

**Year of CfP: 2007**

**Project No: 07013 Completed**

**Project title:** Consortium International en Biologie Avancée (CIBA, International Advanced Biology Consortium), Agropolis/Embrapa initiative

**Unit managing the project:** AGAP (Genetic improvement and Plant adaptation) (CIRAD, INRA, Montpellier SupAgro)

**Project leader:** Marc Berthouly (berthouly(a)cirad.fr)

**Country involved in the project:** Brazil

**Research units from the Foundation's scientific network involved:** AMAP, BGPI, DIADE

**Subthematic axes:** IPB-1 (Integrative Plant Biology 1: *Genetics and genomics, plant breeding, ecophysiology*), IPB-2 (Integrative Plant Biology 2: *Plant pests and diseases, integrated crop protection, population ecology*)

**Objectives:**

Embrapa (the Brazilian Agricultural Research Corporation) has long collaborated fruitfully with French agricultural research institutes such as CIRAD, IRD and INRA. Together, Embrapa and the latter institutions conduct scientific and technical cooperation operations in the fields of agriculture and natural resources, aiming at increasing knowledge in relation with the sustainable development of agriculture. One of the results of the collaboration operations was the signing of an agreement between Agropolis and Embrapa for the installation of the Labex (Embrapa external laboratory) in Montpellier in early 2002. The prime objective of the Labex is to provide a scientific and technological watch by posting experienced scientists to cutting-edge laboratories in Europe. Advanced biology is one of the priority lines followed by the Labex.

The objective of this programme is to set up research projects backed by the Consortium International en Biologie Avancée (CIBA). The CIBA consortium is an Agropolis/Embrapa initiative aimed at achieving an effective sustained international scientific and technical cooperation strategy. Joint funding should make it possible to establish an entity capable of studying and using the diversity of plant genetic resources and to identify the genes and characters of agricultural interest that are essential for breeding programmes in tropical and Mediterranean agriculture.

The holding of two meetings during a 24-month period is planned—the first was in 2008 to reply to ANR 2008 call for bids and the second in 2009 to reply to the call for bids of the 7th European Union FPRD. The meetings are held in Montpellier and in Brazil and attended by Embrapa and Agropolis scientists to identify projects of common interest for drafting bids. Each meeting can be organised in the form of two theme workshops (tolerance to drought and resistance to fungi and nematodes) with scientific presentations open to the public.

**Action carried-out and results obtained:**

Since the CIBA began, Embrapa and Agropolis have made efforts to extend the current portfolio of projects in the themes of the consortium. Accordingly, co-financed by Embrapa and Agropolis workshops have been used to promote the dynamics between research teams in Brazil and France, for the formatting of cooperative research on topics of common interest projects

**A. The first meeting** of CIBA realized in Brasilia through the funding of the RTRA and Embrapa to one side fully revealed the difficulties and constraints of funding international research (negative aspects) and the other permit scientifically strengthen links between different teams (positive aspect).

Négatif Aspect: Despite the quality of the research it is difficult to obtain international funding or national on some plants (perennial) which are not considered as a model. More issues "policies" (inter-institutionnelles) are sometimes a hindrance to the consolidation of collaborations.

Positive Aspect: Although the number of projects for funding for 2008 type ANR, 7th Framework does not exist this meeting several positive aspects: **a.** It served together in excess of Embrapa, various federal institutions and universities Brazilian, giving his "governing" value to the Consortium. **b.** In the case of plants in particular she helped strengthen already existing links:

- **Palm**: the Embrapa has agreed to participate "OPGP" (results of the discussions and exchanges during the seminar) this project is coordinated by CIRAD (n. Billote) (10 partners). Each brings some 150,000 euros. The Embrapa signed and his entry will be effective in 2009

- **Cocoa**: Project ANR 2008 cacaobac : CIRAD/University genoscope/arizona, the Brazil will be associated with the project sequencing next year 2009

- Construction of a bank; Criollo cacao BAC sequencing and bioinformatics analysis end of Lac Cocoa Criollo BAC library construction; BAC-end sequencing and bioinformatic analyses.

