**Results** The density of SIGLEC1 molecules on the surface of monocytes based on two visits, correlated with the SLEDAI (128 determinations, betaST 0.22, p<0.012), but not with the C3 (108 determinations, betaST 0.03, p=0.80), the C4 (106 determinations, betaST −0.06, p=0.58) and the anti-dsDNA-antibodies (104 determinations, betaST 0.06, p=0.61). SIGLEC1 is a more change-sensitive biomarker than the conventional laboratory parameters C3, C4 and ds-DNA-Ab. Patients with an increase in SIGLEC1 of >1120 molecules/monocyte between two visits show a higher probability (OR=7.0, p<0.001) of minimal clinical worsening (SLEDAI more/equal 2 points). Patients who show a decrease >2902 SIGLEC1 molecules/monocyte have a higher chance (OR=6.3, p=0.004) to have a clinical improvement (SLEDAI more/equal 2 points).

**Conclusion** This prospective cohort study showed for the first time the significant relationship between the routinely measured interferon biomarker SIGLEC1 and the disease activity in paediatric SLE patients. Thus, SIGLEC1 represents a potential marker for activity monitoring in this disease.

**Objective:** The etiopathogenesis of lupus is still not fully understood. According to cumulative data, immune, environmental, genetic and neuroendocrine factors interact to develop SLE. TRPV1 receptors on neuronal cells are parts of an important inflammatory pathway in autoimmunity. The role of TRPV1 receptors as a calcium dependent channel receptor in pro inflammatory cell reactions is under investigation. Capsaicin an extract of capsicum and oleoresin capsicum has high affinity to TRPV1 receptors. Substance-P discharge from TRPV1 receptors lead to pain relief. The same mechanism may be responsible for resolving inflammation. It is a hypothesis that the skin reaction to Capsaicin is an estimation activity of TRPV1 receptors in autoimmune diseases.

**Method** 29 female lupus patients and 33 healthy age and sex match volunteers who passed the inclusion criteria of the disease and the study were enrolled. For each participant, a 1 × 1 cm2 blotting paper imbrued by 0.1 ml of the capsaicin solution (0.075%) from Sigma Company was put on the volar forearm and covered by a plastic band, to prevent evaporation. The test was then carried out which consisted of time to tingling, induration area (cm2), and redness area (cm2); measured after 15 min.

**Results** The mean age of patients was 30 (25.5–41.5) and controls was 35 (28–48.5) years (p=0.09, z=−1.6). Tingling sensation was sensed by 22 (73.9%) of patients and 12 (36.4%) of controls (p=0.01, x2=13). Redness was observed in 18 (62.11%) of patients and 8 (24%) (p<0.01, x2=9.07). Time to tingling in SLE and controls was 6.5 (4.75–9) and 3 (2–4) min (p=0.02, z=−2.39). Redness area after 15 min, in SLE and controls were 8.05 (0–12) cm² and 0(0–24) cm², respectively (p<0.01, z=−3.38). In lupus group, induration area was 1.5 (0–3.25) cm2 and in controls it was 0 (0–0), (p<0.001, z=−3.38).

**Conclusion** This study suggested that skin reaction to capsaicin in lupus patients is statistically significant stronger than normal individuals. It may stem from more Substance-P release from nerve endings or more active TRPV1 receptors in lupus. Studies on TRPV1 pathway in lupus are limited. We suggest that this pathway plays some role in lupus pathogenesis and more researches on this purpose should be considered.