



Additional file 7: **Figure S6.** Functional descriptors entail unique information about neuronal connectivity. MK801 treatment (yellow) impaired the functional activity significantly at 18 DIV, that was not reflected in the morphological data (Morph.:  $n_{\text{bio}} = 3 \times n_{\text{tech}} = 5$  - 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).