



## Supplementary material

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### Thickness and an Altered miRNA Expression in the Epicardial Adipose Tissue Is Associated With Coronary Heart Disease in Sudden Death Victims

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*Table 1 of the supplementary material*

*miRNA Expression Profiles by Affymetrix miRNA 3.0 Array.*

miRNA	P-value	Fold-change
miR-628-5p	.0246	-3.903
miR-378h	.0068	-2.085
miR-4500	.023	-2.004
let-7f	.0335	-1.908
miR-483-5p	.0131	-1.833
miR-30b-star	.0209	-1.819
miR-1303	.0337	-1.818
miR-4743	.0068	-1.787
miR-628-3p	.0157	-1.740
miR-616	.0254	-1.705
miR-125a-5p	.0094	-1.704
let-7g	.0407	-1.610
miR-4656	.0312	-1.566
miR-4458	.0184	-1.548

miR-34a-5p	.0103	1.585
miR-1260b	.0232	1.615
miR-575	.026	1.638
miR-1343	.0215	1.647
miR-4723-3p	.0447	1.686
miR-4786-3p	.0245	1.782
miR-3200-5p	.0221	1.801
miR-339-5p	.0289	1.805
miR-3194-5p	.0083	1.881
miR-4454	.0321	1.995
miR-34c-3p	.0307	1.996
miR-4286	.0042	2.214
miR-124-3p	.0289	2.987
miR-34a-3p	.0251	4.115

*CHD, coronary heart disease; miRNA, microRNA; SCD, sudden cardiac death; SD, sudden death.*

*28 mature miRNAs differentially expressed ( $P < .05$  and  $\pm 1.5$  fold-change) in epicardial adipose tissue from arteries with plaque in CHD-SCD patients (14 up-regulated and 14 down-regulated) compared to miRNAs in epicardial adipose tissue from arteries without plaque in non-CHD-SD controls.*

*Shaded lines indicate miRNA selected for the qRT-PCR experiments.*

**Table 2 of the supplementary material**

Correlations Between Several Parameters and miRNAs Levels in Epicardial Adipose Tissue Extracts From Coronary Arteries Without Plaques in Non-CHD-SD Controls (N=28) and From Coronary Arteries With Plaque in CHD-SCD Patients (N=78).

	<b>miR-34a-3p</b>	<b>miR-34a-5p</b>	<b>miR-124-3p</b>	<b>miR-125a-5p</b>	<b>miR-628-5p<sup>a</sup></b>	<b>miR-1303<sup>b</sup></b>	<b>miR-4286</b>
	<b>r (P)</b>	<b>r (P)</b>	<b>r (P)</b>	<b>r (P)</b>	<b>r (P)</b>	<b>r (P)</b>	<b>r (P)</b>
<b>Age</b>							
Controls	0.412 (.029)	0.454 (.015)	0.247 (.279)	0.212 (.279)	0.204 (.317)	0.414 (.142)	-0.202 (.302)
Patients	0.023 (.840)	-0.034 (.767)	-0.083 (.471)	0.017 (.809)	-0.085 (.464)	0.206 (.203)	-0.032 (.779)
<b>BMI</b>							
Controls	0.280 (.185)	0.111 (.573)	-0.068 (.732)	0.011 (.955)	-0.010 (.961)	0.038 (.897)	-0.029 (.882)
Patients	0.044 (.716)	-0.031 (.795)	-0.137 (.250)	-0.079 (.507)	-0.058 (.632)	-0.097 (.578)	-0.072 (.549)
<b>AC</b>							
Controls	0.227 (.287)	0.028 (.897)	-0.067 (.755)	-0.133 (.537)	0.313 (.156)	0.155 (.668)	0.174 (.417)
Patients	0.055 (.646)	0.032 (.788)	-0.199 (.095)	-0.082 (.492)	-0.109 (.367)	-0.087 (.621)	-0.125 (.296)
<b>TC</b>							

