Supporting Information

Melanoxetin: A Hydroxylated Flavonoid Attenuates Oxidative Stress and Modulates Insulin Resistance and Glycation Pathways in an Animal Model of Type 2 Diabetes Melli-tus

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Table S1: Table detailing antibody names, dilutions, and respective purchase sources for Western Blot analyses.

Primary antibody	Secondary antibody	Dilution	Company
Anti- β-Actin	Mouse	1:1000	Merck
Anti-AMPK total	Rabbit	1:1000	Cell Signalling
Anti-AMPKp	Rabbit	1:1000	Cell Signalling
Anti-Argpyrimidine	Mouse	1:500	Nordic
Anti-Calnexin	Goat	1:1000	Sicgen
Anti-Catalase	Rabbit	1:1000	Abcam
Anti-FBPase	Rabbit	1:1000	Cell Signalling
Anti-GADPH	Goat	1:1000	Sicgen
Anti-GLO1	Rabbit	1:1000	Abcam
Anti-GLUT2	Mouse	1:1000	Abcam
Anti-GLUT4	Mouse	1:1000	Abcam
Anti-Hemeoxygenase	Mouse	1:1000	Abcam
Anti-IR total	Rabbit	1:1000	Santa Cruz
Anti-MG-H1	Mouse	1:500	HylcutBiotech
Anti-Nitrotyrosine	Mouse	1:500	Abcam
Anti-Nrf2	Mouse	1:1000	Santa Cruz
Anti-PPARα	Rabbit	1:1000	Abcam
Anti-PPARγ	Rabbit	1:1000	Cell Signalling
Anti-PTP1B	Rabbit	1:1000	Abcam
Anti-SOD1	Rabbit	1:1000	Abcam

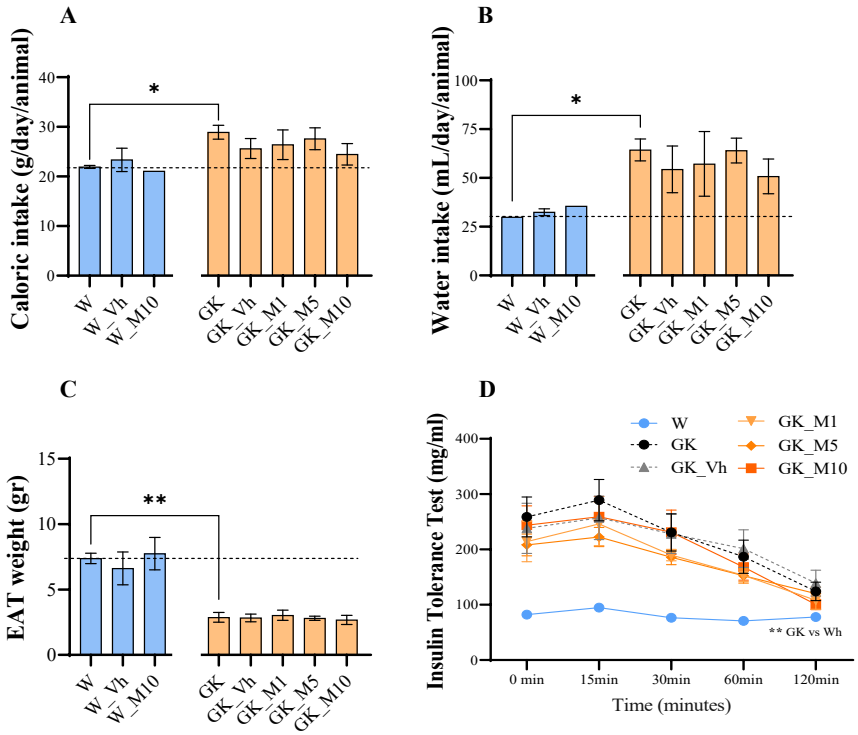

Figure S1: Effect of melanoxetin on caloric intake (A), water intake (B) EAT weight (C) and insulin tolerance test (D) in normal and diabetic animals. Results are expressed as mean ± SEM of 3 to 6 animals per group. *p<0.05, **p<0.01.

