

## 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 auxiliary 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.

# AS3MT,BORCS7,BORCS7-ASMT – rs11191419

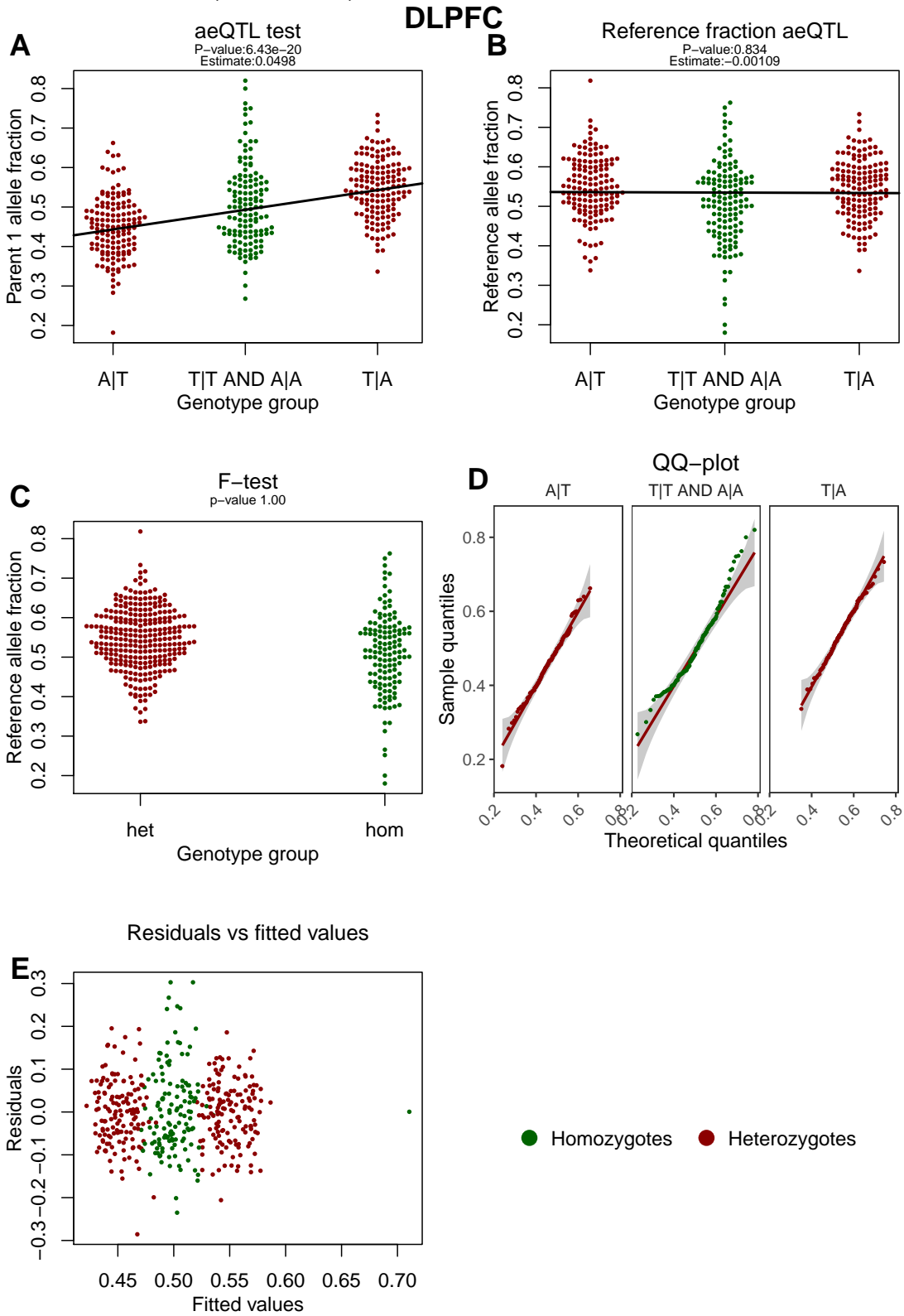


Figure S2-1: More details in the header of this document.

# APOPT1 – rs12887734

## DLPFC

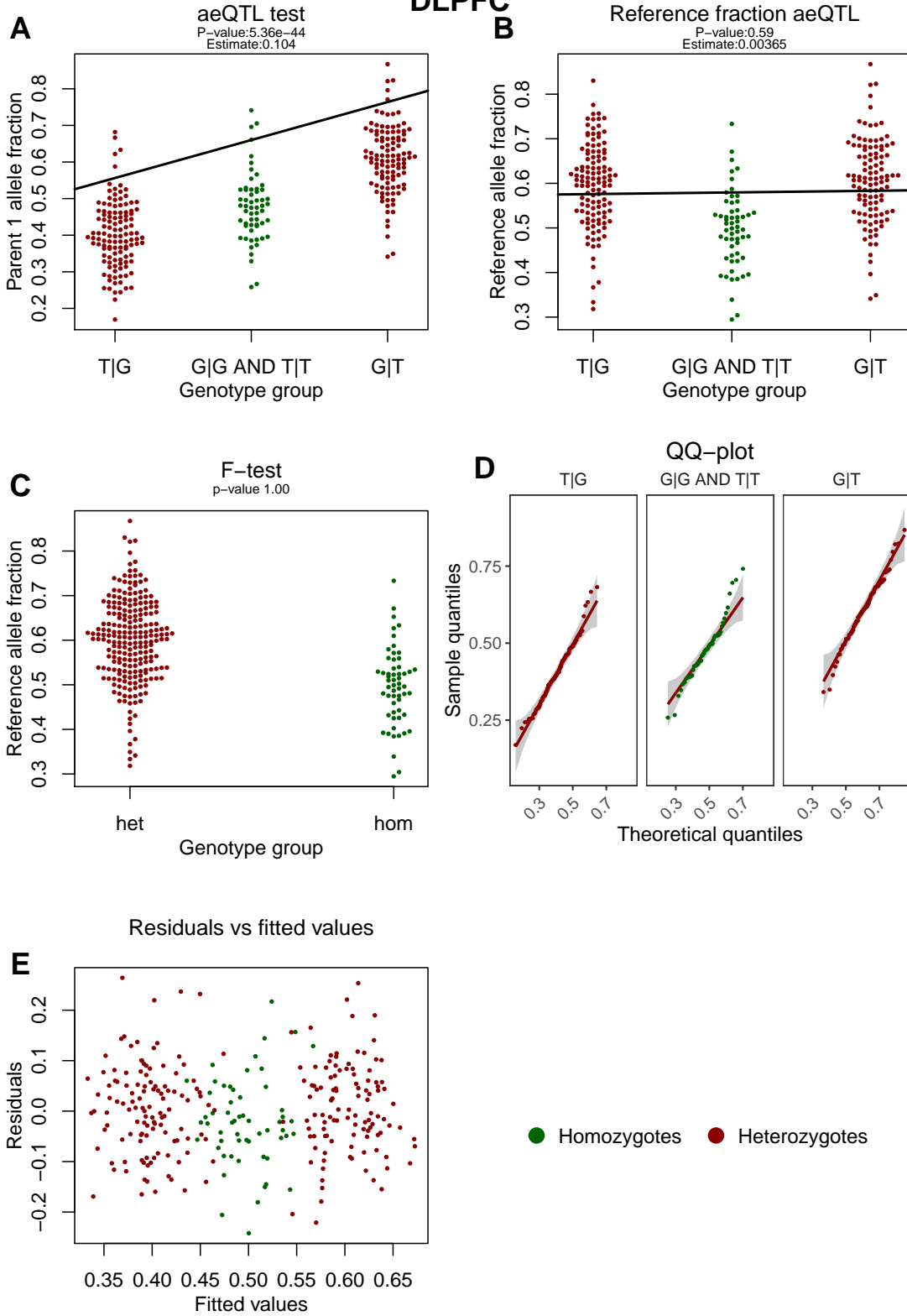


Figure S2-2: More details in the header of this document.

# ZMAT2 – chr5\_140143664\_I

## DLPFC

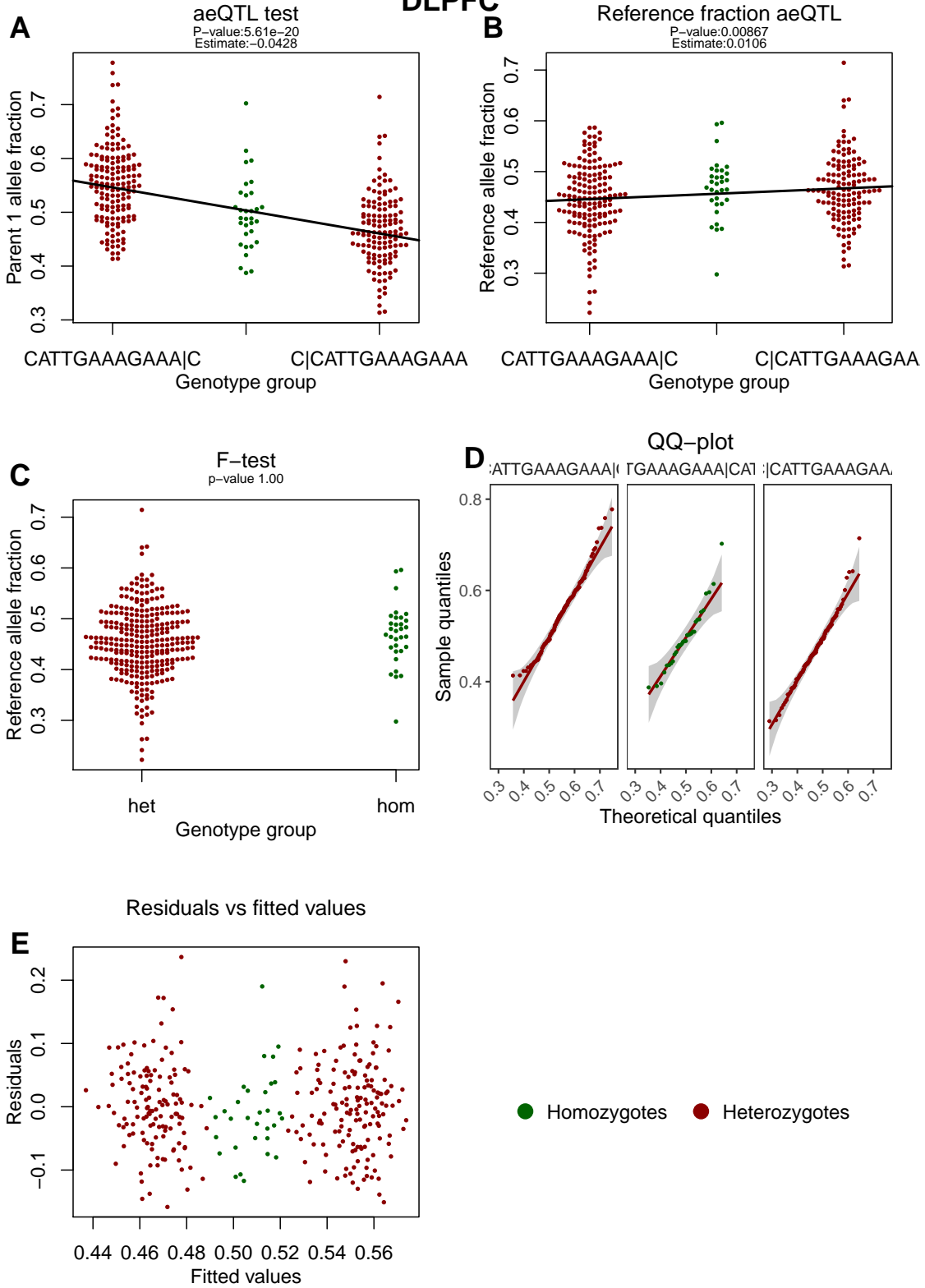


Figure S2-3: More details in the header of this document.

# HAPLN4 – rs2905426

## DLPFC

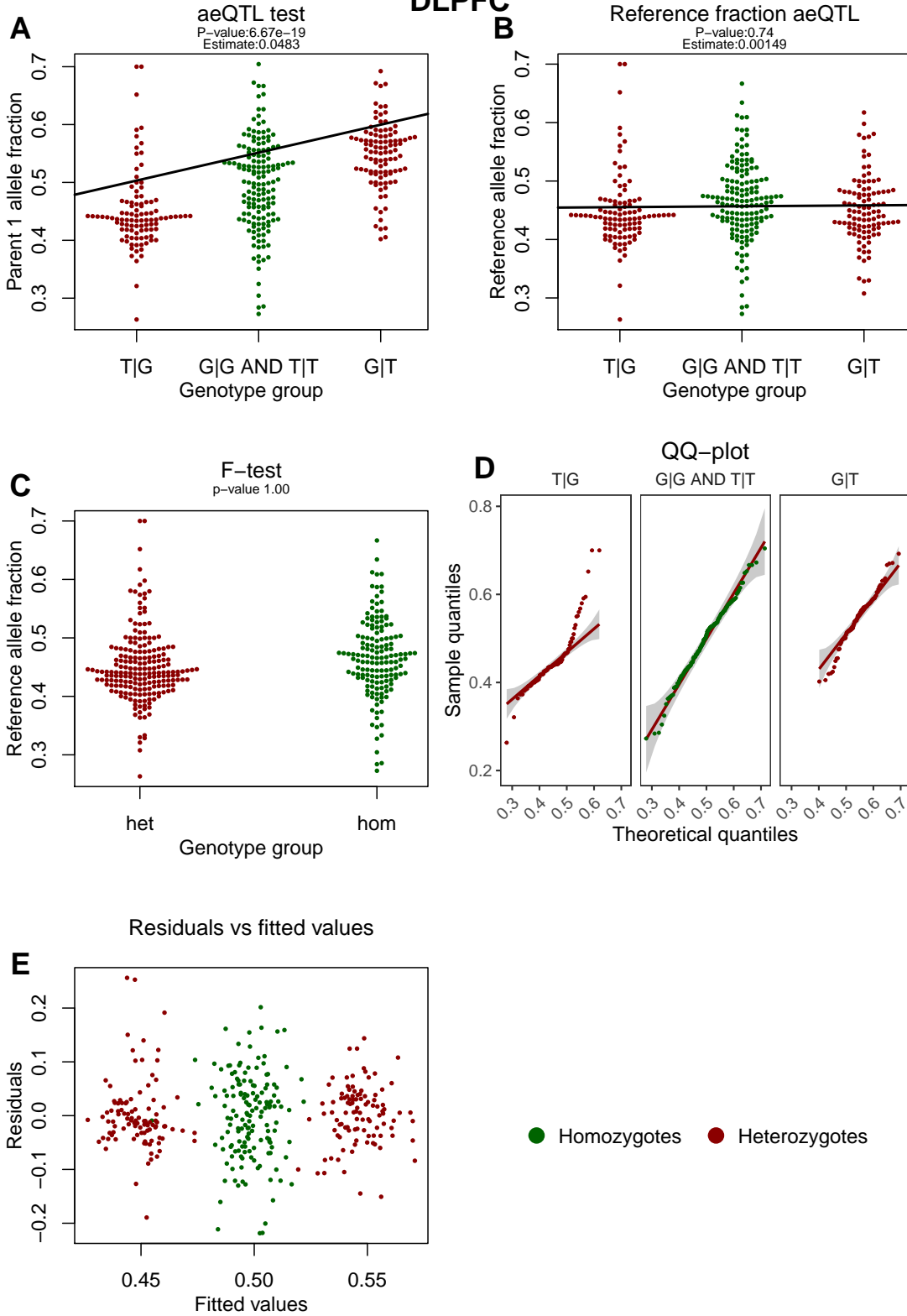


Figure S2-4: More details in the header of this document.

