

ONLINE SUPPLEMENTARY MATERIAL

Parameters	Psoriatic Arthritis (Naïve)	Healthy Controls
Number, n	31	20
Sex, female, %	22 (69%)	13 (65%)
Age, Years	46.1 (12.503)	38.0 (11.2)
DAS28-CRP	3.534(1.136)	N/A
CRP, mg/l	8.357 (10.704)	N/A
ESR, mm/h	20.034 (15.667)	N/A
SJC	2.067 (2.363)	N/A
TJC	2.9 (3.604)	N/A
Disease Duration, years	3 (1.17)	N/A

DAS28, Disease activity score; CRP, C-reactive protein; ESR, erythrocyte sedimentation rate; SJC, swollen joint count; TJC, tender joint count.

Supplementary Table 1 Clinical characteristics of psoriatic arthritis patients and healthy controls recruited to the study.

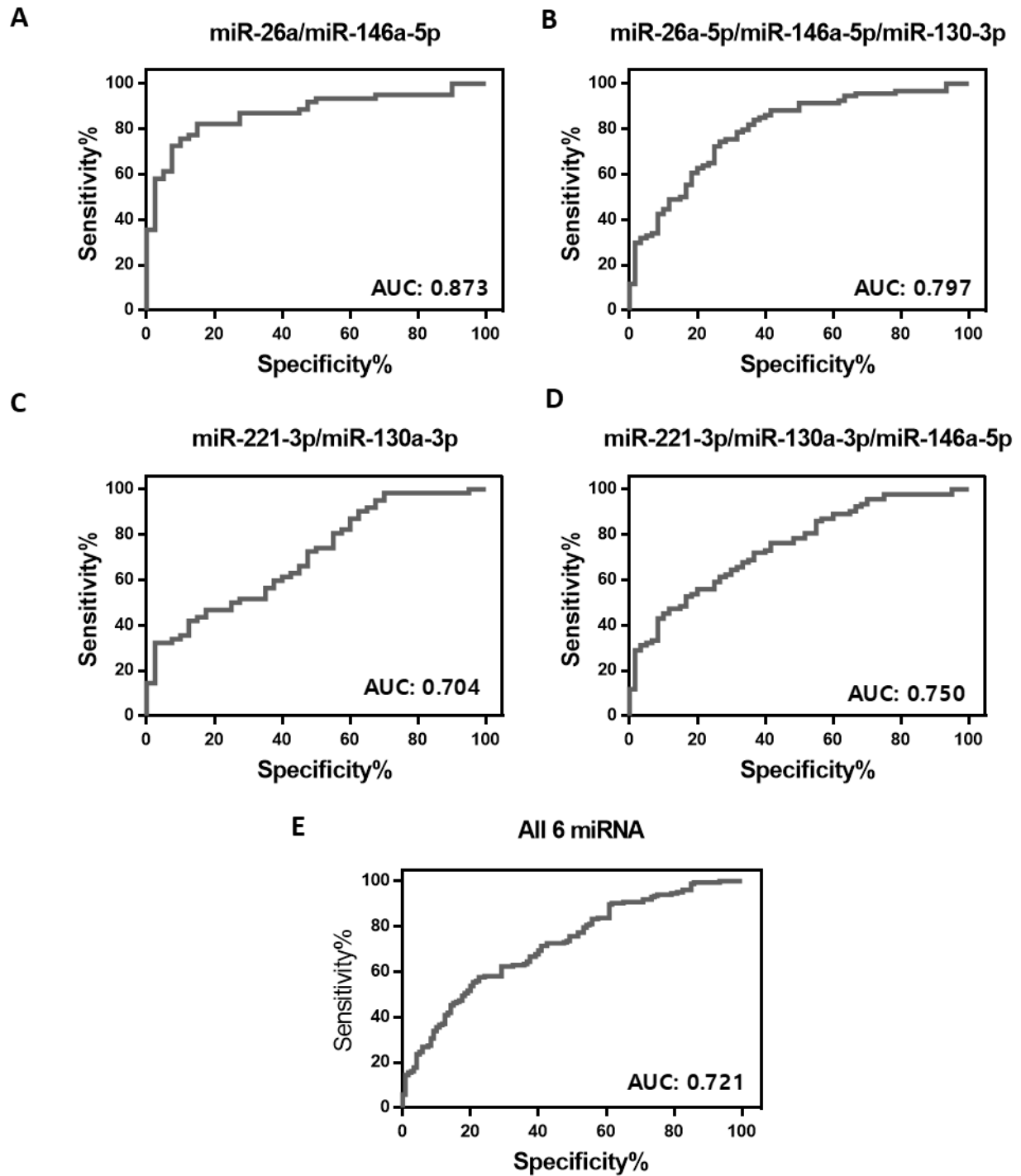
let-7b-5p	miR-20a-5p
let-7d-5p	miR-20b-5p
