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Charter members



Edito

2010 was a very exciting year.

After taking the center stage of agricultural research for development (ARD) in March 2010, during the first ever Global Conference on ARD, Montpellier has been chosen as host of the Consortium Office of the CGIAR (Consultative Group on International Agricultural Research).

In late November, we co-hosted the presentation of the Montpellier Panel Report which urges Europe to scale up its efforts to develop agriculture to spur economic growth in Africa. Panel Report Chair Professor Sir Gordon Conway and other members of the team made the presentation in front of the Montpellier scientific community which was followed by a debate on how to better promote African-European partnership towards agricultural development.

We have selected three exciting Grand Federative Projects (GFP) on three strategic areas namely bioaggressors, leguminous plants and root systems. By providing €1 million each, we hope that such initiatives will result into a real scientific breakthrough while addressing issues and challenges at the interface with upstream research disciplines or other scientific domains.

Last summer, we also saw the realization of two new partnerships. First, we have signed an Agreement with CAPES (Brazilian Federal Agency for Support and Evaluation of Graduate Education) for the launching of a series of Joint Calls for Proposals in an effort to support capacity building between French, Brazilian and African scientists. You will read in this issue the results of the Call. Second, we are collaborating with AWARD (African Women in Agricultural Research and Development), a professional career development programme targeting African women and supported by the Bill & Melinda Gates Foundation and the United States Agency for International Development (USAID), in its anglophone and lusophone programme as well as in its potential expansion to francophone Africa.

Last year, we made an effort to promote agricultural research within the European Foundation sector. You will read in this issue the outcome of the ISDA 2010 and AGRO 2010 events which were partially supported by the Foundation and updates from our two flagship programmes PI@ntNet and ARCAD.

In this issue, we are likewise featuring one of our Fellows from Guinea and an article about the work of an international consortium of plant scientists whose work on sequencing the Cocoa Genome was partly supported by the Foundation.

This Newsletter No.4 thus summarizes the main activities we have carried out in the last semester of 2010. We are hopeful that 2011

will be as fruitful, if not more, as 2010.

We are taking this opportunity to greet you a productive and an eventful new year!

*Henri Carsalade, Agropolis Fondation Chairman of the Board
and Anne-Lucie Wack, Agropolis Fondation Director*

News digest



© JP Allano
Left to right, Ramadjita Tabo,
David Radcliffe, Yvonne Pinto,
Henri Carsalade, Sir Gordon
Conway.

Africa and Europe: Partnerships for Agricultural Development

A recent report financed by the Bill and Melinda Gates Foundation urges Europe to scale up its efforts to develop agriculture to spur economic growth in Africa.

The Montpellier Panel, headed by Sir Gordon Conway (Imperial College London), says food security, nutrition and long-term growth in Africa depend on a clear commitment to agricultural investment.

Africa has a unique opportunity to achieve economic prosperity by investing in agricultural development and is making appreciable progress toward that goal. However, some experts say the lack of clear signals of guaranteed long-term support from Europe - a major partner for Africa - could have a devastating impact on Africa's food and nutrition security. More than 200 million Africans suffer from chronic malnutrition, and 5 million children starve to death every year.

Though European donors have substantially increased their commitments to agricultural development in Africa over the last few years, the experts note that their investments are not always fully aligned with the opportunities available, opportunities that would stimulate the interdependent economies of Africa and Europe.

The Montpellier Panel is urging European and African leaders to move quickly to build a firewall against a new surge in cereal prices. The panel proposes establishing regulatory processes, along with global and national grain reserves, that could be employed to reduce extreme price volatility in global markets for cereals and staple crops, whose greatest impact is on poor countries. France has made pushing through global regulations on commodity food prices a priority of its G20 presidency.

The report focuses on the follow-up to the 2009 L'Aquila summit, at which wealthy governments in Europe and the United States pledged US\$22.5 billion to seek food security worldwide, with much of the funds to be spent on agricultural development in sub-Saharan Africa. The analysis presents a situation in Africa in which investments are urgently needed to address chronic problems and take advantage of the African-led Green Revolution that is focused on increasing production on smallholdings.

After its presentation in some European capitals (London, Brussels) and in Africa (Kampala), the report's main findings were presented in Montpellier in the presence of the region's scientific community, on 30 November 2010.