# CD46 – rs7523273

## DLPFC

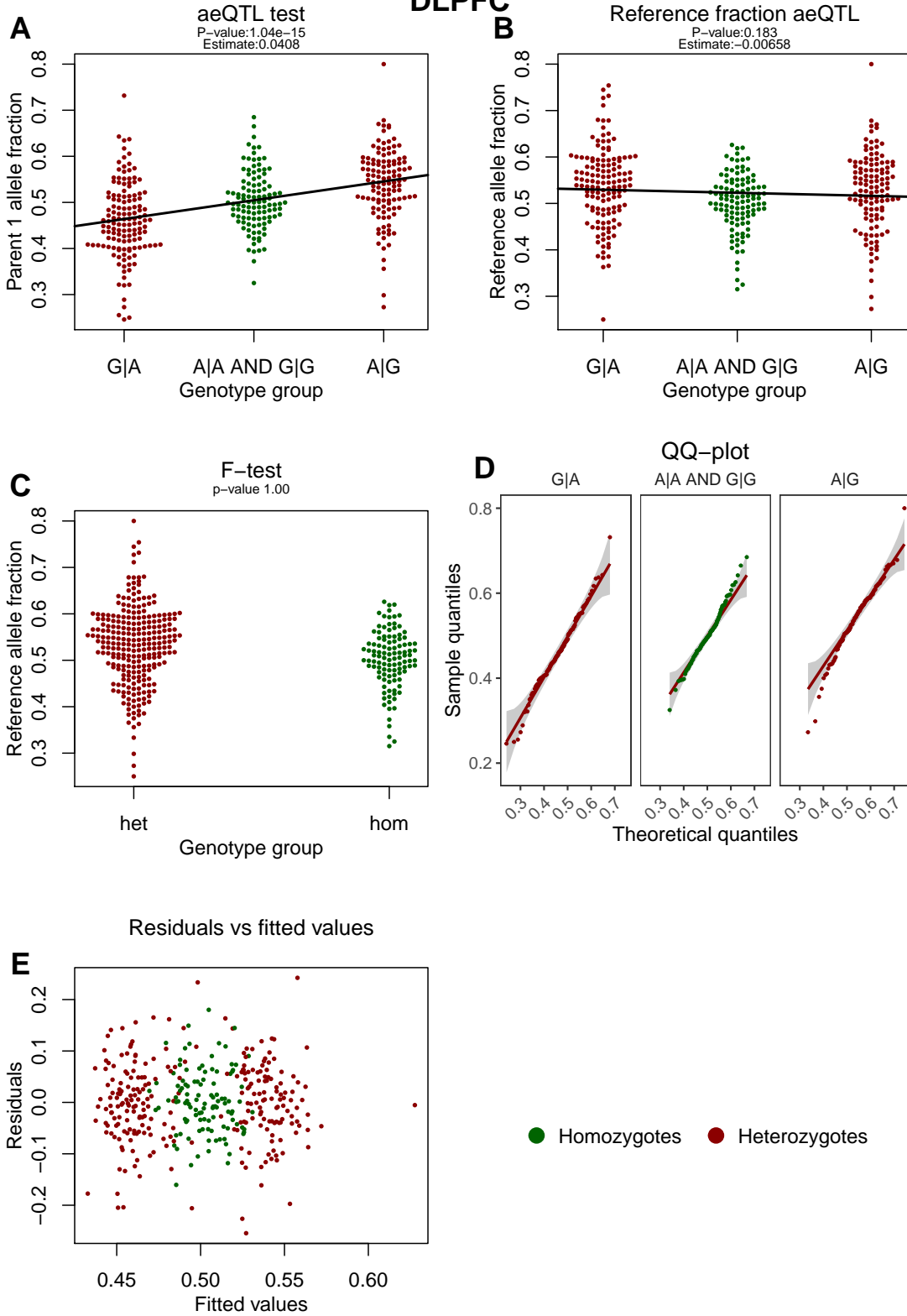


Figure S2-5: More details in the header of this document.

# BRINP2 – rs6670165

## DLPFC

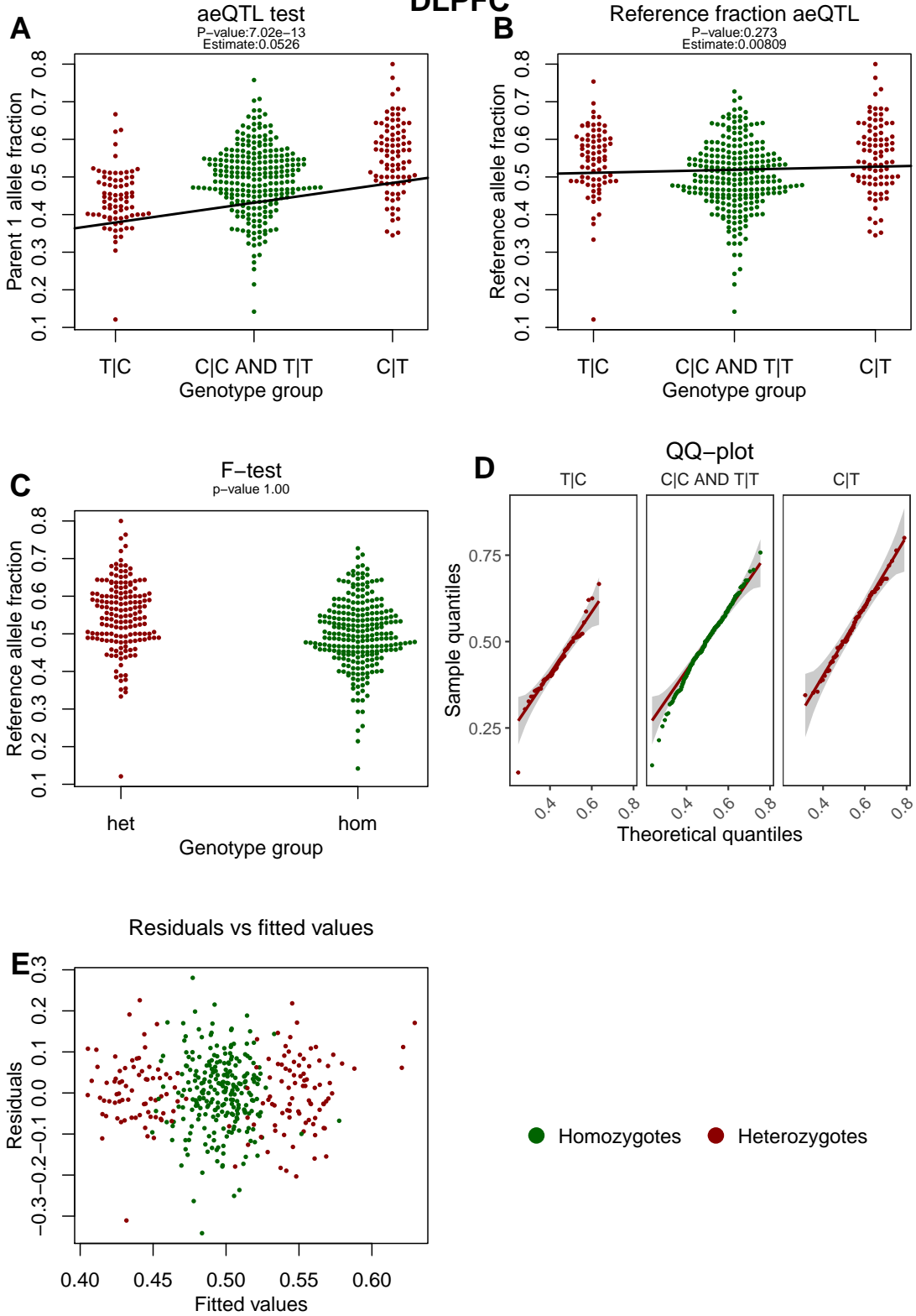


Figure S2-6: More details in the header of this document.

# TOM1L2 – rs8082590

## DLPPFC

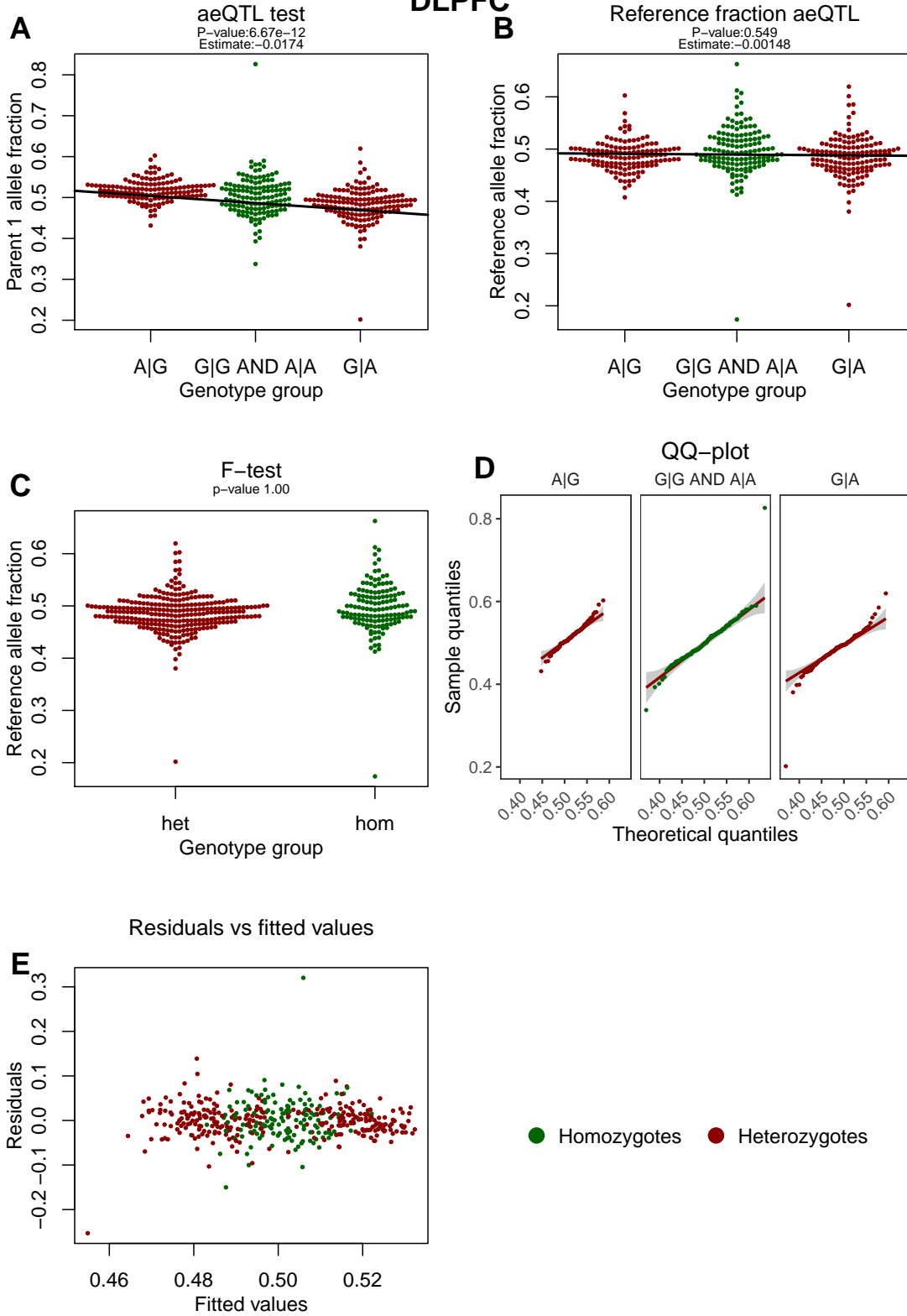


Figure S2-7: More details in the header of this document.



# FURIN – rs4702

## DLPFC

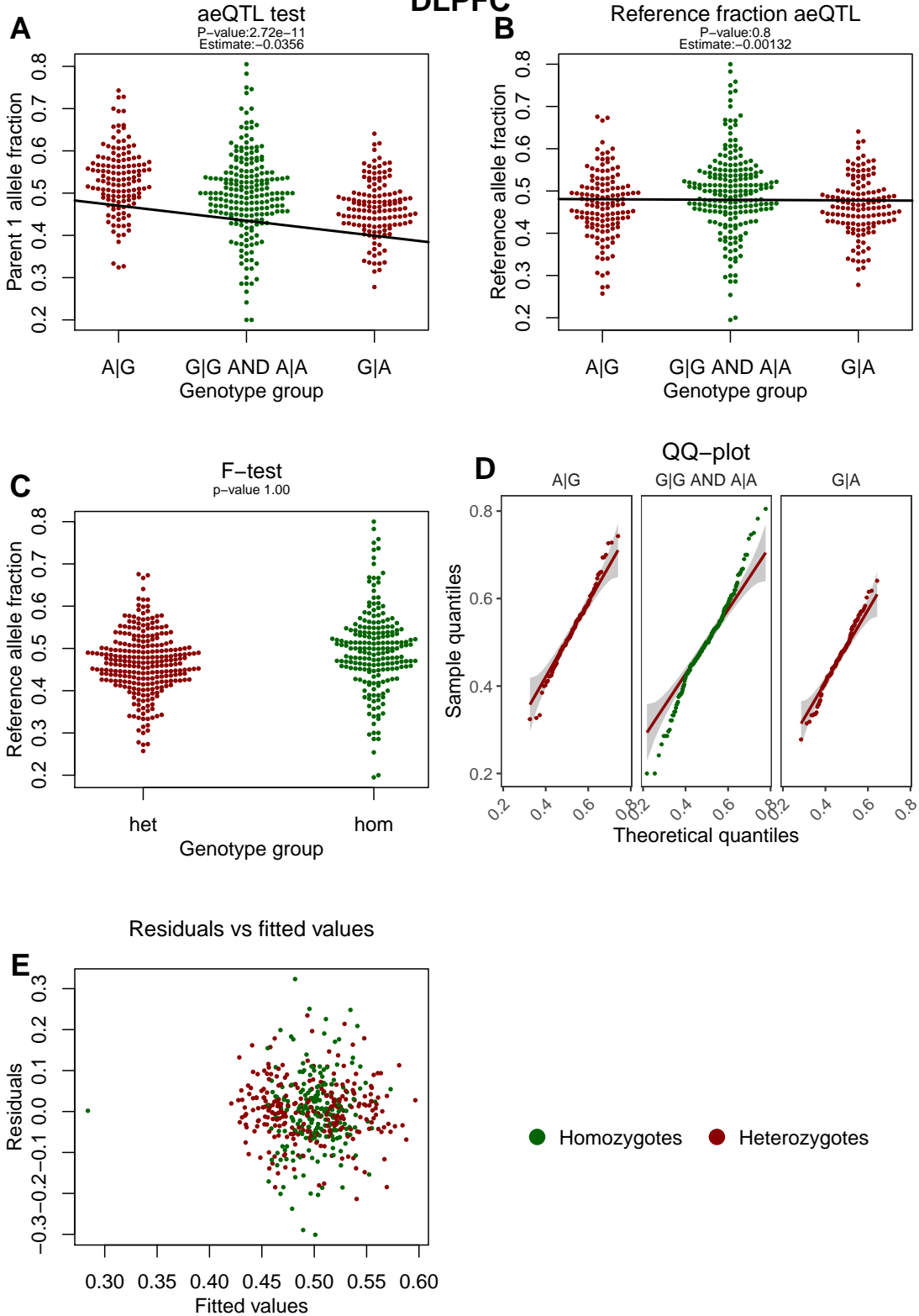


Figure S2-8: More details in the header of this document.

