

Report training stay C.M. Coppens at the lab of prof. Bramham in Bergen (Norway) financed by NENS

During the training stay at the laboratory of prof. Bramham I have been given the opportunity to learn both the molecular techniques and the scientific background required for my study of the functional importance of synaptic plasticity in the prefrontal cortex in coping with stress.

Before the training stay I performed two social stress experiments in rats and collected brain material to be analyzed in Bergen. We have analyzed these samples for the expression of Arc, Bdnf, Arl4d, tieg1 and carp in the prefrontal cortex, nucleus accumbens and hippocampus using real-time PCR. I got to know all the ins and outs of this technique which allows me to proceed with this at my home university in the near future.

Furthermore, I have been trained in using the in situ hybridization techniques for genes involved in the mechanisms of synaptic plasticity. This technique is a routine at the laboratory of prof. Bramham and we will apply the specific probes and protocols in my laboratory in The Netherlands. After having performed the first analyses using this technique at my home university, a post-doc from the University of Bergen will eventually come over to make sure that the analyses are going the way they should go.

Although I have not had the time to perform experiments with viral vectors for the local modification of gene expression, we discussed the current knowledge about this technique and implementation in my research. We want to implement this technique in Groningen and use the knowledge and experience that is available in Bergen. The exact planning of the experiment will be decided together with prof. Bramham.

Besides that, I had a glance at other techniques such as electrophysiology, which makes me understand better what is going on in other disciplines related to my topic of research.

The month at the laboratory in Bergen has been proven to be very useful with respect to the scientific background of my project as well. Additional experiments, limitations and challenges of the current approach and possibilities for further collaboration have been discussed in much detail.

Taken together, the training at the University of Bergen has been very successful. Being in a different scientific environment for a while gave a boost to my scientific knowledge and has been a great experience. In the near future I will implement the learned techniques in my research at my home university in Groningen.