

## Description of Additional Supplementary Files

**File Name: Supplementary Data 1**

**Description:** Genes with significantly higher expression levels in mDA-neurons vs NPC and associated chromatin states.

**File Name: Supplementary Data 2**

**Description:** Genes with significantly lower expression levels in mDA-neurons vs NPC and associated chromatin states.

**File Name: Supplementary Data 3**

**Description:** Genes with expression levels:  $\log_2(\text{RPKM}+1) < 1$  in mDA-neurons and NPC, determined as "silent".

**File Name: Supplementary Data 4**

**Description:** Differentially expressed genes between mDA-neurons and SER-neurons.

**File Name: Supplementary Data 5**

**Description:** Differentially expressed genes after 6-OHDA and methamphetamine treatment, detected by TRAP-seq.

**File Name: Supplementary Data 6**

**Description:** Total chromatin states and associated RPKMs for all genes in all samples of mDA-neurons, SER-neurons and NPCs.