

## news

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### **International Conference on Robotics and Automation**

On April 18-22, 2005 Barcelona hosted the 2005 International Conference on Robotics and Automation (ICRA'05), which was chaired by Alicia Casals, from the Department of Systems Engineering, Automation and Industrial Informatics of the Technical University of Catalonia (UPC). Throughout the seven-year span since the meeting had been last held in Europe (Leuven, Belgium 1998), the continuous advancement in robotics, automation and their related areas produced great changes in the way we use and apply robots. The motto of the ICRA'05 conference, *Robots get closer to humans*, raised issues in matters related to human-robot interaction, in advances and experiences of robots and automation at home, at work, for education, as well as in other emerging areas. Operating closer and closer with humans, robot interaction is an increasing research topic in robotics.

Sponsor of the ICRAs is the IEEE Robotics & Automation Society (IEEE stands for the Institute of Electrical and Electronics Engineers, Inc). The IEEE is a non-profit, technical professional association that gathers more than 377,000 individual members from 150 countries. The Robotics & Automation Society is a thriving worldwide research association working on the future of robotics. The ICRA'05 was a most suitable forum for experts and professionals to discuss on robotics and automation in technical areas including computer engineering, biomedical technology and telecommunications, electric power, aerospace, and consumer electronics.

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### **One hundred years of the Institut Químic de Sarrià (IQS Technical College)**

On August 15, 1905 the Jesuit Father Eduardo Vitoria founded the Laboratorio Químico del Ebro in Roquetes, Tarragona, Spain. The following year the centre was moved to Barcelona, which was the core of scientific and industrial activity in Catalonia, and it was renamed Instituto Químico de Sarrià (IQS). Its first students were graduates who took three-year courses during which they spent five hours a day in the lab in order to further their knowledge in the field of chemistry.

Devoting much time to practical work in the laboratory has been a main feature of the curriculum at the IQS for more than fifty years. In 1965 the IQS was approved as a Private Technical College and in 1973 it became a Coordinated School of the Spanish Council of Scientific Research (CSIC). In 1980 the Ministry of Universities and Research authorised the IQS syllabus for Industrial Engineering specialising in Chemistry. When Ramon Llull University –Catalonia's first private university– was set up in 1991, IQS became integrated into the new university.

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### **European Federation of Biotechnology moved to Barcelona**

The European Federation of Biotechnology (EFB) has established its permanent Central Office (ECO) in Barcelona. The EFB, founded in 1978, aims at promoting

safe and ethically acceptable biotechnology for the better use of Nature's resources. It also wishes to expand collaborations between academic and industrial researchers throughout Europe to increase competencies, strengthen education, promote innovation and increase the benefits of biotechnological research to society at large. EFB holds a biennial European Congress on Biotechnology that gathers around a thousand people.

A Committee of the EFB Executive Board evaluated four bids received and recommended the proposal received from Barcelona BioRegion and the Spanish Society for Biotechnology to locate ECO at the premises of the Catalan Foundation for Research and Innovation in Barcelona. The EFB Executive Board accepted unanimously the recommendation, and the ECO was opened with generous financial support from the Barcelona Bioregion.

The EFB is open to universities, scientific institutes, companies, National Bioindustry Associations (institutional members) and personal members. While there is a modest membership fee for institutional members, personal EFB membership is free of charge. More than 3000 scientists and students throughout Europe currently participate in EFB's Sections according to their special topical interests (personal members have to join one or more EFB Section/s). The EFB has good contacts with the European Commission's Research Directorate-General.

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### **The wine tastes of Tutankhamun studied by University of Barcelona researchers**

A research team of the University of

Barcelona led by Rosa Maria Lamuela carried out a study on the red grape origin of ancient Egyptian archaeological residues. Since the Early Dynastic period (2920–2575 BC) wine jars were placed in tombs as funerary meals. Egyptian New Kingdom (1550–1070 BC) wine jars were labelled with product, year source, and even the name of vine grower. However, there was no mention of the kind of wine they contained. Lamuela and co-workers have developed a sensitive and highly specific method for identification of wine markers that might be present just in trace amounts. Such a method combines liquid chromatography with mass spectrometry in tandem mode (LC/MS/MS) plus alkaline fusion. LC/MS/MS is a very sensitive and highly specific analytical method that allowed detecting tartaric acid at trace levels. Alkaline fusion was carried out to identify syringic acid derived from malvidin as a red wine marker in a deposit residue from a wine jar found at the tomb of Tutankhamun. Not only did the authors identify the presence of wine in jar residues from that tomb, but they also found out the red grape origin of the wine.

