

## **Acute doses of caffeine shift nervous system cell expression profiles toward promotion of neuronal projection growth**

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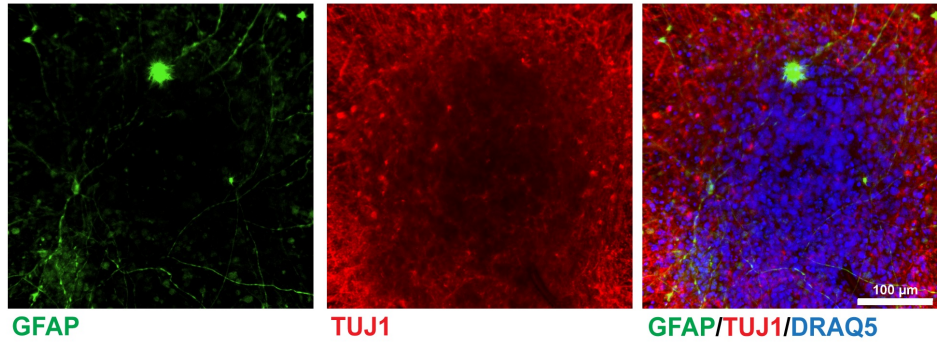
## **Supplementary Information**

**Supplementary Table S1.** Lists of differentially expressed TSS and their annotations for all time points and caffeine concentrations compared to 0  $\mu\text{M}$  caffeine control at time 0, shown in a separate Excel file.

**Supplementary Table S2.** Lists of annotated TSS differentially expressed at 3 h between treatments of different caffeine concentrations - 10  $\mu\text{M}$  vs. 0  $\mu\text{M}$ , 10  $\mu\text{M}$  vs. 3  $\mu\text{M}$ , and the list of TSS common to the two comparisons, shown in a separate Excel file.

**Supplementary Table S3.** ToppGene GO enrichment lists for a) differentially expressed genes for 10  $\mu\text{M}$  caffeine treatment at 3 h compared to control at 0 h, b) caffeine induced dosage-dependent down-regulated genes at 3 h, and c) caffeine induced dosage-dependent up-regulated genes, shown in a separate Excel file.

**Supplementary Figure S1.** NES cells were differentiated for 38 days (no treatment with caffeine) and immunolabeled with glial cell marker GFAP and neuronal cell marker  $\beta$ III-TUB (TUJ1). Nuclei were labeled with DRAQ5. The majority of cells are labeled with  $\beta$ III-TUB, while a small number of cells are positive for GFAP.



**Supplementary Figure S2.** CAGE RNA Expression levels for ADORA1 (A1) TSS1, ADORA1 TSS2, and ADORA2B displayed for all time course samples treated with 0  $\mu\text{M}$  (red), 3  $\mu\text{M}$  (green), and 10  $\mu\text{M}$  (blue) of caffeine. The expression levels are shown as mean TPM $\pm$ 1 s.d. for 0 h, 1 h, 3 h and 9 h.

