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Newsletter

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Galileo should be financed through EU budget, says European Commission

The European Commission has recommended that the European Community (EC) take complete responsibility for funding the deployment of Galileo, Europe's satellite navigation system, warning of the consequences of shelving the project.

Galileo is a joint EU-European Space Agency (ESA) initiative, and was to be financed through a public-private partnership (PPP). It will see a network of 30 Galileo satellites beaming radio signals to receivers on the ground, enabling users to pinpoint exact locations.

Unfortunately the companies within the Galileo consortium were unable to agree on how to share the financial risks involved in the project, and so this method of financing the deployment phase was abandoned. Since the early summer of 2007, the Commission has been looking into alternative funding scenarios, which it presents in the Communication *Progressing Galileo: re-profiling the European GNSS programmes* (GNSS: Global navigation satellite system).

The Commission, European Parliament (EP) and Council of the EU have rejected the occasional call for the project to be written off on account of its inherent costs.

'Failing to take the appropriate decisions on a European GNSS programme, Europe would decide to rely for the mid to long term on foreign GNSS signals with little to no control over quality, availability or price of the latter. In addition, the ensuing loss of resident European expertise on GNSS would be coupled with a major loss



Jacques Barrot

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Published by:

Office for Official Publications
of the European Communities
2, rue Mercier

L-2985 Luxembourg
Fax (352) 29 29-44090

E-mail:
cordis-focus@publications.europa.eu

CORDIS: Community Research
and Development Information Service

CORDIS *focus* is also available at:
<http://cordis.europa.eu/news/focus>

Based on information from CORDIS
News available on the Web at:
<http://cordis.europa.eu/news>

CORDIS *focus* is published by the Office
for Official Publications of the European
Communities as part of the EU-funded
research programmes. It presents the
most important developments in European
research and covers news, calls for proposals,
events, projects and their results.

Subscriptions and orders

CORDIS *focus*

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50th Anniversary of the Treaty of Rome
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continued from page 1 **'Galileo should be financed through EU budget, says European Commission'**

of macroeconomic opportunities for Euro-
pean manufacturing and service companies,'
reads the Commission communication.

Jacques Barrot, European Commission Vice
President in charge of Transport, reinforced
this view as he presented the communica-
tion. 'I am still convinced that Europe needs
Galileo,' he said.

The Commission suggests that the EUR
3.4 billion that is needed to get Galileo up
and running could come from EC funds, the
ESA, or EU Member States. The first option
is favoured by the Commission.

The ESA is already financing half of the
development phase of Galileo. This model
could in theory be extended to the deploy-
ment phase, but the Commission finds three
problems with this scenario.

- Not all of the EU Member States are members of the ESA, and not all of its members are EU Member States. This raises the issue of material and immaterial property rights in relation to Galileo.
- ESA financing would conflict with the Community character of the programme as the Budgetary Authority exercises no control over the part financed directly by ESA member countries.
- Cofinancing has an impact on the public governance of the programme.

The funding could also come in the form
of direct contributions from the EU Mem-
ber States. These contributions could not be
received in the form of loans however, as the
EC is not allowed to borrow. 'The possibility
of setting up such contributions needs to be
studied in much detail as no easy transfera-
ble precedent exists,' says the Commission.

The document goes on to state that 'for
legal, institutional and programmatic

reasons, the Commission considers that
only the European Union, as owner of
the system, should provide the additional
financial resources.'

If these additional resources are however
to come from the EC budget, the multi-
annual financial framework must first be
revised. A proposal on how this should be
done therefore accompanies the Galileo
communication.

The interinstitutional agreement on budget-
ary discipline is designed so that additional
money can be sought when 'unforeseen cir-
cumstances' arise. The failure of the nego-
tiations on the concession contract within
the private consortium constitutes such an
unforeseen circumstance.

The two proposals, on the financing of
Galileo and the renegotiation of the
multiannual financial framework, will

The [European] Commission suggests that the EUR 3.4 billion that is needed to get Galileo up and running could come from EC funds, the ESA, or EU Member States.'

now be passed to the EP and ministers,
who should reach a decision on funding
before the end of 2007.

Based on a communication from the
European Commission, COM(2007) 534 final.
For further information, please visit:
[http://ec.europa.eu/dgs/energy_transport/
galileo/documents/official_en.htm](http://ec.europa.eu/dgs/energy_transport/galileo/documents/official_en.htm)
RCN: 28374

Frequent acronyms

CIP	competitiveness and innovation framework programme
CORDIS	Community Research and Development Information Service
EP	European Parliament
ERA	European research area
ERC	European Research Council
FP5/6/7	Fifth/Sixth/Seventh Framework Programme of the European Community for research, technological development and demonstration activities
ICT	information and communication technology
IP	integrated project
MEP	Member of the European Parliament
R & D	research and development
SME	small and medium-sized enterprise

EP calls for better funding of renewable energy research

A greater portion of the EU budget should go into renewable energy research, the EP says in a report on a roadmap for renewable energy adopted on 25 September 2007. The EU's research and technology programmes should also be used to a greater extent for the development of renewable energies, says the report.

Members of the European Parliament (MEPs) suggest that revenues generated from the 'Emission trading scheme' (ETS) should be invested in research in this area. They were particularly keen on new sources of renewable energies, such as osmosis, tidal and wave energy, concentrated solar power, high-altitude wind power ('laddermill' energy) and algae fuel technology.

Regional and local authorities, as well as non-governmental organisations (NGOs), should make use of funding under the Seventh Framework Programme (FP7) and the Structural Funds (SF), the EP urges, as this will stimulate research, promote renewable energy technologies and the development of new modes of energy transport and storage.

The EP also sees great potential in offshore wind energy, which could make a significant contribution to Europe's independence from energy imports. However, enormous efforts are still needed to develop its full potential. In order to achieve this, the EP calls on the European Commission to draw up an offshore wind energy action plan — a demand welcomed by the European wind energy industry.

It is thanks to their investment in research that EU industries in the renewable energy sector are global market leaders, MEPs point out. As a result, these industries make an important contribution to job creation and EU competitiveness, objectives set out in the Lisbon strategy.

But further investment will be required in order to meet the target of generating 20 % of total energy consumed in the EU from renewable sources by 2020. The target was set by the Spring European Council earlier in 2007. 'This new renewable plan will demand a huge investment, the biggest investment ever in the history of the EU, and the Commission thinks that 500 000 new jobs will be created,' says Danish MEP Britta Thomsen, who drafted the EP's report on the roadmap. 'Of course, this investment will be a booster for research and innovation within the whole energy sector.'

The report, adopted during the Strasbourg plenary session of the EP, is an own-initiative, non-binding report. A new legislative proposal from the Commission is anticipated for December 2007.

Based on an EP report.
For further information, please visit:
<http://www.europarl.europa.eu>
RCN: 28409



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Eurodac database important part of common asylum system, says Frattini

The European Commission has released new figures showing how biometric technology is helping EU Member States to manage immigration. In 2006 alone, the EU-wide biometric database Eurodac processed over 270 000 sets of fingerprints. In the framework of the 'Common European asylum system', it stores and compares fingerprints of asylum seekers and illegal entrants.

Eurodac's main purpose, however, is not to identify the individual but to help determine which EU Member State is responsible for examining an asylum application in accordance with the Dublin regulation. According to the regulation, asylum requests are the responsibility of the EU Member State that permitted the applicant to enter or reside. In addition, the system is designed to detect multiple applications in the same or in several EU Member States.

'Eurodac is an essential part of the EU's "Common European asylum system"', said Franco Frattini, European Commission Vice President responsible for Justice, Freedom and Security. 'The report shows the effective contribution of this EU-wide finger-

print database in managing asylum applications, helping establish which Member State should examine each of them through the comparison of fingerprints of asylum seekers and illegal entrants and preventing "asylum shopping".

The system stores the fingerprints of anyone over the age of 14 who applies for asylum in one of the participating countries. Yet, for reasons of data protection, it does not contain any further details of the person, not even the name. The database relies exclusively on biometric comparison.

Eurodac has been up and running since the beginning of 2003. It is the first common automated fingerprint identification system

within the EU. The database is operated by the Commission on behalf of the participating states, which include the EU Member States as well as Iceland and Norway.

Based on information from the European Commission.
For further information, please visit:
http://ec.europa.eu/justice_home/fsj/asylum/identification/fsj_asylum_identification_en.htm
RCN: 28380



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European Commission launches new e-skills initiative

The European Commission has proposed a series of actions to boost the e-skills of Europeans. According to recent reports, Europe is likely to face a growing e-skills shortage in coming years. Nevertheless, these skills are vital if the EU is to boost innovation and respond to global challenges.

'The availability of e-skills is a key condition for successful innovation and for the competitiveness of European enterprises,' commented Günter Verheugen, European Commission Vice President in charge of Enterprise and Industry. 'We cannot afford to delay and we will only succeed if all partners join their forces.'

'Shortfalls of qualified ICT [information and communication technology] practitioners slow down new ICT applications in the economy and draw away billions of euros of investment funds to dynamic emerging

economies, where hundreds of thousands of new engineers are qualifying each year,' added Viviane Reding, EU Information Society and Media Commissioner.

In its communication, the Commission sets out five areas for action at the EU level: raising awareness; developing supporting actions and tools; fostering employability and social inclusion; promoting better and greater use of e-learning; and promoting long-term cooperation and monitoring progress.

Many of the actions will be carried out within the framework of existing policies and programmes, such as FP7.

Under the 'Awareness raising' action, the Commission pledges to encourage the exchange of information and best practice between EU Member States on ways to promote science, maths and ICT, create career profiles and perspectives, and address gender issues in technical and scientific areas.



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The 'Supporting actions and tools' section covers the development of a European e-competence framework and a European e-skills and career portal, amongst others.

Under the 'Employability and social inclusion' action, the Commission sets out its plans to launch an e-inclusion initiative with a view to halving the digital divide, while the 'e-learning' action will promote the development of courses and mechanisms facilitating the exchange of e-skills training resources.

Finally, the 'Cooperation and monitoring' action calls for an ongoing dialogue with EU Member States and stakeholders on the issues addressed in the communication.

The Commission plans to start working on these action lines by the end of 2007, with a view to achieving full implementation by 2010. During 2008, a major conference will be held to report on progress and discuss the way forward.

'Knowledge, skills and competences are the main capital of European citizens and e-skills are a key competence in the context of lifelong learning,' said EU Education, Training, Culture and Youth Commissioner Ján Figel. 'ICT has the potential to enable innovation and lifelong learning for all. We must ensure that this becomes a reality.'

Based on information from the European Commission.
For further information, please visit:
<http://ec.europa.eu/enterprise/ict/policy/ict-skills.htm>
RCN: 28316



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European Science Foundation and Eurohorcs set out plans for a successful ERA

The European Commission's Green Paper on the European research area (ERA) is a 'good start', but overlooks many important players and so misses important opportunities, according to the European Science Foundation (ESF) and the European Heads of Research Councils (Eurohorcs).

The two organisations drew up their opinion on the Green Paper in response to EU Science and Research Commissioner Janez Potočnik's call for public comments on the proposals.

'The Commission's analysis of the strengths and weaknesses of the European research system (ERS) concentrates too much on the perspective of the Commission's role and on that of governments and intergovernmental structures,' commented Dr John Marks, Chief Executive of the ESF.

According to the organisations, the paper fails to take fully into account the role of other stakeholders, such as the national

research funding organisations, as well as other European bodies, the private sector and non-European research systems.

The ESF and Eurohorcs believe the EU should put more money into basic research, through such instruments as the European Research Council (ERC), and reduce bureaucracy if it wishes to promote competition and boost the quality of research undertaken. Furthermore, EU Member States need to play a greater role in reducing fragmentation by working together to develop common strategies and policies.

'The national players, including research funders and research performers on the one



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hand and governments on the other, have to implement a common strategy to increase their efforts to remove the institutional barriers such as the shortage of human and monetary resources, to adopt common peer review systems, to implement jointly funded schemes and ease the sharing of research infrastructure,' said Professor Pär Omling, President of Eurohorcs.

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EU-funded flu vaccine shows promise in trials

A new flu vaccine developed by EU-funded researchers has shown promise in clinical trials, according to the European Commission, which has also released details of the first flu-related projects to receive funding under FP7.

The RD-3 vaccine is an outcome of the 'Flupan — Preparing for an influenza pandemic' project, which was funded under the Fifth Framework Programme's (FP5's) 'Quality of life' thematic programme. The project partners embarked on a safety/efficacy phase I clinical trial involving 60 volunteers at the end of 2006.

Early results show that the drug is safe and does not cause serious side effects in healthy people. Furthermore, when a special substance was added to the vaccine to make it more powerful, the volunteers' immune systems responded accordingly.

The vaccine was designed to protect against the H7N1 strain of the disease. Although the focus is currently on the H5N1 subtype, the researchers believe that H7 strains of the disease also have the potential to cause a full-blown pandemic. H7N1 was behind a lethal outbreak of influenza among Italian poultry in 1999, and in 2003 an outbreak of the related H7N7 strain in the Netherlands saw 80 people become infected. One person died of the disease.

Producing the H7N1 vaccine was no easy task for the project team; due to its highly virulent nature, H7N1 cannot be manufac-

ured in the same way as standard influenza vaccines. Instead the researchers used a technique called 'reverse genetics' to alter the H7 protein and so make the virus safe.

The process also modified the virus so that it could be grown in mammalian cell lines as well as the more commonly used poultry eggs. Using a mammalian host for the virus makes large scale vaccine production both easier and safer.

According to the project partners, the tools developed during the project can be adapted to other strains of the disease, including H5N1, relatively easily, thereby increasing Europe's pandemic preparedness.

'By working together we can achieve so much,' commented EU Science and Research Commissioner Janez Potočnik. 'This project is just one example of how a European cooperation can lead to concrete results in areas that really matter to Europeans.'

The Commission's commitment to influenza research was further underlined with the announcement of the first projects in the field to be funded under FP7. Of 44 influenza-related project proposals received by the Commission, 11 have been preselected for funding. The projects selected are set to receive some EUR 27 million between them, and they address issues such as diagnostics, drug and vaccine development and capacity building.

Among the projects is the 'AsiaFluCap' initiative, which aims to help the health systems in Asian countries improve their operational planning so that they can cope better with an influenza pandemic. Meanwhile the goal of the 'Nasal pandemic influenza vaccine' (Naspanvac) project is to develop a user-friendly, intranasally delivered vaccine against the highly pathogenic H5 and H7 strains of the disease. The researchers hope that by avoiding the need for injections, their vaccine will be suitable for rapid mass vaccination programmes.

Early diagnosis is vital to successful treatment and pandemic control. The Fluarray project will develop powerful yet simple and affordable tools which will be able to test for a large number of different influenza types. This will give small laboratories or veterinary clinics the means to carry out diagnostic tests which are currently only possible in major research institutions.

