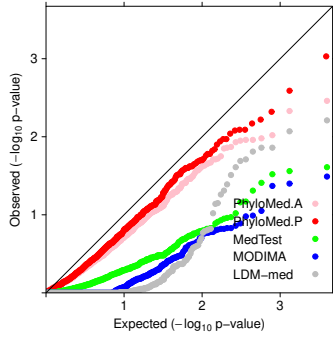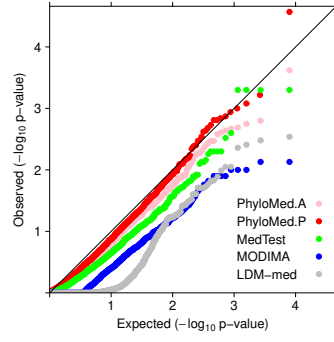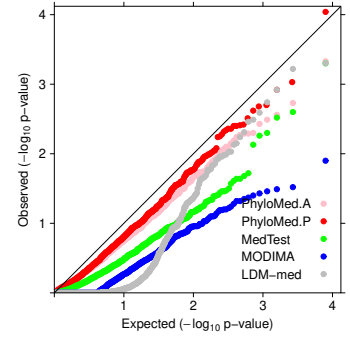$n = 50, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (0, 0)$

$n = 50, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (3 \text{ or } 6, 0)$

$n = 50, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (0, 3 \text{ or } 6)$

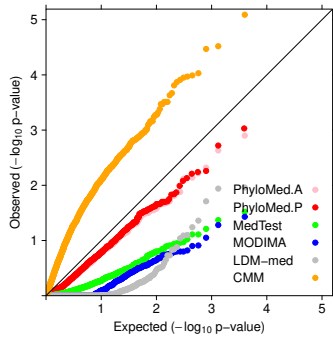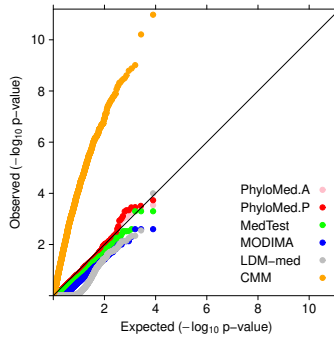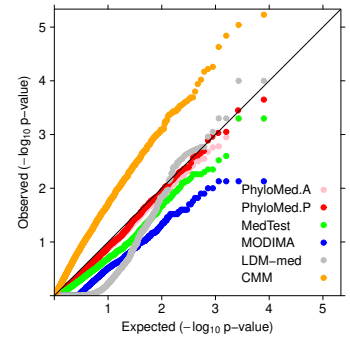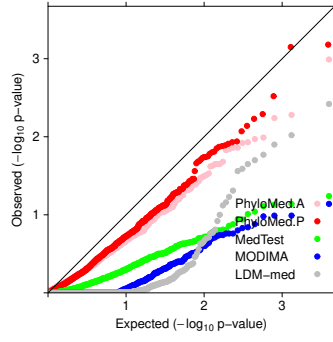$n = 200, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (0, 0)$

$n = 200, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (3 \text{ or } 6, 0)$
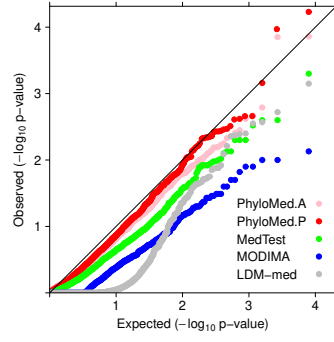
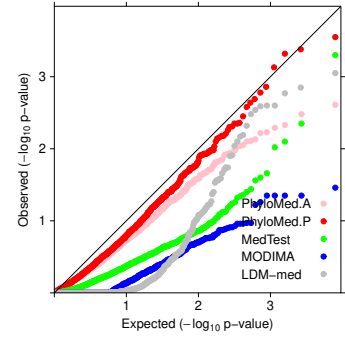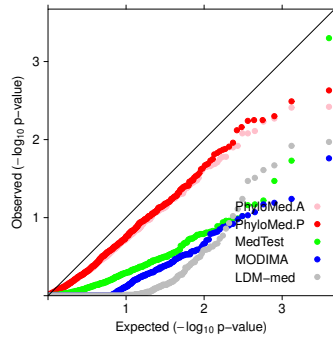$n = 200, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (0, 3 \text{ or } 6)$

PhyloMed.A
PhyloMed.P
MedTest
MODIMA
LDM−med
CMM

Observed ($-\log_{10}$ p−value)

Expected ($-\log_{10}$ p−value)

n = 50, (|$\mathcal{S}_\alpha$|, |$\mathcal{S}_\beta$|) = (0, 0)

n = 50, (|$\mathcal{S}_\alpha$|, |$\mathcal{S}_\beta$|) = (3 or 6, 0)

n = 50, (|$\mathcal{S}_\alpha$|, |$\mathcal{S}_\beta$|) = (0, 3 or 6)

n = 200, (|$\mathcal{S}_\alpha$|, |$\mathcal{S}_\beta$|) = (0, 0)

n = 200, (|$\mathcal{S}_\alpha$|, |$\mathcal{S}_\beta$|) = (3 or 6, 0)

n = 200, (|$\mathcal{S}_\alpha$|, |$\mathcal{S}_\beta$|) = (0, 3 or 6)

