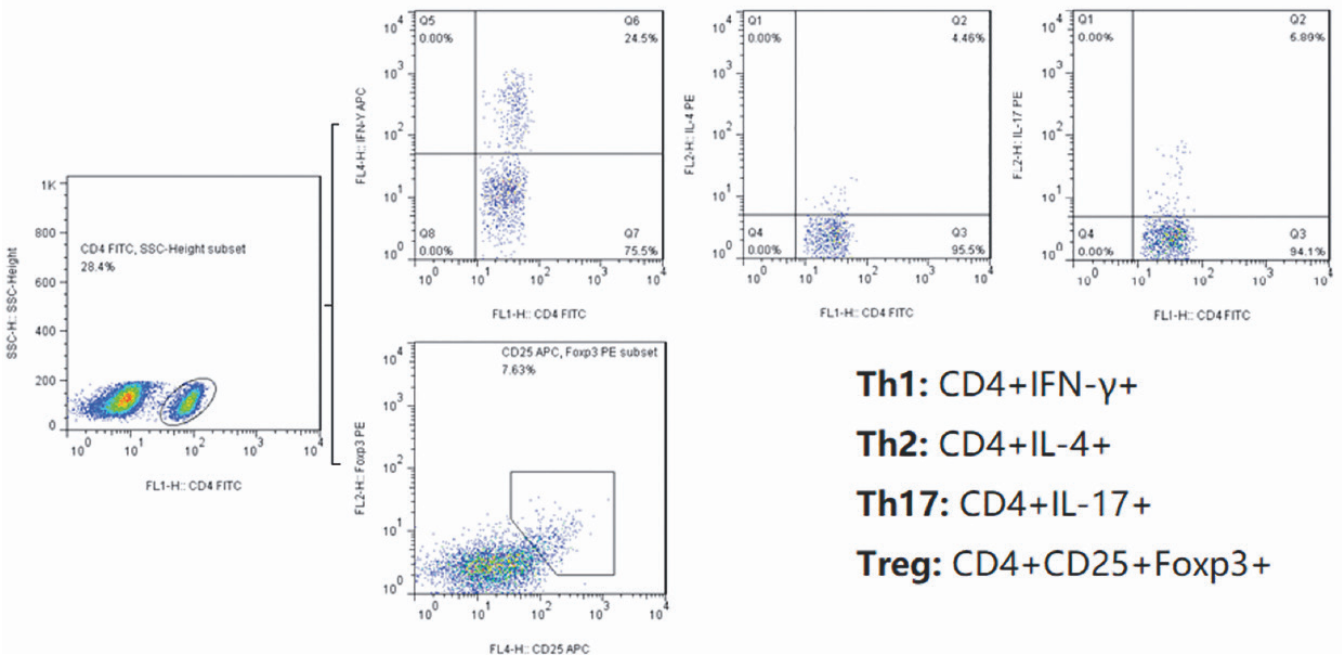
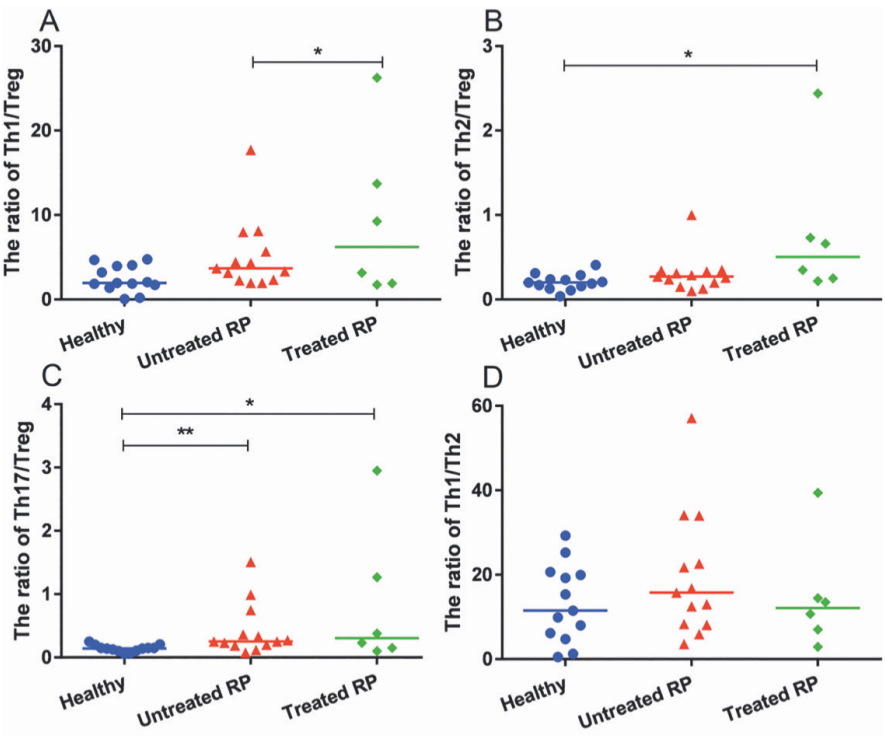
Supplementary material