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### **Joan Massagué and co-workers identify genes for the spread of breast cancer to the lungs**

In the July 28, 2005 issue of *Nature*, Joan Massagué and co-workers at the Memorial Sloan-Kettering Center in New York published the results of a new finding on breast cancer. They have identified a set of genes responsible for spreading the tumour to the lungs. By identifying such genes it is also possible to know how virulent the cancer will become. In 2003, Massagué's team had identified, also in breast cancer cells, another set of genes responsible for metastasis to bone. Both sets have only six genes in common. The latest work shows that the ability of a tumour to form metastases depends on the combined action of multiple genes, and that different sets of genes lead the spread to

different organs, contrary to the traditional assumption that there were no genes that govern metastases to specific organs.

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### **James Watson, Doctor Honoris Causa by the Autonomous University of Barcelona**

On May 24, 2005 the Autonomous University of Barcelona conferred the academic title of Doctor *Honoris Causa* to James Watson, co-discoverer of the structure of DNA in 1953 –he was a 24-year old researcher– and awarded with 1962 Nobel Prize in Physiology or Medicine, which he shared with Francis Crick and Maurice Wilkins.

In his doctoral address, Watson defended therapeutic clonation and stated his opinion that both governments and churches must be away and out from genetics, because only the mother can set the limits to the manipulation of embryonic genes. Watson reminded that the role of research is to “cure diseases”; therefore, the fear of non quantified dangers cannot delay experiments that might bring benefits to humankind.

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### **Paul Dayton awarded the First Ramon Margalef Prize in Ecology and Environmental Sciences**

The USA-born professor and researcher in ecology Paul Dayton was awarded the First Ramon Margalef Prize in Ecology and Environmental Sciences. Dayton works at the Scripps Institution of Oceanography, in the University of California, San Diego. The Autonomous Government of Catalonia decided to honour the memory of Ramon Margalef (1919-2004, see biography and bibliography on p. 297 this issue) by establish-

ing an international prize under his name. The Ramon Margalef Prize in Ecology and Environmental Sciences, worth 100.000 €, is the most important prize awarded by this institution, aiming at recognizing those persons from different places in the world distinguished in the field of ecology or the environmental sciences.

Dayton is a pioneer in population and community ecology among aquatic, marine and terrestrial researchers. His work on coastal, estuarine and Antarctic habitats, carried out over his 35-year career at Scripps, has been recognized worldwide. He has contributed to solving environmental problems and has stressed the need to manage marine resources from a sustainable point of view. In addition to being an outstanding ecologist, Dayton has trained many generations of scientists to whom he has conveyed the value of natural history and field studies, the importance of historical literature, the awareness of the vulnerability and fragility of coastal ecosystems, and the significance of working for the benefit of Nature.

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### **Pedro Alonso, from the University of Barcelona, selected a solidarity hero by *Time* magazine**

*Time* magazine devoted its cover story of the November 7, 2005 issue to the fight against diseases that affect developing countries. The magazine highlighted the work carried out by 18 “solidarity heroes”, as *Time* called a group made up of physicians, researchers, and non-governmental organizations. Among these heroes is Pedro Alonso, director of the International Health Center of the *Hospital Clinic* of the University of Barcelona and the International Preventive Treatment of Infants (IPTI, see CONTRIBUTIONS TO SCIENCE [2005] 3:111–112). Alonso leads a research team that has focused its work on the development of a vaccine against malaria, a disease that annually kills 1.5–2.7 million people worldwide. Expectations regarding the candidate vaccine

currently being tested (RTS.S/AS02A) are quite high. A follow-up of 1442 children who were inoculated in 2003 has shown that the vaccine has retained its efficiency over a 1.5-year period. The RTS.S/AS02A vaccine reduced clinical malaria in 35% of vaccinated individuals, and the severe malaria in 49%. These results, published recently in *The Lancet* and presented at the Multilateral Initiative on Malaria's Pan-African Malaria Conference, held in Yaounde, Cameroon, in November 2005, are very promising. The vaccination project is a joint venture of the International Health Center in Barcelona, GlaxoSmithKline (GSK) Biologicals, and the Center for Health Research in Manhica, Mozambique, and has received funds from the Bill & Melinda Gates Foundation.