Association studies on the PGX data: update since last meeting

Micha Hersch, DGM, UNIL

December 2009

Summary

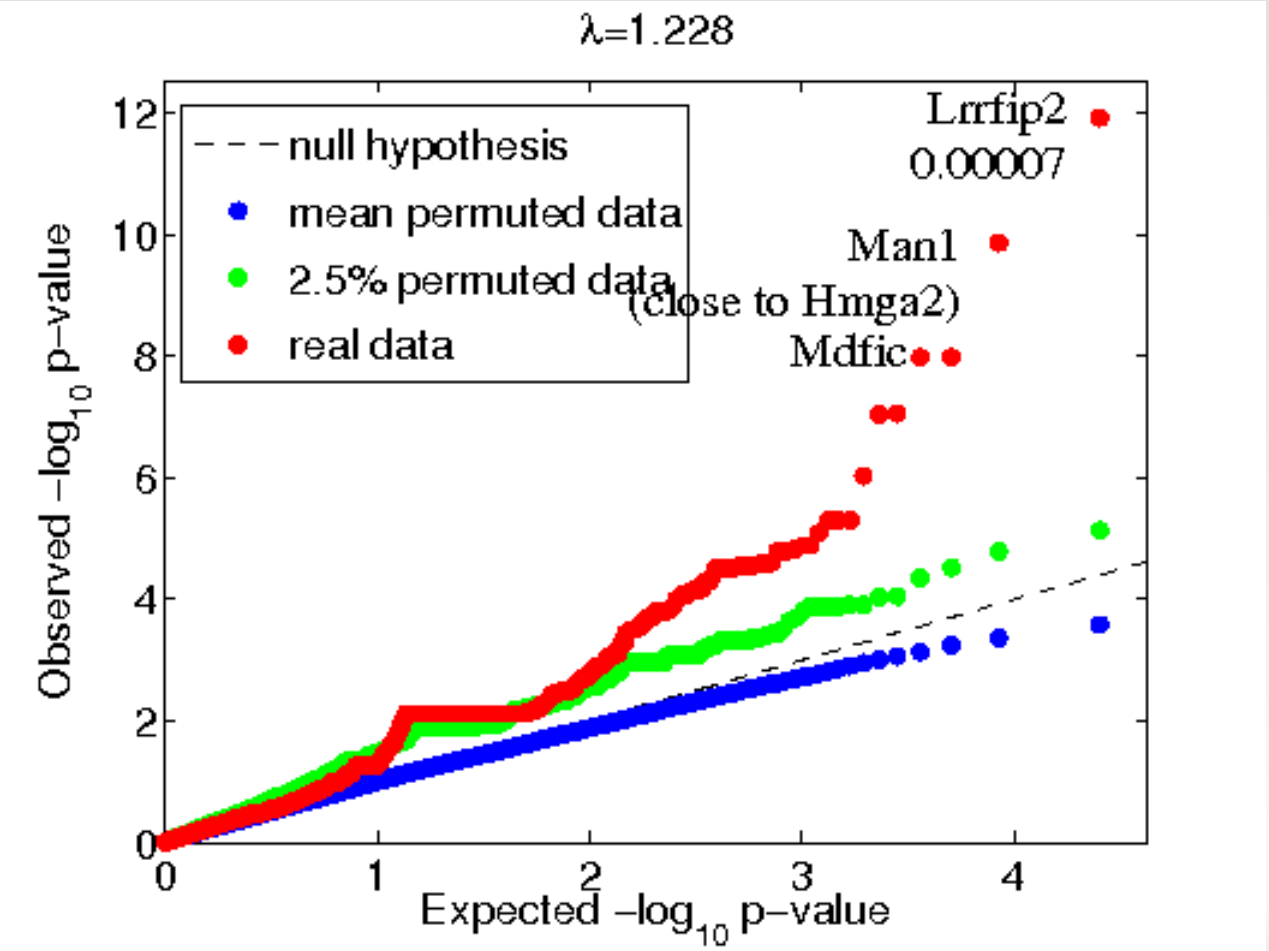
The SNP database was updated, yielding different hits (previously found region Hmga2 is conserved but hit is on a neighbouring gene)

Processing was updated for more reliable results

Expression data was integrated to check whether polymorphisms could be correlated with gene expression levels. Expression values available for 8 mice of two strains.

