Formation and Function of Organized Gut Associated Lymphoid Tissue in Health and Disease

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door
Brenda Jean Olivier geboren te Ladysmith, South Africa
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‘We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.’

Taken from T.S. Eliot’s Little Gidding

This thesis is dedicated to my grandmother, Kay Twyman, and to all the people that played an important part in my life that I have lost over the years.
List of Abbreviations

CCL19  C-C motif chemokine ligand 19 also known as EBI1 ligand chemokine (ELC) and macrophage inflammatory protein-3-beta (MIP-3-beta)
CCL21  C-C motif chemokine ligand 21 also known as secondary lymphoid tissue chemokine (SLC)
CXCL13  C-X-C motif chemokine 13 also known as B lymphocyte chemoattractant (BLC)
CD  Crohn’s disease
DC  Dendritic cells
DSS  Dextran sulfate sodium
FDC  Follicular dendritic cell
FoxP3  Forkhead box P3
GALT  Gut associated lymphoid tissue
GC  Germinal centre
HEV  High endothelial venule
IBD  Inflammatory Bowel Disease
ICA  Intercellular adhesion molecule
ILF  isolated lymphoid follicles
IgA  Immunoglobulin A
LT  Lymphotoxin
LTβR  Lymphotoxin beta receptor
LTi  Lymphoid tissue inducer
MAdCAM-1  Mucosal addressin cell adhesion molecule-1
MLN  Mesenteric lymph node
PP  Peyers Patch
RA  Retinoic acid
RALDH  Retinaldehyde dehydrogenases
RAR  Retinoic acid receptor
RARE  Retinoic acid responsive elements
RORγt  Nuclear retinoic acid –related orphan receptor
SILT  Solitary intestinal lymphoid tissue
slgA  Secretory IgA
TNF  Tumor necrosis family
UC  Ulcerative colitis
VAC  Vitamin A control
VAD  Vitamin A deficient
VCAM-1  Vascular cell adhesion molecule-1
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