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Dorota Gieriej  
Nencki Institute of Experimental Biology  
Neurobiology Laboratory

REPORT ON TRAINING STAY IN MAX PLANCK INSTITUTE OF EXPERIMENTAL MEDICINE, GÖTTINGEN,  
GERMANY.

The training stay took place between January 23<sup>rd</sup> and March 9<sup>th</sup>. The aim was to learn electrophysiology recording *in vivo* technique as well as perform set of recordings from animals prepared earlier.

I have managed to accomplish all goals although setting up the equipment took longer than planned. During the training stay I have learned how to anesthetize animals and how to perform the electrophysiology recording *in vivo*. Last 3 weeks of the training stay I was performing experiments on mice that went through behavioral protocol.

Mice I have previously injected with lentiviral vectors into auditory cortex were subjected to the behavior sound discrimination protocol developed before. These animals were to learn to discriminate between two sounds of different frequency (one marking access to water and other paired with an aversive cue). Animals for the behavior paradigm were taken for the electrophysiological recordings – one animal per day.

During the procedure animals, were presented with sounds and the local field potentials (LFP) and spike signals were recorded from auditory cortex. First, the broad band noise (BBN) on different levels was played to establish the specific level for further recordings. Next, on this level, the frequency sweep was played (frequencies between 2 and 47 kHz) and BBN in different intervals between signals. Data gathered during aforementioned sound presentation allowed the basic characterization of electrophysiology responses. When there were measurable responses in the basic characterization, the animals were additionally presented with sounds that were used in the behavior paradigm. These data will be used to characterize specific responses.

Until now I have analyzed behavioral data and basic characterizations of the electrophysiological responses. I currently analyze brain tissue to verify animals in the experimental groups. When I finish analyze histological data I will perform the detailed analysis of electrophysiological results.

During this training stay I have learned new technique, especially significant was setting up the equipment when I had to cope with a variety of problems concerning proper grounding, noise levels, software malfunctions etc. The experience I gathered will be useful when setting up the equipment in the Institute I work in. Until now we are still waiting for results of granting procedure where the equipment was taken into account.