let-7e-5p	miR-21-5p
let-7g-5p	miR-210-3p
let-7i-5p	miR-22-3p
miR-10a-5p	miR-221-3p
miR-122-5p	miR-223-3p
miR-1246	miR-23a-3p
miR-125a-5p	miR-24-3p
miR-126-3p	miR-26a-5p
miR-129-5p	miR-29a-3p
miR-130a-3p	miR-25b-3p
miR-132-3p	miR-29c-3p
miR-140-3p	miR-30a-5p
miR-142-3p	miR-30b-5p
miR-145-5p	miR-320a
miR-146a-5p	miR-320d
miR-150-5p	miR-339-5p
miR-151a-5p	miR-33a-5p
miR-154-3p	miR-342-3p
miR-155-5p	miR-34a-5p
miR-15a-5p	miR-375
miR-15b-5p	miR-376b-3p
miR-16-5p	miR-422a
miR-16-2-3p	miR-429
miR-17-5p	miR-431-3p
miR-181a-5p	miR-451-3p
miR-181b-5p	miR-486-5p
miR-185-5p	miR-494-3p
miR-192-5p	miR-523-5p
miR-196a-5p	miR-744-5p
miR-200a-3p	miR-885-5p
miR-203a-3p	miR-92a-3p
miR-205-5p	miR-93-5p

