Description:

Applications are invited for Ph.D. positions to study the mechanism of tissue regeneration/re-modeling properties of mesenchymal stem cells (MSCs) and T cell development/function using molecular, cellular and biochemical techniques at the Center for Research Hopital Maisonneuve-Rosemont (CRHMR).

Using rat model of open angle glaucoma, we previously showed that MSCs grown under specific conditions accelerate tissue repair and corrects glaucoma like conditions (Manuguerra-Gagnon R etal Stem Cell 2013). We wish to extend these studies and aim to identify critical molecules and immune cell population involved in mediating wound healing capacity of MSCs.

For the T cell development/function project we use gene knockout and transgenic mouse model to study CD4/CD8 lineage choice. We recently showed that Thpok transcription factor differentially influences CD4 choice of MHCII- and MHCI-specific thymocytes (Zeidan N etal J. Immunology 2019). These models will be employed to further dissect T cell development/function with particular emphasis translating research into clinically relevant immune disorders or developing cancer immunotherapy.

Third project involves isolation and functional characterization of minor histocompatibility antigen specific T cells for improving immunotherapy for hematologic cancers.

Qualification:

Applicants should have Master degree with a solid GPA and strong background in molecular, cellular biology and biochemical techniques. For T cell development solid background in immunology is desired. You are expected to have strong work ethics, motivation and organizational skill and be a team player. Successful candidates will have opportunities to present their work in national and international meetings, and are required to participate in institutional student and invited speaker seminars.

How to apply:

Interested applicants should send CV describing GPA, academic/research achievements and names of three references to vibhuti.dave@umontreal.ca