Discussions were held with all those in attendance (some one hundred persons) after an initial debate involving representatives of the Montpellier science community. Four Panel members were present: Prof. Sir Gordon Conway, Dr. Ramadjita Tabo (FARA), Dr. David Radcliffe (European Commission) and Dr. Henri Carsalade (Agropolis Fondation). Among the needs identified at this meeting were: to sustain and promote capacity building (e.g. scientific, academic, technical, rehabilitation, etc.); to bolster cross-cultural and interdisciplinary teamwork; and to take advantage of Africa's diversity (in terms of culture, genetic resources, and agro-ecosystems).

This Montpellier event was jointly organized by Agropolis Fondation and the Imperial College in conjunction with Agropolis International.

To watch the highlights of the event, [click here](#)
For further info about the work of the Montpellier Panel, [click here](#)

Contact:
Oliver Oliveros
oliveros@agropolis.fr

Agropolis Fondation funds 3 new federative projects

The Foundation has selected three new initiatives that seek to reinforce the Foundation's primary focus towards interdisciplinary approach, innovation, integration and international partnerships.

Called Grand Federative Projects (GFP), these are development- and innovation-oriented research activities that are expected to result into a real



scientific breakthrough while addressing issues and challenges at the interface with upstream research disciplines or other scientific domains. Each of the projects received €1 million from Agropolis Fondation. Below is a brief overview of the three GFPs.

BIOFIS (Bioagressors and invasive species: From individual to population to species) aims to develop, coordinate and communicate research actions on bioagressors (insects, mites, trees, fungi and virus) in Europe and on their associated natural enemies. It will develop an accurate tool for the identification of potential invasive species, emergent pests and their natural enemies. This GFP will also contribute in better understanding the evolutionary processes implied in the establishment (and spread) of an invasive pest. This initiative involves a number of partners from 18 countries around the world.



© Photo 1: A. Galliana
(Morocco Haouz)
Photo 2: P. Hisinger

FABATROPIMED aims to address an issue of strategic importance: nutrient use efficiency, interaction between Nitrogen and Phosphorus; using legumes as a tool to produce high protein content feed/food with much lower input; and biodiversity of soil bacteria and *mycorrhizae*. This GFP involves partners from Madagascar, Burkina Faso, Tunisia and Morocco.

Rhizopolis, a federative project for plant root research, addresses several key challenges at the frontier of root biology. It aims to address the need to use nutrient and water resources more efficiently in producing crops, and in other human-influenced ecosystems. It thus deals with important scientific challenges with direct relevance to pressing human concerns such as global food security, climate change and agricultural sustainability. This GFP involves partners from nine countries from Europe, Asia and North America.

Contacts:

For BIOFIS - arnaud.estoup@supagro.inra.fr
For FABATROPIMED - drevonjj@supagro.inra.fr
For Rhizopolis - alain.gojon@supagro.inra.fr



European Foundations Week

A Roundtable Discussion on the role of foundations in advancing research in agriculture, food and biodiversity

A Roundtable Discussion on the role of foundations in advancing research in agriculture, food and biodiversity was organized by Agropolis Fondation on 2 June 2010 during the 1st European Foundation Week in Brussels, Belgium.

Present during the event were the Global Forum on Agricultural Research (GFAR) Executive Secretary Mark Holderness who provided an overview of what the global agricultural research for development (ARD) community perceives as priority research issues and the Royal Museum of Central Africa Director-General Guido Gryseels who mentioned that in the ARD research sector, foundations played a pioneering role, and cited Ford and Rockefeller foundations as both the initial donors of main international research centers such as the International Rice Research Institute (IRRI) and the International Maize and Wheat Improvement Center (CIMMYT).

Other discussants included PI@ntNet Project Leader Daniel Barthelemy who underscored the importance of linking various disciplines and actors as well as ARCAD Project Leader Jean-Louis Pham who insisted on the concept of openness and demand-orientation.

Fondazione Cariplo's Scientific Research Director Carlo Mango stated that one role that foundations play is to fill in gaps in terms of which research areas are not being funded sufficiently (despite these being of potentially high impact). Meanwhile, ETC Foundation's Mariana Wongtschowski mentioned the need to ensure the involvement of farmers and local communities in the research and innovation process if they are to generate relevant local knowledge and innovations.

On the role of foundations

Discussion during the event pointed out that foundations have tremendous reach and focus on key development objectives. Its huge network of diverse stakeholders can be optimized as they all play major roles in capacity development. Foundations have the ability to spark new ways of working, start up new agendas, help break down institutional walls and foster development-driven agricultural research and extension.

As private entities serving public goals, foundations' distinctive characteristics allow them to add value to research activities and add dimension to research funding. Foundations can contribute in funding fundamental, risky, exploratory research which would not otherwise attract funding from traditional donors.

