EUROPEAN SCIENCE FOUNDATION

SETTING SCIENCE AGENDAS FOR EUROPE

**EUROCORES Scheme**
European Collaborative Research

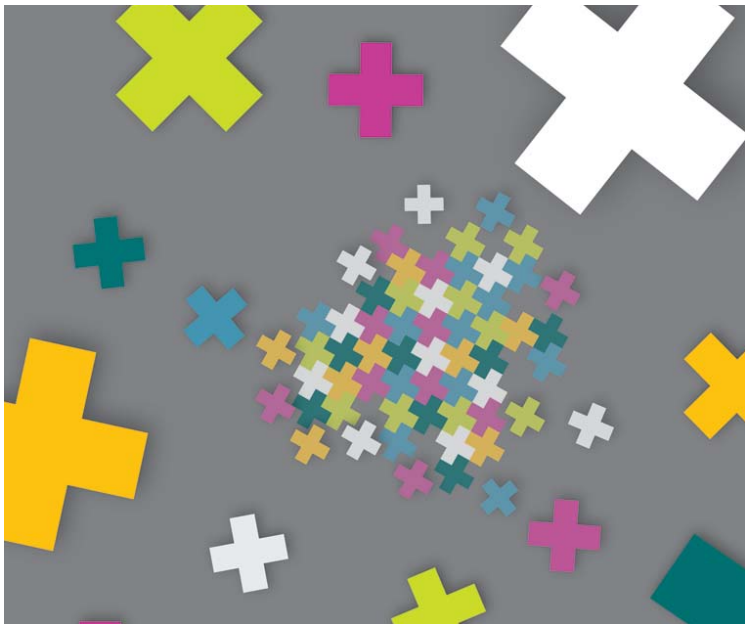
The EUROCORES Newsletter • N°1 • April 2007

# EUROCORES Insight

# Editorial

## Index





Welcome to the first issue of **EUROCORES Insight**, the new EUROCORES newsletter. First of all I'd like to introduce myself. My name is Svenje Mehlert and I'm the EUROCORES Scheme Coordinator. My colleagues, the EUROCORES Programme Coordinators, and I would like to use this opportunity to give you a better insight into the EUROCORES Scheme and the running EUROCORES Programmes.

As many of you know, the ESF European Collaborative Research (EUROCORES) Scheme offers a flexible framework where researchers from Europe as well as from, for example, the US can work in collaborative research projects in and across all scientific areas. In this way researchers in a specific topic are able to work together, independent of their country of origin. The Scheme aims to tackle important scientific issues which are best addressed in larger scale collaborative research programmes. The topics for EUROCORES Programmes are chosen because of the scientific need and added value of collaboration. Often the research requires bringing together researchers who do not normally collaborate.

This first issue of the newsletter focuses on developments in several areas of the EUROCORES Programmes, including an article on how bone cancer patients produced a unique art exhibition under the ECT flag, an interview with EuroQUAM's latest Review Panel co-chair, American Wolfe Prize Awardee, Professor Daniel Kleppner, and an article on margin formation modelling in Norway. These and the other articles in this issue reflect the large range of activities that EUROCORES Programmes are active in.

I hope you will enjoy our first issue of EUROCORES Insight.

Svenje Mehlert, EUROCORES Scheme Coordinator and the EUROCORES Programme Coordinators
**smehlert@esf.org**


**EUROCORES Insight**
**Editor:** Sofia Valleley, svalleley@esf.org • **Editorial Board :** Antonella Di Trapani, aditrapani@esf.org - Inge Jonckheere, ijonckheere@esf.org - Svenje Mehlert, smehlert@esf.org
Mariana Resnicoff, mresnicoff@esf.org - Reija Tuomaala, rtuomaala@esf.org

# Modelling of the Norwegian Margin Formation

***Under the EUROMARGINS flag, Magdalena Scheck-Wenderoth from GeoForschungs Zentrum Potsdam, Germany, in cooperation with scientists from Belgium, France, Germany, the Netherlands and Norway, is using existing deep earth and oceanic sediment data to develop 2D and 3D models of both the oceanic and continental parts of the Norwegian margin. The implications for this type of model are manifold, as it can be applied to locate underground petroleum reservoirs, determine the stability of slopes and to track climate change.***

The Norwegian margin is what is called a passive volcanic margin. The word "passive" is somewhat misleading as this is very far from not being active or dynamic. A passive margin refers to two plates which are pushed apart by upwelling volcanic mantle material. The plates are also pulled apart by a slight pull from subduction forces. Over time, the movement of the plates have a huge impact on the pressure and temperature of the conformation of surrounding material, sometimes giving rise to oil deposits. In addition, volcanic margins originate also from continental breaks.

