The **International Potato Center (CIP)** is seeking a **Bioinformatics Postdoc** competent in 2nd generation sequence analysis to work with a dynamic multidisciplinary team to expand our knowledge of the diversity and conservation of plant genetic resources of cultivated potato and sweetpotato in the Genebank.

**The Center:** CIP is a not-for-profit international agricultural research for development institution with a focus on potato, sweet potato, and Andean Root and Tuber Crops. Its vision is to enhance the use of roots and tubers crops to improve the livelihood of the poor. CIP is dedicated to achieving food security, improved well-being, and gender equality for poor people in root and tuber farming and food systems of the developing world. CIP is headquartered in Lima, Peru with staff and activities in over 30 locations across Africa, Asia, and Latin America. CIP is a member of the CGIAR Consortium, a network of 15 research centers that are mostly located in the developing world and supported by more than 50 donor members.

**The Genebank:** The Genebank maintains the global collection of potato, sweet potato and Andean Root and Tuber, with over 15,000 clonal accessions and almost 4,000 accessions from wild relatives of the cultivated crops maintained as seed. CIP’s Genebank has used next-generation sequencing (NGS) to genotype the entire cultivated potato and sweet potato collections and is conducting whole genome sequencing (WGS) of 10 potato taxa.

**The Position:** The Bioinformatics Postdoc will report to the Program Leader for Conserving Biodiversity for the Future and will be based in Lima, Peru. The main task will be to aid our efforts in evaluating different kinds of molecular data to broaden our understanding of the phylogeny and population structure of our potato and sweetpotato collections. The successful candidate should have the skills required to analyze large genotyping datasets (DArTseq, GBS, Marker/SNP-based), to handle phenotyping data and establish marker trait associations. Prerequisite is also competence in data quality assessment, cleaning and methods of data storage.

**Duties and Responsibilities:**

- Analyze genotype-by-sequence (GbS) and DArTseq data of crops with and without reference genomes, with different ploidy levels, for variant (SNPs/Indels) identification and SNP calling;
• Contribute to the development and improvement of bioinformatics tools for a variant identification pipeline for polyploids;
• Improve and mine existing genome assemblies in potato and evaluate the structural variations and genetic diversity among diploid, triploid, tetraploid and pentaploid taxa;
• Develop new methods to characterize genetic resources using NGS data;
• Establish and maintain local databases for housing data and metadata;

Selection Criteria:
• PhD degree in Bioinformatics, Computer Science or related field;
• Experience with next-generation sequence data analysis, processing raw sequence-based genotyping data, especially short-read alignment and variant calling (SNPs/indels) from NGS data is highly desirable;
• Competence in existing analysis tools (bwa, samtools, STACKS, GATK, Bowtie, etc);
• Experience in software development and competence in at least one scripting language (Python or Perl)
• Knowledge of statistics and/or machine-learning techniques, in particular R (CRAN);
• Familiar with comparative genomics tools (BLAST, multiple alignment, phylogenetic analysis);
• Experience with GWAS and/or QTL mapping is a plus;
• Excellent English written and verbal communication skills are essential to convey the new and existing possibilities of genomics and the results to other biologists and researchers unfamiliar with bioinformatics tools. Knowledge of Spanish is a plus;
• A good ability and demonstrated expertise to plan research, analyze data and complete timely reports;
• Willingness and ability to engage in interdisciplinary work and to conduct research in a multi-cultural environment and in interdisciplinary teams;

Conditions: Employment contract will be for a one-year term (with a three month probation period). Salary will be internationally competitive, paid in US dollars, and commensurate with experience. CIP prides itself on its collegial and supportive working environment, which allows space for personal and professional growth.

Applications: Applicants should apply online through our CIP’s Job Opportunities website (http://cipotato.org/open-vacancies/), including a cover letter, a full C.V with the names and contact information of three references that are knowledgeable of the candidate’s professional qualifications and work experience. Screening of applications will begin immediately and will continue until the post is filled. All applications will be acknowledged, however only short listed candidates will be contacted.

Learn more about CIP by accessing our web site at http://www.cipotato.org.

CIP is an equal opportunity employer. Qualified women and professionals from developing countries are particularly encouraged to apply