**NA 2024-02** **Internship - Next-Generation Sequencing Data Analysis (Bioinformatician)**

**Target Start of Internship**

Flexible

**Duration**

12 months

**Organizational Setting**

Department: Nuclear Sciences and Applications

Division: Joint FAO/IAEA Centre for Nuclear Techniques in Food and Agriculture

Section: Animal Production and Health

Unit: Animal Production and Health Laboratory in Seibersdorf

**Main Purpose**

Under the guidance of the Laboratory Head- Animal Production and Health Laboratory and a Technical Officer, the intern will assist and interact with staff in the laboratory to develop analysis workflows for Next Generation Sequencing (NSG) data and genome annotation. The intern should benefit from interaction and hands-on experience in the laboratory work related to nuclear and nuclear related technologies in an International Organization environment.

**Tasks / Key Results Expected**

* Assist in the development, validation, documentation, and maintenance next generation sequencing data analysis workflows.
* Assist in the analysis of NGS data of animal pathogens (viruses and bacteria), including variant analysis, genome assembly and annotation, AMR-related genes.
* Contribute to the dissemination of the results, including the preparation of verified recipes and SOPs for sharing with MS scientists and the preparation of scientific publications.

**Knowledge, Skills and Abilities**

* Strong knowledge of Unix/Linux and Python.
* Experience in developing and maintaining NGS sequencing data analysis workflow, including using open-source software, tools, and databases.
* Good knowledge of biology and molecular biology.
* Knowledge of one or programming language is an asset.
* Good understanding of next generation sequencing technologies is an asset.

**Qualifications and Experience**

* University degree in Biological/Natural Sciences and Bioinformatics or related fields
* A working Knowledge of applying computer programming to scientific problems solving.
* Good written and spoken English essential; fluency in any other IAEA official language (Arabic, Chinese, French, Russian, Spanish) an asset.

**Internships**

The IAEA accepts a limited number of interns each year. The internships are awarded to persons studying towards a university degree or who have recently received a degree (see Internship web pages for further details).

The purpose of the programme is:

* To provide interns with the opportunity to gain practical work experience in line with their studies or interests, and expose them to the work of the IAEA and the United National as a whole;
* To benefit the IAEA's programmes through the assistance of qualified students specialized in various professional fields.
* The duration of an internship is normally not less than three months and not more than one year.

**Applicant Eligibility**

* Candidates must be a minimum of 20 years of age and have completed at least three years of full-time studies at a university or equivalent institution towards the completion of a first degree.
* Candidates may apply up to one year after the completion of a bachelor's, master's or doctorate degree.
* Candidates must not have previously participated in the IAEA's internship programme.
* Good written and spoken English essential; fluency in any other IAEA official language (Arabic, Chinese, French, Russian, Spanish) an asset.
* Candidates must attach two signed letters of recommendation to their application.