

SUPPLEMENTAL DATA

Circulating organokines in coronary artery disease and metabolic syndrome: FABP4, adiponectin, irisin, FSTL1

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Full article is available at the following link: [Circulating organokines in coronary artery disease and metabolic syndrome: FABP4, adiponectin, irisin, FSTL1](#)

Table S1. Spearman's rank correlation coefficients among study variables

		Adiponectin	FABP4	FSTL1	Irisin
HBA1C	ρ	-.259**	-.146*	.257**	0,047
	p	<0,0001	0,029	<0,0001	0,486
Triglyceride	ρ	-.385**	-0,122	.428**	.423**
	p	<0,0001	0,057	<0,0001	<0,0001
Total Cholesterol	ρ	-0,015	-0,029	0,015	.208**
	p	0,822	0,653	0,813	0,001
LDL	ρ	0,010	0,013	-0,028	0,100
	p	0,882	0,844	0,667	0,119
HDL	ρ	.381**	0,053	-.355**	-.164*
	p	<0,0001	0,409	<0,0001	0,011
CRP	ρ	-0,088	-0,038	0,053	-0,046
	p	0,172	0,556	0,409	0,473
Glucose	ρ	-.259**	-.230**	.329**	.145*
	p	<0,0001	<0,0001	<0,0001	0,024
Urea	ρ	-0,002	-.241**	-0,056	-.157*
	p	0,970	<0,0001	0,386	0,015
Creatinine	ρ	-0,053	-0,064	0,024	-0,112
	p	0,408	0,323	0,715	0,081
Insulin	ρ	-.145*	-0,061	0,057	0,113
	p	0,024	0,345	0,375	0,079

		Adiponectin	FABP4	FSTL1	Irisin
Adiponectin	ρ	1,000	0,110	-.671**	0,012
	p		0,087	<0,0001	0,857
FABP4	ρ	0,110	1,000	0,051	.162*
	p	0,087		0,426	0,012
FSTL1	ρ	-.671**	0,051	1,000	.321**
	p	<0,0001	0,426		<0,0001
Irisin	ρ	0,012	.162*	.321**	1,000
	p	0,857	0,012	0,000	
Waist-to-Hip Ratio	ρ	-.160*	-.131*	.160*	.143*
	p	0,012	0,041	0,013	0,026
Waist Circumference	ρ	-.270**	0,065	.293**	.150*
	p	<0,0001	0,364	<0,0001	0,034
HOMA-IR	ρ	-.192**	-0,104	.135*	.144*
	p	0,003	0,104	0,036	0,025
Troponin	ρ	-0,053	-0,113	0,104	-.138*
	p	0,409	0,079	0,107	0,031
Interleukin-6	ρ	.161*	-.176**	-.136*	-0,060
	p	0,012	0,006	0,034	0,352
Body Mass Index	ρ	-.319**	0,102	.265**	.192**
	p	<0,0001	0,111	0,000	0,003
Age	ρ	0,040	-.153*	-0,025	-.139*
	p	0,539	0,017	0,699	0,030

Spearman correlation coefficients (ρ) between anthropometric and biochemical parameters are shown. Abbreviation: HOMA-IR: Homeostatic model assessment of insulin resistance.

Table S2. Characteristics of FABP4 ROC curve in coronary artery disease

AUC	SE	<i>p</i>	%95 CI	Cut Off	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)
0.702	0.033	<0.0001	0.637- 0.766	0.584	39.53	92.11	85	57.38
				6.422	80.62	41.23	60.82	65.28

Two cutoff values (0.584 ng/mL and 6.422 ng/mL) are presented with their corresponding sensitivity, specificity, PPV, and NPV. To demonstrate the diagnostic performance of FABP4 at different clinical priorities, two thresholds determined using Youden's J index were included- higher sensitivity for screening versus higher specificity for confirmatory evaluation. Abbreviations: AUC: Area under the curve; *p*: Significance; CI: Confidence interval; SE: Standard error; NPV: Negative predictive value; PPV: Positive predictive value.

