

Supplementary figures and tables

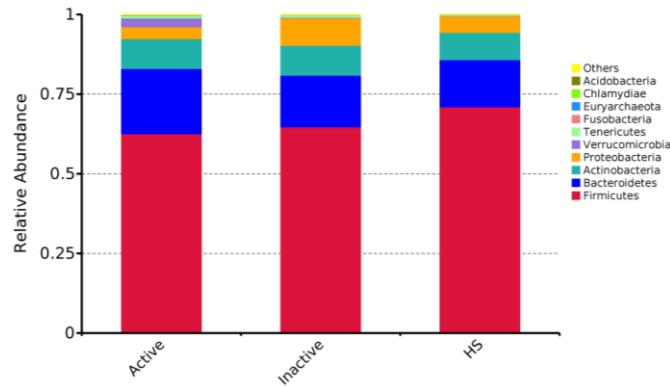


Figure S1 Percentage of bacteria (A) of the top ten phyla in Active-SoJIA, Inactive-SoJIA and healthy subjects (HS).

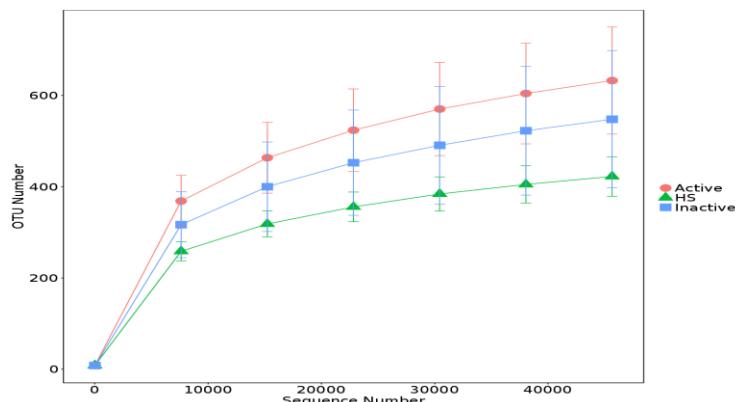


Figure S2 Rarefaction curves for gene number in HS ($n = 32$), Active-SoJIA ($n = 17$), and Inactive-SoJIA ($n = 15$). The curve in each group is near smooth when the sequencing data are great enough with few new genes undetected.

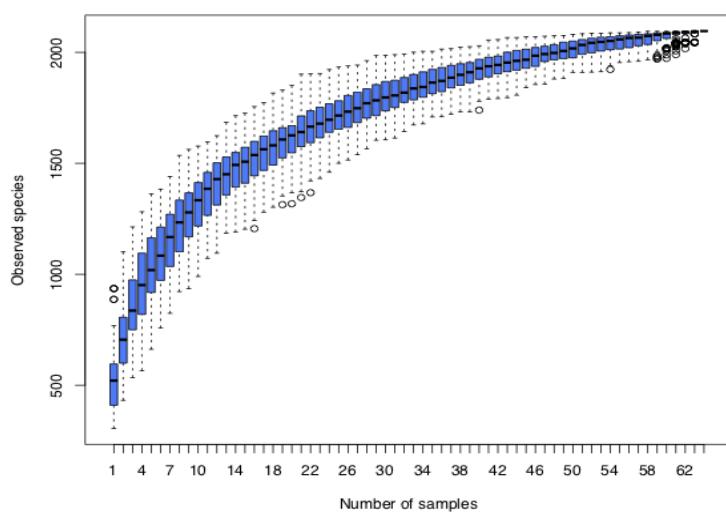


Figure S3 Species accumulation curve. The curve is near smooth when the when the sample size is sufficient.

Table S1 Clinical data of SoJIA patients.

ID patient	sex	Age at sampling (Y= year; Mo= months)	Diseas e durati on (Mo)	CRP (mg/L)	ESR (mm /h)	AJ C	PG A	V AS	JAD AS-27
Ina-SoJIA01	M	11 Y and 11 Mo	17	5	3	0	0	0	0
Ina-SoJIA02	F	9 Y and 4 Mo	58	1	2	0	0	0	0
Ina-SoJIA03	M	7 Y and 4 Mo	24	1	7	0	0	0	0
Ina-SoJIA04	F	10 Y and 4 Mo	27	1	11	0	0	0	0
Ina-SoJIA05	F	14 Y and 8 Mo	22	2	1	0	0	0	0
Ina-SoJIA06	M	13 Y and 7 Mo	74	1	3	0	0	0	0
Ina-SoJIA07	F	16 Y	55	1	5	0	0	0	0
Ina-SoJIA08	M	13 Y and 8 Mo	28	3	3	0	0	0	0
Ina-SoJIA09	F	12 Y and 8 Mo	78	4	4	0	0	0	0
Ina-	M	15 Y and 5	122	7	1	0	0	0	0

