

Table S1. Baseline characteristics of the RA patients

Parameter	Healthy volunteers (n = 124)	Patients (n = 139)	P value
Age, years	58 ± 9	55 ± 8	0.62
Sex (male/female)	105/103	106/105	0.54
Disease duration, years	6.5 ± 2.2	-	0
Body mass index, kg/m ²	24.32 ± 5.50	28.16 ± 6.27	0.71
Rheumatoid factor	-	31 ± 6	0
Creatinine, μ mol/L	71 ± 5.54	49 ± 6.73	0.0072

Table S2. Pathway analysis results via IPA.

Ingenuity Canonical Pathways	-log(p-value)	Ratio	Molecules
Bile Acid Biosynthesis	4.55E00	4.08E-02	glycocholic acid, taurocholic acid
FXR/RXR Activation	3.65E00	1.46E-02	chenodeoxycholic acid, taurocholic acid
Hepatic Cholestasis	3.45E00	1.15E-02	chenodeoxycholic acid, taurocholic acid
Asparagine Degradation I	3.05E00	2E-01	L-asparagine
Asparagine Biosynthesis I	2.84E00	1.25E-01	L-asparagine
tRNA Charging	1.84E00	1.22E-02	L-asparagine