mice had increased immunosuppressive activity on DCs function (SI of 7.31 ± 1.02 versus 2.67 ± 0.49, $P < 0.01$). **Conclusion:** Taken together, our data suggest that soluble factors within decidua alter maternal immune responses to paternal alloantigens via modulation of DCs function that may be implicated in the complex processes of normal pregnancy or fetal rejection.

Keywords: Abortion, Decidua, Dendritic cell, Lymphocyte

1848P

Geo-genetic level of arsenic studied in Bijar, Kordistan, hazardously disrupts human monocyte-derived DCs in vitro

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Background:
Arsenic (As) appears in water, food and soil in Bijar, Kordistan province. As in drinking water and body alarmingly disregulates the immune system through immune-sensor molecules like TLRs. dendritic cells (DCs) are pivotal in the induction of immune responses and T-cell polarization. Information on the effect of As on immune-sensor molecules in DCs is little. To examine the effect of As on the gene and protein expression of TLR2 and TLR4 in monocyte-derived DCs (MoDCs) of healthy humans. **Methods:** The pure/viable MoDCs were generated from blood samples of 6 healthy young individuals. The MoDCs were exposed to 0ng/ml (control group) and 20ng/ml (treatment group) of As for 2 h. The RNA were extracted and subjected for cDNA synthesis and then used for qPCR. Protein expression of TLR2 and TLR4 in MoDCs upon stimulation w/wo As for 2 h was assessed by two-color flow cytometry method. The MoDCs stained with FITC-anti-TLR2 and PE-anti-TLR4. 10,000 MoDCs was acquired for each sample. Protein expression of the TLR2 and TLR4 was eventually expressed by mean fluorescence intensity. **Results and conclusion:** We focused the *in vitro* effects of a minimal geogenic level of As on human TLR2 and TLR4 in MoDCs. As significantly up-regulated expression of TLR2 and TLR4 mRNA and proteins in MoDCs. When exposed to As for 2h, the observed over-expression of each TLRs mRNA in the MoDCs was similar to what was observed in the TLRs proteins. In porcine *in vitro* model we also observed that As interferes with antigen presenting capacity and maturation of MoDCs (unpublished). Immunodisregulation, immunotoxicity and thus (non)infectious diseases in chronically As-exposed people are highly likely.

Keywords: Geogenic arsenic, Flow cytometry, TLRs, Dendritic cells, Immunotoxicity, qPCR

3135P

Investigation of Sodium Benzoate (NaB) Effects on Dendritic Cells (DCs) Maturation and Cytokine Production

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