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Job Description for Professional Posts

Reference: NA2025/48

Position and Grade:	Associate Animal Genetics Officer, P2
Organizational Unit:	Animal Production and Health 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 2, "Nuclear Techniques for Development and Environmental Protection". This Major Programme comprises individual programmes on 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 the marine and terrestrial environments through the use of nuclear and isotopic techniques in sustainable development programmes.

The Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture assists Member States of the Food and Agriculture Organization of the United Nations (FAO) and the IAEA in using nuclear techniques and related technologies to improve food security, alleviate poverty and promote sustainable agriculture. The Joint Centre consists of five Sections, each with an associated laboratory (located in Seibersdorf, 45 km south-east of Vienna), in the areas of: animal production and health; plant breeding and genetics; insect pest control; soil and water management and crop nutrition; and food and environmental protection.

The Animal Production and Health Section and Laboratory assist Member States in improving livestock productivity through the efficient use of locally available feed resources, reproduction and breeding practices, and disease diagnostic tools and control measures.

Main Purpose

The Associate Animal Genetics Officer will be co-responsible, under the supervision and guidance of the Unit Head and the technical officer(s) responsible for the activities and projects in animal production, for a study aimed at genome-wide analysis of livestock and development of low-density marker panel for selection and breeding to increase livestock productivity. The methods will include genome-wide typing of single nucleotide polymorphic markers using microarray platform, extraction of genotype data and bioinformatics analysis of large sets of genomic data to perform genetic evaluation and characterization of livestock.

Role

As a member of the Animal Production and Health group the incumbent will be based at the Agriculture and Biotechnology Laboratory in Seibersdorf and will maintain regular contact with the technical staff at the Headquarters. S/he will be based on an established work plan, conduct research work on genome-

wide analysis for characterization and evaluation of livestock for increased productivity.

Partnerships

The Associate Animal Genetics Officer will work under the partnerships already established within the UN system as well as with other international organisations and the scientific and commercial communities.

Functions / Key Results Expected

The Associate Animal Genetics Officer will participate in a study aimed at genome-wide analysis of livestock and development of low-density marker panel for selection and breeding to increase livestock productivity. S/he will undertake the following activities:

- Perform quality control and sample preparation for high throughput genotyping of livestock breeds
- Perform genome wide typing of livestock using 50K single nucleotide polymorphic (SNP) markers in a microarray platform.
- Extract genome wide data and implement quality control procedures to perform bioinformatics analysis of large sets of genomic data.
- Develop baseline genetic information on livestock breeds, evaluate population structure, estimate levels of inbreeding and effective population size in livestock populations.
- Assist APHL team in the development of low-density marker panel for selection and breeding of livestock for increased productivity.
- Assist with other activities of the Section in relation to CRP and TC projects on animal genetics/breeding/reproduction as appropriate.

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/Centre'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**
Animal Production	Good understanding of molecular genetics and bioinformatics.

Education, Experience and Language Skills

- University degree in biological, agricultural, veterinary or animal sciences. Post-graduate training up to PhD level or equivalent in a subject related to genetics/animal genetics, biochemistry, molecular biology or biotechnology an asset.
- Minimum two years of post-qualifying experience and working knowledge on molecular genetic characterization of livestock, PCR (polymerase chain reaction) based high throughput genotyping technologies, statistical analysis of genotypic data.
- Competence in computer applications including word processing, spreadsheets, databases, presentation graphics and statistical packages.
- Excellent oral and written command of English. Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish) is an asset.