# NDUFA2 – chr5\_140143664\_I

## DLPFC

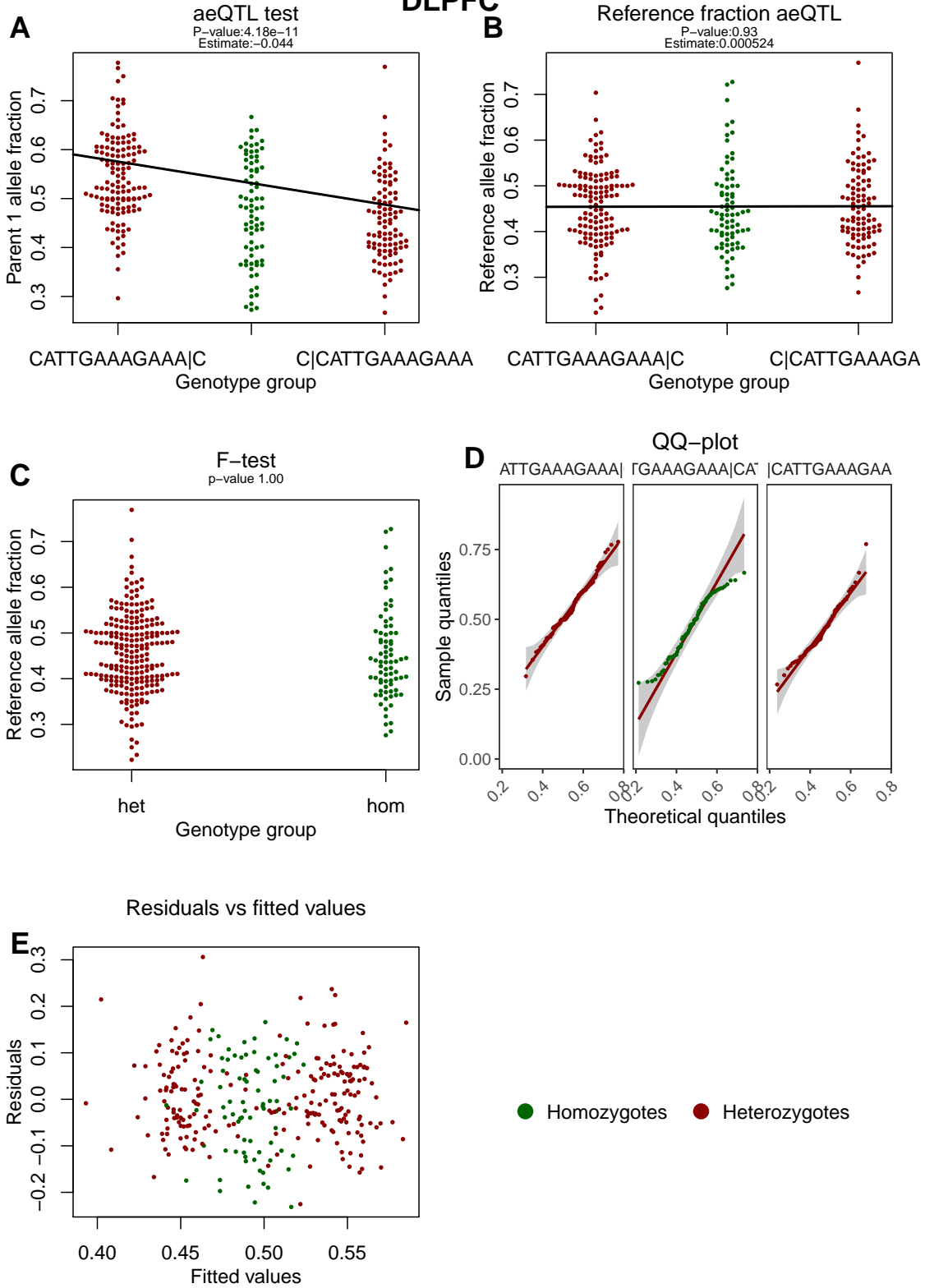


Figure S2-9: More details in the header of this document.

# ANP32E – rs140505938

## DLPPFC

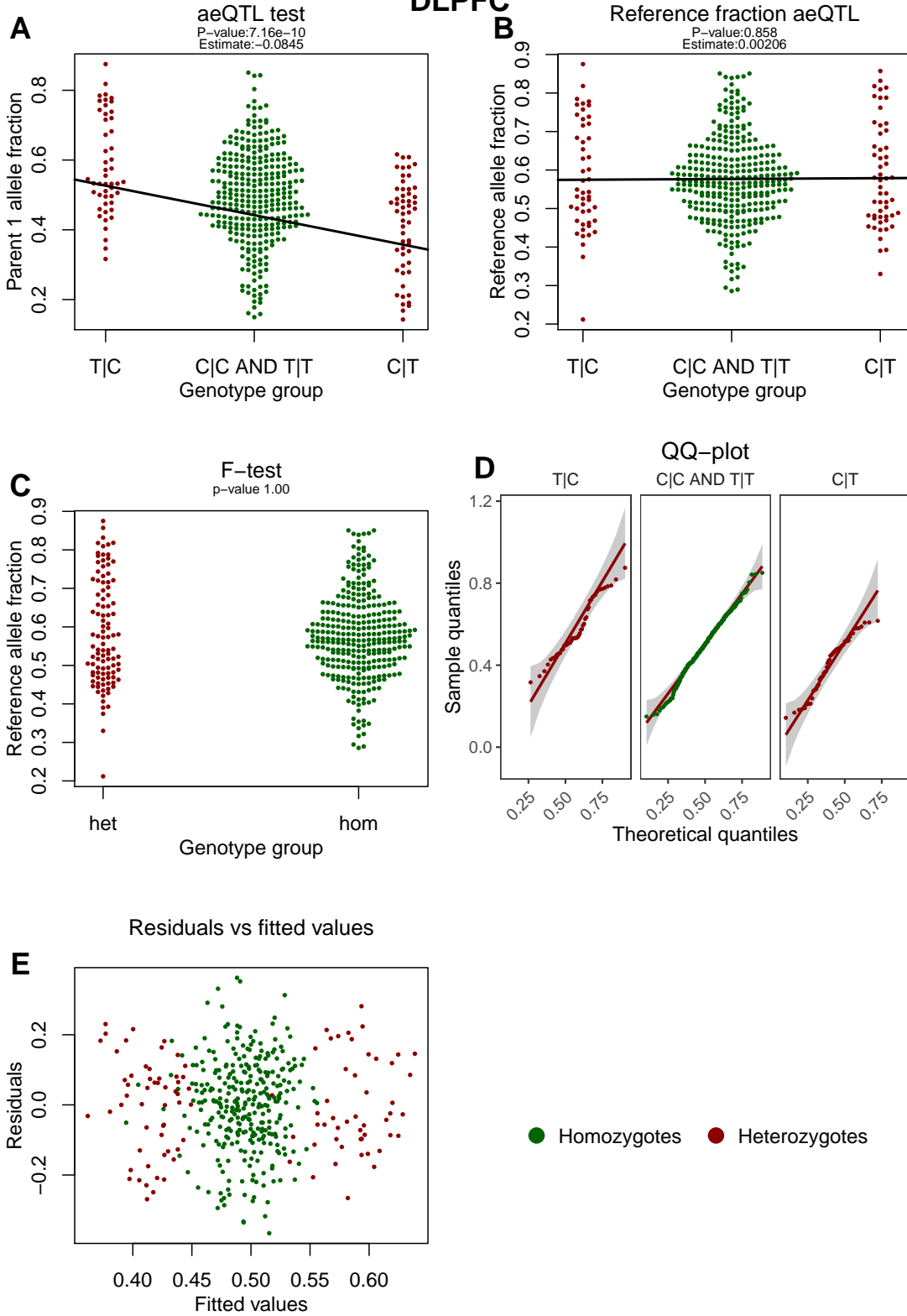


Figure S2-10: More details in the header of this document.

# SPCS1 – rs2535627

## DLPPFC

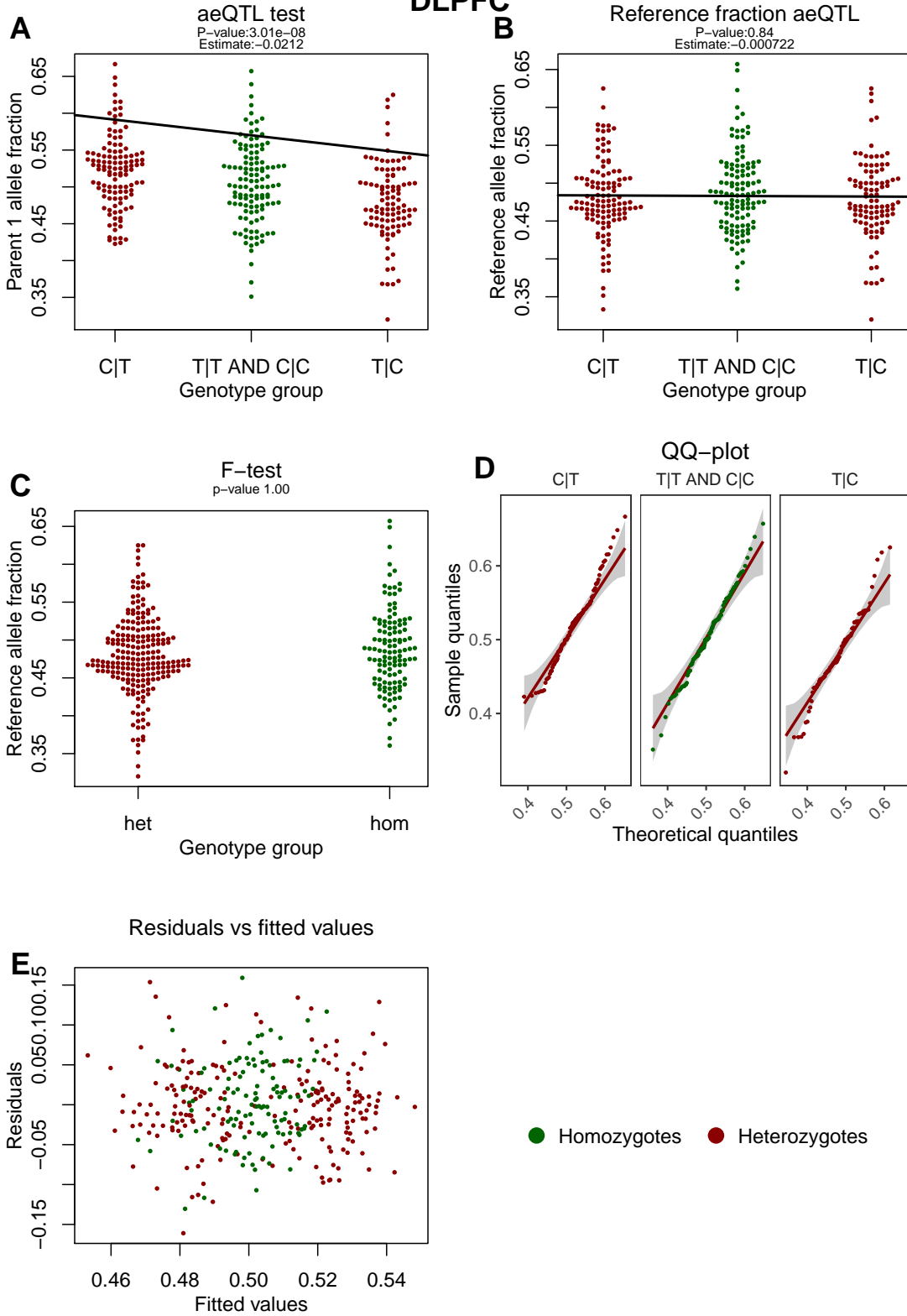


Figure S2-11: More details in the header of this document.

# SNX19 – rs10791097

## DLPFC

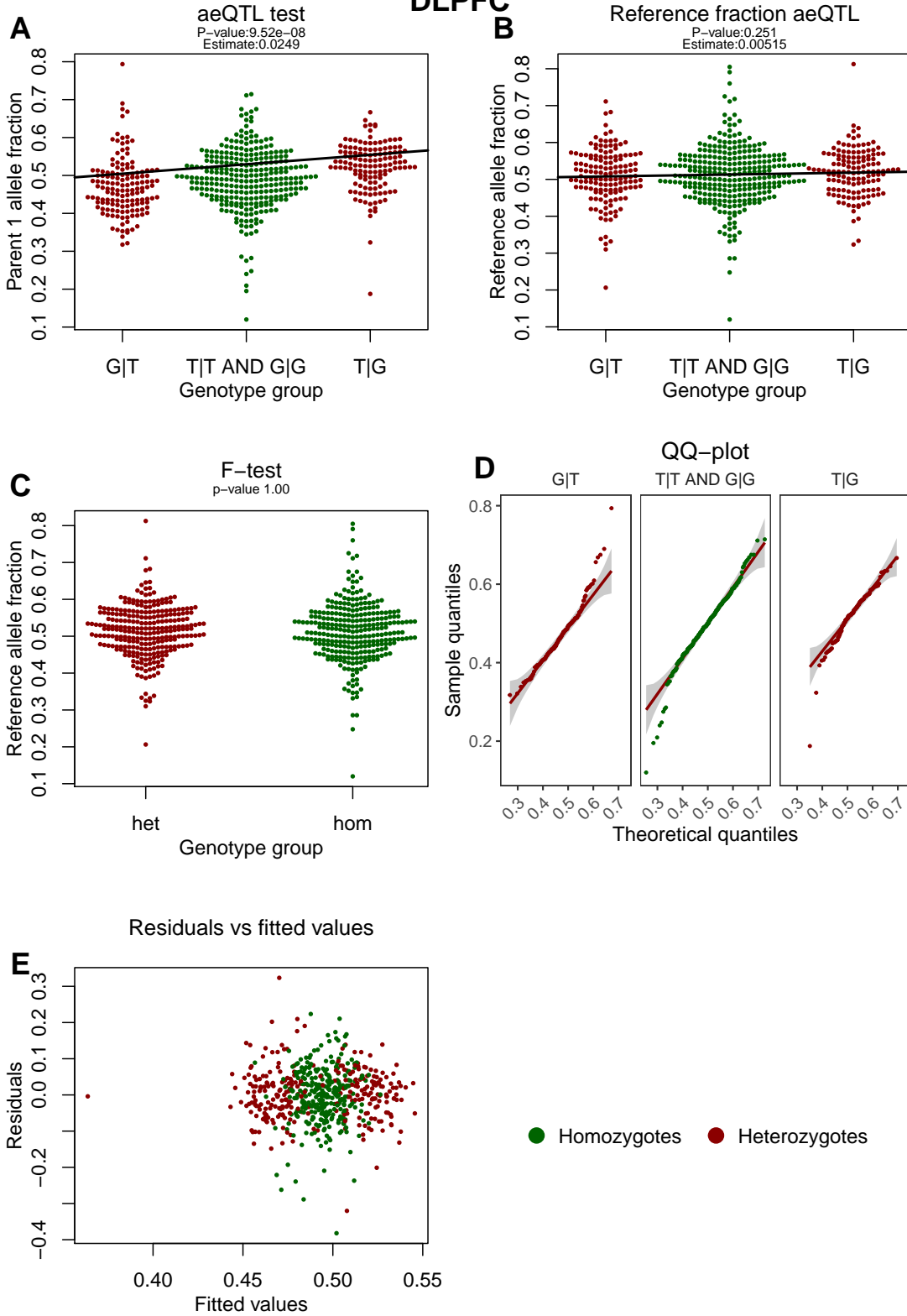


Figure S2-12: More details in the header of this document.

# FAM57B – rs12691307

## DLPFC

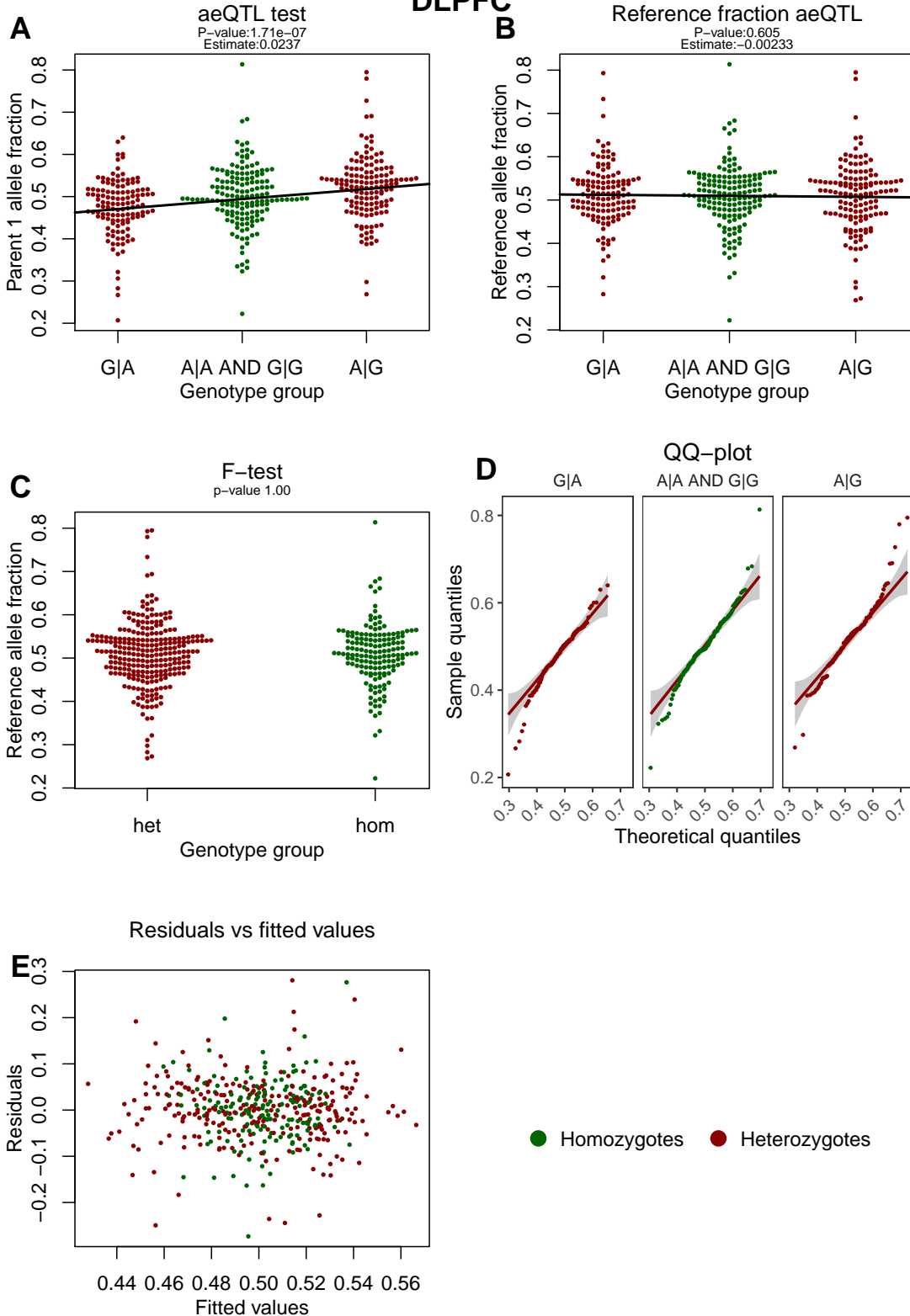


Figure S2-13: More details in the header of this document.

