

## **Canada Research Chair (Tier II) in Viromics and One Health, Department of Biological Sciences**

The **Department of Biological Sciences** in the **Faculty of Science** at the **University of Calgary** invites applications for a **Canada Research Chair (CRC) Tier II in the area of Viromics**. The successful candidate will be appointed at the rank of Assistant Professor (tenure-track) or in exceptional cases Associate Professor (with tenure), and will be nominated for an NSERC Tier II Canada Research Chair. The candidate's research program is expected to focus on viral communities in an environment (soil, water, sewage, etc.) or host (microbe, plant, animal), using DNA/RNA/protein/metabolite-based omics technologies. Viromics differentiates itself from traditional virology by its systems biology (meta-omics) approaches, and by its emphasis on pluralities of viruses and their ecological interactions instead of the mechanics of specific virus-host interactions. The anticipated start date for the position is May 1st, 2023.

### **Eligibility criteria**

CRC Tier II Chairs are intended for exceptional emerging scholars. At the time of nomination, a candidate must have been an active researcher in their field for fewer than 10 years since the conferral of their highest academic degree (PhD or equivalent). Candidates who are more than 10 years beyond having earned their highest degree and who have had career breaks resulting from leaves, clinical training, and research interruptions due to the COVID-19 pandemic, etc., may have their eligibility for a CRC Tier II Chair assessed through the program's Tier II justification process. Please contact University of Calgary's Office of Research Services for more information: [ipd@ucalgary.ca](mailto:ipd@ucalgary.ca).

Further information about the Canada Research Chairs Program can be found on the Government of Canada's CRC website, including eligibility criteria: [www.chairs-chaires.gc.ca](http://www.chairs-chaires.gc.ca) and [www.chairs-chaires.gc.ca/program-programme/nomination-mise\\_en\\_candidature-eng.aspx](http://www.chairs-chaires.gc.ca/program-programme/nomination-mise_en_candidature-eng.aspx).

### **Role and Expected Duties**

A virome is defined as the entire viral component of any biological system. The Chair will establish an active research program that focuses on the virome of some biological system(s), either natural or engineered ecosystems like water or soil, or particular plant, animal, or microbial hosts. Viromics research has diverse themes, including (but not limited to): cross-species virus transmission and new virus emergence; biogeochemical nutrient cycling; ecological interactions of viruses with micro- and macro-biomes; predicting hosts from environmental metagenomes; source tracking of animal/human fecal contaminants with viruses; developing viral therapy alternatives to antibiotics and probiotics for engineering plant or animal microbiomes; effects of viral diversity on pathogenicity and immune responses; viral control of crop pathogens; etc. The proposed CRC will develop a Viromics capability that will be integrated to existing microbiome research infrastructure at the University of Calgary. The CRC will be housed in the Faculty of Science (FoS), and if their primary research focus is animal systems, they will be cross-appointed in the University of Calgary Faculty of Veterinary Medicine (UCVM).

The CRC will participate, and take a leadership role when appropriate, in a variety of environmental, veterinary, medical and transdisciplinary research initiatives across campus under our **One Health at UCalgary** research theme (<https://research.ucalgary.ca/one-health>). One Health aims to systemically understand health issues on multiple scales spanning environments, communities, and individuals. The CRC will likely receive funding from a combination of research agencies (NSERC, CIHR, Genome Canada, Alberta Innovates, etc.) and industry.

The proposed position will build on existing UCalgary strengths in microbiome research, exemplified by cross-Faculty initiatives such as the International Microbiome Centre. Across the university we have a strong group of researchers studying the microbiomes of diverse macro- and micro-environments, ranging from industrial waste to the human gut. Because of the ubiquity of viruses within microbial communities, these microbiome researchers across the university present rich potential for collaboration. In addition, a range of model organisms (bacteria, plants, animals), and environments (wetlands, forests, landfill, aqueous systems, agricultural systems, wastewater, bioreactors, oilsands tailings, etc.) are being studied across the University and present further potential for collaboration.

