

## Supporting information

### **Behavioral and proteomic studies reveal methylglyoxal activate pathways associated with Alzheimer's disease**

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Figure S1

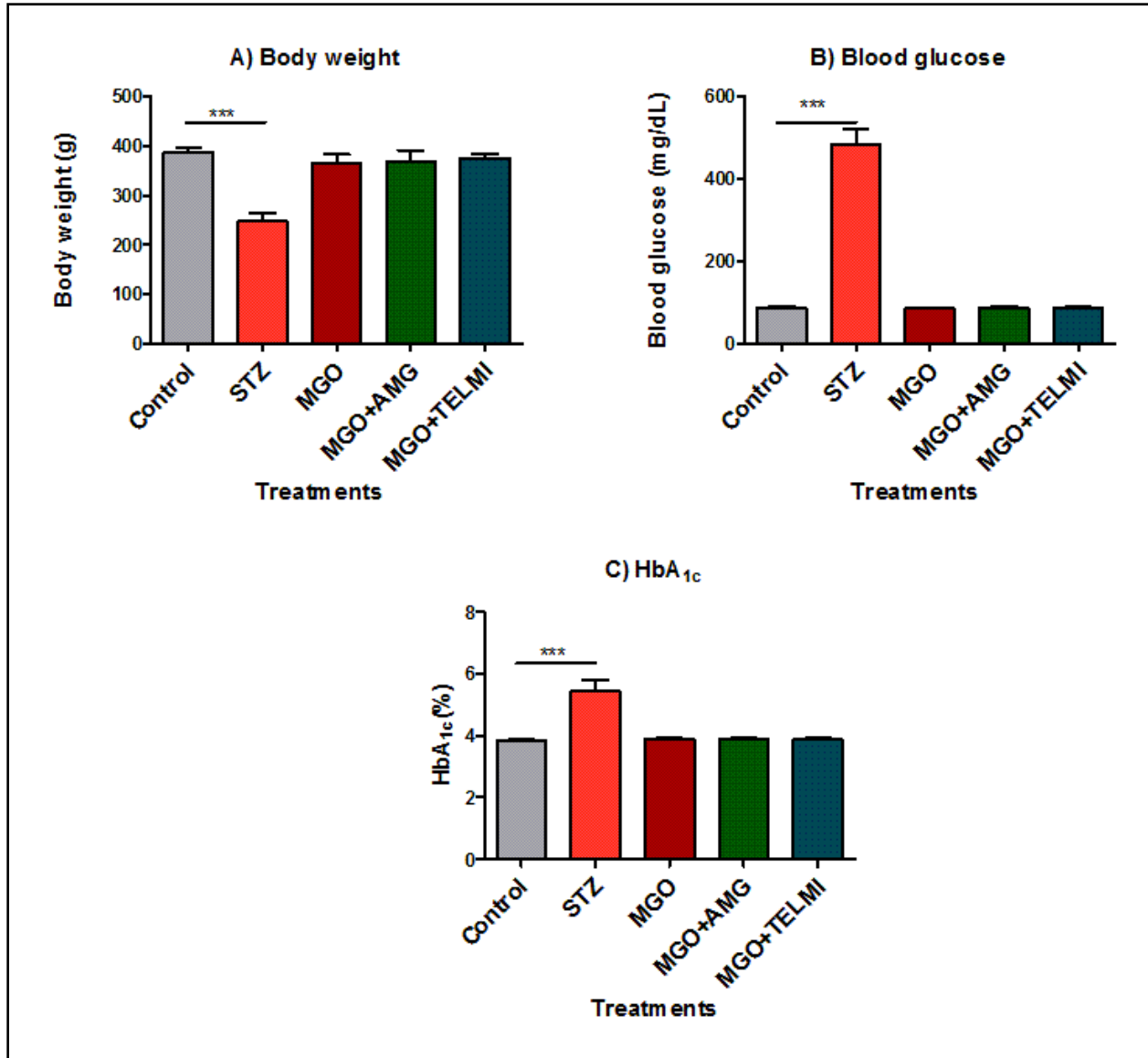
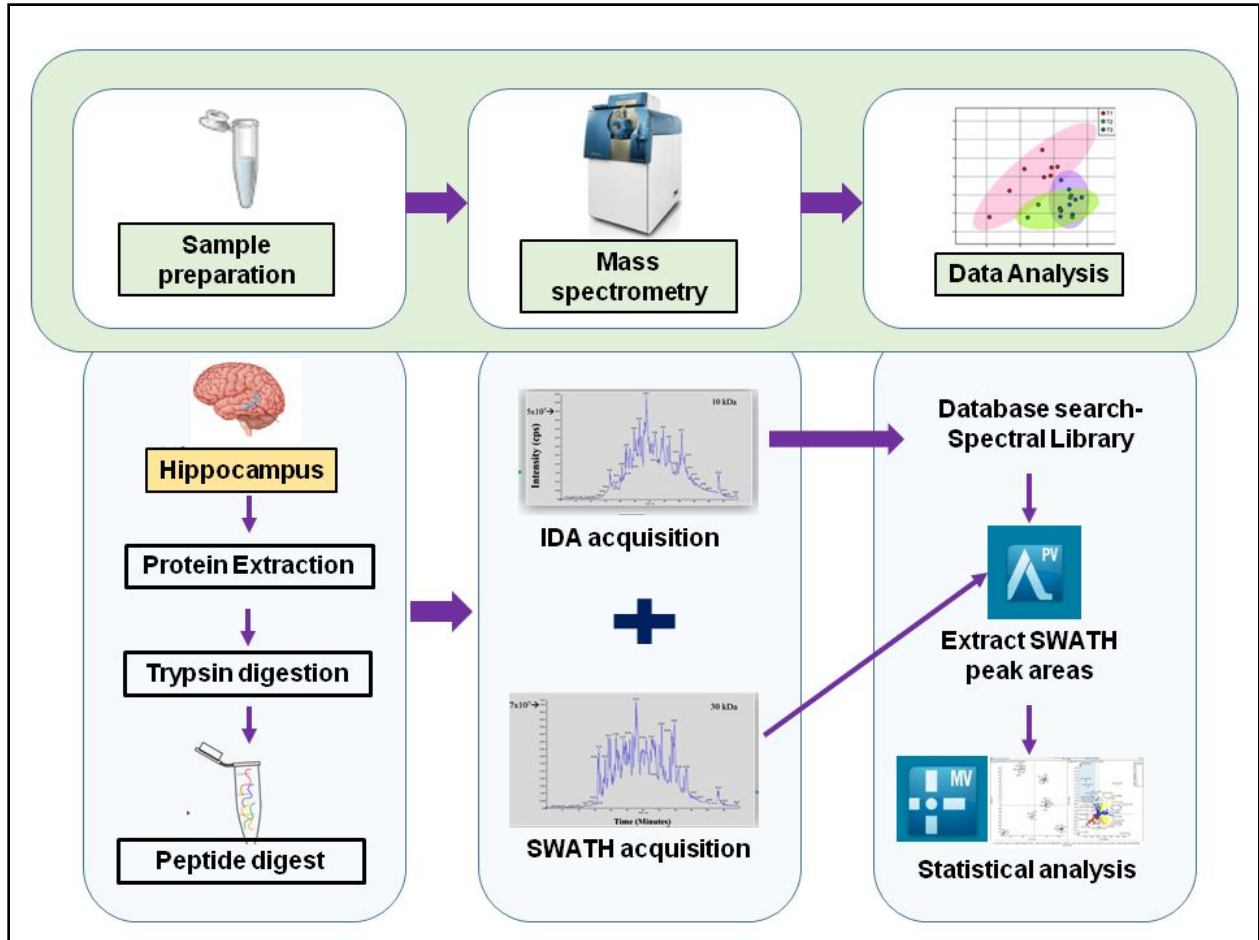


