

# Abstract Vorschau - Schritt 3/4

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Kategorie: Endokrinologie und Reproduktionsmedizin

**Titel: Alteration of CD83 expression and sCD83 secretion in the course of pregnancy**

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**Text: Introduction:** The transmembrane molecule CD83 owns immunosuppressive features: B cells overexpressing CD83 show a high Interleukin 10 release, while CD83 positive T-cells are able to suppress the proliferation of effector CD83 negative T-cells. The membrane-bound form of CD83 generates a soluble protein (sCD83) with therapeutic potential in autoimmune diseases. We aimed to investigate if those features play a role in murine pregnancy.

**Materials:** C57Bl/6 female mice were paired to BALB/c males and sacrificed on days 7, 14 or 18 of pregnancy. Non pregnant C57Bl/6 females served as control.

**Methods:** CD83 expression on Lymphocytes from Spleen, Thymus and Lymph nodes was measured using flow-cytometry. Additionally, the CD83 expression was analyzed after in-vitro stimulation with LPS. The supernatants were collected and the amount of sCD83 was examined by ELISA.

**Results:** We were able to detect an upregulation of CD83 molecule on splenic B and T-cells in the middle of pregnancy. However, after stimulation, the strongest CD83 upregulation was detectable on B cells at the end of pregnancy. Remarkably, Lymphocytes from day 18 of pregnancy showed a significantly higher release of sCD83 after stimulation compared to non-pregnant mice. Except an upregulation on B-cells from paraaortic Lymph nodes, no significant changes were observed in Thymus and Lymph nodes.

**Conclusion:** Our data demonstrates an increase of CD83 expression during pregnancy, supporting our thesis of the involvement of CD83 in immunological adaptations to pregnancy. We hypothesize that the higher sCD83 release after Lymphocyte stimulation can protect the fetus from an inadequate immune response to different pathogens.

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