



Postdoctoral Fellow, Cassava DNA Fingerprinting for Genetic Resources Management (Ref No: DDG-R4D/PDF/GRM/11/15)

Background: The International Institute of Tropical Agriculture (IITA) invites applications for the internationally recruited position of **Postdoctoral Fellow, Cassava DNA Fingerprinting**.

IITA is one of the world's leading research partners in finding solutions for hunger, malnutrition, and poverty. Its award-winning research-for-development (R4D) approach addresses the development needs of tropical countries. IITA works with partners to enhance crop quality and productivity, reduce producer and consumer risks, and generate wealth from agriculture. IITA is a non-profit organization founded in 1967 in Nigeria and governed by a Board of Trustees. IITA works on the following crops: cowpea, soybean, banana/plantain, yam, cassava, and maize. It is a member of CGIAR, a global agriculture research partnership for a food secure future. Please visit <http://www.iita.org/> for more information on IITA.

The Genetic Resources Centre (GRC) holds important international germplasm collections of most of the staple crops of sub-Saharan Africa, totaling more than 33000 accessions. This includes a major collection of cassava, a key crop throughout sub-Saharan Africa. Currently cassava is maintained as a field collection and also as an *in vitro* genebank. However, we are now moving towards the implementation of cryopreservation of clonal crops, starting with cassava and later extending to yam. A key part of our strategy in this regard is to have clear information of the genetic fingerprint of each accession before it is cryopreserved. This will build on existing genotyping-by-sequencing SNP data of cassava accessions maintained at IITA.

Position Responsibilities:

The successful applicant will use the existing GBS data to develop an informative panel of allele specific single nucleotide polymorphisms (SNPs) and be responsible for the applicability/suitability of the SNPs panel for cassava identity validation. He or she will also be involved in all aspects of DNA fingerprinting of cassava accessions using this panel.

Terms of reference

- Conversion of SNP markers from GBS to a panel of informative allele-specific assays (LGC genomics or Illumina SNP chip) for fingerprinting and validation of the identity of accessions within cassava germplasm collection maintained by the GRC.
- DNA fingerprinting of cassava accessions of GRC and use in identity confirmation and studies of genetic relatedness.
- Liaison with external service providers for SNP assays and their interpretation.
- Liaison with GRC Database Manager on storage of fingerprint information linked to accession level information.
- Capacity building of GRC staff and students.
- Contributions to reports and publications.

Educational Qualifications

The candidate should have a PhD in plant genetics, bioinformatics or related discipline. Experience in DNA markers and their application to crop improvement would be an advantage

Core Competencies

- Sound understanding of population genetics and diversity analyses.
- Experience with the analysis of next generation sequencing data.
- Good knowledge of sample tracking systems such Laboratory Information Management Systems (LIMs).
- Familiarity with plant genetic resources, diversity analysis and genebanks would be an advantage.
- Basic knowledge in Linux, R and related packages, scripting knowledge would be an advantage.

Duty station: Ibadan, Nigeria

General information: The contract will be for a period of **one year**. IITA offers internationally competitive remuneration package paid in U.S. Dollars.

Applications: Applications must include covering letter which should address how the candidate's background/experience relates to the specific duties of the position applied for, curriculum vitae, names and addresses of three professional referees (which **must** include either the Head of the applicant's current or previous organization or applicant's direct Supervisor/Superior at his/her present or former place of work). The application should be addressed to the Head, Human Resources Service. Please complete our online application form using this link: <http://www.iita.org/careers>

Closing Date: 17th December 2015

IITA is an equal opportunity employer and particularly welcomes applications from women candidates.

Please note that only shortlisted candidates will be contacted.