

Name: Jaeike Faber

Year Bursary Awarded: 2025

Present Post: Pathology resident, Erasmus Medical Centre, Rotterdam.

Department Innovation Grant completed: Clinical Pathology, Erasmus Medical Centre, Rotterdam University Medical Centre.

I wish to thank the BDIAP for awarding me this Innovation Grant. With it, I have been able to set up a new line of research in the Erasmus MC where I am currently in training to become a pathologist. I have used this opportunity to gather experience in setting up an independent research project, something I would like to use as a step-up in the pursuit of a future academic career. During this endeavour I was closely mentored by dr. Jan von der Thüsen who helped me navigate the intricacies of project management.

The Erasmus MC has a unique tissue bank containing samples from explanted hearts which I found the ideal source for a comparative investigation regarding cardiomyopathies. During my PhD I had already touched upon that topic, particularly left ventricular noncompaction cardiomyopathy. I now wanted to investigate if we could discover any functional differences between trabecular and compact myocardium in left ventricular noncompaction cardiomyopathy that might be different to other cardiomyopathies like hypertrophic or dilated cardiomyopathy.

Thanks to the funding by the BDIAP I was able to investigate sarcomeric and vascular abundance and fibrosis in the two heart layers using (immuno)histochemical techniques. Additionally, since the Erasmus MC tissue bank also contains matched frozen samples to the paraffin blocks, I have been able to perform contraction force measurements on single cardiomyocytes isolated from the compact and trabecular layer in collaboration with Amsterdam UMC physiology department.

Another opportunity the Innovation Grant provided me with is the option to travel abroad to collaborate with the EMBL Hamburg synchrotron facility. Later this year I will go there to correlate my 2D and functional data to the 3D morphology of the cardiomyocytes in the compact and trabecular wall to assess cardiomyocyte disarray in particular.

In conclusion, thanks to the Innovation Grant I have been able to develop new skills regarding project management, collaboration and leadership. My gratitude to the BDIAP for providing me with this opportunity!