# CKB – rs12887734

## DLPCF

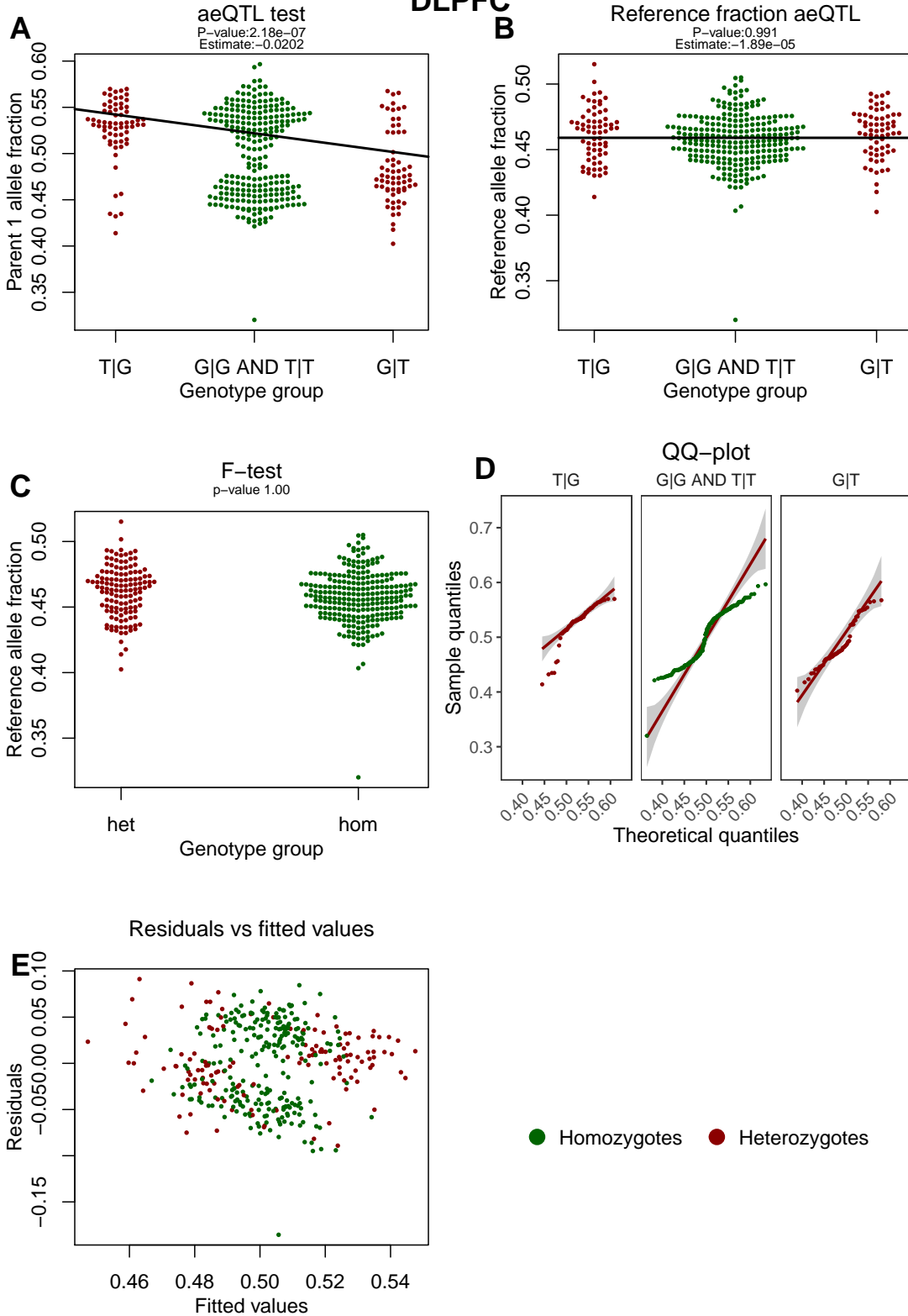


Figure S2-14: More details in the header of this document.

**PTPRF – rs11210892**

**DLPFC**

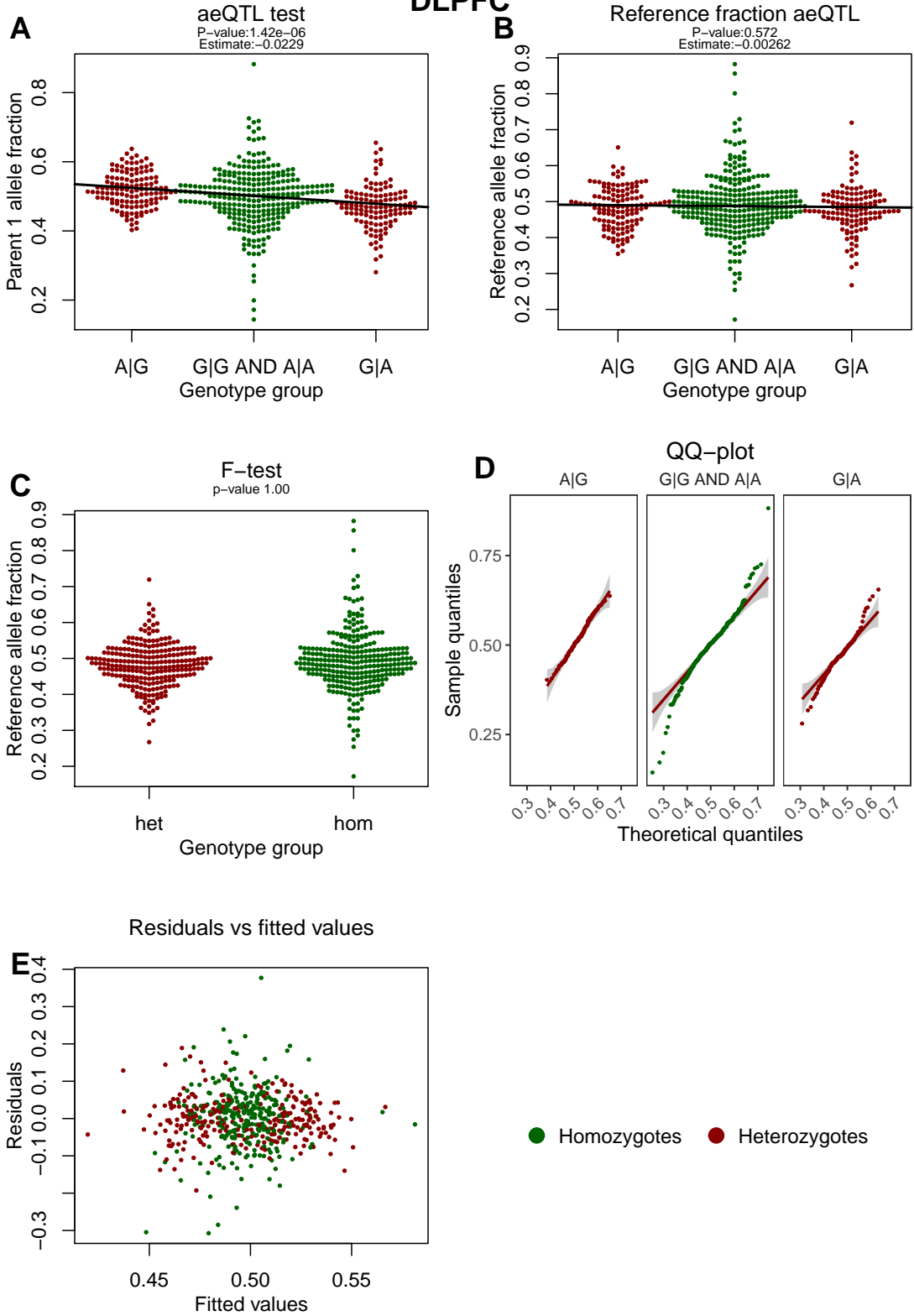


Figure S2-15: More details in the header of this document.



# HSPE1,MOB4,HSPE1-MOB4 – rs6434928

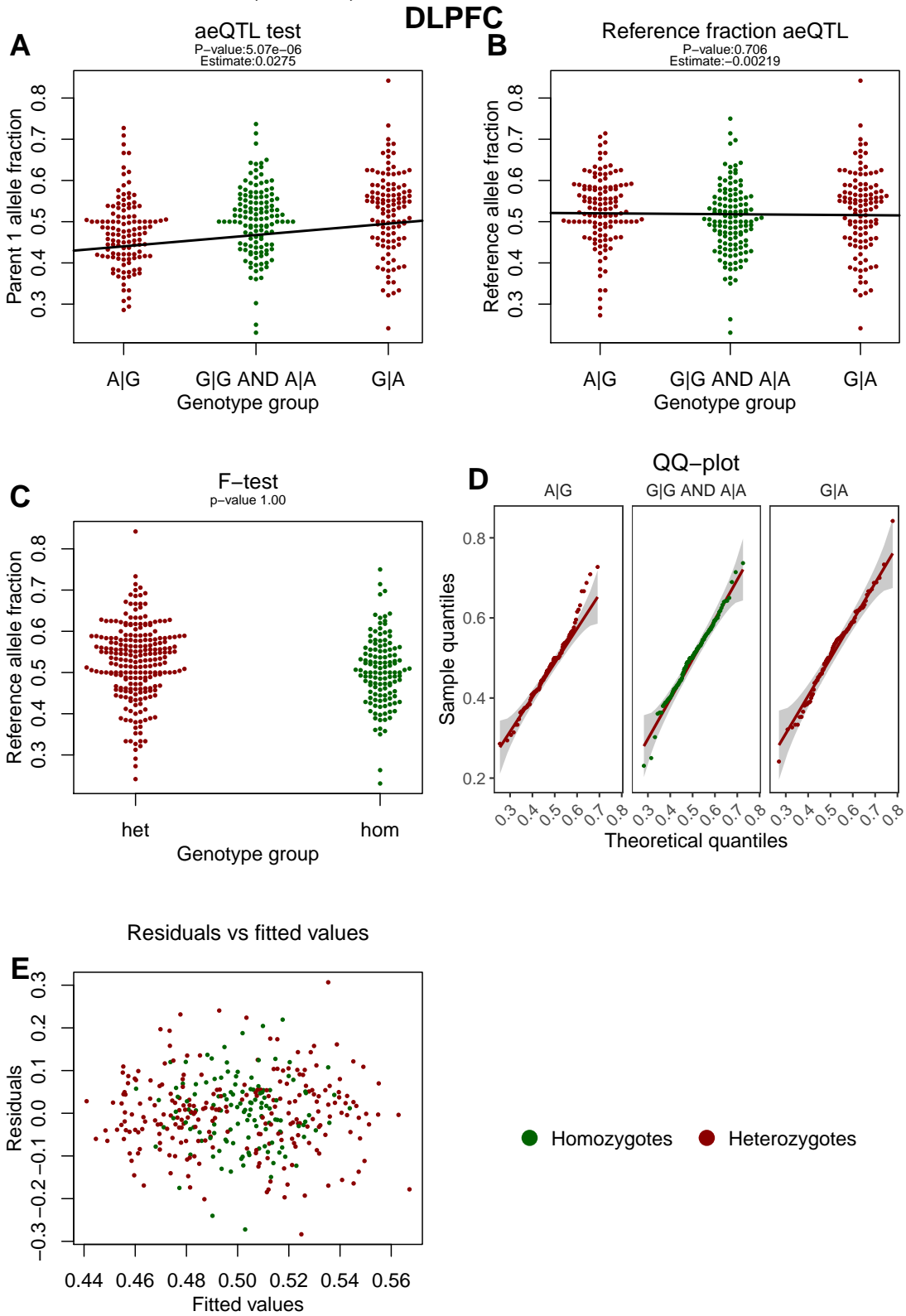


Figure S2-16: More details in the header of this document.

# NEK4 – rs2535627

## DLPFC

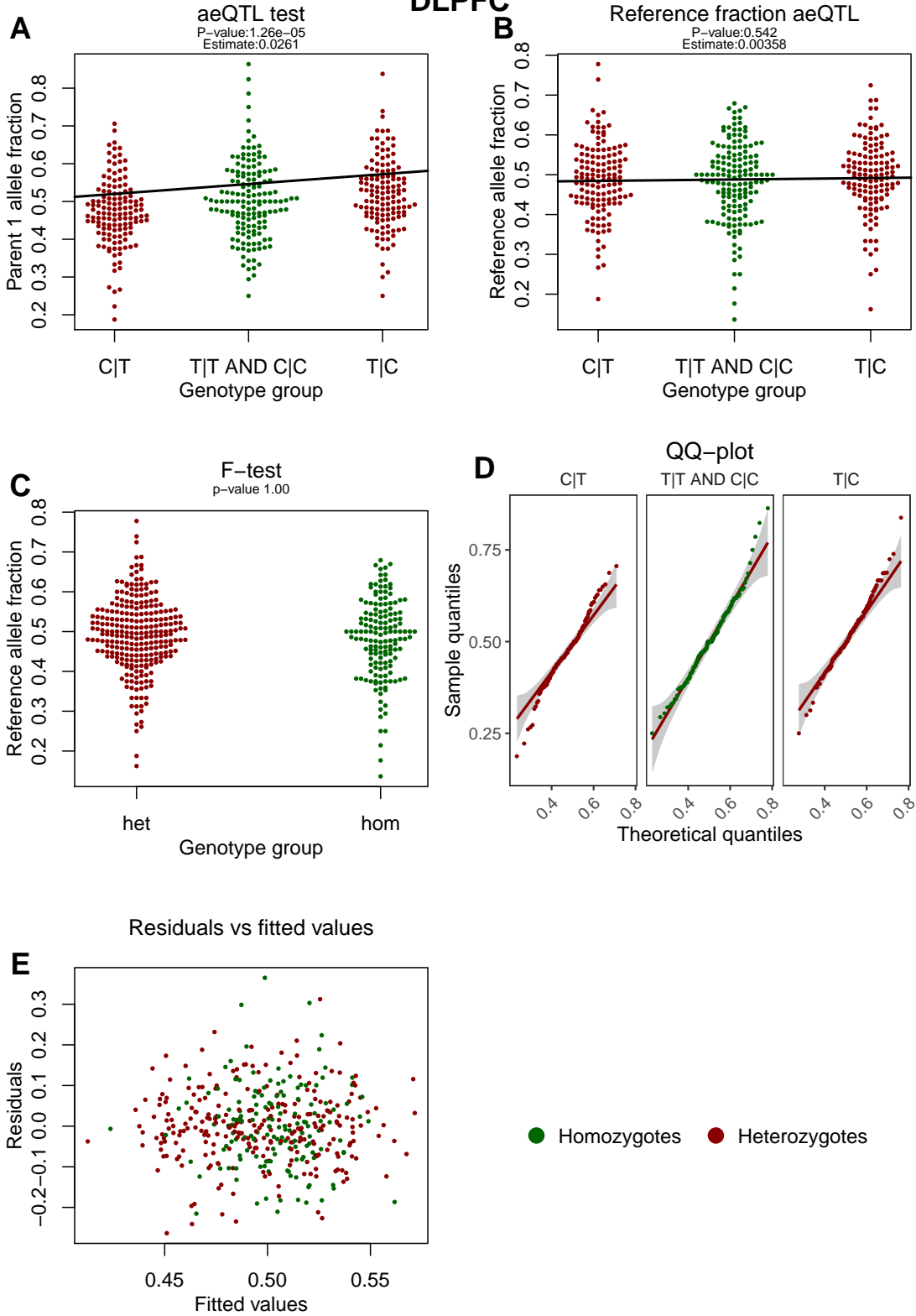


Figure S2-17: More details in the header of this document.

