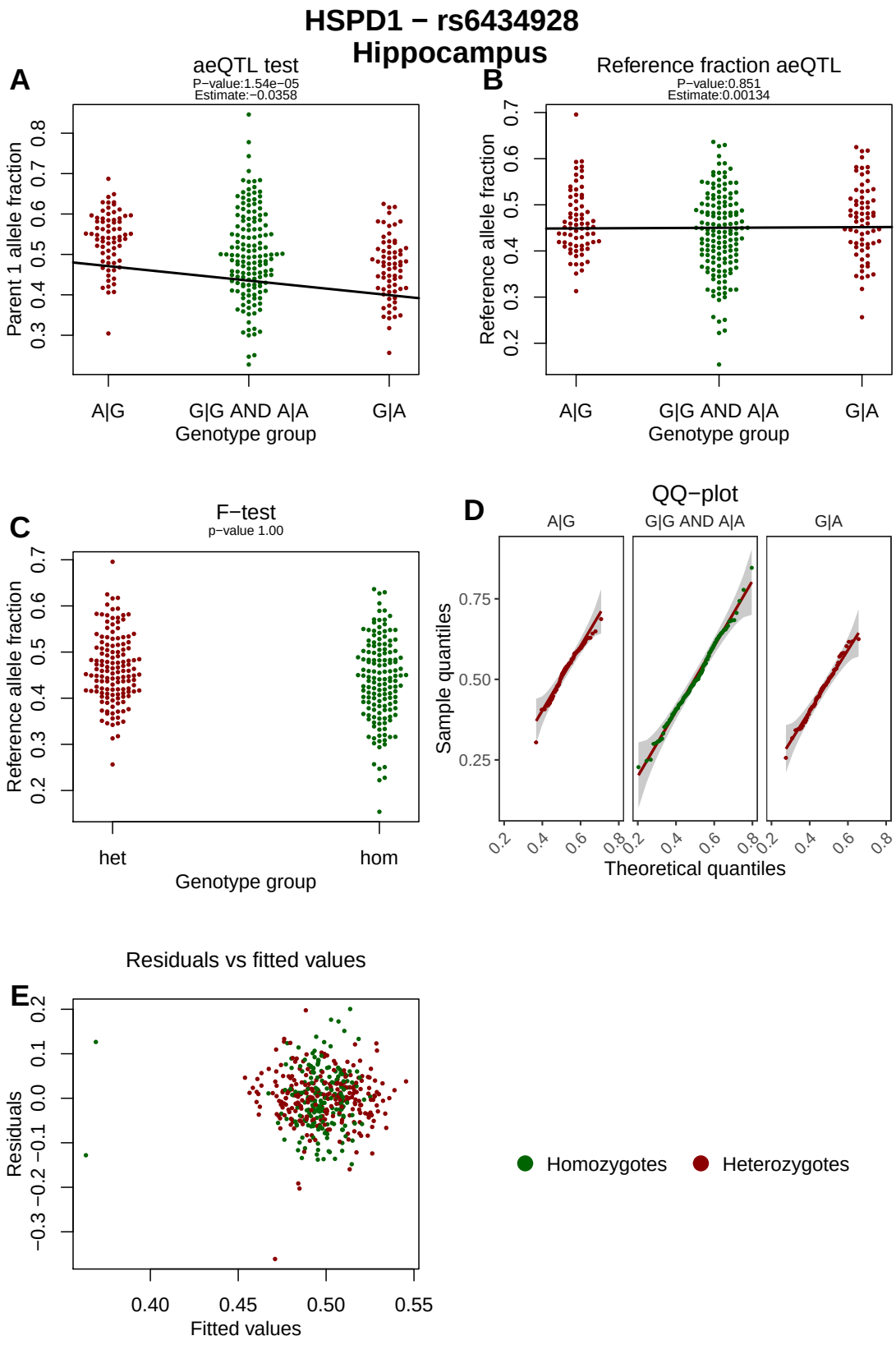

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