



PhD position (Marie Curie Early Stage Researcher) Enzymatic FoodSmartphone assays for AChE inhibitors

PhD position DETAILS

Position:	Marie Curie Early Stage Researcher
Organisation:	Department of Food Analysis and Nutrition, University of Chemistry and Technology, Prague, Czech Republic
Application deadline:	March 27, 2017, 17:00 CET
Salary:	Average gross salary of 1 944 € per month based on the full-time position, plus a monthly EU mobility allowance plus a monthly family allowance (the latter only when applicable).
Duration:	For 3 years

PhD position PURPOSE:

University of Chemistry and Technology, Prague (UCT Prague) is offering a unique opportunity for an Early Stage Researcher to undertake research in the framework of the project “Smart phone analyzers for on-site testing of food quality and safety (FoodSmartphone)”. The Early Stage Researcher will be funded for 3 years by the prestigious Marie Skłodowska-Curie Actions Innovative European Training Network (MCSA-ITN-ETN-2016) programme. The successful candidate will be offered the opportunity to enrol on the following PhD programme: *Enzymatic FoodSmartphone assays for AChE inhibitors* (ESR 6). He/she will be an active member of a research project team assisting in the delivery of research and training activities within a specified project scope aimed to meet overall FoodSmartphone research objectives and submit a thesis in fulfilment of the requirements of a PhD degree.

MAJOR DUTIES:

- 1) Enrol in a PhD by research programme according to the UCT Prague rules and carry out the research and training activities specified by a career development plan (CDP).
- 2) Conduct specific research in the following topical area: 1. Development and evaluation of test strips with immobilised enzymes aiming for short assay times and fit-for-purpose sensitivity. 2. Development of a paper-based microfluidics system for integrated sample handling in the strip assay. 3. Critical comparison of the final assay with GC/MS and LC/MS reference methods. 4. Development of GC/MS and LC/MS reference methods for target analytes studied by other consortium members in order to allow benchmarking of the developed smartphone assays.
- 3) Undertake research that involves the critical evaluation, analysis and interpretation and presentation of the obtained results in consultation with the assigned supervisory team.
- 4) Undertake mandatory industrial placements and other activities focused on scientific and transferrable skills at European partners involved in the project as necessary to complete the project.
- 5) Actively participate in the PhD training activities.
- 6) Participate in outreach and dissemination activities promoting the FoodSmartphone project and the Marie Skłodowska-Curie Actions (MSCA) programme including the use of social media, video-diaries, newsletters, etc.
- 7) Prepare regular progress reports on the performed research and training activities and present the research outcomes at bi-monthly meetings, at annual project workshops, and to external audiences to disseminate and publicise research findings.
- 8) Work closely with industrial and other partners as collaborators and to facilitate knowledge transfer between UCT Prague and other partners in the FoodSmartphone project.
- 9) As a MSCA ETN Ambassador carry out undergraduate supervision/demonstrating/teaching duties under supervisor direction and according to the university regulations.
- 10) Study and follow the technical literature including academic papers, journals and textbooks to keep abreast with the state-of-the-art in the project topical area.

- 11) Record, analyse and write up results of research work and contribute to the production of research reports and publications.
- 12) Carry out routine administrative duties as requested, e.g. arranging research programme group meetings, maintaining research programme group website, contributing to organisation of the programme group training events.

Planning and Organising:

- 1) Contribute to the CDP development and provide regular updating of this plan.
- 2) Manage own time and meet agreed deadlines.
- 3) Plan own day-to-day activity within the framework of the agreed research and training programme.
- 4) Contribute to the planning of research and training activities, reports and publications.
- 5) Actively contribute to organisation of outreach activities events such as training workshops.

Resource Management Responsibilities:

- 1) Ensure research resources are used in an effective and efficient manner.
- 2) Provide guidance as required to support staff and any students involved with research and training.

