

# PREVALENCE of HLA ANTIBODIES in POST PREGNANCIES FEMALE BLOOD DONORS

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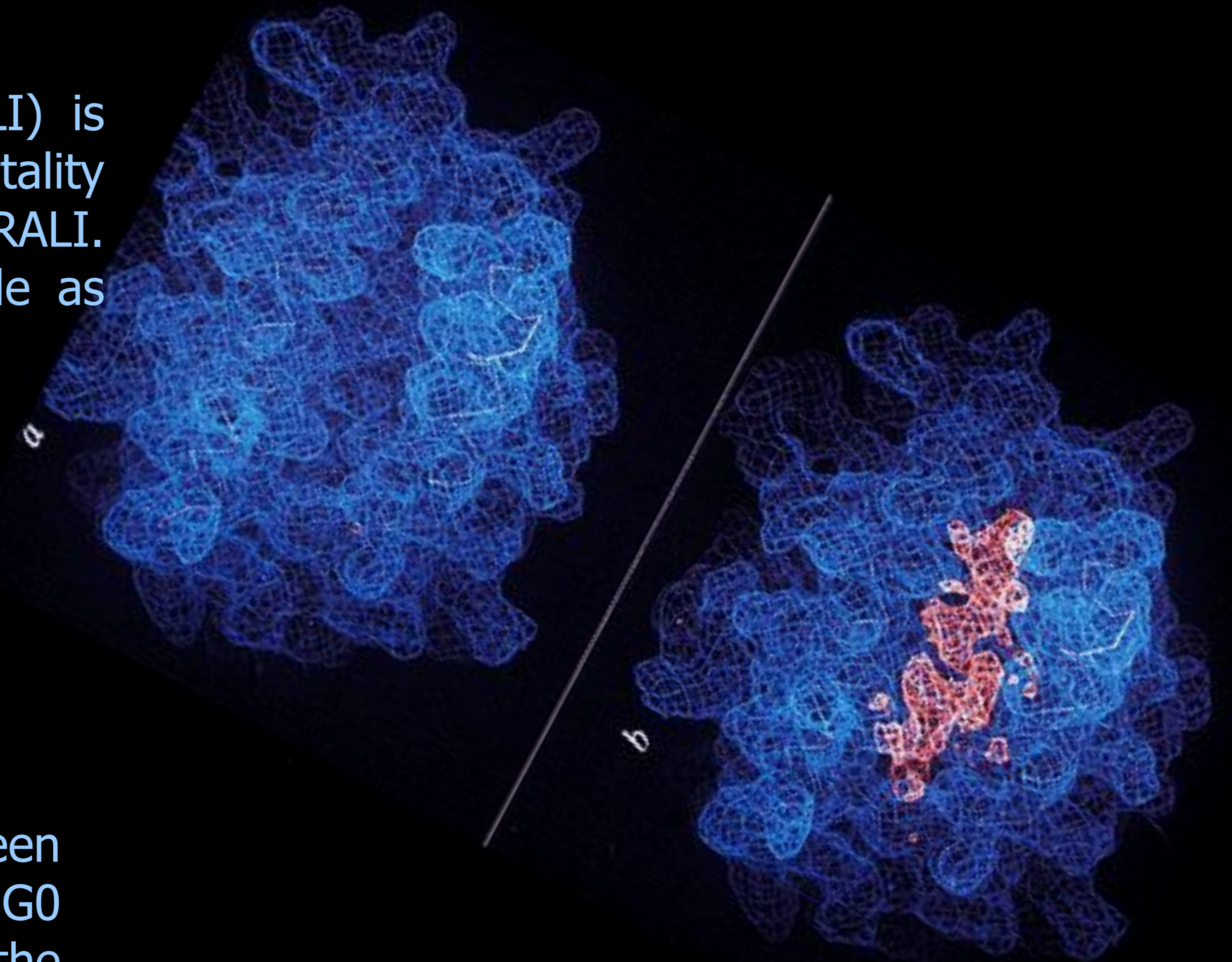
**Background:** Transfusion related acute lung injury (TRALI) is known as transfusion hazard with high morbidity and mortality rate. Mainly HLA class II have been associated with TRALI. Preventive measures are in the exclusion of donor female as they carry any these antibodies.