The CRC will have access to specialized microbiome facilities in the Faculty of Science and the International Microbiome Centre, which include extensive infrastructure for genomics, proteomics and metabolomics. Specialized resources for high-throughput proteomics and metabolomics are available in the Calgary Metabolomics Research Facility, one of Canada's largest mass spectrometry facilities, developed specifically to unravel complex host-microbe metabolic dynamics. Resources for data analysis and biomolecular computing are available via the Advanced Research Computing (ARC) cluster, the cross-faculty Centre for Molecular Simulation, the Institute for Quantum Science and Technology, the Health Visualization Initiative, and the Alberta Precision Exchange (APEX) Program for Precision Diagnostics.

The long-term goal for the CRC chair is to develop a vibrant and internationally recognized research program in alignment with the recently developed institutional "Growth Through Focus" strategy and the Faculty of Science strategic research plan. "Growth Through Focus" is built around three big ideas that will differentiate our university and drive growth: transdisciplinary scholarship, integration with our community, and future-focused program delivery that will see us expand flexibility and customizability of the UCalgary experience. To learn more about this vision please see:

<https://www.ucalgary.ca/unstoppable>. The successful candidate will possess the attributes and desire needed to lead research initiatives within strategic interdisciplinary themes at UCalgary, build on current strengths, develop strategies for future growth, and promote program developments with student engagement and experience. Additionally, the Chair will play an important role in teaching and research supervision of students in the Department of Biological Sciences and Faculty of Veterinary Medicine undergraduate and graduate programs. Although this position carries a reduced teaching load, the candidate will be expected to contribute to a senior Virology course. Service to the Department, Faculty, University, and Community is also expected.

The University of Calgary is a young and ambitious comprehensive research institution. Located in the nation's most enterprising city, the university is making tremendous progress on its Eyes High journey to be recognized as one of Canada's top five research universities, grounded in innovative learning and teaching, and fully integrated with the community it both serves and leads. The student body includes 28,000 undergraduate and 6,800 graduate students enrolled across 100 different undergraduate, graduate or professional degree programs. The University of Calgary inspires and supports discovery, creativity and innovation across all disciplines. For more information, visit [ucalgary.ca](http://ucalgary.ca).

Calgary has consistently been named as one of the world's most livable cities. It is a city of leaders - in business, community, philanthropy, and volunteerism. Calgarians benefit from a growing number of world-class dining and cultural events and enjoy more days of sunshine per year than in any other major Canadian city. Calgary is less than an hour's drive from the majestic Rocky Mountains and boasts the most extensive urban pathway and bikeway network in North America.

## Qualifications

- Academic Credentials: PhD (or equivalent) and subsequent postdoctoral training in Microbiology, Virology or a related field.
- Research output and impact: Applicants should have a strong publication record in recognized international journals and books, and/or a strong record in alternative, non-traditional outputs such as (but not limited to): community outreach (popular press, interviews, public or online seminars, scientific social media), and resource development (online databases, protocols, software tools). Applicants may provide evidence of research impact and translation (follow-up studies, entrepreneurial activities, patents, social action, use of results in clinical trials).
- Research Plan: The main research program should fall within the scope for funding of NSERC (The Natural Sciences and Engineering Research Council of Canada). Entrepreneurial spirit and the ability to interact with industry is a definite asset.
- Supervisory or leadership record: Experience supervising students either as a PI or as a senior researcher (e.g. "unofficial" postdoctoral mentoring of students), or potential for supervisory excellence. Evidence of leadership ability or of leadership potential.
- Teaching experience: The position carries a reduced teaching load, but experience in teaching in the fields of Microbiology and Virology, or potential for teaching excellence.
- Evidence of collaboration: Evidence of collaborative research and collegiality
- Commitment to EDI: Demonstrated commitment to creating a culture of equity, diversity, and inclusion.

The successful candidate at the **Assistant Professor** level should have a track record of publications, prior experience in working with external research funding programs including, but not limited to, peer-reviewed post-doctoral fellowships programs, and participation in effective teaching at the University level.

