

The effect of inbreeding on BMI and height

May 20, 2013

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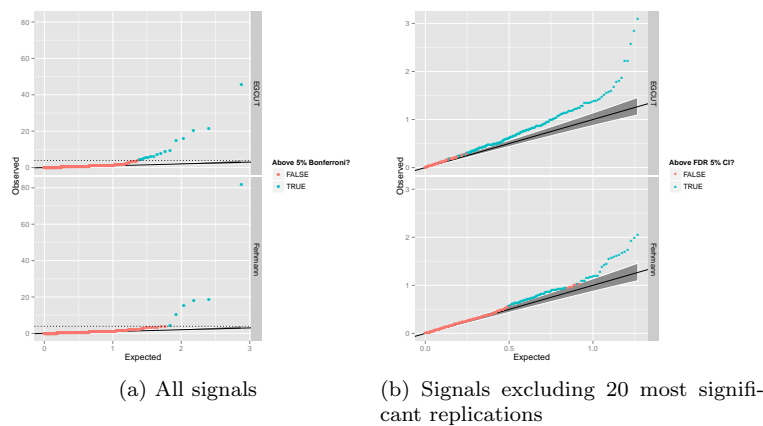


Figure 1: Q-Q plots of interaction p-values from replication dataset

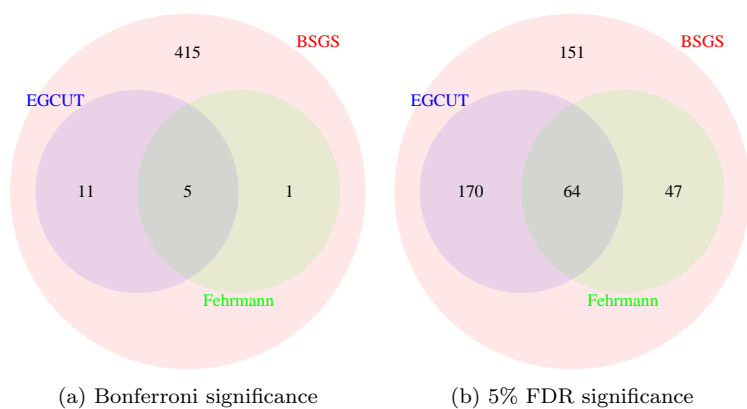


Figure 2: Overlap in signals between replication datasets

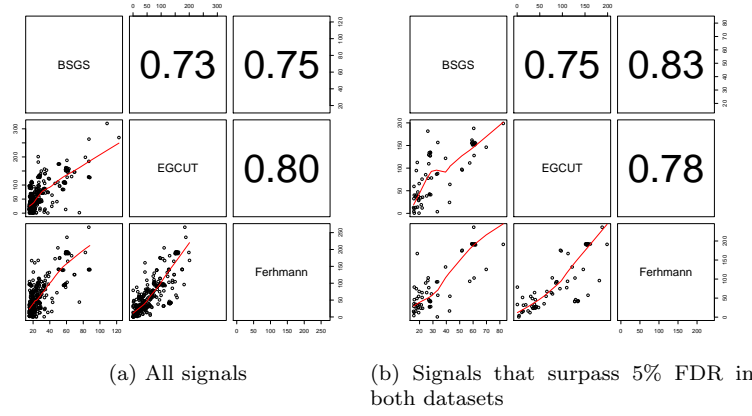


Figure 3: Full genetic effects correlate between datasets (8d.f. p-values)

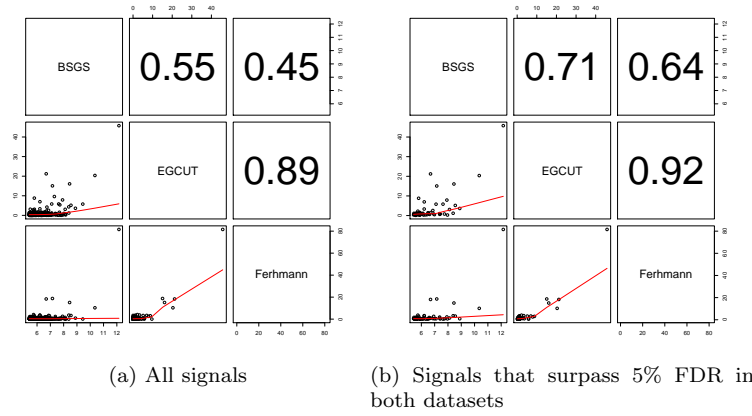


Figure 4: Full genetic effects correlate between datasets (8d.f. p-values)

