

Fig. S1. Decreased RAGE level after sRAGE-MSC conditioned medium treatment on AGE-albumin induced neuronal cell death. RAGE expression is shown in double-labeled confocal images RAGE (red) and DAPI (blue) using neuronal (SHSY-5Y) cell before and after exposing AGE-albumin or co-treated with AGE-albumin and sRAGE UCB-MSC conditioned medium. Scale bar=50 μ m.

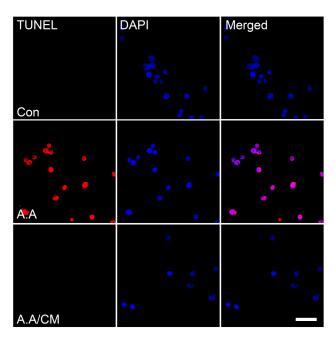


Fig. S2. Decreased neuronal death after sRAGE UCB-MSC conditioned medium treatment. Neuronal death was evaluated by double staining TUNEL (red) and DAPI (blue). Scale bar=50 $\,\mu$ m.

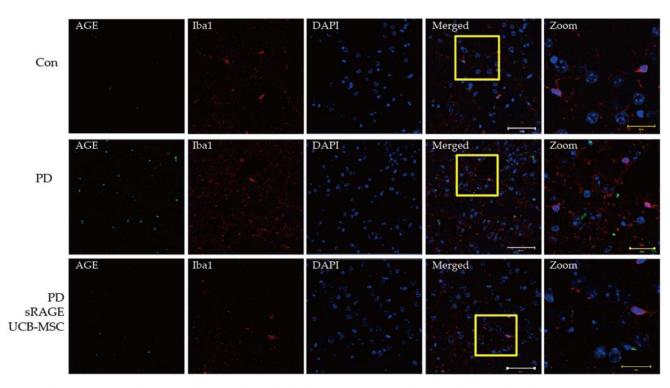


Fig. S3. The expression level of AGE and activated microglial cells in striatum of control, PD and PD treated with sRAGE UCB-MSC Groups. Triple-immunostaining analysis of AGE (green) and lba1 (red, activated microglial cell marker) in striatum area of normal, PD and PD with sRAGE UCB-MSC brain. Merged image shows AGE, lba1 were localized mostly in striatum area of PD (rotenone treated mouse). Scale $bar = 50 \mu m$.

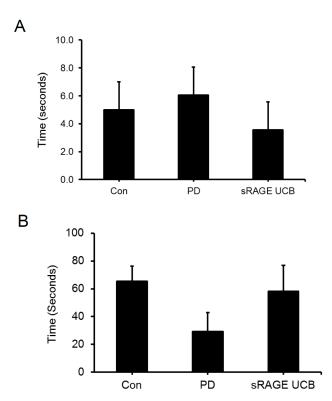


Fig. S4. Recovery of animal behavior measured by rotarod and pole test. The maintaining time was measured for three different groups of animals which are control, PD and PD treated with sRAGE-UCB. Each group has 6 mice and the average maintaining time was illustrated in a bar graph (A-rotarod test and B-pole test).