In the coming weeks, the Commission will enter into contract negotiations with the partners of the selected projects. This latest round of projects brings total Commission funding for influenza research to over EUR 90 million since 2001.

Based on a press release from the European Commission, IP/07/1298, and MEMO/07/348.
For further information, please visit:
<http://www.nibsc.ac.uk/spotlight/fluplan>
http://cordis.europa.eu/fp7/cooperation/health_en.html
RCN: 28328



This project is just one example of how a European cooperation can lead to concrete results in areas that really matter to Europeans.

tured in the same way as standard influenza vaccines. Instead the researchers used a technique called 'reverse genetics' to alter the H7 protein and so make the virus safe.

 <http://cordis.europa.eu>

continued from page 4 **'European Science Foundation and Eurohorcs set out plans for a successful ERA'**

The organisations set out 11 activities and measures which they believe will strengthen the ERA. Many of these are designed to boost researcher mobility, such as the call for more 'Money follows researcher' schemes and giving foreign EU researchers the chance to apply for funding from other countries.

Young researchers are also covered in the recommendations, with boosting the standards

of PhD training programmes and providing better career path options for young scientists both included in the list. 'Both the Commission and the national institutions have to strongly increase their efforts to attract more young people into science and research and to keep them in the system,' the organisations write.

The organisations also highlight the importance of global research, with one of their pri-

orities being to develop and foster cooperation schemes which go 'beyond the borders of the ERA towards a Global research area (Glorea)'.
Based on information from the ESF. For further information, please visit:
<http://www.esf.org>
<http://www.eurohorcs.org>
RCN: 28308

EU Commissioner urges universities to embrace modernisation

EU Science and Research Commissioner Janez Potočnik claimed that Europe is at a pivotal point in its history as he encouraged universities to modernise and repeated warnings of increasing competition from Asia and South America.

The Commissioner was speaking to an audience at Warwick University, United Kingdom, on 20 September 2007, where he himself had applied to during his student days.

'I believe that we are standing at a point in Europe's history which could be as important as its reconstruction after the Second World War. Then the priority was peace, following the mass destruction of European society. Today, the priority is prosperity, with the mass construction of Europe's knowledge society,' said Mr Potočnik. In post-war Europe, reconstruction depended on trade in coal and steel, while today these resources have been replaced by knowledge.

The Commissioner drew a further parallel: during the post-war period, the focus was on securing freedom. The EU has since established what has come to be known as the 'four freedoms': in labour, goods, capital and services. 'Now it is time for a fifth: the freedom of knowledge,' said Mr Potočnik.

Central to the Commissioner's vision of freedom of knowledge is the ERA, and key to the success of the ERA are universities. However, if universities are to contribute to the creation of the ERA, as well as the knowledge society necessary to compete with emerging economies in the Far East, they must embrace modernisation.

'While the public mission and overall social and cultural remit of European universities and their commitment to basic science must be preserved, the demands of a modern globalised world mean that they

increasingly need to become significant players in the economy, able to respond better and faster to the demands of the market and to develop partnerships which harness scientific and technological knowledge,' said Mr Potočnik.

He suggested that the future for universities lies in seizing the opportunities offered by new developments in existing fields, as well as by new, emerging lines of scientific inquiry. 'This could mean focusing less on scientific disciplines and more on research domains such as green energy or nanotechnology, associating them more closely with related or complementary fields,' Mr Potočnik suggested. These complementary fields could include

the humanities, social sciences, and entrepreneurial and managerial skills.

The Commissioner closed by first looking back at the contributions to science by great inventors from history, and then looking to the future. The world has moved on from an age when a single genius working in relative isolation could start a revolution, he said. 'Today, more than ever, science requires

'In post-war Europe, reconstruction depended on trade in coal and steel, while today these resources have been replaced by knowledge.'

a collective effort of the best minds. In Europe, we have an enormous potential to take advantage of this change.'

Based on a speech by Janez Potočnik.
RCN: 28382



Janez Potočnik

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European Commission launches High Level Group on the Competitiveness of the European Chemicals Industry

The European Commission has launched a High Level Group on the Competitiveness of the European Chemicals Industry, in a bid to guarantee the future health of a sector representing 5 % of Europe's GDP.

Following the recent adoption of new EU health and safety legislation for the sector, known as 'REACH', high-level stakeholders from the chemicals industry met in Brussels, Belgium, for the first in a series

of meetings aimed at enhancing the competitiveness of the sector.

According to the Chair of the group, European Commission Vice President Günter

Verheugen, 'the EU chemicals industry is a world leader today and makes an enormous contribution to growth and jobs in Europe. However, there are clear signs that it is facing unprecedented challenges both from the effects of global change and the expectations of our citizens. With this initiative, we aim to ensure the right framework conditions for the chemicals industry to continue operating and investing in the EU on a sustainable basis.'

continued on page 7

Winners of EU contest for young scientists announced

Sparkling water droplets, perfumed plants and data encryption are the topics of the winning entries in the EU's 19th 'Young scientists contest'. The three winning teams each received prizes of EUR 5 000 from José Manuel Silva Rodríguez, Director-General of the European Commission's Research DG.

The contest is part of the EU's 'Science in society' programme, and was set up with the aim of encouraging young people to pursue their interest in science and embark on scientific careers. This year's competition, which was held in Valencia, Spain, attracted 81 entries from 30 countries from across Europe, as well as China and the United States. All the teams participating in the contest had already won a national science competition.

Aged between 14 and 20, the young scientists covered a wide range of disciplines, including astronomy, earth sciences, biology and social sciences. The entries were judged by an international panel of 15 experts.

'If there are two crucial elements of Europe's future, it's our young people and our research ability,' said Janez Potočnik, EU Science and Research Commissioner. 'So it's very heartening to see the interest from around the world in this contest for young scientists, as well as the many innovative ideas on display. I hope that your success in being selected for this contest will encourage you to continue on your journey of invention and discovery.'

Winners Florian Ostermaier (19) and Henrike Wilms (20) of Germany first became interested in the properties of water droplets during a trip to a cave. They noticed that every time a drop fell from a stalactite, it appeared to flash at a certain height. Experiments with a dripping tap revealed the conditions under which these flashes occur.

'In addition to that we succeeded in describing the phenomenon mathematically and we know now that the light reflections within a

falling droplet change because the droplet itself oscillates,' they write in their entry. The budding physicists note that the phenomenon can be observed wherever a drop detaches itself from a surface, including in the shower or from a gutter.

Another winner was Márton Spohn (18) from Hungary, who studied plants that defend themselves from pests by emitting a scent which attracts the natural predators of the pest. 'This phenomenon was studied by biologists and chemists, but a contradiction remained unnoticed: chemicals that are held responsible directly for this effect cannot evaporate,' Mr Spohn writes in his entry.

Experiments with plant extracts revealed how these chemicals are turned into compounds which can evaporate and waft through the air to attract the pests' predators. Mr Spohn hopes his work will lead to the development of more environmentally friendly pesticides.

The third winner of a top prize was Abdusalam Abubakar (16) from Ireland. His project involved RSA encryption, which uses a public and private key to encrypt data sent over the internet, for example. Mr Abubakar built on previous work by other scientists to show when an encrypted message could, in theory, be attacked.

In addition to a top prize in the general contest, the German and Hungar-

ian winners were each awarded a 'Stockholm international youth science seminar' honorary award, which involves a trip to Stockholm, Sweden, to attend the Nobel

'If there are two crucial elements of Europe's future, it's our young people and our research ability.'

prize ceremonies and meet the Nobel laureates. Mr Abubakar topped up his first prize with a 'London international youth science forum' award, which will give him the chance to take part in a two-week intensive summer science festival and meet other young scientists from around the world.

The outlook for the three winning teams is good, according to the European Commission. Previous participants have gone on to achieve major scientific breakthroughs and many have successfully marketed the ideas developed for the contest.

Based on a press release from the European Commission, IP/07/1348.
For further information, please visit:
<http://ec.europa.eu/research/youngscientists/index2.htm>
RCN: 28366



First-prize winners Abdusalam Abubakar, Florian Ostermaier, Márton Spohn and Henrike Wilms

 <http://cordis.europa.eu>

continued from page 6 **'European Commission launches High Level Group on the Competitiveness of the European Chemicals Industry'**

The new initiative will have three goals. The first is to strengthen the competitiveness of the sector by examining how to continue to attract investment to Europe, so as to maintain current high levels of employment in the sector.

The second goal is to find ways to raise the public profile of the chemicals sector. According to the Commission, despite its significant contribution to the daily lives of citizens through both traditional sec-

tors (such as agriculture, construction and textiles) and high-tech industries (such as automobiles, modern healthcare and electronics), society still views the industry in a negative light.

Finally, the group will look at adapting the energy-intensive sector to the challenges posed by climate change, whilst simultaneously seeking to take advantage of its potential in terms of developing energy-saving technologies, such as biofuels.

The group is also expected to formulate a set of sector-specific policy recommendations by spring 2009.

Based on a press release from the European Commission, IP/07/1293.
For further information, please visit:
http://ec.europa.eu/enterprise/chemicals/hlg/index_en.htm
RCN: 28325

EU launches 'Sustainable nuclear energy technology platform'

Nuclear energy has won a place in the EU's low-carbon energy mix following the launch of a new forum for nuclear energy research by the European Commission and the Commissariat à l'énergie atomique (CEA, the French atomic energy commission).

The 'Sustainable nuclear energy technology platform' (SNE-TP) will bring together researchers and industry to define a strategic research agenda (SRA) and deployment strategy, with the goal of maintaining European leadership in this vital sector.

Europe currently has the largest nuclear industry in the world, with one third of its electricity coming from nuclear plants. With worldwide energy consumption likely to double between 2000 and 2050, nuclear energy will remain a key element in future low-carbon energy systems.

A vision document outlining how the sector should develop in the future was unveiled at a stakeholder meeting in Brussels, Belgium,



to officially launch the new European technology platform (ETP) on 21 September 2007. The SNE-TP's main goal will be to develop a fully integrated approach to nuclear energy research within Europe.

'For those countries that choose it, nuclear power will be a very important part of their solution to security of supply and reduction of greenhouse gases,' said EU Science and Research Commissioner Janez Potočnik at the launch of the platform.

'It is clear that we need to address two important concerns — ensuring that nuclear power is economically competitive and, more importantly, our duty to make it as neutral as possible in environmental terms and in terms of the legacy we leave future generations,' Mr Potočnik added.

Research, development and innovation will be Europe's tools for addressing these concerns, said the Commissioner. Studies will address a significant reduction in nuclear waste, as well as sound ways of recycling or storing it.

The SNE-TP will bring together all nuclear energy stakeholders to implement their vision of how the sector should develop in the short, mid and long term, identifying the research needed to make that vision a reality. It will provide expert advice and recommendations to the Commission and national governments to help define and concentrate the efforts and budgets on priorities agreed at EU level.

This way, the EU hopes that it will reinforce the European scientific base, while fostering dialogue on key issues such as waste management and safety, and the protection of populations against radiological hazards. This is essential in order to reassure the public that these issues are being addressed appropriately.

One of the partners in the SNE-TP is the CEA, which has a long history of involvement

'Europe currently has the largest nuclear industry in the world, with one third of its electricity coming from nuclear plants.'

in nuclear research and is at the forefront of technological development in the field, as it works on fourth-generation nuclear reactors.

According to its Administrator-General, Alain Bugat, the CEA will have an 'open and cooperative approach' within the new platform. The idea behind the platform is that more can be achieved by cooperating than by working as individual Member States. So, the CEA is ready to share its knowledge with partners, including the results of its research into nuclear waste, as well as its infrastructures and future constructions such as the fourth-generation prototype reactors.

The platform forms part of the Commission's wider 'Strategic energy technology plan' (SET plan) to promote the EU's research and development (R & D) efforts on low-carbon technologies, due to be published at the end of 2007.

Based on a press release from the European Commission, IP/07/1370, and a CORDIS News interview. For further information, please visit: <http://www.snetp.eu> RCN: 28391

 <http://cordis.europa.eu>

International study finds new drug combination to cut deaths from diabetes

The largest ever study of treatments for diabetes has shown that a combination of two blood pressure-lowering drugs reduces the risk of death, heart attack and kidney disease in diabetes sufferers.

The 'Action in diabetes and vascular disease: Preterax and Diamicron MR controlled evaluation' (Advance) project involves 20 countries from around the world, 12 of them from the EU. The results were presented at the 'European Society of Cardiol-

ogy [ESC] congress' in Vienna, Austria, on 3 September 2007.

A total of 11 140 patients took part in trials, which lasted over four years. Half of the participants received a fixed combination of

two blood pressure-lowering drugs (perindopril and indapamide) in a single tablet, daily. The other half received a matching inactive placebo.

'These results represent an important step forward in health care for millions of people with diabetes worldwide,' said Professor Stephen MacMahon from the George Institute for International Health in Australia. 'This treatment reduced the likelihood of dying from the complications

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EU celebrates 20th anniversary of the Montreal protocol on ozone layer protection

The EU and the international community celebrated the 20th anniversary of the 'Montreal protocol on substances that deplete the ozone layer'.

Taking place in Montreal, Canada, the celebrations highlighted the achievements of the treaty, which agreed to phase out 95 % of ozone-depleting substances (ODSs) and is widely regarded as the most successful international environmental treaty.

From banning chlorofluorocarbons (CFCs) found in spray cans and refrigerators to phasing out hydrochlorofluorocarbons (HCFCs) and the pesticide methyl bromide, the EU and its Member States have played a leading role in the success of the Montreal protocol.

Going beyond its minimum requirements, the EU has been a driver for the development of innovative technologies to replace ODSs

with safer alternatives that are less harmful to human health and the ecosystem.

Despite these achievements, scientists say the ozone layer is not expected to recover until some time between 2060 and 2075, making its timely recovery heavily dependent on both agreed commitments being met and new challenges being tackled.

'The effective and united approach taken by the international community to combat ozone depletion demonstrates what can be achieved when there is the will to address environmental problems,' said EU Environment Commissioner Stavros Dimas.