Supplementary Table 2: List of immunological focused miRNA panel

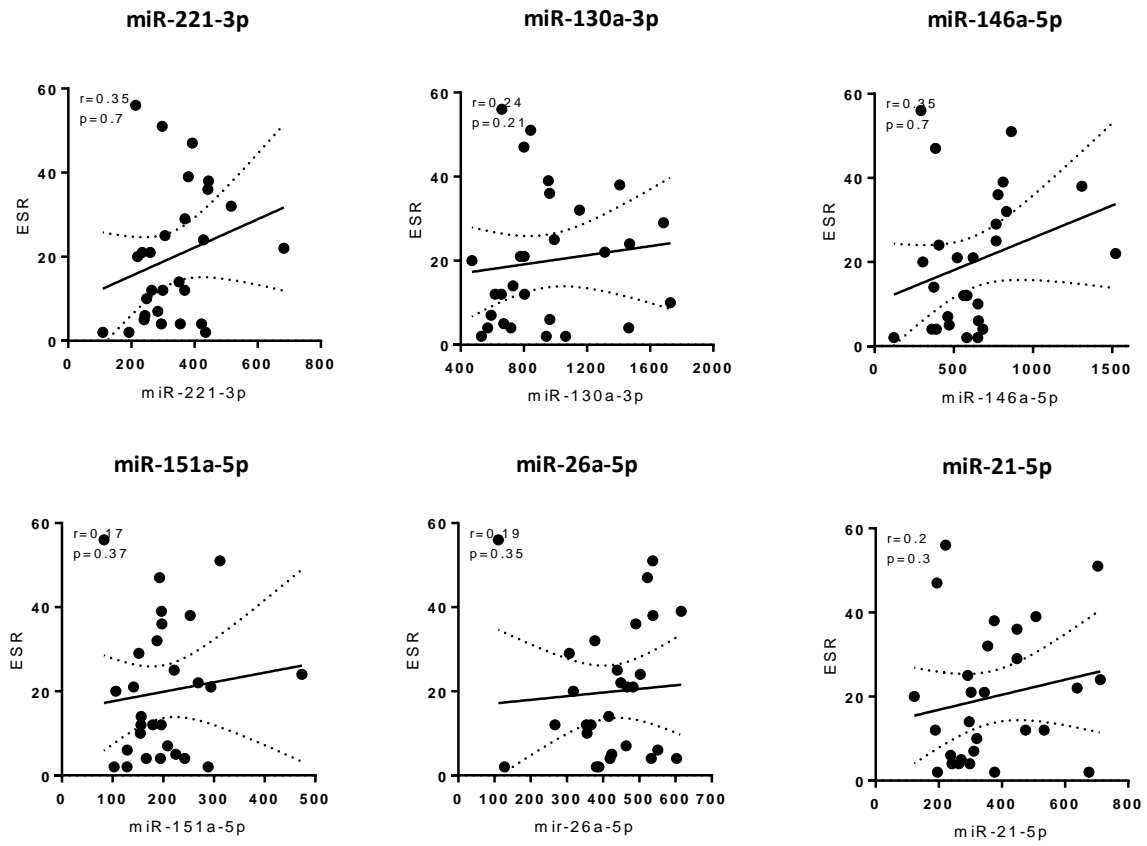
Systemic Name	Mirbase Accession No	Regulation	Fold Change	p (corr)
hsa-miR-221-3p	MIMAT0000278	↑	1.76	0.000005
hsa-miR-130a-3p	MIMAT0000425	↑	1.63	0.00009
hsa-miR-146a-5p	MIMAT0000449	↑	1.93	0.0001
hsa-miR-151a-5p	MIMAT0004697	↑	1.98	0.0002
hsa-miR-26a-5p	MIMAT0000082	↑	1.69	0.0020
hsa-miR-21-5p	MIMAT0000076	↑	1.55	0.0202
hsa-miR-16-5p	MIMAT0000069	↓	0.75	0.0225
hsa-miR-744-5p	MIMAT0004945	↑	2.49	0.0318
hsa-miR-451a	MIMAT0001631	↓	0.67	0.0436
hsa-miR-150-5p	MIMAT0000451	↓	0.66	0.0889
hsa-miR-494-3p	MIMAT0002816	↑	3.65	0.0925
hsa-miR-30b-5p	MIMAT0000420	↑	1.41	0.1185
hsa-miR-431-3p	MIMAT0001625	↑	1.61	0.1213
hsa-miR-7d-5p	MIMAT0000065	↑	1.6	0.1477
hsa-miR-181b-5p	MIMAT0000257	↑	1.56	0.1512
hsa-miR-93-5p	MIMAT0000093	↓	0.85	0.2566
hsa-miR-24-3p	MIMAT0000080	↑	1.28	0.3666
hsa-miR-20b-5p	MIMAT0001413	↓	0.8	0.7087
hsa-miR-205-5p	MIMAT0000266	↓	0.46	0.7158
hsa-miR-33a-5p	MIMAT0000091	↑	2.14	0.8663

