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## The Effect of an Enriched Social Rearing Environment on Dopamine Containing Neurons of the Midbrain Ventral Tegmental Area in Rats

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Poster Presentation P13

**THE EFFECT OF AN ENRICHED SOCIAL REARING ENVIRONMENT ON  
DOPAMINE CONTAINING NEURONS OF THE MIDBRAIN VENTRAL  
TEGMENTAL AREA IN RATS**

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Previous research suggests that rats reared in an enriched environment resist dopamine (DA) neuron loss associated with induced Parkinson's disease better than rats reared in a standard environment. Because of this apparent neuroprotective effect, this study examined whether rats reared in an enriched environment would show greater numbers of DA containing cells in the midbrain ventral tegmental area (VTA). Rats were reared in three different environments: Isolate (impoverished, isolate-reared), Iso-play (enriched, isolate-reared), and Enriched (enriched, group-reared). The rats were then sacrificed and the number of DA containing cell bodies in VTA tissue sections was determined by tyrosine hydroxylase-immunocytochemistry. No significant difference in DA cell body number was observed between the different treatment groups. These results suggest that the decreased sensitivity to reward and increased learning speeds in enriched rats may arise from differences in neural complexity rather than the number of neurons in the VTA.