Foundations often have the flexibility to respond to the needs of the research community and are in a position to fund interdisciplinary projects which allows for exchange and collaboration enhances researchers' mobility, etc.

On agriculture

The audience who attended the Roundtable Discussion shared the need to build evidence as basis for accountability to end users with better measures of research value, reflecting development agendas and not just research quality as measured by publications.

There was a consensus that research funding is not enough and that a policy environment where development and impact-driven research can be supported, shared and promoted, needs to be put in place. The need for legal frameworks (including ethics and IPR issues) that facilitate or hinder knowledge sharing should also be looked at.

Finally, participants agreed that the profile of agriculture in the foundation and not-for-profit sector should be raised. Such an important and development-oriented topic should be given sufficient visibility and attention by the foundation sector in the next Annual General Assembly of the European Foundation Council (EFC).

Contact:
Oliver Oliveros
oliveros@agropolis.fr

Agriculture must respond to new societal demands

Over 500 participants from 65 countries took part in the 1st International Symposium on Innovation and Sustainable Development in Agriculture and Food (ISDA 2010) held from 28 June to 01 July 2010 in Montpellier.

Three hundred papers on how agricultural and food systems can innovate to promote sustainable development were presented and discussed. Participants agreed that although it is still important to produce more, producing better and differently - including intangible goods - has become an urgent requirement. Agriculture must now respond to new societal demands: environmental services, inclusion of marginalized populations, differentiated quality, rural development, energy production, etc. These are challenges that lead stakeholders to reconsider the role and functions of agriculture as well as the role of research in innovation processes.



Photo © Cirad, Pierre-Yves Le Gal
ISDA2010 participants visited several organic rice farms in the Camargue region, East of Montpellier in the Rhône estuary

Recognized personalities added broad perspectives to the discussions by presenting their views in plenary sessions: Andy Hall (Link Ltd., CRT-RIU) discussed the challenges for the development of innovation systems, Prabhu Pingali (Gates Foundation) made a plea for an agriculture renaissance, Juliana Santilli (Public Prosecutor in Brazil) defended the recognition of agrobiodiversity by international laws, Aliou Diagne and Papa Seck (AfricaRice) proposed ways to renovate African agricultural policies, and Lawrence Busch (Michigan State University, Lancaster University) discussed the need for renewing thinking in science at a time when standards and firms contribute significantly to the orientation of agriculture.

Three roundtables enabled representatives of political and development institutions to express their views on innovation processes. The World Bank organized a roundtable on innovation systems in practice. With the support of Agropolis Fondation, OECD and IFAD facilitated a roundtable on policies to foster innovation in the Mediterranean region. Finally, different actors from the Languedoc-Roussillon region discussed the regional dynamics of innovation.

Thirty-six sessions grouped in five hot topics enabled participants to share their experiences and views on innovation for sustainable development.

Following the success of this first edition, the partners of the event have called for its continuation. Papa Seck, Director General of AfricaRice suggested that the next edition of ISDA be hosted in Africa in the next three of four years.

The event was organized by the Innovation Research Unit composed of scientists from Cirad, INRA and Montpellier SupAgro. The support of Agropolis Fondation and other partners including CTA, IFAD, the French Ministry of Foreign Affairs, and the French Ministry of Sustainable Development, allowed the involvement of 90 participants - students, scientists from Southern countries, representatives of associations - in this international event, which resulted in very rich exchanges.

Further details about ISDA2010 (Programme, papers, etc)
<http://www.isda2010.net/>

Contact:
Emilie Coudel
emilie.coudel@cirad.fr



Agro2010: A meeting for world agriculture, 29 August–03



Photo (c) Agropolis
Agropolis Fondation Director
Anne-Lucie Wack during the
AGRO2010 Session on ecological
intensification of cropping
systems

September 2010

The 21st Century agriculture must face an unprecedented challenge which is to feed an ever-growing world population on a limited cultivated surface, while cutting down the inputs (fertilizers, pesticides, water and energy) with major environmental impacts: diminution of biodiversity, damages on water quality, soil erosion.

According to nearly 600 scientists, many of whom are young researchers from 56 different countries who attended the 1st International Scientific Week on Agronomy and the 11th European Congress of the European Society for Agronomy (ESA) last summer in Montpellier, these are the major issues facing agriculture today.