**"Knowing the bigger picture means you can guess where future weakness zones will be," said Magdalena.**

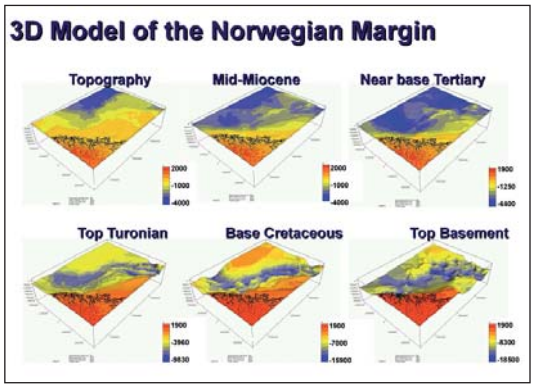
Magdalena's model to better understand the Norwegian margin relies on previous experimental works and explorative surveys. Using the continental break as her historical gauge, she takes into account the uplift of the crust from the forces pulling and pushing the margins apart, the folding and cracking of the hardened surface crust, sediment upheaval and collection into basins and even gravitational pull.

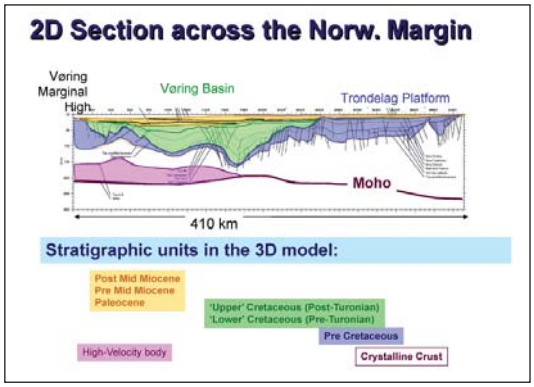
By looking at the folds in the stiff upper crust of the plates, Magdalena considered she might find an explanation to the continental break up mechanism. However, by reversing the folding process and measuring the amount of extension, she found that the folding only accounted for 3-4% of the margin movement so that could not have caused such a big break up. She then started looking at the compression caused by glaciation by measuring the amount of sediment present.

Areas with a lot of sediment represented a large hole and vice versa. She discovered that prior to the continental break up, the sediment was thick but this changed during the break-up. This finding could indicate that the break-up was caused by movements and upheaval in the lower crust. By examining 2D cross sections of the area and by carefully taking into account what she had already learnt as well as gravitational pull, she developed a model which fits with all existing data.

**Being able to locate vertical plate movements will have significant impact on predicting the impact on oil and hydrocarbon deposits, something which has a serious commercial value.**

**For more information, contact:**
**Bernard Avril • bavril@esf.org**




Courtesy of Magdalena Scheck Wenderoth

# A moment with Professor Daniel Kleppner

Prof. Daniel Kleppner

***Professor Daniel Kleppner has recently accepted the co-chair position on the EuroQUAM review panel. Professor Kleppner has been in the physics faculty of Massachusetts Institute of Technology (MIT) since 1966 and is now a professor emeritus and Co-Director of the Center for Ultracold Atoms where he carries out research in experimental atomic physics. Here, Professor Kleppner talks about his experience with EUROCORES and EuroQUAM so far.***

***How did you get involved in EUROCORES and EuroQUAM?***

I was contacted by the coordinator of the EuroQUAM Programme. I had no previous knowledge of EUROCORES.

***What prompted you to accept the post?***

I felt it was an opportunity to work with very interesting physicists and to learn about some very interesting physics.

***As an experienced and leading scholar in this field, what do you think about the potential impact of collaborative research schemes such as EUROCORES?***

The possibility of new funding for research naturally stimulates interest. When new money becomes available for collaborations, it is important to be sure that the collaborations are genuine, not merely patched together to acquire support. When worth while, collaborations can be fantastic. The best collaborations are those that are created spontaneously. A programme like EuroQUAM can certainly help nurture and foster good collaborations. When things go right, a programme such as EuroQUAM can be terrific.

