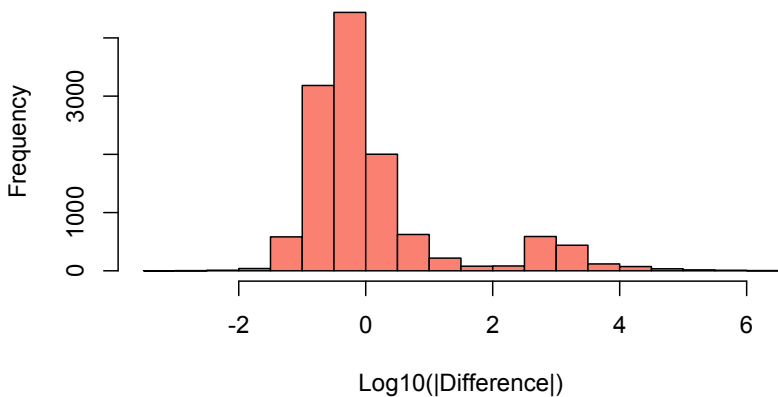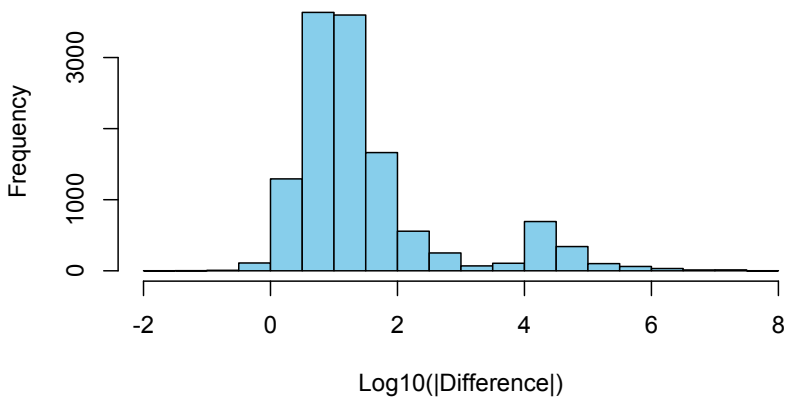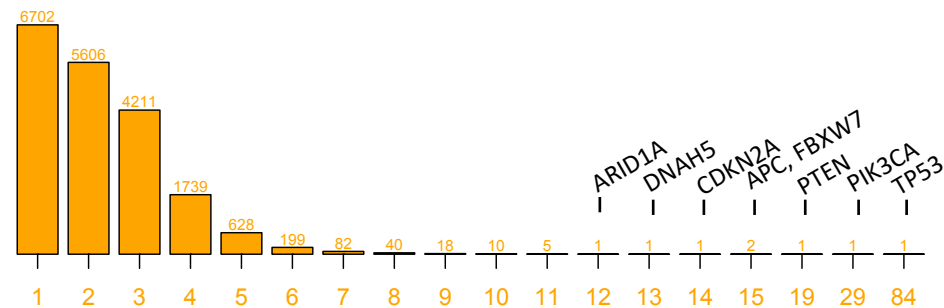**A** Differences in $\alpha$ parameter before and after fitting

**B** Differences in $\beta$ parameter before and after fitting

**C** Iterations needed to converge

ARID1A  DNAH5  CDKN2A  APC, FBXW7  PTEN  PIK3CA  TP53

6702  5606  4211  1739  628  199  82  40  18  10  5  1  1  1  2  1  1  1

1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  19  29  84

**D** Iterations needed to converge
(in fractions of maximum number of mutations)

OR1J2, SORCS1, TLL1,
CACNA1E, PCDHA1
PDZRN4, DNAH5
LILRA5

9  87  3784  4135  3313  4337  2525  789  203  33  25  5  2  1

0  0.1  0.2  0.3  0.4  0.5  0.6  0.7  0.8  0.9  1  1.1  1.2  1.4