Supplement Table 1. Serum concentration of leptin, oxidative stress, inflammatory marker, blood pressure, and AIP of the study participants before and after 8 weeks of intervention

Variables	Crocetin group (n=23)	Placebo group (n=25)	P-value[c]	P-value[d]	P-value[e]
hs-CRP (ng/mL)					
Baseline End of trial P-value [a] Mean difference P-value [b]	487.72 ± 127.23 368.09 ± 140.29 0.0001 -119.62 (83.20) 0.0001	736.60 ± 513.97 579.68 ± 257.46 0.021 -156.91 (471.95) 0.109	0.006 0.002	0.695	0.695
SOD (U/ml)					
Baseline End of trial P-value [a] Mean difference P-value [b]	257.52 ± 38.18 299.24 ± 29.49 0.001 41.72 (45.72) 0.0001	275.89 ± 35.96 268.56 ± 22.04 0.716 -7.33 (49.67) 0.468	0.049 0.0001	0.520	0.520
MDA (nmol/ml)					
Baseline End of trial P-value [a] Mean difference P-value [b]	9.74 ± 1.68 8.75 ± 1.22 0.002 -0.99 (1.83) 0.017	9.25 ± 1.10 9.09 ± 0.73 0.909 -0.16 (1.12) 0.485	0.54 0.043	0.178	0.779
CAT (Unit/mL)					
Baseline End of trial P-value [a] Mean difference P-value [b]	2.04 ± 0.61 1.69 ± 0.35 0.094 -0.34 (0.81) 0.052	2.24 ± 0.56 2.58 ± 0.65 0.074 0.33 (0.82) 0.055	0.076 0.0001	0.008	0.886
Leptin (ng/mL)					
Baseline End of trial P-value [a] Mean difference P-value [b]	2.46 ± 0.96 0.59 ± 0.66 0.0001 -1.86 (1.185) 0.0001	0.73 ± 0.59 0.64 ± 0.52 0.196 -0.09 (0.82) 0.591	0.0001 0.38	0.854	0.854
AIP					
Baseline End of trial P-value [a] Mean difference P-value [b]	0.78 ± 0.29 0.64 ± 0.26 0.045 -0.13 (0.25) 0.017	0.55 ± 0.12 0.59 ± 0.18 0.367 0.04 (0.20) 0.280	0.001 0.475	0.409	0.058
SBP					
Baseline End of trial P-value [a] Mean difference P-value [b]	13.25 ± 0.88 13.00 ± 0.86 0.0001 -0.25 (0.27) 0.0001	14.18 ± 1.54 14.31 ± 1.67 0.086 0.13 (0.37) 0.086	0.013 0.001	0.096	0.096
DBP					

Baseline End of trial P-value [a] Mean difference P-value [b]	8.89 ± 0.97 8.60 ± 0.83 0.004 -0.24 (0.35) 0.003	9.66 ± 1.13 9.64 ± 1.06 0.943 -0.01 (0.29) 0.789	0.013 0.0001	0.218	0.218

SOD superoxide dismutase, CAT catalase, MDA malondialdehyde, hs-CRP high-sensitivity C-reactive protein, AIP the Atherogenic Index of Plasma, SBP systolic blood pressure, DBP diastolic blood pressure

* Mean (SD)

P-value[a] P values denote the significance of within-group changes with (P< 0.05), paired t-test (for normal distribution data) and Wilcoxon test (for non-normal distribution data)

P-value [b] P values denote the significance of within-group mean difference, one sample test was used

P-value [c] P values denote the significance of between-group differences with (P< 0.05, Mann–Whitney U test (for all variables)

P-value [d] P values denote the significance of between-group differences with (P< 0.05), We used analysis of covariance (ANCOVA) to control confounders and baseline values such as age, gender, education, duration of disease, smoking, physical activity, history of disease, blood pressure, diabetes mellitus, dietary intake of energy, carbohydrate, protein, fat, BMI, W/H ratio and leptin, hs CRP, SOD at baseline)

P-value [e] P values denote the significance of the between-group mean difference with (P< 0.05), We used analysis of covariance (ANCOVA) to control confounders and baseline values such as age, gender, education, duration of disease, smoking, physical activity, history of disease, blood pressure, diabetes mellitus, dietary intake of energy, carbohydrate, protein, fat, BMI, W/H ratio and leptin, hs CRP, SOD at baseline)

SupplementTable 2. Basic anthropometric indices of patients with coronary artery disease

