

JOB POSTING INFORMATION	
Placement Term:	2023 - Summer
Job Title:	S23 Formulation Screening Associate (Co-op)
Position Type:	Co-op Position
Job Location:	Vancouver, BC
Country:	Canada
Duration:	4 or 8 months
Job Description:	<p>Located on the University of British Columbia campus, NanoVation is focused on design and testing of novel lipid nanoparticle (LNP) formulations for the delivery of nucleic acids. LNP technology plays an essential role in the COVID-19 mRNA vaccines and is the enabling technology in the FDA-approved formulation Onpattro. While this technology has been optimised for delivery to the cells within the liver, other tissues are poorly targeted. NanoVation has developed new technology to overcome this limitation.</p> <p>Responsibilities include but not limited to the following:</p> <ul style="list-style-type: none"> •Assist in the formulation, concentration, and characterisation of lipid nanoparticles •Cell culture media preparation •Assist in LNP transfection in human primary and secondary cell cultures, protein extraction and sample analyses using bioluminescence and fluorescence assays •Cell passaging, freezing, banking, and documentation •Compile data to be used for the preparation of reports and meeting presentations •Maintenance of tissue culture room, ordering lab supplies, replacing lab inventories, making chemical stock solutions, and the like.
	<p>A background in biochemistry, biology, chemistry and/or related life sciences discipline preferred.</p> <p>Strong analytical, problem solving and communication skills Ability to learn quickly and work independently with minimal direct supervision Candidate must be available to work full-time (40 hours/week) during the co-op term</p> <p>Requires training for chemical and biological safety prior to start Chemical Safety - Research Safety (ubc.ca), Biosafety for Study Team Members - Research Safety (ubc.ca); will be provided.</p>
Job Requirements:	<p>A background in biochemistry, biology, chemistry and/or related life sciences discipline preferred.</p> <p>Strong analytical, problem solving and communication skills Ability to learn quickly and work independently with minimal direct supervision Candidate must be available to work full-time (40 hours/week) during the co-op term</p> <p>Requires training for chemical and biological safety prior to start Chemical Safety - Research Safety (ubc.ca), Biosafety for Study Team Members - Research Safety (ubc.ca); will be provided.</p>

Citizenship Requirement:	N/A
Targeted Co-op Programs:	View Targeted Programs

APPLICATION INFORMATION	
Application Deadline:	April 30, 2023 09:00 AM
Application Procedure:	Through UBC Science Co-op
Cover Letter Required?:	Yes
Address Cover Letter to:	Dr. Jayesh A Kulkarni
Application Documents Required:	Job Application Summary Sheet, Cover Letter on Co-op Header, Resume on Co-op Header, UBC Transcript (Do not upload your own UBC transcript)

ORGANIZATION INFORMATION	
Organization:	NanoVation Therapeutics
Address Line 1:	2405 Wesbrook Mall 4th floor
City:	Vancouver
Postal Code / Zip Code:	V6T 1Z3
Province / State:	BC
Country:	Canada

Works Cited

UBC Science - MyAccount - Science Co-Op - Job Postings.

www.scope.sciencecoop.ubc.ca/myAccount/co-op/postings.htm. Accessed 2 Apr. 2023.

2200 University Blvd
Vancouver BC, V6T 1Z1

April 14, 2023

NanoVation Therapeutics

Dear Dr. Jayesh A Kulkarni,

As a 4th year student in the UBC-BCIT Honours in Biotechnology Program, the Formulation Screening Associate Co-op position at NanoVation Therapeutics genuinely catches my interest. I am intrigued by NanoVation's lipid nanoparticle technology and would love to have the opportunity to learn more about its role in COVID-19 mRNA vaccines. I believe that I can be a valuable asset to NanoVation, as my lab and research experience, ability to work independently, and documentation and communication skills would be immensely applicable to the team.

With research experience in both industry and academia, I have developed a variety of laboratory and research skills. During my co-op at Xenon Pharmaceuticals Inc., I used flash nanoprecipitation to generate polymeric nanoparticles that could encapsulate XEN1101 (API) at increased drug loading capacity. Additionally, I gained an extensive amount of formulation development experience through the execution of formulation screens and the development of a novel transdermal patch prototype.

In my previous co-op placement at the BCIT Centre for Applied Research and Innovation (CARI), I also developed the ability to work independently. At CARI, I independently completed a 1-month stability study measuring the concentration of CBD and THC in over 10 cannabis samples by HPLC. Additionally, I employed problem-solving and analytical skills to operate, train, and write an SOP for an outdated analytical instrument.

Through my courses and previous co-op positions, I have also developed excellent documentation and communication skills. At Xenon, I was trusted with assisting in document collection and review and being a liaison between the CMC team and drug product manufacturers. Having completed four research projects at Xenon, I also have experience writing literature reviews, data summaries, and scientific reports up to 145-pages. This allowed me to become proficient in using Microsoft® Office and demonstrate effective report-writing skills. I believe these skills and experiences would be applicable to the Formulation Screening Associate Co-op position.

