

ROLE OF EPIGENETIC CHANGES INDUCED BY SCFAS IN INTESTINAL EPITHELIAL CELLS

In the present project, we wish to test the hypothesis that SCFA regulate innate immunity of intestinal epithelial cells (enterocytes and related cells) by affecting histone modifications, especially modifications that may metabolically directly relate to SCFA, such as lysine acetylation and crotonylation. To test our ideas we will employ intestinal organoid culture ("mini-guts"), mouse models and transcriptome and chromatin analysis to examine the effect of SCFA directly on intestinal epithelial cells. In vivo experiments in which mice will be treated directly or indirectly (fibre) with SCFAs will also be performed in order to analyse the relevance of the findings in vitro. To reach the proposed aims, we plan the exchange of three graduation students between the research groups and visits of the researchers involved in this project. We will also promote workshops to increase and to strengthen the scientific collaborations.

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ABOUT THE PROJECT

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