



## It's a matter of health

One of the most important achievements of the Lisbon Treaty, which aims to turn the EU economy into the most competitive and dynamic economy in the world, has been the increase of the investment in research in Europe. At the same time, science communication has also been boosted, and the different actors involved in this task have made a great effort to promote research in society. But in some cases, the result has been the communication of misleading messages which have created unrealistic expectations.

Nowadays, most communication about biomedical research is carried out from a marketing perspective based on economic and innovation interests, where there is no room for real dialogue between scientists and society. This scenario was outlined in the Report of the MASIS Expert Group setup by the European Commission "Challenging Futures of Science in Society", published in 2009.

This communication model is leading us to counterproductive situations, for example in the HIV and AIDS field, where the social perception is that antiretroviral treatments are very effective and that HIV has become an easily treatable chronic disease. This vision helps us position our research centres as being very successful, but does this help funding institutions to defend the need for investment in this particular research field? Moreover, does this cause people to relax their disease prevention behaviors? Or are continuous media messages about new innovations leading to distorted public perception, which in turn creates funding obstacles? Something is definitely going wrong. The situation is quite worrisome, mainly because we are facing diseases such as HIV and AIDS whose treatments often present severe side effects, and which are not accessible to more than 33 million infected people around the world.



Students solving a scientific enigma with a group of researchers in the "Live Research Fair"

The distorted social perception of health innovation isn't the only problem. If we look at the decrease in the number of students choosing scientific degrees and the increase of people in the alternative medicine and parascience arenas, it is easy to deduce that something needs to change. This is especially clear if we take into account the current economic situation and consider that the goal to overcoming our woes is to move toward a knowledge-based economy. This will not be achieved without inspiring future researchers, because we all know that Europe needs more researchers and more funds for research.

There is a substantial work to be done, outside the science communication field, to improve investment in research, the remuneration of scientists, and the way science is taught in schools which is often disconnected from current research and from inquiry-based methodologies. But those of us who are devoted to informal education methods also recognize a need for improvement.

I welcome you to this health-centred edition of the Ecsite Newsletter.

**Rosina Malagrida, Head of Science Communication, Barcelona Science Park, Barcelona, Spain, and editor of issue of the Ecsite Newsletter**

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**Next issue:**  
Hard Science

## Communication 2.0: Biomedical research and the European public

For years Programmes Europe has been promoting outreach in science, but a large number of activities are still based on limited one-way communication models. The United Kingdom recognized several years ago that their communications strategy was based on what they referred to as the Public Understanding of Science, which is borne out of the Deficit Model – a belief that the public has insufficient knowledge of science. This approach has not improved the public perception of science.

We need to move beyond the Deficit Model to facilitate a scientifically literate society whose citizens are capable of asking questions and expressing doubt when faced with a lack of scientific evidence.

Marketing theory teaches us that if we want to convince an audience about the need to invest in biomedical research because it is the “engine” of improving people’s quality of life, we need to establish trust between researchers and citizens. This trust will only be achieved through experiences that facilitate dialogue based on transparency and in being able to demonstrate the benefits that this knowledge can bring to society. This new paradigm of science communication is known as Public Engagement. We know we must move toward a Public Engagement model, but we still struggle to put this in practice. Science outreach professionals are in search of optimal channels for public engagement. As Eurobarometers indicate, science and biomedical research do, in fact, capture the interest of citizens, but we still need to research

how to open real dialogue – some studies question whether we are really achieving this.

Web 2.0 presents a great opportunity to facilitate dialogue and there are some attractive channels aimed at communicating biomedical sciences to different audiences such as the education community and patients. There are also other media aimed at wider audiences. Nevertheless, it is difficult to pinpoint tools that offer a sense of the real methodology of biomedical research within current research projects and protocols. Channels are needed to promote a more realistic image of how biomedical research is evolving and to get a sense of what is going on now in the top biomedical labs. Some educational portals are trying to achieve this: The EEUU portal [learn.genetics.utah.edu](http://learn.genetics.utah.edu) and [XploreHealth.eu](http://XploreHealth.eu) — an EU-founded project launching in spring 2011, which also has the support of Amgen, Imtech and Fundació “la Caixa”. These portals offer content through virtual labs, video games, tools to facilitate dialogue, videos and blogs which aim to decrease the gap between research and education.

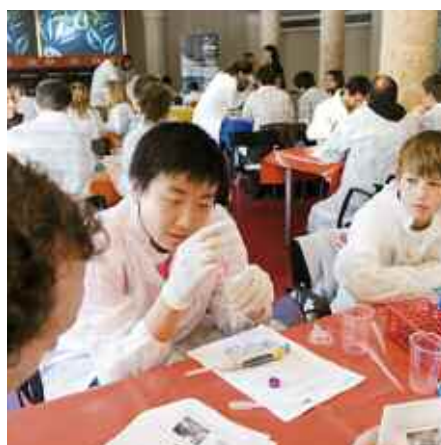
A virtual experience will never be able to replace face-to-face learning, therefore museums and science centres, as well as research institutions, must play a crucial role in facilitating dialogue between researchers and the education community. All science communication actors must work on evolving science learning formats. Their efforts will help to shape a new model of 2.0 multichannel communications which has not yet been mastered. We need to create multiple two-way channels to help each segment of our target audiences access

the presentation that suits their learning needs, and to complement other channels and circumstances that are shaping the current public perception of biomedical research. These dialogues between researchers and citizens can be shaped through different channels such as science fairs where research groups can display scientific problems and allow citizens to solve them through experimentation using lab equipment or during experiment workshops where scientists invite the public to do research with their instruments and reagents in the frame of their research project. Other formats can be organized such as programs where researchers mentor young students while they perform their own research projects, or “open days”, which operate as research treasure hunts where students look for clues in research centres to obtain an “express” PhD.

