Qinyan Song

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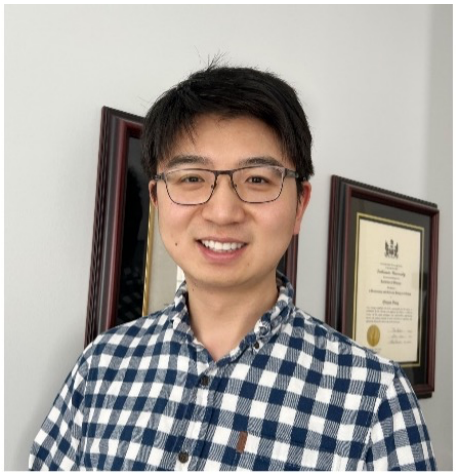

Qinyan started his post-secondary education in 2008 at Dalhousie University. After graduating with a Bachelor of Science, Honours, in Molecular Biology and Biology, he remained at Dalhousie and began his Master of Science with Dr. Jan Rainey and Dr. Paul Liu. In 2015 he transferred to the PhD program for Biochemistry and Molecular Biology. His research focused on oncology, using recombinant protein production technology to study the interaction between p53 and its regulator MDM2 and MDMX proteins, which play a role in regulating tumour suppression.

During his time with the Rainey lab, Qinyan heard about Biovectra from a student in a neighbouring lab who worked there. Upon graduation, Biovectra was one of the places Qinyan applied, and thanks to a prompt interview process and the ability to stay in Halifax, Qinyan began work with Biovectra in October 2020.

Biovectra is a contract development and manufacturing organization based here in Atlantic Canada. They help clients take clinical-scale projects up to a commercial level, focusing on the production of synthetic small molecules, recombinant proteins, plasmid DNA, and mRNA through synthetic methods and fermentation processes.

Quinyan first started with Biovectra's analytical team in quality projects where he developed chromatography methodologies for external clients. He said it was the technical skills learned during research that aided him the most in his transition from academia to industry. While the subject matter of the project may change, these transferable skills remain an important foundation. This past summer, Qinyan moved to Biovectra's process development team where he works with fermentation processes that target the production of plasma DNA needed to make mRNA vaccines. Typically, fermentation processes begin on

a small 2 to 10 L scale where the yields can be optimized. The cells are then lysed, filtered, and chromatography is used to isolate the desired DNA product. While that sounds like a deceptively simple workflow, Qinyan says that these projects take months to even get started. The client's process must be well understood, and the quality of chemicals and materials used in these processes have to be carefully selected. A lot of research, thought, and planning must be put in before the first test runs can be completed. If the first test run is consistent with what clients have seen before, additional runs can be completed to collect the data needed. A report is then generated so that projects can be passed on to the next stage where another team upscales the processes to a larger commercial scale.

While in the process development team, Qinyan says that he still has the opportunity to work closely with members of other teams, such as the analytical team or the manufacturing and technical groups, as they all contribute different expertise to a given project. Given that each project is slightly different, Qinyan says there are always new things to try and lots to learn, something he quite enjoys about his current position. On the other hand, projects often have deadlines, and managing time to meet these deadlines can sometimes be a challenge that requires long hours. Regardless, Qinyan seems content with his position, and he says that, given how much he can learn within the process development team, he will likely stay there for many years before he considers switching to another area of the company.