***How do you think EuroQUAM differs from other collaborative projects?***

EuroQUAM's most important feature – its scientific goals – comes at a unique time of scientific opportunities and outstanding young scientists. The groups in EuroQUAM are excellent and we [the panel] had a hard time in ranking them. In the US, the National Science Foundation has sometimes created programmes for large centres in response to Congressional pressure to respond to perceived national needs such as industrial competitiveness. Such short term goals do not address the underlying need for a strong foundation of basic research nor the need for broad support of small research groups. Centres can have so many public obligations, for instance in addressing educational problems at the secondary level or reaching out to industry, that their scientific mission may be compromised. Essentially, one must be able to make the case that, scientifically, the support to a centre is more effectively used than if it went to individual investigators or small groups. It looks to me like EuroQUAM is doing a good job of avoiding problems such as these, and stimulating excellent scientific collaborations.

***What do you think of the quality of the project proposals that you have seen?***

The proposals were for the most part outstanding, and a number were truly superb. EuroQUAM is certainly timely, since it comes at a time of intellectual expansion and the development of a large number of excellent groups.

***What are your views on the effectiveness and the implementation of this EUROCORES project?***

The selection process seems to have been designed carefully, for it attracted outstanding proposals. We judged them in what I hope is an enlightened and fair minded process.

***If you could change anything about the outline and full proposal procedure, what would it be?***

I feel too much attention is being paid to being multi-disciplinary. This is a difficult criterion, especially when also establishing trans-national collaborations in rapidly developing areas. I believe that inter-disciplinarity should not be listed as a criterion for evaluation, but if it happens to exists it should be encouraged. I suggest asking referees merely to comment on interdisciplinary aspects, if there are any, but not to use them as a basis for judgement of scientific quality.

***What do you look for in a good proposal?***

Clarity of goals, and, of course, good science by good scientists.

***What motivates you in your own research?***

The same as most of my colleagues: joy of discovery, and the good opinion of people I respect.

***What ambitions would you still like to fulfil?***

I am now emeritus, though active. My goals have changed to seeking satisfaction from being useful.

***How do you see the future of scientific collaboration?***

I assume you are talking about formal collaborations linked by joint funding. These can be effective if they are truly linked by intellectual motives, but they can be artificial and wasteful. The general question is the balance between collaborative support, and support for individual investigators. I am more familiar with that issue in the US than in Europe, and in the US there is some tension because of the general shortage of funding in the physical sciences. At the Center for Ultracold Atoms we work hard to retain the goodwill of the physics community through activities such as holding summer schools, being receptive to visitors and generally being helpful members of the community.

***What are your thoughts on American-European scientific collaboration using instruments such as this?***

Science has always been international but I have been tremendously impressed by how European science has been transformed in the last few decades. Graduate students can move freely between universities in different countries, lecturers give lectures abroad, and the historical pattern of research positions in universities is being modernised. ESF has taken initiative in organising international science conference with a strong European flavour. It's admirable and we in the US could even feel a bit left behind sometimes. There really is a sense that there is a new European scientific entity and a new way of doing things, whereas we [the US] are still struggling with the old ways, including a strong dependence on European scientific talent. We cannot count on importing scientific talent from abroad indefinitely, nor is it clear that the US can maintain scientific excellence by relying on its old ways.

**For more information, contact:**
**Farzam Ranjbaran • franjbaran@esf.org**

# News

## 6 New Programmes

**The following Calls for Proposals are now open:**

- 4-D Topography Evolution in Europe: Uplift, Subsidence and Sea Level Change
  - The Geoscience of Coupled Deep Earth
  - Surface Processes (TOPO-EUROPE)
- Friction and Adhesion in Nanomechanical Systems (FANAS)
- Stress and Mental Health (EuroSTRESS)
- Logical Modelling in Interaction, Communication, Cognition and Computation (LogICCC)
- European QUAntum StandARds and Metrology (QUASAR)
- Cross-national and Multi-level Analysis of Human Values, Institutions and Behaviour (HumVIB)

**For more information:**
**www.esf.org/eurocores**

## Call for EUROCORES Themes

The European Science Foundation is looking for new ideas for collaborative research at the European level. We are inviting well developed proposals for new EUROCORES Programmes.

The EUROCORES theme proposals must be received by 1 June 2007 midday (CET). Proposals are submitted online at **www.esf.org/eurocores**. The full Call with detailed information and proposal guidelines can also be found on this address in addition to the criteria for theme selection. You can also contact the EUROCORES Scheme at **eurocores@esf.org**.