"Farmers remain the major stakeholders of the drastic change in production ways that society is expecting in Northern as well as Southern countries. Consumers also have an important part to play in this change while recognizing and evaluating the efforts of the agricultural sector to provide safe and tasty products respectful of the environment at a reasonable price. The role of agricultural research is to anticipate these evolutions by developing knowledge and methods which allow inventing these new production ways in partnership with the agricultural world," said Jacques Wery, ESA President and Conference organizer.

The week-long Congress demonstrated the importance and relevance of agronomy as a science. It also served as an opportunity where stakeholders - agronomists, agricultural experts, development technicians, decision makers, agrofood suppliers - could meet. During the event, participants explored various actions that cut cross disciplines, i.e., from integrative plant biology to soil and hydrology, ecology and plant protection, economics, social sciences, informatics and artificial intelligence.

More than 160 communications and 370 posters were presented out of the 470 articles published in the congress proceedings. Participants shared and discussed scientific studies linked to the sustainable development, the management of natural resources, the coexistence of food and non food use in production systems, and the setting up of "ecologically intensive" cropping systems.

Organized by Agropolis International in partnership with the French agricultural research and higher education institutions and the French Association for Agronomy (AFA), the successful event was co-sponsored by Agropolis Fondation.

Created 20 years ago, ESA aims at stimulating and promoting research on agronomy in Europe. The Montpellier Congress has shown the evolution of ESA towards a wider opening to the South as well as to students, young scientists, development organizations and research institutions. ESA's new President Fred Stoddart of Helsinki University is tasked to organize the 12th ESA Congress in Finland in 2011.

Further details about AGRO2010 (Programme, papers, etc)

<http://www.agropolis.fr/agro2010/>

Contact:
Jacques Wery
wery@supagro.inra.fr

Partnerships



Five projects selected under the 2010 Agropolis Fondation - CAPES Joint Call for Proposals

Five projects involving French, Brazilian and African scientists were selected under the 2010 Agropolis Fondation-CAPES (Brazilian Federal Agency for Support and Evaluation of Graduate Education) Joint Call for Proposals (CfP).

This Call was carried out within the framework for common action in promoting scientific cooperation between France and Brazil as outlined in the Memorandum of Agreement (MOA) signed by the two institutions on 01 July 2010. This Agreement also provides for the possible involvement of African countries in a joint effort to contribute to knowledge sharing and scientific capacity building.

Below are the five projects selected under this Call:

1. Identification of nematode (*Meloidogyne spp.*) effectors of pathogenicity in rice (*Oryza sativa*)
Team: Diana Fernandez (RPB-IRD, France), Maria Fatima Grossi de Sa (Universidade Catolica de Brasilia, Brazil), and Hughes Baimey (International Institute of Tropical Agriculture, Benin)
2. InfraRed Spectrometry as a tool to model inorganic and organic phosphorus availability in tropical soils under conservation systems (PAIRS)
Team: Thierry Becquer (UMR Eco&Sol, IRD-INRA-Montpellier SupAgro, France), Maria de Fatima Guimarães (State University of Londrina, Brazil) and Tantely Razafim Belo (University of Antananarivo, Madagascar)
3. Organization of a joint French-Brazilian-African training course for the construction of a sentinel

network for Greening disease outbreak detection in peri-Mediterranean countries

Team: Alexandre de Kochko (DIAPC-IRD, France), Claudia Carareto (Universidade Estadual Paulista, Brazil), Pascal Musoli (National Agricultural Research Organization, Uganda)

4. Role of active retrotransposons (RT) In *Coffea canephora* and *C. arabica* Genome Evolution

Team: Frédéric Gatineau (JMCGA-CIRAD, France), Alexandre Morais do Amaral (EMBRAPA Labex-Europe) and Joseph Tamesse Lebel (Université de Yaoundé, Cameroon)

5. PHenotyping, GEnotyping and analyzing genetic diversity and structure of a collection of *Coffea arabica* from Ethiopia, in relation with quality and drought tolerance (PHEGECO)

Team: Thierry Leroy (DAP-CIRAD, France) and Luiz Filipe (Embrapa Café, Brazil)

Launched on 7 July, proponents had until 17 September 2010 to submit their proposals. The Call targeted interdisciplinary projects with an integrated approach to plants that address development issues concerning the North and the South. It considered funding requests that would support joint research projects involving work missions of professors, faculty members and scientists and/or researchers as well as study missions of doctoral students and post-docs. Requests for support for the organization of high-level scientific events (e.g., conferences, seminars, workshops, etc.) were also considered.