For those more interested in the ethical, legal and social aspects of biomedical research, there are several card games and science cafes available, which are good ways to stimulate discussion and encourage the public to form opinions with solid arguments. All these different activities, when combined with exhibitions and other platforms, can be complemented by, and promoted through the internet to wider audiences.

We must keep developing channels, alongside scientists, that communicate biomedical research in a way that does not support the Deficit Model. We must focus on more than just basic concepts, but also delve in to current research. A Concordat for Engaging the Public with Research was recently signed in the UK to promote public engagement with research. It was signed by most UK research donors such as the Royal Society and the Research Councils UK, among others, as they understand the importance and immediacy of the issues at stake. Engaging the public is the only way to inspire future researchers, to educate citizens and build a strong scientific culture which is able to understand the questions of benefit and risk raised by biomedical research. Our current situation leads one to think that a similar concordat should be signed in other countries.

**Rosina Malagrida, Head of Science Communication, Barcelona Science Park, Barcelona, Spain, and editor of issue of the Ecsite Newsletter**



Young people participating in “Research!” a series of workshops offered to the general public in which participants are encouraged to conduct some of the experiments that are currently being performed at PCB laboratories. (PHOTOS: © Parc Científic Barcelona. Photos: Raimon Solà)

## At-Bristol: Switched on to health

Health is a major focus for society at the present time. The rise in obesity, coupled with a rise in diabetes among youth, has prompted science and discovery centres to engage visitors on health issues. Many activities are developed in consultation with cutting-edge researchers who sometimes take part in dialogue events on contemporary health issues.

At-Bristol, the Science and Discovery Centre in Bristol, South-West England, offers programs for school and public audiences on many areas of health. These include curriculum-linked workshops and science shows for primary and secondary pupils, Meet the Expert events with practising researchers and public events for family and adult audiences.

At-Bristol has run a number of Science Cafe events for adult audiences with a focus on health with researchers leading discussions on topics including the ethical questions of quarantine in the 21st Century. Participants completed a map activity exploring pandemics, the way they spread, and how we should approach quarantine.

A major new permanent exhibition, All About Us –funded by the Wellcome Trust – will be launched in March 2011. This exhibition will engage visitors in biomedical science and show them how the human body works. A Live Lab has been set up on

the exhibition floor offering a range of activities for visitors of all ages including heart dissections and discussions about healthy and unhealthy hearts. All About Us will include an online mechanism, Explore More, where visitors record data and footage of themselves obtained during their visit, such as pulse rate, and personalise the data on the At-Bristol website after their visit.

At-Bristol activities for secondary school groups address aspects of health. These include: The A Question of Taste workshop for 17-18-year-old pupils includes DNA extraction and polymerase chain reaction (PCR) testing and a debate about the ethics of genetic testing; the Meet the Gene Machine workshop takes the form of a ‘chat show’ wherein pupils discuss the ethical implications of advances in DNA fingerprinting; The Ready Sweaty Go theatre presentation, for 12 -14-year-olds, investigates the science of sport. The DNA Codebreakers workshop introduces pupils to DNA, genetics and enables them to extract their own DNA. They also explore some common genetic traits and find out why they are like their parents.

At-Bristol also engages primary school pupils in health with Healthy Bodies, a workshop for seven to 14-year-olds. A Meet the Expert event about diabetes with a researcher from Bristol University



Dissecting a cow's heart in At-Bristol's new Live Lab



Pupils Meet the Expert during Brain Awareness week at At-Bristol

was offered to eight to 12-year-olds. Pupils discussed the implications of the disease and isolated the white cell fraction from ‘fake’ blood. The Science Learning Centre, South West (SLCSW), located within At-Bristol, offers courses to secondary school teachers on health issues with input from Bristol University researchers. Lifestyle and Health, for example, focuses on three aspects of health – ageing, diet and obesity. Genetics explores aspects of contemporary genetic medicine, such as stem cell research, personalised medicine (pharmacogenetics) and embryo selection.

At-Bristol will soon run events for 15-18-year-olds on contemporary health themes through the European-funded Xplore Health project. These events will take place in the new Live Lab and will involve real experiments as well as discussions with scientists.

**Dr Sue Cavell, Director of Learning, At-Bristol, Bristol, South-West England, UK**

Xplore Health is a European educational portal about cutting-edge health research that offers innovative multimedia and hands-on experiences to young people through the internet, schools and science centres and museums. It is coordinated by the Barcelona Science Park and was developed with contributions from Ecsite, European Schoolnet and Centre of the Cell, among others. The project officially launches in April 2011. Project leader Rosina Malagrida and European Commission project officer, Josephina Enfedaque, give us a preview of what's in store.