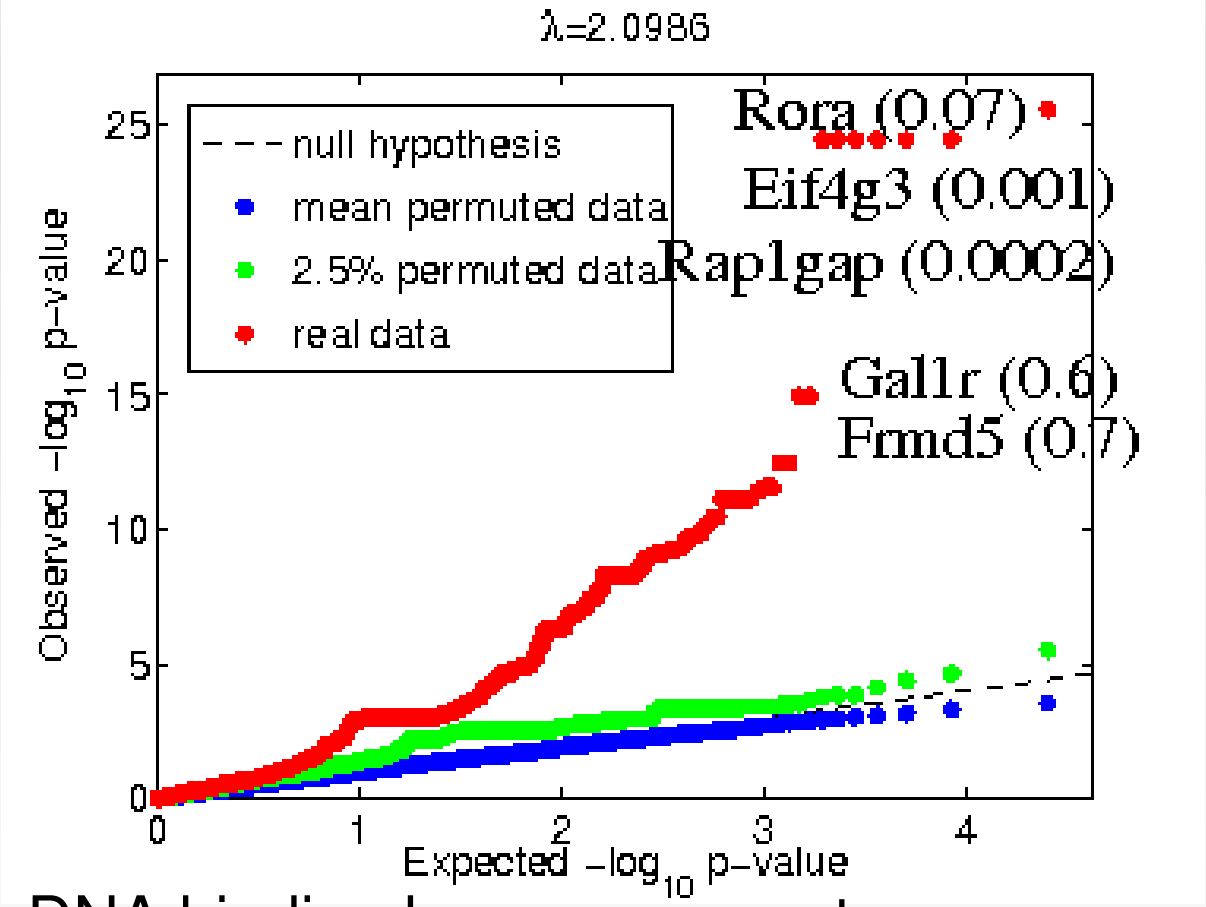
Results (1/4)

ECG phenotypes, iso conditions



Results (2/4)

