



VACCINE AND INFECTIOUS DISEASE ORGANIZATION

Postdoctoral Fellow – Influenza Vaccine

The Vaccine and Infectious Disease Organization (VIDO), Canada's Centre for Pandemic Research, is a world leader in infectious disease research and vaccine development for humans and animals. Located at the University of Saskatchewan in Saskatoon, Canada, VIDO is home to one of the largest and most advanced containment level 3 facilities in the world. To strengthen the preparedness for emerging infectious diseases we are currently expanding our infrastructure to include containment level 4 capacity, a GMP vaccine manufacturing facility, and a new animal housing facility. Our vision includes having the capacity to study any emerging disease in any animal model embracing a One Health approach to prevent emerging and re-emerging infectious diseases in humans and animals.

Position Summary

Dr. Aneesh Thakur, Principal Investigator, [Laboratory of Vaccine Engineering and Immunology \(LVEI\)](#) is seeking an outstanding Postdoctoral Fellow focusing on Influenza vaccine development to join his team.

H5N1, Highly Pathogenic Avian Influenza (HPAI), also known as bird flu, is a serious disease and requires rapid response because it is highly contagious and often fatal to chickens. Most efforts to develop vaccines against H5N1 infection in chickens have relied on traditional vaccine platforms that do not induce a strong immune response and provide only limited immunity due to rapid virus mutation and rearrangement. Messenger RNA is a promising vaccine technology to develop novel H5N1 vaccines in chicken. Moreover, aerosol delivery of mRNA can generate protective immunity in the lungs against HPAI. However, little is known about how to design safe mRNA vaccines for administration in the respiratory tract and how to achieve potent airway mucosal immunity. The purpose of this project is to develop and test an inhalable mRNA vaccine against H5N1 infection in chicken. The project will combine approaches in drug delivery, immunology, virology, and *in vivo* infection models to achieve the objectives.

Profile

We are looking for a highly motivated and enthusiastic scientist with the following competencies and experience:

Essential experience and skills:

- PhD (completed in the past three years) in Immunology, Drug Delivery, or another related discipline
- Hands-on experience with formulation, cell culture, flow cytometry, and molecular biology techniques
- Team player with excellent oral and written communication skills
- Effective organizational and time management skills

Desirable experience and skills:

- Experience in the formulation and characterization of nanoparticles
- Experience in animal experimental trials especially chicken
- Experience in *in vitro* transcription and RNA purification

Experience working with biosafety level 3 pathogens is an asset but not required. The selected candidate will have the opportunity to be trained in world class containment level 3 facilities and at Vaccine Development Centre, the GMP vaccine manufacturing facility at VIDO.

Status: 2-year term, with the possibility of extension

Employment Group: Post-Doctoral Fellows – PSAC

Full Time Equivalent (FTE): 1.0

Salary Information: The starting salary will follow the university standard for a post-doctoral researcher and will be commensurate with experience.

The successful applicant will be required to provide the following current verification(s) where 'Yes' is indicated below. Further information is available at: <https://careers.usask.ca/tips-for-applying.php#Howtoapplyforaposition>

Facility Access Screening including Criminal Record Check: Yes

Driver's License and Abstract Check: Not Applicable

Education/Credential Verification: Yes

Vulnerable Sector Check: Not Applicable

Interested candidates are asked to submit their application in one single application document (pdf file) including a statement of research interest, complete curriculum vitae (CV), and contact information of three references.

[Apply Now](#)

Review of applications will begin immediately; however, applications will be accepted and evaluated until March 31, 2024. We thank all applicants for their interest; only those candidates selected for an interview will be contacted.

Living in Saskatoon

- One of the lowest costs of living among major cities in Canada (<https://www.saskatoon.ca/community-culture-heritage/new-saskatoon/life-saskatoon>)
- One of the sunniest places in Canada (<https://www.saskatoon.ca/community-culture-heritage/new-saskatoon/life-saskatoon>)
- A leading centre of culture and learning, Saskatoon is also one of the most socially engaged and most literate cities in Canada (<https://admissions.usask.ca/campus-life/housing.php#LivinginSaskatoon>)

For more information visit: [Discover Saskatoon](#)

For more information visit: vido.org

Note: The University believes equity, diversity, and inclusion strengthen the community and enhance excellence, innovation and creativity. We are dedicated to recruiting individuals who will enrich our work and learning environments. All qualified candidates are encouraged to apply; however, in accordance with Canadian immigration requirements, Canadian citizens and permanent residents will be given priority. We are committed to providing accommodations to those with a disability or medical necessity. If you require an accommodation in order to participate in the recruitment process, please notify us and we will work together on the accommodation request. The University of Saskatchewan's main campus is situated on Treaty 6 Territory and the Homeland of the Métis. We pay our respects to the First Nations and Métis ancestors of this place and reaffirm our relationship with one another. Together, we are uplifting Indigenization to a place of prominence at the University of Saskatchewan.