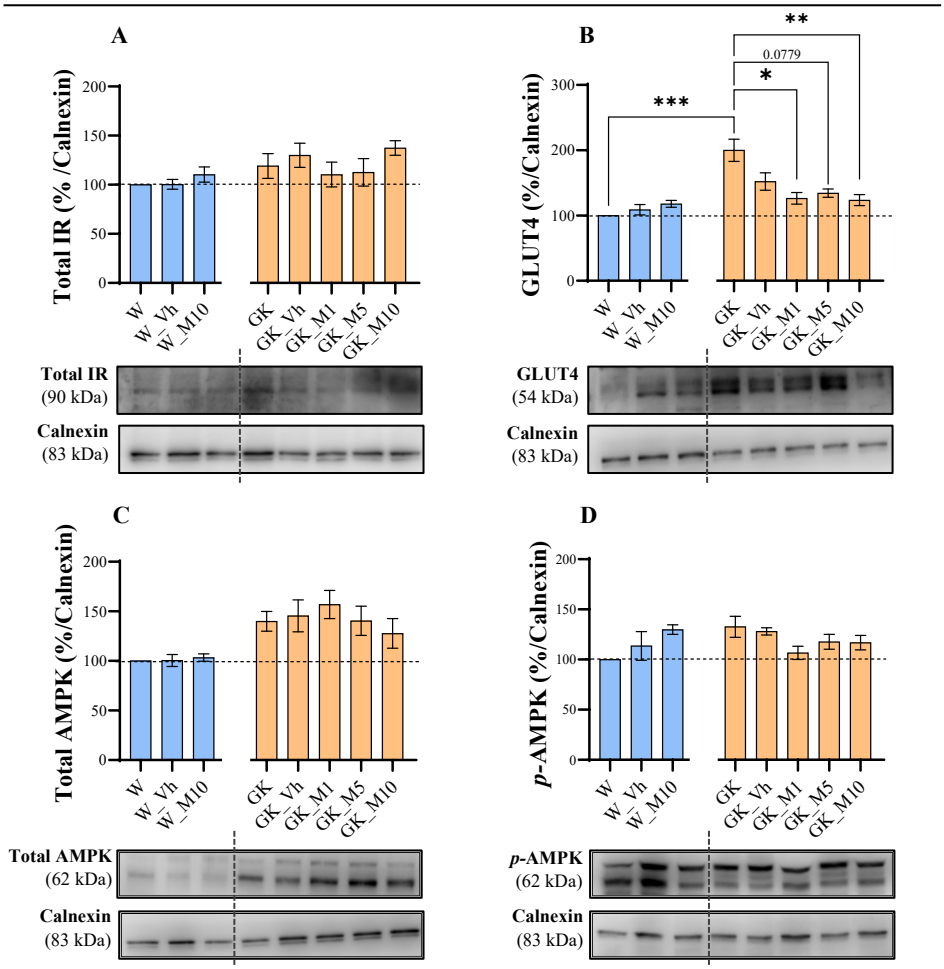

Figure S2: Effect of melanoxetin on the expression of total IR (A), GLUT4 (B), total AMPK (C), and *p*-AMPK (D) in epididymal adipose tissue. Results are expressed as mean ± SEM of 3 to 6 animals per group. **p*<0.05, ***p*<0.01, ****p*<0.001.

