Supplementary data Figure legends

Supplemental Figure 1: Effect of transgenes overexpression on E14.5 rat ventral midbrain progenitors. (A and B) Ngn2 and Pitx3 transduced cells downregulate the expression of the immature neural marker Nestin. (C and D) High cell death occurs in Ngn2 transduced cultures after 8 days differentiation, in vitro. (E) Estimation of the number of cells present in each transduced following 8 days differentiation: bar diagram representing the number of DAPI cells per counting frame. White arrowhead in panels A-E point out eGFP/Nestin co-expressing cells. Scale-bars: $A-D=50~\mu m$.

Supplemental Figure 2: Positive control performed for some of the antibodies used in this study. TH immunohistochemistry shows that both TH monoclonal (m) and polyclonal (p) antibodies recognize TH immunopositive cells. All antibodies recognize rat dopaminergic neurons.

Table 1: list of primers used in this study. The table contains the name of each of the genes, the primers (sense and antisense) used to detect their expression, the orientation of each primers and the size of the PCR product.