Expression quantitative trait loci (eQTL)

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ACTGACCTAG<mark>ATCAGTG</mark>TAGCGATCGTATACGAGACCGATTCATCGGCAT

transcription

AUCAGU<mark>CGAUC</mark>ACCGAU

translation

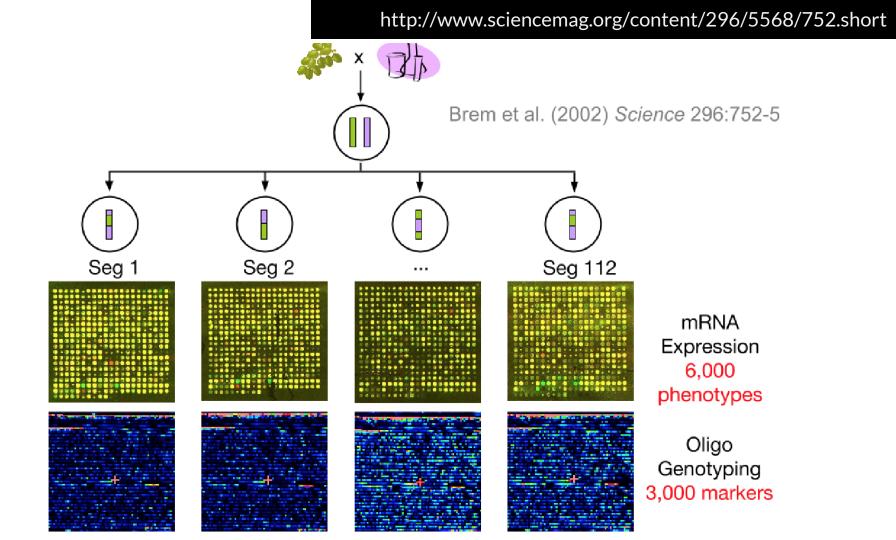
protein

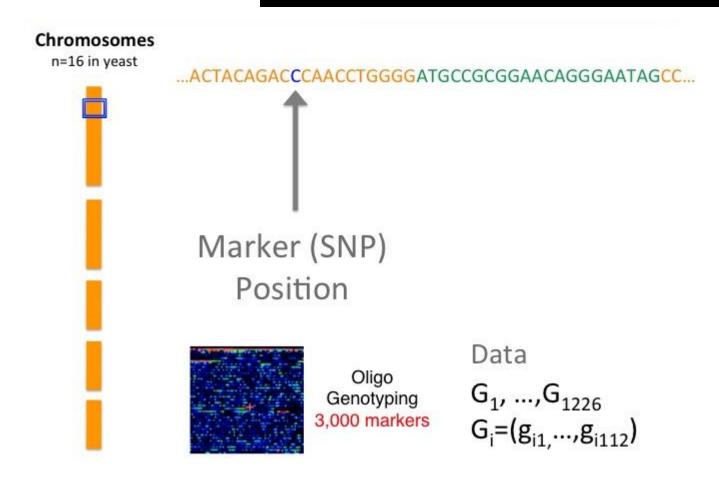
DNA

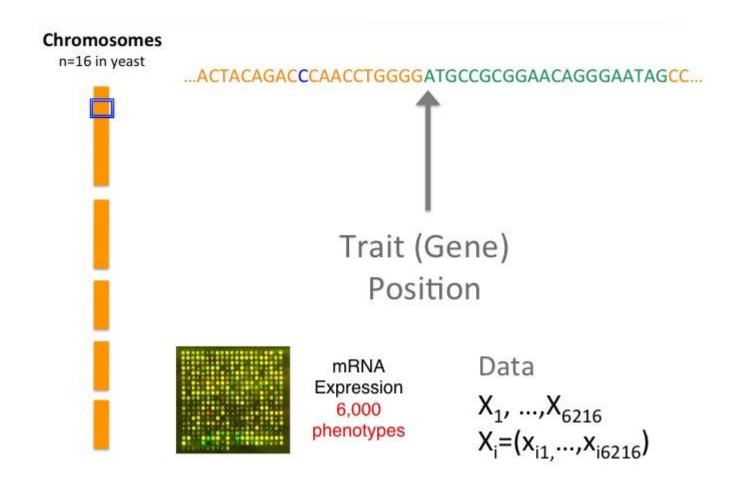
RNA



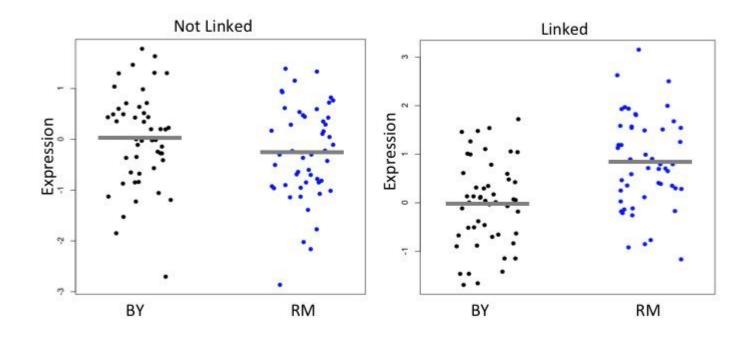
Study design

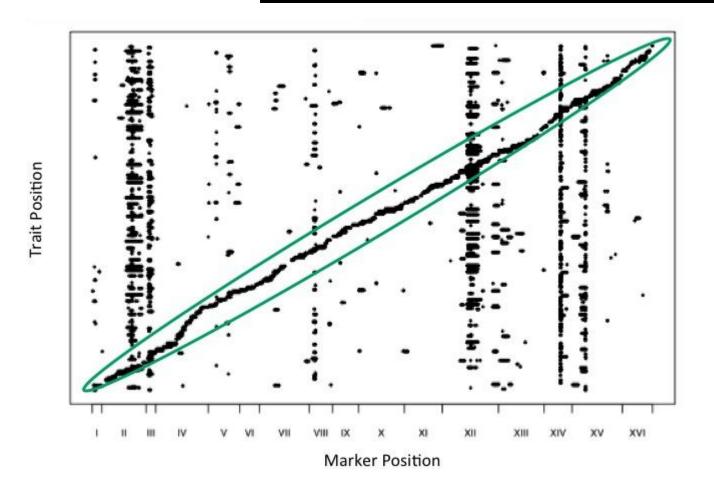




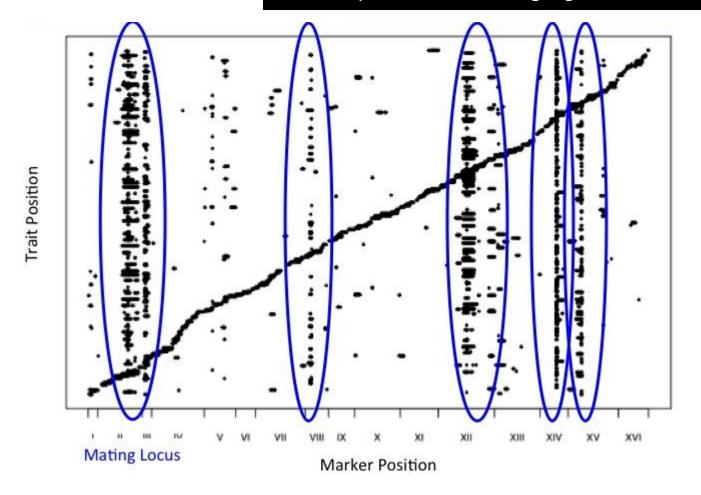