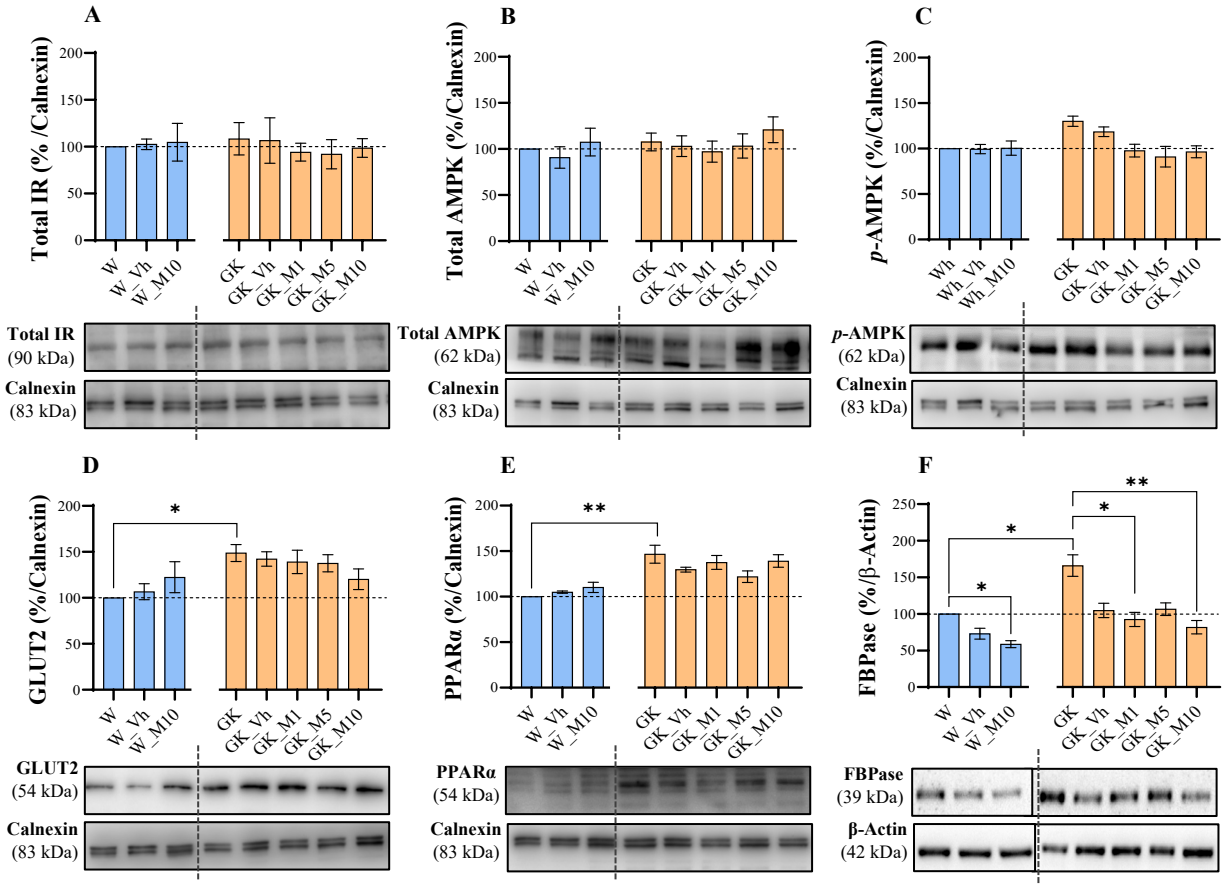

Figure S3: Effect of melanoxetin on the expression of Total IR (A), Total AMPK (B), *p*-AMPK (C), GLUT2 (D), PPARα (E) and FBPase (F) in liver tissue. Results are expressed as mean ± SEM of 3 to 6 animals per group. **p*<0.05, ***p*<0.01.

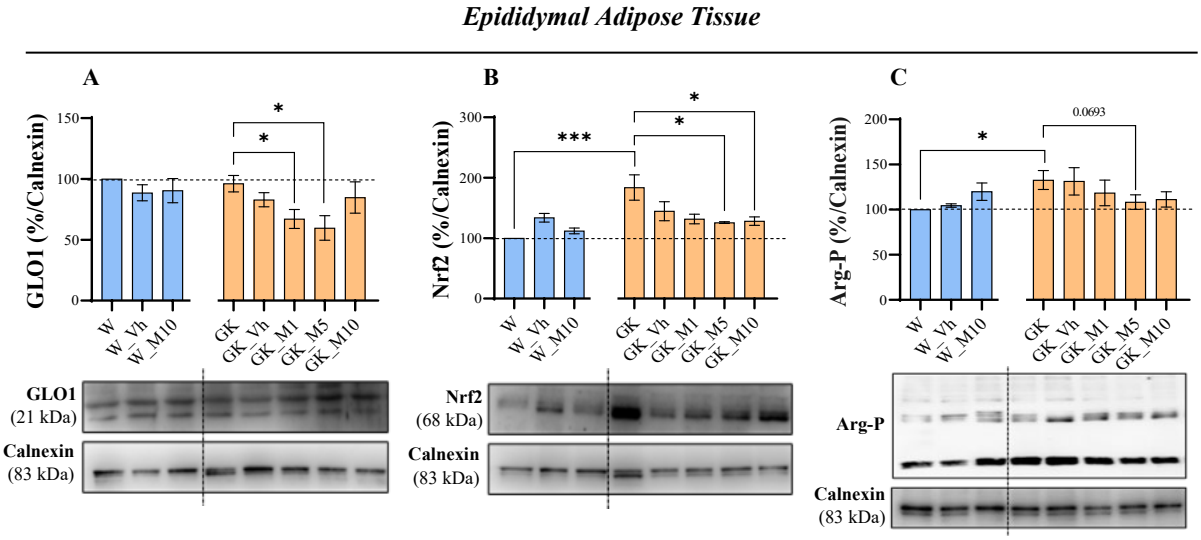

Figure S4: Effect of melanoxetin on the expression of GLO1 (A), Nrf2 (B) and Arg-P (C) in epididymal adipose tissue. Results are expressed as mean ± SEM of 3 to 6 animals per group. *p<0.05, ***p<0.001.