'The flexibility and dynamism of the Montreal protocol has proved its worth over the past 20 years. It has made significant contributions to tackling climate change and I am confident that it will continue to evolve to face future challenges. But it is important for the international community to make a renewed effort to bring forward the

phase-out dates for HCFCs while ensuring that ozone- and climate-friendly alternatives take their place. The EU has already made

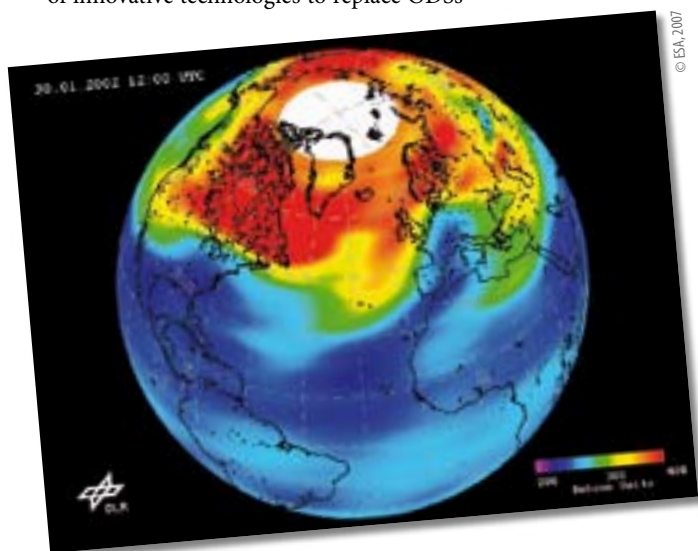
'The flexibility and dynamism of the Montreal protocol has proved its worth over the past 20 years.'

a big step in that direction and will lend its support to other parties who want to follow us,' the Commissioner added.

The conference in Canada provided a forum for the signatories of the protocol to address a number of new challenges, such as the need to decrease the number of areas where ODSs are not covered by the protocol. They also needed to find ways to prevent ODSs trapped in existing equipment and buildings from being released, as well as stopping the illegal trade in banned ODSs.

In addition to addressing these challenges, the international community will have to ensure that compliance with already existing commitments remains a priority and that the links with other international environmental agreements such as on climate change, persistent organic pollutants, waste, chemicals and plant protection are strengthened.

Based on a press release from the European Commission, IP/07/1334.
For further information, please visit:
<http://ec.europa.eu/environment/ozone>
RCN: 28351



 <http://cordis.europa.eu>

continued from page 8 **'International study finds new drug combination to cut deaths from diabetes'**

of diabetes by almost one fifth, with virtually no side effects.'

'Type 2 diabetes' is the most common form of diabetes, mostly affecting adults. Sufferers are known to be at a high risk of developing major health problems earlier in life than those without diabetes. In particular, sufferers are more likely to experience a heart attack, stroke, blindness, kidney failure and leg ulcers that can lead to amputation.

The study participants were already receiving most of the standard treatments for diabetes, including other drugs to lower blood pressure. But the precise combination used in this study resulted in a 14 % reduction in the risk of death, and an 18 % reduction in

the risk of death from cardiovascular disease. 'In absolute terms, one death would be avoided for every 79 patients treated with the fixed combination of perindopril and indapamide for five years,' said Study Director Dr Anushka Patel, also from the George Institute.

Currently around 250 million people worldwide have diabetes, and this number is growing rapidly. The majority of these people will either die or become disabled by the complications inherent in their condition.

Based on information from the ESC and the Advance project.
For further information, please visit:
<http://www.advance-trial.com>
RCN: 28281



MEPs call for end to primate experiments in the EU

The European Commission has responded to a written declaration from the EP on the use of primates in experiments by emphasising the ethical review procedures that are in place for EU-funded research, and that have already led to the rejection of research involving primates.

The declaration, signed by over 400 MEPs, urges the Commission, the Council of Ministers and the EP to use the revision of Council Directive 86/609/EEC of 24 November 1986 on the approximation of laws, regulations and administrative provisions of the Member States regarding the protection of animals used for experimental and other scientific purposes as an opportunity to:

- make ending the use of apes and wild-caught monkeys in scientific experiments an urgent priority;
- establish a timetable for replacing the use of all primates in scientific experiments with alternatives.

The Commission states that it is currently working on a revision of the directive, and adds that 'all the research activities carried out under the Framework Programme [FP7] must be carried out

in compliance with fundamental ethical principles.'

The Commission instigates an ethical review of any research proposals that raise sensitive

ethical issues. 'Research involving the use of primates is always submitted to ethical review. In fact, the one project rejected in the Sixth Framework Programme [FP6] on ethical grounds was a project that involved the use of primates. It shows that the European Commission's ethical review is capable of restricting the use of primates in research,' reads a Commission statement.

'Furthermore, the use of available alternatives is always compulsory, in conformity with the application of the "3R" principle ("reduction, refinement and replacement" of the use of animals in research) as part of the scientific and ethical review.'



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According to the EP, more than 10 000 primates are used in experiments every year in EU laboratories. However, public opinion is largely against such practices: the declaration points out that more than 80 % of those participating in a 2006 public consultation considered the use of primates in experiments as unacceptable.

The main arguments against the use of primates in experiments are:

- evidence that primates suffer immensely when in captivity;
- 26 % of primate species are in danger of extinction and wild-caught primates are still being used in laboratories;
- it will be difficult to protect primates from further threats such as human consumption if western countries are, at the same time, using these species in experiments;
- there are important differences between humans and other primates, meaning that the results of studies using primates are not always applicable to humans;
- advanced technology and techniques now offer alternative methods that are more efficient and reliable than primate experiments.

John Bowis, British MEP and cosponsor of the declaration, welcomed its adoption by the EP saying: 'Advancements in technology have provided alternative "test" methods that are proving to be more efficient and reliable than primate experiments, and ending the use of monkeys and apes in scientific trials must now be a priority.'

Fellow British MEP David Martin added: 'Primates are so close to humans in their social, mental and emotional functions that putting them through the extreme trauma of scientific testing should be unthinkable. Aside from this consideration, scientific tests on primates are often bad science, and many of the species being used are endangered in the wild.'

The Director of the Eurogroup for Animals welcomed the declaration

and urged the Commission to now put in place a strategy, as well as resources, to achieve a phase-out of experiments involving primates as a matter of urgency.

'All the research activities carried out under the Framework Programme [FP7] must be carried out in compliance with fundamental ethical principles.'

Based on a statement from the European Commission, an EP declaration and information from the Eurogroup for Animals. RCN: 28314

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Poll highlights Europeans' interest in health research

Europeans are more interested in medical and health research than in international news or economic affairs, a new Eurobarometer survey reveals.

According to the European Commission, 71 % of those polled said they were interested in medical and health research, and 60 % expressed an interest in science and technology (S & T). In comparison, international news and economic affairs were of interest to 70 and 68 % of Europeans respectively.

Interestingly, while men are more interested than women in S & T, women are more interested in medical and health research. Furthermore, young adults are more interested in S & T, but older age groups are more interested in medical and health research.

Both topics are of greater interest to people with higher levels of education as well as to people who have either suffered from a chronic or life-threatening disease themselves, or who have experienced this through a family member.

When quizzed about which aspects of health-related research were of most interest to them, 78 % of respondents mentioned the results of the research. Asked what would interest them if a major disease was being studied, 60 % mentioned new discoveries, while a third wanted to know more about how the disease spreads and its causes and treatments.

'In other words, what interests Europeans in medical and health research is above all the added value that they can obtain from such research, for example information which allows them to better protect themselves from infectious diseases,' the survey states.

Television is the leading source of information on these issues, with newspapers, radio and magazines following close behind. However, the internet is growing in importance as a source of information, especially for young Europeans.

One of the main aims of the survey was to find out how aware Europeans are of EU-funded research in the medical field. Around half of those surveyed said that they were aware that scientists could work with European colleagues on collaborative research projects, and of these, three quarters knew that the EU could help to fund such projects. In general, people who had expressed a strong interest in science were more likely to have

heard of the possibility of EU funding for collaborative research projects.

'This Eurobarometer shows the growing interest in research issues among Europeans, particularly in areas that affect them directly,' commented EU Science and Research Commissioner Janez Potočnik. 'The desire for information about health and medical research is undoubtedly linked to the ageing of the population, but it is also encouraging to see the interest among the younger generation as well for science and technology. This study highlights our responsibility to communicate the results of the research we support to the public.'

Based on a press release from the European Commission, IP/07/1341, and 'Eurobarometer' no. 265: 'Medical and health research — A special Eurobarometer public survey'. For further information, please visit: http://ec.europa.eu/public_opinion RCN: 28356



 <http://cordis.europa.eu>

EU and Russia to strengthen agro-bio-food research ties

Cooperation between the EU and Russia in agro-bio-food research has become tighter in recent years and is set to become even stronger in the near future, according to European Commission officials.

Christian Patermann, Programme Director 'Biotechnology, Agriculture and Food' at the European Commission's Research DG,

'A number of countries have now established technology platforms at a national level, but Russia is the first non-EU Member State to do so.'

attended a recent international symposium on biotechnology, agriculture, forestry and food in Russia. On his return he declared that research plays a very important role in

the European-Russian space of cooperation that is currently under development.

Mr Patermann, along with the EC-Russia Working Group on Agro-Bio-Food, gave a particularly strong welcome to Russia's first national technology platforms.

European technology platforms (ETPs) are intended to provide a framework for stakeholders led by industry, to define R & D priorities, timeframes and action plans on a number of strategically important issues. A number of countries have now established technology platforms at a national level, but Russia is the first non-EU Member State to do so.

The recent symposium also led to an agreement that from 2008, Russia and the EU will carry out coordinated, cofunded activities, particularly in the field of industrial biotechnology.

A joint communiqué from the EC-Russia Working Group on Agro-Bio-Food also supports the idea of a large, highly visible joint project that 'could have an overarching impact on EU-RF [Russian Federation] long-term relations'. The working group will now begin screening possible areas for the project, focusing in particular on the conversion of renewable resources (biomass) into high added-value products and energy.

Based on information from the European Commission, a joint EU-Russia communiqué, and a video by Christian Patermann. To watch the short video of Mr Patermann talking about this subject, please visit: http://cordis.europa.eu/fp7/kbbe/interview_en.html RCN: 28362

EURAB proposes broad approach to FP6 impact assessment

Two alternative ways in which to assess the success of European research policy and its accompanying framework programmes were proposed by the European Research Advisory Board (EURAB) at its final meeting. The alternatives involve an assessment of goal attainment, and assessing the evidence base for research policy-making.

A working group within the European Commission's Research DG is currently working on a strategy and procedure for the performance of scientific and technological project reviews and *ex post* impact assessments. Within this context, EURAB was asked to provide recommendations on *ex post* impact assessments.

The imminent end of EURAB's current term led to its decision to publish a brief opinion now, and to recommend that the topic of impact assessments be considered afresh early in the lifecycle of the new EURAB.

EURAB's paper begins by recognising the 'social and political pressures for account-

ability and value for money in the field of research spending', and then welcomes increased efforts to satisfy these demands.

The paper therefore recommends an increase in the funds allocated to *ex post* assessment, but cautions against channelling this money into the assessment of individual research projects.

Instead, 'given the intrinsic uncertainties associated with the practice of scientific research and the recognised difficulties associated with the attribution of long-term socioeconomic impacts to particular research projects, EURAB suggests

two alternative emphases, both worthy of increased support'.

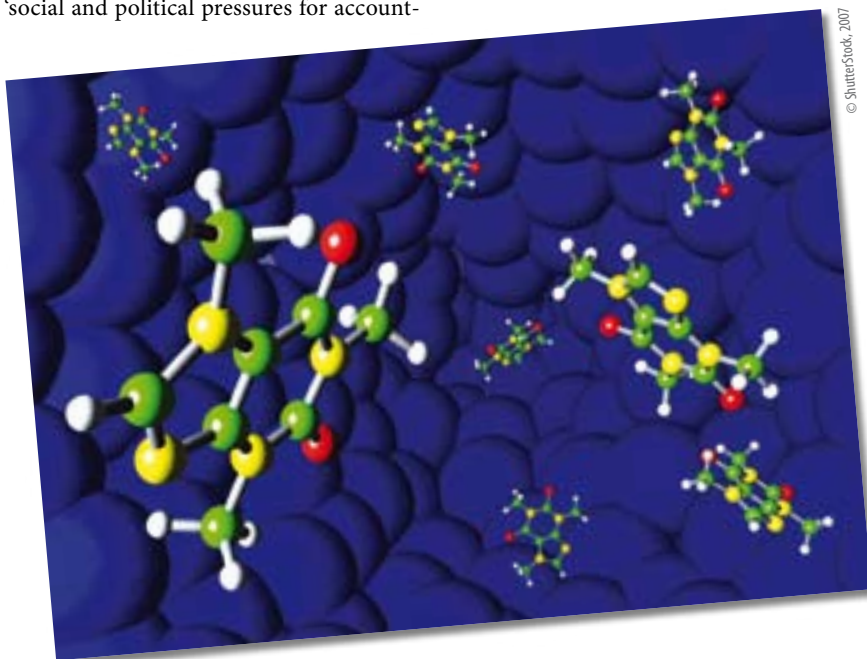
The first is an increased emphasis on the assessment of goal attainment and efficiency of implementation at project and programme levels. Within such an emphasis, particular attention should be paid to the diversity of projects funded by the EU's framework programmes, and their diverging goals. Different evaluation approaches and techniques would need to be implemented as appropriate.

EURAB states that 'customised studies focusing on goal attainment and efficiency of implementation would yield valuable lessons for the future conduct of the framework programmes and would have a greater impact on overall programme and project performance than futile efforts to link individual projects with long-term socioeconomic impacts'.

EURAB's second proposal is a move away from the evaluation of projects and programmes towards an appraisal of the processes leading up to the setting of research policy and spending. EURAB would welcome, for example, more information on the evidence base that led to the establishment of the research investment target at 3 % of GDP, as set in 2002.

EURAB concedes that such an exercise would fall outside the spheres of programme evaluation and *ex post* evaluation, but emphasises that 'any increase in funds for impact assessment would be better spent on efforts to improve the evidence base for research policy-making in general rather than on more limited *ex post* project impact assessments'.

Based on the 'EURAB Recommendations on Ex Post Impact Assessment'.
For further information, please visit:
<http://ec.europa.eu/research/eurab>
RCN: 28322



<http://cordis.europa.eu>

EU plans safer, greener and smarter cars

The European Commission has unveiled plans to speed up the development of safer, cleaner and more intelligent cars. Over the next few months, the Commission will start talks with European and Asian car manufacturers with the intention of launching automatic EU-wide emergency call technology in all new cars from 2010, as well as promoting other safe and green technologies.

To improve road safety, the Commission's new 'Intelligent car initiative' encourages stakeholders to speed up the implementation of electronic stability control (ESC) systems for middle-sized and small cars. ESC has speed sensors and separate braking for

each wheel that can keep a vehicle under control at high speeds or on slippery roads.

According to the Commission, some 4 000 lives could be saved every year and 100 000 crashes avoided if all cars had the ESC system.

'Technology can save lives, improve road transport and protect the environment,' said Viviane Reding, the EU Information Society and Media Commissioner.

'If we are serious about saving lives on European roads, then all 27 [EU] Member States should set a deadline to make eCall and electronic stability control (ESC) standard equipment in all new cars. At the same time, we need to clear administrative obstacles to innovations that will make cars safer and

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European Commission set to cut Baltic fishing quotas

The European Commission has proposed a series of cuts in the Baltic Sea's fishing quotas for 2008. The proposals are based on scientific advice issued earlier this year by the International Council for the Exploration of the Sea (ICES), as well as the opinion of the Commission's Scientific, Technical and Economic Committee on Fisheries (STECF) and input from stakeholders.

