# Master's Thesis: "Towards an *in vitro* model of chromosomal instability to study immune migration and interactions"

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My six months' stay at the Foijer Lab in Groningen went by in no time and I have learned many valuable experiences both personally and from a study point of view.

The goal of my project was to develop a novel cancer model to better understand the emergence and development of cancerous tissue and tumors. One of the main research areas in the lab is chromosomal instability (CIN), a genetic condition seen in many cancers. By inducing CIN in different cell lines and studying them, the aim was to better understand how cancer cells cope with its negative effects, potentially finding a way to use it to find new ways of treating tumors. For my thesis, I tested different ways of inducing CIN in cell lines of varying origins and characterized their phenotypes. Additionally, I investigated the behavior of CIN cells regarding immune cell recruitment, following up on work previously done in the lab. I learned and applied various molecular biological methods, including Western Blots to measure the expression of genes in genetically modified cells, and RT-qPCR and flow cytometry to quantify the abundance of immune signaling factors. Time-lapse fluorescence microscopy was used to characterize the CIN phenotype of the cells of interest by counting and categorizing correct and erroneous chromosome segregations.

My supervision was done by a PhD student and a Postdoc, both of which were relatively new to the lab themselves. A large part of the work planned for my thesis had not been attempted before in the Foijer Group, so we learned much in teamwork, and I quickly became independent since my supervisors were both mainly involved in projects different from mine. Nevertheless, the other PhD students and Postdocs from the lab were happy to help and support me in the project, and I learned much by collecting knowledge from different people.

During my project, we prioritized performing a broad range of different characterization methods over optimizing single experiments since we believed it was more important to get a general overview over the potential of our cellular model of CIN. In the end, we managed to establish a solid methodological basis which will hopefully serve as a starting point for future studies in the lab.

Apart from working in the lab, the Netherlands was a great experience for me personally. Groningen, being a vibrant student city that was large enough for a busy night life and infrastructure, but small enough to get everywhere by bike, was a lot of fun. From cute cafés, green hidden courtyards and the huge weekly market in the old city center to small local concerts, impro-comedy shows and outdoor techno festivals, the city has a *lot* to offer. During my time there, I joined the local student's badminton club, went ice skating and got to know many international people from all over the world. I also took the opportunity to travel to Utrecht and Den Haag, both cities that share the same spirit as Groningen, but each with their own specialties. And of course, I couldn't refuse a trip to the countryside to visit the famous tulip fields…

All in all, I had an awesome time in Groningen during which I learned to become more independent, acquired valuable lab skills and got fully immersed in (dutch) student life. Additionally, my stay helped me realize the direction I would like to pursue in my scientific future. I am truly grateful for having been able to take this opportunity with the support of the SNI.