

PARTNERSHIP

2010: French-Egyptian Year of Science and Technology



Presidents Mubarak and Sarkozy officially announced last December that 2010 would be “the French-Egyptian year of Science and Technology.” A number of events are organized throughout the year, set to enhance and strengthen scientific cooperation between the two countries.

> For more information: <http://science.cfcc-eg.org/>

EUROPEAN PROJECT

Joining Forces against Tuberculosis

The SysteMTb project (Systems Biology of *Mycobacterium tuberculosis*) was launched on April 1st, 2010. Involving 13 partners (including CNRS) from nine European countries, this project was granted over €10 million by the European Commission. Coordinated by Luis Serrano from the CRG¹ in Barcelona, it will focus on how *Mycobacterium tuberculosis*—the microorganism that causes TB—survives both inside and outside our cells and attacks our immune system. With HIV and malaria, TB is one of the three most devastating infectious diseases in the world, and the number of tuberculosis-related deaths is set to rise.

1. Center for Genomic Regulation (Barcelona, Spain).

GEOLOGY

Post-Seismic Mission to Chile

Five days after the 8.8-magnitude earthquake that struck Central Chile on February 27th, a French aid airplane carrying a team of geophysicists landed in Santiago. This mission was organized by a French national earthquake response team from the CNRS INSU,¹ coordinated by the International Associated Laboratory (LIA) Montessus de Ballore,² in collaboration with the IRD.³

The response time is crucial, as ground-based observations need to be made as quickly as possible to measure the hundreds of aftershocks, assess future seismic risk, and determine the overall characteristics of the earthquake—in this case the second most powerful in modern Chile's history.

For this, the 15 French scientists⁴ set up more than a ton of instruments over an area of 600

kilometers, integrating GPS, accelerometer, and seismometer sensors to measure ground motion—e.g., displacement, velocity, and acceleration. The team will regularly return on site to check the stations and retrieve data from this temporary network until October. So far, they have been able to evaluate, through observations, the co-seismic and post-seismic ground displacements, the scale of the triggered tsunami, and the main aftershocks sequence.

Though not unexpected,⁵ this earthquake still raises crucial questions regarding the duration and the complexity of the main rupture, the energy actually released, the dimension of the rupture zone, and the mechanisms and the extension of the aftershocks.

To elucidate these questions, the large amount of data this mission will generate needs to be

fully exploited. A database, available to researchers across the world, will gather all the seismological information collected. This will include data from the French teams, who have cooperated for many years with their Chilean counterparts, and from other foreign teams (US, Germany, and the UK), whose work is coordinated by the Chilean national seismological service. “Making this data immediately available to the entire international community is of great importance. It is the first time that this is done for an earthquake of this magnitude,” emphasizes Jean-Pierre Vilotte of IPGP.⁶

Mathieu Hautemulle

1. Institut national des sciences de l'univers.
2. INSU / IPGP / ENS / University of Chile.
3. Institut de recherche pour le développement.
4. The team members belong to the Institut de physique du globe de Paris (IPGP), the

Laboratoire de géologie de l'Ecole normale supérieure de Paris, the Laboratoire de géophysique interne et tectonophysique (LGIT) of Grenoble, and the Institut de radioprotection et de sûreté nucléaire (IRSN).

5. In 2009, researchers including Christophe Vigny—who is also participating in this mission—predicted that an 8-8.5 earthquake could hit this area “in the near future.” The study was published in the June 2009 issue of *Physics of the Earth and Planetary Interiors*.
6. Institut de physique du globe de Paris.

IN FOCUS

CNRS Opens an Office in Brazil

On June 16th, CNRS inaugurated its office in Rio de Janeiro (Brazil). Yves Saint-Geours, French ambassador to Brazil, Joel Bertrand, CNRS chief research officer, and Jean-Pierre Briot, head of the CNRS Office in Brazil, attended the event. Representatives from Brazil included Wrana Panizzi, CNPq¹ vice-president, and Jacob Palis Jr., president of the Brazilian Academy of Sciences (ABC).

This is the ninth CNRS Office to be opened abroad. Brazil, which is fast becoming a major player in international scientific research, is CNRS's main partner in South America. The presence of a local CNRS Office should further strengthen cooperation between the two countries.

1. Conselho Nacional de Desenvolvimento Científico e Tecnológico.



© M. Rodrigues

From left to right: Jean-Pierre Briot, head of the CNRS Office in Rio, Yves Saint-Geours, French Ambassador to Brazil, and José d'Albuquerque Castro from the Federal University of Rio de Janeiro.

CONTACT INFORMATION

→ **Jean-François Marini**
CNRS office, Santiago, Chile.
jean-francois.marini@cnrs-dir.fr

→ **Christophe Vigny**
ENS, Paris.
vigny@geologie.ens.fr

→ **Jean-Pierre Vilotte**
IPGP, Paris.
vilotte@ipgp.fr

→ **Bertand Delouis**
Géosciences Azur, Valbonne.
delouis@geoazur.unice.fr