Supplementary Fig. S1. Phenotypic characterisation of $CD4^+$ T cell subsets by Flow cytometry. All dot plot analysis is of $CD4^+$ gated lymphocyte. Th1: $CD4^+INF\text{-}\gamma^+$; Th2: $CD4^+IL\text{-}4^+$; Th17: $CD4^+IL\text{-}17^+$; Treg: $CD4^+CD25^+Foxp3^+$.

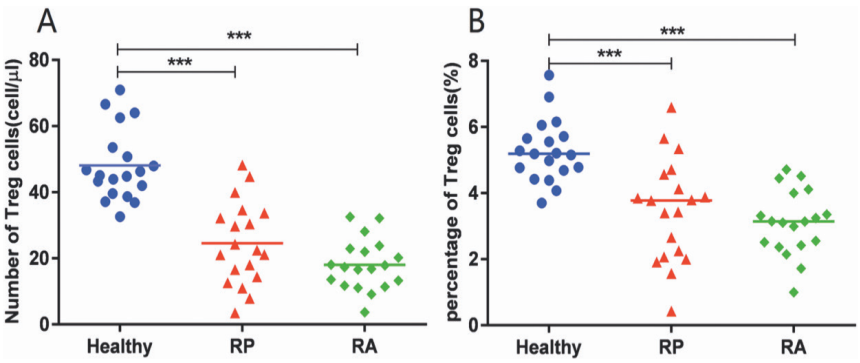


Supplementary Fig. S2. Imbalance between CD4+T cell subsets in different RP patients and healthy controls. All patients were divided into untreated RP group (n=13) and treatment RP group (n=6) based on whether they had been treated with glucocorticoids and immunosuppressants.
A: Compared with untreated RP patients, the ratio of Th1/Treg cells in treated RP patients increased.
B: The ratio of Th2/Treg in treated RP patients was higher than healthy controls.
C: The ratio of Th17/Treg cells in untreated and treated RP patients increased compared with healthy controls.
D: The ratio of Th1/Th2 cells was not altered significantly.
All data are presented as medians. Statistical analyses were performed using the independent-samples Kruskal-Wallis test (non-normality). *$p<0.05$; **$p<0.01$.

Supplementary Table S1. Laboratory characteristics of 19 patients with RP.

Laboratory test	
ESR ↑	15/19 (78.95%)
CRP ↑	9/19 (47.37%)
IgA ↑	2/19 (10.53%)
IgG ↑	1/19 (5.26%)
IgM ↑	1/19 (5.26%)
RF positive	1/19 (5.26%)
ANA positive	4/19 (21.05%)
Anti-ENA positive	1/19 (5.26%)
c-ANCA positive	1/19 (5.26%)

ESR: erythrocyte sedimentation rate; CRP: C-reaction protein; Ig: immunoglobulins; RF: rheumatoid factor antigen; ANA: anti-nuclear antibody; Anti-ENA: anti ENA antibody; ANCA: antineutrophil cytoplasmic antibody.



Supplementary Fig. S3. Difference between peripheral Treg cells in RA and RP patients.
A-B: There was no statistically significant change in the absolute number or percentage of peripheral Treg cells between RP and RA patients, even though those in RA and RP patients were lower than those in healthy people.
All data are presented as medians. Statistical analyses were performed using the Mann-Whitney U-test (non-normality). ***$p<0.001$.