**Identification and characterization of Ostariophysan alarm cues**

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Ostariophysan fishes, which make up about 74% of freshwater organisms, rely on their ability to sense specific chemical information in order to assess and avoid risk predation. Alarm cues, which are released when fish epidermis sustains mechanical damage that occurs during a predation event, enhance prey’s ability to detect and respond appropriately with an antipredator response. While a tremendous amount of work surrounding predator-prey interactions within the Ostariophysi Superorder has been performed, the chemical identification of alarm cues has received relatively little attention. The objective of this research is to develop a methodology to identify the chemical structure and characteristics of Ostariophysan alarm cues via analytical methods and subtractive-combination bioassays. Fish skins will be subjected to different processes of extraction and separation in order to produce several molecular fractions which will be subsequently used as stimuli in behavioural assays. Once the active fraction(s) is isolated, gas chromatography – mass spectrometry (GC-MS) and nuclear magnetic resonance (NMR) will be used to identify the chemical structure of the active compound in alarm cues. Upon effective identification and characterization of these cues, further studies can be performed to understand the anti-parasitic and UVB radiation defence roles, thus consolidating the present knowledge on their ecological role and evolution across the Ostariophysi Superorder.