Of particular concern is the condition of the region's two cod stocks: the Commission is proposing a 23 % cut in the eastern cod fishery quota and a 33 % cut for the western stock. ICES had called for a complete closure of the eastern cod fishery and a 50 % cut in the quotas for the western fishery.

According to the Commission, a major problem in the cod fisheries is the under-reporting of catches, although control measures outlined in the multiannual plan for Baltic cod should address this issue when they are implemented by the EU Member States.

The Baltic salmon population is also in trouble, with numbers of adult fish likely to fall substantially over the coming years as juvenile salmon are currently experiencing an extremely low survival rate. With this in mind, the Commission is proposing a 15 % cut in the salmon catch, and will address the problem further in the Baltic 'Salmon action plan' (SAP), which is under revision at the moment.

One fishery which bucks this negative trend is the central herring stock, and the Commission suggests that the quota for this fishery be increased by 11 %. However, the same cannot be said for the other herring fisheries in the region, and so they too are set to see quota cuts.

In addition to reducing catches, the Commission is also keen to ensure that wider conservation rules are correctly applied. 'This is an area that needs a lot of improvement,' commented Mireille Thom, the European Commission's Spokesperson for fisheries and maritime affairs. 'The situation has been acknowledged both by the [EU] Member States and the fishing industry around the Baltic Sea, and they have committed to improving things.'

The proposals were discussed by EU fisheries ministers at their Council meeting on 22 and 23 October 2007.

Overfishing is just one of a number of threats facing the Baltic Sea. Excess nutrients from agriculture are washed into the sea where they cause eutrophication. The sea is also threatened by pollution with hazardous substances from industrial activities and transport.

Based on a press release from the European Commission, IP/07/1278. For further information, please visit: <http://ec.europa.eu/fisheries> RCN: 28289



<http://cordis.europa.eu>

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cleaner,' the Commissioner added. In 2008, the Commission will propose a plan to roll-out the most effective low carbon dioxide (CO₂) emitting technologies.

'In our fight to halve the number of road casualties by 2010, we are taking action on all fronts — safer drivers, safer infrastructure and safer vehicles. With this action on intelligent cars, the Commission is pushing to ensure that cutting-edge technology finds its way into our cars as soon as possible where it will help save lives and reduce the environmental impact of transport,' said Jacques Barrot, European Commission Vice President and EU Transport Commissioner.

As for smarter road transport, the Commission is calling on all the relevant stakeholders to develop a standard interface to connect

'Technology can save lives, improve road transport and protect the environment.'

mobile navigation devices with other systems integrated into the vehicle. The Commission will also hold a consultation on whether braking assistance and crash avoidance systems should be compulsory in all cars.

'We should fully exploit our technologies and knowledge to the benefit of our societies. We have available technologies to better assist drivers and by doing so, we will help avoiding human tragedies. Therefore I proposed to introduce mandatory electronic stability control (ESC) for new cars as of 2011, and I am now waiting for the public reaction,' added European Commission Vice President Günter Verheugen.

Based on information from the European Commission. For further information, please visit: http://ec.europa.eu/information_society/newsroom/cf/itemlongdetail.cfm?item_id=3602 RCN: 28358

First common height gene identified

For the first time, scientists have identified one of the many genes which commonly influence our height. The work, which was partly funded by the EU, is published online by the journal Nature Genetics.

It has been known for some time that around 90 % of the variation in human height is due to genetic factors, rather than environmental factors such as diet. Although scientists have discovered rare gene variants which affect height in very small numbers of people, until now the common gene variants which affect the height of the majority of the population have remained unidentified.

The scientists studied the DNA of 5 000 people, looking for tiny differences in the genetic code which appeared more often in tall people than in shorter people. This revealed that people with a certain version of a gene called 'HGMA2' were likely to be taller than people with a different version of the gene. The results were confirmed by a follow-up study of over 19 000 people.

We all have two copies of HGMA2, one from each parent. The study revealed that having two 'tall' versions of the gene adds around 1 cm to your height compared to someone with two 'short' variants. Having one copy of the 'tall' variant adds around 0.5 cm of height. According to the scientists, its effect on growth can be seen in individuals as young as seven years of age.

'Height is a typical "polygenic trait" — in other words, many genes contribute towards making us taller or shorter,' explains Dr Tim

Frayling of the Peninsula Medical School in Exeter, United Kingdom, a coleader of the research. 'Clearly our results do not explain why one person will be 6 ft 5 in. [1.96 m]

and another only 4 ft 1 in. [1.24 m]. This is just the first of many that will be found — possibly as many as several hundred.'

Around 25 % of the white European population is estimated to have two 'tall' versions of the gene, while 25 % have two 'short' versions.

Little is known about the precise role of HGMA2, but the scientists believe that it could influence height by causing increased cell production. This is of interest because tall people are at a slightly

greater risk of certain cancers, and cancers are caused by unregulated cell production.

'There appears to be a definite correlation between height and some diseases,' comments Dr Mike Weedon of the Peninsula Medical School. 'For example, there are associations between shortness and slightly increased risks of conditions such as heart disease. Similarly tall people are more at risk from certain cancers and possibly osteoporosis.'

In children, being short can sometimes indicate the presence of a serious medical condition, and height, or the lack of it, is a common reason for sending children to a specialist.

'By defining the genes that normally affect stature, we might some day be able to better reassure parents that their child's height is within the range predicted by their genes, rather than a consequence of disease,' says Dr Joel Hirschhorn of the Broad Institute in Massachusetts, United States.

Earlier in 2007, many of the researchers involved in this study revealed the discovery of the first common gene linked to obesity.

EU funding for the height gene research came from the FP6 Eurodia integrated project (IP) and the FP5 'Genome-wide analyses of European twin and population cohorts to identify genes in common diseases' (Genomeutwin) project.

Based on the article 'A common variant of HMGA2 is associated with adult and childhood height in the general population', Weedon, M. N. et al. (2007), in 'Nature Genetics', published online on 2 September 2007; the Wellcome Trust; and the Broad Institute.

For further information, please visit:
<http://www.nature.com/naturegenetics>
RCN: 28283



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The scientists studied the DNA of 5 000 people, looking for tiny differences in the genetic code which appeared more often in tall people than in shorter people.'

Project designs PC to trap hi-tech criminals

German and Swiss researchers have developed the world's fastest personal computer (PC) forensic system to copy and protect evidence in criminal cases involving computers and digital networks. The 'E! 3664 IT Forensic' project was supported by Eureka.

As the widespread use of IT has led to an increase in computer crime, so the demand from law enforcement agencies for reliable digital forensics tools to trap criminals has also risen.

Whilst traditional forensic techniques, from fingerprinting to DNA traces, have only a small role to play in fighting computer crime, digital forensics require a fast analysis and copy of computer records ranging from picture

files and database contents to file transfers and e-mails. In addition, the evidence obtained for forensic analysis must be totally credible and tamperproof to stand up in a court of law.

The project developed an all-in-one portable digital forensic PC that can read all types of memory technology and provide a mirror image of the data on any type of hard disk, sector by sector, using hardware-based

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EU project to build better ships by design

The EU-funded Improve project is developing three next-generation ship designs to keep the competitiveness of European shipbuilding afloat. As competition from the Far East intensifies, the only way for the once dominant European shipbuilding industry to survive is to build on its technological advantage and offer ships with added value.

Through the innovative use of advanced conceptual design and manufacturing techniques, the project will seek to develop concepts for small series and highly customised production environments, which will take into account important factors such as structure, production, operations, performance and safety at the preproduction stage of a ship's construction.

Operators want ships that do not require any significant repair during the designed lifetime, and this is to be achieved through improved quality and performance. The tar-

ers will be able to offer optimised generic ship designs to clients,' explains Professor Philippe Rigo, the coordinator of the project from the University of Liège, Belgium.

'As these will also factor in such design characteristics as capacity, production costs, maintenance costs, availability, safety, reliability and robustness of ship structure at the early design phase, project proposals will also have a far greater price accuracy,' he added.

The team hopes that the project's results will help the European shipbuilding industry to claw back some of the market share it has lost to its cheaper labour competitors, China and Korea.

The project, funded under FP6, involves 17 partners, including three ship owners, four universities, three shipyards, two ship design companies, two engineering companies, two software companies, a classification company and an international association of universities.

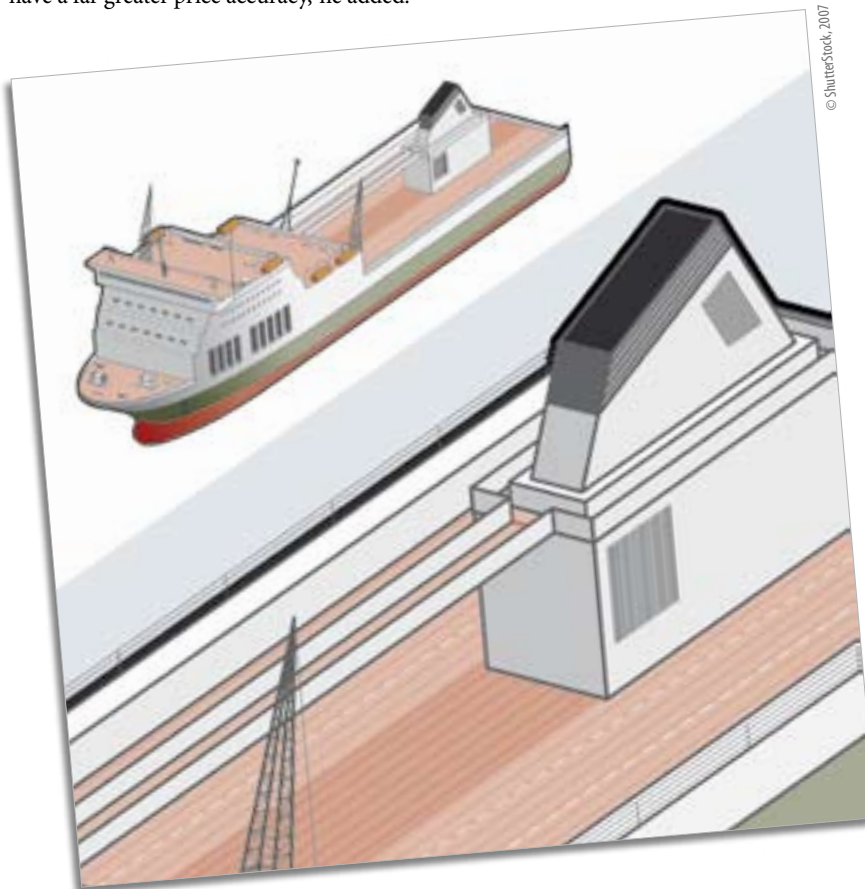
Based on an interview with the Improve project coordinator. For further information, please visit: <http://www.improve-project.eu> RCN: 28315

'Thanks to the mathematical models we are developing as part of Improve, European ship builders will be able to offer optimised generic ship designs to clients.'

gets of the Improve project include reducing manufacturing costs by 8 to 15 % and production lead times by 10 to 15 %, as well as enabling a 5 to 10 % reduction in the structural maintenance costs for ship owners.

The team's conceptual design methods will be used for developing three types of competitive, next-generation vessels, including liquefied natural gas (LNG) carriers, chemical tankers and passenger ferry ships.

'The main novelty in the project will be at the conceptual design stage. Thanks to the mathematical models we are developing as part of Improve, European ship build-



<http://cordis.europa.eu>

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writing protection to avoid any possibility of falsifying data while copying.

'We did not have all the know-how necessary in house,' explains Martin Hermann, General Director of mh SERVICE GmbH, which specialises in supplying portable PCs and forensic portable PCs in Germany and throughout Europe.

'We can now copy 10 GB [gigabytes] of secured evidence in just 5 minutes, compared with

30 to 60 minutes using alternative equipment,' adds Mr Hermann.

According to the project partners, the new instrument, dubbed 'TreCorder', is already attracting interest from security agencies, police forces, finance and tax authorities and accountancy organisations on both sides of the Atlantic.

Moreover, the new knowledge gained in the project is also being studied by the

Organisation européenne pour la recherche nucléaire (CERN, the European organisation for nuclear research) in Geneva, Switzerland, the birthplace of the worldwide web, and the National Institute of Standards and Technology (NIST), which advises government and industry on IT security in the United States.

Based on information from Eureka. For further information, please visit: <http://www.mh-service.de> RCN: 28295

New design allows for novel support stockings that are both 'loose and tight'

Loose&tight, an EU project funded under FP6, has designed and modelled a support stocking for varicose vein sufferers that significantly improves upon what is currently available. The research has already led to patent applications, and the stockings should be on the market by early 2008.

Varicose veins are one of the most prevalent chronic conditions in Europe. This makes it all the more surprising that little has been done to ease symptoms since the invention of compression hosiery in 1947. Varicose veins occur when veins become enlarged and twisted. The term commonly refers to the veins on the leg, although varicose veins can occur elsewhere.

Veins have leaflet valves to prevent blood from flowing backwards. When veins become enlarged, the leaflets of the valves no longer meet properly, and the valves no longer work. The blood collects in the veins and they enlarge.

Support stockings have been effective to an extent in preventing the worsening of varicose veins, but they are not without problems. The main wearers — the elderly — have difficulty putting the stockings on: the garment must be very narrow in order to provide genuine support, but must be pulled over the foot which is wider than the lower shin and ankle area.

The team from Loose&tight looked at the problem from a new angle. Instead of using textiles themselves to maintain the constant

'In the coming months, the Loose&tight team is also planning to extend their patents to the rest of Europe, China and Japan.'

pressure levels necessary in compression hosiery, the researchers experimented with putting super-elastic alloys within the textile structure. The experiment paid off. The team found inserting super-elastic wires bent into a certain shape into the stocking meant that it could be stretched, and then return to its original shape.

The particular shape into which the wires must be bent has presented its own problems, but the Loose&tight team has already come up with solutions.

CORDIS News spoke to project coordinator Dante Galli from the Italian engineering company D'Appolonia. He explained that making the wire into a snake shape at such small dimensions, putting a covering around

the wire and then inserting it into the textile had all presented challenges.

The wire would normally be manufactured in lengths of between 2 000 and 5 000 m. The industrialisation of the process to manufacture the wire in such a shape and such a length was the first hurdle. Two other research partners in the project, Grado Zero Espace, Italy, and the Institute of Physics at the University of Prague, Czech Republic, worked on the manufacturing process both at laboratory and at industrial scale. They came up with several different ways of manufacturing the wire, and the methods have had good results at the prototyping level.

Next, Grado Zero Espace succeeded in manufacturing several samples of the Nitinol 'snake' wire of up to 2 000 m in length. This ensured the industrial validation of the approach. 'That was a great result,' said Mr Galli.

Once the wire had been manufactured, it could not be inserted uncovered into the hosiery. But putting a covering on a wire that has been bent into a snake shape is not practical.

