



2013

Call for Research Proposals

Bioversity International announces two Fellowships, for up to US\$ 20,000 each, which will be available for 2013 to carry out research, from 3 to 12 months, on a wide range of biophysical, economic and social themes related to the conservation and use of genetic resources in developing countries. Multi-disciplinary research is particularly encouraged.

These opportunities are available thanks to support from [Pioneer Hi-Bred International, Inc.](#), United States and the [Grains Research and Development Corporation \(GRDC\)](#), Australia.

The fellowships are intended to cover travel, stipend for living expenses, bench fees, materials, insurance, conference participation and publications. They can be held concurrently with other sources of support.

How to apply?

Applications should be submitted in English, French or Spanish **by 11 November 2012** to VFF-2013@cgiar.org. The Application form and Guidelines can be downloaded [here](#) or requested by email.

The successful applicants will be informed by 30 April 2013 and are required to take up their Fellowships before 31 December 2013.

Who can apply?

Eligibility for this call is determined on the basis of applicants meeting a number of general criteria and additional criteria for the GRDC-supported fellowship.

Nationality

Applicants should be nationals of low and medium income countries, according to the [Human Development Index](#)

Age

Applicants should be no more than 35 years of age.

Degree

Applicants should hold at least a Master's degree (or equivalent) in a relevant subject area.

Topic of research

All applications must address one of the [Research Themes](#) described below.

Location

Proposed research may be carried out in any country outside the applicant's home country.

Additional requirements (for the GRDC-supported fellowship only)

Applicants for the GRDC-supported fellowship must also meet one of the four thematic criteria below, in addition to meeting the location requirement :

- Target a species that is a priority for both Australia and the home country.
- Target an alternative, neglected or underutilized species with either environmental or economic potential for Australia.
- Work on any of the following specific crops: wheat, barley, oats, sorghum, cereal rye, triticale, maize, canary seed, millets/panicum, canola, linseed, safflower, soybeans, sunflowers, chickpeas, cowpeas, fababeans, field peas, lentils, lupins, mung beans, navy beans, peanuts, pigeon peas and vetch.
- Use biotechnology in support of efficient use of plant genetic resources.
- Research must be carried out at an Australian research institute or at the International Maize and Wheat Improvement Center - [CIMMYT](#) or at the International Center for Agricultural Research in the Dry Areas - [ICARDA](#) (members of [CGIAR Consortium](#)).

Applications must include:

Bioversity International strives for diversity in gender and nationality in its training and capacity development programmes.

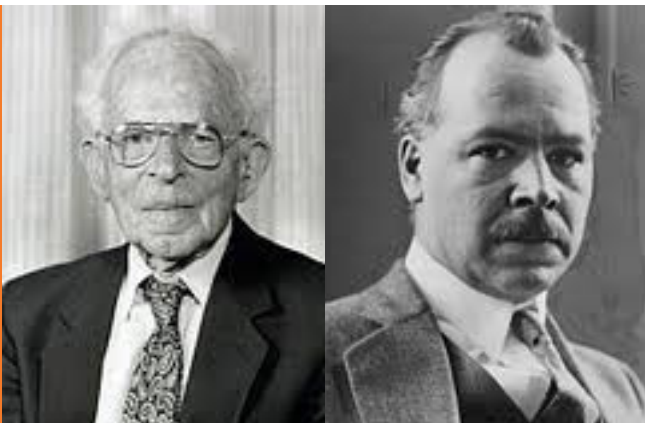
- Cover letter
- Completed application form
- Full curriculum vitae (with a list of publications)
- Research proposal prepared following the Guidelines for Preparation of Research Proposals
- Letter of acceptance from the proposed host institute (should follow the Guidelines)
- Letter of support from an institute in a developing country (preferably the home institute) which should specify why the research is important to the institute and should also identify the support that will be provided to the applicant upon return.

For further information please contact:

Vavilov–Frankel Fellowships
Bioversity International
Via dei Tre Denari, 472/a
00057 Maccarese, Rome
Italy

Fax: (39) 0661979661; Email: VFF-2013@cgiar.org

Website: http://www.bioversityinternational.org/training/research_fellowships



Bioversity International established the Fellowship Fund in 1989, to commemorate the unique contributions to plant science of Academician Nikolai Ivanovich Vavilov and Sir Otto Frankel. To date, 39 scientists from 24 developing countries have received awards to carry out innovative research related to the conservation and use of plant genetic resources, outside of their home countries for a period of three months to one year.