Liver

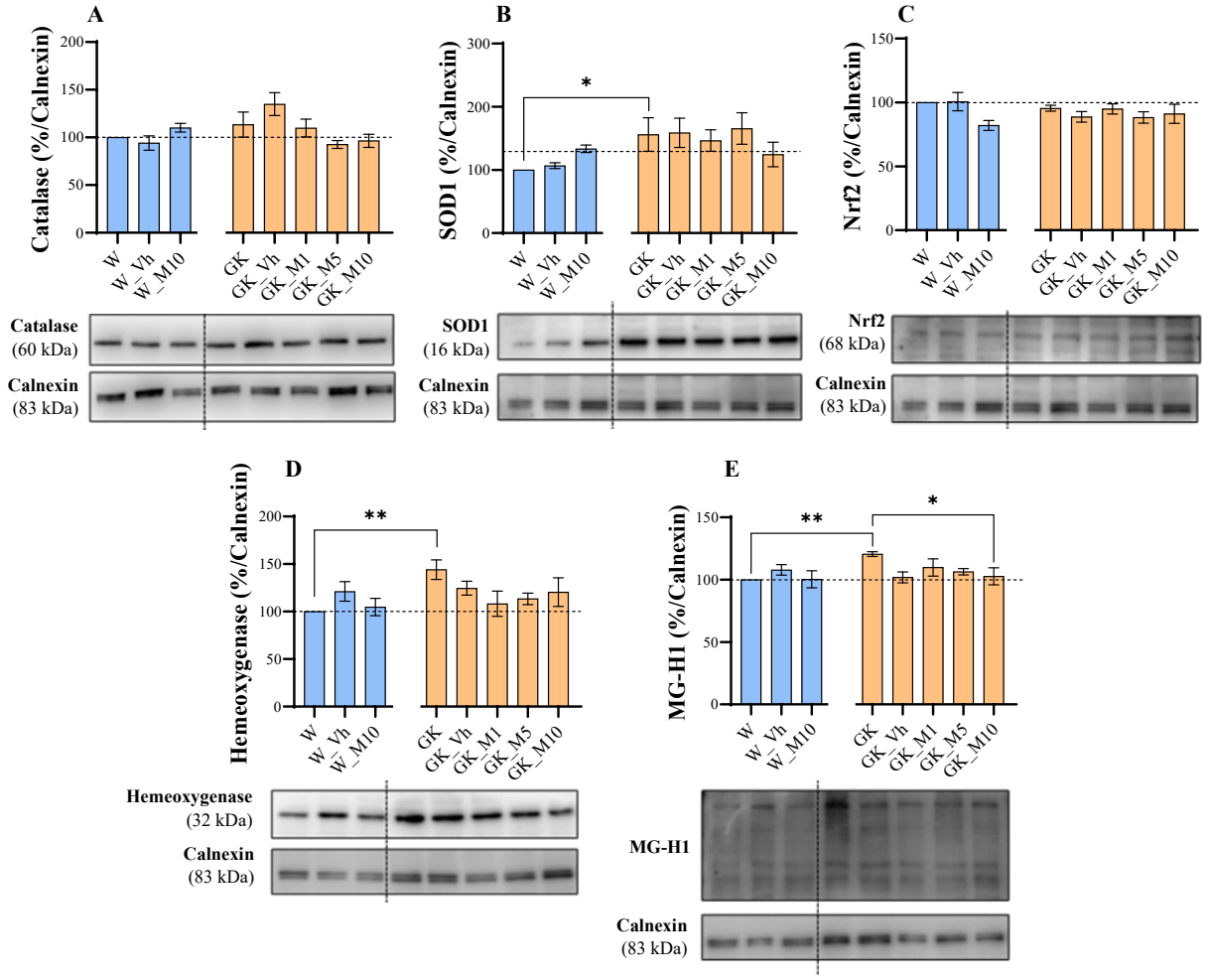

Figure S5: Effect of melanoxetin on the expression of catalase (A), SOD1 (B), Nrf2 (C), hemeoxygenase (D), and MG-H1 (E) in liver tissue. Results are expressed as mean ± SEM of 3 to 6 animals per group. *p<0.05, **p<0.01.