The answer, as Mr Galli explained, was found to be heat treatment. The team found that, by using a special shape-setting method, it was possible to obtain the required snake configuration and then to temporarily straighten it. The straight wires can thus have their covering put in place before being inserted into the stocking using a knitting machine. As the force is released, the wires return to their snake shape, giving the stockings the flexibility that is needed.

'We are exploiting the super-elasticity of the wire,' said Mr Galli. He added that this unique process could also have other applications, in situations where controlled extensibility is required, for example in technical sports clothes.

The final garment is also lighter than traditional support stockings — sufferers are currently wearing quite heavy hosiery that is uncomfortable in warm weather.

Knitting trials have already been performed by project partner TEA srl. Different

combinations of textile fibres were mixed with both super-elastic Nitinol 'naked' wires and Nitinol wires covered with complementary wires. The result? 'Very good aesthetic and comfort results, the proof of feasibility in terms of workability of the materials with standard circular knitting machines have been achieved,' according to Mr Galli.

He speaks very positively about the project. The team comprised nine partners, six of whom were small and medium-sized enterprises (SMEs). While it can sometimes be difficult to bring SMEs fully into the fold of a collaborative project, all partners in Loose&tight were very committed, and very involved. Mr Galli made sure that this would be the case by checking that all partners agreed on the direction of the project so that they would not lose interest.

The project team is currently testing the process to cover the wires, and intends to patent the method if successful. The heat

'Support stockings have been effective to an extent in preventing the worsening of varicose veins, but they are not without problems.'

treatment process is also the subject of a patent application, as is the mathematical model that can calculate what the compression level will be when details of the material used are provided. In the coming months, the Loose&tight team is also planning to extend their patents to the rest of Europe, China and Japan.

As if this were not reason enough for optimism, Mr Galli is also confident that prototypes will be in place by the end of 2007, and that the product will then be on the market by early 2008.

Before that time the model must be checked against standards, but the project coordinator is confident. The team already knows, for example, that a wearer cannot feel the metal when he or she is wearing the stockings.

The team is hoping to receive a project extension until the end of 2007 to cover the final test.

Based on a CORDIS News interview with the project coordinator.
For further information, please visit:
<http://www.dappolonia-research.com/loose&tight>
RCN: 28288

There's more to a sunflower than oil, concludes EU project

Helicas, an EU project funded under the SME strand of FP6, has found new uses for the 95 % of every sunflower discarded after the production of oil. With pressure on the industry mounting due to increased production of palm and soybean oil outside of Europe, these new applications could offer an alternative source of income.

More than 450 000 European farmers in 21 countries are cultivating sunflowers on more than 255 000 ha. Many of the companies involved in the cultivation and processing are SMEs, which are particularly vulnerable to increased competition from abroad.

The 12 partners from five EU Member States involved in the Helicas project found

new uses for sunflower biomass in cosmetics, foodstuff and animal feed. The team also found ways to produce new, more flavour-some sunflower oil.

'The petals, stalks and leaves of the plants contain numerous valuable components that can be extracted and used in cosmetics, food or animal feed. In addition, that which is left over from the oil pressing process, the sunflower seed meal, can be used as an ingredient in food. It contains valuable proteins, carbohydrates and additional bioactive substances with nutritionally beneficial qualities,' said project coordinator Dr Thomas Dietrich from ttz Bremerhaven, Germany.

The team grew different types of sunflowers in four dif-

ferent countries. The idea was to investigate several varieties, and not exclusively those used for oil production.

They found that extracts from the stalks can be used in cosmetics as they have attractive skin-smoothing and healing properties.

'The petals, stalks and leaves of the plants contain numerous valuable components that can be extracted and used in cosmetics, food or animal feed.'

Given the increasing interest in products with ingredients from nature, market potential is easy to envisage. ttz Bremerhaven also produced baking products and fish feed from sunflower meal.

These results, together with new knowledge on cultivation, yields and processing will now be used Europe-wide. 'We have attained our goal, namely of developing innovative strategies for the use of sunflower biomass,' said Dr Dietrich.

Based on information from ttz Bremerhaven. For further information, please visit: <http://www.ttz-bremerhaven.de/english> RCN: 28294



<http://cordis.europa.eu>

Scientists shed light on blood sugar regulation

Swedish scientists have shed new light on how the insulin-secreting cells of the pancreas keep our blood glucose levels stable and so prevent the development of diabetes. The work, which was partly funded by the EU, is published in the journal Cell Metabolism.

When sugar enters the blood after being absorbed from our food, it needs to get out of the bloodstream and into the muscles (where it provides energy) or the liver and fat tissue (where it is stored). If it is not removed from the blood, diabetes occurs.

The hormone that regulates this transport of sugar from our blood into other tissues is insulin, which is released by the special insulin-secreting cells in the pancreas called 'beta cells'.

The membrane of the beta cells contains channels which are able to detect the

amount of sugar in the blood and control sugar-stimulated insulin secretion. In this latest study, the researchers investigated how the beta cell keeps the right number of these channels at the cell surface to be able to respond efficiently to changes in the blood's glucose levels. This is important because the sensitivity of the cells to glucose stimulation depends on the number of these channels.

They found that glucose increases the number of these channels on the surface of the cell. The cell stores newly manufactured channels inside special structures which do

not contain insulin. When blood sugar levels rise, these structures move to the surface so that the channels can take their place in the cell membrane. In this way, the beta cells are able to respond quickly to changes in blood sugar levels, and ensure that they stay within normal limits.

EU funding for the research came from the Eurodia project, which is funded through the 'Life sciences, genomics and biotechnology for health' thematic area of FP6.

Based on information from the Karolinska Institutet and the article 'Glucose recruits KATP channels via non-insulin-containing dense-core granules', by Yang, S.-N. et al. (2007), in 'Cell Metabolism' 6, pp. 217-228. For further information, please visit: <http://ki.se> <http://www.cellmetabolism.org> RCN: 28303

EU projects changed my life, says researcher

'The adventure of working on an EU-funded project completely changed my professional life,' says Professor Jean-François Boulicaut from the Instituts nationaux des sciences appliquées (INSA, the national institutes for applied sciences) in Lyon, France.

'If I hadn't had the idea to set up the project, with very good partners, then I could not have developed the theme and I would not be where I am today, doing what I am doing,' he told CORDIS News. The theme in question is 'data mining' (the science of extracting useful information from large data sets or databases). Where he is today is to be a well-respected member of the international 'data mining' community.

It was on his return from a sabbatical year, working with one of the best teams in the world at the University of Helsinki in Finland, that Professor Boulicaut just knew he wanted to pursue his new-found interest in the subject.

In 1998, the professor decided to submit a project proposal under the 'Future and emerg-

ing technologies' (FET) section of the 'Information society technologies' (IST) strand of FP5. The 'Consortium on discovering knowledge with inductive queries' (cInQ) project gave him the opportunity to rub shoulders with Professor Heikki Mannila, one of the pioneers in the field of data mining.

Between 2001 and 2004, Professor Boulicaut led the project, working on the concept of inductive queries which use data mining as a sophisticated tool for database queries to identify meaningful data or patterns. Although the science is often used by business intelligence organisations and financial analysts, the professor decided early on that he wanted to apply data mining algorithms to the plethora of biomedical data, and especially gene expression data.

As the cInQ project progressed, the researchers became pioneers in developing algorithms that can quickly calculate actionable patterns from huge databases.

His second and current project, 'Inductive queries for mining patterns and models project' (IQ), funded under the IST/FET part of FP6, began in 2005 with the goal of further developing the framework of inductive querying that will enable the development of effective inductive database systems. Targeted applications in bio-

'I would like to see a kind of intermediary vision where not only the handful of potential Nobel prize winners receive funding under the terms of excellent research.'

informatics have been selected to demonstrate the applicability of the algorithmic results.

Working on two EU-funded projects has proven to be a career enhancing, if not always an easy experience for the researcher. 'On the one hand, I have had the great opportunity of cooperating with the best teams in the field of data mining in Europe, which has tremendous value in my eyes. On the other hand, I would say that the administrative obligations of setting up an EU-funded project are much too heavy and time consuming,' Professor Boulicaut says, adding that the situation is however improving.

Professor Boulicaut compares the administrative burden of an EU-funded project with a project funded by the Agence nationale de la recherche (ANR, the French national research agency), and claims that there is no 'common measure' in terms of submitting a project, the obligatory follow-up and the sums of money involved. 'This puts a serious brake on researchers who want to set up an EU-funded project,' he believes.

However, according to the professor, processes are improving as more and more support and help are being offered to researchers to guide them as they submit a project proposal. He also points to the added value of working in a network of great researchers and the international visibility of EU-funded research projects as reasons for getting involved in a second European project.



Professor Jean-François Boulicaut

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'It was my first European project that allowed me to undertake quality research, helped by my partners in the project, who were already well known and established in the data mining world,' says Professor Boulicaut. 'Thanks to this first experience, I immediately became quite well known in the field of data mining at the European level and the project emerged very quickly onto the European scene.'

Professor Boulicaut is nothing but encouraging towards future generations of researchers interested in working on EU-funded projects. If it changed his professional life for the better, then it is safe to say it could change any young, up and coming researcher's life, he says. If the proof of the pudding is in the eating, the fact that Professor Boulicaut is about to move on to his third helping is telling. He is currently working on a proposal related to data mining for systems biology.

The researcher would like to see the EU doing more to support research into data mining, which he believes to be a hugely important field, now beyond being defined as a 'future emerging technology'. 'There is a colossal effort at the European level to produce data, but that effort is not proportionate to the exploitation of that data,' Professor Boulicaut says.

And yet this is precisely where data mining is of most relevance, according to the computer scientist, 'for behind data mining lies the idea of bringing out potentially interesting hypotheses when we are not quite sure of what exactly we want to find from our mass of data'. The challenge is indeed to discover knowledge from data.

Professor Boulicaut also links his perceived lack of support for data mining research with a general malaise over the direction of research, and basic research especially, primarily in France but also in Europe at large.

'The problem as I see it is that public-private partnerships [PPPs] in research are supplanting academic research, which has an unfortunate knock-on effect on both basic research and the economy of the



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continent in the face of globalisation,' the professor says. 'I really think we should be supporting quality research at the academic level and also defending the idea of basic research where scientists are not asked to provide an application every three months, but where we are given the licence to work on something which could be transferred towards a start-up or a company later, without any strong hypothesis about how long it should take.'

Some instruments exist for supporting basic research, including the ERC established in 2007. But more and more funding schemes

'Working on two EU-funded projects has proven to be a career enhancing, if not always an easy experience for the researcher.'

are targeted towards public-private research, believes Professor Boulicaut. This situation could lead to a brain drain that could irrevocably affect Europe's economy in the space of 5 to 10 years. Instead, the researcher would like to see support for quality basic research at the academic level, and suggests that those receiving research funding should not have to fit into one of the following two categories: public basic research carried out by potential Nobel prize winning scientists,

or applied research carried out by private sector companies.

'I would like to see a kind of intermediary vision where not only the handful of potential Nobel prize winners receive funding under the terms of excellent research,' says Professor Boulicaut, 'but also the whole layer of researchers who do long-term quality basic research without private partners on important topics for their country, the European continent and industry.'

However, Professor Boulicaut, who himself is active in long-term research, has never failed to win EU funding for his projects. In fact, his experiences have turned him into a pro-European with a firm belief that his fellow European researchers can achieve great results, and not just in the field of data mining.

Based on a CORDIS News interview with the project coordinator. For further information, please visit: <http://iq.ijs.si> <http://liris.cnrs.fr/~jboulica> <http://www-ai.ijs.si/SasoDzeroski/cfnQ> RCN: 28329

European Commission adopts Eurostars programme for R & D-performing SMEs

The European Commission has endorsed the first ever dedicated funding programme for R & D-performing SMEs. The Eurostars programme will aim to stimulate European entrepreneurship by funding companies engaged in R & D and supporting their bids to lead international collaborative R & D and innovation projects.

As a joint programme bringing together the EU and the inter-governmental Eureka initiative, Eurostars will begin its funding activities in 2007 with a budget of EUR 800 million over its first six years.

In addition to an EU contribution of EUR 100 million, 22 EU Member States and five countries associated to FP7 will jointly contribute another EUR 300 million. In turn, the private sector will mobilise up to EUR 400 million to support European R & D-performing SMEs.

Through Eurostars the participating countries will pool their national programmes and research funding in favour of SMEs, resulting in a better and more efficient use of funds.

'Eurostars brings a new level of cooperation and integration between Community and national research programmes,' said EU Science and Research Commissioner Janez Potočnik.

'Creating strong links between public and private funding, Eurostars will give a boost to R & D-performing SMEs, allowing them to collaborate with the best research teams in Europe and to transform new ideas into successful businesses. It is an illustration of the European research area at work,' he added.

As SMEs provide 75 million jobs and account for 99 % of all businesses in Europe, they are seen as playing a crucial role in the



bid to meet the targets of the renewed Lisbon partnership for growth and jobs.

The Eurostars programme will offer funding to those SMEs with less than 250 employees who invest at least 10 % of their annual turnover in R & D activities. These activities will have to involve multipartner, multinational projects which are led by SMEs, but open to other types of participants such as universities, research organisations and large companies. They will also have to target market-oriented R & D, aimed at short to medium-term commercial results.

The Eurostars programme was officially launched in Brussels, Belgium, on 2 October 2007 and will have a first application cut-off date of 3 December 2007.

Based on a press release from the European Commission, IP/07/1313.
For further information, please visit:
<http://www.eurostars-eureka.eu>
RCN: 28336

CREST publishes guidelines on coordinated use of FP7 and Structural Funds to support R & D

The Committee for Scientific and Technical Research (CREST, Comité de la recherche scientifique et technique) has published a set of 14 recommendations to help EU Member States and Europe's regions to better exploit the synergies between FP7 and Structural Funds (SF) to boost R & D performance.

'By working together, they can help to mobilise research and technological development potential at regional, national and European level, improve and increase R & D invest-

ment in research (in view of the 3 % Barcelona target) and contribute to regional economic and social development much more effectively than if they were employed separately,' reads the statement by the CREST Working Group.

The report includes guidelines that provide 14 recommendations in six priority domains, namely the development of R & D strategies, the R & D base, research excellence, international cooperation, the exploitation of R & D results and the improvement of communication.

In its report, CREST points out that the two instruments, the SF for cohesion policy and

FP7 for research policy, share the common goal of creating more jobs and growth. As the new programming period for the two funding schemes will run for the same period, linking the two will also be made easier.

The voluntary guidelines emphasise the role EU Member States and Europe's regions should play in defining and implementing their R & D strategies according to the strengths and needs of their territory.

'A regional strategy has to be thematically focused to be effective and efficient,' reads the recommendation. 'The successful development of the RTDI [research, technological development and innovation] system is based on developing existing strengths towards a competitive critical mass, but also creating new capacities in fields not yet well developed, or trying to overcome weaknesses,' it adds.