## Q & A: Health research coming to a computer screen near you

**When will the multimedia content of Xplore health be launched? What does the project want to achieve by using videos, virtual labs and video games?**

**J.E.:** Some of the multimedia tools are already online (the ones on how drugs are developed), but there will be other multimedia tools on biotechnology, skin cancer, genomics, mental health, AIDS, cardiovascular diseases and obesity, and malaria. All these are research priorities in the European health research programme. People love digital content, and these ones feature real

scientists doing cool things, which make young audiences connect with the world of research. I think short videos and video games are two of the most popular methods of communication in the web 2.0 (think about the success of Youtube), especially when people can leave comments and share the clips within their social networks.

**R.M.:** Xplore Health will give the public a unique opportunity to do "hands on science" on line, they will be able to enter virtual labs and experience how it is like to do research. We have already developed two virtual labs, in coordination

with Centre of the Cell, but we are now working hard to keep on publishing new content. We are also developing video games, which will communicate biomedical content in an even more enjoyable format.

**In the educators section Xplore Health will offer eight new dialogue games concerning policymaking and also experiment protocols. Why is it important to facilitate these two communication formats?**

**R.M.:** In Xplore Health we are aware that a virtual experience can never substitute a real hands-on experience. That is the why we thought that by offering science centres and museums some open lab protocols linked to current research, we might facilitate events that could complement the online experience. They could also be organized in schools, but they require some lab equipment that may be easier for a science centre or museum to acquire. We already have five Ecsite members who are in the process of organizing events!

**J.E.:** Dialogue games are great tools to raise awareness of complex social issues and to help make an informed, balanced opinion. Public Health is indeed a complex issue: It involves many actors with different interests, from researchers to pharmaceutical companies, regulatory agencies, patients, doctors, media and governments. In Europe, policy-making is particularly complex because it often involves regional, national and European administrations. To debate what should be the standard of care for citizens and any given individual, one needs to consider not only the strictly medical or scientific aspects, but also the economic, social and ethical issues.

**The project will also strive to help people understand the research process. Why is it important for people to understand and discuss research results?**

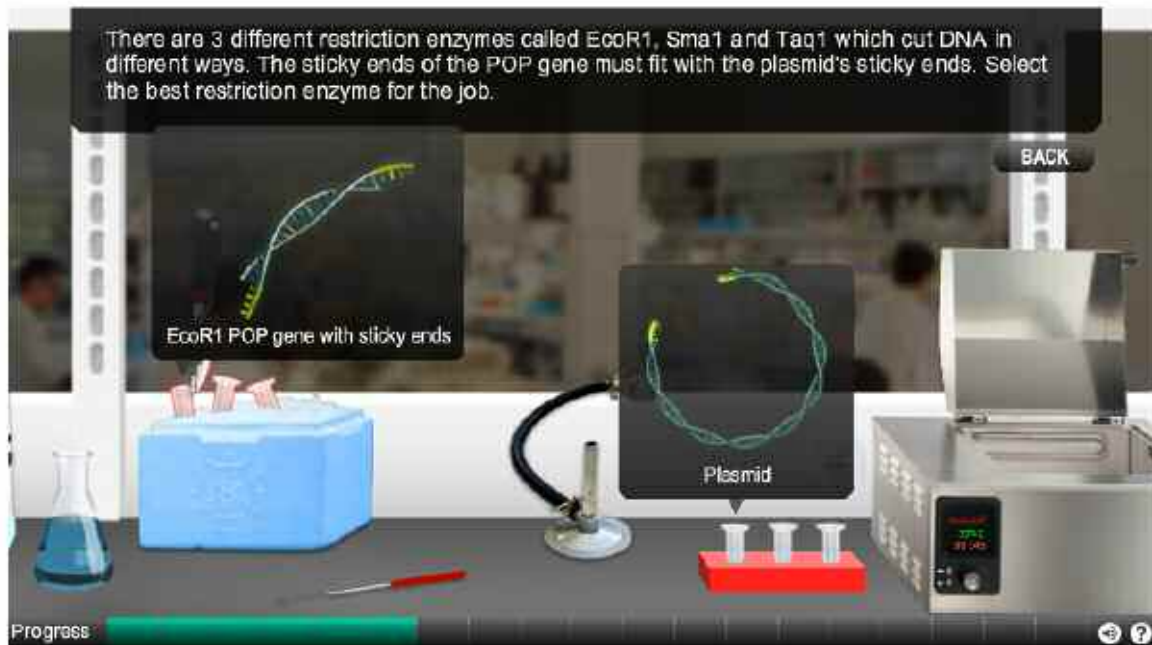
**J.E.:** I am personally convinced that the way most people approach science is the same way they



Xplore Health home page

## Produce a drug target!

To develop a new drug the first step scientists need to do is to identify a target. Enter the lab and produce a drug target to use in the research of a drug against schizophrenia.



Share / Save

869 views ★★★★★

A virtual experiment at Xplore Health

approach religion: Faith. Science even has its own hierarchy of "priests" (scientists), its own temples (labs), sacred texts (journals), rituals (research), and its own ceremonies (congresses). Perhaps the most striking features of this new religion are its miracles: Doctors can cure cancers, they return sight to blind people, and they make paralyzed people walk. All these are wonderful achievements of Reason, but many people still simply accept or reject scientific facts without understanding them. They react on an emotional basis, following blindly what scientists, or media, or interests groups say, without questioning. This leads to unfortunate situations, like people refusing to vaccinate their children, or people embracing ineffective or even dangerous treatments, based on pseudoscientific theories. Understanding how research works can help us to make more rational choices and to decide which sources of information can be trusted. Faith is a very good evolutionary feature; we have evolved to have faith because it improves survival when no real knowledge is available. But we also have curious brains that have evolved to look for answers. Knowledge trumps faith and makes us free.

