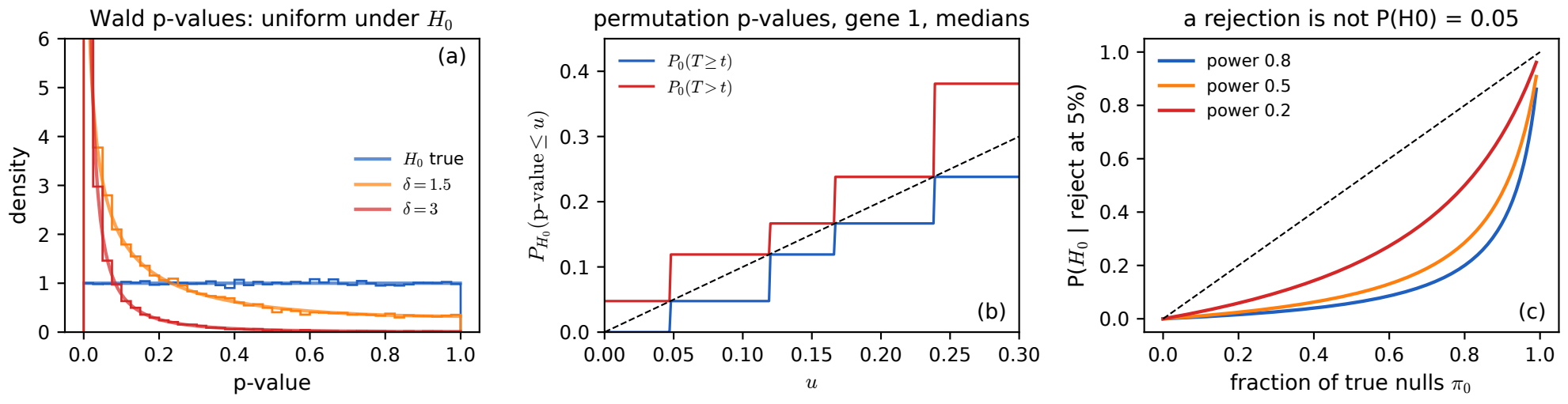

Wald p-values: uniform under H_0
(a)
density
p-value
H_0 true
$\delta = 1.5$
$\delta = 3$
permutation p-values, gene 1, medians
$P_0(T \geq t)$
$P_0(T > t)$
$P_{H_0}(\text{p-value} \leq u)$
u
(b)
a rejection is not P(H0) = 0.05
power 0.8
power 0.5
power 0.2
P(H_0 | reject at 5%)
fraction of true nulls π_0
(c)