Looking for a motivated Diploma student to work in a very friendly team on the research project:

COMPARISON OF WESTERN BLOT METHODS FOR SERCA QUANTIFICATION IN A HIBERNATING SPECIES

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Project outlines:

Western blotting is an analytical method used for detecting and semi-quantifying proteins. In Polyacrylamide gels, proteins are separated by electrophoresis according to their molecular mass. By using a combination of primary and secondary antibodies, amounts of proteins of interest can be estimated via immunodetection. To control for equal loading of the protein on the membrane and to compensate for loading or transferring differences, a common approach consists in using a House-Keeping Protein (HKP), which is assumed to be equally abundant between tissues, organs, physiological conditions, e.g., seasonal status. To date, it is well known that this assumption can be false, especially in the case of samples comparison between states associated with high physiological transitions. Indeed, significant amounts of proteins involved in metabolic pathways can differ between seasons and/or physiological states. In the last decade, the use of total protein dyes appeared to be a good alternative as loading control. Hence, this project will aim at comparing methods of western blotting by using as loading control either total protein dyes or HKPs. Samples from dormice, either torpid or euthermic during hibernation, or summer euthermic will be used to produce a reliable protocol to semi-quantify protein amounts between these different seasonal or physiological states.

Experimental schedule: ~4 months flexible

The applicant should have a good background in biology including strong practical skills in biochemistry and the willingness to learn new techniques.

If you are interested, please contact us as soon as possible by sending a CV via E-mail.