LRP1,MIR1228 – rs12826178

DLPFC

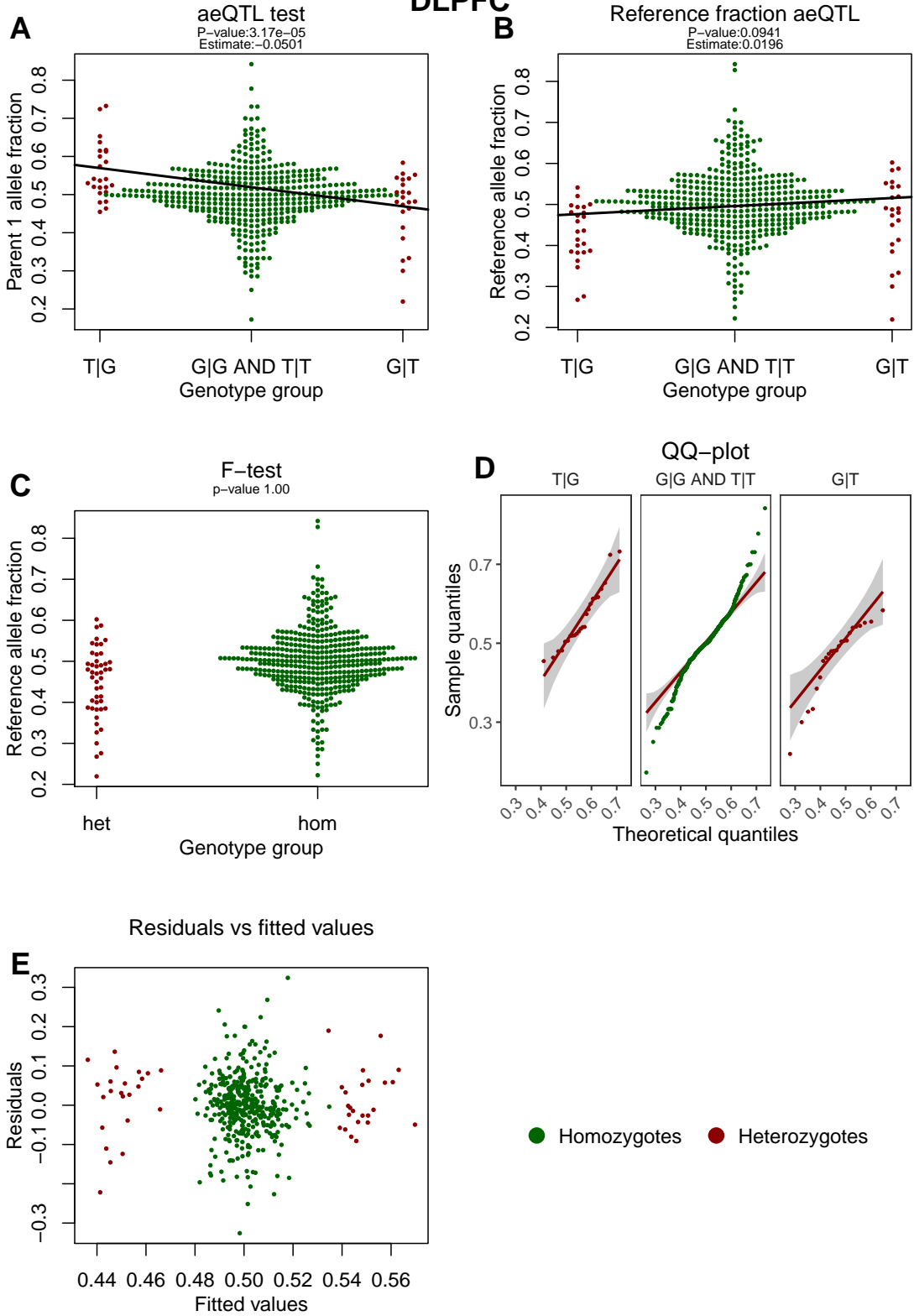


Figure S2-18: More details in the header of this document.

# PRMT7 – rs8044995

## DLPFC

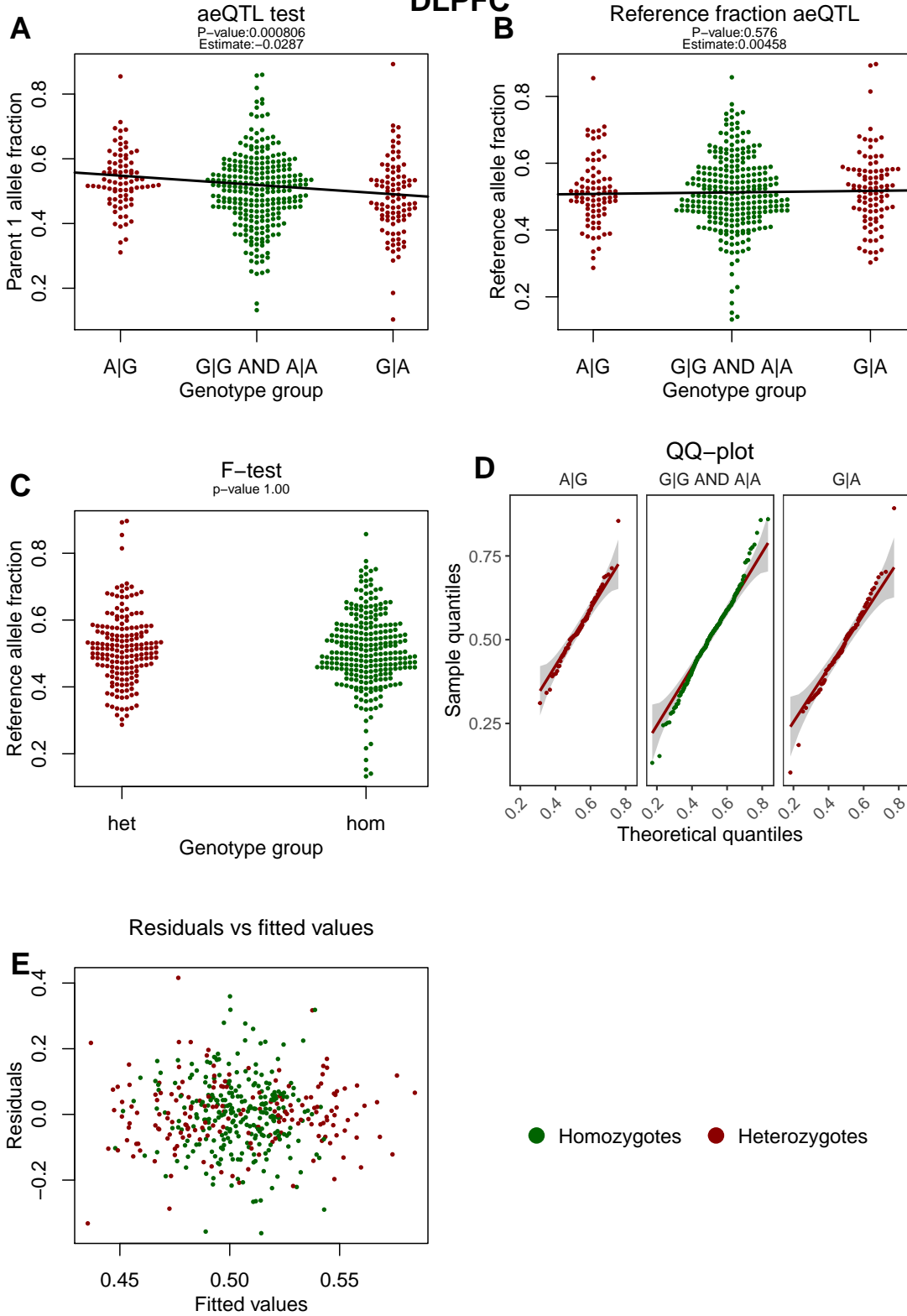


Figure S2-19: More details in the header of this document.

# GATAD2A – rs2905426

## DLPFC

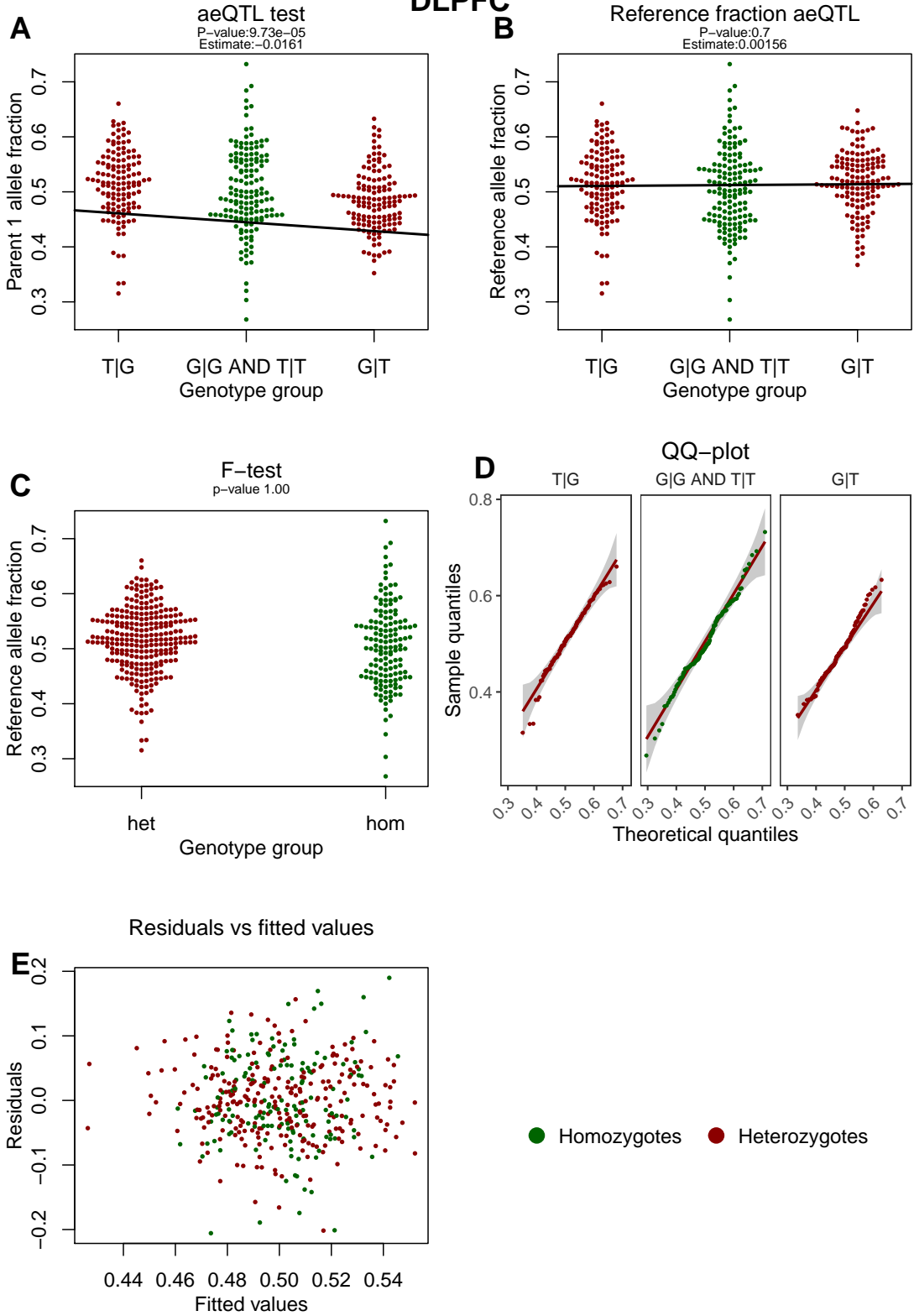


Figure S2–20: More details in the header of this document.

# HSPD1 – rs6434928

## DLPFC

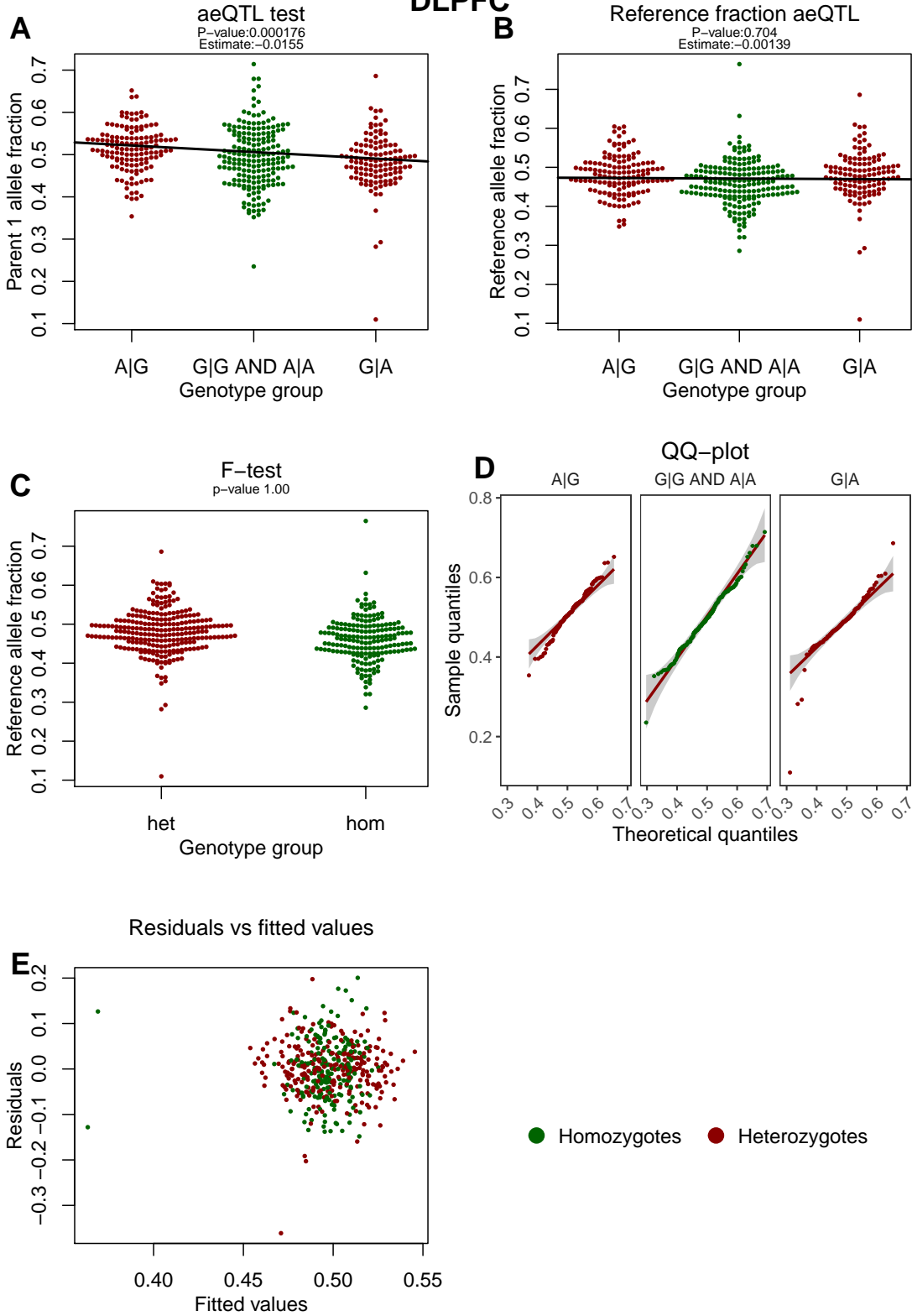


Figure S2-21: More details in the header of this document.