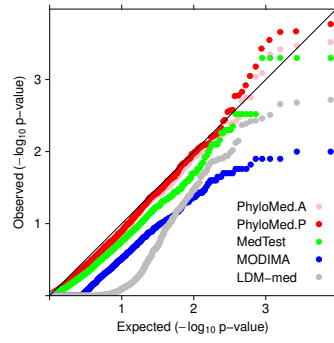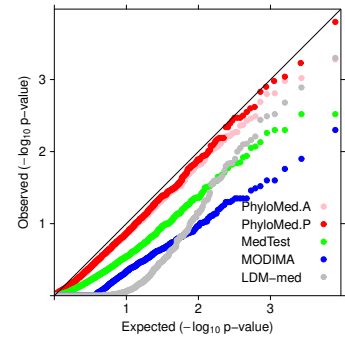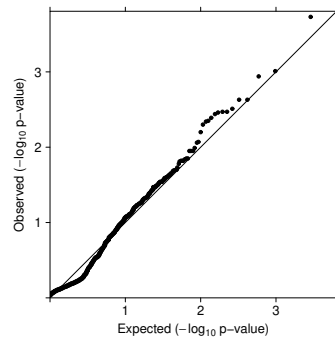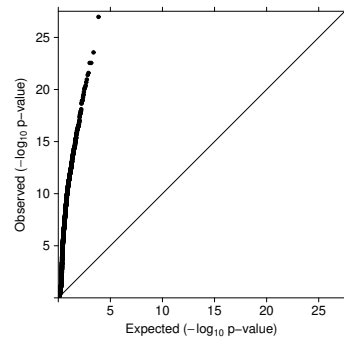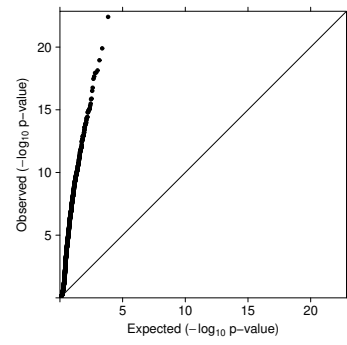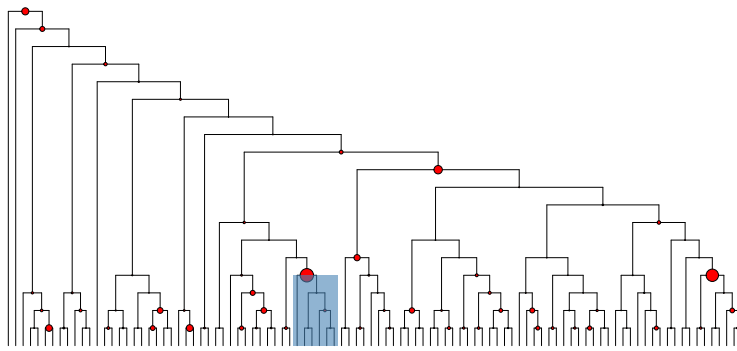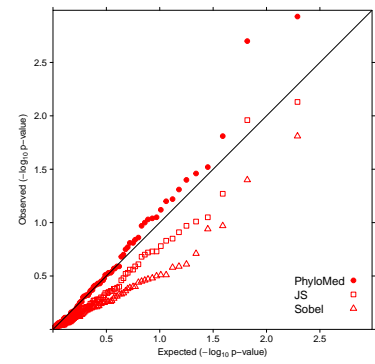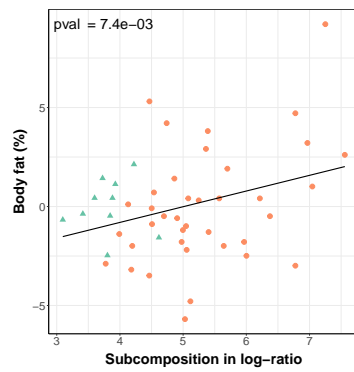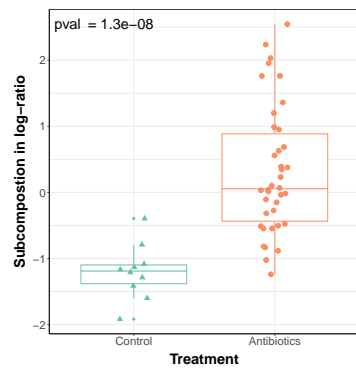$n = 200, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (0, 0)$ $n = 200, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (3 \text{ or } 6, 0)$ $n = 200, (|\mathcal{S}_\alpha|, |\mathcal{S}_\beta|) = (0, 3 \text{ or } 6)$

a

b

c

pval = 1.3e−08

pval = 7.4e−03

d

0.013

0.0088

0.0093

0.017

0.011