Variables	Crocetin group (n=23)	Placebo group (n=25)	P-value[c]	P-value[d]	P-value[e]
Weight (kg)					
Baseline End of trial P-value [a] Mean difference P-value [b]	81.17 ± 10.42 80.29 ±10.32 0.0001 -0.87±0.68 0.0001	77.70 ± 9.46 77.68 ± 9.22 0.5 -0.02±1.002 0.921	0.341 0.522	0.195 0.356	0.014
WC (cm)					
Baseline End of trial P-value [a] Mean difference P-value [b]	92.60 ± 7.98 91.33 ± 8.30 0.0001 -1.269±0.813 0.0001	92.28 ± 8.71 91.78 ± 8.48 0.016 -0.5±1.02 0.022	0.853 0.951	0.480 0.593	0.08
HC (cm)					
Baseline End of trial P-value [a] Mean difference P-value [b]	104.53 ± 8.60 104 ± 8.77 0.001 -0.526±0.662 0.001	101.12 ± 6.43 101.04 ± 6.15 0.723 -0.08±1.115 0.723	0.132 0.179	0.123 0.172	0.107
BMI (kg/m^2)					
Baseline End of trial P-value [a] Mean difference P-value [b]	28.07 ± 1.87 27.76 ± 1.81 0.0001 -0.306±0.255 0.0001	27.14 ± 2.70 27.15 ± 2.76 0.435 0.008±0.338 0.903	0.13 0.18	0.228 0.441	0.017
WHR					
Baseline End of trial P-value [a] Mean difference P-value [b]	0.88 ± 0.05 0.87 ± 0.05 0.0001 -0.008±0.006 0.0001	0.91 ± 0.05 0.90 ± 0.04 0.058 -0.004±0.011 0.058	0.104 0.05	0.403 0.360	0.861

BMI body mass index, HC hip circumference, WC waist circumference, WHR waist/hip ratio
* Mean (SD)
P-value[a] indicate the significance of within-group changes, with $P < 0.05$. Analyses were conducted using the paired t-test for normally distributed data and the Wilcoxon test for non-normally distributed data.
P-value [b] indicates the significance of within-group mean difference, one sample test was used.
P-value [c] indicates the significance of between-group differences with $P< 0.05$, Independent Samples t-test for normal distribution data, and Mann–Whitney U test for non-normal distribution data.
P-value [d] indicates the significance of between-group differences, with $P < 0.05$. We used analysis of covariance (ANCOVA) to control confounders and baseline values such as age, gender, education, physical activity, smoking status, blood pressure, and dietary intake (energy, carbohydrates, protein, fat), as well as baseline value of leptin, high-sensitivity C-reactive protein (hs-CRP), and superoxide dismutase (SOD).
P-value [e] indicates the significance of between-group mean differences, with $P < 0.05$. We used analysis of covariance (ANCOVA) to control confounders and baseline values such as age, gender, education, physical

activity, smoking status, blood pressure, and dietary intake (energy, carbohydrates, protein, fat), as well as baseline value of leptin, high-sensitivity C-reactive protein (hs-CRP), and superoxide dismutase (SOD).

Supplement Table 3. Energy and macronutrient intake of patients with coronary artery disease

Variables	Crocetin group (n=23)	Placebo group (n=25)	P-value[c]	P-value[d]	P-value[e]
Energy (kcal/day)					
Baseline End of trial P-value [a] Mean difference P-value [b]	2623.86 ± 265.32 2511.55 ± 295.32 0.0001 -112.303±69.829 0.0001	2478.07 ± 303.10 2465.07 ± 288.64 0.231 -13.004±68.941 0.231	0.067 0.812	0.027 0.332	0.012
Protein (g/d)					
Baseline End of trial P-value [a] Mean difference P-value [b]	70.24 ± 11.70 65.85 ± 11.81 0.0001 -4.393±3.436 0.0001	68.10 ± 9.41 67.78 ± 9.32 0.242 -0.322±1.758 0.242	0.541 0.375	0.315 0.886	0.002
Carbohydrate (g/d)					
Baseline End of trial P-value [a] Mean difference P-value [b]	385.10 ± 42.96 367.23 ± 46.44 0.0001 -17.869±10.699 0.0001	365.47 ± 44.65 359.99 ± 52.09 0.183 -5.474±20.481 0.183	0.177 0.984	0.047 0.415	0.268
Fat (g/d)					
Baseline End of trial P-value [a] Mean difference P-value [b]	89.16 ± 6.76 86.57 ± 8.68 0.002 -2.583±3.424 0.002	82.64 ± 11.29 82.00 ± 10.89 0.225 -0.638±2.563 0.225	0.014 0.117	0.005 0.08	0.336

* Mean (SD)
P-value[a] indicates the significance of within-group changes, with $P < 0.05$. Analyses were conducted using the paired t-test for normally distributed data and the Wilcoxon test for non-normally distributed data.
P-value [b] indicates the significance of within-group mean difference, one sample test was used.
P-value [c] indicates the significance of between-group differences with $P< 0.05$, Independent Samples t-test for normal distribution data, and or Mann–Whitney U test for non-normal distribution data.
P-value [d] indicates the significance of between-group differences, with $P < 0.05$. We used analysis of covariance (ANCOVA) to control confounders and baseline values such as age, gender, education, physical activity, smoking status, blood pressure, disease history, disease duration, and WHR, as well as baseline value of leptin, high-sensitivity C-reactive protein (hs-CRP), and superoxide dismutase (SOD).
P-value [e] indicates the significance of between-group mean differences, with $P < 0.05$. We used analysis of covariance (ANCOVA) to control confounders and baseline values such as age, gender, education, physical activity, smoking status, blood pressure, disease history, disease duration, and WHR, as well as baseline value of leptin, high-sensitivity C-reactive protein (hs-CRP), and superoxide dismutase (SOD).

