ANTI-RO FALSE-NEGATIVES DETECTION THROUGH ANTI-RO52 KDA AND ANTI-RO60 KDA ANALYSIS IN SYSTEMIC LUPUS ERYTHEMATOUS PATIENTS

**Purpose**
The aim of the present study is to identify false-negatives for anti-Ro by analysing both 52 KDa and 60 KDa subunits separately, as well as to characterise if there are clinical or molecular differences in this subgroup of patients compared to anti-Ro negative cases.

**Methods**
A cross-sectional, observational study of patients diagnosed of SLE according to SLICC 2012 criteria was performed. In these patients a complete blood-test was made, and clinical data by personal interview was collected. INF1A, Anti-Ro, anti-Ro52KDa and anti-Ro60KDa levels where measured by colorimetric methods. Biostatistical analysis was performed with R 3.3.2.

**Results**
We selected 69 SLE patients with negative results for anti-Ro (2.34±4.17 U/mL) out of 142 total SLE patients. A total of 51 patients were negative for both anti-Ro subunits and 18 cases presented positive results (up to 20 pg/mL) for at least one of them (See table 1).

The subgroup of patients that exhibit simultaneously high levels of anti-Ro52KDa and anti-Ro60KDa have higher clinical activity compared to negative anti-Ro cases (75% of active patients against 41.2% in anti-Ro negative patients). However, no differences in the accumulated damage evaluated by SLICC score between negative anti-Ro cases and patients with at least one positive subunit were observed.

We analyse serum levels of INF1A cytokine in the four groups of patients, and anti-Ro and subunits negative cases showed significant lower INF1A levels than the other patients (8.26±14.87 pg/mL and 26.62±40.71 pg/mL respectively; p=0.04). In addition, patients with high levels of anti-Ro52KDa subunit are those with the highest INF1A levels (anti-Ro 52+/anti-Ro60- 23.5±47.6 pg/mL of INF1A; anti-Ro 52+/anti-Ro60 +36.4 ±37.9 pg/mL of INF1A).

**Conclusion**
In our anti-Ro seronegative patients, a 26% of false-negative cases were detected. These cases with high levels of almost one anti-Ro subunit showed significantly higher levels of INF1A in contrast to negative cases, supporting the fact that they are indeed a different group from the negative cases. Moreover, the high INF1A levels could be the reason of the observed differences in the clinical activity measured by SLE-DAI score in both groups.

### Abstract PS1:8 Table 1

<table>
<thead>
<tr>
<th></th>
<th>NEGATIVES N=51</th>
<th>Anti-RO52KDa POSITIVES N=8</th>
<th>Anti-RO60KDa POSITIVES N=2</th>
<th>Anti-RO52KDa/ Anti-RO60KDa POSITIVES N=8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-RO [U/mL] Mean (DS)</td>
<td>1.92 (3.11)</td>
<td>1.65 (3.2)</td>
<td>0.5 (0.71)</td>
<td>6.15 (8.37)</td>
</tr>
<tr>
<td>Anti-RO52 KDa [pg/mL] Mean (DS)</td>
<td>1.26 (1.89)</td>
<td>147.24 (74.25)</td>
<td>1.05 (0.89)</td>
<td>196.02 (50.06)</td>
</tr>
<tr>
<td>Anti-RO 60 KDa [pg/mL] Mean (DS)</td>
<td>1.73 (2.71)</td>
<td>6.3 (7.01)</td>
<td>120.96 (111.78)</td>
<td>145.22 (76.69)</td>
</tr>
</tbody>
</table>

*Purpose*
The relationship between B cells subsets distribution, clinical and laboratory parameters, therapeutic response and prognosis in lupus nephritis (LN) is still underestimated. The