

JOB OFFER

Position in the project:	Master Student
Scientific discipline:	Microbiology, sustainable agriculture, environmental microbiology, biotechnology,
Job type (employment contract/stipend):	Stipend
Number of job offers:	1
Remuneration/stipend amount/month (<i>"X0 000 PLN of full remuneration cost, i.e. expected net salary at X 000 PLN"</i>):	1500 PLN
Position starts on:	01.10.2022
Maximum period of contract/stipend agreement:	12 months
Institution:	University of Warsaw, Faculty of Biology / Warsaw
Project leader:	Prof. Wojciech Franus
Project title:	Fly ashes as the precursors of functionalized materials for applications in environmental engineering, civil engineering and agriculture. Project is carried out within the TEAM-NET program of the Foundation for Polish Science.
Project description:	This TEAM-NET joint project assumes using fly ashes as a precursor for the synthesis of novel functionalized materials with the structure of not only zeolites, but also mesoporous silica materials and metal-organic frameworks (MOFs). Then produced materials will be tested for possible applications in agriculture, civil and environmental engineering. With the implementation of new technologies of coal combustion and flue gas treatment, new types of fly ashes with increased content of unburned carbon (up to 30%) have been produced. Such byproducts will be used in this project for the synthesis of novel zeolite-carbon composites. Previous work related to the use of this type of fly ashes was focused on the separate production of zeolites or activated carbons, which did not fully exploit the potential of the above-mentioned byproducts. Their use as a precursor to the synthesis of a zeolite-carbon-vermiculite composite in this project will also pave the way for developing a novel material to replace vermiculite raw materials in agricultural applications. With this announcement we are looking for a Master student for the work-package #6 "Production of biostimulants of crop plant growth and of composting process and production of bioinhibitors of phytopathogen growth based on functionalized materials derived from fly ash and bacterial inoculants". The aim of WP #6 is to develop microbial biostimulants of crop plant growth and of biocomposting as well as biological inhibitors of phytopathogen growth. Strains selected from the culture collection of the University of Warsaw will be analyzed for their ability to survive in soil environment (including extreme conditions, e.g. low temperature). The influence of the application of microbial strains on plant biomass, plant resistance to unfavorable environmental conditions and phytopathogen growth in soil will also be analyzed. In the next stage, a process manual for the immobilization of selected strains on functionalized materials and on natural carriers (e.g. zeolites) will be developed. The influence of carrier conditioning on the survival and activity of immobilized microorganisms will also be investigated. Experimental

	verification of biopreparations on the laboratory and pilot scales (pot experiments and micro-field/biocomposter experiments, respectively) will also be carried out. In addition, the effect of biopreparation application on the structure and biodiversity of the soil microbiome (both bacterial and fungal) will be determined.
Key responsibilities include:	1. Isolation and development of abiotic stress tolerant bacterial inoculants 2. Characterization of selected strain for their PGPR attributes and biocontrol activity, 3. Extraction of enzymes and other extracellular metabolites
Profile of candidates/requirements:	1. Creativity and willingness to take part in cross-disciplinary research project 2. Knowledge of basic microbiology, molecular biology and/or analytical chemistry methods 3. The candidate must be fluent in English (both speaking and writing).
Required documents:	1. CV 2. list of publications and/or major achievements 3. motivation letter 4. B.Sc. Student information card All documents should be prepared in the English language.
Please submit the following documents to:	dr Kumar Pranaw k.pranaw@uw.edu.pl and prof. Lukasz Drewniak l.drewniak2@uw.edu.pl .
Application deadline:	19.09.2022
For more details about the position please visit (website/webpage address):	https://www.fnp.org.pl/oferta_pracy http://wbia.pollub.pl/pl/praca http://www.wggios.agh.edu.pl/pracownicy https://www.biol.uw.edu.pl/pl/index.php?option=com_content&view=category&layout=blog&id=148&Itemid=317
Euraxess job/stipend offer (in case of PhD and postdoc positions):	
Appeal	<i>Possible appeals against the decision should be sent to prof. Wojciech Franus (project coordinator, w.franus@pollub.pl) no later than 7 days after receiving the decision, i.e. the date of results announcement. In the protest an explicit justification have to be included.</i>
Consent to personal data processing	<i>To allow us to process your data, please include the following statement in your application:</i> <i>"I hereby consent to have my personal data processed by the University of Warsaw with its registered office at ul. Krakowskie Przedmieście 26/28, 00-927 Warszawa for the purpose of carrying out a recruitment process and selecting an employee and concluding a contract for employment at the University of Warsaw. I have been informed of my rights and duties. I understand that provision of my personal data is voluntary."</i>