

From November until December 2017, I visited the Department of Infectious Disease at the 1st Affiliated Hospital of South China University of Technology (SCUT) in Guangzhou, China. I have been discussing with the hepatologists to set up collaborative projects since early 2017, and this working visit provided an opportunity for me to discuss face-to-face the progression of the collaborative projects, to solve practical problems, to exchange experience and expertise, and to make future plans. The aim was to solidify a collaboration with SCUT in Guangzhou to study disease progression and liver cancer development in patients chronically infected with the hepatitis B virus (HBV).

My studies at the Erasmus MC in the group of André Boonstra focus on characterizing the immunological and genomic landscapes of chronic hepatitis B virus (HBV) infection using systems biology approaches, by correlating blood and hepatic immunological and genomic profiles of patients to better understand progression of chronic HBV. These studies indicated a possible role for B cells and NK cells during the natural history of chronic HBV. We also found gene profiles in these studies that suggest that malignant progression towards liver cancer has an early onset during the initial stage of HBV infection, and could lead to identification of novel therapeutic strategies.

Worldwide around ~ 250 million individuals are infected with HBV, and one-third of HBV infected people reside in China. These individuals are all at risk of developing liver cancer, and in fact about 80-90% of all liver cancers in China are due to HBV related. Since also in the Netherlands, the prevalence of HBV is relatively high in the Asian population, comparative studies of Asian patients in China and in the Netherlands may shed light on differences caused by vaccination history or therapeutic management, which are important factors impact on chronic HBV progression. During the visit, I had extensive work discussions with all clinical and laboratory staff of the Department of Infectious Disease at the 1st Affiliated Hospital of SCUT. In addition, a presentation was given in which our research at the Erasmus MC was presented, as well as a series of seminars to clinical postgraduate students at SCUT. Furthermore, I also visited the Center for Disease Control and Prevention (CDC) of Guangxi province to discuss possibilities for collaboration.

My visits to both institutes have allowed me to set up the research collaborations, which are highly complementary between the Dutch side and the Chinese site, and will accelerate my research on system biology of chronic HBV.

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