Lymphoid organ development in the human fetus

Summary
The striking similarities between secondary and tertiary lymphoid organs have intensified research efforts into clarifying the mechanisms of lymph node development in murine embryos. An increasing body of evidence now suggests that development of murine secondary and tertiary lymphoid organs, and even human tertiary lymphoid organs, occurs via comparable mechanisms. However, there is very little data on the development of secondary lymphoid organs in the human fetus, and it is at present unclear to what degree the development of human and mouse secondary lymphoid organs is related. Moreover, the human equivalent of the mouse Lymphoid Tissue Inducer cell (LTi) is still unknown. In order to identify candidate cell populations of putative human LTi, we set out to analyze human fetal mesenteric lymph nodes. Within these nodes we have identified a CD34 negative NK-precursor population that expresses RORγt, L7Rα and Lymphotoxin. By comparing these putative human LTi cells to the murine LTi a first model for human lymph node development can be compiled.