# Young Bone Cancer Patients Produce Unique Art Exhibition

A unique art exhibition depicting the hopes and fears of children and young people with bone cancer has been produced by patients taking part in an important clinical trial aimed at improving treatment of the disease.

The paintings and drawings, by turns powerful, humorous, humbling and inspiring, received their first showing at an international medical conference in Stuttgart, Germany in 2006. The exhibition will now be displayed in several hospitals and clinics.

The project was the brainchild of artist Dr Lizzie Burns, who teamed up with clinical research fellow Dr Martha Perisoglou of University College London Hospital, as a way of allowing cancer patients to express feelings that they might otherwise find difficult to articulate and to broadcast the importance of clinical trials in the search for better treatments of disease. The young artists are being treated at hospitals in London and Birmingham and are all taking part in an international clinical trial called EURAMOS 1, which aims to find better ways of treating a rare type of bone cancer called osteosarcoma. The UK arm of the trial is being run by the Medical Research Council (MRC).

“We thought it would be fun for the patients to have the opportunity to do some artwork about their experiences, and to express feelings that might otherwise be difficult to express – really to convey their own story,” said Dr Burns.

Dr Perisoglou approached the patients to find out who would like to participate in the project, and Dr Burns met them and provided materials and talked about possible ideas for their work.

“I really did not know what to expect – this is a pretty horrendous cancer – but it was incredible to see the way that people deal with it,” Dr Burns said. “It is totally inspiring.”

The artwork itself varies from 34-year-old Syed’s simple pencil cartoon-strip depicting the ‘story’ of his cancer from diagnosis to treatment, to more elaborate and remarkably anatomically correct paintings of the bones of the leg showing the tumour.

***“You never know tomorrow when I leave hospital I could get hit by a bus and it all could be a waste of time but it’s not, while you’re living you try things,” said Sayed.***

Dr Burns was particularly thrilled with an especially moving piece created by ten-year-old Susanna, whose brother Charlie, five, is one of the patients. Susanna’s work depicts the lower half of the human skeleton with a mass of spotted matter filling the pelvis and a large arrow pointing to the top of the thigh bone. The picture is entitled ‘My Brother’s Tuna’, and as Susanna explained, the reason for the peculiar title is because Charlie “said to my Mum ‘why have I got a fish in my leg?’ The reason for this is because he is only five years old and does not understand what a tumour is.”

The exhibition includes intensely moving quotes from the patients and photographs of them working on their pieces. The photographs are particularly striking because of the broad smiles of the artists at work, often at the same time as they are receiving their chemotherapy.

For Dr Perisoglou the project was extremely worthwhile. “The patients definitely got a lot out of it,” she said. “Just being able to express emotions and feelings that they might not be able to put into words, such as hopes and anxieties, was important. Also they would speak to Lizzie for maybe hours at a time and on several occasions, which was also something they appreciated a lot. It allowed the patient to focus on something positive rather than just the illness.”


## My Brother's Tuna

*The reason I named this piece of art My Brother's Tuna is because he said to my mum : "Why have I got a fish in my leg ?"*

*The reason for this is because he is only five years old and he doesn't understand what a tumour is.*

*Susanna, age 10*

***"It has made me appreciate things more, I can't say how, but it has. Like my hair for instance because I had to have my hair perfect. The last photo I had taken when I had hair I thought it looked ugly but now I look back it looked really nice. I really appreciate my hair now and it doesn't matter if it doesn't look 100% perfect."***

***"I want to live" - Laura, age 15.***

The conference in Stuttgart at which the exhibition received its first public showing was entitled 'Pan European Sarcoma Trials – moving forward in a climate of increasing economic and regulatory pressure'. Nearly 200 doctors and scientists from across the world attended the meeting, to discuss issues relating to the development of more effective treatments of the rare cancers called sarcomas, of which osteosarcoma is one.

The art project was funded by the UK Medical Research Council. EURAMOS – the European and American Osteosarcoma Study Group – is funded through the European Science Foundation's EUROCORES programme on pan-European Clinical Trials, ECT.

**For more information, contact:**
**Mariana Resnicoff • mresnicoff@esf.org**

# News

## EUROCORES Attracts Nobel Prize Winner

In 2005, Theodore Hänsch, together with two US scientists, won a Nobel Prize in Physics. One of the proposers for this programme, was Theodore Hänsch. In 2006, ESF received a proposal for the EUROCORES Programme EuroQUASAR.

