

M.Sc. Position to Study Aquatic Chemosensory Biology

Interested in **aquatic animal behaviour** or integrative fields such as **neuroecology** or **neuroethology**?

Interested in building expertise at more than one level of inquiry in biology, from field studies, through behavioural experiments, neurophysiology and microscopy, to bioinformatics?

[Dr. Russell Wyeth](#) in the [Biology Department](#) at St. Francis Xavier University ([StFX](#)) is accepting applications for an MSc student position to start **September 1, 2027**.

Our research is focused on understanding how aquatic animals use odours and other cues during navigation. We work primarily with marine slugs and freshwater snails, both of which rely heavily on chemical cues to guide movement through their habitats. Potential thesis projects range across a number of different levels of organization, including:

- field work with SCUBA studying how nudibranchs respond to odour and flow cues while navigating in its natural habitat
- behavioural experiments in the laboratory exploring the navigation strategies sea slugs and snails use to find odour sources
- neuroanatomical research studying the structure of the gastropod nervous system, focusing particularly on sensory cells that detect odours and other cues
- analysis of activity-dependent gene expression to ascertain sensory pathways in the peripheral and central nervous systems of gastropods
- neuroethological experiments to establish how the nervous system integrates chemical and other sensory information to produce adaptive movements towards attractive odours and away from aversive odours

Research topics will be chosen based on student interest and expertise. Funding is available, but students eligible to apply for an [NSERC CGS](#) are particularly encouraged. Projects may involve work at Bamfield Marine Sciences Centre in British Columbia.

For further information or to apply, contact Dr. Russell Wyeth: rwyeth@stfx.ca