

Job Description for Professional Posts

Position and Grade:	Research Scientist (JPO) (P-2)
Organizational Unit:	Radioecology Laboratory IAEA Environment Laboratories (NAEL), Monaco Department of Nuclear Sciences and Applications
Duty Station:	Monaco
Type/Duration of Appointment:	Junior Professional Officer / 2 years (subject to a probationary period of 6 months)

Organizational Setting

IAEA Environment Laboratories (NAEL) is a Division of the Department of Nuclear Sciences and Applications and consists of four laboratories, three of which are located in Monaco (including the Radioecology Laboratory) and one in Seibersdorf, Austria (approx. 45 km south of Vienna). NAEL implements the IAEA Programme Environment under the Major Programme 2. The Division operates in a complex matrix environment with inputs from many parts of the organization, such as the Technical Cooperation (TC) Department for implementation of the IAEA TC Programme as well as other Departments for horizontal collaborations.

The role of the Radioecology Laboratory (REL) is to improve knowledge of the processes which determine the behaviour and fate of radionuclides and other contaminants such as biotoxins in the environment, with a particular emphasis on the biosphere. Its activities are in the field of radioecology with applications to ecotoxicology and biogeochemistry. REL project work aims to assist and enhance capability of Member States in the use of nuclear and isotopic techniques to understand and assess contaminant transfer and impact and environmental processes.

Harmful algal blooms (HABs) are of increasing global concern as the occurrence and severity of HABs (e.g. ciguatera poisoning, paralytic, diarrhetic and amnesic shellfish poisoning) are major threats to public health, fisheries and aquaculture, and development. Through participation in projects of applied research and method development, the JPO will contribute to the development of nuclear and isotopic technology (radio-ligand receptor binding assay, RBA) for the monitoring of algal toxins in water and marine organisms and conduct toxicological experiments. The projects will contribute to improved capacity to ensure safe seafood in fisheries and aquaculture sectors.

Main Purpose

As part of a team led by the Laboratory Head, the Junior Professional Officer (JPO) carries out laboratory experimental research using radiotracer and isotopic techniques to better assess, in the context of global environmental and climate change, the impacts of harmful algal blooms on the environment and seafood safety. The researcher will conduct laboratory experiments and participate in other activities to support the projects and mission of the Radioecology Laboratory.

Role

Under supervision of the Head of the Radioecology Laboratory, The JPO research scientist is: (1) a *technical specialist* assisting in planning and conducting laboratory experiments, (2) *an analyst* processing data and analysing experimental results, and (3) *a communicator* preparing and presenting results to the scientific community through technical reports and scientific publications. The JPO will perform other related duties as opportunities arise.

Partnerships

The JPO research scientist builds and maintains working relationships with staff of the REL and other laboratories of the Environment Laboratories Division. The incumbent builds relationships with staff of the Nuclear Applications Department (and other departments) of the IAEA and other UN system organisations, including collaboration with other international organisations such as UNEP (United Nations Environment Programme), GEF (Global Environmental Facility), UNDP (United Nations Development Programme), UNESCO-IOC (Intergovernmental Oceanographic Commission) or international projects sponsored by bodies such as the European Union, to ensure the effective utilisation of technical inputs to the design and implementation of marine pollution and climate change programmes. The JPO will collaborate with researchers and project officers of the National Oceanic and Atmospheric Administration (NOAA, USA) and the Intergovernmental Oceanographic Commission. The research scientist also develops and builds networks with scientists and technical staff from Member State laboratories in training activities related to analytical methodologies for the use of nuclear and isotopic techniques to study ecotoxicology and the transfer of contaminants in ecosystems under environmental and climate change to support sustainable management of coastal and marine ecosystems.

Functions / Key Results Expected

- Optimize radio-ligand-based biochemical methods for the detection of biotoxins associated to harmful algal blooms
- Plan and conduct experimental research on transfer of marine biotoxins in seafood and other biota, under environmental/climate change scenarios.
- Analyse and evaluate experimental results and infer conclusions for the preparation of technical reports and scientific manuscripts for publication.

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- Contribute to the development and implementation of projects with national institutes and international organizations to demonstrate the value of nuclear and isotopic applications in ecotoxicological research through collaboration and presentation of results of scientific studies.

Knowledge, Skills and Abilities

- Good knowledge of biochemistry, chemistry and toxicology
- Ability to conduct laboratory experiments using radioelements and basic knowledge of radionuclides analyses.
- Experience in sterile working condition and phytoplankton culture.
- Good planning and organizing skills with the ability to work in a team as well as independently.
- Strong analytical skills: ability to articulate, conceptualize, plan and execute ideas.
- Interpersonal skills: demonstrated ability to work in a team environment with scientific, technical and administrative staff and to maintain collaborative partnerships across organizational boundaries.
- Ability to work in a multicultural/multidisciplinary team with respect and sensitivity for diversity.

Education, Experience and Language Skills

- University degree in environmental sciences (i.e. biochemistry, biology, toxicology or radioecology).
- Minimum of 2-year experience in the study of radioecology and/or ecotoxicology; experience in the transfer of algal toxins in living organisms is an asset.
- Publication of research in peer-reviewed, scientific journals is an advantage.
- Fluency in spoken and written English is essential; working knowledge of another official IAEA language (Arabic, Chinese, French, Russian and Spanish), especially French, an asset.

Internal Human Resources use only:	
Effective Date:	
Occupational Group(s):	
Post Number:	

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