# LCAT,SLC12A4 – rs8044995

## DLPFC

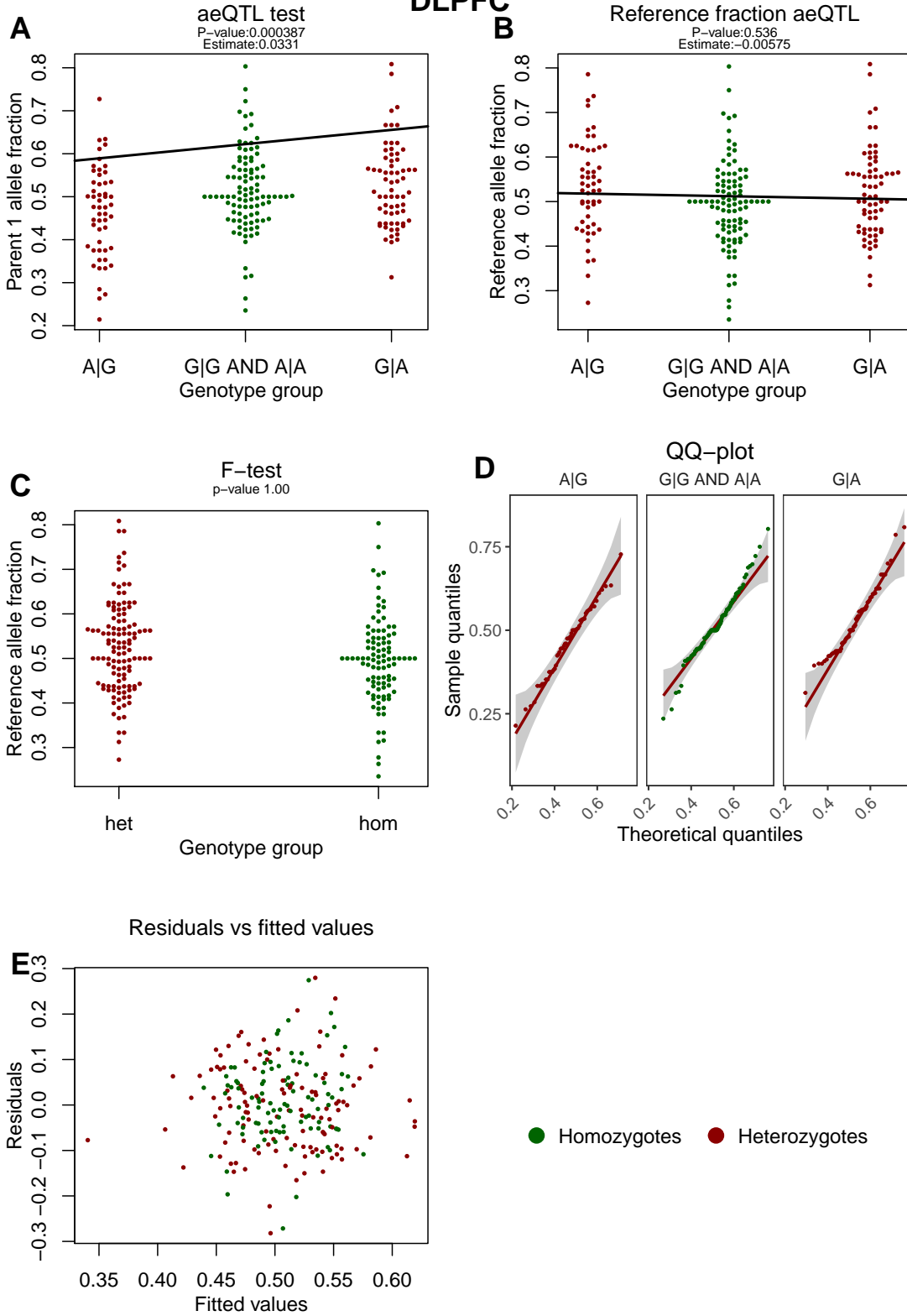


Figure S2-22: More details in the header of this document.

# FAM53C – rs10043984

## DLPPFC

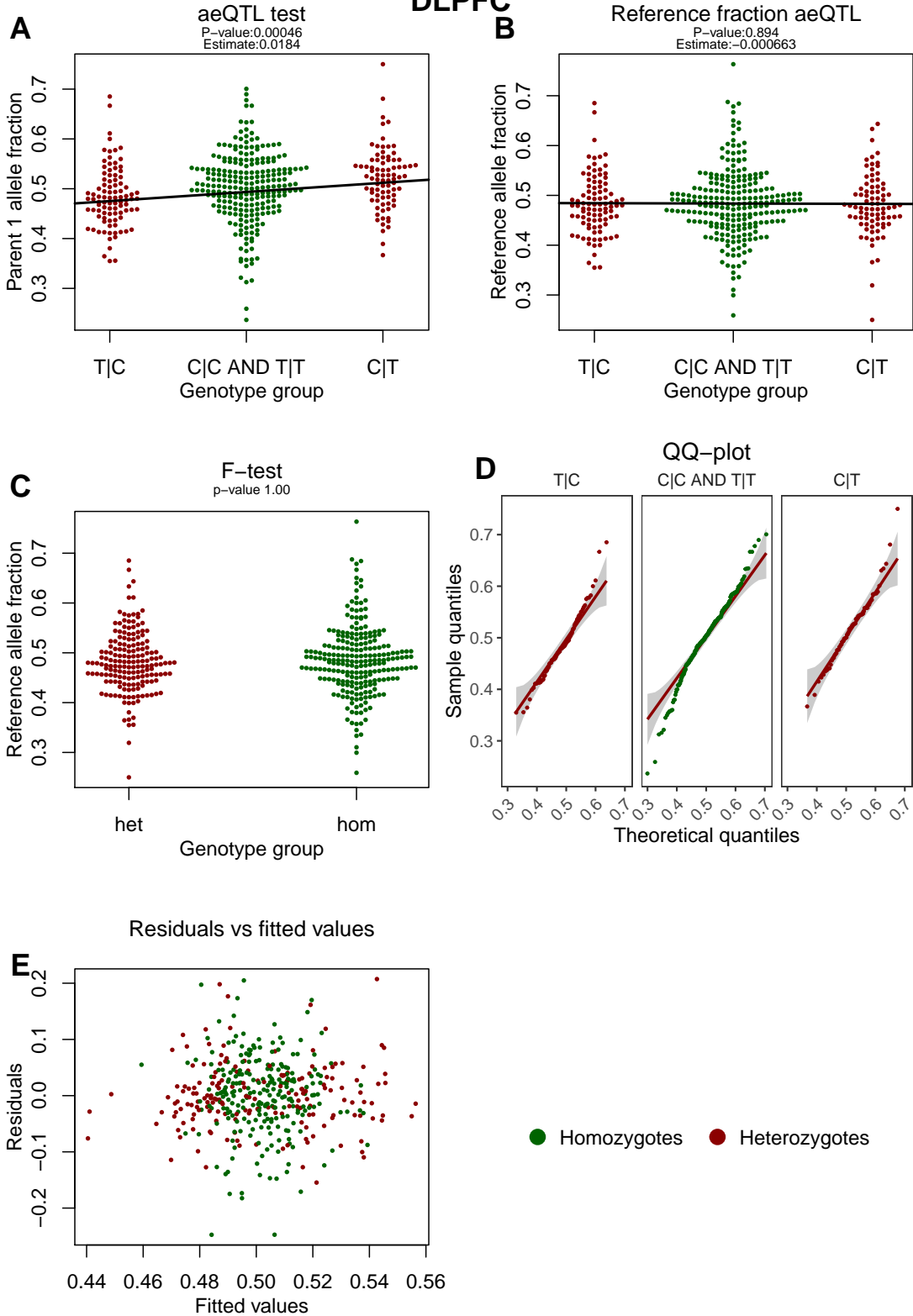


Figure S2–23: More details in the header of this document.



# IK,MIR3655 – chr5\_140143664\_I

## DLPFC

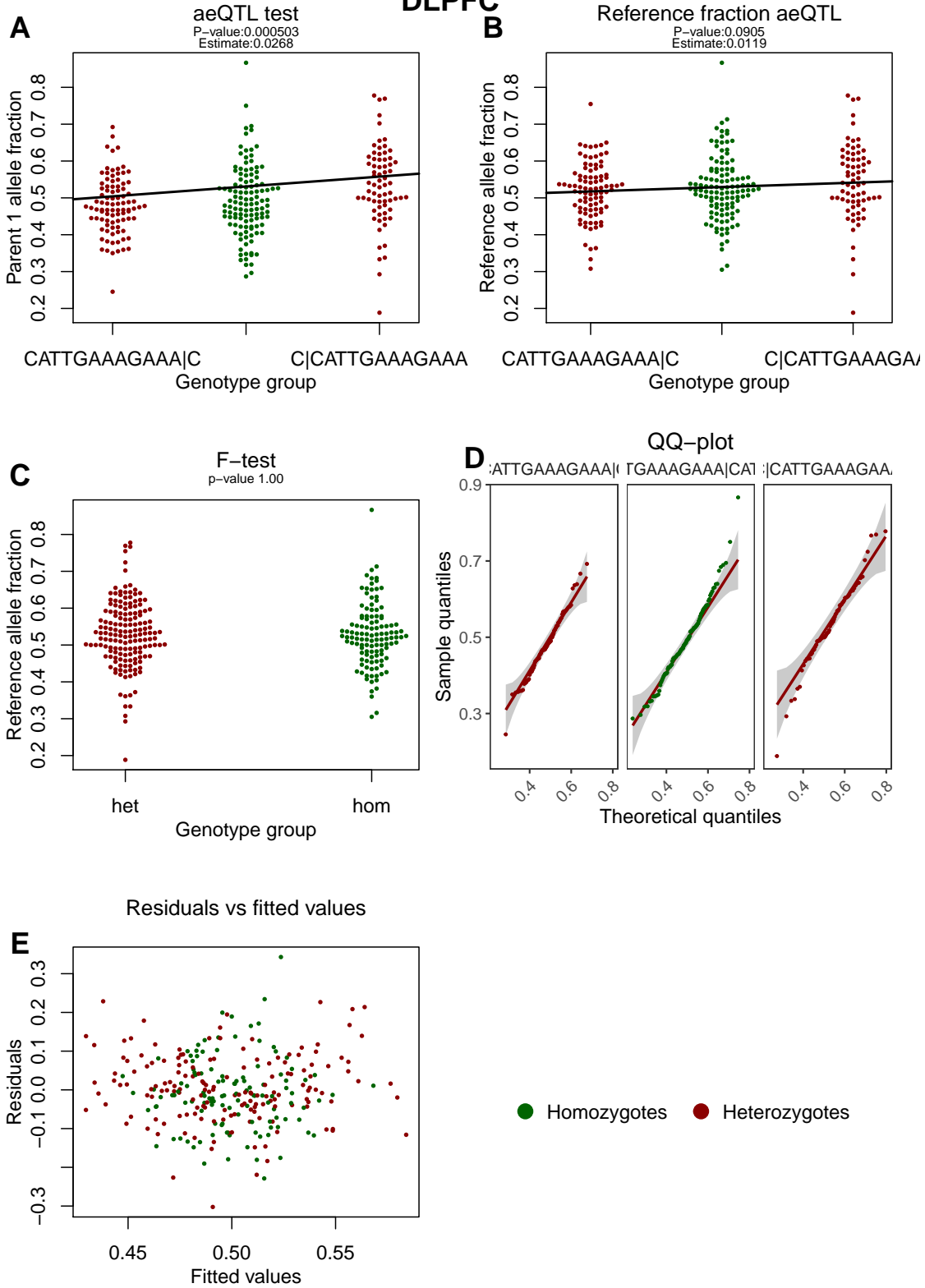


Figure S2-24: More details in the header of this document.

# PPP1R13B – rs12887734

## DLPFC

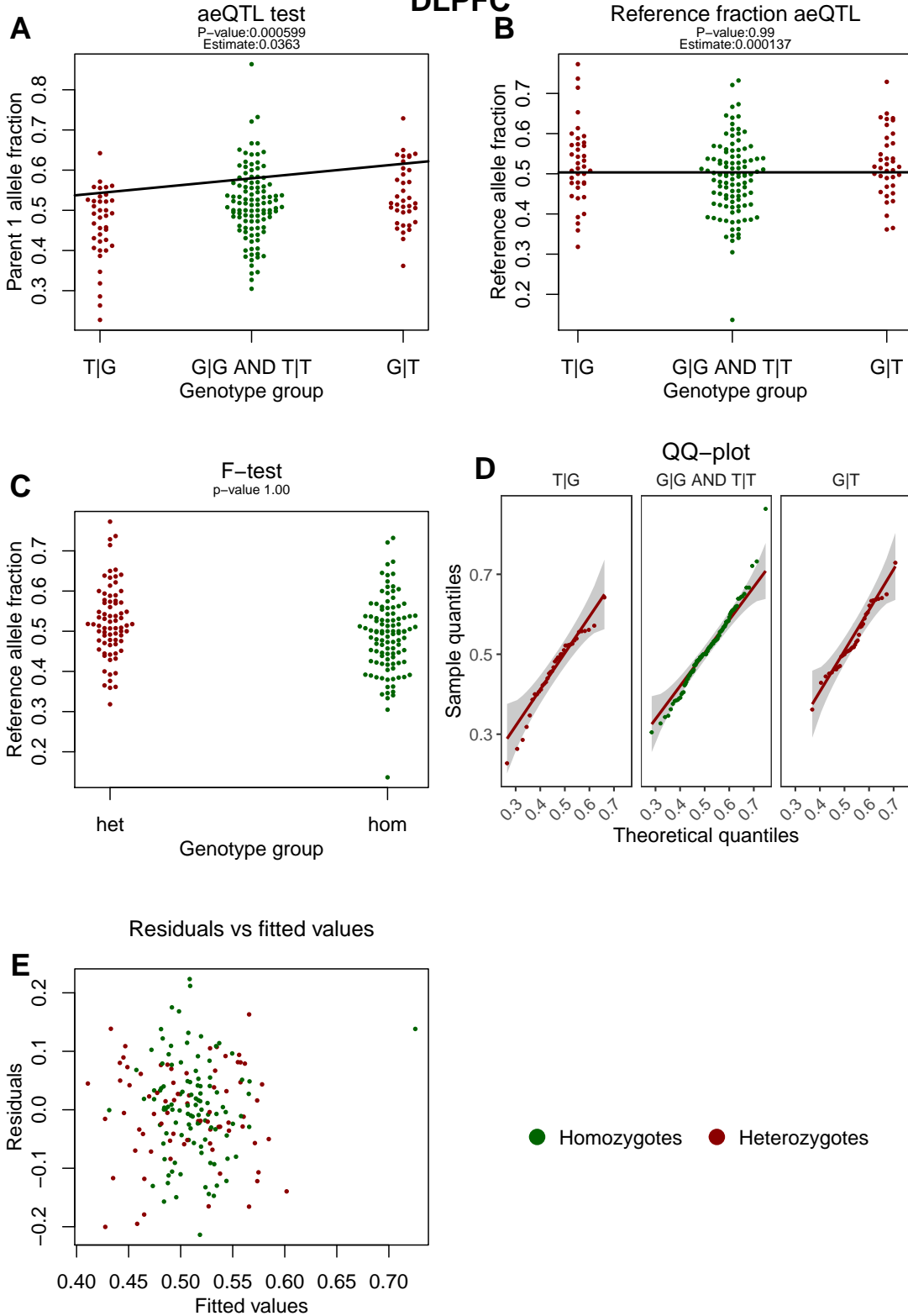


Figure S2–25: More details in the header of this document.

# AS3MT,BORCS7,BORCS7-ASMT – rs55833108

## DLPFC

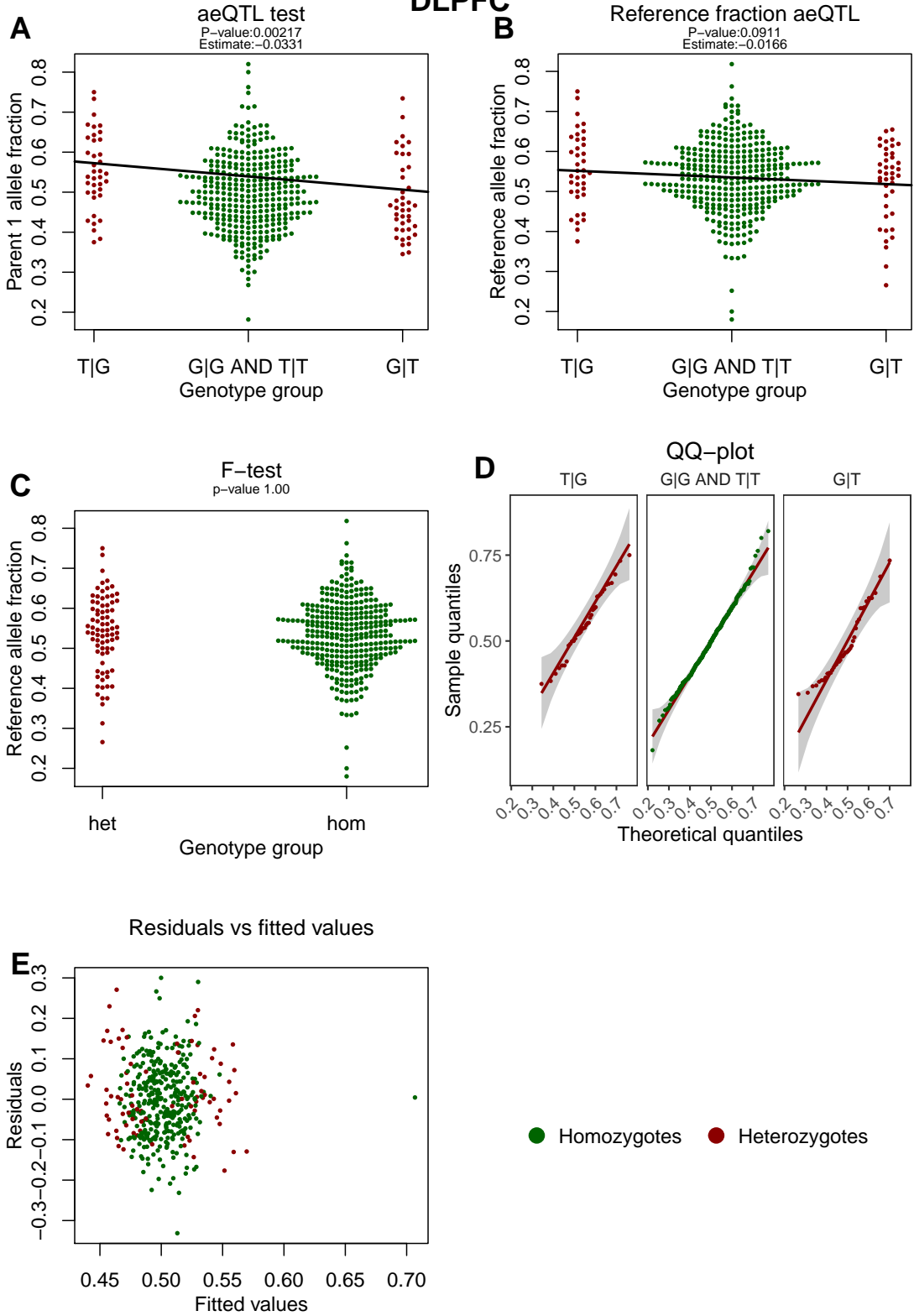


Figure S2-26: More details in the header of this document.