Hänsch's Nobel Prize, in addition to the 1997 and 2001 Physics Nobel Prizes which were awarded for ground breaking achievements such as laser cooling, Bose-Einstein Condensation and precision metrology (optical comb generators), paved the way for novel precision experiments, metrology and fundamental tests in physics.

EuroQUASAR will bring together European expertise to create quantum standards and to apply latest developments such as quantum metrology and novel techniques of quantum engineering. EuroQUASAR will provide the framework to bring the fields of quantum metrology, fermionic and bosonic quantum matter, gravitational wave research and theorists working on new models to be tested by the most sensitive devices available in low energy physics together.

**For more information:**
**www.esf.org/euroquasar**

# CNR-ISMN's Cavallini gets a EURYI recognition with a little help from EUROCORES SONS

GACR

Dr. Massimiliano Cavallini (left) receiving the EURYI award from Nobel Prize winner Prof. Torsten Wiesel (right) at the EURYI Awards Ceremony in Prague, 13 October 2006

***For the last three years, the European Science Foundation has given out the EURYI (European Young Investigator) Award. This year, Massimiliano Cavallini, Research Scientist at CNR-ISMN, Division on Nanotechnology of Multifunctional Materials, Bologna, Italy, was one of 25 talented scientists who received this prestigious award which is between €1,000,000 and €1,250,000, comparable in size to the Nobel Prize, and is designed to attract outstanding young scientists from around the world to create their own research teams at European research centres.***

Cavallini bagged the award with his project "Dynamics of Molecules on Organic Transistors (DYMOT)", an ambitious proposal which aims to develop the next generation of sensors. These sensors could be able to detect the dynamics of molecules adsorbed on to a surface, including biological molecules such as metabolites (products of metabolism involved in growth, development and reproduction) in the body and even screening for pollution in the environment.

"Although this is our ultimate goal of the project, it's very far in the future. However, I'm hoping to provide the basis for a new generation of sensors," said Cavallini.

The short term benefits for Cavallini winning this award involve being able to gain a better position and set up his own lab, something which is every scientist's dream but not always easy to achieve. Furthermore the middle term perspective is to be able to gain a permanent position.

Cavallini credits his success on having developed a cross-disciplinary proposal. This is an approach he has learnt from, amongst other things, being involved in the EUROCORES Programme SONS through the project FUN-SMARTs.

**"My involvement in SONS has given me an opportunity to interact with lots of people and to collaborate with important and excellent groups without too much bureaucracy as well as attend important international conferences, providing a nice opportunity for visibility,"** he said. "A SONS colleague wrote the recommendation letter for EURYI, so SONS has played a very important role in my research and in me winning this award," Cavallini went on.

Cavallini also explained that SONS has been important for paper publishing and providing radio coverage of his research. This created the necessary impacts that lead to a collaborative patent with ICMAB-CSIC (Institut de Ciència de Materiales de Barcelona) licensed to Cavallini's own spin-off company, SCRIBA Nanotecnologie. Cavallini also remembers with fondness the discovery of a new lithographic method based on mixing the material intended to form the film with a polymeric material. This discovery led also to a publication in the prestigious journal Angewandte Chemie International Edition.

"The best thing about winning this award was the satisfaction to have recognition of good work. This recognition will have an impact at international level and will improve my position. I've been lucky in the past and free to follow my own inspiration in research but EURYI will enable me to set up my own workgroup and be totally independent," said Cavallini. "There won't even be a need for me to have a supervisor sign purchase orders any more." He goes on to say that the focus of the project will also improve the standing of his division and institute at the CNR by providing a new laboratory which will be based on new nanolithographic methods.

Cavallini sums up by saying, **"EURYI is not just an opportunity for me but will also be great for my collaborators."** The future is bright for Massimiliano Cavallini, and through cross-discipline collaboration which includes further work with SONS (second call), he is hoping to provide a basis for a new generation of sensors.

