

Model 2 - Multiple proteins, two groups (one σ for all proteins)

$$y_{ij} \sim N(\mu_{ij}, \tau)$$

$$\mu_{ij} = b_i X_{ij}$$

$$\tau = 1/\sigma^2$$

$$\sigma \sim \text{Unif}(0, 10)$$

$$b_i \sim N(0, 1e^{-12})$$