

PHD STUDENT IN THE DOCTORAL SCHOOL – CALL FOR APPLICATIONS

Position: PhD student in **biological sciences**

Unit of the project realization: Institute of Biology, Biotechnology and Environmental Protection, Faculty of Natural Sciences – University of Silesia in Katowice

Unit realizing the PhD student education: Doctoral School at the University of Silesia in Katowice

Call is open for candidates to the Doctoral School and for current PhD students.

Research will be carried out in the frame of the project „**Structure, functioning and evolution of ovaries in earthworms and their allies - microscopical and molecular analysis**” (OPUS-20 project, DEC-2020/37/B/NZ4/00560), financed from National Science Center under management of prof. dr hab. Piotr Świątek.

PhD student will participate in research tasks connected with analysis of ovarian morphology, histology and ultrastructure in selected groups of earthworms. Additionally, molecular analysis (sequencing of selected genes) are planned. In details the role of PhD student is material sectioning and preparation for transmission and scanning electron microscopy; analysis, documentation and interpretation of the morphological, histological and ultrastructural results; material analysis in fluorescence microscopy; participation in molecular research (DNA sequencing and phylogenetic analyses); participation in preparation of the manuscripts and congress abstracts. Presentation and dissemination of the obtained results.

Project description:

The main goal of the project is to carry out comparative microscopic analysis of the ovary organization and the course of female gamete production (oogenesis) in the selected earthworm taxa, and what is more, to use these histological and ultrastructural data to elucidate the ovary evolution and together with molecular data to create combined “morpho-molecular” phylogenetic tree of earthworms. Such combined phylogenetic analysis with the use of new data connected with ovary histology and ultrastructure together with molecular data gained in the project (five genes are planned to be sequenced in the each studied specimen) should shed more light on both the developmental biology and evolution of earthworms. The role of a PhD student will be to use light (including fluorescence) and electron microscopy techniques to fully analyze the cellular composition (histology) and ultrastructural details of cells which constitute ovaries in two families of earthworms. Additionally, student will use molecular methods to isolate DNA and partially sequence the selected genes (12S, 28S, 18S, COI, and histone H3) for each analyzed specimen.

We offer:

1. Scholarship for candidates to the Doctoral School – duration: 4 years, amount:
 - a. 2,559.95 PLN per month for first two years,
 - b. 3,653,70 PLN per month for next two years (the amount depends on the regulation of the Minister of Education and Science - subject to change), or
2. Scholarship for current PhD students – 3,000.00 PLN for 3 years.
3. Education in Doctoral School at the University of Silesia in Katowice
4. The opportunity to work on an interesting research topic,
5. The opportunity to work in an interdisciplinary and international team

Requirements:

1. MSc diploma in biology
2. Knowledge in zoology, animal histology and animal embryology
3. Practical knowledge in use of histological and microscopical techniques, at least light and florescent microscopy
4. Basal knowledge and practice in molecular methods as DNA extraction and PCR
5. Good command of English

Required documents:

1. Motivation list with a description of the scientific interests
2. CV
3. List of scientific publications and/or other scientific activities (e.g. participation in scientific congresses)
4. Copy of the MSc diploma in biology
5. Very welcome are the opinions of two or one independent research scientists

Candidates should register in IRK system and select „Doctoral School - admission by grant and implementation doctorate program”.

Documents should be delivered till 9.07.2021 to an e-mail: piotr.swiatek@us.edu.pl in the PDF format.

In case of any questions, before the formal application please contact to the grant leader for the e-mail address given above.

Documents will be rated by the commission, led by the project leader. Admission will be carried out according to the NCN regulations. Admission can be carried out both in Polish and in English.