Table 4. Serum concentration of leptin, oxidative stress, inflammatory marker, blood pressure, and AIP of the study participants before and after 8 weeks of intervention

Variables	Crocetin group (n=23)	Placebo group (n=25)	P-value[c]	P-value[d]	P-value[e]
hs-CRP (ng/mL)					
Baseline End of trial P-value [a] Mean difference P-value [b]	487.72 ± 127.23 368.09 ± 140.29 0.0001 -119.62 (83.20) 0.0001	736.60 ± 513.97 579.68 ± 257.46 0.021 -156.91 (471.95) 0.109	0.006 0.002	0.695	0.695
SOD (U/ml)					
Baseline End of trial P-value [a] Mean difference P-value [b]	257.52 ± 38.18 299.24 ± 29.49 0.001 41.72 (45.72) 0.0001	275.89 ± 35.96 268.56 ± 22.04 0.716 -7.33 (49.67) 0.468	0.049 0.0001	0.520	0.520
MDA (nmol/ml)					
Baseline End of trial P-value [a] Mean difference P-value [b]	9.74 ± 1.68 8.75 ± 1.22 0.002 -0.99 (1.83) 0.017	9.25 ± 1.10 9.09 ± 0.73 0.909 -0.16 (1.12) 0.485	0.54 0.043	0.178	0.779
CAT (Unit/mL)					
Baseline End of trial P-value [a] Mean difference P-value [b]	2.04 ± 0.61 1.69 ± 0.35 0.094 -0.34 (0.81) 0.052	2.24 ± 0.56 2.58 ± 0.65 0.074 0.33 (0.82) 0.055	0.076 0.0001	0.008	0.886
Leptin (ng/mL)					
Baseline End of trial P-value [a] Mean difference P-value [b]	2.46 ± 0.96 0.59 ± 0.66 0.0001 -1.86 (1.185) 0.0001	0.73 ± 0.59 0.64 ± 0.52 0.196 -0.09 (0.82) 0.591	0.0001 0.38	0.854	0.854
AIP					
Baseline End of trial P-value [a] Mean difference P-value [b]	0.78 ± 0.29 0.64 ± 0.26 0.045 -0.13 (0.25) 0.017	0.55 ± 0.12 0.59 ± 0.18 0.367 0.04 (0.20) 0.280	0.001 0.475	0.409	0.058
SBP					
Baseline End of trial P-value [a] Mean difference P-value [b]	13.25 ± 0.88 13.00 ± 0.86 0.0001 -0.25 (0.27) 0.0001	14.18 ± 1.54 14.31 ± 1.67 0.086 0.13 (0.37) 0.086	0.013 0.001	0.096	0.096
DBP					

Baseline End of trial P-value [a] Mean difference P-value [b]	8.89 ± 0.97 8.60 ± 0.83 0.004 -0.24 (0.35) 0.003	9.66 ± 1.13 9.64 ± 1.06 0.943 -0.01 (0.29) 0.789	0.013 0.0001	0.218	0.218

SOD superoxide dismutase, CAT catalase, MDA malondialdehyde, hs-CRP high-sensitivity C-reactive protein, AIP the Atherogenic Index of Plasma, SBP systolic blood pressure, DBP diastolic blood pressure

* Mean (SD)

P-value[a] P values denote the significance of within-group changes with (P< 0.05), paired t-test (for normal distribution data) and Wilcoxon test (for non-normal distribution data)

P-value [b] P values denote the significance of within-group mean difference, one sample test was used

P-value [c] P values denote the significance of between-group differences with (P< 0.05, Mann–Whitney U test (for all variables)

P-value [d] P values denote the significance of between-group differences with (P< 0.05), We used analysis of covariance (ANCOVA) to control confounders and baseline values such as age, gender, education, duration of disease, smoking, physical activity, history of disease, blood pressure, diabetes mellitus, dietary intake of energy, carbohydrate, protein, fat, BMI, W/H ratio and leptin, hs CRP, SOD at baseline)

P-value [e] P values denote the significance of the between-group mean difference with (P< 0.05), We used analysis of covariance (ANCOVA) to control confounders and baseline values such as age, gender, education, duration of disease, smoking, physical activity, history of disease, blood pressure, diabetes mellitus, dietary intake of energy, carbohydrate, protein, fat, BMI, W/H ratio and leptin, hs CRP, SOD at baseline)