

Whole-Brain opto-fMRI Map of Mouse VTA Dopaminergic Activation Reflects Structural Projections with Small but Significant Deviations

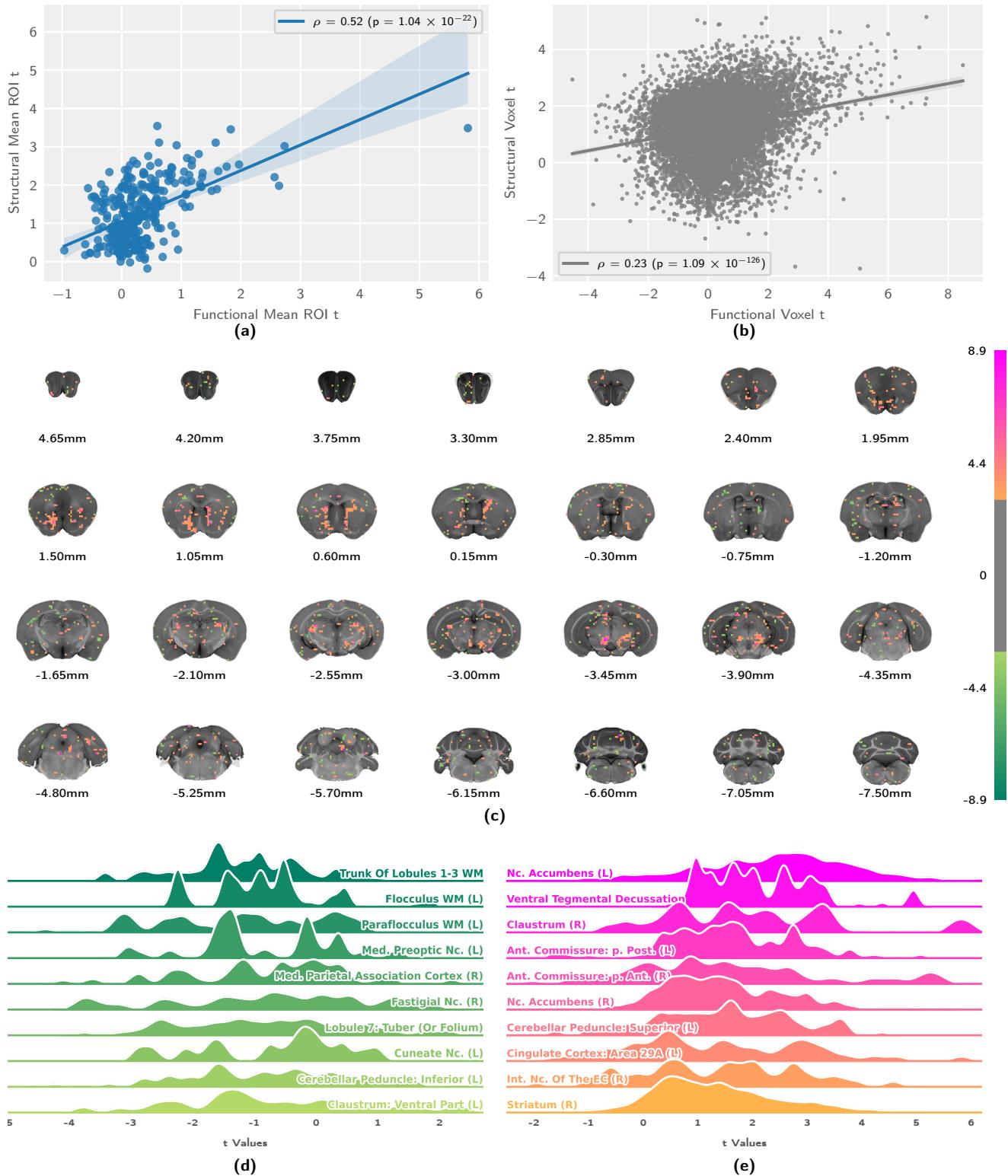


Figure 4: Comparing VTA functional activation to structural projection data reveals good correspondence, with deviations involving the dorsomedial striatum and the contralateral ventral striatum. Depicted are correlation analyses (a, b) of the population-level functional and structural statistic scores, alongside statistic distributions (c, d, e) for the contrast, taking into account variability across subjects. (a) Region-wise regression plot between functional and structural mean ROI t-scores. Tinted area indicates the 99 % confidence interval of the regression estimate. (b) Voxel-wise regression plot between functional and structural projection maps. Tinted area indicates the 99 % confidence interval of the regression estimate. (c) Coronal slices, showing the population-level contrast t-statistic between VTA functional activation and VTA structural projections. (d) Distribution densities of t-statistics, showing the regions where VTA structural projection exceeds functional activation most strongly. (e) Distribution densities of t-statistics, showing the regions where VTA functional activation exceeds structural projection most strongly. Abbreviations: Ant. (Anterior), EC (Endopiriform Claustrum), Int. (Intermediate), Med. (Medial), Nc. (Nucleus), p. (Pars), Post. (Posterior), WM (White Matter).