



$$H_{ij} \sim \text{Binomial}(\theta_{ij}^H, s)$$

$$Fa_{ij} \sim \text{Binomial}(\theta_{ij}^F, s)$$

$$\theta_{ij}^H \leftarrow \phi(\frac{1}{2}D_{ij} - C_{ij})$$

$$\theta_{ij}^F \leftarrow \phi(-\frac{1}{2}D_{ij} - C_{ij})$$

$$D_{ij} \sim \text{Gaussian}(0, 1)$$

$$C_{ij} \sim \text{Gaussian}(0, 1)$$

$$\tau_i^H \leftarrow \theta_{i1}^H - \theta_{i2}^H$$

$$\tau_i^F \leftarrow \theta_{i1}^F - \theta_{i2}^F$$