

Small Grants Scheme for 2003

Background

The Cassava Biotechnology Network (CBN) for Latin America and the Caribbean (LAC) is pleased to announce its competitive Small Grants Scheme for 2003. This Scheme aims to:

- Foster those cassava biotechnology projects that have links between developing countries and either developed countries or advanced laboratories
- Permit and encourage developing country laboratories to work on cassava biotechnology research topics relevant to the objectives of end-users, nation, and the CBN overall

The Scheme primarily supports the planning of specific proposals for international collaborative research on priority cassava biotechnology research needs as defined by cassava end-users and farmers. Some of these grants may also be awarded as grants-in-aid for operational expenses of developing country biotechnology research; for emergency bridging funds in biotechnology research; or for short-term training in specific biotechnological methods.

Most of these awards are expected to be in the area of plant biotechnologies (tissue- and gene-based) that incorporate participatory methods involving farmers. Some awards are also given in microbial biotechnologies. Grant amounts range between US\$4,000 and \$10,000. These funds are provided through the generous support of the Special Program on Biotechnology and Development Co-operation of the Directorate-General for International Co-operation (DGIS/BIOTECH) of the Government of the Netherlands.

Applications

Applications are invited for the following four categories of awards:

- *Proposal Development and Planning Grants.* These grants, essentially for travel and consultation, must bring together partners from at least one developing country and at least one developed country or international institution. Because CBN cannot provide funds for the full development of projects, the possibilities of obtaining additional funds from other sources for the full project will weigh heavily in the awarding of these grants. Partnerships that involve linkages between local research, extension, and end-users will also be considered.
- *Grants-in-Aid for Developing Country Activities.* These small grants are intended to assist developing country laboratories carry out research that is consistent with

national and CBN priorities, including field laboratories manned by trained farmers.

- *Bridging Funds Grants.* These will be awarded to either initiate or prevent loss of momentum in research projects regarded by CBN as crucial or of highest priority. In essence, such grants aim to tide researchers over lean periods, for example, to prevent a research project stopping because funding has temporarily ceased but promised in the immediate future. Bridging Funds Grants may also be awarded for projects whose take-off time is critical but for which approved funds are yet to be released.
- *Short-Term Training Grants.* These grants are for short training programs that last between 1 week and 9 months, are relevant to CBN's priority areas, support specific on-going or planned CBN priority projects, or support technology transfer to the participating country's national programs.

Applications and awards time-table

<i>Date</i>	<i>Activity</i>
20 November 2002	Applications received by CBN Coordination
20 December 2002	Awards announced
31 December 2003	Award winners' reports on activities received by CBN Coordination

Criteria for evaluating funding proposals and applications

The following principles shall guide the CBN's Steering Committee when selecting proposals and applications for funding.

- *All grants*
 - The institutions and participants involved must have sufficient scientific capacity
 - The research topic must be of high priority to the CBN
- *Proposal Development and Planning Grants*
 - Research area must be of high priority, with limited activity, and requiring more effort
 - At least one partner must be from a developing country and another from a developed country or international institution
 - Further funding for the proposal must be likely, once it is developed (i.e., preliminary donor interest desirable)
 - A participatory research component must be included in the proposal

- *Grants-in-Aid for Developing Country Research*
 - Must match national and CBN's high-priority research topics
 - Developing country laboratories only

- *Bridging Funds Grants*
 - Must match CBN's high-priority research topics
 - Will effectively prevent undesirable consequences to research resulting from a funding gap or, in the case of new projects, funding delay

- *Short-Term Training Grants*
 - Trainee must be from a developing country
 - Training need must be a key component of an on-going or planned cassava biotechnology research project, or
 - If training involves technology transfer, it must be directed toward activities integrated into the national research, development, and extension system
 - Training must involve capacity building in participatory approaches to cassava biotechnology

Identifying partner institutions

Researchers wishing to forge collaborative links but are yet to identify potential collaborators may refer to the attached list of CBN members and their research interests. The CBN Coordination would also be pleased to assist in making the initial contacts for such collaboration.

Eligible expenditures

<i>Grant type</i>	<i>Expenditures covered</i>
Proposal Development	Travel, communications, consultancy fees, office supplies
Grants-in-Aid	Operating expenses such as reagents, supplies, support-staff salaries, utilities (water, electricity)
Bridging Funds	As needed (salary for laboratory leader not included)
Training	Travel and living expenses; training materials, including books and photocopying; and modest bench fees. Tuition and other fees are excluded because CBN can support only training programs donated by host laboratories

Submitting applications

- Applications and or proposals must be **no more than 5 pages**. Applicants please note: the CBN Steering Committee members will not guarantee reading beyond 5 pages!

- Applications should be **single-spaced**, one side of the paper only, using **12 characters per inch** or larger (never smaller).
- Submit **2 copies**, stapled or clipped, but **not** bound.
- Applications must arrive no later than 20 November 2002 to:
 - CBN Coordination Office (Dr C. Mba)
 - Biotechnology and Agrobiodiversity Project
 - Centro Internacional de Agricultura Tropical (CIAT)
 At either:
 - KM 17 Recta Cali—Palmira
 - Palmira, COLOMBIA
 Or post box:
 - A.A. 6713, Cali, COLOMBIA
- Applicants are strongly encouraged to send their applications via e-mail to <<a.alves@cgiar.org> or < c.s.zuniga@cgiar.org>>. Submissions may also be made by fax: (+57-2) 445 0073 or (+1-650) 833 6626. Such electronic and fax submissions must, however, be matched by hard copies sent by airmail or courier and postmarked no later than 20 November 2002.