**Can you briefly discuss any other health-related projects currently in the works at the European Commission?**

**J.E:** The European Union is funding collaborative research in health (you can see the areas and projects at <http://ec.europa.eu/research/health>). "Collaborative" means that scientists from several countries participate together in research projects, typically during 3 to 5 years. Sometimes these projects are very big, and involve more than 20 partners, including the leading experts in a given field, and can involve members from any country in the world.

Currently, our portfolio of FP6 and FP7 ongoing projects exceeds 900 research and innovation ventures in most areas of health and biomedical research. That means that in areas such as cancer, genomics, infectious diseases, vaccines, diabetes, neurosciences, etc., Europe has networks of scientists that exchange knowledge and work together to achieve world-class advances in contemporary science and to make our lives healthier by bringing new drugs and therapies to the market.

One of my favourite ones is the European Stroke Network (see the video at <http://www.facebook.com/video/video.php?v=1759702123048>). We also fund some Support Actions, like XploreHealth, that communicate about European research, for example by making documentaries or developing websites. One excellent Support Action in the paediatric cancer

field is DIRECT: Overcoming Cancer with Research <http://www.overcomingcancerwithresearch.eu>. They organized very successful outreach activities and their website has very good resources for children and adults. And we are also launching a videogame! Take a look at: [www.powerofresearch.eu](http://www.powerofresearch.eu).

**What would be the ideal outcome of the Xplore Health project?**

**R.M.:** We would like to help to bridge the gap between research and education. From the Barcelona Science Park, we have been organising outreach activities on current biomedical research for almost ten years. Teachers find it very interesting but they always told us that they needed to approach research not only once a year but on a daily basis from their classrooms. We believe that Xplore Health will facilitate this approach. We also aim at counting on the participation of schools and museums all around Europe to organize outreach activities using our content. At this stage we are already working with five museums and four schools as pilot centres to test how we can push the project to its optimal level. If we manage to reach science communicators and teachers interested in explaining current research, we can work together to inspire future researchers and stimulate dialogue. So, join us!

## Communicating current research in science centres and museums

Not so long ago, it was relatively unusual to find science centres and museums making serious efforts to communicate with their visitors about current research; but not today. Internationally, there is a strong trend in our field toward closer engagement with current research. This trend seems to be driven partly by a professional (the exhibitor) interest in engaging audiences with the processes of scientific discovery and technological innovation, and partly by a public (the visitor) interest in the latest ideas and inventions coming out of the laboratory.

There has been some debate within our profession about the distinctive challenges involved in communicating about current research. Elsewhere, I've written about the differences between exhibiting "finished science" and "unfinished science".<sup>1</sup> In the former case, the significance of the work being displayed is usually pretty clear, and the storyline is often fairly easy to create; but in the latter case, the significance of the (ongoing) work being displayed is often unclear, and so the storyline may be more difficult to determine. Again, finished science usually gives the appearance of being factual and unproblematic, whereas unfinished science is often conjectural and may be controversial. The contrast here is between exhibiting about, say, classical physics (settled; uncontroversial) and climate change (unsettled; and persistently controversial).

For the past three years the MIT Museum has been experimenting with the communication of current research through linked exhibitions and public programmes. In 2007 we opened a new introductory "Innovation Gallery", and since then, we've been populating this space with a series of temporary exhibitions based on a wide variety of current research projects from across MIT. From the beginning, the concept for this gallery involved using a combination of regularly changing exhibitions and supporting programmes. Working closely with selected research groups, we would create temporary displays about particular research projects. While these displays were on the floor, we would bring the researchers themselves into the gallery from time to time for face-to-face dialogue with key target audiences (specifically, high school students and adults).

This concept has worked pretty well, and we've gradually improved the way we implement it in the light of experience. At the outset, we offered reasonably large (120 – 150 sq. m.) "mini exhibitions" on topics such as an urban "city car" project and a zebra fish cancer research programme. These mini exhibitions were quite popular, but at the same time they proved to be both time consuming and expensive to renew, so we developed an exhibition system that allows us to change out individual exhibits more quickly and cost-effectively.

Sampling MIT, which opened in 2009, is a renewable exhibition based on a suite of reusable display elements: Floor-to-ceiling pillars supporting graphic panels and fabric banners, display tables and casework, etc. The exhibition comprises a series of six to seven separate exhibits (c. 50 sq. m.), each devoted to a single research project or programme. Because Sampling MIT is modular, individual exhibits can be changed out regularly without having to close the entire gallery. The exhibition stays fresh (we hope) through a process of piecemeal and opportunistic renewal. Currently, we sustained a renewal programme involving the replacement of one to two individual exhibits per year.

The main reason for devoting the Innovation Gallery to current research is mission related. The MIT Museum is a bridge between a research university and the wider community, and it would not be doing its job properly if it didn't bring research to the foreground of its exhibitions and programmes. This having been said, the focus on current research brings benefits to all concerned: The museum develops an expanding network of contacts and connections within the MIT research community, featured researchers get to showcase their work to a wide audience (and, incidentally, to fulfill any outreach obligations that they may have to funders), and visitors catch a glimpse of new ideas and innovations in development.

