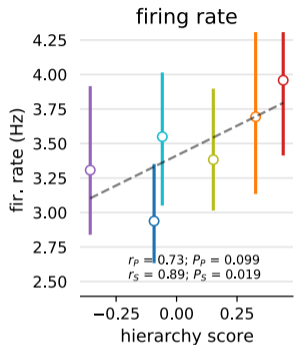
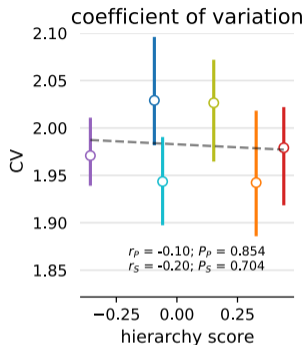


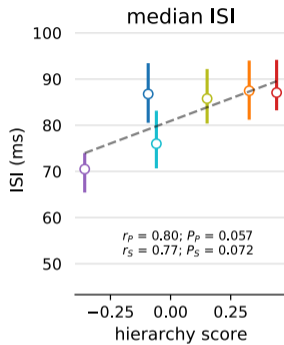
A



B



C



**Figure S4. Correlation between single neuron firing statistics and hierarchy score for natural movie stimulation in the *Functional Connectivity* data set.** Firing rate and median interspike-interval (ISI) of sorted units tend to increase with hierarchy score, but have lower Pearson correlation coefficients  $r_P$  (with higher p-values  $P_P$ ), as well as Spearman correlation coefficients  $r_S$ , compared to timescales or predictability on the same data set in Fig. 2. The coefficient of variation (CV), in contrast, is not correlated with the hierarchy score.