



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Terms of Reference for Intern

Name:	
Job Title**:	Data Analysis (Genomics/Computational Biology)
Division/Department: Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (AGE)	
Programme/Project Number:	
Duty Station:	Seibersdorf, Austria
Expected Start Date of Assignment:	1Q2019
Duration:	12 months
Reports to: Name:	Mr Qu Liang
Title:	Director AGE

GENERAL DESCRIPTION OF TASK(S) AND OBJECTIVES TO BE ACHIEVED

Objectives:

The unique Plant Breeding and Genetics Laboratory (PBGL) develops and adapts technologies to improve crop varieties for the benefit of Member States, thereby contributing to food security and the sustainable development goals.

The intern will assist in the development, implementation, and documentation of data analysis protocols in the field of plant genetics, genomics, and breeding. The intern will thus contribute to innovative R&D, provide relevant services, and support PBGL's capacity building and outreach activities. The intern will be involved in collaborative projects with professional staff members of the Plant Breeding and Genetics Laboratory. If necessary the intern will liaise with the IT-Innovations Lead in IAEA's IT-Department (MT-IT) maintaining a good collaborative relationship.

These activities will provide the intern with a unique learning experience at the interface of Biology, Computer Science, and international development cooperation.

Tasks:

- The intern will apply computer programming and software development skills to assist the PBGL team in the development, documentation, and maintenance of reproducible data analysis workflows in a Linux/Windows client-server and/or cluster environment.
- The intern will participate in and contribute to the development of novel approaches and analysis tools for phenotypic screening assays to enhance the efficiency of selecting desired mutation events for further characterization.
- The intern will apply existing and develop novel approaches and analysis tools for genome analysis and phenotype-genotype associations to identify causal variants for further characterization and utilisation. This will include bioinformatics analyses of Next Generation Sequencing and other -omics data to support forward and reverse genetic approaches.
- With good communication skills in the English language the intern will contribute to the dissemination of results, which will include producing reproducible protocols for internal use as well as for use by partners in Member States and other stakeholders.
- If applicable, the intern will contribute and/or lead scientific publications and provide input to internal and external information material highlighting the activities of PBGL's work.

KEY PERFORMANCE INDICATORS

Expected Outputs:	Required Completion Date:
<ul style="list-style-type: none">• Successfully undertake in a timely manner assigned duties in any or all fields specified above• Maintains legible record of the work to enable (re-)use and reproduction.• With a team oriented and collaborative mind set the intern will contribute to the success of the entire PBGL team.	As required by the supervisor and by the end of the contract.