And there are other, less obvious benefits as well. We've found that the discipline of exhibiting work in progress can sometimes help researchers clarify and refine their ideas. For example, in the process of developing an exhibit featuring their "holopod camera" a research group at MIT's department of Mechanical Engineering refined their holographic method of imaging plankton in small volumes of seawater. In another case, an exhibit on the uses of imaging in current brain science research is



An interactive exhibit about solar energy at MIT Museum

helping researchers at MIT's McGovern Institute in the task of recruiting human research subjects. A stereotypical red telephone in the exhibit allows a steady trickle of adult visitors to inquire about the possibility of volunteering to spend time in an fMRI machine.

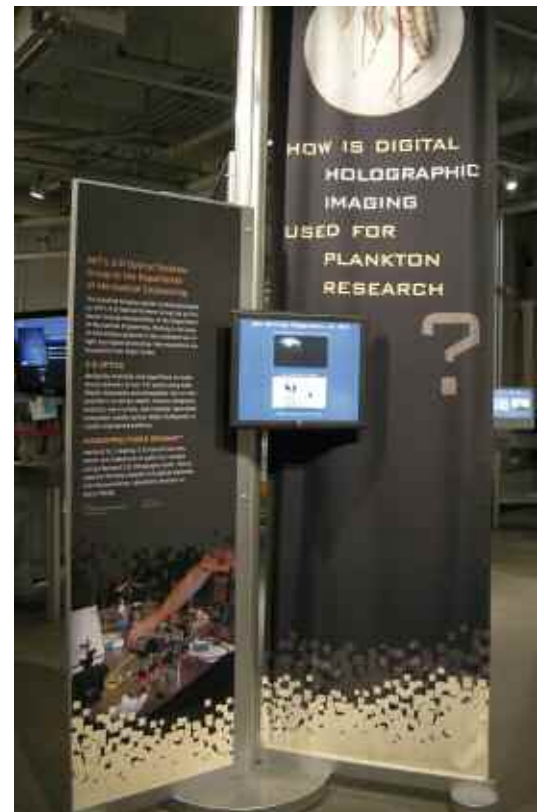
Exhibiting current science and technology presents many challenges. One is persuading busy researchers to take time to provide

guidance on the creation of an exhibit; another is satisfying the exacting requirements that these researchers often have — not just to ensure accuracy but also to achieve completeness in the description of their work. A third challenge, of course, is to find appropriate ways of creating accessible exhibits about research topics that may not lend themselves easily to display.

Here, there is real inequality between disciplines. Space science and technology generally lends itself to display (which is not to say, of course, that it can't be done more or less well); but life science and technology is often remarkably difficult to turn into workable exhibits. This difficulty is often attributed to the effects of scale (so much of contemporary life science is conducted at the cellular and molecular levels); but actually, I think it is usually the result of scale compounded by a certain sort of complexity.

As the late Francis Crick once observed, "Because of the cunning shown by Natural Selection the whole of [the world of life] is little more than a series of gadgets. This distinguishes [it] importantly from almost all the important problems in physics. Typically the errors in one gadget are corrected in a further one". When one considers that every single cell has a multitude of interconnected, mutually correcting intracellular "gadgets", and that study and manipulation of these gadgets occupies the attention of perhaps the greater part of the life science community world-wide, it's easy to see why the task of exhibiting this ongoing work in museums presents challenges.

This challenge is currently being wrestled in collaboration with the MIT Museum and MIT's Koch Institute for Integrative Cancer Research. The Koch Institute is a new research facility that brings together cancer biologists and biological engineers in an effort to develop new interdisciplinary approaches to the diagnosis and treatment of cancers. The Institute has a public gallery facing a busy street in Cambridge, Massachusetts, and we're working with the Koch's scientists and engineers to create exhibits that will present a meaningful account of their work to the general public. Current cancer research is deeply engaged with the molecular "gadgets" that cause and prevent cancer, and our task is not easy. We're greatly aided,



Holographic exhibit at MIT Museum supported by the 3-D Optical Systems Group at MIT's Department of Mechanical Engineering.

however, by the increasingly sophisticated imaging techniques that are being used to visualize cellular and sub-cellular processes.

There's no one right way to represent current research in museums. Good ways are faithful both to the spirit of the science they portray and to the strengths of the museum environment which is good at evoking wonder and poor at explaining the details of how things work. I believe that science centres and museums have much to gain from the increased appetite of their visitors for authentic encounters with active, ongoing scientific inquiry.

**John Durant, Director of the MIT Museum and Adjunct Professor in the Science, Technology & Society Program at MIT, Boston, Massachusetts, USA**

<sup>1</sup> J. Durant, "The Challenge and the Opportunity of presenting 'Unfinished Science'", in: D. Chittenden, G. Farmelo & B. V. Lewenstein (Eds.), *Creating Connections: Museums and the Public Understanding of Current Research*, Altamira Press, New York, 2004, pp. 47-60.



Sampling MIT at the MIT Museum connects visitors to research underway at the Institute.

