



PhD positions

There are two PhD positions available in the group of David Vermijlen at the Department of Pharmacotherapy and Pharmaceutics - Institute for Medical Immunology Université Libre de Bruxelles (ULB), Belgium

Project 1: The development of human invariant anti-cancer $\gamma\delta$ T cells.

In this project we aim to (i) identify the presence of human invariant effector $\gamma\delta$ T cells in fetal peripheral tissues and assess their maintenance into adult (cancer) tissues where they can play a role in cancer immunosurveillance; (ii) dissect the molecular mechanism underpinning the generation of human invariant effector $\gamma\delta$ T cells.

Project 2: Shaping neonatal immunity by maternal administration of probiotics.

Using mouse models, in close collaboration with Prof. Véronique Flamand, we will investigate the influence of microbiome/probiotics on immune cell development in early life and we will assess the effect on the development of allergic asthma. This PhD student will focus on the role of $\gamma\delta$ T cells.

Foreseen starting date: October 1, 2019, but is flexible.

Profile: Candidates should hold a Master in biomedical sciences, pharmaceutical sciences, cell and molecular biology or equivalent. Previous experience in cellular and/or molecular biological techniques, immunological techniques (such as flow cytometry) or a mouse model (for project 2) will be beneficial.

Application: Enquiries and applications should be made to David Vermijlen at dvermijl@ulb.ac.be. Please email a CV, motivation letter and recommendation or contact details of two referees. Selection will start in August 2019 till suitable candidates are found.

Selected publications:

- Vermijlen D *et al.* Human cytomegalovirus elicits fetal $\gamma\delta$ T cell responses *in utero*. Journal of Experimental Medicine 2010;207:807-821.
- Vermijlen D, Prinz I. Ontogeny of innate T lymphocytes - Some innate lymphocytes are more innate than others. Frontiers Immunology 2014;5:486.
- Dimova T *et al.* Effector V γ 9V δ 2 T cells dominate the human fetal $\gamma\delta$ T cell repertoire. PNAS 2015; 112:E556-65
- Van hede D *et al.* Human papillomavirus oncoproteins induce a reorganization of epithelial-associated $\gamma\delta$ T cells promoting tumor formation. PNAS 2017; 114: E9056-E9065