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Innovation in Bulgaria: some improvement but much more to be done

The latest report on the innovation performance of the Bulgarian economy paints a mixed picture. Bulgarian enterprises are displaying few signs of innovation, links between research and innovation remain weak, and human and financial resources are lacking. On a more positive note, Bulgaria's gross innovation product has increased, and the entrepreneurship and business environment continues to improve.

The *Innovation.bg 2007* report by the Applied Research and Communications Fund (ARC Fund) of Sofia, analyses the state of the national innovation system and makes recommendations for enhancing innovation performance.

Among the key conclusions in this year's report are:

- the market component of the Bulgarian innovation system is at an early stage of development, and innovation is not widespread in Bulgarian enterprises;
- innovation and research products are being developed independently of one another;
- the national innovation system is being developed and influenced predominantly by the integration and financing of European innovation networks;
- the major barriers to innovation in Bulgaria are the lack of financing and qualified personnel;
- performance has started to improve, and this turnaround is the perfect time for renewed efforts to boost performance further.

Some recommendations are targeted primarily at the Bulgarian Government. More political, administrative and financial resources should be channelled into formulating and implementing the national innovation policy, the paper states. More effort should also be made to improve coordination between strategic documents, policies and administrative and financial instruments.

Having noted the crucial role that EU funds play in driving Bulgarian innovation, the report calls on the Bulgarian authorities to direct these funds towards more com-

plex, longer-term projects at national and regional level, rather than using them for the shorter-term direct financing of enterprises. These longer-term projects should also be implemented in coordination with other EU programmes, such as FP7 and the 'Competitiveness and innovation framework programme' (CIP).

A look at the statistics contained in the report illustrates the uphill struggle that Bulgaria still faces. Over 65 % of companies did not carry out any innovation activity during 2006. Sofia's ARC Fund calculates the average innovation index of Bulgarian enterprises as 10.2 (out of a maximum 100) for 2006, and claims that 'this reflects their lack of capacity to combine several types of innovation and the low degree of novelty of their innovation activities.' The report adds that most innovations coming from Bulgarian companies are new only to the company or the Bulgarian market, and not to the international market.

But Bulgaria's gross innovation product did increase in 2006 (calculated by looking at innovation, research and technology performance), according to

the report, while the entrepreneurship and business environment continues to improve. 'Lasting macroeconomic stability has provided conditions for company growth and the establishment of productive partnerships for innovation. Yet, certain microeconomic factors, such as high entry barriers, low competitiveness and unfair competition, high market concentration, low protection of property rights etc. continue to hinder the development of the Bulgarian innovation system, and thus the competitiveness of Bulgarian enterprises in the EU,' states the report.

The report was originally presented in December 2006, and has recently become available in English.

Based on the report 'Innovation.bg 2007' from the ARC Fund.
For further information, please visit:
<http://www.arcfund.net/artShow.php?id=8343>
RCN: 28331



<http://cordis.europa.eu>

continued from page 20 'CREST publishes guidelines on coordinated use of FP7 and Structural Funds to support R & D'

'I am particularly pleased that today's Council conclusions and the report by the Committee for Scientific and Technical Research [CREST] are making a lasting contribution to better research conditions in Europe. Better coordination of the use of Structural Funds and research framework programmes is an

important element of sustainable investment in the future,' said German Education and Research Minister Annette Schavan at the adoption of the CREST recommendations.

The report was originally presented to the June 2007 European Council meeting,

and has recently become available via the CORDIS Library.

Based on information from the European Commission.
To download the CREST guidelines, please visit:
<http://cordis.europa.eu/documents/documentlibrary/2851EN.pdf>
RCN: 28339

Before contacting the European Commission, all tenderers are strongly advised to consult the original call text in the Official Journal of the European Union.

Cancellation of call for tenders: Galileo concession

The European Commission has published a cancellation to its call for tenders for a concession for the deployment and operation phases of the Galileo programme.

The original call was published on **17 October 2003**.

The tender process was cancelled by a decision from the European Global Navigation Satellite System (GNSS) Supervisory Authority.

To see the full details of the notice, please visit: <http://ted.europa.eu/udl?uri=TED:NOTICE:210083-2007:TEXT:EN:HTML>
OJ S 171-210083, 6.9.2007

RCN: 28307

Call for tenders: monitoring vaccine effectiveness — seasonal and pandemic influenza in the EU

The European Centre for Disease Prevention and Control (ECDC) has published a call for tenders for monitoring vaccine effectiveness in relation to seasonal and pandemic influenza in the EU.

The tender is aimed at the development and piloting of study protocols for the investigation of vaccine effectiveness. Protocols should be used as a routine tool for monitoring vaccine effectiveness during seasonal influenza, but should also be adaptable to a pandemic situation for both pre-pandemic and pandemic vaccines.

The deadline for requesting tender documents is **6 November 2007**. The deadline for submitting tender documents is **15 November 2007**.

To see the full details of the call, please visit: <http://ted.europa.eu/udl?uri=TED:NOTICE:236480-2007:TEXT:EN:HTML>
OJ S 195-236480, 10.10.2007

RCN: 28493

Call for proposals: 'International cooperation' programme

The European Commission has issued a call for proposals for 'International cooperation' activities under the Capacities programme of FP7.

The activity area covered by this call is 'Supporting the coordination of national policies and activities of Member States

and associated states on international S & T [science and technology] cooperation'.

The objective of the European research area network (ERA-Net) scheme is to step up the cooperation and coordination of research programmes carried out at national or regional level in the EU Member States or associated states through the networking of research programmes, towards their mutual opening and the development and implementation of joint activities.

Under FP7, the ERA-Net scheme is continued and reinforced notably through the introduction of the 'ERA-Net plus' actions, in which the Commission will provide an incentive to the organisation of joint calls between national or regional research programmes by 'topping-up' joint transnational funding with EC funding.

The budget for the call has been set at EUR 11 million.

The deadline for submitting proposals is **12 February 2008**.

To see the full details of the call, please visit: http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.CapacitiesDetails.CallPage&call_id=62
OJ C 230, 2.10.2007

RCN: 28448

This is an indicative list of FP7 calls for proposals which will be closing soon.
To obtain the full list of calls, please visit: <http://cordis.europa.eu/fp7>

Call identifier	Call	FP7 Specific Programme	Theme/Activity	Closing date
FP7-SSH-2007-1	Socioeconomic Sciences and Humanities	Cooperation	Growth, employment and competitiveness in a knowledge society: the European case	29 November 2007
FP7-ICT-SEC-2007-1	Joint call ICT & Security 1	Cooperation	Pervasive and trusted network and service infrastructures, critical infrastructure protection, security systems integration, interconnectivity and interoperability	29 November 2007
FP7-INCO-2007-3	Activities of international cooperation ERA-Net & ERA-Net Plus	Cooperation	Supporting the coordination of national policies and activities of EU Member States and associated states on international S & T cooperation	19 February 2008
FP7-ICT-2007-C	FET Open scheme	Cooperation	Information and communication technologies	31 December 2008

While every effort is made to ensure that the information in the CORDIS focus Newsletter is accurate, readers who wish to follow up on any of the opportunities cited in the Newsletter should confirm the validity of information with the contacts and/or references cited in the entries.

Belgian scientists unveil eco-friendly research base to study climate change on Antarctica

The famous Belgian explorer Alain Hubert has unveiled the world's first environmentally friendly polar science station, built to house research on the impact of climate change on the Antarctic.

The *Princess Elisabeth* station aims to be a totally energy self-sufficient research base that will allow scientists to study climate change and generate greater public interest on the issue without leaving a big polluting mark.

The EUR 12 million station is a prefabricated, aerodynamically designed wood and stainless steel structure. It will be home to 20 researchers in an interior of 700 m². Funded by the Belgian Government and private partners, it will be transferred to the South Pole from Belgium in November 2007.

'The base will be the first of its kind to produce zero emissions, making it a unique model of how energy should be used in the Antarctic,' said Alain Hubert, the founder of the Belgium-based International Polar Foundation (IPF), which investigates the impact of climate change on the polar caps.

In total isolation, so as to avoid possible oil spills and other not-so-natural disasters, it will be powered by solar panels on its roof and wind turbines. Water will be recycled and solid waste will be taken away every two years.

'From an ecological point of view it is totally innovative as the base will be practically "zero-emission",' explained project leader Johan Berte, who believes that it could provide a blueprint for future stations in Antarctica.

The scientists at the base will focus their research on climatology, glaciology and microbiology. They will be very involved in the 'International Polar Year' (IPY), a global initiative involving more than 50 000 researchers studying how global warming and



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other phenomena are changing the coldest parts of the Earth, and how this impacts the rest of the world.

The initiative is the largest of its type for 50 years, unifying scientists from 63 nations in 228 studies to monitor the health of the polar regions, using icebreakers, satellites, stations and submarines.

'The [research] base will be the first of its kind to produce zero emissions, making it a unique model of how energy should be used in the Antarctic.'

Based on information from press sources.
For further information, please visit:
<http://www.polarfoundation.org>
RCN: 28302

Berlin to bolster coal plant technology for removing CO₂

Germany is set to increase its support for carbon capture and storage (CCS) technology. On 19 September 2007, the federal cabinet approved a package of measures to further R & D in the field, and gave the green light to the construction of pilot plants.

'Brown and black coal will be indispensable energy sources for Germany in the medium term, as renewable energies would not be able to cover basic consumption,' the government said. 'However, future coal usage has to be reconciled with the need to protect the environment.'

CCS technology has the potential to remove carbon dioxide (CO₂) from emissions at fossil-fuel power plants and production plants. Research has shown that emissions could be reduced by 75 to 90 %. In theory, the CO₂ captured will then be stored deep underground.

Following the decision, the German Federal Government said that the aim was to develop commercially viable products by 2020. In order for that goal to be attained, Berlin announced the creation of a legal framework for the development and testing of the technology. The current lack of laws outlining the requirements for CO₂ storage and handling continues to be a stumbling block, as is funding.

The government also pointed out that highly efficient power plants are a prerequisite for the use of CCS. Therefore, old and ineffi-

cient plants all over the world will need to be replaced by modern ones.

Coal-fired power stations are currently one of the biggest CO₂ emitters. CCS technology is thus widely supported by policy-makers, as well as energy firms. The European Commission has suggested making CCS obligatory for all new power plants after 2020.

Up to 12 CCS testing facilities are due to be set up in Europe, and most European energy firms are already developing pilot plants: Vattenfall, for instance, is constructing a test plant in Germany, while RWE has announced plans to build a clean-coal power plant in the United Kingdom.

Based on information from the German Federal Government.
For further information (only available in German), please visit:
http://www.bundesregierung.de/nn_1264/Content/DE/Artikel/2007/09/2007-09-19-ccs-technologien.html
RCN: 28377

EU project calls on Poland to pioneer new genetic testing guidelines

The EU-funded EuroGentest network of excellence (NoE) is on a mission to see international guidelines on genetic testing adopted throughout Europe, and is starting with Poland.

The Organisation for Economic Cooperation and Development (OECD) published its *Guidelines for Quality Assurance in Molecular Genetic Testing* in June 2007. The guidelines address genetic testing for vari-

'The EuroGentest partners are seeking to structure, harmonise and improve the overall quality of genetic services.'

ations in germ-line DNA sequences — the sequence of germ cells that have genetic material that may be passed to a child, as well as products arising directly from changes in heritable genomic sequences that predict effects on the health or influence the health management of an individual.

Poland is an ideal starting point for the introduction of the guidelines, according to Polish geneticist Professor Michal Witt. Professor Witt hosted a roadshow in Poland on the implementation of the rules and procedures proposed by the OECD on 19 September 2007.

'Firstly we have a scarcity of legal regulations in Poland regarding genetic testing, matched by a reluctance of politicians and legislators to get involved in what is admittedly a difficult area,' says Professor Witt. 'We also have the contrast of highly professional state-

funded clinical genetics centres being challenged by a growing number of commercial labs, clinics and companies offering genetic testing with no further interpretation of results or counselling. And of course there is a growing interest in and demand from the public for genetic testing,' he adds.

Professor Witt hoped that the meeting would 'encourage Polish politicians to commit to being one of the first countries to fully implement the OECD guidelines as soon as possible.'

Since the 1980s, the use of genetic testing as a tool for diagnosing disease and predicting future disease risk has grown steadily. It is now used by some medical professionals to establish which drugs would be most effective for an individual, based on his or her genetic variation.

According to EuroGentest, while Europe's genetic services are underpinned by high-quality scientific know-how, they are saddled with 'an intolerably high level of technical errors and poor reporting, caused by a lack of structuring and complementarity at the European level.'

The EuroGentest partners are seeking to structure, har-

monise and improve the overall quality of genetic services. They are focusing in particular on genetic testing, including questions on its legal, health and economic impact, intellectual property rights (IPR), ethics and social issues.

The adoption of the OECD guidelines by all EU Member States would go some way towards meeting these aims. The guidelines set out to:

- promote minimum standards for quality assurance systems and molecular genetic testing laboratory practices;
- facilitate mutual recognition of quality assurance frameworks;
- strengthen international cooperation and the crossborder flow of samples for clinical purposes;
- increase public confidence in the governance of molecular genetic testing.

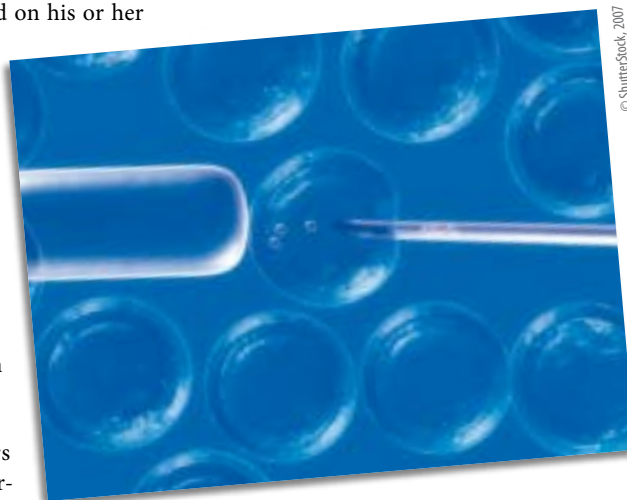
Based on information from EuroGentest and the OECD 'Guidelines for Quality Assurance in Molecular Genetic Testing'.

For further information, please visit:

<http://www.eurogentest.org>

<http://www.oecd.org/dataoecd/43/6/38839788.pdf>

RCN: 28383



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 <http://cordis.europa.eu>

French life science park celebrates record investment haul

Biocitech, a life science technology park in Paris, France, is celebrating after having raised around EUR 90 million in 12 months. Achievements to date include 20 patents, more than 25 partnerships between resident companies, two clinical trials, nine 'major scientific advances' and 25 publications in peer-review journals.

