



**Postdoctoral Research Fellow**, Cullis and Russell Labs  
Department of Biochemistry and Molecular Biology & Department of Medicine  
The University of British Columbia

**Job Summary:**

The labs of Dr. Pieter Cullis and Dr. James Russell, in the Department of Biochemistry and Molecular Biology, and the Department of Medicine at UBC are looking for a highly motivated, full-time Postdoctoral Research Fellow (PDF) with a PhD in Biochemistry, Biophysics, Pharmacology, Molecular Biology, or a related field. The PDF will be co-supervised and report to both Prof. Cullis and Prof. Russell.

The candidate will head a multidisciplinary project developing lipid nanoparticle (LNP) messenger RNA (mRNA) vaccines for multi-drug resistant bacteria. A strong molecular biology background and experience with bacterial infectious disease are assets. The candidate will require both a strong scientific background and excellent communication skills as they will be part of a cross-faculty multidisciplinary team.

The successful candidate will also run collaborations with other academic groups, develop new intellectual property, and support grant and patent applications. The start date for this position is flexible, but as soon as possible is preferred.

**Responsibilities will include but are not limited to the following:**

- Technique development and implementation centered around LNP mRNA formulation development for bacterial vaccines.
- Cloning and screening functionality of novel mRNA designs
- Formulation of lipid nanoparticles and testing in in vitro and in vivo contexts
- Interpretation of next-generation sequencing results and structural engineering techniques for vaccine antigen identification and design, in collaboration with field experts
- Training junior laboratory members and students
- Preparing manuscripts for publication, and supporting and writing grant proposals
- Attending meetings and seminars
- Initiating and direction collaborations with other labs

**Education/Work Experience:**

- A PhD in Biochemistry, Pharmacology, Biophysics, Molecular Biology, Molecular Microbiology, or related
- A solid scientific and technical background with excellent written and oral communication, as well as effective interpersonal skills
- A strong background in molecular biology and genetic engineering; additional nucleic acid formulation (LNP or other) experience is an asset but not required
- Experience in the field of infectious disease is an asset
- A quality track record of scientific output, with at least 2 first author manuscripts in reputable journals preferred but not required
- Excellent writing and presentation skills are required

Interested Candidates Please email a CV to: [cullis.applications@gmail.com](mailto:cullis.applications@gmail.com)

## About UBC

For more than fifty years, the Department of Biochemistry & Molecular Biology has played an active and important role at UBC and in the greater scientific community. The Department is home to approximately 90 research laboratories from fifteen Departments organized into nine research clusters, fostering a strong foundation for innovation and collaborations. All members of the Department maintain active, well-funded research programs that encompass many areas of modern biochemistry, and molecular and structural biology. The Department hosts an active Graduate program with more than 90 students and offers over fifteen undergraduate courses and laboratory courses for honours, major and minor Undergraduate programs.

The Department of Biochemistry & Molecular Biology is mainly located in the Life Science Institute (LSI) in Vancouver, BC. A number of research faculty, however, are dispersed at different locations, such as, Michael Smith Labs and BCCHR, and the teaching stream are based in the Biological Sciences Building at the Point Grey Campus. The Biological Sciences Building is a hub for Science Undergraduate teaching and students, housing a number of Departments such as the Departments of Biochemistry & Molecular Biology, Botany, Cellular & Physiological Sciences, and Zoology. All members of the Departments maintain their lab teaching activities at this new site.

UBC - One of the World's Leading Universities 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.