### Title (English)

**Peripheral blood cell HLA class II gene expression in children at genetic risk for type 1 diabetes and coeliac disease**

### Abstract

Differential expression of HLA-DQ heterodimers on a blood mononuclear cell subset is associated with organ-specific autoimmune disease. HLA-DQ genotypes on chromosome 6 are strongly related to increased risk of developing autoimmune diseases such as type 1 diabetes, and coeliac disease. Peripheral blood subsets from children at increased genetic risk for type 1 diabetes (HLA-DQ2/8; DQ8/8; DQ8/X (X is not 6.2); DQ2/2) or coeliac disease (HLA-DQ2/2; DQ2/8) with and without islet cell autoantibody markers (GADA, IAA, IA-2A, and ZnT8 (W, R, Q)A) were investigated for HLA-DQA1, B1, A2 and B2 gene expression. High HLA-DQ cell surface immunofluorescence was observed in B cells and CD14+CD16-APC. HLA-DQA1 is expressed in CD14+CD16-APCs and B cells. The results indicate that RQ of HLA-DQA1 tended to be lower in CD14+CD16-APCs in subjects with more than two islet autoantibodies.

### Keywords

Type 1 diabetes, islet autoantibodies, HLA, HLA-DQ, B cells, CD14+CD16-APCs, flow cytometry, gene expression