IAEA
International Atomic Energy Agency

Job Description for Professional Posts

Reference: NA2025/42

Position and Grade:	Associate Research Officer (Plant Pathology), P2
Organizational Unit:	Plant Breeding and Genetics Laboratory Plant Breeding and Genetics Section Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture
Duty Station:	Seibersdorf, Austria
Type/Duration of Appointment:	FT – JPO, 1 year

Organizational Setting

The Department of Nuclear Sciences and Applications implements the IAEA's major programme on nuclear techniques for development and environmental protection (Major Programme 2). This major programme comprises individual programmes in food and agriculture, human health, water resources, environment and radiation technologies. These programmes are supported by laboratories in Seibersdorf, Monaco and Vienna. The major programme's objective is to enhance the capacity of Member States to meet basic human needs and to assess and manage marine and terrestrial environments using nuclear and isotopic techniques in sustainable development programmes.

The Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture is in the Department of Nuclear Sciences and Applications of IAEA in Vienna. The Joint Centre assists Member States of the Food and Agriculture Organization of the United Nations (FAO) and IAEA in using nuclear techniques and related technologies to improve food security, to alleviate poverty and to promote sustainable agriculture. It does so by coordinating and supporting applied research, providing technical and advisory services, laboratory support and training, and collecting, analysing and disseminating information. The Joint Centre consists of five sections in the areas of: animal production and health; plant breeding and genetics; insect pest control; soil and water management and crop nutrition; and food safety and environmental protection. Each section has an associated laboratory, as part of the FAO/IAEA Agriculture & Biotechnology Laboratories located in Seibersdorf, 45 km southeast of Vienna.

The Plant Breeding and Genetics (PBG) Section and its Laboratory (PBGL) assist Member States with the development, dissemination and transfer of plant mutation breeding and related technologies for sustainable intensification of agricultural production systems with the objective of supporting FAO and IAEA Member States to improve food and nutrition security and climate-smart, sustainable agriculture.

Main Purpose

The Associate Research Officer (Plant Pathology) will contribute to the development of research protocols for improved screening and detection of transboundary pests and diseases such as Fusarium wilt in banana, Stemphylium blight in lentils, and/or Striga parasitic weed in sorghum. The Associate Research Officer (Plant Pathology) also supports related human capacity building efforts. The

incumbent carries out his/her tasks in the context of crop mutation breeding incorporating the use of nuclear techniques and efficiency-enhancing biotechnologies.

Role

The Associate Research Officer (Plant Pathology) is: (i) a researcher, conducting experiments in the field of plant pathology and/or weed science, developing protocols and methods to help address Member States' constraints in the area of plant pathology; (ii) an analyst, to statistically analyse the resulting data, and (iii) a writer of protocols or scientific papers for reporting the findings in appropriate media; (iv) a team member, contributing to laboratory goals and providing inputs to informed decisions on Research and Development (R&D) strategies. The activities will provide the incumbent with a unique learning experience in applied R&D in the context of international development cooperation.

Partnerships

Reporting to the PBGL Laboratory Head, the Associate Research Officer (Plant Pathology) will work closely with the other members of the PBG Laboratory (staff, visiting scientists, interns and fellows), with the members of the IPC Section and with staff of the Department of Technical Cooperation, to leverage implementation of the sub-Programme activities and facilitate programme delivery.

Functions / Key Results Expected

The incumbent will contribute to the development of experimental procedures and protocols using conventional (morphological), molecular, or phenomics tools to screen mutant populations for improved resistance to Fusarium wilt in banana, Stemphylium blight in lentils, and/or Striga in sorghum. She/he will also participate in planning, experimental design, method development, and data analysis of the investigations. Specifically, he/she will be involved in one or more of the following:

- Conduct laboratory or greenhouse experiments to screen mutant populations or advanced mutant lines for improved disease resistance.
- Conduct laboratory or greenhouse research for detection of plant pathogens.
- Collect and evaluates information and statistical analysis of data.
- Contribute to reports and peer-reviewed publications documenting R&D findings.
- Assists with training and other activities of the PBGL in relation to CRP (Coordinated Research Projects) and TC (Technical Cooperation) projects on banana, lentil, or sorghum phytopathology.

Competencies and Expertise (do not revise or edit)

Core Competencies		
Competence	**Occupational Role**	**Behavioural Indicator**
Communication	Individual Contributor	Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen and understand the perspective of others and proposes solutions.
Achieving Results	Individual Contributor	Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.

Teamwork	Individual Contributor	Actively contributes to achieving team results. Supports team decisions.
Planning and Organizing	Individual Contributor	Plans and organizes his/her own work in support of achieving the team or Section's priorities. Takes into account potential changes and proposes contingency plans.

Functional Competencies		
Competence	**Occupational Role**	**Behavioural Indicator**
Analytical thinking	Associate	Gathers and analyses information, identifying critical relationships and patterns among data and proposes workable solutions.
Knowledge sharing and learning	Associate	Actively seeks opportunities to learn by formal and informal means; learns from others, adopting and sharing best practice.
Technical/scientific credibility	Associate	Acquires and applies new skills to remain up to date in his/her area of expertise. Reliably applies knowledge of basic technical/ scientific methods and concepts
Judgement/ decision making	Associate	Consults with supervisor/manager and makes decisions in full compliance with the Agency's regulations and rules.

Expertise	
Expertise	**Description**
Plant Diseases Control	Experience in research and development activities relating to the application of plant pathology or weed science, molecular techniques, and other relevant biotechnologies related to crop improvement.
Plant Breeding and Genetics	Knowledge of principles of genetics, techniques for crop improvement and physical and chemical mutagenesis

Education, Experience and Language Skills

- University degree in plant pathology, molecular plant disease diagnostics, plant disease screening or related disciplines.
- Minimum two years of postgraduate experience in research and development activities relating to the application of plant pathology or weed science, molecular techniques, and other relevant biotechnologies related to crop improvement.
- Publication record in peer-reviewed journals would be an advantage.
- Fluency in spoken and written English. Knowledge of any other official IAEA language (i.e. Arabic, Chinese, French, Russian or Spanish) is an advantage. A working knowledge of German would be useful.