Controls	0.045 (.828)	0.240 (.238)	0.099 (.631)	-0.117 (.570)	0.086 (.689)	0.191 (.551)	-0.335 (.095)
Patients	-0.083 (.493)	-0.064 (.595)	0.000 (.998)	0.081 (.503)	0.058 (.636)	0.095 (.593)	0.105 (.383)
<b>Right AV groove</b>							
Controls	0.580 (.004)	0.461 (.027)	0.215 (.324)	0.338 (.115)	0.155 (.503)	0.487 (.129)	0.093 (.672)
Patients	0.107 (.353)	0.062 (.594)	0.075 (.518)	0.104 (.367)	-0.064 (.598)	0.151 (.347)	-0.138 (.228)
<b>Anterior RV wall</b>							
Controls	0.533 (.009)	0.414 (.049)	0.550 (.007)	0.197 (.368)	0.177 (.442)	0.487 (.129)	-0.126 (.567)
Patients	0.137 (.230)	0.061 (.595)	0.005 (.967)	0.070 (.544)	0.032 (.782)	0.328 (.036)	-0.026 (.822)
<b>Lateral RV wall</b>							
Controls	0.312 (.147)	0.257 (.236)	0.228 (.295)	0.015 (.947)	0.040 (.865)	0.111 (.746)	0.181 (.410)
Patients	0.077 (.500)	0.037 (.748)	-0.051 (.658)	0.001 (.996)	0.063 (.584)	0.056 (.728)	0.004 (.975)
<b>Left AV groove</b>							
Controls	0.486 (.019)	0.330 (.124)	0.419 (.047)	0.425 (.043)	0.161 (.486)	-0.107 (.753)	-0.044 (.841)
Patients	0.024 (.836)	0.051 (.659)	0.004 (.971)	0.072 (.533)	0.033 (.774)	0.304 (.054)	-0.064 (.575)
<b>Anterior LV wall</b>							
Controls	0.365 (.087)	0.219 (.314)	0.645 (.001)	0.149 (.497)	0.210 (.361)	0.370 (.262)	0.210 (.337)

Patients	0.148 (.197)	0.167 (.143)	0.136 (.236)	0.203 (.074)	0.178 (.122)	0.131 (.415)	0.082 (.477)
<b>Anterior IV groove</b>							
Controls	0.602 (.002)	0.509 (.013)	0.387 (.068)	0.404 (.056)	0.249 (.277)	-0.151 (.658)	-0.161 (.463)
Patients	-0.041 (.395)	-0.010 (.932)	-0.091 (.426)	-0.064 (.575)	-0.061 (.598)	0.151 (.347)	-0.138 (.228)
<b>EAT score</b>							
Controls	0.667 (.001)	0.537 (.008)	0.492 (.017)	0.373 (.079)	0.213 (.353)	0.254 (.451)	0.010 (.965)
Patients	0.098 (.395)	0.074 (.522)	-0.010 (.934)	0.070 (.544)	0.005 (.965)	0.233 (.148)	-0.067 (.563)

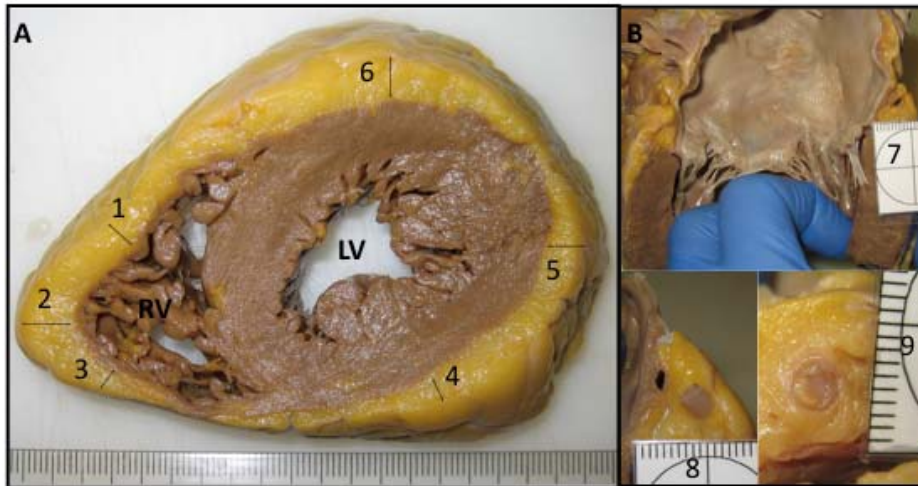
AC, abdominal circumference; AV, atrioventricular; BMI, body mass index; CHD, coronary heart disease; EAT, epicardial adipose tissue; EAT score, total sum of the epicardial adipose tissue thickness measurements in each individual; IV, interventricular; LV, left ventricular; RV, right ventricular; SCD, sudden cardiac death; SD, sudden death; TC, total cholesterol.