Application outline

Applicants are requested to ensure that their applications conform strictly to one of the following outlines:

Outline for research grant applications

- Title
- Objective
- Justification
 - Include correspondence with CBN
 - If applying for a Proposal Development Grant or Grant-In-Aid, include national priorities and rationale for proposed partnerships
 - If applying for a Proposal Development Grant, include outlook for further funding, including specific donor interest, if any, at this stage. Indicate the steps being taken to seek full funding for the proposal.
- Outcome and beneficiaries
- Activities
 - If applying for a Proposal Development Grant, include planning and tentative research agenda

- Discuss technology transfer: what needs are predicted, when, and with whom?
- Participation of end-users, particularly the manner in which they will be involved
- Participants, responsibilities, timetable, and description of strengths of each institution. If applying for a Proposal Development Grant, indicate how needs of each institution will be met through working together
- Itemized budget and explanation of funds requested. If applying for a Grants-in-Aid, reagents or laboratory supplies should be described as specifically as possible

Outline for training grant applications

- Title
- Objective
- Justification: describe how the proposed training will tie in with an on-going CBN project or with national program research and development activities
- Outcome and beneficiaries
- Activities: describe the technique or method to be learned
- Host and home institutions, trainee, responsibilities, timetable, and description of strengths of each institution
- Itemized budget and explanation of funds requested (in budget notes)

Language

Applications and/or proposals may be submitted in either Spanish or English.

Additional materials

Please attach the following to all applications (these are not part of the 5-page limit):

- A one-page (no more) Curriculum Vitae of each participant
- If applying for a Proposal Development Grant, letters of commitment from the senior member of each collaborating group

- If applying for a Training Grant, a letter of support from the trainee's home Supervisor or Director; a letter of invitation from the senior Supervisor at the host institution; and an additional letter of professional reference for the trainee
- The formal name and business address of the institution(s) to which payment would be made, with specific instructions on directing grant payments
- If applying for a Grant-in-Aid, and **only if requesting CBN assistance in the purchase of reagents and laboratory supplies**, provide details, including suppliers, reference numbers, estimated prices if being bought from Miami, FL, USA, and specific instructions for directing shipments of donated research supplies. When budgeting, remember to add about 35% of total cost of supplies as shipping and handling costs

Research priorities in cassava biotechnology as identified by the CBN

Level^a Research topics

Biotechnology applications for realizing cassava opportunities

- H Starch quantity and quality for diverse end uses
- H Biofortification: using conventional and novel tools for crop improvement to increase micronutrient density in cassava
- M Biochemistry, molecular genetics, and fermentation for developing new products and improving their texture, taste, and nutritional value
- M Improved efficiency in plant nutrient recycling
- M Extended range and increased productivity in sub-optimal agroecological zones through research on photosynthesis under stress, enhanced mycorrhizal interactions, and biofertilizers

Biotechnology applications for solving cassava problems

- H Integrated pest management, including host/pathogen and host/pest interactions
- H Resistance to important bacterial and viral diseases such as cassava bacterial blight, cassava mosaic disease, and cassava anthracnose disease; and pests such as cassava green mite and whitefly
- H Modified cyanogen biochemistry for optimal cassava production and use
- M Improved processing qualities that increase labor productivity and reduce

drudgery

- M Enhanced fermentation systems for reducing cyanogen and managing waste
- M Delayed postharvest deterioration
- M Development of true seed for cassava production

Biotechnology tools for genetically improving cassava

- H Molecular and cytological characterization of genomes of *Manihot* species
- H Molecular genetic map and international database of genomic data
- H Useful genes and gene promoters, characterized and cloned
- H Gene tagging of traits of agronomic importance
- H Improved regeneration systems
- H Improved genetic transformation techniques
- H Techniques for regulating aspects of reproductive biology such as flowering, pollen conservation, double haploid production, and apomixis

Biotechnology tools for conserving and enhancing Manihot genetic diversity

- H Collection and assessment of genetic diversity of wild and cultivated gene pools for enhanced conservation; and definition of useful variability, using new molecular marker tools such as the simple sequence repeat (SSR) technique and the diversity array technology (DArT)
- H Diagnostic methods for clean germplasm transfer
- M Cryopreservation for long-term conservation of genetic resources
- M Tissue culture for germplasm conservation, exchange, and micropropagation

Social science tools for eliciting end-users' knowledge of cassava and their priorities for biotechnology research

- H Innovative, participatory methods for (1) incorporating end-users' knowledge of cassava and their priorities into biotechnology research, (2) identifying and assessing different stakeholder needs, and (3) undertaking

participatory monitoring and evaluation that effectively and in a sustainable manner influences the agenda for biotechnology research

- H Organizational innovations to enable effective networking and exchange of experiences and ideas among cassava end-users and international and national scientists
 - H Institutions for developing and sustaining research partnerships between biotechnology researchers and farmers who domesticate wild cassava varieties
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- a. Levels of priority: H = high; M = medium (low priority research areas are not listed).