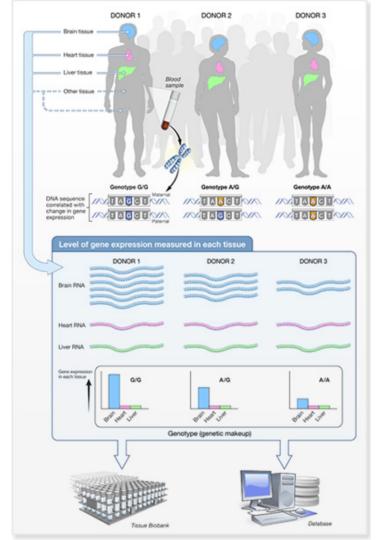
Statistical model



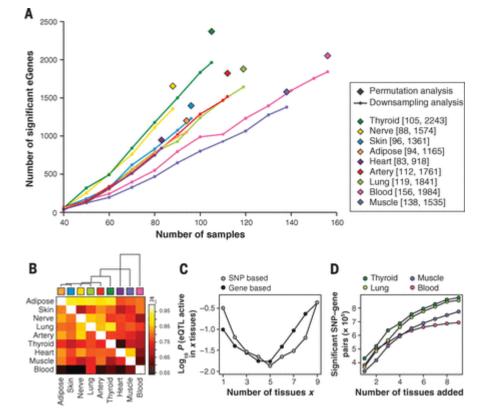


http://www.sciencemag.org/content/296/5568/752.short





http://www.sciencemag.org/content/348/6235/648



Notes and further reading

- cis-eQTL are usually more believable than trans-eQTL
- There are many potential confounders
 - Population stratification, batch effects, sequence artifacts
- An excellent review
 - http://www.nature.com/nrg/journal/v16/n4/abs/nrg3891.html