Biochemical analyses

All ELISA measurements were performed using ELK Biotechnology kits in accordance with the manufacturer's instructions. The specific catalog numbers were as follows: adiponectin (Cat: ELK1233, lot no: 17561221), FABP4 (Cat: ELK2150, lot no: 17563046), FSTL1 (Cat: ELK3142, lot no: 17565006), and irisin (Cat: ELK6625, lot no: 17573641). Quality control procedures were applied in accordance with the manufacturer's recommended standards. The 5-parameter logistic (5-PL) curve-fitting model was used to generate the standard curve. Samples were aliquoted into four parts upon initial processing and stored at -80 °C to avoid freeze-thaw cycles. The investigator conducting the assays was blinded to the patients' clinical classifications, and the samples were randomly arranged. Samples for adiponectin, FABP4, and irisin studies were diluted 40-fold, and samples for the FSTL1 study were diluted 100-fold. Sample concentrations were calculated from the standard curve drawn using five-parameter logistic regression based on the absorbance values of the standards. One patient's irisin value was outside the calibrator range and was treated as missing, so it was not included in the statistical analysis. The equation used for each plate and the standard curves are provided in order:

Adiponectin calibration range: 0.16-10 ng/mL.

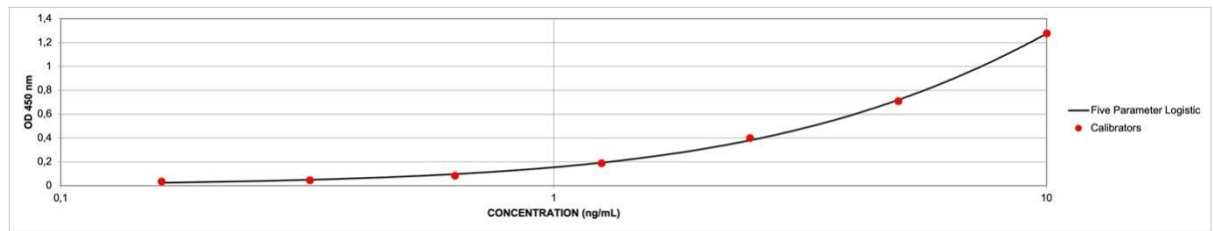


Figure S1. Adiponectin 1. Plate: $R^2= 0,9994$

$$y = 74102.53 + (0.003103479 - 74102.53)/(1 + (x/10.09353)^{1.064323})^{0.00002494115}$$

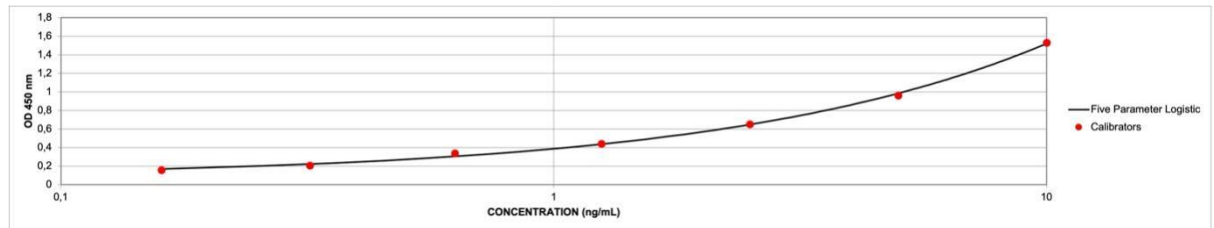


Figure S2. Adiponectin 2. Plate: $R^2= 0,9985$

$$y = 7121.451 + (0.07850245 - 7121.451)/(1 + (x/27095.58)^{0.6707265})^{0.04074906}$$

