

Job Title: WL S22 Research Assistant in Stem Cell Bioengineering-Zandstra Lab

Zandstra lab has one part-time (20 hrs/week) opening for a UBC Work Learn program student in summer 2022.

For more details and instructions on how to apply, please visit the UBC Careers Online website through the link below, and search for the above job title:

<https://students.ubc.ca/career>

Applications must be submitted through the UBC Careers Online platform between Mar 7-20th 2022. For general enquiries please email us at **zandstra.lab@ubc.ca**.

Position Classification: Project Worker

Job Description:

The Zandstra Stem Cell Bioengineering laboratory is a highly successful multidisciplinary program that integrates researchers in stem cell biology, biological computation, synthetic biology, developmental biology, and regenerative medicine. One major goal is developing a platform for scalable *in vitro* production of T cells from stem cells for eventual use as off-the-shelf cell therapies. Our research program is based on understanding how individual cells make developmental decisions by studying multiscale interactions between cells, their internal regulatory networks, and the external microenvironment, and then mobilizing our findings to generate therapeutic cells from stem cells. The laboratory is in the School of Biomedical Engineering located within the Biomedical Research Centre, and is affiliated with the Michael Smith Laboratories, at the University of British Columbia's Vancouver campus.

We are seeking an undergraduate student to join our team as a Project Worker to assist in the day-to-day operation and maintenance of our busy, dynamic lab. Specific duties may include:

- Basic laboratory maintenance duties such as preparing and autoclaving lab glassware and consumables (pipette tips, tubes), restocking supplies, and refilling waterbaths and cell culture incubator water trays
- Preparing aliquots of stem cell growth media and media components
- Preparing stock solutions, and liquid or solid media for molecular biology experiments
- Preparing the Aggrewell plates that are used in the early stages of the *in vitro* T cell production platform
- Updating the chemical/reagent inventory in our laboratory's Electronic Laboratory Notebook software
- If time permits, assisting with routine quality control of cultured stem cell lines (collecting samples for mycoplasma testing, flow cytometry analysis for desired markers)
- If the student shows strong motivation, aptitude, and ability to complete assigned tasks, they may be offered the opportunity to assist one of our researchers on a research project, expanding upon the skills developed in the task-based lab support activities

The student will receive extensive training on these duties which are of limited to moderate complexity, by the senior lab technician (or other lab members), who will also directly supervise the student. The

student will attend weekly lab meetings and will also have the voluntary opportunity to attend subgroup meetings pertaining to different lab research projects in order to further enhance their exposure to scientific research.

Qualifications:

This position would be suitable for a junior level undergraduate student enrolled in a UBC life science or bioengineering program who has completed at least one year of study. Previous experience working in a research laboratory would be an asset but is not required, as training will be provided. Individuals must also:

- Work well in a goal-oriented team environment
- Be reliable, responsible, self-motivated, and driven to complete tasks to a high standard, with good attention to detail
- Possess good time-management and organizational skills
- Possess excellent verbal and written communication skills
- Be open to instruction and constructive feedback, and incorporate this into the work
- Have a good understanding of safe laboratory practices, and prior completion of the UBC biological safety and chemical safety training courses would be desirable

Student Learning Components

Orientation and Training

- Completion of UBC biological safety and chemical safety training courses
- An orientation to the building, the lab, and the lab's research program
- A copy of the lab's detailed onboarding manual
- Introductions to the principal investigator, research associates, postdocs, and graduate and undergraduate students
- Task-specific training as required from the senior technician or other lab members
- A specific list of overall tasks and goals will be provided at the beginning of the posting by the senior technician; these will be added to over time as competency is achieved
- A weekly workplan with specified hours of work will be agreed in advance with the senior technician

Feedback and Ongoing Support

- Senior technician and other lab members are available to answer questions and offer assistance if needed
- Specific feedback provided during and after completion of tasks
- The Project Worker is expected to organize their own time to complete tasks once fully trained and competent on those tasks
- The Project Worker will report to the senior technician once a week to discuss work progress and any issues that arise

Mentorship and Networking Opportunities

- One-on-one mentorship offered by senior technician

- Open, collaborative, multi-disciplinary lab environment offers opportunities to connect with and learn from graduate students, postdocs, and research associates from diverse backgrounds
- Networking opportunities available both within the lab's extensive alumni network (including both academic and industry connections) and the close-knit research institute in which the lab is located, and within the SBME and MSL departments

Personal and Professional Development

- Student will gain experience in a world-class multi-disciplinary research lab, which is invaluable for candidates who may be considering a future career in scientific, engineering, biomedical, or biotechnology industry research
- Student will play a key role in the day-to-day operations of a large, busy laboratory, which provides an excellent opportunity for continued development of strong organization, communication, and time management skills
- Engagement with fellow lab members and participation in knowledge-sharing and mentorship activities offered will contribute to expansion of student's professional network
- The project worker may be asked to give a short presentation of their work/project to the lab, towards the end of the program
- Senior technician will work together with the student to create a Professional Development Plan, in which they will set goals using a S.M.A.R.T. template and measure their progress throughout the work-learn period

Contribution to the University Community

At the heart of every successful large research lab is a core team of people that take care of the basics. The student worker will be a key member of this team, and will support the lab's research program by helping to ensure the smooth running of day-to-day lab operations.

We believe that we do our best work when all members of the lab feel supported, heard, and valued. We strive to create a lab that consists of people from diverse backgrounds and experiences while also recognizing that this is a dynamic process that can always be improved. Concrete efforts in this regard include regular discussions of Equity, Diversity, and Inclusion (EDI) issues at group meetings and lab retreats, and active participation by the principal investigator and lab members in the departmental Respectful Environments-EDI committee.

For further information on our research and team, please visit our website and Twitter account:

<https://www.stemcellbioengineering.ca/>

<https://twitter.com/StemCellBioEng>

When the position is filled we will note this on the job posting on our lab website.

We regret that we can only contact those applicants who are selected for further consideration.