Watch out for the announcement of our 2011 Joint Call!

For further queries about the 2010 Joint Call contact:

agropolisfondationcapex2010@agropolis.fr

To know more on how you can partner with us, [click here >](#)

Contact:

partnerships@agropolis.fr

Supporting African women in agricultural research: Agropolis Fondation partners with AWARD



Agropolis Fondation and the African Women in Agricultural Research and Development (AWARD), a project of the CGIAR's Gender & Diversity Programme supported by the Bill & Melinda Gates Foundation and the United States Agency for International Development (USAID), are partnering together to contribute in boosting scientific and leadership capacity among African women in agricultural research.



The Foundation and AWARD held a meeting with BMGF representatives in Seattle in late September 2010 in order to discuss, among others, the expansion of the programme in Francophone Africa.

Part of this partnership arrangement is the hosting of a number of AWARD Fellows for a period of 3 to 9 months in research units that are part of the Foundation's scientific network. Following the recent AWARD selection process, a total of 60 African women have been selected. Of this total, five are proposed to conduct their research work in Montpellier, within the framework of the Agropolis Fondation-AWARD partnership.

The Foundation will support each selected Fellow for up to US\$24,000 (€20,000). It will cover laboratory fees, medical insurance, housing (including electricity, water and other utilities) and family-related cost including babysitting, nursery/child care facilities. The Foundation's support may also be used to cover the Fellow's public transport as well as her lunch allowance at the canteen of the host organization.

Agropolis Fondation is supporting AWARD in its effort to expand the programme in Francophone Africa. AWARD has elaborated a strategy to broaden its on-going programme which focuses on 10 Anglophone African countries to the French-speaking countries in the region. Given the historically strong relationship between France and Francophone Africa, the Foundation will serve as a link between AWARD and our charter members - Cirad, INRA, IRD and Montpellier SupAgro - and possibly other French partners (e.g., national research organizations, civil society groups and universities) in Sub-Saharan Africa.

The two entities will work towards the organization of public awareness and scientific events in the region, including international training courses.

To know more on how you can partner with us, [click here >](#)

Contact:

partnerships@agropolis.fr

Feature Fellow



A stint in Montpellier, a step forward in my career
by *Aboubacar Camara*

Photo credit: A. Camara.

After defending my PhD thesis in geography in March 2007, I began to consider the future direction of my professional career. Should I stay in France? Return home to Guinea to resume my untenured position at IRAG (Guinea's Agricultural Research Institute)? Maybe visit an Anglophone country to perfect my English?

Overall, I felt the need for a transition between my thesis work and professional life. Ultimately, however, I chose to return to Guinea to join my wife and two daughters whom I had missed so much! I resumed my work at IRAG with the hope of eventually assuming a permanent staff position.

While in Guinea, Jean-Marie Kalms, a former colleague from CIRAD, contacted me with a proposal for a post-doctoral research. The topic was in line with the work I had done for my thesis on the spatial dynamics of Guinean agroforestry systems and with a similar project in which Jean-Marie was previously involved. The post-doctoral research was to be part of the "Innovative Agroforestry Methods" project funded by Agropolis Fondation. I accepted his proposal because it was an opportunity for me to compare the methodology I used in Guinea for my thesis with other approaches, to broaden my experience and to exchange with agronomists from different scientific disciplines.

I arrived in Montpellier in May 2008 and joined the Innovation Research Unit. I was welcomed by a dynamic team of CIRAD research scientists who were friendly and eager to work with me, including Jean-Marie, Nicole Sibelet and Patrick Dugué. Discussions regarding my project attracted the interest of others in the unit attached to INRA's *Département Sciences pour l'Action et le Développement*. I got involved in this discussion and helped to organize and run two workshops on agronomy and geography.

In July 2008, I began a two-month field assignment in Cameroon. Although slightly more developed than Guinea, the difference is not very great and I honestly felt on firm ground there. I met friendly colleagues from IRAD (Cameroon's Agricultural Research for Development Institute) and CIRAD staff stationed in Yaoundé who shared their experience with me. They facilitated my field research in Kedia (Bokito region) and Mvan (Akonolinga region).

In the field, I met very cooperative individuals, including officers from the NGO (ADEAC, Centre Region Farm Development Association), and good humored farmers who helped me in my work (e.g., surveys, observations, mapping).

"This post-doctoral experience helped me to improve my skills... In addition, my stint in France has allowed me to discover this city where intellectuals and contemporary thinkers meet. Montpellier is indeed a city which allows such a cultural and intellectual richness..."