P (corr); Bonferroni-corrected one-way ANOVA

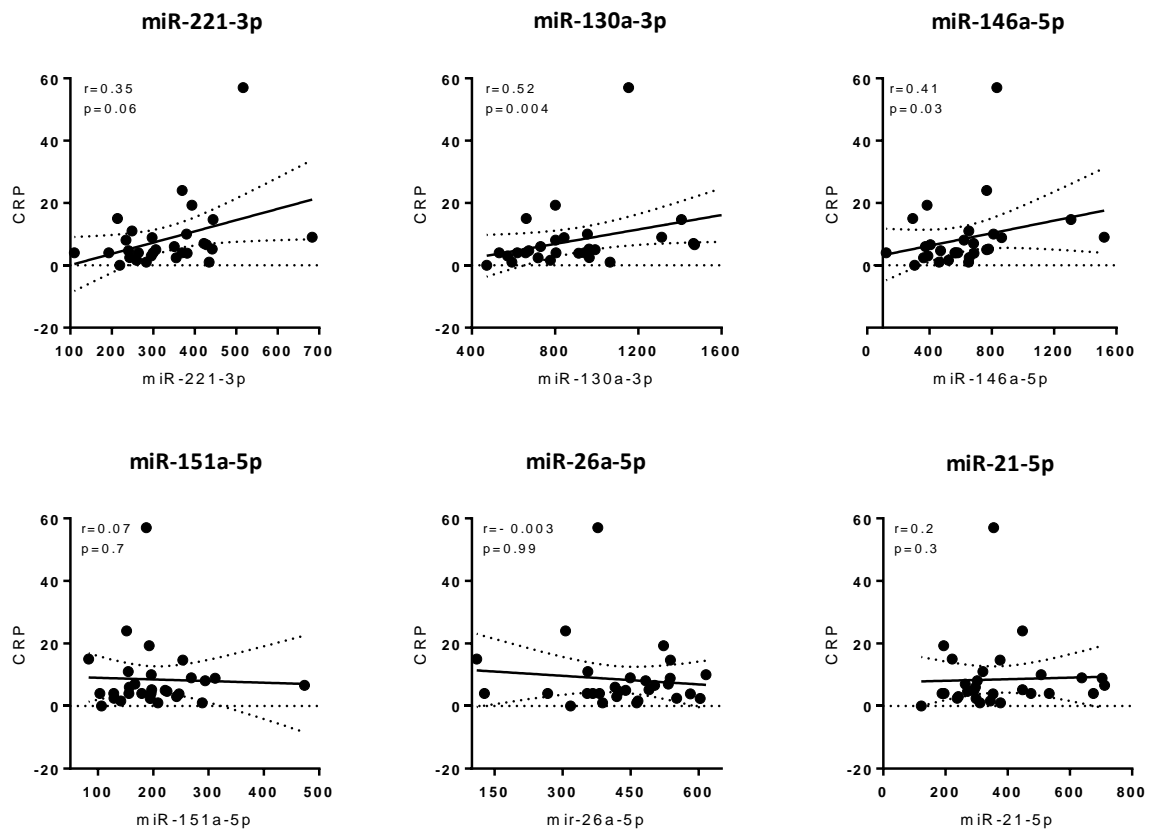
Supplementary Table 3: Differentially expressed serum miRNA between PsA and healthy controls.