ECG phenotypes iso treatment effects



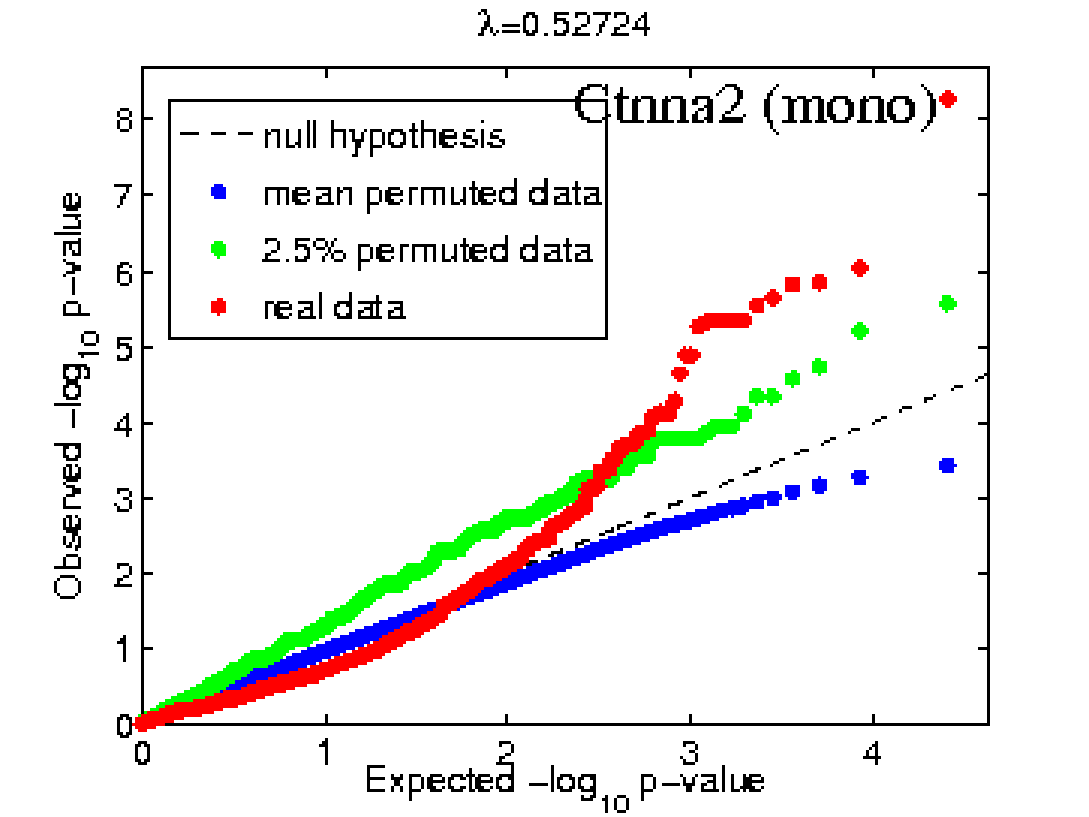
Rora: DNA binding hormone receptor

Eif4g3: stress granules, translation regulator

Gal1r: galanin receptor – galanin modulates cholinergic neurotransmission in the heart, involved in the stress response

Results (3/4)

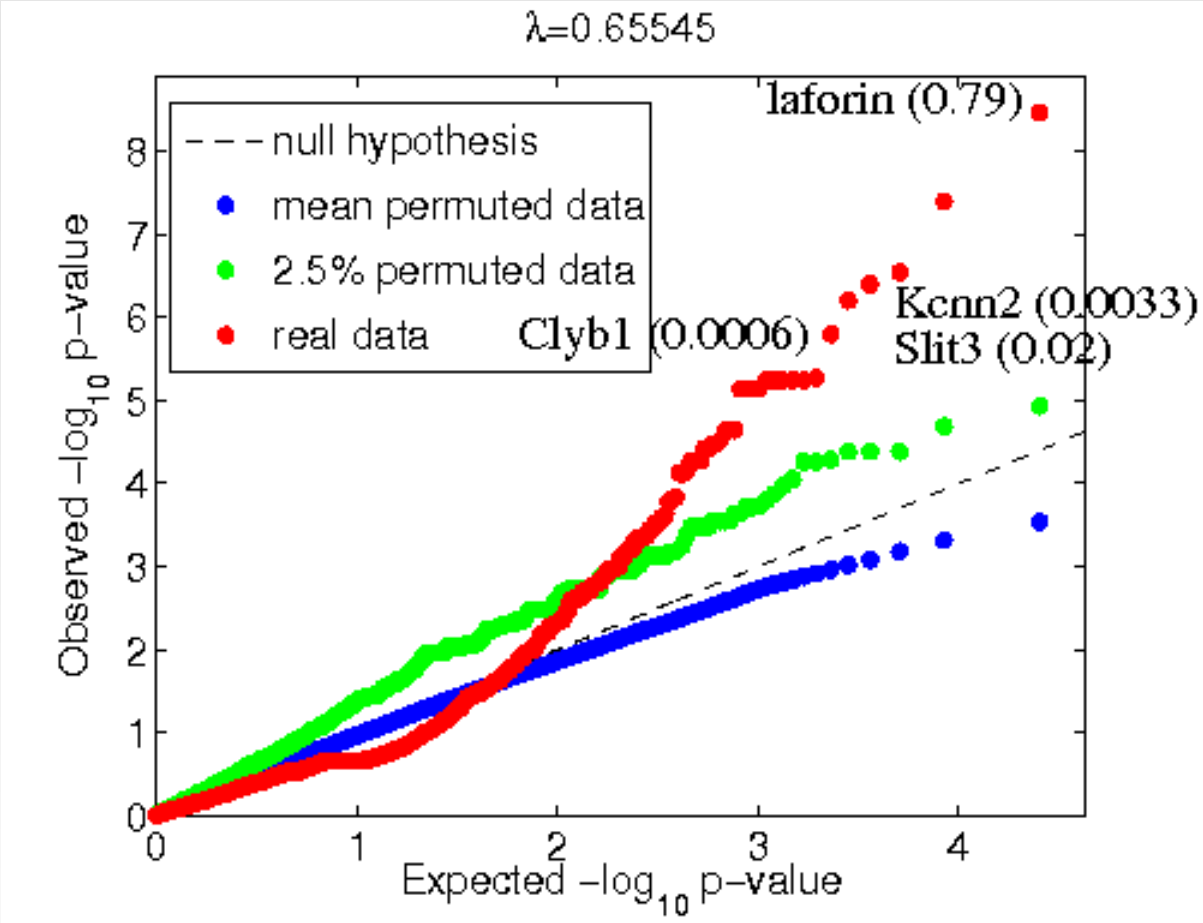
ECG phenotypes, ate treatment effects,



Ctnna2:

Results (4/4

No ECG phenotypes, ate treatment effects



Kcnn2: functional in the atrioventricular node

Summary of results

We have some hits, some of them make sense, and some are related to differentially expressed genes...

Possible future work

- Measure expression levels for more strains to confirm the results
- Pin down salient phenotypes
- Focus on a restricted set of genes for further (biological) investigation
- Questions for the biologists:
  - Do you trust those results?
  - How do you see the follow up?
  - What further experiments would you like/agree to do, based on those results?