<sup>a</sup>As an exception, evaluable results of miR-628-5p levels were obtained in less CHD-SCD patients and non-CHD-SD controls (N=77 and N=26, respectively)

<sup>b</sup>As an exception, evaluable results of miR-1303 levels were obtained in less CHD-SCD patients and non-CHD-SD controls (N=41 and N=14, respectively)

**Figure 1 of the supplementary material.**

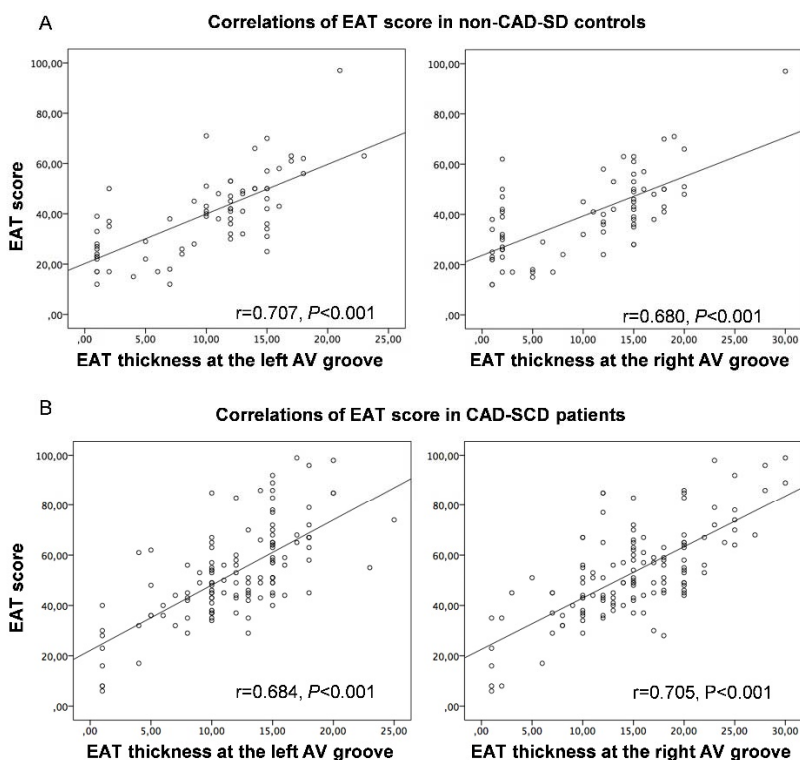
Postmortem EAT measurement technique. A: maximal measurement on the RV and LV surfaces. B: measurements at the grooves. 1, anterior RV wall; 2, lateral RV wall; 3, posterior RV wall; 4, posterior LV wall; 5, lateral LV wall; 6, anterior LV wall; 7, left AV groove; 8, right AV groove; 9, anterior IV groove. EAT, epicardial adipose tissue. RV, right ventricular; LV, left ventricular.



**Figure 2 of the supplementary material.**

Correlations of the EAT score with the individual EAT measurements at different sites in non-CHD-SD controls (N = 73) and CHD-SCD patients (N = 130). A: the most relevant correlations in controls are shown, the rest are listed on the left. B: the most relevant correlations in patients are shown, the rest are listed on the left. AV, atrioventricular; CHD, coronary heart disease; EAT, epicardial adipose tissue; EAT score, total sum of the EAT thickness measurements in each individual; IV interventricular; LV, left ventricular; RV; right ventricular; SCD, sudden cardiac death; SD, sudden death.

Statistical significance ( $P < .05$ ) was assessed by Pearson correlations.



**Correlations of EAT score**

	CONTROLS		PATIENTS	
	r	P	r	P
Anterior IV groove	0.425	<0.001	0.731	<0.001
Anterior LV wall	0.463	0.003	0.445	<0.001
Anterior RV wall	0.461	<0.001	0.56	<0.001
Lateral RV wall	0.547	<0.001	0.655	<0.001
Lateral LV wall	0.537	<0.001	0.458	<0.001
Posterior RV wall	0.418	<0.001	0.339	<0.001
Posterior LV wall	0.281	0.018	0.325	<0.001