

DESCRIPTION OF ACTIVITY PERFORMED DURING PRACTICE IN IIT

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Place: *Italian Institute of Technology (IIT), Genova from 01.07.10 till 28.09.10.*

During the period of the practical placement I learned how to perform Western blotting (WB) and immunoprecipitation (IP) under the supervision of Dr. Patricia Lievens. These methods were used to investigate the Impact of FGFR1 related signaling pathway on palmitoyltransferase phosphorylation. It turned out that co-transfection with FGFR1 induces prominent tyrosine phosphorylation of different HA-DHHCs (1, -2, -3, -7 and -8) in both neural N2A and non-neural CHOK-1 cells, pointing thereby that the process of tyrosine phosphorylation could be a common feature for many DHHC family members. Overexpression of src (the participant of one of the pathways downstream of RGFR1 activation with FGF2) in SYF -/- cells is likely to fully activate tyrosine phosphorylation of DHHCs. However we didn't reveal any serine phosphorylation in DHHC7 transfected in N2A cells nether after PMA- (the activator of serine/threonine kinase – PKC) or with Ocadaic Acid- (the inhibitor of proteinserine / threonine phosphatases) treatment, confirming that FGFR1 does not induce any serine phosphorylation of DHHC7 and suggesting that PKC pathway doesn't participate in DHHC7 activation.

I tested also different FGFR1- and His-antibody in WB, several HA- antibody in WB and IP and DHHC3- and DHHC7 antibody in immunohistochemistry either.

With help of Dr. Patricia Lievens, Galina Dityateva and Elena Dvoretzkova I learned how to deal with cell cultures and by Alexander Detyatev was introduced to neuronal transfection.

I was also introduced to and time-lapse videorecordings, the method which enables to observe the changes occurring in cell in real time.

The subject of the investigation I took part in was interesting for me. I was amazed at up-to-date equipment and availability of all needed consumable materials. I learned progressive biochemical and cell biological techniques I never used before. It was a pleasure for me to deal with all people in the group and I'm very grateful to them for help and teaching. I enjoyed the practice very much and I want to thank also Anna Shestakova, Olga Martynova and Katri Wegelius for organization of it.

Travel and stay costs were sponsored by program BioN with support of grant Tempus 159313-TEMPUS-1-FI-TEMPUS-JPCR