SoJIA10		Mo							
Ina-SoJIA11	M	9 Y and 8 Mo	65	4	4	0	0	0	0
Ina-SoJIA12	F	8 Y and 9 Mo	39	1	5	0	0	0	0
Ina-SoJIA13	M	7 Y and 7 Mo	32	1	5	0	0	0	0
Ina-SoJIA14	F	12 Y and 6 Mo	37	1	19	0	0	0	0
Ina-SoJIA15	F	11 Y and 8 Mo	50	7	16	0	0	0	0
A-SoJIA01	M	15 Y	20	1	1	0	1	2	3
A-SoJIA02	M	12 Y and 9 Mo	98	1	2	0	1	1	2
A-SoJIA03	F	6 Y and 4 Mo	14	13.5	5	1	3	5	9
A-SoJIA04	F	6 Y and 4 Mo	51	1	1	4	2	3	9
A-SoJIA05	M	12 Y and 6 Mo	119	9	16	1	3	5	9
A-SoJIA06	F	14 Y and 6 Mo	95	4	21	2	2	2	6.1
A-SoJIA07	M	14 Y and 4 Mo	3	13	41	0	1	2	5.1
A-SoJIA08	F	9 Y and 9 Mo	62	10	8	1	2	3	6
A-SoJIA09	M	14 Y and 1 Mo	129	62	103	18	7	7	40.3
A-	F	6 Y	39	3	7	5	4	5	14

SoJIA10									
A- SoJIA11	M	14 Y and 4 Mo	119	56	111	24	8	9	50.1
A- SoJIA12	M	6 Y and 1 Mo	2	46	53	5	5	5	18.3
A- SoJIA13	F	11 Y and 2 Mo	23	260	105	24	8	8	48.5
A- SoJIA14	M	8 Y and 2 Mo	56	62	59	2	2	3	10.9
A- SoJIA15	M	13 Y and 11 Mo	129	33	33	4	3	3	11.3
A- SoJIA16	F	10 Y and 8 Mo	26	128	86	3	3	3	15.6
A- SoJIA17	F	9Y and 8 Mo	8	160	102	14	6	7	35.2

CRP=C Reactive Protein, ESR= erythrocyte sedimentation rate,PGA=physician global assessment,VAS =parent/patient Visual Analogue Scale of well-being,AJC=active joint count, JADAS-27=Juvenile arthritis disease activity score on 27 joints. A-SoJIA=Active SoJIA, Ina-SoJIA=Inactive SoJIA,HS=Healthy subjects.

Table S2 P-value of the relative abundance of bacterial between pairs of groups.

Group 1	Group 2	<i>p</i> -value
Firmicutes/Bacteroidetes		
A-SoJIA	HS	0.048*
Ina-SoJIA	HS	1.000
A-SoJIA	Ina-SoJIA	0.261
c_Erysipelotrichia		
A-SoJIA	HS	0.000*
Ina-SoJIA	HS	0.004*
A-SoJIA	Ina-SoJIA	1.000

o_Erysipelotrichales

A-SoJIA	HS	0.000*
Ina-SoJIA	HS	0.004*
A-SoJIA	Ina-SoJIA	1.000

f_Ruminococcaceae

A-SoJIA	HS	0.005*
Ina-SoJIA	HS	0.072
A-SoJIA	Ina-SoJIA	1.000

f_Bacteroidaceae

A-SoJIA	HS	0.030*
Ina-SoJIA	HS	1.000
A-SoJIA	Ina-SoJIA	0.353

g_Faecalibacterium

A-SoJIA	HS	0.000*
Ina-SoJIA	HS	0.088
A-SoJIA	Ina-SoJIA	0.176

g_Bacteroides

A-SoJIA	HS	0.030*
Ina-SoJIA	HS	1.000
A-SoJIA	Ina-SoJIA	0.353

Significances were calculated using Kruskal Wallis test and Bonferroni correction. p<0.05 are considered statistically significant. A-SoJIA=Active SoJIA, Ina-SoJIA=Inactive SoJIA, HS=Healthy subjects.