**For more information:**
**www.esf.org/sons**
**www.esf.org/sons2**
**www.esf.org/euryi**
**http://www.scriba-nanotec.com/**

**or contact:**
**Antonella Di Trapani • aditrapani@esf.org**

# Highlights from EUROCORES Networking in 2006

***In 2006 EUROCORES organised an array of successful conferences within many of the work programmes. Here are some highlights from a selection of these conferences.***

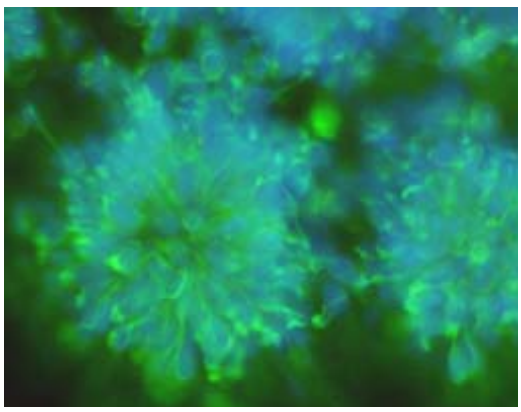
### Stem cells: between fact and fantasy

Brain cells tested in car-manufacturing plants, frog extracts to aid cloning, and new teeth for toothless gums. All these projects have stem cells in common. The first EuroSTELLS conference held in Venice, Italy, 19-21 March, brought together EUROCORES-funded scientists and representatives from biotechnology companies, the UK Stem Cell Bank and the NIH, Baltic and International Stem Cell Initiatives to debate these and other findings from this emerging field, in a realistic and sensible way.

**Stem cells, some say, are the future of medicine**. Instead of drugs or the surgeon's scalpel, stem cells could become the body's own repair kit. But the wildly optimistic claims of 'cures tomorrow' are quickly retreating from view. Today, as scientists emphasise how much they still have to learn about these cells, the field has taken a dramatic turn towards basic research.

To reflect this shift, and to encourage the development of a stem cell 'tool box' the European Science Foundation launched the EuroSTELLS programme in July 2005. "People applied for ESF funding not as individuals but as networks – in collaborative projects involving scientists of at least three different countries. This meeting is a unique opportunity to bring these networks together," commented Mariana Resnicoff, EuroSTELLS programme coordinator. "The purpose is to foster synergy."

**For more information:**
**www.esf.org/eurostells**



Lazzari *et al,* Direct derivation of neural rosettes from cloned bovine blastocysts: a model of early neurulation events and neural crest specification in vitro. Stem Cells 2006 Nov; 24(11):2514-21. Epub 2006 Aug 24.

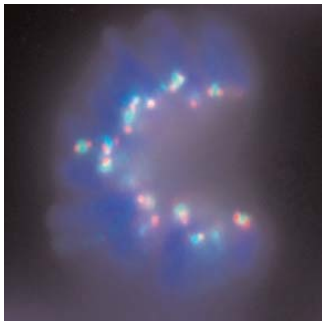
### EuroDYNA conference magnifies small components for big issues: finding the answer to human disease

At the EuroDYNA conference, 12-14 October in Brno, Czech Republic, 60 scientists from nine European countries came together to present their research in the field of genetics and cell nucleus architecture – often referred to as the body's building blocks. It is hoped that this could lead to a better way of combating human diseases.

The conference demonstrated that there is still much to learn about the body's small components but that scientific synergy and pan-European collaboration could help to achieve this goal.
The conference touched on the issue of RNA interference (RNAi) amongst other things. **RNAi has been a hot topic for a few years and the field has already garnered a Nobel Prize in medicine in 2006 for research on RNA interference – gene silencing through RNA molecules**.

Other issues that attracted the attention of the conference goers included the different stages and mechanisms of cell division. The structural organisation of the cell nucleus and chromosomes was also highlighted, as was the importance of trying to understand the route of cancer through work on cell response to DNA damage.

EuroDYNA has only been an active programme since 2005 but already it is clear that research advances will come from this unique collaboration. Like the community effect described by speaker John Gordon, University of Cambridge: "when cells are close together, the effect will be amplified", the take home message from this conference is that scientific synergy leads to better research results and understanding the small processes will ultimately lead to a greater understanding of the body as a whole.



Mitotic view of cultured human cells. Micrograph by Erwan Watrin, IMP, Vienna

**For more information:**
**www.esf.org/eurodyna**

Iaranga from the Chutkotkan village of Snezhoye, North-Eastern Siberia (Russia)/Patty A.Gray

### BOREAS Launch Conference

The BOREAS Launch Conference, 14-17 October 2006, at the Scott Polar Research Institute in Cambridge, UK was a major networking occasion for the Arctic Humanities and Social Sciences research communities worldwide.