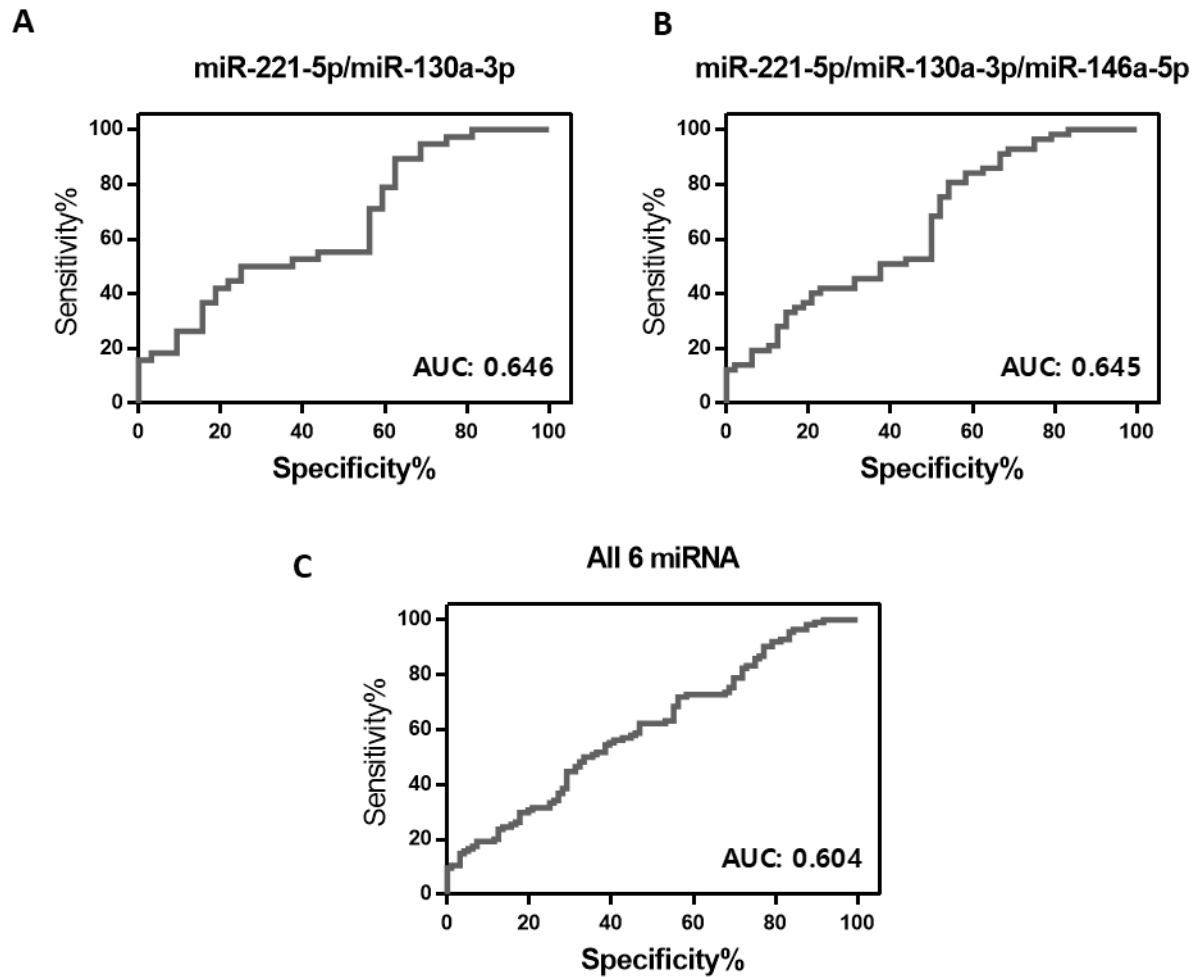
Supplementary Figure 1: The diagnostic value of multi-variant serum miRNA for (A) two-miRNA signature, miR-26a-5p and miR-146a-5p, and (B) three-miRNA signature, miR-26a-5p, miR-146a-5p, and miR-130a-3p, with the strongest individual AUC values. The predictive value for the most differently expressed (C) two-miRNA signature, miR-221-3p and miR-130a-3p, and (D) three-miRNA signature, miR-221-3p, miR-130a-3p, and miR-146a-5p, as compared to healthy controls. (E) The predictive value of the six-miRNA signature.



Supplementary Figure 2: Spearman pair-wise correlation analysis of miRNA expression and ESR.



Supplementary Figure 3: Spearman pair-wise correlation analysis of miRNA expression and CRP.



Supplementary Figure 4: The prognostic value of multi-variant serum miRNA for (A) two-miRNA signature, miR-26a-5p and miR-146a-5p, and (B) three-miRNA signature, of the strongest individual AUC values, for response to therapy. (C) The prognostic value of the six-miRNA signature.

Parameter	Responder	Non-Responder
Number, n	14	18
CRP, mg/l	13.21 (3.8)	3.87 (0.54)
ESR, mm/h	19.78 (4.2)	14.42 (2.59)
SJC	7.32 (2.58)	1.42 (0.28)
TJC	3 (0.92)	2.37 (0.65)
Synovitis	54.16 (8.58)	70.24 (3.52)
Vascularity	67.58 (4.55)	69.69 (4.24)

CRP, C - reactive protein; ESR, erythrocyte sedimentation rate; SJC, swollen joint count; TJC, tender joint count. Mean (Std. Error of Mean)

Supplementary Table 4: Responder and non-responder patient demographics