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STSM Report

During my stay at the Division of Ichthyobiology and Fisheries, Warsaw University of Life Sciences I had opportunity to work on fish testis tissue, but also on some other tissues in order to better acquainted with the immunohistochemistry methodology. The fish species on which I worked were zebrafish (*Danio rerio*), perch (*Perca fluviatilis*), sterlet (*Acipenser ruthenus*) and medaka fish (*Oryzias latipes*).

Our plan was to use antibodies against spermatogonia-specific molecular markers such as GFRa1 or nanos 2 and which I will also use during my further work. However, due to technical problems, we were able to use only vasa (germline specific marker), SOX 9 (Sertoli cell marker) and PCNA (proliferating cell nuclear antigen) antibodies. Although those antibodies are not specific for the cells types I am going to work further with, I was able to learn this methodology, get acquainted with many tricks or the trade and get to practice it on my own on different tissues of different fish species.

As for the work itself, after fish were sacrificed, tissue was sampled and fixed in 4% formaldehyde, processed throughout standard histological methodology, prepared for blocking in paraffin and cutting on the slices thickness about 5 μm by the microtome. On histology samples prepared on this way we apply different immunohistochemistry protocols depending of the used antibody.

During our work we tested different protocols for different antibodies to be able to find the most suitable methodology which will give the best results. Among different antibodies we varied incubation time and antibody concentration as well as visualization time. After visualization I was able to quantify positive reaction applying stereological analysis.

My stay at the Division of Ichthyobiology and Fisheries, Warsaw University of Life Sciences was of great benefit for me. I was able to learn a new technique which is very important for my further work.

KIEROWNIK PRACOWNI
/ Prof. dr hab. Teresa Ostaszewska /