Figure S1- Parameters of the rats under study A) Body weight, B) blood glucose, and C) HbA<sub>1c</sub>

Diabetic rats showed a decrease in body weight as compared to the rest of the groups (A), Blood glucose level and HbA<sub>1c</sub> was elevated in STZ group as compared to the remaining groups (B, C).

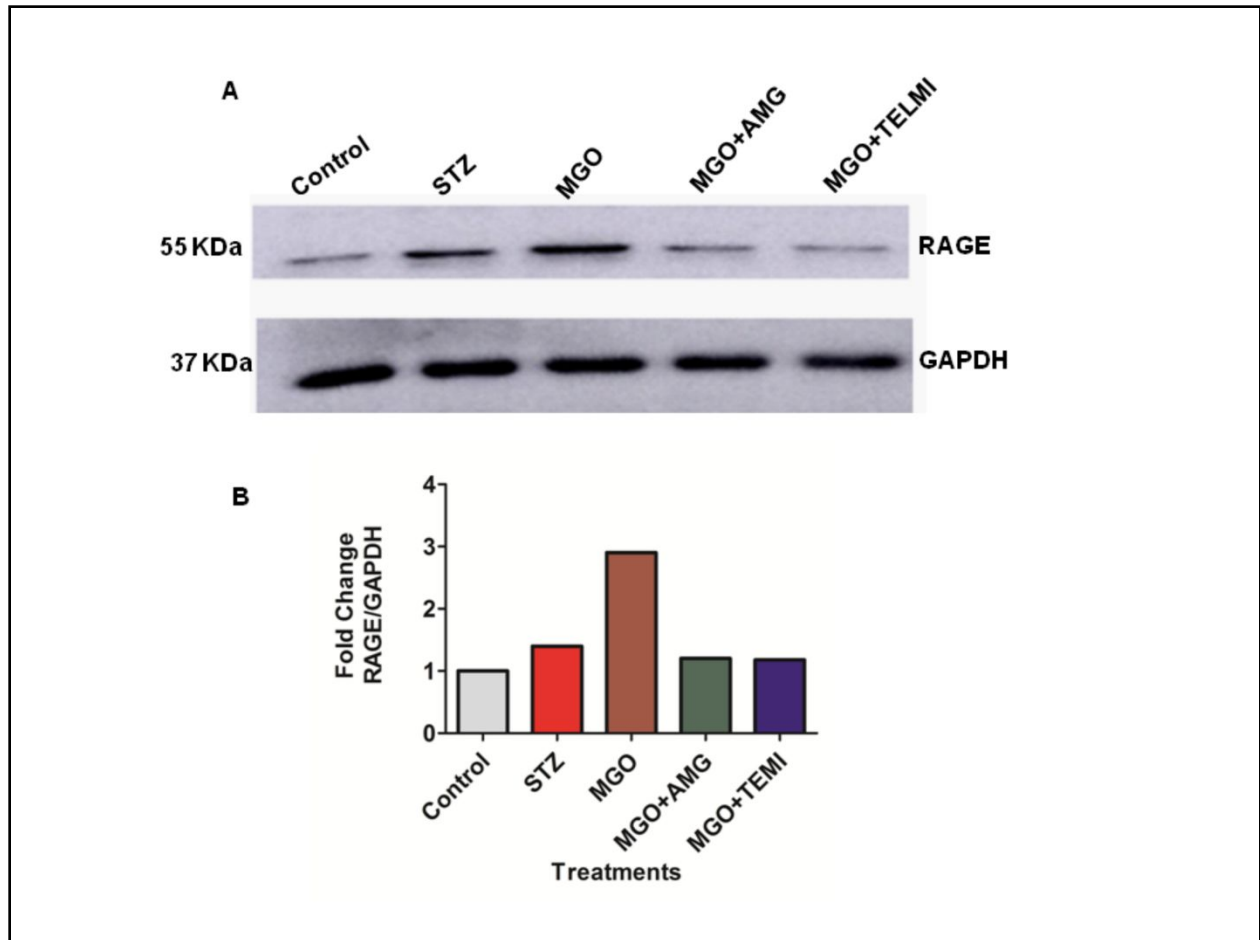
**Figure S2**



**Figure S2- Overall view of the IDA-SWATH methodology used**

IDA-SWATH proteomic approach was used to understand global proteomic changes in the rat hippocampus upon different treatments under study. It involved protein isolation followed by trypsin digestion to get peptides, which were then analyzed on the mass spectrometer by IDA and SWATH acquisitions. IDA spectral library was prepared by using ProteinPilot v5.0 software to identify the proteins in the samples. It was then followed by statistical analysis.

**Figure S3**



**Figure S3- RAGE western blot A) ECL image, B) Densitometric analysis**

RAGE expression was found to be increased upon STZ and MGO treatment as compared to the control group (A). MGO co treatment with AMG and TELMI downregulated the RAGE expression (B). GAPDH was used as a loading control.