Paid Summer Research Opportunity for 3rd and 4th Year Engineering Students

The St. Michael's Hospital Zebrafish Core is home to the first automated high-throughput zebrafish screening (HTS) facility in Canada and one of the newest facilities of its kind worldwide. Zebrafish are enabling a technological revolution in genome editing for functional genomic studies, development of disease models, and high throughput screens in drug discovery. The research areas include pathological angiogenesis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, epilepsy, stroke, traumatic brain injury, retinal degeneration, and neural regeneration.

We are seeking an engineering student to aid in the operation and maintenance of the HTS Platform over the spring/summer months. The selected candidate will gain valuable experience in operating robotics and developing experimental protocols. We are looking for a student with the potential to innovate, contribute to new developments, and help turn ideas into functional systems. As a result, the candidate will have the opportunity to aid in the development of high-impact solutions.

The candidate will gain experience using automation to execute experimental protocols along with obtaining a familiarity with general techniques in molecular biology (ie., PCR, drug screens, reporter assays, and transgenics).

Under general supervision, the candidate will be responsible for:
- Aiding in the operation of the HTS and development of its associated protocols
- Operating vendor software and software developed in house that interfaces with automated equipment and processes large amounts of HTS-related protocols and data.
- Liaise with local scientists to provide an interface between them, robotic automation, and instrumentation found in the lab.
- Perform other duties as assigned.

**Basic Qualifications**
- Engineering student entering 3rd or 4th year in the fall with at least a B average while carrying a full course load. *(Transcripts must be provided with application)*
- Exceptional organizational, communication, and teamwork skills are required.
- An attention to detail and strong mathematical skills.
- A history indicating technical proficiency in performing complicated lab techniques, including equipment operation and maintenance, liquid handling, and automation is desired.

**Preferred Qualifications**
Practical understanding of chemical engineering, mechanical engineering, physical chemistry, biomedical physics, biochemistry, and cell biology is preferred. Ability to self-manage time across multiple projects, work independently, and be motivated to take action on high-level requirements is desired. A robotics and medical imaging background is highly desired.

Note: All applicants must include a copy of their transcript, CV, and a letter of reference from a previous employer and/or a professor from their engineering program.

**Please forward application package to:**
Ms. Jamie Li, Admin Assistant
Zebrafish Centre for Advanced Drug Discovery, St. Michael's Hospital
zconference@smh.ca