Over a period of three days, presentations on the various BOREAS projects offered a dazzling array of the research areas involved in the programme. The projects moved effortlessly in their conception between different areas and countries of the Arctic, providing a truly comparative regional vision; this vision was backed up by realistic, logistic skills and local partnerships on the ground.

The launch of the ESF EUROCORES Programme BOREAS coincides with a major interdisciplinary initiative in polar research, the International Polar Year (IPY) 2007-2008. One of the main objectives of the IPY is an active inclusion of the human and social dimensions in polar research. This is why several possibilities for the BOREAS Programme to take a leading role for Humanities research among IPY initiatives were considered during the conference. Researchers present agreed that BOREAS offers a rare strategic opportunity to prepare the ground for a more sustained presence of Humanities and Social-Science-based circumpolar research in science planning for the next 10 years, and that it will be wise to use BOREAS as a flagship to show the strength, vitality and international nature of the field, in Europe and around the globe.

**For more information:**
**www.esf.org/boreas**

### CNCC Launch Conference

On 12-14 November 2006, 70 researchers from 15 different countries gathered in Copenhagen, Denmark to find connections between each other's work and to visualise the road ahead.

The EUROCORES Programme "Consciousness in a Natural and Cultural Context (CNCC)" brings together researchers from disciplines as divergent as clinical neuroscience, information processing and behavioral biology to philosophy, logic, human movement sciences and religious studies. The CNCC Launch conferences greatly succeeded in bringing about an energetic interaction between the participants, most of whom had not met each other before, with some unexpected and promising scientific connections as results.

The programme concerns one of the most important research issues of our time: consciousness. Hot debates in the media indicate a growing interest also by the general public in this topic and its far-reaching societal implications which range from memory enhancement, neuro-prostheses and treatments for diseases like dementia or schizophrenia, to neuro-marketing and brain lying detectors. All this is no longer science-fiction but one of the major challenges to modern science: **"Science" magazine recently ranked the issue of consciousness second on its top 25 of big questions facing science over the next quarter-century**.

The CNCC Launch Conference prepared the ground for five programme-wide CNCC events in the coming year, with meetings on "Perception, Interaction and Consciousness", "Fallibilities, illusions and metacognition", "Narratives Alternatives to Theories of Mind", "Self and Other in Social Neuroscience and Philosophy of Mind" and "Sense of Agency". Together with the numerous individual contacts established at the meeting, also beyond the programme context, these five collaborative networking activities show the degree of interaction needed and created at the CNCC Launch Conference. We are looking forward to keep you informed.

**For more information:**
**www.esf.org/cncc**

Corbis



# Launching New Programmes

***The conference schedule for 2007 contains a number of exciting high profile events. In this issue, our Humanities Unit is outlining a few of the up and coming events in their field.***

**"The Evolution of Cooperation and Trading" Launch Conference, 4-7 July 2007, Budapest, Hungary**

**For more information, contact:**
Rüdiger Klein: tect@esf.org
Visit the TECT website regularly to read about new activities: http://www.esf.org/tect

## The Evolution of Cooperation and Trading (TECT)

Few phenomena attract as much attention from as many different scientific disciplines as the study of cooperation. This fascination with cooperation – and its cousin, trading – rests on its puzzling nature: cooperation appears fundamentally unstable and theoretically problematic, yet it is omnipresent throughout nature and human societies.

TECT will explore new research perspectives on "the evolution of cooperation and trading", through empirical, theoretical and modeling methods, on an array of organisms, ranging from microorganisms to human societies.

The TECT Programme is based on the working assumption of an evolutionary continuity of cooperation, both genetic and cultural, an assumption which was thought to be in need of a study in its own right. The TECT research agenda draws on recent advances in life, natural, human and social sciences. Across all these areas, a common theoretical framework for explaining biological and cultural evolution has emerged, which emphasises the properties of interactive, goal-directed agents. At the same time, methodological advances in several disciplines have provided new information about the properties of agents and their interactions. TECT comprises multinational and multidisciplinary research teams covering anthropology, artificial intelligence research, biology, chemistry, cognitive sciences, economics, history, linguistics, mathematics, neurosciences, philosophy of science, political sciences, psychology, and sociology.

TECT allows researchers to explore the potential for the exchange of models and theory as well as the transfer of empirical methods and results from one discipline to another. As trading and cooperation are not fully interchangeable concepts, TECT concentrates only on those areas in which the two phenomena overlap.