The companies hosted at Biocitech raised EUR 89.8 million in the 12 months leading up to September 2007, which is more than that raised by any other single French site for the same period. This has marked out Biocitech as 'one of the leading technology parks in Europe', according to the park's owners.

Much of the park's success has been attributed to collaboration between resident

companies. Some 25 new agreements were signed between these companies over the last year, while an additional 30 were sealed with external institutions or companies.

'The impressive number of partnerships between our residents provides backing for our policy of encouraging them to use the synergies that exist between them and

to increase the "campus-effect" we have here,' said Biocitech Director Jacques Lhomel.

Along with other organisations in the Île-de-France region, Biocitech is involved in the 'Medicen Paris region' network, a healthcare and new therapy cluster that the French Government believes is internationally competitive. Members of the network qualify for financial support from the government.

Based on information from Andrew Lloyd and Associates.

For further information, please visit:

<http://www.biocitech.com>

RCN: 28402

British regulators give go-ahead to hybrid embryo research

The United Kingdom's Human Fertilisation and Embryology Authority (HFEA) has decided to allow scientists to create human-animal embryos for use in research. Scientists wishing to use these embryos will still need to make individual applications to the HFEA.

'Having looked at all the evidence, the authority has decided that there is no fundamental reason to prevent cytoplasmic hybrid research. However, public opinion is very finely divided with people generally opposed to this research unless it is tightly regulated and it is likely to lead to scientific or medical advancements,' says a statement from the HFEA.

Researchers around the world are using stem cells from human embryos in research intended to further understanding of a number of diseases. Many believe that embryonic stem cells may lead to new therapies. Currently scientists must rely on

human eggs left over from fertility treatment. But these are in short supply, and the eggs are not always of a high quality. Using animal eggs will allow scientists to push ahead, avoiding these restrictions.

'The decision on how the HFEA should approach the licensing of human-animal hybrids and chimera research has presented a particular challenge as this research is so novel in legal, scientific and ethical terms,' reads the HFEA statement.

The decision followed a detailed consultation that gathered views from scientists and the wider public about the

issues raised by this research. The result is 'not a total green light for cytoplasmic hybrid research,' the HFEA emphasises, but instead 'recognition that this area of research can, with caution and careful scrutiny, be permitted.'

The authority will now examine two research applications submitted in 2006.

The HFEA statement claims that public opinion accepts that human-animal research may have some value, but adds that there is a clear demand for further information on what researchers are doing. This highlights a need for better communication about research from both scientists themselves and the HFEA, according to the authority.

Based on a statement by the HFEA.
To read the HFEA's statement in full, please visit:
<http://www.hfea.gov.uk/en/1581.html>
RCN: 28304



<http://cordis.europa.eu>

Study uncovers ignorance over cancer among the elderly

Elderly Spaniards have very poor knowledge of cancer, its causes, treatment and prevention, with 2 % of those questioned believing it to be a contagious disease, new research has shown.

Dr Tania Estapé and colleagues from the psychosocial oncology department at the Fundación para la Educación Pública y la Formación en Cáncer (FEFOC, the foundation for education and training in cancer) in Barcelona, Spain, carried out one-to-one interviews with 557 people aged 65 and over in the Barcelona area. The average age of interviewees was 74.

Only 53.5 % of those questioned thought that cancer could be prevented, only 45.8 % knew about the impact of diet on cancer and only 38.1 % knew that they should avoid becoming overweight. Three quarters of interviewees knew that cancer could be diagnosed early, but seemed less sure of how this can be done. Only 44 % were aware of screening programmes for prostate cancer, and only 34 % knew that breast cancer could be detected early.

'This report shows how important it is to improve and increase the cancer education programmes that are targeted towards older people,' said Dr Estapé. 'Some attitudes and misconceptions about cancer may lead to the elderly avoiding or not participating fully in a healthy lifestyle.' Dr Estapé presented the results at the

'European cancer conference' in Barcelona, on 25 September 2007.

Among the more surprising results was the finding that 2 % of those questioned believed cancer to be a contagious disease. A further 8.7 % were unsure about this statement. Some 3 % believed that cancer was punishment for something that the sufferer had done wrong.

Knowledge of treatment was also lacking, with 44.7 and 23.1 % believing that a mastectomy or prostatectomy respectively were the only ways to cure breast and prostate cancer. Around half of interviewees also considered chemotherapy and radiotherapy to be dangerous.

The importance of informing society about ongoing research into cancer was reinforced by the study group's views: less than a third knew the meaning of a 'clinical trial', 23 % knew what 'placebo' meant, and only 4.2 % claimed to understand the term 'randomisation'.

Interestingly, the responses of the 89 (17.2 %) interviewees who had had cancer in the past did not vary significantly from the responses of

those who had not. The only major difference was in the percentage of people who believed that cancer could be cured (71.85 compared to 57.25 %).

'At the moment, our elderly people come from a time when health information was poor, cancer was often thought of as an incurable disease, and therefore there was nothing that could be done to prevent or to

'This report shows how important it is to improve and increase the cancer education programmes that are targeted towards older people.'

cure it. I think our younger generations will be better informed,' said Dr Estapé.

'However, we need to try to improve the knowledge of our elderly so that they can understand that a diagnosis of cancer is not automatically a death sentence, and that there are lifestyle changes they can make now to reduce their risk of cancer developing,' Dr Estapé added.

Based on information from the European Cancer Organisation (ECCO).
For further information on the ECCO, please visit:
<http://www.ecco-org.eu>
RCN: 28413

In the coming weeks**International seminar on dismantling nuclear facilities**

An international seminar on dismantling nuclear facilities will take place from 19 to 23 November 2007 in Saclay, France.

The aim of the event is to give an overview of the French experience on dismantling nuclear facilities. The information will be based on presentations made by experts and illustrated by visits to sites currently being dismantled.

For further information, please visit:

<http://www.enen-assoc.org>

RCN: 28354

Conference on functional genomics with embryonic stem cells

A conference on functional genomics with embryonic stems cells will be held in Heidelberg, Germany, from 24 to 26 November 2007.

The event will cover the following topics:

- technology;
- self-renewal;
- ectoderm;
- endoderm;
- mesoderm.

The conference is organised by the EU-funded 'Functional genomics in engineered embryonic stem cells' (FunGenES) project.

For further information, please visit:

http://www-db.embl.de/jss/EmblGroupsOrg/conf_72

RCN: 28363

'MEDEA+ forum 2007'

MEDEA+, the industry-initiated, pan-European programme for advanced cooperative R & D in microelectronics, will hold its annual 'MEDEA+ forum' on 26 and 27 November 2007 in Budapest, Hungary.

The event will feature an update of MEDEA+'s activities in 2006, presentations of a number of MEDEA projects and keynote speeches as well as a poster and demo session.

For further information, please visit:

<http://www.medeaplus.org>

RCN: 28312

Meet CORDIS!

The events at which CORDIS will be represented are marked with the CORDIS logo. We look forward to welcoming you at our stand. If you would like to contact us in the meantime, please do not hesitate to get in touch with our Help Desk:



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In the coming months**'2007 European offshore wind conference and exhibition'**

The '2007 European offshore wind conference and exhibition' will take place in Berlin, Germany, from 4 to 6 December 2007.

The event will address the following questions.

- What contribution can offshore wind power make to future European energy supply?
- How can the offshore industry develop to become more cost-efficient?
- What barriers are still preventing the development of offshore wind?
- How can the industry positively influence the development of offshore energy policy?

The conference will include presentations from Sweden's Minister of Enterprise, Energy and Communications, Denmark's Minister of Transport and Energy, and the Vice President of the EP.

For further information, please visit:

<http://www.eow2007.info>

RCN: 28447

'European venture contest'

The 'European venture contest' will award EUR 90 000 to an innovative venture with the ambition and potential to reshape its industry and conquer the international market at an award ceremony in Barcelona, Spain, on 11 December 2007.

Companies competing for the award will need to have passed a selection procedure. The selection culminates in a presentation by the finalists of their business project to the final jury on 10 and 11 December 2007. The award will be presented at a dinner at the end of the second day.

The 'European venture contest' is the largest and richest pan-European competition of its kind, and is now in its third year.

For further information, please visit:

<http://www.europeanventureinstitute.eu>

RCN: 28446

The events listed in this section are based on event announcements and were selected from the CORDIS events calendar, which is updated on a daily basis. For further information on forthcoming events, please visit: <http://cordis.europa.eu/news>

Report highlights challenges facing doctoral education in Europe

Europe must do more to attract and retain the best young researchers, according to a new report on doctoral education in Europe from the European University Association (EUA).

The report, *Doctoral Programmes in Europe's Universities: Achievements and Challenges*, identifies trends in doctoral education in Europe and highlights challenges the sector must address if it is to attract and retain the best talent.

'Europe needs to increase the number of researchers and doctoral training can be seen as a cornerstone in reaching this goal,' commented Dr John Smith, Deputy Secretary-General of the EUA. 'Our work has shown that universities are taking a more structured approach towards the organisation of doctoral education.'

On this note, the report welcomes the fact that more and more institutions are creating dedicated graduate or research schools, which are defined as 'an independent organisational unit with effective administration, strong leadership and specific funding supporting this structure'.

These schools offer a number of advantages to doctoral students. On a practical level, they provide a clear administrative structure for doctoral programmes, support the task of supervising candidates, organise admissions in an open and transparent way, provide teaching and transferable skills training as well as advice on funding opportunities.

They also help to provide a stimulating environment and promote cooperation across disciplines, ensure critical mass and help to overcome the isolation of young researchers, bring junior and senior scientists together and enhance opportunities for mobility.

The report also notes the growing number of innovative doctorates such as 'professional doctorates', which focus on embedding research into another professional practice. The report stresses the fact that these alternative programmes must have the same basic requirements as 'traditional' doctorates in order to ensure the same high level of quality. 'Original research has to remain the main component of all doctorates,' the EUA writes.

One of the major challenges facing doctoral training in Europe is funding. All too often, funding does not cover the length of the programme and does not provide doctoral candidates with sufficient means to work and live in decent conditions.

'The attractiveness of a research career in Europe, whether in the academic or non-academic sectors, starts and is largely determined at the doctoral level,' said Dr Smith. 'It is essential, therefore, to improve the status and financial support conditions of doctoral candidates which varies substantially across Europe.'

Other areas with room for improvement include the development of doctoral candidates' career prospects. According to the EUA, more needs to be done to ensure candidates have the opportunity to develop transferable skills which will enhance their employability at the end of their doctoral programme.

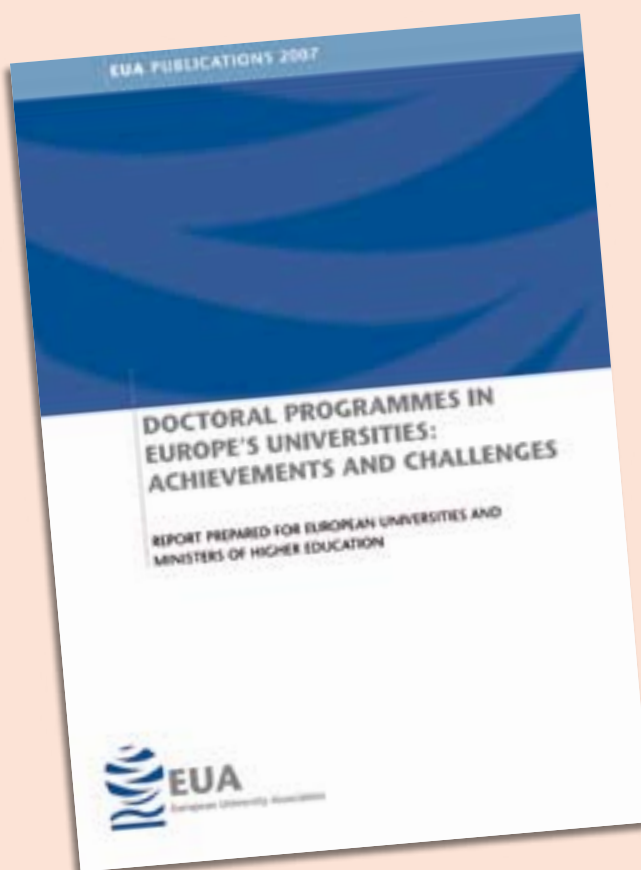
Developing these skills involves more than simply taking courses. 'An important element of transferable skills development is bringing together doctoral candidates from different disciplines and

different levels (first to third year) to encourage interdisciplinary dialogue and foster creative thinking and innovation,' the report states.

The supervision and assessment of doctoral candidates could also be improved in many cases. 'The importance of ensuring good supervision needs to be properly recognised as a task of staff supervising doctoral candidates, should be included in their workload and task descriptions, and thus also taken into consideration in academic career structures and decisions on promotion,' the report recommends.

Mobility is another issue addressed by the report, which recommends that departments facilitate the mobility of their doctoral candidates. 'International mobility, including transsectoral and transdisciplinary mobility, should be recognised as having an added value for the career development of early-stage researchers,' the report reads.

Based on the EUA report
'Doctoral Programmes in Europe's Universities:
Achievements and Challenges'.
For further information, please visit:
<http://www.eua.be>
RCN: 28293



Scientists call for action to conserve livestock diversity

Urgent action is needed to conserve indigenous livestock breeds, according to the International Livestock Research Institute (ILRI).

With farmers around the world increasingly turning to just a small number of farm animal breeds, more and more traditional breeds are at risk of extinction. The ILRI is calling on the international community to put in place a number of measures, such as

'In Europe, China, India, South America and the United States, there are well-established gene banks actively preserving regional livestock diversity.'

the use of gene banks, to conserve these rare breeds, many of which are native to developing countries.

'Valuable breeds are disappearing at an alarming rate,' said Dr Carlos Seré, Director-General of the ILRI. 'In many cases, we will not even know the true value of an existing breed until it's already gone. This is why we need to act now to conserve what's left by putting them in gene banks.'

Farmers switch to more common breeds because they offer short-term advantages in terms of yield. For example, Holstein-Friesian cows produce higher volumes of milk, and Large White pigs grow faster. However, these breeds are often poorly adapted to the more extreme environments of developing countries.

During a recent drought in Uganda, the few farmers that had retained the local Ankole cattle were able to walk them long distances to water sources. In contrast, many farmers

who had given up the Ankole for imported breeds lost their entire stock. Yet despite their high level of adaptation to the local environment, the Ankole could become extinct within 20 years, scientists predict.

The ILRI has drawn up four recommendations to save traditional breeds like the Ankole cattle. The first step is to 'keep genetic diversity on the hoof'. In other words, farmers need to be encouraged by market incentives and public policies to maintain genetic diversity on the farm.

Secondly, greater livestock mobility across national borders should be encouraged. Ensuring a widespread distribution of rare breeds will make them less vulnerable to threats such as war, natural disaster and disease.

