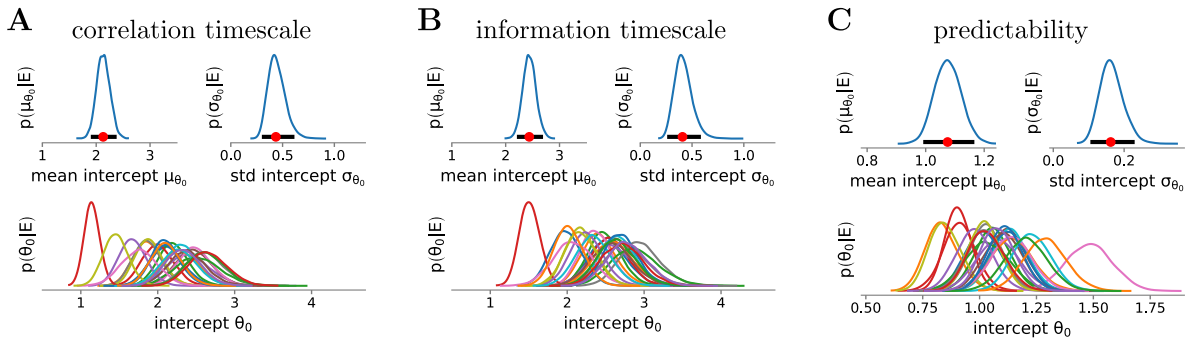
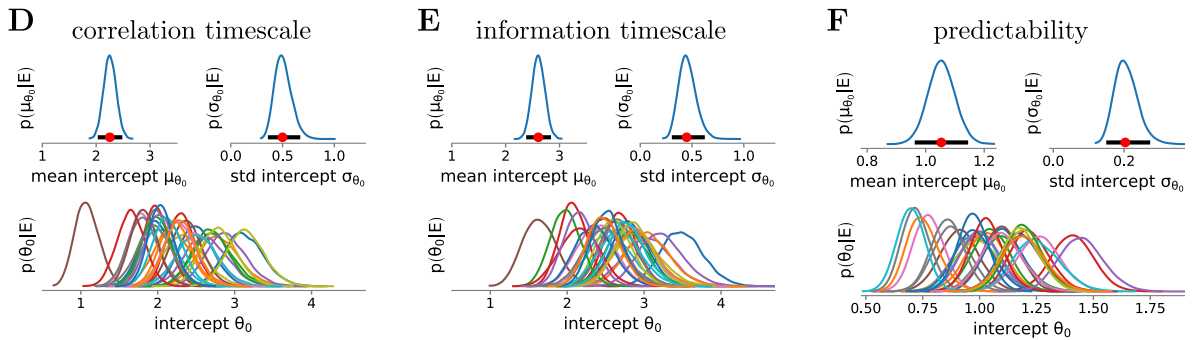


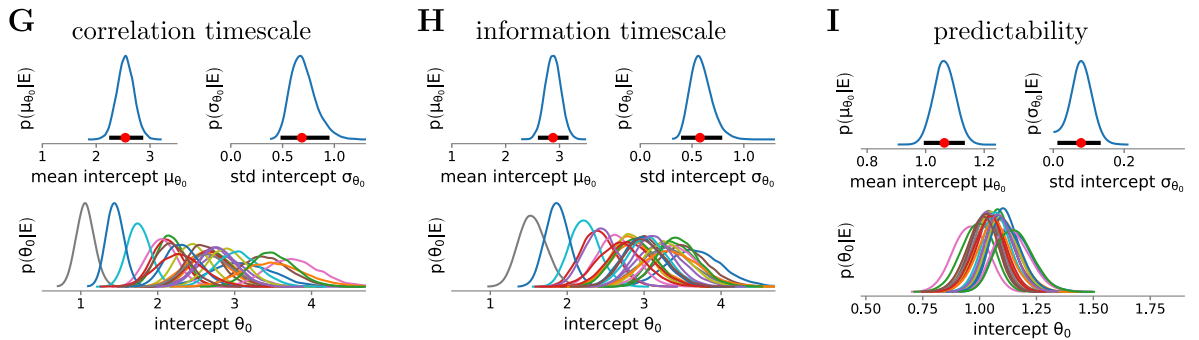
## Functional Connectivity (natural movie)



## Brain Observatory 1.1 (natural movie)



## Functional Connectivity (spontaneous)



**Figure S14. Posterior distributions of intercepts in the cortical hierarchy model.** Overall, posteriors over intercepts of the cortical hierarchy model reveal a high diversity among mice, whereas slopes are more similar between different mice (Supplementary Fig. S13). **(A)** (Top) Posterior distributions of the mean  $\mu_{\theta_0}$  and standard deviation  $\sigma_{\theta_0}$  of the model intercept  $\theta_0$  for the correlation timescale. (Bottom) Posterior distributions of  $\theta_0$  for individual mice (colors indicate different mice). **(B,C)** Same as A, but for information timescale and predictability. **(D-F)** Same as A-C, but for the *Brain Observatory* data set. **(G-I)** Same as A-C, but for spontaneous activity in the Functional Connectivity data set. **(I)** For predictability, intercepts are much more similar between mice, because the slope is much closer to 0 (Supplementary Fig. S13), and thus may partially account for differences in median predictability between mice. For all panels red dots and black bars indicate the median and 95 % highest-density-interval of the posterior distribution.