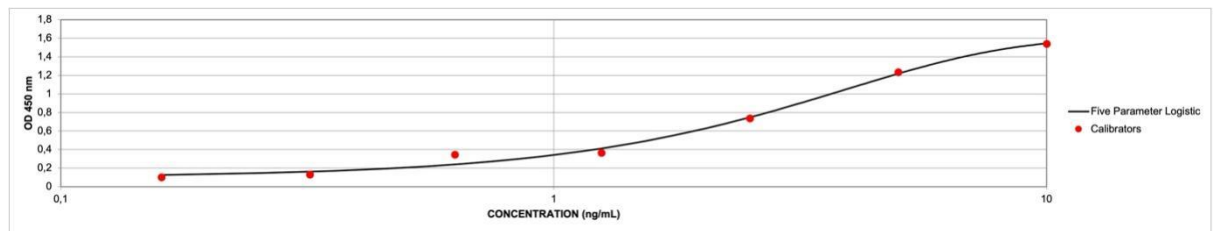


Figure S3. Adiponectin 3. Plate: $R^2= 0,9917$

$$y = 1.598074 + (0.1016772 - 1.598074)/(1 + (x/292331)^{1.278973})^{1713563}$$

FABP4 calibration range: 0-2000 pg/mL

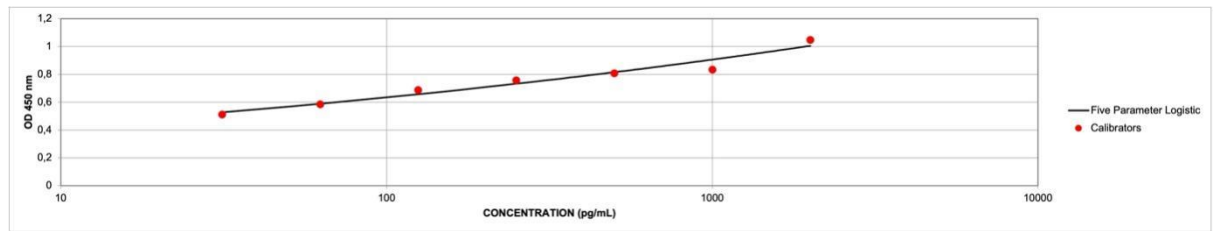


Figure S4. FABP4 1. Plate: $R^2= 0,9533$

$$y = 1753.705 + (0.04455612 - 1753.705)/(1 + (x/13896.12)^{0.1983739})^{0.001055148}$$

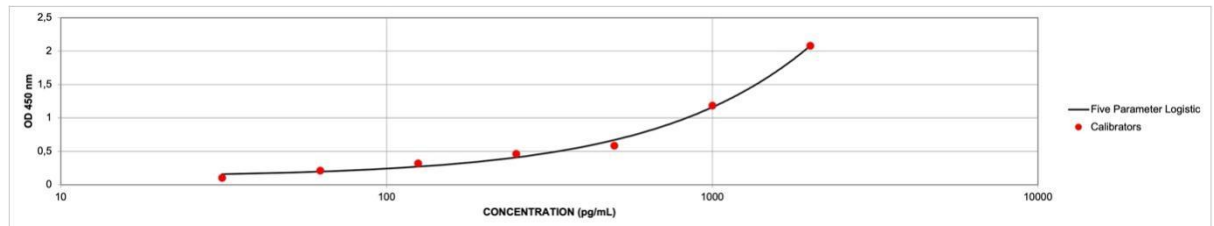


Figure S5. FABP4 2. Plate: $R^2= 0,9945$

$$y = 11454.55 + (0.113479 - 11454.55)/(1 + (x/122461.4)^{0.9176872})^{0.007576333}$$

