

Supplementary Materials: Antidiabetic, Lipid Normalizing, and Nephroprotective Actions of the Strawberry: A Potent Supplementary Fruit

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Table S1. Animals' food and water intake during interventions.

Groups	Feed Intake (gm)	Water Intake (mL)
Healthy control	22.3 ± 1.24 *	50.24 ± 1.93 **
NIC-STZ control	44.1 ± 0.52	138.6 ± 1.64
MET-treated group	42.4 ± 9.51	94.19 ± 0.74 **
SWE	37.9 ± 9.56 *	87.13 ± 0.63 ***
SHAE	26.7 ± 0.28 **	80 ± 3.24 **
SAE	59.8 ± 1.144 **	70 ± 0.45 **

Results are represented as mean ± SE. gm/rat/day ($n = 6$); * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ as compared to the negative control group (Dunnett Multiple Comparisons Test).

Table S2. The efficiency of qRT-PCR for relative quantification of mRNA. Efficiency is calculated from the slope of the curve as $E = 10(-1/\text{slope})^{-1}$.

Sr. No.	Target Genes	Symbol	Efficiency
Fatty Acid Metabolism Genes			
1	Carnitine Palmitoyltransferase 1A	CPT 1A	121.22
2	Malonyl CoA: ACP Acyltransferase	MCAT	110.17
3	Acetyl-CoA Carboxylase Alpha	ACACA	110.17
4	acyl-CoA Synthetase Long-chain family member 1	ACSL 1	110.17
5	Fatty Acid Synthase	FASN	93.06
6	Fatty Acid Binding Protein	FABP	101.30
Transcription Factors			
1	Peroxisome Proliferator-Activated Receptor Gamma	PPAR- γ	100.92
2	Sterol Regulatory Element-Binding Proteins	SREBP	104.75
3	Nuclear Factor- $\kappa\beta$	NF- $\kappa\beta$	108.43
Inflammatory Markers			
1	Tumor Necrosis Factors- α	TNF- α	98.71
2	Interleukin 6	IL6	96.84

Table S3. Experimental design employed in the study.

Days	HC	NIC-STZ	MET	SWE	SHAE	SAE
1st day	I. p. injection of saline solution and citrate buffer	I. p injection of nicotinamide (110 mg/kg) and STZ (65 mg/kg)	I. p injection of nicotinamide (110 mg/kg) and STZ (65 mg/kg)	I. p injection of nicotinamide (110 mg/kg) and STZ (65 mg/kg)	I. p injection of nicotinamide (110 mg/kg) and STZ (65 mg/kg)	I. p injection of nicotinamide (110 mg/kg) and STZ (65 mg/kg)
22nd day	–	Confirmation of stable hyperglycemia	Confirmation of stable hyperglycemia	Confirmation of stable hyperglycemia	Confirmation of stable hyperglycemia	Confirmation of stable hyperglycemia
23rd day	–	–	Metformin (200 mg/kg body weight, Per os)	Strawberry water extract (2 g/kg body weight, Per os)	Strawberry hydro-alcoholic extract (2 g/kg body weight, Per os)	Strawberry alcohol extract (2 g/kg body weight, Per os)
30th, 36th, 43rd day	Intermittent blood collection					
50th day	Blood samples were collected, animals were sacrificed. Liver, pancreas, brain, and kidney were harvested					

HC: Healthy control, NIC-STZ: NIC-STZ treated control, MET: Metformin-treated control, SWE: Strawberry water extract, SHAE: Strawberry hydro-alcoholic extract, SAE: Strawberry alcohol extract.

Table S4. Primer sequences of selected RT-PCR genes.

Sr. No.	Target Genes	Primers	Sequence
Housekeeping Gene			
1	Glyceraldehyde-3-phosphate dehydrogenase	Forward Reverse	AGTTCAACGGCACAGTCAAG TACTCAGCACCAGCATCACC
Fatty Acid Metabolism Genes			
1	Carnitine Palmitoyltransferase 1A	Forward Reverse	CACTGATGAAGGAAGAAGAC CCAGTCACTCACGTAATTTG
2	Malonyl CoA: ACP Acyltransferase	Forward Reverse	AAAACCTCTAGGCTCAATCAAC GGATGTGTGTATTTATGCCC
3	Acetyl-CoA Carboxylase Alpha	Forward Reverse	AGCAGTATTTGAACACATGG CAGTTCCAAGAAGTAGAAGC
4	acyl-CoA Synthetase Long-chain family member 1	Forward Reverse	ACATTATGAACGATTGCTCC GCATTACACACTCTACAACG
5	Fatty Acid Synthase	Forward Reverse	AAAAGGAAAGTAGAGTGTGC GACACATTCTGTTCACTACAG
6	Fatty Acid Binding Protein	Forward Reverse	TGGAGGGTGACAATAAAATG TCATGGTATTGGTGATTGTG
Transcription Factors			
1	Peroxisome Proliferator-Activated Receptor Gamma	Forward Reverse	AAGACAACAGACAAATCACC CAGGGATATTTTTGGCATACTC
2	Sterol Regulatory Element-Binding Proteins	Forward Reverse	AAACCTGAAGTGGTAGAAAC TTATCCTCAAAGGCTGGG
3	Nuclear Factor- κ B	Forward Reverse	AAAAACGAGCCTAGAGATTG ACATCCTCTTCCTTGTCTTC
Inflammatory Markers			
1	Tumor Necrosis Factors- α	Forward Reverse	CTCACACTCAGATCATCTTC GAGAACCTGGGAGTAGATAAG
2	Interleukin 6	Forward Reverse	CAGAGTCATTCAAGCAATAC CTTTCAAGATGAGTTGGATGG