POSITION IDENTIFICATION

Position Title: Research Associate in Sustainable Biotechnologies
Faculty: Science
Department: Microbiology and Immunology
Salary: $75,000 plus benefits

POSITION SUMMARY

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Responsible for developing and participating in programmatic research initiatives within the Hallam lab. With input and guidance from the principal investigator, the research associate will be responsible for developing, writing, and administering grants and scientific publications, conducting original scientific research, and participating in teaching and training activities originating from the lab. A key focus of this position will be to support and extend current research efforts to design, build, and test sustainable biotechnologies related to waste resource recovery, environmental restoration, and synthetic ecology. This includes transforming or adapting microorganisms to site-specific conditions for strategic metal recovery including but not limited to copper and rare earth elements and in the development of environmental DNA approaches to enhance and monitor biological diversity and ecological interactions using a combination of plurality and single-cell methods. Will also participate in stakeholder engagement and cultivating new collaborations especially in Europe, South America, and Australia related to emerging One Health and related biodiversity initiatives. The anticipated start date is January 1st, 2026.

Organizational Status
This position reports directly to the principal investigator and closely interacts with staff and trainees in the lab. Will work with the Hallam lab project manager to ensure operational efficiency and research reporting as well as core facility managers in the Life Sciences Institute. Advises upon the design, and plans and oversees the implementation of, new technical solutions for delivering research results e.g., methods for molecular biology and microbial cultivation-based techniques, new equipment acquired, new protocols developed for various scientific applications. Identifies and establishes better links with existing and new collaborators and funding agencies including but not limited to Genome BC, and other Genome Canada Affiliates, Digital Research Alliance, and the Tri-Council. Participates in negotiating and arranging contracts with various service providers/suppliers and supervises support staff within the lab.

Work Performed
- With input and direction from principal investigator will coordinate day-to-day operations of programmatic research initiatives, ensuring alignment across projects and working groups to maintain continuity of research effort among and between trainees and staff;

- Develop and validate cellular, molecular, and ecological workflows including but not limited to high-throughput enrichment and cultivation using liquid handling robots and flow-cytometric and microfluidic droplet sorting, stable isotope probing and activity-based cell assays, and plurality and single-cell omics (DNA, RNA, protein, and metabolites) methods;
- Support the Rio Tinto Centre for Future Materials biomining initiative through laboratory work, protocol optimization, data management, and integration of multi-omic data sets supporting microbial biotechnology innovation related to strategic metal recovery and the emerging bioeconomy;
- Develop, write, and administer grants with input and direction from principal investigator and contribute to internal and external communications, including scientific publications, research highlights, stakeholder briefings, and impact reports.
- Liaise with UBC grants and partnership offices to align fund raising activities with institutional strategies and compliance requirements.
- Maintain communication channels across projects and working groups including but not limited to biobanking, electronic notebooks, agendas, meeting notes, and follow-ups and track timelines, deliverables, and research outputs for programmatic research initiatives in coordination with project manager and principal investigator, and;
- Help mentor undergraduate, graduate, postdoctoral and other trainees working in the Hallam lab with input and direction from principal investigator and participate in the development of lab protocols, methods, teaching and other documents related to teaching and learning in the lab environment.

Consequence of Error/Judgement

It is critical to current and future lab operations and impacts that decisions regarding resource allocations and time management are made with a thorough understanding and insight into contemporary multi-omic standards and practices as well as emerging technologies with enabling potential. Errors in the planning or execution of experiments can compromise related and dependent experiments performed by other lab members. Valuable reagents, research time, and money will be lost. Any errors or lapses in judgment will be corrected during bi-weekly meetings. Errors in judgement in these areas would severely limit our ability to compete for research funding and recruit or retain the best trainees. Failure to effectively manage the budgets and reporting requirements would severely impair the continued access to funding and the laboratory's day-to-day research and administrative functions. Likewise, errors in timely reporting of project progress or failure to meet the stringent demands of the granting agencies and industrial partners could compromise the relationships with user partners and other stakeholders.

Supervision Received

The position will work independently under the direction of the principal investigator and will receive written and/or verbal protocols on assignment of new duties and/or new or unusual challenges or opportunities within the lab.

Supervision Given
Assists in the hiring, training, supervision and performance evaluation of undergraduate, and graduate students, postdoctoral fellows and staff. Determines deadlines, schedules and priorities for several distinct areas of responsibility, balancing operational requirements, strategic considerations, and equity between portfolios. Negotiates and reviews services provided by internal and external collaborators and service providers. Coordinates overall continuity and compatibility of the lab's technical capabilities and personnel in consultation with the lab manager and project manager.

Minimum Qualifications
Doctoral degree in a relevant discipline including but not limited to molecular biology, biological engineering, microbial, ecology or related fields of inquiry with relevant training or significant experience practicing multi-omic methods and analyzing high-content data sets. Minimum five years of experience managing collaborative interdisciplinary projects and reporting to granting agencies with a proven record of expertise in digital technologies, scientific communication, and publication success. Excellent time management skills supported by good judgement, solid work ethic, and ability to maintain confidentiality, tact and discretion. Ability to work independently, under pressure and handle multiple tasks. Willingness to respect diverse perspectives, including perspectives in conflict with one's own and to demonstrate a commitment to enhancing one's own awareness, knowledge, and skills related to equity, diversity, and inclusion.

Preferred Qualifications
- Embodies a combination of working knowledge and experience in conducting research, directing research teams, and supporting collaborative, multi-institutional, international research groups is an asset;
- Multi-disciplinary research experience in marine or terrestrial field and laboratory programs encompassing logistics, experimental design, sample processing, data analytics, research publication and reporting;
- Strong record of scientific publications encompassing environmental and host-associated microbiology, plurality or single-cell multi-omics and bioinformatics;
- Experience working with industry partners on sustainability projects with focus on the translation of fundamental science into validated applications in the context of bioeconomy and One Health related research and development initiatives;
- Demonstrated ability to develop and maintain cooperative and productive working relationships within multi-disciplinary groups and leadership personnel such as senior level academics, researchers, university administration, funding agencies, external (international) stakeholders and industry partners, and;
- Proven experience in fund raising activities, in a Canadian or International University setting, with current knowledge of and successful application to federal, international and private funding programs.

Applicants must submit the following: (1) a cover letter that describes how your research interests and previous research experience fit with the position, and provides specific details about how you meet the requirements outlines above; (2) a curriculum vitae; and (3) the names

and contact information for 2-3 references. All applications must be submitted online at micb.recruitment@ubc.ca.

Review of applications will commence: September 1, 2025.

We provide a supportive and highly interactive environment with strong mentoring as well as opportunities for intellectual and professional growth, innovation, project leadership, and collaboration. Wet-lab work will be carried out in the UBC Life Sciences Institute (LSI)(http://www.si.ubc.ca), which houses 85 laboratories carrying out cell and molecular biology research in a highly collaborative setting. Excellent facilities for super-resolution microscopy, single-particle tracking, and real-time imaging are available in the LSI, along with access to advanced facilities for genomics, proteomics, metabolomics, animal models, bioinformatics, and advanced computing. Further information on the Department of Microbiology & Immunology is available at http://www.microbiology.ubc.ca.

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As one of the world's leading universities, the University of British Columbia creates an exceptional learning environment that fosters global citizenship, advances a civil and sustainable society, and supports outstanding research to serve the people of British Columbia, Canada and the world.

UBC hires on the basis of merit and is committed to employment equity. All qualified persons are encouraged to apply. Equity and diversity are essential to academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Metis, Inuit, or Indigenous person. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.