



POSITION FOR MASTER STUDENT, University of Saint Joseph (Macau)

Applications are invited for a full-time master student to develop a thesis under the following research topic: “Auditory feedback in shaping auditory-vocal systems: insights from a fish model”.

Summary

The question of how brain coordinates vocal output is relatively unknown. While human and bird vocal communication is relatively complex, studying simpler models such as fish can provide important insights for understanding the development of auditory-vocal systems. Feedback from the auditory systems can be critical for the control of vocal behavior in many animals, including humans. In fish, auditory feedback on vocal activity remains unknown. Moreover, the relation between the development of the auditory sense and the vocal differentiation remains uninvestigated in this taxon. Preliminary data shows that the Lusitanian toadfish, *Halobatrachus didactylus*, uses an unusually sophisticated vocal repertoire for fish (more than five different calls) to communicate during various social contexts and this ability starts remarkably early in life. The aim of this project is twofold: (1) investigate whether and/or how auditory sensitivity and auditory processing central units change throughout ontogeny in *H. didactylus*; and (3) evaluate whether auditory feedback plays a role in shaping vocalizations during development.

The master student is expected to develop research, write a thesis and publish data in scientific peer-reviewed journals, as well as, to participate in general lab management tasks and maintenance of stock animals. Research activities will take place at the USJ science lab, but availability to work abroad (HK, Portugal, US) might be needed.

Suitable candidates are those with a Bachelor degree or equivalent, and registered in a M.Sc. program in one of the fields: Biology, Medicine, Psychology, Biochemistry, Environmental Sciences, and Physics (acoustics/electronics). Students are expected to communicate mostly in English. Chinese language will be an advantage but not mandatory. Laboratory research experience is preferable. Conditions: 12 months duration, starting on September 2013; stipend - 10.000 MOP per month.

Candidates should send an email with a copy of the CV (English) and a motivation letter to Raquel Vasconcelos raquel.vasconcelos@usj.edu.mo, as well as 3 contacts of potential referees. Use same email in case of any doubt regarding this application. Only short-listed applicants will be contacted for final selection and interview. Position will remained opened until filled, but applications are expected before May 30th 2013.

Information about the PI and research team can be found at:

<http://www.usj.edu.mo/en/research/science-and-environment/vasconcelosteam>

Posted on April 16th 2013.