## **SWEET-O-BIKING: COMMUNICATING DIABETES AT HIŠA EKSPERIMENTOV**

The Sweet-o-bike is an interactive exhibit. It explains the principles of diabetes through experimentation with the functionality and dosage of insulin, hyperglycaemia, hypoglycaemia, blood glucose, and carbohydrate content in food. We are currently using the Sweet-o-bike as an activity where school children are first tested about their knowledge on diabetes. After cycling on the Sweet-o-bike they are tested again. A comparison of pre and post testing demonstrates the high impact of interactive exhibits in the process of educating young population about health issues such as diabetes.

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## **HEART OVER HEELS: AN INTERACTIVE EXHIBITION ABOUT THE HUMAN BODY FOR CHILDREN AGES SIX AND UP**

Huffing and puffing, you embark on a journey through your lungs; crawling, you explore the digestive progress of the stomach and feel your heart beat like a tap dance. FRida & freD's interactive exhibition now at DASA in Dortmund is a hands-on experience, where young visitors explore their own health using all their senses. Children are encouraged to ask who and what they are, what they like and don't like, and what it takes to feel good in their own skin.

### **Frida & Fred**

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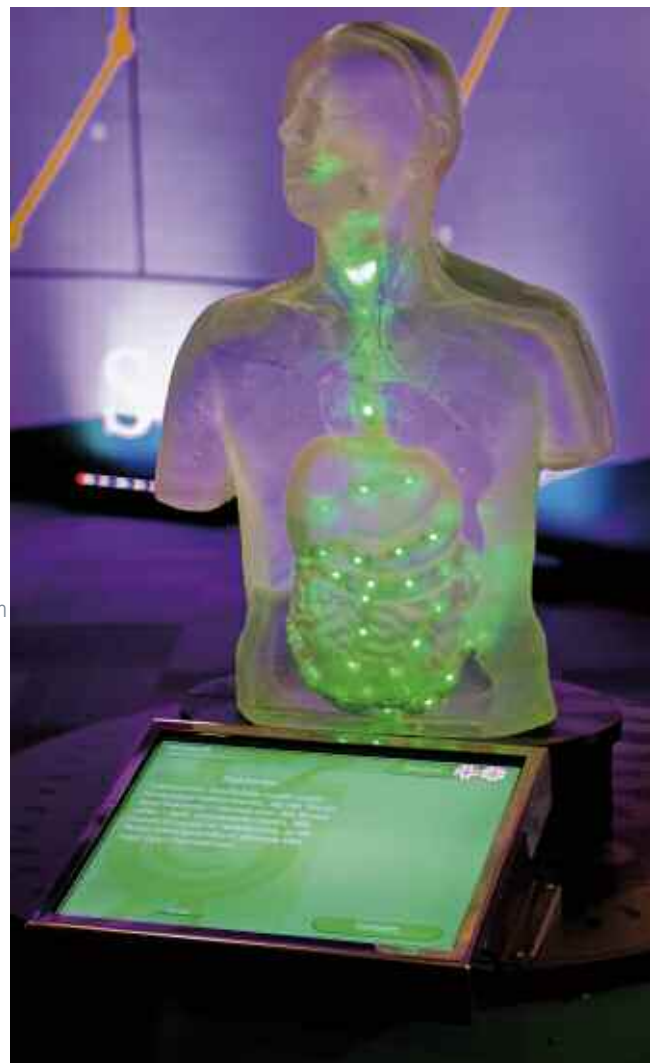


## **PERFECTLY SCULPTED DIGESTION**

Digestion, an installation illustrating the digestion process, is used in VilVite's programs on nutrition and health. A glass torso is filled with light diodes and the public interacts with it using a touch screen. Medical experts from the Bergen University and science communicators from VilVite joined forces with PC game developers and glass artists in creating this unique, interactive "sculpture".

### **Vilvite Bergen Science Centre**

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## **TUNIS SCIENCE CITY: PREVENTION IS BETTER THAN CURE**

Communicating health issues is considered to be one of Tunis Science City's crucial tasks. That's why health education exhibitions and workshops run all year with the purpose of raising public awareness about lifestyle-related diseases. Among

these is an exhibition entitled Eating healthily which offers advice for a healthy diet. Another, AIDS prevention, deals with HIV infection. Other miscellaneous workshops highlight the disastrous health effects of tobacco and drugs as well as how the heart and the immune system work.

### **Tunis Science City**

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## **FARMACUÁTICOS: THE SEA PHARMACY**

The exhibition in the Aquarium Finisterrae in A Coruña, conducted with the support of PharmaMar, focuses on the sea as a resource for biomedical research. Visitors explore content through aquariums with fish, sponges, corals, frogs and other species that contain substances of biomedical importance. Interactive modules provide insight into the peculiarities of sea organisms, the products they provide and the methods used to research them.

### **Museos Científicos Coruñeses**

Contact Susana Pérez: [susana@casaciencias.org](mailto:susana@casaciencias.org)  
[www.casaciencias.org/mc2/](http://www.casaciencias.org/mc2/)



## **GENETICS, RISK, LIFESTYLE: CAN I BLAME IT ON MY GENES?**

This Wellcome funded project, produced in partnership with the School of Psychology and the Centre for Excellence in Public Health Research at Queen's University, Belfast, will be presented in a panel session at the Ecsite conference. The project involves teacher and pupil workshops looking at skin cancer, hypercholesterol anaemia and heart disease linked to genetics. It is also being developed as a web-based tool kit for teachers.