Heart

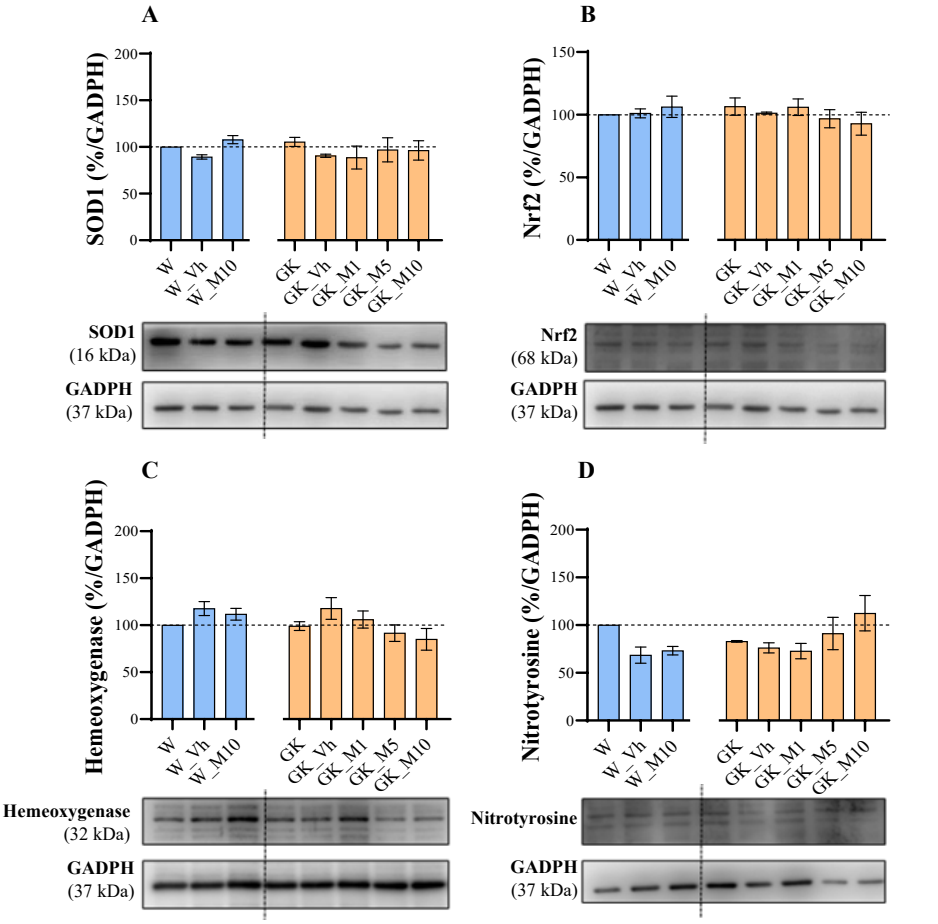

Figure S6: Effect of melanoxetin on the expression of SOD1 (A), Nrf2 (B), hemeoxygenase (C), and nitrotyrosine (D) in the heart. Results are expressed as mean ± SEM of 3 to 6 animals per group.

Aorta

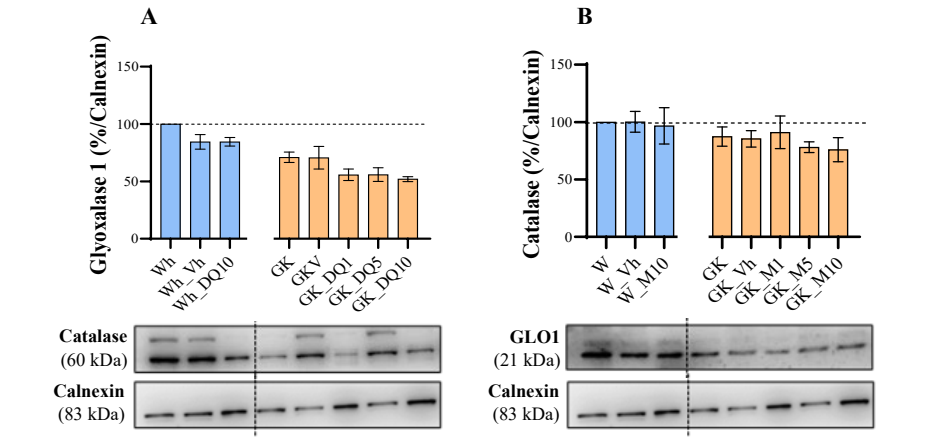

Figure S7: Effect of melanoxetin on the expression of GLO1 (A) and catalase (B) in the aorta. Results are expressed as mean ± SEM of 3 to 6 animals per group.