| Probe gene | SNP1 | SNP2 | Replication | Type | Previous associations |
|------------------|-------------------|--------------------|--------------------|-----------|-----------------------|
| ADK (chr10) | rs2395095 (chr10) | rs10824092 (chr10) | Ferhmann* + EGCUT* | cis-cis | known-known |
| C8ORF59 (chr8) | rs7152284 (chr14) | rs2896452 (chr8) | Ferhmann | trans-cis | new-known |
| CEACAM21 (chr19) | rs4803481 (chr19) | rs2421050 (chr5) | Ferhmann | cis-trans | known-new |
| CTSC (chr11) | rs7930237 (chr11) | rs556895 (chr11) | Ferhmann* + EGCUT* | cis-cis | known-known |
| GPR177 (chr1) | rs12532999 (chr7) | rs12065581 (chr1) | Ferhmann | trans-cis | new-known |
| HMBX1 (chr8) | rs4765451 (chr12) | rs8180944 (chr8) | EGCUT | trans-cis | new-known |
| HMBX1 (chr8) | rs8180944 (chr8) | rs4553956 (chr3) | Ferhmann | cis-trans | known-new |
| MBNL1 (chr3) | rs218671 (chr17) | rs13069559 (chr3) | EGCUT* | trans-cis | new-known |
| MBNL1 (chr3) | rs2030926 (chr6) | rs13069559 (chr3) | EGCUT* | trans-cis | new-known |
| MBNL1 (chr3) | rs11981513 (chr7) | rs13069559 (chr3) | EGCUT* | trans-cis | new-known |
| MBNL1 (chr3) | rs4392535 (chr4) | rs13069559 (chr3) | EGCUT* | trans-cis | new-known |
| MBNL1 (chr3) | rs4735830 (chr8) | rs13069559 (chr3) | EGCUT* | trans-cis | new-known |
| MBNL1 (chr3) | rs7710738 (chr5) | rs13069559 (chr3) | EGCUT* | trans-cis | new-known |
| MBNL1 (chr3) | rs2614467 (chr14) | rs13069559 (chr3) | Ferhmann + EGCUT* | trans-cis | new-known |
| MBNL1 (chr3) | rs16864367 (chr3) | rs13069559 (chr3) | Ferhmann* | trans-cis | new-known |
| NAPRT1 (chr8) | rs2123758 (chr8) | rs3889129 (chr8) | Ferhmann* + EGCUT* | cis-cis | known-known |
| NAPSB (chr19) | rs1405655 (chr19) | rs7577137 (chr2) | Ferhmann | cis-cis | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs471728 (chr11) | EGCUT | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs7213338 (chr17) | EGCUT | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs2351458 (chr4) | EGCUT* | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs9509428 (chr13) | EGCUT* | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs10937361 (chr3) | Ferhmann | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs17719594 (chr14) | Ferhmann | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs1401098 (chr12) | Ferhmann | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs1843357 (chr8) | Ferhmann + EGCUT | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs6718480 (chr2) | Ferhmann + EGCUT* | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs6926382 (chr6) | Ferhmann + EGCUT* | cis-trans | known-new |
| TMEM149 (chr19) | rs8106959 (chr19) | rs914940 (chr1) | Ferhmann + EGCUT* | cis-trans | known-new |
| TMEM149 (chr19) | rs807491 (chr19) | rs7254601 (chr19) | Ferhmann* + EGCUT* | cis-cis | known-known |
| XAF1 (chr17) | rs1533031 (chr17) | rs12591171 (chr15) | Ferhmann | cis-trans | known-new |

Table 1: The 20 most significant interaction terms from both replication sets. * denotes Bonferroni level significance in the named data set.