Research themes

Applications for both the GRDC and Pioneer-supported Fellowships must address one of the following research themes:

Use of agrobiodiversity as an instrument for climate change adaptation

In many contexts, climate change adaptation can be expected to rely on the maintenance and strengthening of local systems and their natural, human and social capital assets. These assets include agrobiodiversity, locally held knowledge and informal institutions underpinning collective action to reduce vulnerability and ensure food security. There is, however, a paucity of formal evidence on this, relevant to policy debates. An assessment of empirical data on agrobiodiversity conservation and sustainable use as an efficient instrument for climate change adaptation can be expected to provide crucial information for informing the policy debate and adaptation strategies. This issue may be addressed by studies that (1) review existing data in innovative ways or (2) that gather new empirical evidence on interventions that strengthen local capacities in on-farm conservation and sustainable use of genetic resources (e.g. community seed banks, participatory plant breeding, and related efforts).

Research to enhance the conservation of genetic resources of a tree species important to the livelihoods of the rural poor

Research questions within this theme may include:

- What are the patterns of diversity and what do they reveal about priorities for conservation (in situ, circa situ and ex situ)?
- What are the threats to the viability of populations and how might they be addressed?
- How do current patterns of use affect the diversity of the species?
- How effective are protected areas in conserving the species and its genetic diversity?

Sustainable diets for improved nutrition and health

Redirecting the global agricultural system towards greater biodiversity in order ensure better nutrition is vitally important. But the redirection must be done with a deeper understanding of the nutritional, economic, environmental, dietary and cultural point of view. The current global agricultural system is producing enough food, in aggregate, but access to and consumption of sufficient food that is culturally acceptable, affordable and nutritious is more challenging. Projections for the next 10 to 50 years further strengthen the need for improving the quality and sustainability of the diet especially given the challenges imposed by climate change and increasing populations with a rising appetite for environmentally costly animal source foods. What is needed, however, is food that contributes to a healthy diet that is appealing, flavorful, sustainable, and accessible at a reasonable cost. Determining these dimensions in a diet in ways that can be measured and analyzed to recommend appropriate policy and programme options to address both over and undernutrition will contribute to improved nutrition and sustainable development.

Management of Musa diseases through a better understanding of specific host-pathogen interactions and co-evolution

Host plant resistance is widely recognized as an economically and ecologically sound approach for managing Musa diseases. However, resistance is often not durable in farmers' fields, because in the field other pathotypes of the pathogen may be present than those used in the screening trials or because pathogens may evolve to overcome resistance of the host. A better knowledge of the close interaction and co-evolution of host diversity and different pathotypes/races of a pathogen will help Musa improvement programmes in producing more durable sources of resistance and thus allow more sustainable disease management.

Policy research in support of implementation of the International Treaty for Plant Genetic Resources for Food and Agriculture

The International Treaty on Plant Genetic Resources for Food and Agriculture entered into force in 2004. Parties to the Treaty are committed to creating a common pool of genetic resources to support agricultural research, plant breeding and training. Countries need to implement combinations of policies, laws and administrative guidelines to become fully active participants in the common pool. The effective implementation of the Treaty at the national level requires a comprehensive collection and assessment of baseline information about plant genetic resources conservation and use in each country and protracted engagement with a wide range of stakeholders. National policy makers can use those inputs to identify options for implementing the Treaty, including for example how community-based plant genetic resource management initiatives can be involved more directly in the implementation of the Treaty. Such work may be addressed by studies that 1) improve understanding of the role that such initiatives play in the conservation and provision of germplasm of all kinds or 2) improve understanding of how community gene/seed banks initiatives may complement national and international gene-banks.

Gene discovery in crop wild relatives

Crop wild relatives (CWR) are a valuable source of genetic variability that has been the basis for crop evolution and will be increasingly important in adapting agriculture to changing growing conditions. CWR held in collections can be mined for traits and genes of interest to breeders. Identifying these traits and genes would not only accelerate breeding efforts, but also provide incentives for the conservation of these CWR in genebanks and in their natural habitats.

Facilitating better use of genebank materials

Genebanks worldwide hold millions of crop and crop wild relative accessions, but fewer accessions are used than could be. It is not clear why so little genetic material is put to use. A more complete picture of the extent of use, as well as constraints to use and strategies for enhancing the use of genebank materials in breeding or in farmers' fields will help ensure that genebanks are fully used.

Researching neglected and underutilized species for food and nutrition security

The world relies on very few species and varieties for food and nutritional security today. That creates a situation of high vulnerability for humanity. Hundreds of underutilized species, currently at the margins of R&D have high nutritional content but cannot compete with commodity crops due to several bottlenecks along the value chain, such as the lack of improved germplasm, inefficient agronomic practices, ineffective processing, limited value addition technologies, poor marketing and a lack of supportive policies.

Applying economics to agrobiodiversity conservation, sustainable use and policy analysis

Many crop and livestock genetic resources tend to be undervalued as they have a range of non-market values associated with them (e.g. adaptive traits, options for the future). This has resulted in a bias against conservation and increasing levels of threat. How important are these unaccounted for values? How to use such values to support conservation and sustainable use? What incentives are needed to encourage conservation and can such incentives be pro-poor? Answering these questions requires the development of appropriate valuation techniques, decision-support tools (combining diversity and conservation cost data) and the design of cost-effective policy options.