Thank you for taking the time to consider me for the Formulation Screening Associate position. I look forward to the opportunity to work with the team and learning more about the role of lipid nanoparticle technology in COVID-19 mRNA vaccines. I can be contacted at 778-847-2636 or angiezhou6@hotmail.com

Sincerely,



Angie Zhou

Enclosed: Resume

Angie Zhou

2200 University Blvd, Vancouver BC, V6T 1Z1
angiezhou6@hotmail.com • 778-847-2636

OBJECTIVE: Research position in the biotechnology industry with focus on lipid nanoparticle delivery

EDUCATION

University of British Columbia **2018 - present**
Bachelor of Science, Honours in Biotechnology

British Columbia Institute of Technology **2019 - 2021**
Diploma in Biotechnology

PROFESSIONAL EXPERIENCE

Xenon Pharmaceuticals Inc., Burnaby **May 2021 – Dec 2021**
CMC Drug Product Formulation Co-op

- Tested over 25 combinations of drug formulation components including solvents, plasticizers, and polymers to successfully create a transdermal patch prototype for the delivery of epileptic drugs
- Executed over 40 experiments that involved varying polymer and drug concentrations, solvent and anti-solvent flow rates, and polymer type to generate polymeric nanoparticles that could encapsulate XEN1101 (API) at increased drug loading capacity
- Trusted with assisting in document collection and review and acting as a liaison between the CMC team and drug product manufacturers
- Performed over 5 formulation screens to direct PK and toxicology studies in animals
- Effectively delivered a 20-minute presentation to 150+ employees

BCIT CARI, Burnaby **May 2020 – Aug 2020**
Research Assistant Co-op

- Independently completed a 1-month stability study measuring the concentration of CBD and THC in over 10 cannabis samples by HPLC
- Analyzed over 60 different hand sanitizer products using GC-MS to confirm required alcohol content (> 60%) and assess levels of impurities, including toxic components
- Trusted with assisting in formulating and preparing custom orders of kratom (plant) capsules, hand sanitizers, and cannabis drinks for industry partners
- Employed troubleshooting and communication skills to operate, train, and write an SOP for an outdated analytical instrument (Karl-Fisher titrator)

VOLUNTEER EXPERIENCE

UBC-BCIT Biotechnology Club, Vancouver **Sept 2019 – Present**
VP Student Life

- Collaborate with the UBC Science Undergraduate Society and the Microbiology and Immunology Students Association to plan the annual Biotech Networking Night, which includes representatives from over 15 biotechnology companies and 100 attendees
- Demonstrate ability to work in a team, organizational skills, and effective time management through the planning of monthly social events

SKILLS AND ABILITIES

Technical: Proficient: Microsoft Word, Excel and PowerPoint, R and R Suite

REFERENCES: Available on request

To: Dr. Sarah McLeod (sarah_mcleod@bcit.ca)
From: Angie Zhou (angiezhou6@hotmail.com)
Date: April 14, 2023
Subject: Request for Reference – Angie Zhou

Dear Dr. McLeod, I hope you have been well since we last spoke. I am writing to request a letter of reference for the Formulation Screening Associate Co-op position at NanoVation Therapeutics.

In May, I will commence my last co-op work term and begin my search for a position in the biotechnology field. During the time that I was enrolled in your class at the British Columbia Institute of Technology, your mentorship helped me build essential skills and facilitated my success in navigating through the science field. As the Biotechnology Program Head and experienced instructor, your reference would greatly enhance my job application.

If you are comfortable with providing a positive reference for me, please let me know by April 20, 2023, as I will need to have my references ready by then. If you have any further questions or comments, please do not hesitate to contact me at 778-847-2636 or via email at angiezhou6@hotmail.com.

Thank you for your time and consideration, I look forward to hearing from you.

Sincerely,



Angie Zhou

Encl. Résumé and Cover Letter

To: Dr. Matthew Tandy (mtandy@xenon-pharma.com)
From: Angie Zhou (angiezhou6@hotmail.com)
Date: April 14, 2023
Subject: Request for Reference – Angie Zhou

Dear Dr. Tandy, I hope you have been well since we last spoke. I am writing to request a letter of reference for the Formulation Screening Associate Co-op position at NanoVation Therapeutics.

As you may know, I will be beginning my final co-op work term at the beginning of May. As such, I am beginning my job search for a position in the biotechnology field. During the time that I worked for you as a co-op student at Xenon Pharmaceuticals Inc., your mentorship helped me build essential laboratory skills and taught me how to approach problems like an experienced scientist. I developed skills working in the laboratory environment that I hope to refine and develop through positions in an industry setting. As the Associate Director CMC at Xenon Pharmaceuticals Inc. and experienced scientist, your reference would be an excellent addition to my application.

If you are comfortable with providing a positive reference for me, please let me know by April 20, 2023, as I will need to have my references ready by then. If you have any further questions or comments, please do not hesitate to contact me at 778-847-2636 or via email at angiezhou6@hotmail.com.

Thank you for your time and consideration, I look forward to hearing from you.

Sincerely,



Angie Zhou

Encl. Résumé and Cover Letter

To: Dr. Xiaohui Zhang (xiaohui_zhang@bcit.ca)
From: Angie Zhou (angiezhou6@hotmail.com)
Date: April 14, 2023
Subject: Request for Reference – Angie Zhou

Dear Dr. Zhang, I hope you have been well since we last spoke. I am writing to request a letter of reference for the Formulation Screening Associate Co-op position at NanoVation Therapeutics.

As you may know, I will be beginning my final co-op work term at the beginning of May. As such, I am beginning my job search for a position in the biotechnology field. During the time that I worked for you as a co-op student at BCIT's Natural Health and Food Products Research Group (NRG), your mentorship helped me build essential laboratory skills and taught me how to approach problems like an experienced scientist. I developed skills working in the laboratory environment that I hope to refine and develop through positions in an industry setting. As an experienced research analyst with over 17 years of chemistry experience, your reference would be an excellent addition to my application.

If you are comfortable with providing a positive reference for me, please let me know by April 20, 2023, as I will need to have my references ready by then. If you have any further questions or comments, please do not hesitate to contact me at 778-847-2636 or via email at angiezhou6@hotmail.com.

Thank you for your time and consideration, I look forward to hearing from you.

Sincerely,



Angie Zhou

Encl. Résumé and Cover Letter