An assignment in Guinea between November and December 2008 enabled me to complete my data and to prepare a conference paper comparing the two study areas for the International Agroforestry Workshop (August 2008 in Sérédou, Guinea). I also had the opportunity to present the results of my studies - which highlight the advantages of an approach combining geography and agricultural science to understand the spatial-temporal dynamics of agroforestry systems in humid tropics - in other conferences including the World Agroforestry Congress (August 2009 in Nairobi, Kenya) and the International Symposium on Innovation and Sustainable Development, ISDA 2010 (June 2010 in Montpellier).

This post-doctoral experience helped me to improve my skills, particularly in the field of farm and territorial agronomy, and to expand my professional network with research scientists. In addition, my stint in France has allowed me to discover this city where intellectuals and contemporary thinkers meet. I once attended a series of public discussions in Montpellier organized by the French journal *Le Monde* and radio station *France Culture*. Occasions like these afforded me to witness and participate in a rich and often intense public debate on modern-day societal issues - from crisis to democracy, from emergence of new technologies to the linkage between science and society. This was certainly useful in better understanding the world we live in. Montpellier is indeed a city which allows such a cultural and intellectual richness.

This experience and this diversified partnership network, undoubtedly contributed to my nomination by the Director General of IRAG to the post of Scientific Coordinator at the Regional Agronomy Research Center for Maritime Guinea (Foulaya, Kilissi and Koba stations). Now my current aim is to shape this center as a showcase for Guinea and - on the long term - a sub-regional research center, with a focus on fruit, horticulture, and cereal crops.

Aboubacar Camara completed his PhD thesis in geography on 30 March 2007. Married and now father of three children, he hopes to contribute to the development of his country through agricultural research.

Contact:

aboubacar.camara@cirad.fr
aboubacar.camara@irag-guinee.org

[Click here to learn more about our Agropolis Fellows](#)

Feature Project

Cocoa Genome revealed

An international consortium of plant scientists, led by Cirad, a French research centre working with developing countries to tackle international agricultural and development issues, sequenced and analyzed the Cocoa Genome. These results are expected to speed up the production of new improved varieties.

It is now the turn of the cocoa tree to have its DNA sequence revealed. Scientists from the International Cocoa Genome Sequencing Consortium (ICGS) today announced the sequencing and analysis of the genome of the cocoa tree, *Theobroma cacao*. The consortium, led by the Montpellier-based Cirad, is comprised of scientists from 20 different institutions in six countries (France, USA, Ivory Coast, Brazil, Venezuela and Trinidad & Tobago). Their efforts to sequence the cocoa genome was partly funded Agropolis Fondation, together with other government and industry donors from France, USA and Venezuela.

The group of scientists has sequenced the genome of a *Criollo* type cocoa plant isolated in the jungles of Belize. It is thought to be a descendant of plants originally domesticated by the Mayan civilization and it produces fine quality chocolate.

DNA extracted from this plant was broken into small fragments which were then analyzed using a combination of different methods (Illumina, 454 and Sanger sequencing) to sequence the genome many times over.

Raw data were assembled using powerful computers to reconstitute a nearly complete draft of the cacao genome. In a final step, teams of biologists examined the data in detail, identifying important genes and studying the structure and evolution of the genome, with detailed genome analyses suitable for publication. The analysis revealed the structure of the cocoa genome and led to the discovery of hundreds of genes important to traits unique to cocoa flavor and quality, as well as genes involved in disease resistance.

The results are freely available via several worldwide genetic databases.

It is expected to dramatically accelerate scientific progress in the field of cocoa genetics and will speed up the development of new varieties of cocoa that will help farmers in developing countries to grow cocoa sustainably.

An article on the genome of *Theobroma cacao* has been published online Nature Genetics on 26 December 2010. (Reference : Xavier Argout, et al. The genome of *Theobroma cacao*. Nature Genetics (2010).

ref : Nature Genetics (2010) doi:10.1038/ng.736
<http://www.nature.com/ng/journal/vaop/ncurrent/full/ng.736.html>



Claire Lanaud is the project leader of the project funded by Agropolis Fondation which supported the work on cocoa genome



A Criollo cocoa tree
 © CIRAD, C. Lanaud

Agropolis Fondation's financial support was decisive at the time when I was seeking for funds from all possible sources in order to realize our project under a very competitive context.