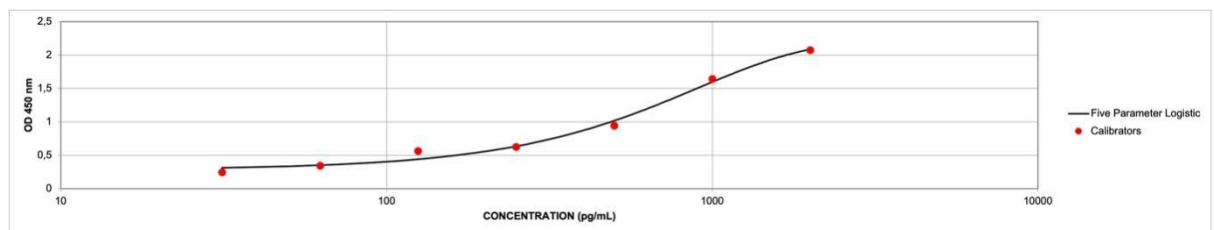


Figure S6. FABP4 3. Plate: $R^2= 0,9933$

$$y = 2.214219 + (0.2849123 - 2.214219)/(1 + (x/15384920)^{1.255839})^{206778.1}$$

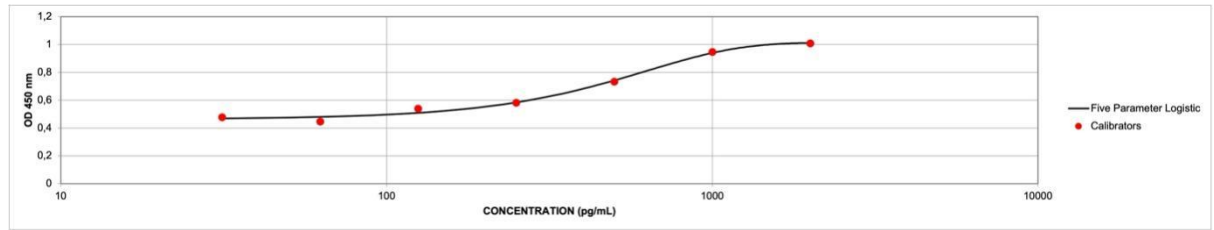


Figure S7. FSTL1 1. Plate: $R^2 = 0,9927$

$$y = 1.014072 + (0.4630112 - 1.014072)/(1 + (x/3566174)^{1.503526})^{438354.4}$$

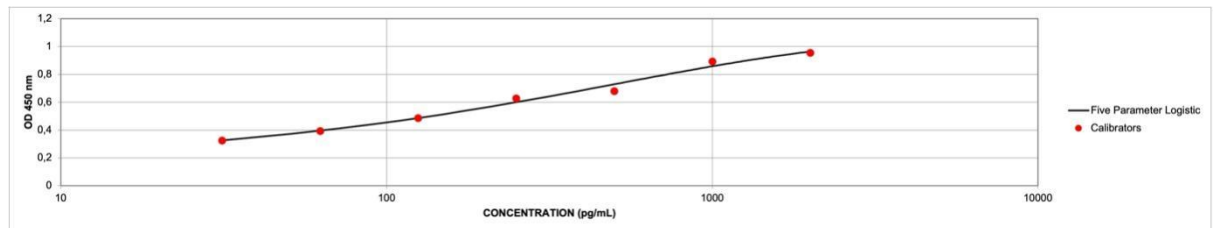


Figure S8. FSTL1 2. Plate: $R^2 = 0,9867$

$$y = 1.063961 + (0.1623138 - 1.063961)/(1 + (x/181336700)^{0.5771249})^{1601.114}$$

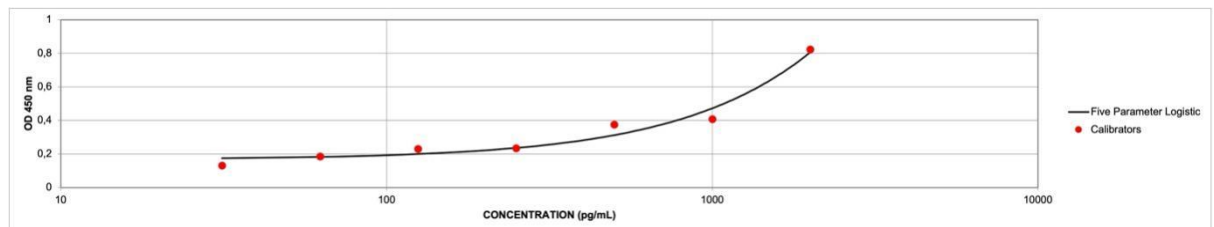


Figure S9. FSTL1 3. Plate: $R^2 = 0,9656$

$$y = 5244.195 + (0.1667051 - 5244.195)/(1 + (x/71344.87)^{1.074336})^{0.00573397}$$