Internal and External Relationships:

- 1) Liaise with research colleagues and support staff on routine matters.
- 2) Make internal and external contacts to develop knowledge and understanding and form relationships for future collaboration.
- 3) Attend and contribute to relevant meetings and training events.
- 4) Contribute to the project outreach programmes by establishing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

- 1) Highly motivated and skilled candidate with a recent academic MSc degree (or equivalent) in analytical and bioanalytical chemistry, biomedical engineering or related disciplines.
- 2) Demonstrable experience of application of chromatographic methods coupled with mass spectrometry.
- 3) Demonstrable experience of residue analysis.
- 4) Demonstrable experience of sample preparation, separation and purification techniques relevant to analyses of compounds in biological and food matrices.
- 5) Demonstrable understanding of enzyme-based assays, principles and application.
- 6) Demonstrable experience of analytical methods validation including assessment of bioassays performance characteristics.
- 7) Ability to act effectively as a laboratory demonstrator.
- 8) Strong analytical and problem solving skills.
- 9) Ability to logically conceptualise and summarise the research findings.
- 10) Excellent verbal and writing communication skills.
- 11) Ability to interact with colleagues and staff.
- 12) Ability to organise resources, manage time and meet deadlines.
- 13) Evidence of strong interest in working in a dynamic research environment, and a strong motivation to succeed within a competitive research field.
- 14) Be eligible and qualified for enrolment in the PhD programme at UCT Prague.
- 15) Be willing and able to conduct mandatory secondments in other organisations throughout Europe for defined periods.
- 16) Be willing to travel to programme meetings and present at conferences.

DESIRABLE CRITERIA:

- 1) Practical experience of applying specialist skills and techniques required for undertaking a PhD programme
- 2) Willingness to assist in undergraduate supervision and teaching.

3) Familiarity with website maintenance and the use of social media tools.

SPECIFIC REQUIREMENTS

EU Marie Curie mobility criteria apply: candidates should not have resided, worked or studied in the Czech Republic for more than 12 months in the last 3 years.

EU Marie Curie 'early stage researcher' criteria apply: candidates should be in the first four years of their research career and not have a doctoral degree.

MORE INFORMATION

About organisation

Vysoka skola chemicko-technologicka v Praze (VSCHT), in English University of Chemistry and Technology (UCT Prague), is the largest academic institution of its kind in Central Europe with a history of almost 200 years. Currently, UCT Prague is an educational and research leader in technical (bio)chemistry, food and chemical technologies with a wide range of national and international collaborations. The four Faculties of the VSCHT are accredited to provide three-year Bachelor programmes, two-year Master programmes and PhD programmes. The total enrolment at the VSCHT is about 3000 Master and Bachelor students and more than 800 PhD students. In addition, 3rd age university is attended by more than 200 students.

The Laboratory of Food Quality and Safety, which is a part of The Department of Food Analysis and Nutrition (DFAN), Faculty of Food and Biochemical Technology, is accredited according to the International standard ISO/IEC 17025:2005 by the Czech Institute for Accreditation. Besides of running accredited tests (data from monitoring programs are delivered e.g. to EFSA database), activities also include (i) development/application of novel analytical methods for control of emerging threats (target screening); (ii) development/application of non-target screening strategies, including metabolomic fingerprinting/profiling followed by chemometric data processing; (iii) investigation of chemical reactions in food and related matrices; (iv) analysis of novel natural biologically active components; bioprospecting; environmental pollutants; residues, processing contaminants and natural toxicants.

Special attention is given to studies on food component interactions / breakdown which may result in changes of nutritional value and/or sensory properties. In recent years, interdisciplinary 'omics'-based research aimed at the assessment of in vivo / in vitro effects induced by biologically active compounds, both beneficial and toxic, has been initiated.

Information

For more information regarding this position please contact Prof Dr. Jana Hajslova; jana.hajslova@vscht.cz or at (+420)220 443 185.

Application

Please submit your letter with CV by e-mail to martina.vlckova@vscht.cz (this is the only correct way to apply) before March 27, 2017. Any applications reaching us, in any other way are not taken into consideration.

FoodSmartphone encourages qualified women, researchers from recent member states and researchers with a refugee status to apply as well. A screening research is part of the selection procedure and employment conditions at UCT Prague.