

**Supplementary material**

<b>Clinical feature</b>	<b>SLE (n=50)</b>
<b>Current affected system</b>	
Musculoskeletal, n (%)	8 (16%)
Skin, n (%)	7 (14%)
Hematological, n (%)	8 (16%)
Urinary, n (%)	6 (12%)
Respiratory, n (%)	0 (0%)
Cardiac, n (%)	0 (0%)
Neurological, n (%)	0 (0%)
<b>Comorbidities, n (%)</b>	
High blood pressure, n (%)	13 (35,1%)
Hypothyroidism, n (%)	10 (27%)
Osteoporosis, n (%)	7 (18,9%)
Dyslipidemia, n (%)	6 (16,2%)
Fibromyalgia, n (%)	3 (8,1%)
Type 2 Diabetes Mellitus, n (%)	2 (5,4%)
<b>Family history of autoimmune diseases, n (%)</b>	
Systemic Lupus Erythematosus, n (%)	12 (57,1%)
Rheumatoid Arthritis, n (%)	7 (33,3%)
Sjögren's Syndrome, n (%)	2 (9,5%)
Antiphospholipid Syndrome, n (%)	1 (4,8%)
Psoriatic Arthritis, n (%)	1 (4,8%)
<b>Antinuclear Antibodies (ANAs) at diagnostic, n (%)</b>	
Nuclear Homogeneous, n (%)	20 (50%)
Nuclear Fine Speckled, n (%)	16 (40%)
Nuclear Large Speckled, n (%)	2 (5%)

Cytoplasmatic Reticular, n (%)	1 (2,5%)
Mitotic NuMA-like, n (%)	1 (2,5%)
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Current therapy for SLE	
Hydroxychloroquine, n (%)	31 (62%)
Prednisolone, n (%)	22 (44%)
Mycophenolate Mofetil, n (%)	12 (24%)
Methotrexate, n (%)	11 (22%)
Azathioprine, n (%)	8 (16%)
Methylprednisolone, n (%)	7 (14%)
Deflazacort, n (%)	6 (12%)
Biologics*, n (%)	5 (10%)
Cyclosporine, n (%)	3 (6%)
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Active SLE (SLEDAI-2K score $\geq 4$ ), n (%)	21 (42%)
Inactive SLE (SLEDAI-2K score $< 4$ ), n (%)	29 (58%)
Consumed complement, n (%)	15 (30%)
Positive anti-DNA, n (%)	13 (26%)
Hospitalization in the last six months, n (%)	11 (22%)

**Table S1.** Clinical features of a cohort of systemic lupus erythematosus patients. NuMA: nuclear mitotic apparatus. \*Biologics reported were belimumab and rituximab.

Laboratory markers	SLE patients (n=50)	Controls (n=50)	P
HDL-C (mg/dL), median (IQR)	50.5 (41.75-61)	55 (50-61.50)	0.0373 <sup>a</sup>
hsPCR (mg/L), median (IQR)	1.33 (0.62-3.70)	2.33 (1.31-3.03)	0.1432 <sup>a</sup>
Serum IL-6 (pg/mL), median (IQR)	28.45 (14.10-45.29)	7.41 (4.12-12.54)	<0.0001 <sup>a</sup>
Serum IL-1 $\beta$ (pg/mL), median (IQR)	5.93 (4.82-7.82)	4.35 (3.43-5.27)	<0.0001 <sup>a</sup>
IL-1 $\beta$ mRNA (RTU), median (IQR)	0.27 (0.08-0.70)	0.01 (0.001-0.04)	<0.0001 <sup>a</sup>
Caspase-1 mRNA (RTU), median (IQR)	0.68 (0.14-2.13)	0.26 (0.07-0.76)	0.0082 <sup>a</sup>
IL-18 mRNA (RTU), median (IQR)	0.29 (0.01-1.07)	0.09 (0.03-0.20)	0.0471 <sup>a</sup>
ASC mRNA (RTU), median (IQR)	18.15 (4.96-37.08)	2.02 (0.42-3.49)	<0.0001 <sup>a</sup>
NLRP3 mRNA (RTU), median (IQR)	0.94 (0.38-7.43)	0.04 (0.01-0.08)	<0.0001 <sup>a</sup>
NLRP1 mRNA (RTU), median (IQR)	0.28 (0.12-0.71)	0.06 (0.02-0.14)	<0.0001 <sup>a</sup>
NLRC4 mRNA (RTU), median (IQR)	0.73 (0.23-2.28)	0.06 (0.005-0.14)	<0.0001 <sup>a</sup>
AIM2 mRNA (RTU), median (IQR)	1.38 (0.23-4.56)	0.31 (0.05-0.63)	<0.0001 <sup>a</sup>

**Table S2.** Descriptive statistics of laboratory markers evaluated in SLE patients and healthy controls. *a* Mann–Whitney U test. hsCRP: High-sensitivity C-reactive protein. HDL: high-density lipoprotein. Related to Figures 1, 2 and 3. RTU: relative transcription units.

**Figure S1.** Gene expression markers in individuals with active, remission SLE and healthy controls. Multiple comparison of relative gene expression between healthy controls and active or remission SLE patients. **A.** IL-1 $\beta$ , **B.** IL-18, **C.** Caspase-1, **D.** ASC, **E.** NLRP3, **F.** NLRP1, **G.** NLRC4 and **H.** AIM2. The statistical comparison was established using Mann–Whitney U and Kruskal–Wallis tests with a 95% confidence level, and when applicable, *post hoc* tests (or multiple benchmarks) for the HDS of Dunn were applied. Statistically significant differences are represented as asterisks for every pair of groups compared (\* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ ; and \*\*\*\* $P < 0.0001$ ). Related to Figure 3. RTU: relative transcription units.

**Figure S2.** Heatmap of correlations of laboratory markers assessed in SLE patients. The values in the cells correspond to Spearman's Rho  $r$  value. Negative and positive correlations between pairs are colored blue and red, respectively. Significant correlations ( $P < 0.05$ ) are marked by an asterisk in each pairwise cell. hsCRP: High-sensitivity C-reactive protein. HDL: high-density lipoprotein. Related to Figures 4 and 5.