Irisin calibration range: 0-1000 pg/mL

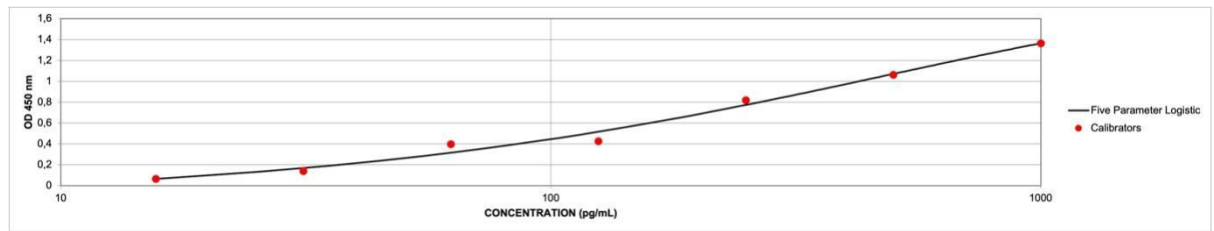


Figure S10. Irisin 1. Plate $R^2= 0,9873$

$$y = 1.763779 + (-0.140503 - 1.763779)/(1 + (x/139486300)^{0.628012})^{2660.082}$$

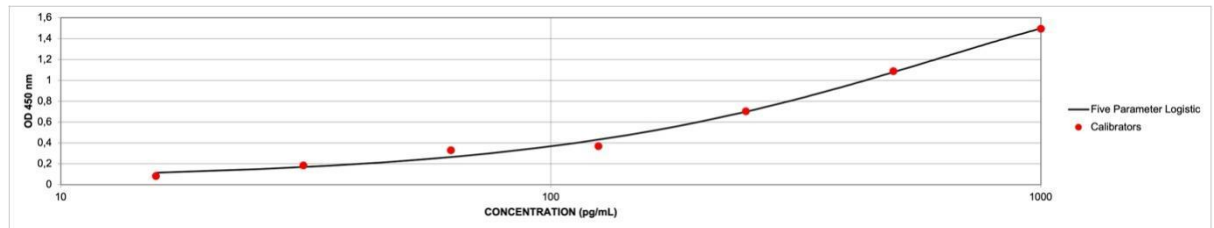


Figure S11. Irisin 2. Plate $R^2= 0,9942$

$$y = 1.897814 + (0.05345388 - 1.897814)/(1 + (x/32687720)^{0.911923})^{19982.94}$$

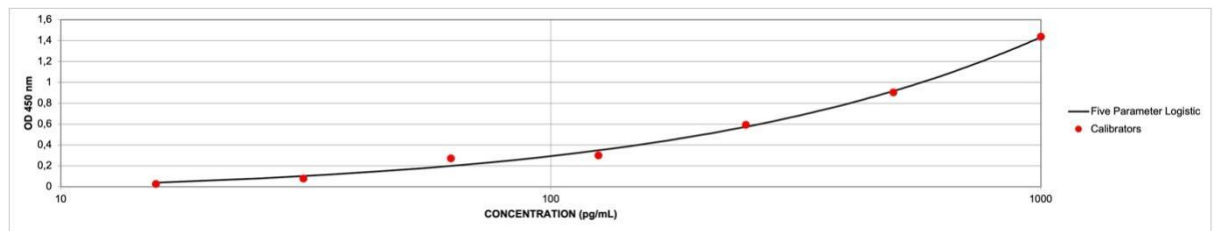


Figure S12. Irisin 3. Plate $R^2= 0,9942$

$$y = 6935.842 + (-0.08316246 - 6935.842)/(1 + (x/82907.89)^{0.6159374})^{0.00342963}$$

