

International Atomic Energy Agency

Long Term Fellowship on Radium in Water (Radiochemistry)

PROSPECTUS

Project Number & Title: RER/7/008: "Strengthening Capabilities for Radionuclide Measurement in the Environment and Enhancing QA/QC System for Environmental Radioactivity Monitoring"

Place (City, Country): Spiez, Switzerland

Dates: 30 January to 22 December 2017

Deadline for Nominations: 11 November 2016

Organizers: The International Atomic Energy Agency (IAEA) in cooperation with the Government of Switzerland through SPIEZ LABORATORY of the Federal Office for Civil Protection.

Host Country Organizer: Mario Burger, Ph.D.
Head of Physics Division

Béatrice Balsiger Ph.D.
Head of Radioactivity Branch

José Corcho, Ph.D.
Fellow supervisor

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Language: English. Knowledge of French or German would be positive.

Purpose: The main purpose of this long term fellowship is to develop/improve radiochemical methods for the determination of radium isotopes (^{228}Ra , ^{226}Ra , ^{224}Ra and ^{223}Ra) in water.

Expected Output(s): Participant will have to:
1. Conduct a literature review on the topic. Present and discuss the methods

of choice.

2. Organize and conduct the necessary laboratory work for testing and validating the proposed methods.
3. Communicate the results through the preparation of reports/documents for publication.
4. Other works related to the personal interests of the candidate related to radiochemistry and in the interest of RER/7/008. Personal interest has to be mentioned in the application form

Scope and Nature:

The long-term fellowship will consist of both technical lectures and practical training with hands-on experiments led by the staff of the laboratory. The participant should be able to work autonomous after the first month of the fellowship.

Topics that will be included are:

1. Sample preparation and sample digestion methods
2. Radiochemical separation methods
3. Counting and detection methods, with emphasis on alpha spectrometry and gas proportional counting.
4. Hands-on experiments at the laboratory.
5. Quality assurance / Quality control
6. Preparation of scientific reports/publications
7. Other topics of interest for the candidate and the IAEA.

Background Information:

The overall objective of the regional project RER/7/008 is to further develop the capabilities in source and environmental monitoring and to improve quality assurance for the measurements and monitoring of radioactivity in the environment, in accordance with ISO/EN 17025, in order to assure future metrological comparability of measurement results and to harmonize approaches and procedures at the regional level. The expected project outcome is to have increased capabilities in monitoring radionuclides in the terrestrial and aquatic environments.

Participation:

This long-term fellowship is open to only one participant. The applicant will be selected based on the qualification criteria stated below. Therefore, applicants are encouraged to provide the necessary information to prove their professional competencies.

Participants' Qualification:

A master degree in Chemistry or Nuclear Sciences.
Minimum of two years of demonstrated experience in the field of radioanalytical chemistry and environmental radioactivity.

Nomination Procedure:

Please submit nominations to the IAEA online through the Technical Cooperation Department's InTouch system (<http://intouch.iaea.org>). Only if this is not possible, nominations may be submitted using the standard IAEA Nomination Form for Fellowship, which is available from the IAEA website: <http://www.iaea.org/technicalcooperation/How-to-take-part/fellowship/index.html>. Completed forms should be endorsed by relevant

national authorities and sent to the Programme Management Officer for this project, Ms Carmina Jeminez de Bergant (IAEA Official Fax: +43-1-26007 or E-Mail Official.Mail@iaea.org), through the official channels, i.e. the designated National Liaison Office for IAEA matters, not later than **11 November 2016**. Nominations received after this date or that have not been routed through the established official channels cannot be considered.

**Administrative
and Financial
Arrangements:**

Nominating Governments will be informed in due course of the name of the applicant who has been selected and will, at that time, be given full details of the procedures to be followed with regard to administrative and financial matters.

The selected applicant will be provided with a round trip economy class air ticket from his/her home country to Switzerland and a stipend for the period of the fellowship.

The organizers of the fellowship do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or during the fellowship, and it is clearly understood that each Government, in nominating participants, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.