## Inventing Europe: Technology and the Making of Europe, 1850 to the Present

The EUROCORES Programme "Inventing Europe" creates a platform for transnational research in the humanities and social sciences on the process of European integration, by focusing on the history of the uses of technology and on the cultural history of innovation processes.

"Inventing Europe" looks at transnationally developed and used technologies as cultural products. This research programme aims at mapping the varied ways in which people have built, explored and, also, opposed the concept and practice of "Europe" over the past 150 years. In doing so, "Inventing Europe" addresses, to some extent, the cultural deficit underlying the lack of a sense of belonging in much of the current debates about the future for Europe. "Inventing Europe" studies and interprets cultural and social processes as underlying – and, more often than not, preceding – institutional developments.

"Inventing Europe" understands technology as comprising machines, products, systems, and infrastructures as well as the skills, knowledge, cultural scripts and social contexts that make them work. In the same vein, technological change is understood as a deeply political, social, and cultural process, which involves choices that are taken by and shape in turn people and institutions alike.

**"Inventing Europe" Launch conference 7-10 June 2007, Rotterdam, the Netherlands**

The ESF and the "Stichting Historie der Techniek" (http://www.histech.nl/) are jointly organising the Launch Conference of the EUROCORES Programme Inventing Europe in conjunction with the Third Plenary Conference of the "Tensions of Europe" Network (ToE).

**For more information, contact:**
Rüdiger Klein: inventingeurope@esf.org
Visit the Inventing Europe website regularly to read about new activities:
http://www.esf.org/inventingeurope

# Conferences in 2007

## April

| | |
|---|---|
| **15-16** | **EGU General Assembly**, Vienna, Austria.<br>- **Open session:** Climate variability and the carbon cycle (past, present and future): The EuroCLIMATE Programme on multi-proxy reconstructions and coupled climate models at European and regional scales<br>- **Open session:** Biodiversity science in Europe: new tools and strategies (EuroDIVERSITY)<br>- **Open session:** Processes of rifting, sediment transport, fluid flow and biogenic activity (EUROMARGINS)<br>- **Open session:** Mineral properties and behaviour: the European Mineral Sciences Initiative (EuroMinSci)<br>- **Union Symposia 5:** Prospective views for European Cooperation in Geosciences/Environmental Sciences: Contributions in a global context. |

## May

| | |
|---|---|
| **5-7** | **EuroCLIMATE Workshop: Radiocarbon and ice-core chronologies during Glacial and deglacial times,** Heidelberg Academy of Sciences, Heidelberg, Germany. |
| **14-25** | **EuroSTELLS at the Spring School "Cell Signalling and Differentiation in Regenerative Medicine" and Practical Course on "Culture and Transplantation of Neural Stem Cells",** in Oslo, Norway. |
| **14-16** | **EUROCORES OMLL Workshop "VOCOID, VOcalisation, Communication, Imitation and Deixis in infant and adult human and non-human primates",** Grenoble, France. |
| **22-27** | **EuroQUAM: World Forum on Smart Materials and Smart Structures Technology (SMSS)**, Chongqing and Nanjing, China, (http://smsst07.cee.uiuc.edu/intro.html). |
| **31 May 1 June** | **EUROCORES Workshop on Self-Organized NanoStructures (SONS) at the EMRS Spring Meeting 2007 -** a cross-EUROCORES networking activity between SONS 1 and SONS 2, Strasbourg, France. (http://www.emrsstrasbourg.com/index.php?option=com_content&task=view&id=195). |

## June

| | |
|---|---|
| **12-15** | **SONS Workshop on 'Polymers, Amphiphiles and Nanostructured Materials',** Coombe Lodge, Bristol, UK, (www.chem.bris.ac.uk/inorg/isa/panm.index.html). |

---

The European Science Foundation (ESF) provides a platform for its Member Organisations to advance European research and explore new directions for research at the European level.
Established in 1974 as an independent non-governmental organisation, the ESF currently serves 75 Member Organisations across 30 countries.

EUROPEAN SCIENCE FOUNDATION
SETTING SCIENCE AGENDAS FOR EUROPE

1 quai Lezay-Marnésia • BP 90015
67080 Strasbourg cedex • France
Tel: +33 (0)3 88 76 71 00 • Fax: +33 (0)3 88 37 05 32
**www.esf.org**