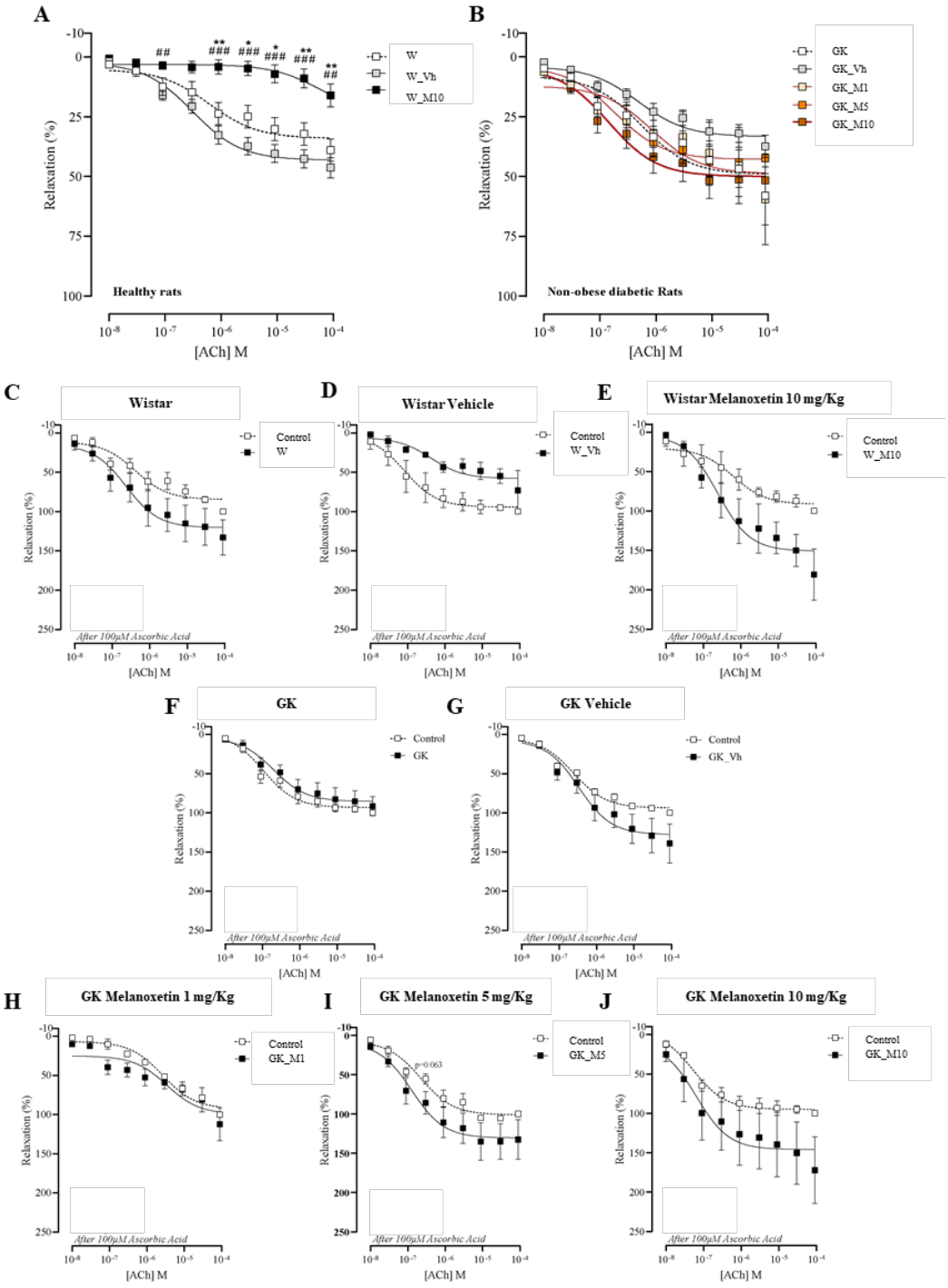

Figure S8: Effects of melanoxetin treatment on relaxation response of the isolated to acetylcholine (ACh). The relaxation response was measured before (A and B) and after pre-incubation with ascorbic acid from Wistar control and Wistar vehicle rats (C and D), Wistar rats treated with 10mg/kg of melanoxetin (E), GK control and vehicle (F and G) and GK rats administered with different concentrations of melanoxetin - 1mg/kg, 5mg/kg and 10mg/kg (H, I and J).