The successful candidate at the **Associate Professor** level must have a strong track record of publications, evidence of securing ongoing external research funding, effectiveness in teaching at the University level, and evidence of effective graduate student supervision.

## How to Apply

Interested individuals are encouraged to apply online via the 'Apply Now' link. Please note that the application process allows for only four attachments. Your four application attachments should be organized to contain the following:

- Cover letter and curriculum vitae, including the names and contact information of three referees
- Statement of research interests (1-3 pages)
- Statement of teaching philosophy/teaching dossier (1-2 pages)
- Statement describing prior contributions and/or philosophy in the area of Equity, Diversity, and Inclusion (EDI). This should include a description of your ability to work within a culturally diverse and international student, staff, and faculty body (up to 1 page)

Questions may be addressed to:

Peter Dunfield, Professor and Associate Head (Research)

Department of Biological Sciences  
pfdunfie@ucalgary.ca

**Applications will be accepted until October 11, 2022.**

The University of Calgary recognizes that candidates have varying career paths and that career interruptions can be part of an excellent academic record. Candidates are encouraged but not required to provide any relevant information about their experience and/or career interruptions to allow for a fair assessment of their application. Selection committees have been instructed to give careful consideration to, and be sensitive to the impact of career interruptions, when assessing the candidate's research productivity.

The University of Calgary has launched an institution-wide [Indigenous Strategy](#) in line with the foundational goals of [Eyes High](#), committing to creating a rich, vibrant, and culturally competent campus that welcomes and supports Indigenous Peoples, encourages Indigenous community partnerships, is inclusive of Indigenous perspectives in all that we do.

*As an equitable and inclusive employer, the University of Calgary recognizes that a diverse staff/faculty benefits and enriches the work, learning and research experiences of the entire campus and greater community. We are committed to removing barriers that have been historically encountered by some people in our society. We strive to recruit individuals who will further enhance our diversity and will support their academic and professional success while they are here. In particular, we encourage members of the designated groups (women, Indigenous peoples, persons with disabilities, members of visible/racialized minorities, and diverse sexual orientation and gender identities) to apply. To ensure a fair and equitable assessment, we offer accommodation at any stage during the recruitment process to applicants with disabilities. Questions regarding [diversity] EDI at UCalgary can be sent to the [Office of Equity, Diversity and Inclusion](#) ([equity@ucalgary.ca](mailto:equity@ucalgary.ca)) and requests for accommodations can be sent to Human Resources ([hrhire@ucalgary.ca](mailto:hrhire@ucalgary.ca)).*

*All qualified candidates are encouraged to apply; however Canadians and permanent residents will be given priority. In this connection, at the time of your application, please answer the following question: Are you a Canadian citizen or a permanent resident of Canada? (Yes/No)*

To learn more about academic opportunities at the University of Calgary and all we have to offer, view our [Academic Careers website](#). For more information visit [Careers in the Faculty of Science](#).

The University strongly recommends all faculty and staff are fully vaccinated against COVID-19.

### **About the University of Calgary**

The University of Calgary is Canada's leading next-generation university – a living, growing and youthful institution that embraces change and opportunity with a can-do attitude. Located in the nation's most enterprising city, the university is making tremendous progress on its Eyes High journey to be recognized as one of Canada's top five research universities, grounded in innovative learning and teaching and fully integrated with the community it both serves and leads. The University of Calgary inspires and supports discovery, creativity and innovation across all disciplines. For more information, visit [ucalgary.ca](#).

## **About Calgary, Alberta**

Calgary is one of the world's cleanest cities and has been named one of the world's most livable cities for years. Calgary is a city of leaders - in business, community, philanthropy and volunteerism. Calgarians benefit from a growing number of world-class dining and cultural events and enjoy more days of sunshine per year than any other major Canadian city. Calgary is less than an hour's drive from the majestic Rocky Mountains and boasts the most extensive urban pathway and bikeway network in North America.

Posting Date: August 26, 2022

Closing Date: October 11, 2022