**Aim:** We study a group of female blood donor with prior history of 2 or more pregnancies (G2), 1 (G1) pregnancy and without any pregnancy (G0) for detection of HLA antibodies

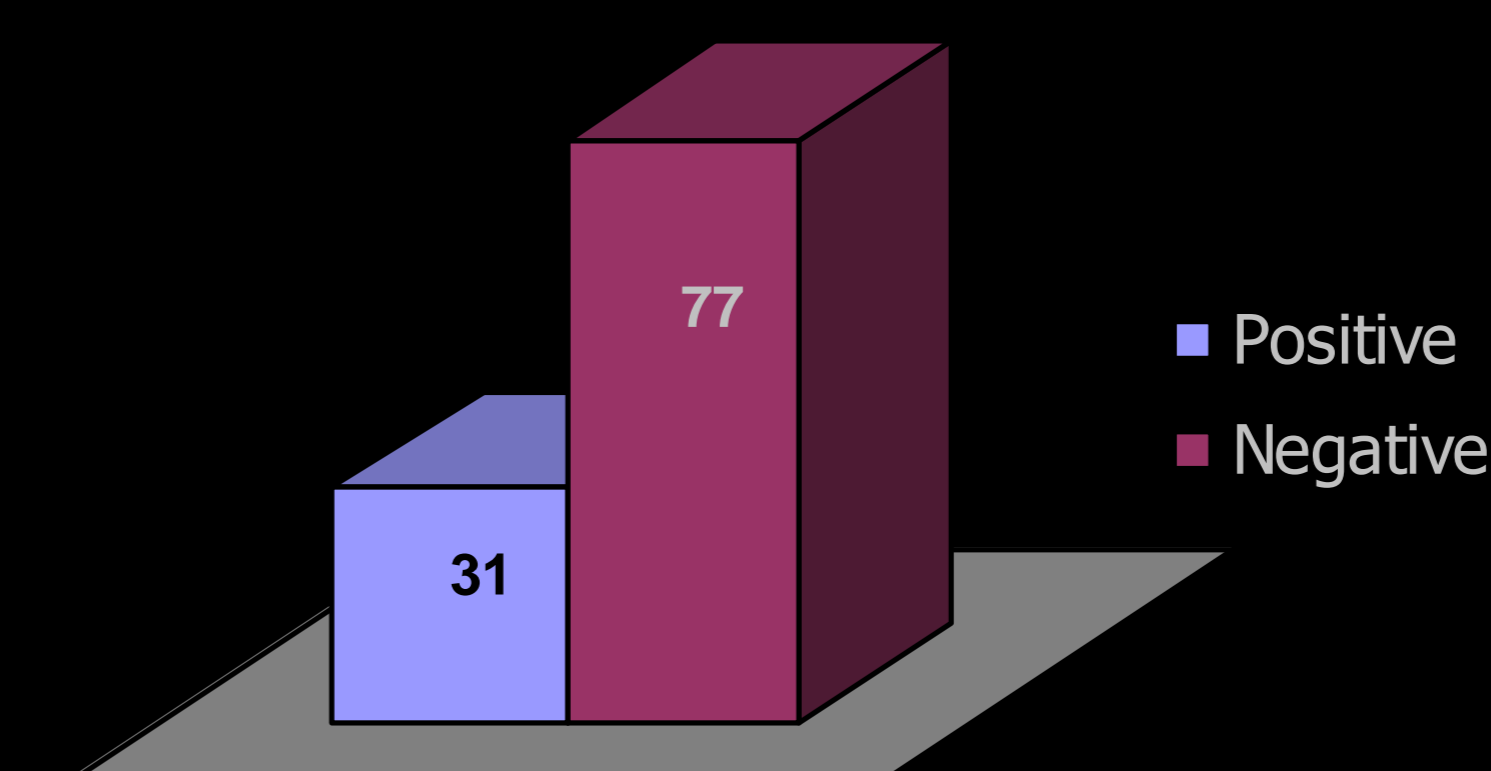
**Methods:** We collected a total of 108 samples between September and December of 2010 (G2 – 56; G1 – 19 and G0 – 33 samples). For detection of HLA antibodies we used the LABScreen Mixed Assay which is multiplex technique that detects anti HLA Class I and II IgG antibodies. Microparticles (beads) are coated with HLA antigens. Those beads have a combination of two dyes, and for each set of beads the dyes proportions are different so that the bead sets can be distinguished. Positivity was defined when the ratio is equal or higher than 4.

**Results:** In the totality of the 108 study samples we found positivity for HLA class I antibodies in 22% (G2- 32%, G1- 26%, G0 - 3%) and for HLA class II antibodies in 17% of samples (G2 – 27%, G1 - 5% and G0 – 6%). Positivity for both HLA class I and II antibodies was found only in G2 samples (18%) and G1 samples (5%). Our study also shows a 12% of positivity only for HLA class I antibodies (G2- 14%, G1 – 21%, G0 – 3%) and a 6% of positivity only for HLA class II antibodies (G2 – 9%, G1- 0%, G0 – 6%)

**Conclusions:** Our study reveals higher prevalence of HLA class I and II antibodies in G2 population. Women with both positive HLA Class I and II antibodies have been exclude for blood donation in order to prevent TRALI in recipients. This study will continue with a higher number of samples. Ideal was to test all this women to HLA class antibodies prior to each blood donation.



Distribution of studied samples (108)



Positivity for HLA class I and II antibodies

