



Additional file 8: **Figure S7.** Nuclear descriptors entail unique information. AraC treatment (yellow) had a major negative impact on nuclear descriptors during the whole time range, while other descriptors showed only transient effects (*e.g.*, dendrite density) or negative effects on later time points (*e.g.*, correlation of the calcium bursts) (Morph.:  $n_{\text{bio}} = 3 \times n_{\text{tech}} = 6$  - Func.:  $n_{\text{bio}} = 3 \times n_{\text{tech}} = 6$ ). Significant differences between control and treated cultures are indicated ( $p < 0.05$ , pairwise Wilcoxon test with Bonferroni correction).