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## **ANIMATED HEALTHY LIVING SERIES**

My Friend Boo is a fast-paced animated adventure and comedy series supported by the European Commission and available free of charge to European Broadcasters. The three episodes of the Healthy Living series teaches children values and views about healthy eating and physical activity. The animation has been developed by experts together with input from pupils in six European Countries (Belgium, Bulgaria, Spain, Ireland, Italy and Poland) and children who have visited the museum with their families. A Teaching Pack for teachers is downloadable from

[www.myfriendboo.com/teachers](http://www.myfriendboo.com/teachers).

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website: [www.mdbr.it](http://www.mdbr.it), [www.animate-eu.com](http://www.animate-eu.com),

[www.myfriendboo.com](http://www.myfriendboo.com)

## **EUREKA!CUP 2011 : OPERATION 'BODY CHECK'**

Health is a number one priority for most people. Eating healthy and getting plenty of exercise can lead to good health. Technology

can help us too: How about bionic eyes, prostheses and artificial heart valves? These are developments in the field of Biomedical Engineering. Start exploring the biomedical world and create an innovative design for a current problem.

Contact: [m.d.jonge@techniekpromotie.nl](mailto:m.d.jonge@techniekpromotie.nl)

[www.eurekacup.nl](http://www.eurekacup.nl)

## **FIRST® LEGO® LEAGUE 2010: BODY FORWARD™ "ENGINEERING MEETS MEDICINE"**

Can FIRST® LEGO® League teams improve our quality of life? Through the 2010 Body Forward™ Challenge, 8 to 15 year olds will explore the cutting-edge world of Biomedical Engineering to discover innovative ways to repair injuries, overcome genetic predispositions, and maximize the body's potential with the purpose of leading happier and healthier lives.

Contact: [s.j.b.ezendam@techniekpromotie.nl](mailto:s.j.b.ezendam@techniekpromotie.nl)

[www.firstlegoleague.org](http://www.firstlegoleague.org) (EN)

[www.firstlegoleague.nl](http://www.firstlegoleague.nl) (NL)

## **PLASTINATION AT PARQUE DE LAS CIENCIAS**

The plastination laboratory at Parque de las Ciencias is a window to science, a transparent space in the museum that aims to preserve and handle biological material. Its main objective is to spread this technique in the educational field, in collaboration with other research centres, and to promote plastination as a high value teaching focus in the biomedical sciences.

Contact Cristina González Sevilla:

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[www.parqueciencias.com/eng/](http://www.parqueciencias.com/eng/)



## **Ecsite Annual Conference 2011: Copernicus Science Centre, Warsaw, Poland 26-28 May, 2011**

Registration is now open! Look for the link on the right-hand side of the Conference website: [www.ecsite.eu/annual\\_conference](http://www.ecsite.eu/annual_conference). Book your spot by March 13 to enjoy early bird rates. Full session details are available on the Conference website. Conference-related questions? Contact Alikı Giannakopoulou, at [agiannakopoulou@ecsite.eu](mailto:agiannakopoulou@ecsite.eu) or by mobile phone at: +32 473 414574.

## **Open Science Resources**

Teachers and science communication professionals have the opportunity to contribute educational materials to the Open Science Resources portal in the 'Discover Open Science Resources' summer school organised in Crete, Greece, July 2011, to train professionals in how to construct online educational resources for use in formal and informal settings. Sign up free to the Open Science Resources portal to discover digital content from major science centres and museums in Europe. Contact Jennifer Palumbo for more information: [jpalumbo@ecsite.eu](mailto:jpalumbo@ecsite.eu).

## **TIME for NANO**

It's time to participate in the second edition of the TIME for NANO online video competition. Monetary prizes are available for the first prize winners of the national contests, plus there will be a European prize awarded by Ecsite. The videos must be made by groups or single teenagers about topics of social and ethical relevance in nanotechnology. For more information contact, Jennifer Palumbo: [jpalumbo@ecsite.eu](mailto:jpalumbo@ecsite.eu).

## **PLACES**

The PLACES web platform, OPEN, is gearing up to be an unparalleled opportunity to engage in discussion and planning about the development of European Cities of Scientific Culture. Stay tuned to the Ecsite website for updates. The project's first Regional Science

Cities Workshop took place recently at Thinktank Science Museum in Birmingham, England, where discussions led to important insights about the interplay between science and society. Also, the first PLACES conference is set for September 2011 in Paris, France. Details about these items and more are on the horizon as PLACES continues to build momentum.

## **TWIST**

The TWIST project partners celebrated the project's first Gender Day event on March 8th, International Women's Day. Activities included a Science Showroom, Scientist Speed-dating and an "XX" conference where young people and adults come together to discuss gender issues. Partners will meet in March to discuss the evolution of several products such as a computer-based test to explore implicit gender biases, as well as a European multimedia database on women scientists, an exhibition module on gender issues and guidelines addressing science centres and museums to promote scientific communication from a gender perspective. Contact Marzia Mazzonetto for more information: [mmazzonetto@ecsite.eu](mailto:mmazzonetto@ecsite.eu).