# RIMS1 – rs1339227

## DLPFC

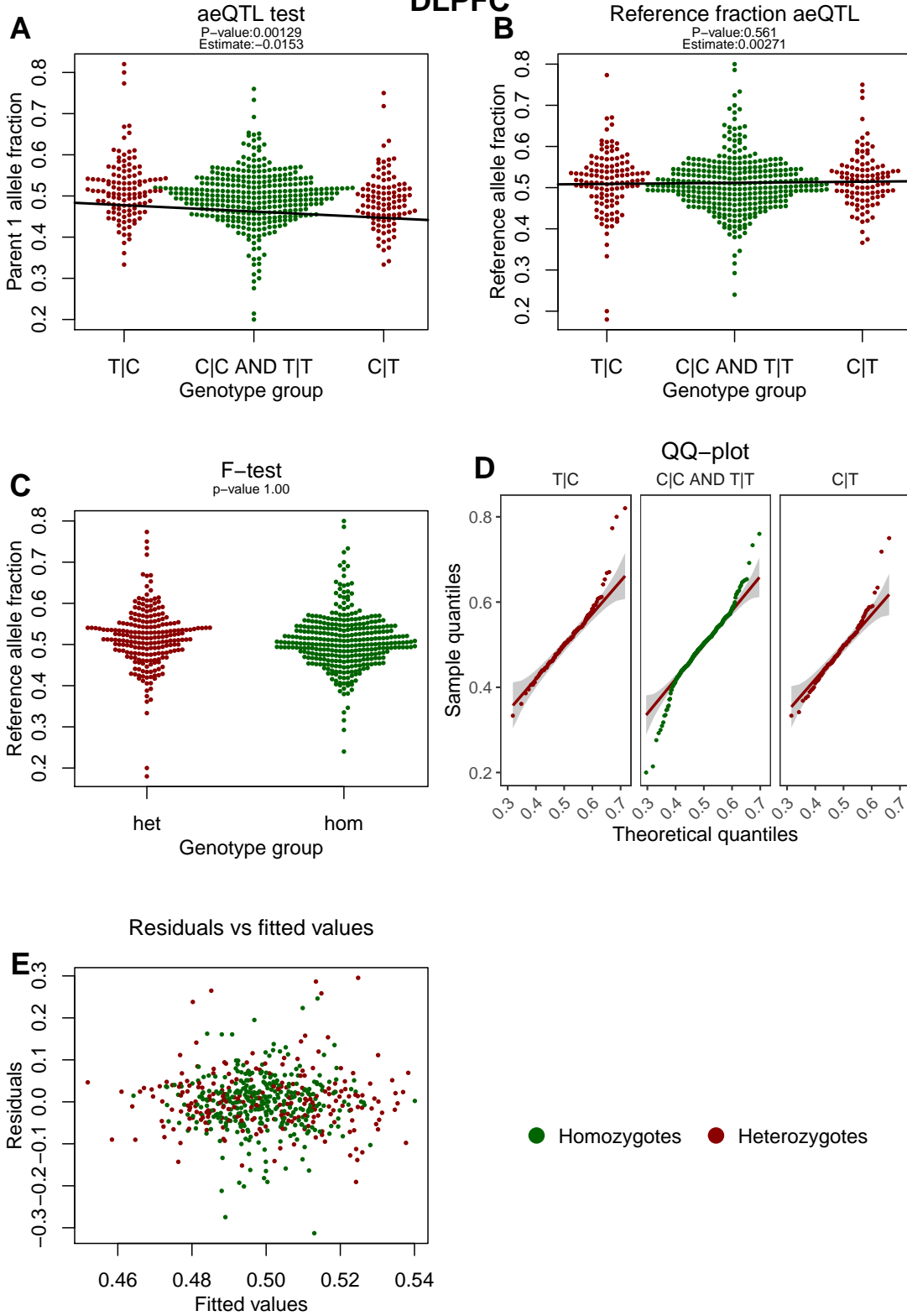


Figure S2-27: More details in the header of this document.

# BUB1B,PAK6 – rs56205728

## DLPFC

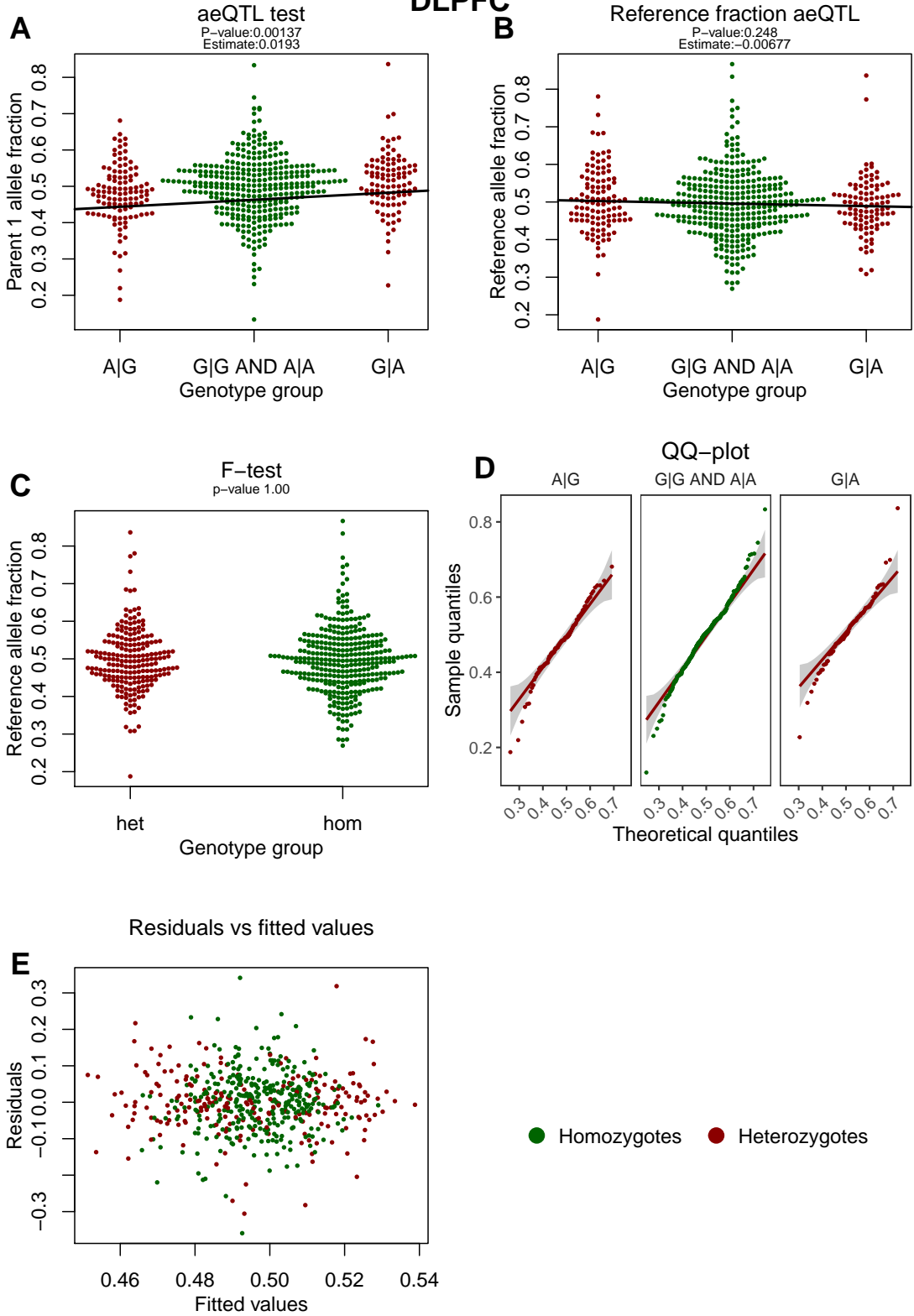


Figure S2–28: More details in the header of this document.

# DNAJC19 – chr3\_180594593\_I

## DLPFC

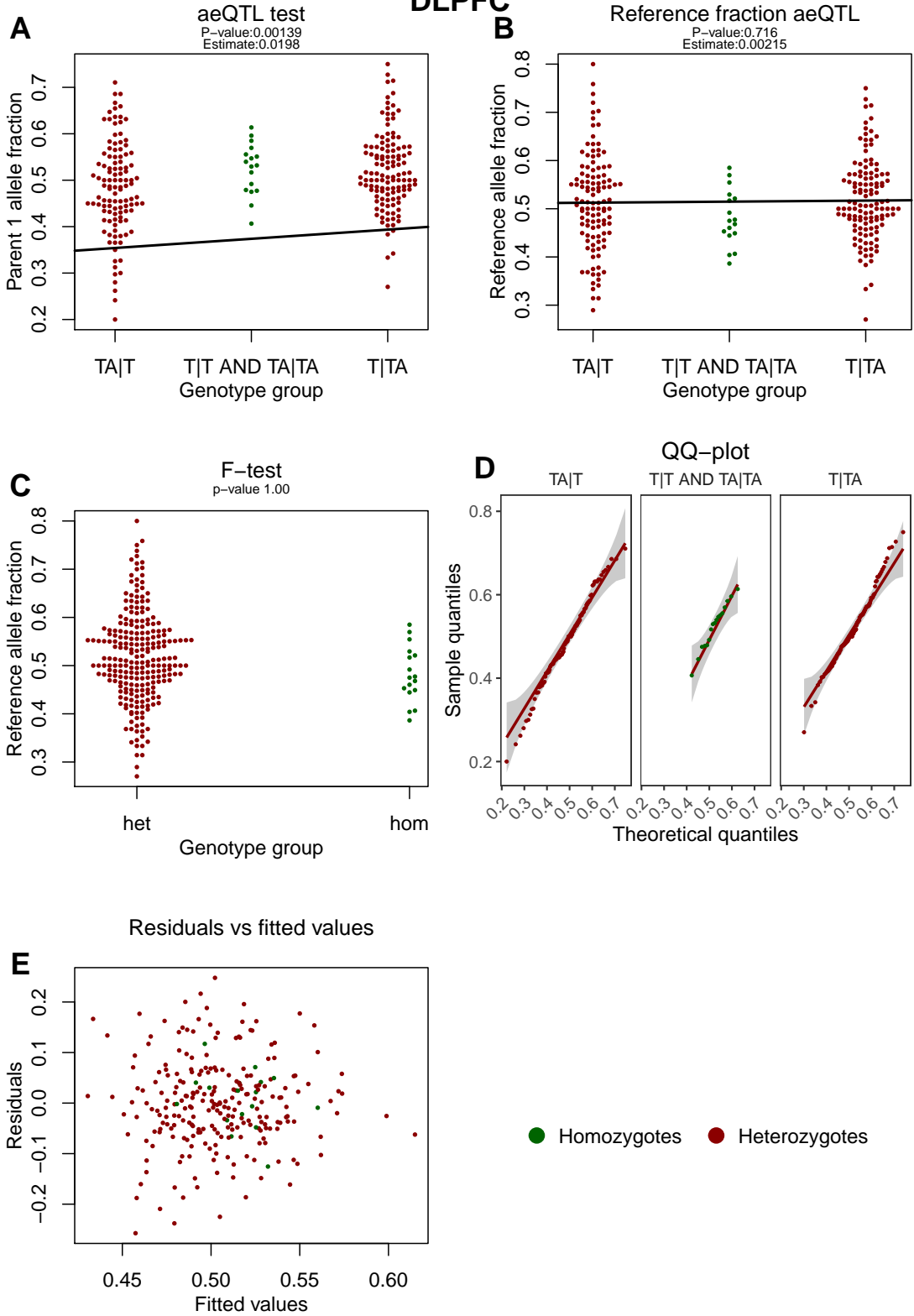


Figure S2–29: More details in the header of this document.

# VPS45 – rs140505938

## DLPFC

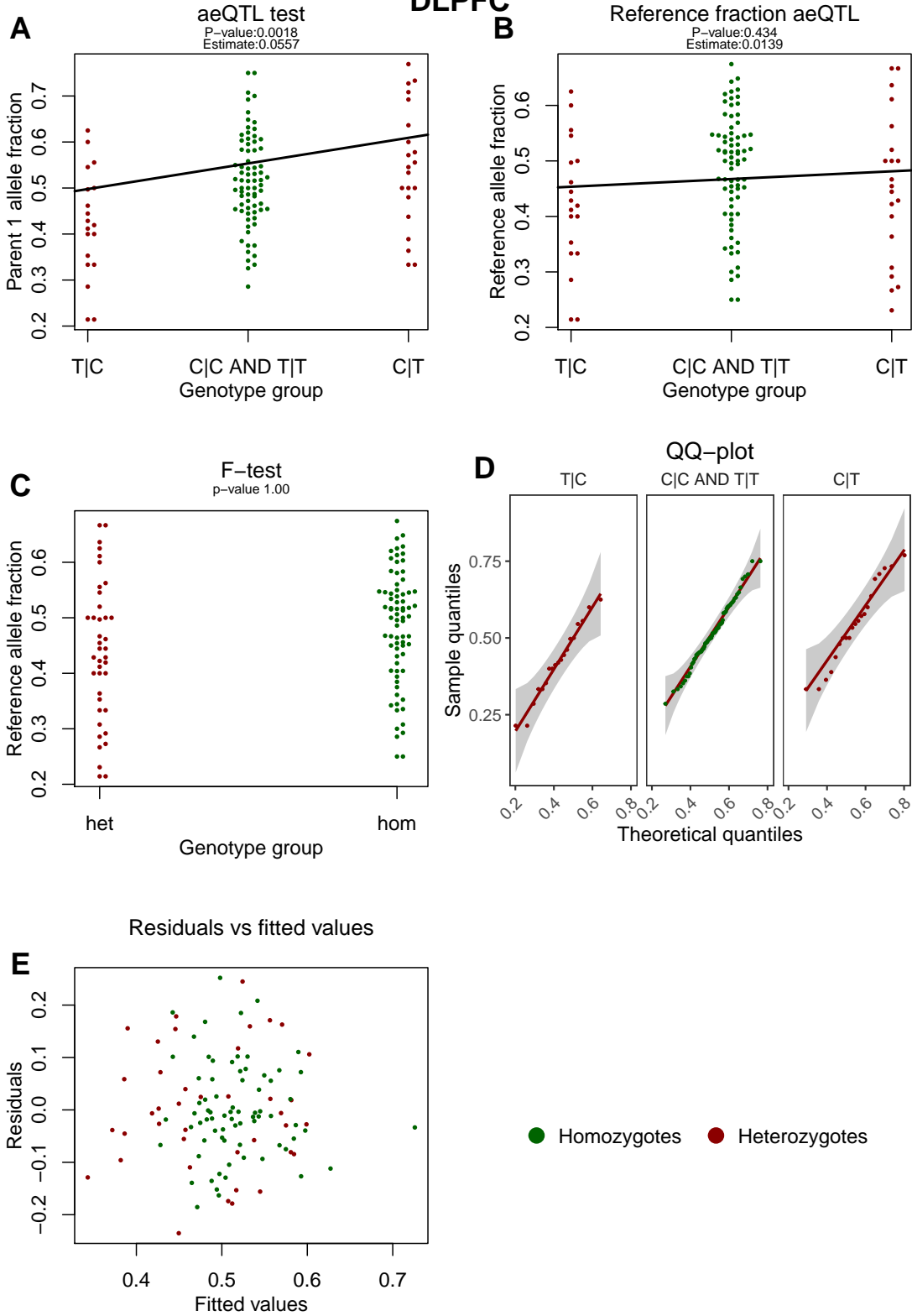


Figure S2–30: More details in the header of this document.

