A humanized mouse model to study malaria vaccines

PROJECT DESCRIPTION
Recent advances in chimeric “humanized” mice allow us to study human immune responses to the human pathogen Plasmodium falciparum at the liver stage in a small animal model. The student's role will be to isolate and cryopreserve human hematopoietic stem cells for xenotransplantation into an immune-compromised murine host. In collaboration with the maternity unit at the Royal Alexandra Hospital, he/she will collect umbilical cord blood from healthy deliveries and purify CD34+ stem cells from the cord blood using a magnetic bead technique. He/she will characterize the purity and viability of the cells using flow cytometry, then cryopreserve the cells for future use in mouse experiments.

FACULTY-DEPARTMENT
Pediatrics

OPEN TO STUDENTS FROM THE FOLLOWING INSTITUTIONS
All/No Preference

DESIRED FIELD OF STUDENT STUDY
Biological sciences

INTERNSHIP LOCATION
North Campus

NUMBER OF INTERNSHIP POSITIONS
1

INTERNSHIP START AND END DATE
May 1; length 12 weeks

ARE THE DATES FLEXIBLE?
Yes