# Detecting causal relationships between traits
## Joseph Marcus & Matthew Stephens



*Pickrell et al. 2016*

# Applications
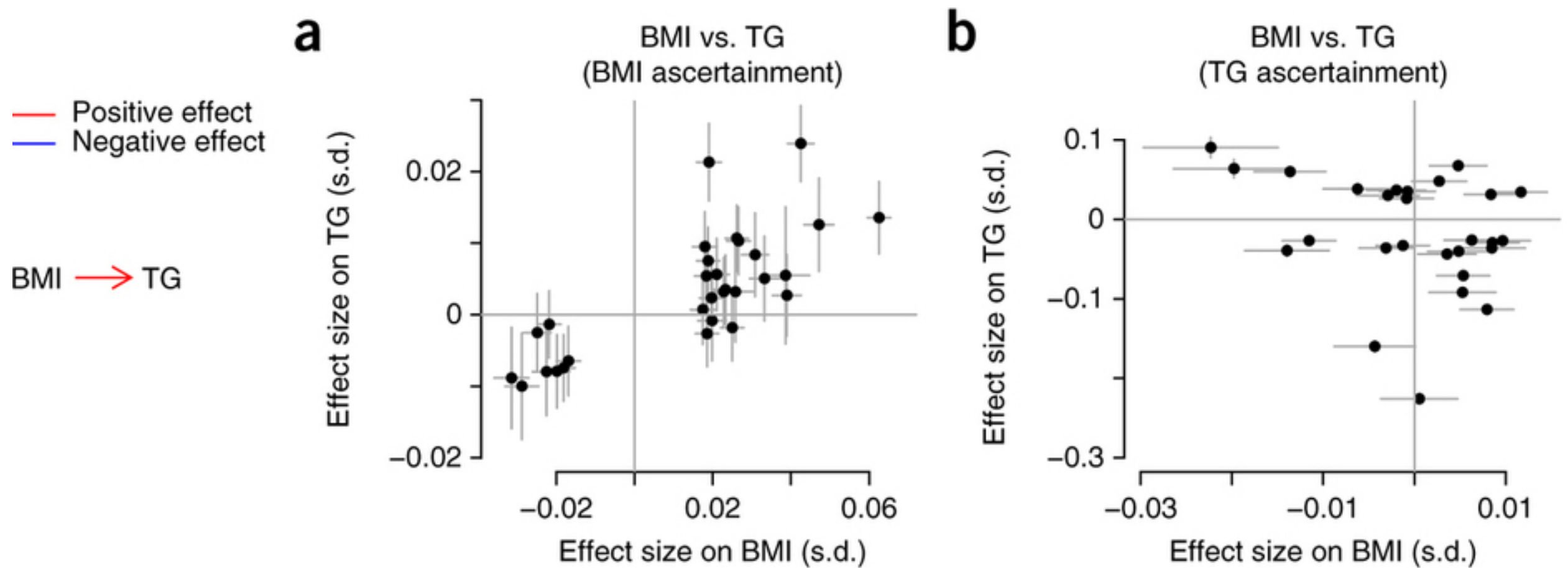
| Trait 1 ⇄ ? ⇄ Trait 2 | | Example |
|---|---|---|
| Quantitative trait (QTL) | Quantitative trait (QTL) | LDL / CAD |
| Gene expression (eQTL) | Quantitative trait (QTL) | YFG / SCZ |
| Molecular phenotype (meQTL) | Molecular phenotype (eQTL) | Central dogma |