



Samenvatting van het proefschrift

Z. Zhou "Inflammatory and metabolic features of stromal cell subtypes in inflammatory bowel disease"

Promotiedatum: 8 januari 2025 Universiteit: LUMC

Promotor: Dr. L.J.A.C. Hawinkels

Co-promotores: Dr. A.E. van der Meulen-de Jong Dr. M.C. Barnhoorn

The main goal of this thesis is to gain insights into the role of stromal subsets in the pathogenesis of IBD to evaluate their potential as a target for therapy.

In Chapter 2, we reported the stromal cell subsets in the three most commonly used experimental colitis models: DSS-induced colitis, IL-10 KO colitis, and T cell transfer colitis for IBD. Additionally, the effects of commonly used IBD therapies (thiopurines/anti-TNF-a/anti-p40) were assessed on stromal subset abundance. In order to further investigate the role of stromal cells in IBD pathogenesis.

In Chapter 3, we investigated the metabolic status of IBD derived stromal cells. The effect of glycolysis on the inflammation status was investigated in vivo and in vitro, possibly opening new avenues to explore this further in clinical strategies for treatment of IBD. The second part of this thesis focuses on a common complication in IBD, the perianal fistulas.

In Chapter 4, the current literature on the diagnosis and characteristics of perianal fistulas was summarized and discussed, including the differences



and similarities of CD-associated and cryptoglandular perianal fistulas. To increase our understanding of the role of the stromal cells in perianal fistulas, in Chapter 5, the role of fistula-derived fibroblast was further explored.

In Chapter 6, the main findings from these studies were summarized, integrated and the potential clinical relevance of these findings was further discussed.