- Claire Lanaud

Contacts :

Claire Lanaud : claire.lanaud@cirad.fr

Xavier Argout : xavier.argout@cirad.fr

Flagship Programmes



ARCAD organized 2nd edition of training course on agrobiodiversity

The second edition of the international training course on agrobiodiversity "*Agrobiodiversité: des hommes et des plantes. Outils et Méthodes d'analyse*" was held in Rabat, Morocco on May 3-14, 2010.

The course was organized by ARCAD in partnership with the *Institut Agronomique et Vétérinaire Hassan II* and with the support of *Institut de Recherche pour le Développement (IRD)* Office in Morocco.

The idea of this course, first held in Montpellier in 2008, originated from the many requests for training received by the ARCAD team in the field of agrobiodiversity analysis.

While multidisciplinary is often cited as necessary to study the intricate genetic, cultural and social components of the dynamics of crop diversity in agroecosystems, only a few pedagogical resources are available to scientists who are willing to develop their own research on this hot topic. Scientists involved in the ARCAD programme therefore developed a two-week course designed to provide trainees with a basic knowledge in population genetics and social sciences.



Photo © JL Pham
Prof. Ghita Chlyeh of IAV Hassan II presents faba bean field trial to training participants

Given in French, the course included a balanced set of lectures, case studies and hands-on computer work. While it is impossible for the trainees to master all tools necessary for agrobiodiversity analysis, the training course allowed them to be aware of the main concepts underlying such research. It also afforded them to get further into scientific literature on the subject.

Of the more than 120 applications received for the course in Morocco, only 25 trainees coming from 12 countries were selected. The participants were a mix of PhD students and senior professionals in the field of crop biodiversity and breeding. The first week was dedicated to population genetics while the second one was focused on anthropology and interaction between social sciences and biology.

The policy dimension of the subject, which is an important element in understanding the overall context of plant genetic resources conservation and use, was presented by a Brazilian researcher, Prof. Juliana Santilli, who was a former trainee of the first edition of the course. Other trainers came from Cirad, INRA, IRD, IAV Hassan II and Bioversity International.

Another trainee of the first course, Prof. Ghita Chlyeh, was so pleased with the course that it was her who suggested organizing the second edition of the course in Morocco. Thanks to the very warm hospitality of the Moroccan colleagues, led by Prof. Mohammed Sadiki, Director of IAV Hassan II and Prof. Loubna Belqadi, having the training course in Morocco proved to be a very good idea. Exciting lab visits and trips to field research sites (and touristic spots), delightful meals and tons of cookies were key elements in promoting interactions among an enthusiastic group of trainees and trainers. It is hoped that this will lead to future joint projects.

[Click here to learn more about ARCAD >](#)

The ARCAD consortium includes Agropolis Fondation's charter members namely Cirad, INRA, IRD, and Montpellier SupAgro. The Languedoc Roussillon Regional Government has pledged €5M in support of this flagship programme.

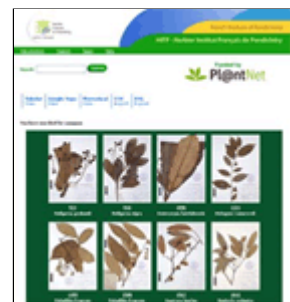
Contact:
arcad@agropolis.fr

PI@ntNet UPDATES

Since its launch in October 2010, the PI@ntNet team has been working on various R&D tasks aimed at building its web-oriented scientific and informative software platform dedicated to plant identification and to the collaborative sharing of plant datasets.

Two new case studies have also been initiated. PI@ntScan aims to build a large image bank of tree leaves. Several members of *TelaBotanica* contributed by sending pictures taken on trees that grow in France. The resulting image bank is used by the IMEDIA team to develop new identification approaches. The second case study, PI@ntHerbarium, is dedicated to the management of herbarium data. It will allow participants from several herbaria to share their experiences in the digitization of specimen data, and to provide feedback on the ergonomics and suitability of the PI@ntNote software for herbarium data management.

In collaboration with the [French Institute of Pondicherry](#) (IFP), a web service has been developed for the PI@ntGhats case study which allows easy web publishing of specimen data managed with PI@ntNote. Based on these results, IFP took the lead of a consortium of South Indian herbaria which aims to build a Western Ghats Biodiversity Open Collaborative Information System (WG-BOCIS). Led by IFP's Dr. B.R. Ramesh, this initiative has been selected recently by the [Critical Ecosystem Partnership Fund](#) (CEPF) which will provide a US\$450 000 financial support towards its implementation.



