Name of Applicant	Sadegh Rahimi
Name of the NENS School programme the applicant is enrolled with	SPIN-Signal Processing in Neurons
Name of the Home Programme Coordinator	Prof. Francesco Ferraguti
Name of the supervisor at the home laboratory	Dr. Meinrad Drexel, PhD
Affiliation of the supervisor at the home laboratory	Institute of Molecular and Cellular Pharmacology, Department of Genetics and Pharmacology, Medical University of Innsbruck, Austria
Name of the NENS Host programme	ONWAR-Graduate School Neurosciences Amsterdam Rotterdam
Name of the Host Programme Coordinator	Prof. A.B.(Guus) Smit
Name of the supervisor at the host laboratory	Prof. Corette Wierenga
Affiliation of the supervisor at the host laboratory	Cell Biology, Faculty of Science, Utrecht University, Netherland
Involved countries	Austria (home), Netherlands (host)
The period of the training stay	01.10.2021 to 20.11.2021

The main goal of my stay in Utrecht was to learn how to perform whole cell patch clamp recordings from organotypic slices. In our department in Innsbruck, we have a very well equipped electrophysiology rig; however, no one uses it for patch clamp recording from brain slices. Thanks to NENS stipend for this training stay, I found the opportunity to travel to Utrecht and join the Professor Wierenga's lab, in which, the patch clamp recording and the preparation of organotypic slices are conducted on daily and weekly based respectively. Professor Wierenga and her team were truly supportive, helping me to conduct (proper) patch-clamp recording (fig.1). After the first three dry weeks, which I found my mistakes, I could record two to three cells per day. In addition to patch-clamp recording, I had the opportunity to practice the preparation of organotypic culture and to observe confocal and two-photon microscopy.

Because of COVID-19 crisis I did not expect to have smooth training months in Utrecht; however, at the end, due to kind support of Professor Wierenga's team and the administration of the Utrecht University, I fully achieved my learning objective. The acquired knowledge would be useful not only for my thesis, but also for another research group in our institute, focusing on the role of Toll like receptors in neurological diseases, in particular, epilepsy. They also need patch clamp recording from neurons (hippocampal pyramidal cells) to prove their evidence on single cell level.

The NENS Exchange Grant allowed me to enjoy a highly-productive experience in Utrecht University, learning new techniques and boosting my PhD project. The Utrecht University has a vibrant and excellent neuroscience community made of extraordinary scientists. It has been a pleasure to be surrounded by all these colleagues who willingly offered help, insights and excellent scientific input. It was truly delightful, and therefore I would like to thank the NENS Committee of Higher Education and Training for making this magnificent unique opportunity possible, by providing all the funding needed to successfully develop this enriching experience for 2 months.

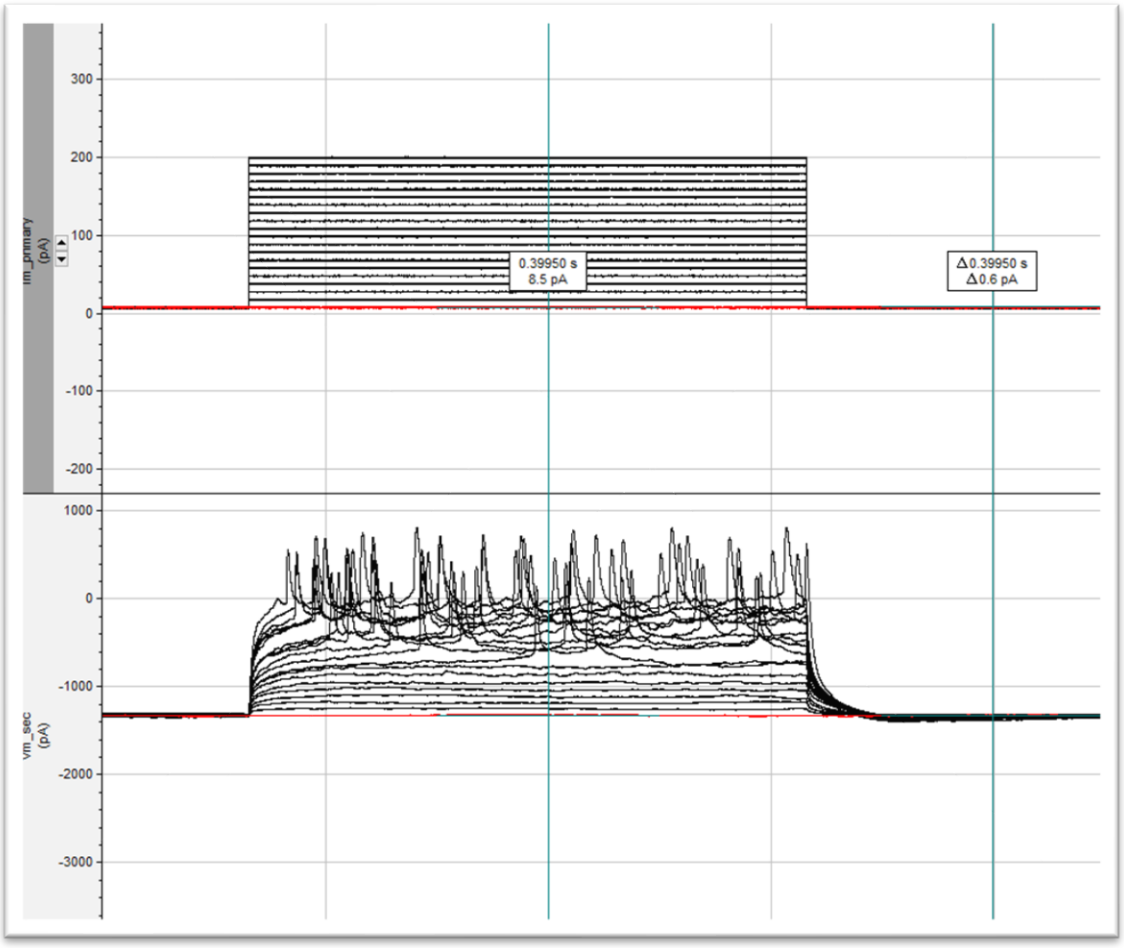

Figure 1. Representive result of the current clump recording from hippocampal pyramidal cells in organotypic culture