The **Translational Hepatology Laboratory,** lead by Christine Bernsmeier, investigates **liver cirrhosis**, a complex systemic inflammatory disease with high morbidity, mortality, and infectious complications. Our research focuses on the role of **monocytes and macrophages** in disease progression and infection susceptibility, aiming to uncover underlying immune mechanisms and identify potential targeted therapeutic strategies.

Our recent studies have identified **distinct monocyte states**, including M-MDSC, CD14+DR+AXL+, and CD14+MERTK+, which are characterised by distinct altered immune function and emerge along different stages of disease progression. Detailed understanding of these monocytes' functional states provides unique opportunities to **develop interventions that may modulate immune function and improve patient care in the future**.

Internship focus and responsibilities:

- **Optimization of antibody panels for Imaging Mass Cytometry (IMC)**, an advanced technique that maps immune cell subsets in **patient-derived liver tissue**, by tissue compartment and longitudinally across disease progression
- As a key step, **immunofluorescence (IF) staining will be used to validate and optimize antibodies**, ensuring the IMC panel will be reliable and interpretable
- Hands-on work with **biological samples from patients with liver disease and controls**, keeping the research highly **translational and clinically relevant**
- Support ongoing projects using **translational approaches (FACS, IHC)**
- Acquire skills in **advanced tissue imaging, immunological analysis, and data interpretation**, translating bench research into meaningful clinical insights

Why join us:

- Participate in **innovative, translational research projects** with direct clinical impact.
- Work in a **dynamic, international laboratory team.**
- Gain hands-on experience with **state-of-the-art techniques**, from immunofluorescence optimization to IMC and functional e.g. flow cytometry based validation.
- Experience the full **translational pipeline bench-to-bedside**, from patient samples to mechanistic insights and functional validation.

Requirements:

- Master student in **biology, biotechnology, pharmacology, or related fields**
- Strong interest in **immunology, tissue imaging, and translational research**
- Motivation, precision, and ability to work in **multidisciplinary teams**
- Availability for a **block internship over a few months**

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