The third recommendation calls for wider use of 'landscape genomics'. This approach involves using advanced genomic and geographical mapping techniques to predict which breeds are best suited to which environments and circumstances around the world.

Dr Seré describes the fourth recommendation — gene banking — as 'long-term insurance'. 'In Europe, China, India, South America and the United States, there are well-established gene banks actively preserving regional livestock diversity,' he said. 'Sadly, Africa has been left wanting and that absence is sorely felt right now, because this is one of the regions with the richest remaining diversity and is likely to be a hotspot of breed losses in this century.'

The ILRI is an international research institute which receives funding from a wide range of sources, including the EU.

Based on information from the ILRI.
For further information, please visit:
<http://www.ilri.org>
RCN: 28290



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 <http://cordis.europa.eu>

New international ethical guidelines for biobank researchers launched

Swedish ethics researchers at the Centre for Bioethics (CBE), along with leading biobank researchers, have put together a set of practical ethical guidelines for biobank research.

Writing in the latest issue of *Nature Biotechnology*, the researchers present for the first time a comprehensive manual tackling the central issues involving biobank research in the life sciences.

Biobanks consist of systematically gathered biological samples that are valuable for both research and medical treatments. When tissue samples are linked to good clinical data, they become indispensable to medical science. At

the same time, a number of ethical issues are raised regarding the use of these samples.

'It is crucial to be able to weigh the conflicting interests, so that the regulation of biobank research doesn't become a patient security problem in diagnosis, care and treatment,' says Professor of Biomedical Ethics Mats G. Hansson, Director of the CBE at the Karolinska Institutet and Uppsala University, Sweden.

continued on page 29

Spending on cancer research rising, study shows

Spending on cancer research in Europe is on the up, and Europe is now a major contributor to the global cancer research effort, according to the Second Cancer Research Funding Survey by the European Cancer Research Managers Forum (ECRM), entitled Investment and Outputs of Cancer Research: from the Public Sector to Industry. However, growing levels of bureaucracy threaten to stifle future research, the report warns.

According to the survey, which was launched at the EP on 18 September 2007, a total of EUR 3.2 billion was spent on cancer research in Europe in 2004, representing an increase of 38 % since the last survey two years ago. Just over half of this amount comes from governmental organisations, with the rest coming from the charitable sector.

Although Europe still spends less on cancer research as a percentage of GDP than the United States, the gap is closing. Furthermore, Europe and the United States are evenly matched when it comes to the volume of cancer research publications produced.

‘Contrary to public perception, a phenomenal amount of cancer research is carried out in Europe, evidenced by the huge amount of cancer research papers being published here,’ commented Professor Richard Sullivan, Chair of the ECRM. ‘This is important, as many policy makers assume the global funding for cancer research is overwhelmingly concentrated in the [United States]. Our data indicate that this is not true and the effort is truly a global one. The possibilities for fruitful partnerships not only exist, but should be the basis for future long-term policy.’

However, the report’s authors highlight the growing threat that bureaucracy poses to advances in cancer research. ‘Good research governance is essential but bureaucracy is absorbing too much of the global investment in cancer research,’ said Professor Sullivan. ‘Bureaucracy and over-management remain constant dangers to progress. Funding organisations and government policy-makers must guard against these dangers and, where necessary, simplify and harmonise.’

A recent study by Cancer Research UK found that EU Directive 2001/20/EC — the ‘Clinical trials directive’ — has resulted in a doubling of the costs of running non-commercial cancer clinical trials, delayed the start of trials by several months and made international collaboration in clinical trials more difficult.

The ECRM document also emphasises the wide differences in cancer research spending within Europe. Leading the field by a long way is the United Kingdom, which spent EUR 783 million on cancer research in 2004. Second and third places went to Germany and France, who spent EUR 324 million and EUR 249 million respectively.

Since the last survey was published two years ago, 60 % of EU Member States have increased their levels of research funding in real terms. However, 30 % have not increased their spending at all.

‘It is clear that some governments are still failing to appropriately support cancer research,’ said Professor Sullivan. ‘For these countries, the need for specific policy actions to ensure a limited core of high-quality research within their institutions — relative to their R & D budgets — is crucial if these [EU] Member States

have aspirations to become major locations for cancer research in the future.’

The survey also identifies a move away from basic research and towards more clinical research in a majority of countries studied. Speaking at the launch of the report, Professor Sullivan called for a more holistic approach to curing and controlling cancer.

‘New drug discovery is only one strategy,’ he said, noting that there was a need for more research into issues such as prevention and early diagnosis. Professor Sullivan added that he hoped the European Commission would fund such research under FP7.

Based on CORDIS News attendance at the launch of the ‘Second Cancer Research Funding Survey’. For further information and to download the survey, please visit: <http://www.ecrmforum.org> RCN: 28367



 <http://cordis.europa.eu>

continued from page 28 **‘New international ethical guidelines for biobank researchers launched’**

In the past, biobank scientists engaging in international collaborative projects have faced the uphill task of navigating through a plethora of wide-ranging guidelines and regulations in different countries. Now for the first time, researchers will have access to an ethical framework providing them with a comprehensive solution to addressing their concerns over medical needs and personal integrity.

According to Professor Hansson, it is important that ethical questions surrounding medical research be discussed and examined in the same forum as the scientific discussion.

‘It’s also important that proposals regarding the ethical balancing of various interests be put through the same type of independent scrutiny by being peer-reviewed in estab-

lished scientific journals, just like medical research,’ he claims. ‘The framework is not only an instrument for researchers, but can also serve as a guide for ethics committees throughout Europe,’ he added.

Based on information from Uppsala University. For further information, please visit: <http://www.nature.com> RCN: 28350

Clever plants log on to chat network to send warning signals

Researchers in the Netherlands have found that plants have their own 'chat systems' that they can use to warn each other of impending dangers.

Contrary to conventional thinking that views plants as passive organisms waiting to be pulled up or eaten up, the scientists discovered that many plants spend their time communicating with one another. A form of internal communications network was identified, which enables the plants to exchange information efficiently.

Many herbal plants such as strawberry, clover, reed and ground elder do not reproduce by seed, but increase in size by sending horizontal stems, known as 'runners', along or under the ground. Through these stems, individual plants can remain connected with each other for a certain period of time, giving them the chance to share informa-

'We were very surprised how communicative plants really are.'

tion via these internal channels in much the same way as computer networks do.

Through experimental research, the scientists were also able to demonstrate that the

clover plants use the network links to warn each other of enemies closing in and thus increase their chances of survival. Using their internal signals, the plants under attack by caterpillars warn the other members of the network, which then strengthen their chemical and mechanical resistance so as to be less attractive to the advancing insects. Thanks to this early warning system, the plants can stay one step ahead of their attackers and significantly limit the damage they cause.

'We were very surprised how communicative plants really are. We looked at the common clover and discovered that they "talk" through networks to warn of approaching attackers such as caterpillars. This has very interesting parallels to electronic networks and early warning systems for military defence purposes,' said Dr Josef Stuefer, coordinator of the project from Radboud University in Nijmegen, the Netherlands.

However, the team of researchers also found an important drawback to this vegetative network, similar to the one found in computer networks: viruses. Viruses can use the

infrastructure to rapidly spread through the connected plants. Like falling dominoes, the infection of one plant then leads to the infection of all plants within the network.

'It appears that plants lack firewalls, so they become easily and quickly infected by viruses,' said Dr Stuefer. 'It is unclear as yet whether plants make use of e-mail and have effective anti spamming mechanisms,' he added jokingly.

Based on information from Radboud University.
For further information, please visit:
<http://www.eco.science.ru.nl/exploec/josef.htm>
RCN: 28411



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Scientists discover gas guzzling bacteria

Sea-bed dwelling bacteria which live off a diet of gas have been discovered by a team of American and German scientists.

The depths of the seafloor are not an easy place to live; even just a few millimetres below the surface, there is often no oxygen (O_2). Food is also in short supply, as the nutritious proteins and carbohydrates found in fresh plankton are consumed higher up the water column. The remains that reach the seafloor are the parts that are hard to digest.

Nevertheless, the sediments of the seafloor do harbour life, in the form of microorganisms such as bacteria. Now scientists have discovered a group of bacteria whose diet consists of the short-chain hydrocarbons ethane (C_2H_6), propane (C_3H_8) and butane (C_4H_{10}).

Although aerobic (O_2 -breathing) bacteria with a similar diet have been found before, this is the first time that anaerobic, gas-feeding bacteria have been found. They isolated the bacteria from O_2 -free mud

taken from gas seeps in the Gulf of Mexico. They then shut them in bottles together with the hydrocarbon gases under study, but without O_2 .

They found that the bacteria use sulphate from the sea water to convert C_2H_6 , C_3H_8 or C_4H_{10} into carbon dioxide (CO_2); during this process, the sulphate is itself converted into hydrogen sulphide (H_2S). The newly discovered organisms are extremely slow in growing, taking three days to divide (compared to the 30 minutes for the bacteria used to produce yoghurt).

The findings solve a number of mysteries, such as the disappearance of C_2H_6 , C_3H_8 and C_4H_{10} , as well as methane (CH_4), from mud volcanoes.

The bacteria could also be useful in industrial biochemistry; they must have a special digestive enzyme to be able to break

down chemically stable substances such as C_2H_6 without the help of heat or chemicals

'Now scientists have discovered a group of bacteria whose diet consists of the short-chain hydrocarbons ethane (C_2H_6), propane (C_3H_8) and butane (C_4H_{10}).'

like O_2 . If a similar enzyme could be produced artificially, it would surely be interesting for chemical synthetic processes, the authors speculate.

The study is published online in the journal *Nature*.

Based on information from the Max Planck Society and the article 'Anaerobic oxidation of short-chain hydrocarbons by marine sulphate-reducing bacteria', by Kniemeyer, O. et al. (2007), in *Nature*, published online on 19 September 2007.

For further information, please visit:
<http://www.mpg.de>
<http://www.nature.com/nature>
RCN: 28403

General policy

ERC puts forward recommendations on bolstering the ERA

The Scientific Council of the ERC has responded to the European Commission's Green Paper on the relaunch of the ERA with five recommendations. The paper from the Scientific Council states that 'it would be a cruel deception to argue that we are now poised to achieve the professed goal of our becoming the most dynamic knowledge economy in the world. Europe's recent investments are (still) insufficient [...]'

RCN: 28287

European Commission sets out plans to boost research-regional policy links

The EU Member States and Europe's regions must do more to exploit synergies between the EU's regional policies and research and innovation programmes, according to a new European Commission communication. 'By harnessing their potential for knowledge, regions can make a considerable contribution to increasing growth and jobs and improving the quality of life of all Europeans,' said Janez Potočnik, EU Science and Research Commissioner.

RCN: 28321

Prevention, not cure, key to animal health

The old adage 'prevention is better than a cure' is at the heart of the new 'Community animal health policy' adopted by the European Commission. The strategy places a strong emphasis on precautionary measures, disease surveillance, controls and research. With these tools, the Commission hopes to reduce the incidence of animal disease and minimise the impacts of outbreaks when they occur.

RCN: 28376

Projects and programmes

Study highlights link between exercise and smoking habits

People who are physically active as teenagers are less likely to become smokers than inactive teenagers, according to new research from a team of American and Finnish researchers. The work, which was partly funded by the EU, is published in the journal *Addiction*.

RCN: 28330

Climate change not main cause of Neanderthals' demise, study finds

The mystery of what killed the Neanderthals has come a step closer to being solved, thanks to a new study which rules out one of the leading theories — catastrophic climate change. The study, which was partly funded by the EU, is published in a recent edition of the journal *Nature*.

RCN: 28338

New drug will give hope to HIV-positive children

HIV-positive children can now benefit from an antiretroviral drug designed specially for them. 'Triomune Baby' and 'Triomune Junior' were developed with funding from the 'European and developing countries clinical trials partnership' (EDCTP). There is an urgent need for AIDS drugs for children. According to the World Health Organization (WHO), there are well over 2 million children living with HIV around the world, 90 % of them in Sub-Saharan Africa.

RCN: 28349

Other news

ESA teams up with Air France to show earthly images

Air travel could soon become more interesting, thanks to an onboard picture show. The European Space Agency (ESA) has announced that passengers aboard selected Air France flights will soon be able to see satellite images of the land over which they are flying. The images integrated into the inflight Geovision programme will begin with captivating images appropriate to the routes of Air France flights operating between Paris and Bangalore, Delhi, Mumbai and Singapore.

RCN: 28305

Study links food colourings to hyperactive behaviours

Parents whose children show signs of hyperactivity may find that cutting certain artificial food colourings from their diet may lead to an improvement in their behaviour. This latest piece of advice on food colourings is based on research which shows that for some children, certain mixtures of artificial food colourings appear to have a negative effect on their behaviour.

RCN: 28309

Spanish researchers develop award-winning ancient manuscript recognition system

Spanish researchers have developed an award-winning system for the automatic recognition of manuscripts. The scientists have designed the efficient 'Blurred shape model' (BSM) to be able to work with ancient, damaged or difficult to read manuscripts, handwritten scores and architectural drawings.

RCN: 28310

The articles selected for the *CORDIS focus* Newsletter were published online during the previous month. They can be accessed directly on the website by keying in the record control number (RCN) in the 'Search articles' facility or by visiting the online edition (in English only) at: <http://cordis.europa.eu/news/focus> For a complete catalogue of all CORDIS News articles, please visit: <http://cordis.europa.eu/news> European Commission speeches (SPEECH) and press releases (IP) quoted in the references can be accessed on: <http://europa.eu/rapid>

Euratom 'Fission' gets reactive on info dissemination under FP7

New information on fission research and development within the Euratom programme is now available on CORDIS, the European Community's Research and Development Information Service. The new thematic area is part of the European Commission's drive to disseminate information on Euratom and fission research.

Under the Seventh Euratom Framework Programme, the Fission indirect action will fund projects establishing a scientific and technical basis for the safe, long-term management of long-lived radioactive waste.

Users are met with a brief introduction and overview of the new thematic area, and provided with links to forthcoming news and events. The thematic area has a standard structure in its menus, making information access uniform. Users can use the menu to explore in detail issues such as participation in the Seventh Framework Programme (FP7), calls for proposals, support and publications which can be found in the 'Library' section.

Safety in nuclear research is of course crucial. The 'Fission and radiation protection' action aims to establish competence in the long-term handling of nuclear radioactive waste, as well as to promote the safer and more resource-efficient use of nuclear energy. The thematic area provides iconic links to various institutions or programmes offering related information.

A further information section provides more details, for example on 'Management of radioactive waste', 'Reactor systems', 'Radiation protection', 'Infrastructures' and 'Human resources, mobility and training'. Each link takes the user to a specific section dedicated exclusively to the relevant topic. The thematic area is clear, concise and simple to search.

Based on information from CORDIS News.
To access the thematic area, please visit:
<http://cordis.europa.eu/fp7/euratom-fission>
RCN: 28426



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