

Supplementary materials

Table S1 Characterization of samples obtained by elution of 30% and 40% methanolic aqueous solutions in purple sweet potato by HPLC

Fraction	Identification
Methanolic aqueous solutions (30%, monoacylated AF-PSPs)	1.cyanidin 3-p-hydroxybenzoyl sophoroside-5-glucoside
	2.cyanidin 3-(6"-caffeoyl sophoroside)-5-glucoside
	3.peonidin 3-p-hydroxybenzoyl sophoroside-5-glucoside
	4.peonidin 3-(6"-caffeoyl sophoroside)-5-glucoside
	5.cyanidin 3-feruloyl sophoroside-5-glucoside
	6.peonidin 3-feruloyl sophoroside-5-glucoside
	7.cyanidin 3-caffeoyl sophoroside-5-glucoside
	8.cyanidin 3-sophoroside-5-glucoside
Methanolic aqueous solutions (40%, diacylated AF-PSPs)	9.cyanidin 3-(6',6"-dicafeoyl sophoroside)-5-glucoside
	10.cyanidin 3-(6'-caffeoyl-6"-p-hydroxybenzoyl sophoroside)-5-glucoside
	11.peonidin 3-caffeoyl sophoroside-5-glucoside
	12.cyanidin 3-(6'-caffeoyl-6"-feruloyl sophoroside)-5-glucoside
	13.peonidin 3-(6',6"-dicafeoyl sophoroside)-5-glucoside
	14.peonidin 3-(6'-caffeoyl-6"-p-hydroxybenzoyl sophoroside)-5-glucoside
	15.peonidin 3-(6'-caffeoyl-6"-feruloyl sophoroside)-5-glucoside
	16.peonidin 3-(6'-caffeoyl-6"-p-coumaryl sophoroside)-5-glucoside
	17.peonidin 3-(6'-feruloyl-6"-p-hydroxybenzoyl sophoroside)-5-glucoside
	18.peonidin 3-(6'-coumaryl-6"-p-hydroxybenzoyl sophoroside)-5-glucoside
	19.peonidin 3-(6',6"-diferuloyl sophoroside)-5-glucoside

HPLC: high-performance liquid chromatography; AF-PSPs: anthocyanins from purple sweet potato.

Table S2 Primers for qPCR analysis and the PCR products size

GenBank (No.)	Description	Sequence (5'→3')	Product size (bp)	T_m (°C)
NM_008084.2	M-GAPDH-Sense primer	CCTCGTCCCGTAGACAAAATG	133	60
	M-GAPDH-Antisense primer	TGAGGTCAATGAAGGGGTCGT		
NM_008439.4	M-khk-Sense primer	AGCGGATAGAGGAGCACAATG	124	
	M-khk-Antisense primer	CTGACAAACACCACCTCACCAT		
NM_080633.2	M-Aco2-Sense primer	TTGAGCCCAGTGAGTACATCCG	122	
	M-Aco2-Antisense primer	TGGGTCATCCAGGTGTCCATAT		
NM_144903.3	M-aldolase B-Sense primer	TTTCCACGAGACCCTCTACCA	140	
	M-aldolase B-Antisense primer	GAATGGTGGTTTCCTTGTGTTGTT		
NM_008061.4	M-G6PC(RZ)-Sense primer	ACACCGACTACTACAGCAACAGC	208	
	M-G6PC(RZ)-Antisense primer	AATCCCAACCACAAGATGACG		

qPCR: fluorescent real-time quantitative polymerase chain

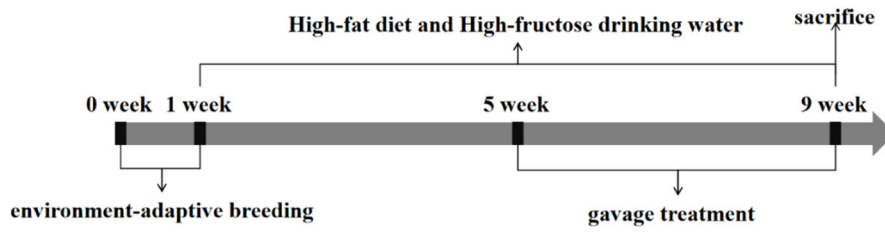


Fig. S1 Process for establishing a mice model of hyperuricemia and hyperglycemia induced by high-fructose/high-fat diet. All mice were divided into the normal control group (NC, 10 mL/kg body weight (BW) of double distilled water), the model group (Model, 10 mL/kg BW of double distilled water), positive group (AP, 5 mg/kg BW of allopurinol), low-dose diacylated AF-PSPs group (L-DiAF, 25 mg/kg BW), and high-dose diacylated AF-PSPs Group (H-DiAF, 50 mg/kg BW). AF-PSPs: anthocyanins from purple sweet potato.