A) Group connection test methods

Group neurons

Estimate group connection probabilities

$\hat{B}^{(L)}$

$\hat{B}^{(R)}$

Compare probabilities, compute p-values

$\hat{B}_{ij}^{(L)}$? $\hat{B}_{ij}^{(R)}$

p_{11} p_{12} p_{32} p_{33}

$H_0: B_{ij}^{(L)} = B_{ij}^{(R)}$
$H_A: B_{ij}^{(L)} \neq B_{ij}^{(R)}$

Combine p-values for overall test

p-values

p_{12}

$H_0: B^{(L)} = B^{(R)}$
$H_A: B^{(L)} \neq B^{(R)}$

B) Group connection probabilities

Estimated edge probability

0 - No edges observed

$\hat{B}$ left

$\hat{B}$ right

C) Connection p-values

log_{10} corrected p-value

α

Test not run, no edges on:
L - left
R - right
B - both
X - significant
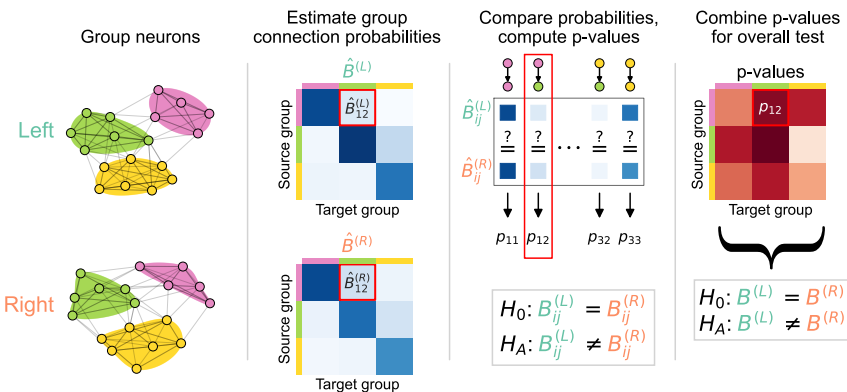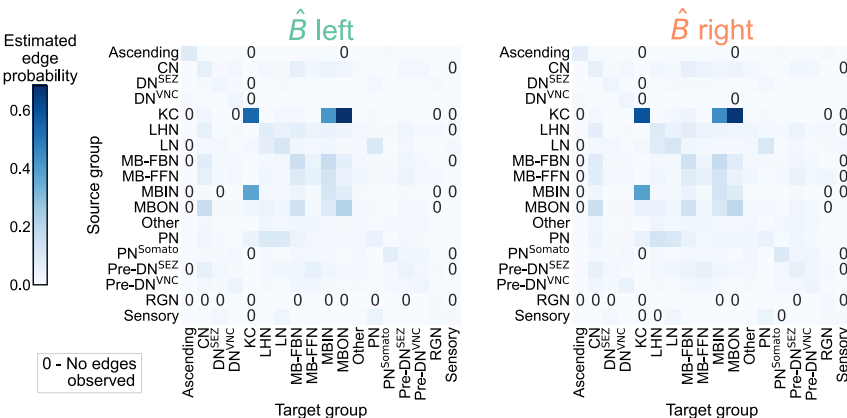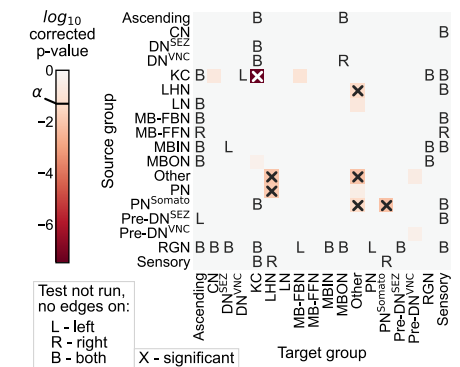
D) Probabilities for significant connections

Hemisphere
Right
Left