# AS3MT,BORCS7,BORCS7-ASMT – rs11191419

## Hippocampus

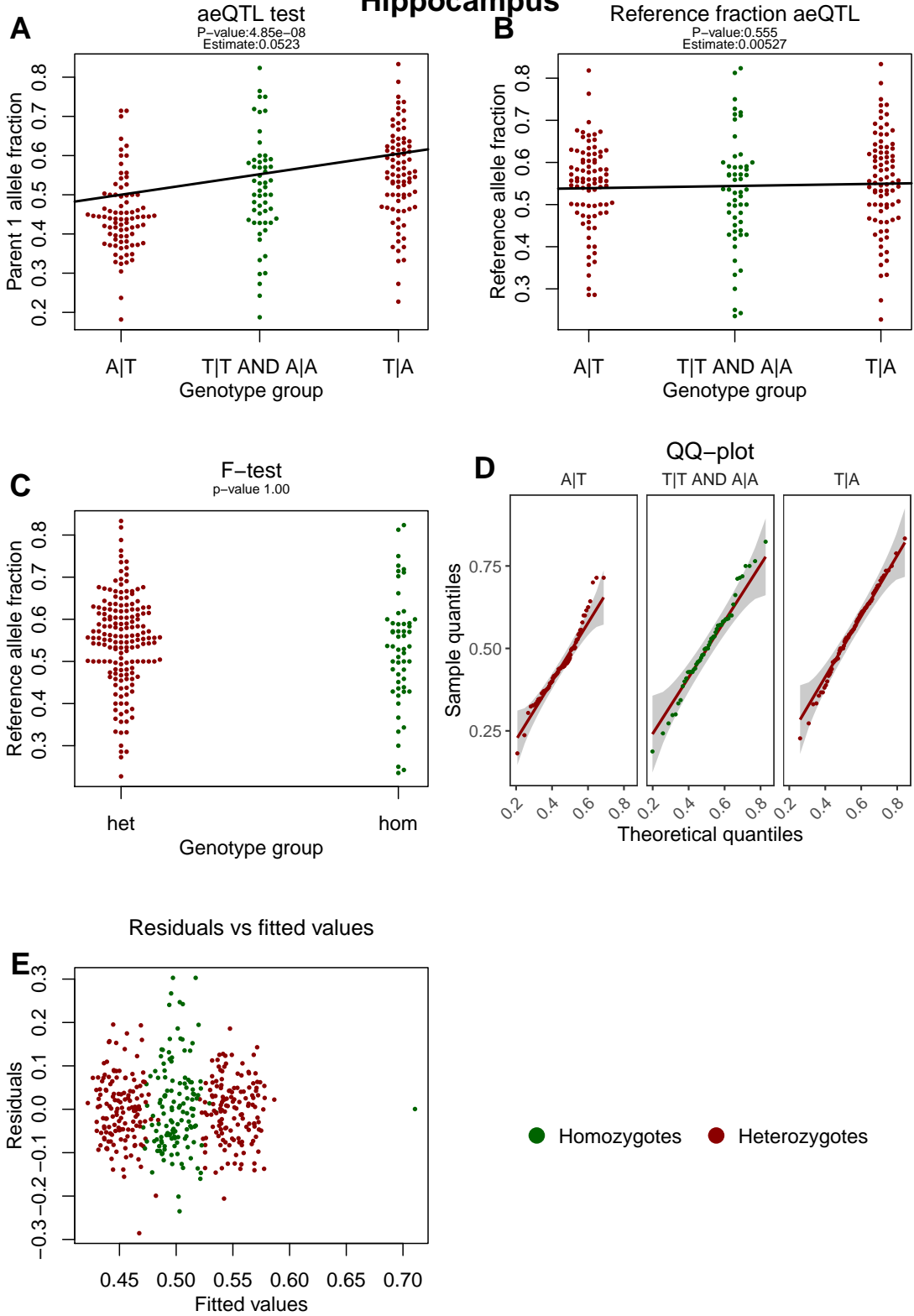


Figure S2-31: More details in the header of this document.



# ZMAT2 – chr5\_140143664\_I

## Hippocampus

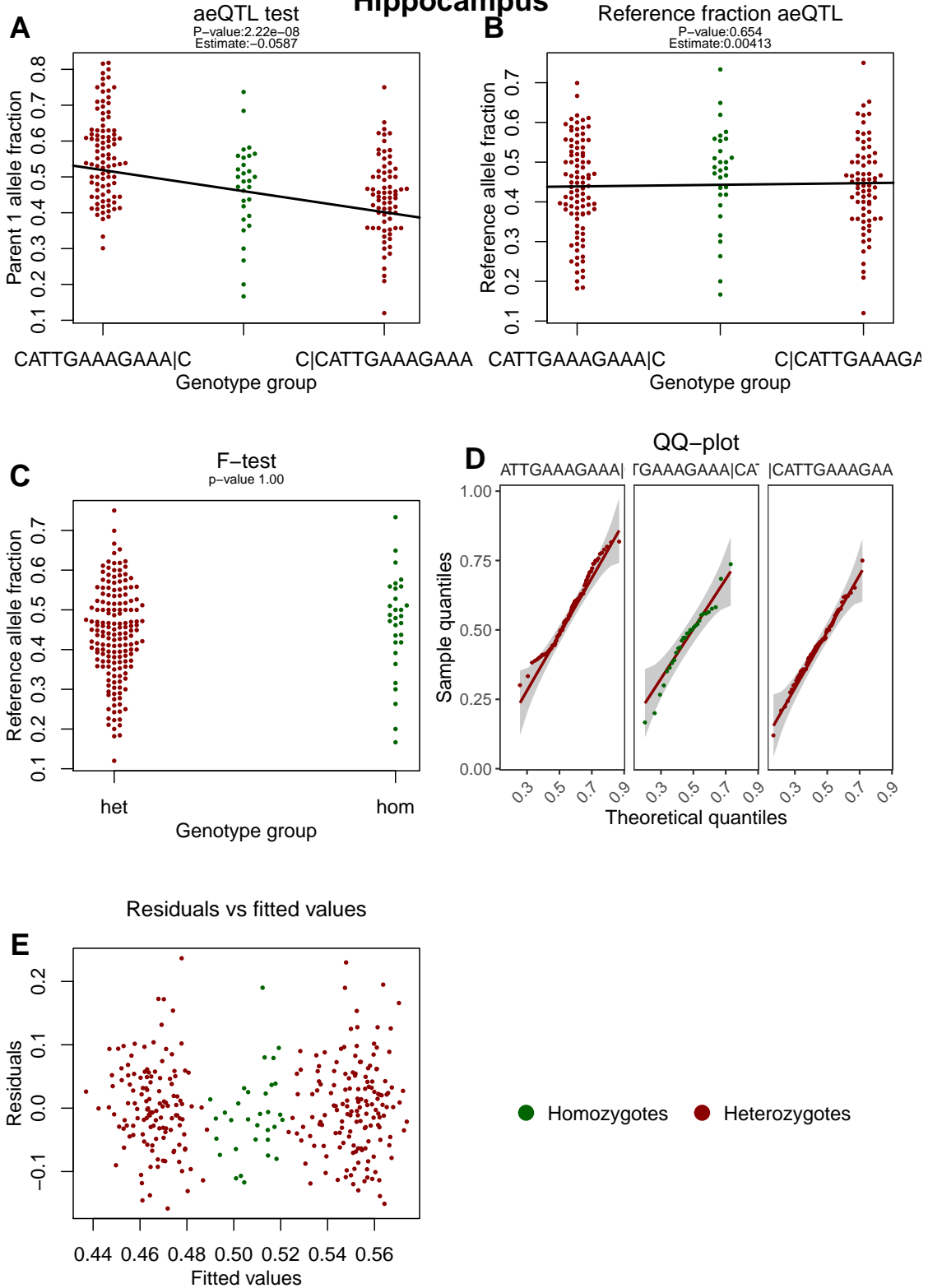


Figure S2-32: More details in the header of this document.

# SNX19 – rs10791097

## Hippocampus

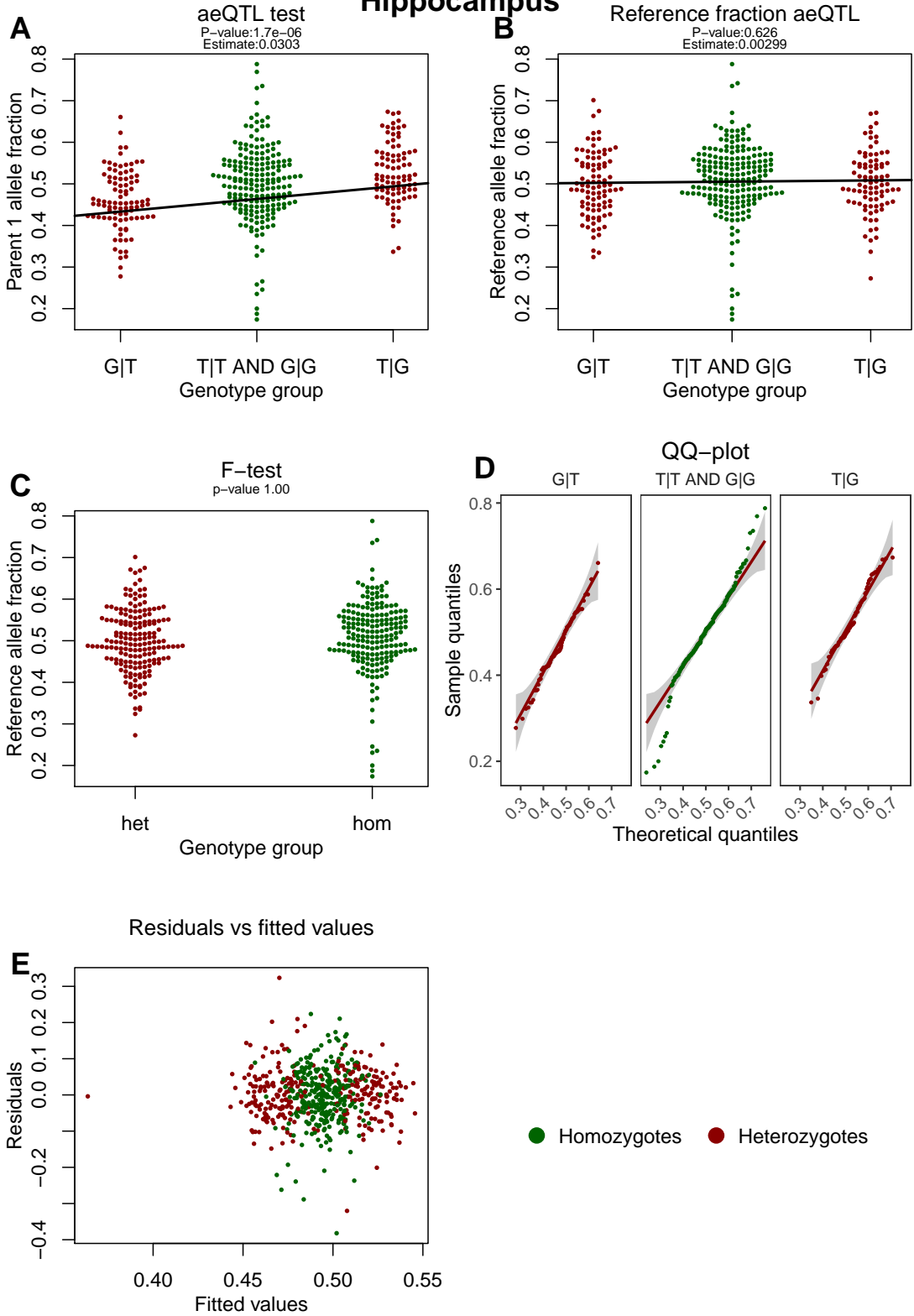


Figure S2-33: More details in the header of this document.

# HSPD1 – rs6434928

## Hippocampus

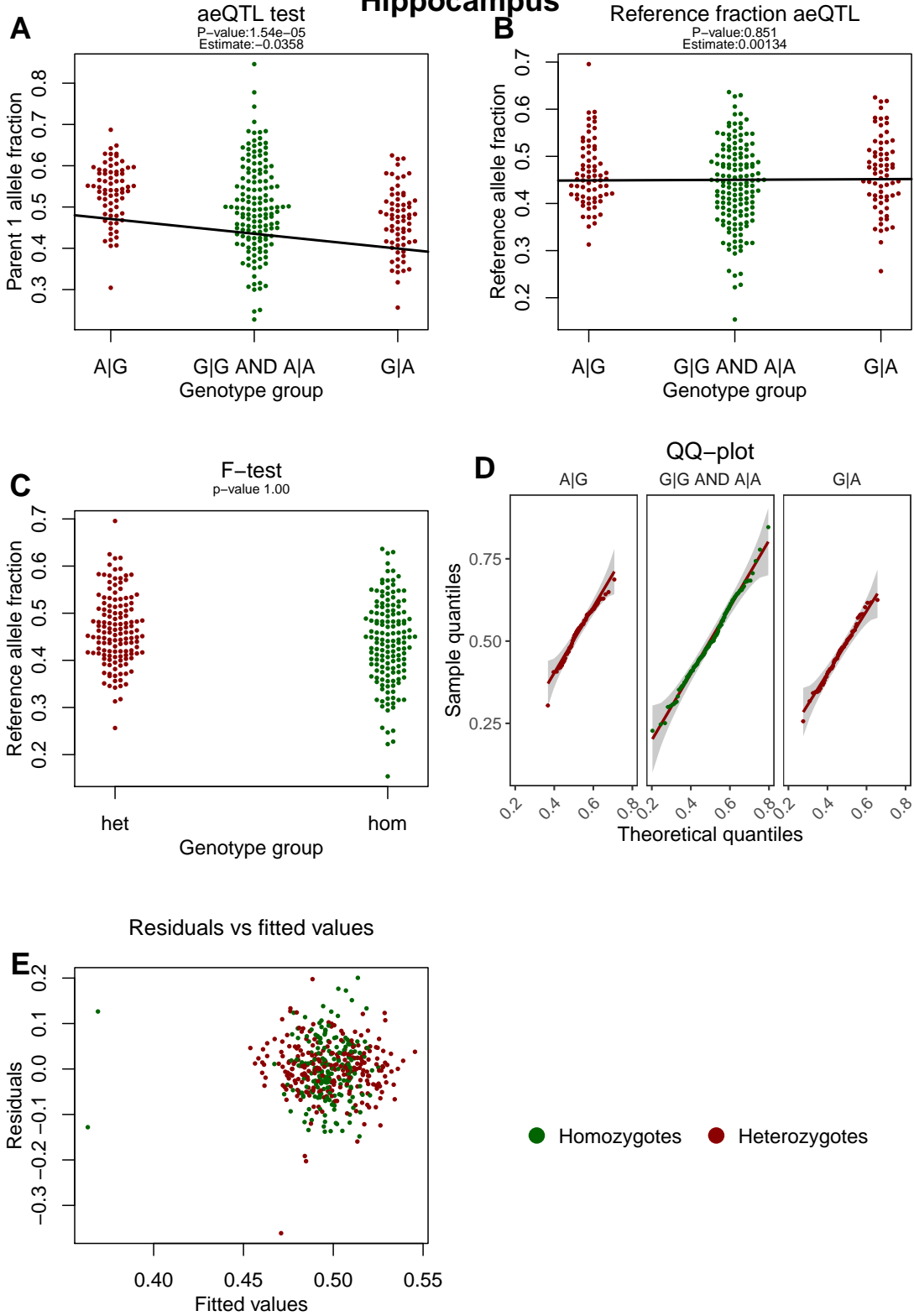


Figure S2-34: More details in the header of this document.