Herbarium sheets can be displayed and enlarged, on-line. Beta-version can be accessible at the following address:
www.ifpindia.org/herbarium

Training courses on the use of the PI@ntNote software were also organized in Montpellier last spring. Several scientists and students attended the event which showed them how to create, modify and fill in their own databases easily.

Linked to PI@ntNet and PI@ntHerbarium, a consortium of French institutions managing natural history collections (including National Museum of Natural History, University of Montpellier 2, IRD, Cirad and INRA) have recently submitted a €16M project proposal to the French Government's Call for Proposals "Equipements d'Excellence". The project NUMECOLL aims at (i) building the world's largest image bank on herbarium specimens, and (ii) providing web2.0 collaborative tools for scientists and amateurs to fill up databases with information visible on images. If accepted, NUMECOLL would significantly accelerate the inventory of the world's flora, and open new fields of research on

biodiversity.

The PI@ntNet team has also participated in a number of international congresses in the past months in order to share research results obtained so far in automated and assisted plant identification.

- Daniel Barthélémy presented PI@ntNet's challenges in relation to information and communication technology (ICT) at the [Future Internet Assembly's Conference](#) in Valencia, Spain in April 2010.
- Carolina Sarmiento and Pierre Bonnet presented "PI@ntWood: A computer-assisted identification tool for 110 species of Amazon trees based on wood anatomy" at the [International Association of Wood Anatomists Congress](#) in Wisconsin, USA in June 2010.
- Wajih Ouertani of the Imedia Project Team at INRIA presented recent advances in identification methods at the [BioIdentify 2010 Conference](#) in Paris, France in September 2010.

[Click here to learn more about PI@ntNet >](#)

The PI@ntNet consortium involves CIRAD, INRA and INRIA. Its partners include the French NGO of amateur botanists "Telabotanica" and the University of Montpellier 2.

Contact:
contact@plantnet-project.org

About Agropolis Fondation



Quick facts

- Established in February 2007 as a French Foundation for Scientific Cooperation
- Located in Montpellier, at the heart of the Agropolis complex, home to one of the world's largest concentration of scientific expertise in the food, agriculture and environment sectors
- Four charter members are France's leading scientific institutions for development-oriented research and higher education in Agriculture, Food and Environment: Cirad, INRA, IRD and Montpellier SupAgro
- Promotes a scientific network composed of 31 research units with top-flight scientists specializing in plant research at various levels- from its genes to its environments to its final uses- and at the interface of temperate, tropical and Mediterranean regions
- Initial endowment of €20M and current additional funding and pledges of over €6M
- Launched series of Calls for Proposals in 2007, 2008, 2009 and 2010
- Since inception, 88 projects have been selected for a total funding commitment of €14.4M
- €3M funding allocated to each of the Foundation's two Flagship Programmes (PI@ntNet and ARCAD)
- €1M funding allocated to each of the Foundation's three Grand Federative Projects (Biofis, FABATROPIMED and Rhizopolis)
- Altogether, supported projects involve more than 250 partners from 55 countries, about 60% are from Southern (Africa, Asia and Latin America & the Caribbean) and Mediterranean countries
- Agropolis Fondation Fellows total more than 110 international scientists from more than 30 countries

AGROPOLIS FONDATION STAFF

- Anne-Lucie Wack, Director
- Philippe Puech, Secretary General
- Anne Causse, Assistant to the Director
- Marie-Christine François, Assistant to the Secretary General
- Jean-Pierre Labouisse, ARCAD Project Coordinator
- Laetitia Mahé, Junior Officer
- Oliver Oliveros, Senior Officer
- Jean-Louis Pham, ARCAD Project Leader
- Martine Toutant, Scientific Officer

Contact:
Agropolis Fondation
Avenue Agropolis
34394 Montpellier
Cedex 5 France

Tel: +33(0) 4 67 04 75 74
Fax: +33(0) 4 67 04 75 43
agropolis-fondation@agropolis.fr

What's on your mind?

Agropolis Fondation Newsletter is meant to serve as a tool to disseminate information on our and our

partners' goings-on. But since we would like this Newsletter to be of service to you, we would like to receive your feedback and know what you think.

So, send us your comments and suggestions at agropolis-fondation@agropolis.fr
We are just a click away!

Agropolis Fondation supports and promotes high level research and higher education in agricultural sciences that address the main challenges related to sustainable agricultural development in temperate, tropical and Mediterranean regions. The Foundation's office is located at the heart of Agropolis International complex in Montpellier, home to one of the world's largest concentration of skills and expertise in Agriculture, Food Biodiversity and Environment.