**B. The Second meeting** of the CIBA was realized at Montpellier at the headquarters of Agropolis International in Montpellier 5-10 October 2009

The workshop has been very successful and to fully achieved its objective "articulation" Advanced plant biology research projects. These proposals aim to encourage a tripartite France/Brazil/Africa partnership by strengthening existing scientific interactions between France and Brazil.

As a result of the various discussions and conclusions made by the working groups some lines of actions could be defined:

- **to include the training in all the actions or activities of CIBA**: It was decided the need to establish a clear strategy to foster mobility (trade) and scientific training of researchers as part of the CIBA projects.

- **to favour the tripartite partnership in CIBA**: Search applications identified by the African colleagues present at the workshop are more adaptive nature and stress the emphasize to adjust the already developed methodologies, Brazil and France, to African conditions.

- **to favour the participation of African institutions in CIBA**: The CORAF by its leaders, showed the interest to participate and/or collaborate to the CIBA. Managers of the CORAF have proposed that the next workshop CIBA could be achieved in Africa. The CNPq, from its Director, is committed to finance part of this event.

It was suggested that, also the CORAF, CIBA include FARA (*Research Forum for agriculture in Africa*) as a potential partner. The FARA was created by three subregional organizations (CORAF, ASARECA and SADC) to mobilize resources, facilitate access to technologies, develop policies, strengthen the training of African countries and establishing strategic partnerships and alliances that promote agricultural research in Africa.

Another important Organization for CIBA is the AGRA (*Alliance for a green revolution in Africa*) that manages resources of *Bill & Melinda Gates Foundation*. The AGRA, jointly with the FARA, are currently the two institutions with capacity to finance projects r & d for Africa.

- **Meeting "out " of IV WORKSHOP CIBA**:

It was the first meeting of the Scientific Committee of CIBA consisting of: Philippe la Guerche (INRA), Jean-Christophe Glaszmann (Cirad), Vera Carvalho Alves and Mauro Carneiro (Embrapa), and José Osvaldo Siqueira (CNPQ). A report of the meeting should be distributed.

There is a meeting at the headquarters of Agropolis Fondation with Anne - Lucia Wack (Director General Agropolis Fondation); Oliver Oliveros (Senior officer International partnership Agropolis Fondation), Pedro Arcuri (Embrapa-Labex-Europe Coordinator); José Osvaldo Siqueira (CNPQ program director) and Sandoval Carneiro Júnior (Director of international relations CAPES) to discuss the terms of an agreement concluded between the CAPES and Agropolis Fondation which aims to promote the mobility of researchers and postgraduate students Brazilian and French. Agropolis Fondation proposes also signing agreements with the CNPq for the networking of scientific projects.

When of a meeting with colleagues present Brazilian in the workshop, José Osvaldo Siqueira (CNPQ program director) announced a project partnership CNPq/Labex for the granting of scholarships (Ph.d. sandwich and post-doctoral) in the United States and Europe.

**Prospects for the future:**

Actions necessary to promote the CIBA: Need a debate internal in Embrapa on the concept of "Advanced biology" and the applicability of research in this area for genetic improvement and the production of tropical plants. Therefore, it is clear that genetic improvement is integral and primary target projects within the framework of the CIBA. He raised the issue of the difficulty of CIBA project by the national bodies (France) and international finance because these organizations do not consider tropical crops as a priority.

Creating a CIBA WEB site (2010), with specializing service in CIRAD (B. Girardot)

Need to search for a permanent funding for research and training: an initiative was launched to next to the Embrapa .the same thing should soon be placed parallel to the next of Agropolis

**Total Agropolis Fondation funding:** € 50,000 (travel expenses)

**Funding categorie(s):** Agropolis Fondation small grants (support to prepare applications for national or international calls for proposals (e.g. ANR and EU FPs)

**Project duration:** January 2 2008 – December 5 2009

**Keywords:** advanced biology - Agropolis – Embrapa – sustainable development - CIBA