Supplementary Figure 1. Changes in body weight after the vehicle and GDF11 treatment. n=6-8, #p<0.05 Vs sham rGDF11, **p<0.01 Vs sham vehicle, treated group.

Supplementary Figure 2. No difference in (A) ability to walk on digigait, (B) distance moved in the open field and (C) nest-building activity was observed between sham vehicle and sham rGDF11 treated mice, and (D) decrease in time immobile was observed in the sham rGDF11 treated mice at day 30. *p<0.05, n=4-8.
**Supplementary Figure 3.** Representative images and graphs showing average number (Avg#) of (A) GFAP, (B) Iba-1 and (C) CD31⁺ cells in sham vehicle and sham rGDF11. Magnification 20X. n=3-5.

**Supplementary Figure 4.** Representative images and graphs showing BrdU and DCX staining in (A) SVZ and (B) hippocampus in sham and MCAo groups. Magnification 20X. n= 4-7, **p<0.01, *p<0.05.