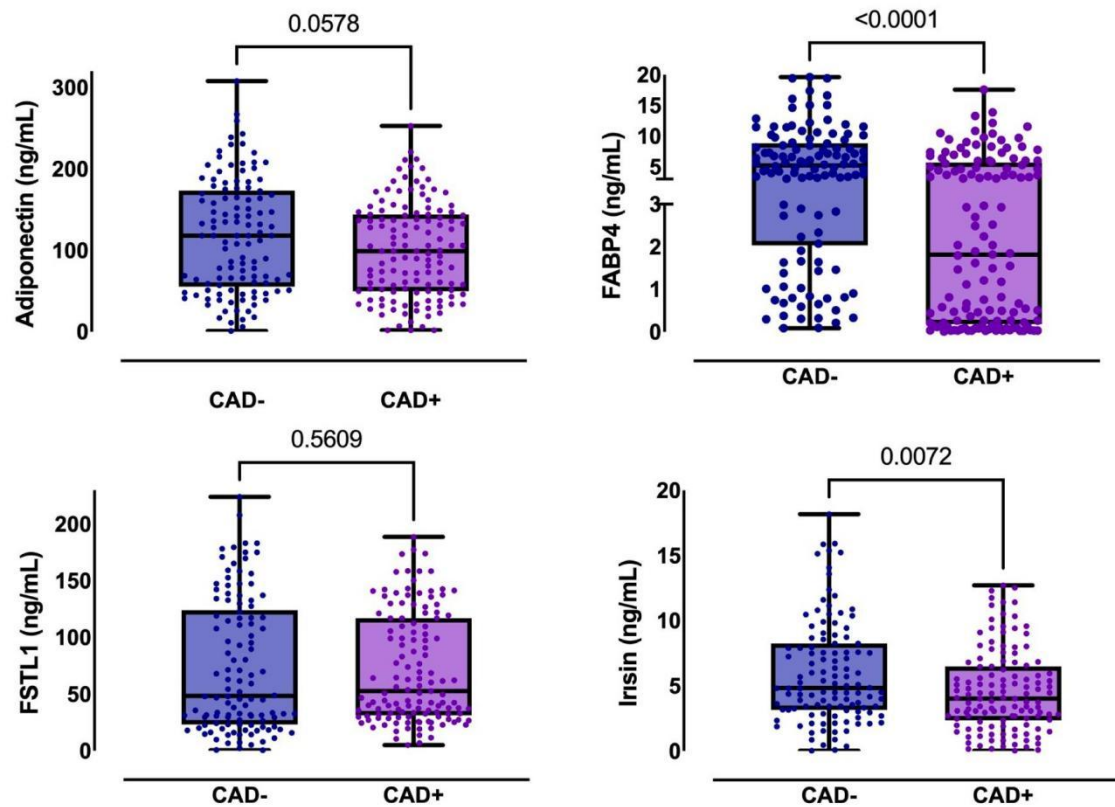


Figure S13. Distribution of circulating adiponectin, FABP4, irisin, and FSTL1 levels in patients with and without coronary artery disease. Median FABP4 levels were significantly lower in patients with coronary artery disease (1.81 [0.19–5.68] ng/mL) compared to those without the disease (5.23 [2.03–8.86] ng/mL; $p < 0.0001$). Similarly, irisin levels were lower in the CAD group (4.03 [2.36–6.49] ng/mL) than in the non-CAD group (4.85 [3.15–8.26] ng/mL; $p = 0.0072$). No significant differences were observed for adiponectin or FSTL1 levels. Abbreviations: CAD: Coronary artery disease; non-CAD: Without coronary artery disease; FABP4: Fatty acid-binding protein 4; FSTL1: Follistatin-like 1; p: Significance.

Graphical abstract