## **Xplore Health**

Find brand new experiments, videos and discussion games on the Xplore Health website ([www.xplorehealth.eu/](http://www.xplorehealth.eu/)), a European-funded project dedicated to creating an educational portal about cutting-edge health research. Find out how drugs are developed, who pays to develop them and who has access to treatment. A second module on biotechnology is under construction. The five members of the Outreach Committee – Centre for Life and At-Bristol in the UK, Copernicus Science Centre in Poland, Jardin des Sciences in France and Domus in Spain – are taking part in a training workshop about experiment reproductions in laboratories and the practice of dialogue games dealing with ethical, legal and social aspects of drug development. For more information, contact Marzia Mazzonetto at [mmazzonetto@ecsite.eu](mailto:mmazzonetto@ecsite.eu).

## **Polka**

As of February 2011, Hungary and Denmark are leading the pack of Polka PlayDecide sessions - each organizing more than ten

percent of total sessions. PlayDecide sessions have taken place in 18 countries, including 16 EU/EEA member states, plus Brazil and Canada. The more sessions you organise, the more likely you will receive an Award! Ecsite offers 400 euro grants for organizing games relevant to POLKA themes. Find out how you can start playing by visiting the PlayDecide website: [www.playdecide.eu](http://www.playdecide.eu).

## **6th Science Centre World Congress, Cape Town, South Africa, 4 - 8 September 2011**

Ecsite is a partner of this not-to-be-missed international event. Congress registration is now open, with discounts offered to early registrants and delegates from countries with a low gross national income. Accommodations with designated congress hotels can also be booked during the registration process. Find out more at [www.6scwc.org](http://www.6scwc.org).

## **Entrances and departures from the Ecsite Executive Office in Brussels**

Marzia Mazzonetto, Projects Coordinator, comes to Ecsite from graduate studies in science communication at Pompeu Fabra University in Barcelona. She is excited to begin working on the TWIST, Accent and Xplore Health projects.

Emma Wadland, Communications Officer and Webmaster, brings a Masters degree in Journalism to her new post. In addition to taking care of the Ecsite website, she is responsible for Ecsite's quarterly printed newsletter, Ecsite e-news and communication for the PLACES project.

Michael Creek, an Ecsite veteran of four years, has moved on to freelance project management consulting work. The Ecsite team thanks Michael for his dedicated work and wishes him good luck in his new endeavour.

**REDIS Final Conference in Magdeburg – Cities and Science: New Challenges, 12-14 April, Magdeburg, Germany**  
 Science and research have become drivers of urban development in many European cities. This has implications for urban lifestyles and changes the way cities are planned and managed. In this transition, cities face a number of new challenges. The City of Magdeburg invites you to discuss these issues by joining the conference, 'Cities and Science – New Challenges' for presentations from several European cities and leading international experts and policy makers. Meet international experts, ministers, mayors, professors and urban decision makers from all over Europe and get new insights on knowledge-based urban planning. For more information, contact: Klaus Puchta by phone: +49 391- 540 25 62, or e-mail: puchta@ob.magdeburg.de.

**Science teaching festival: Science on Stage 2011 Copenhagen, Denmark, 16-19 April, 2011**  
 About 400 science teachers from all over Europe will participate in the next international Science on Stage festival organized by Science on Stage Europe. Participants will have the opportunity to exchange experiences, didactical concepts and teaching methods. For more information visit: [www.science-on-stage.eu](http://www.science-on-stage.eu) or contact: [info@science-on-stage.eu](mailto:info@science-on-stage.eu).

**The Scientix European Conference Brussels, Belgium, 6 - 8 May, 2011**  
 This is a unique opportunity to learn more about different science education projects in Europe, get to know the people behind the projects, and share your expertise, knowledge and best practices with colleagues from across Europe. Also, it gives a thorough view of the potential and possibilities of the Scientix portal and community. For more details, visit: [www.scientix.eu](http://www.scientix.eu).

**The British Science Association Award Lectures for researcher-communicators Bradford, UK, 10 - 15 September, 2011**  
 The British Science Association is seeking nominations for its Award Lectures to be delivered during the British Science Festival in Bradford, 10 - 15 September 2011. The Award Lectures recognize five researchers who are also talented communicators and are able to share their work with a general audience. Nominees must be active researchers and have demonstrated outstanding communication skills to a general audience. For more information, visit [www.britishsociety.org](http://www.britishsociety.org).

**IRENEC 2011: 1st International 100% Renewable Energy Conference and Exhibition, Istanbul, Turkey, 6 - 8 October, 2011**  
 This conference pursues improvements in energy end use efficiency and renewable energies. IRENEC, International 100% Renewable Energy Conferences and Exhibitions aim to promote this monumental transformation from fossil fuels to renewable energy sources and to contribute to the 100 percent goal to be reached without nuclear energy or carbon-capture technology. IRENEC 2011, will gather the most notable international audience to share this inspiring but achievable vision and to seize the opportunities and deal with the challenges. For general information, visit: [www.ireneconline.com](http://www.ireneconline.com).

**A new edition of the European In-service training course Schools and Science Museums: Cooperation for improving Teaching, Learning and Discovery, Munich, Germany, 5 - 10 December 2011**  
 Aimed at teachers and museum educators, the objective of this course is to develop knowledge and competences in science education using museums as educational resources. It takes place at the Deutsches Museum in Munich and is conducted by experts from Belgium, France, Germany, Hungary, Italy and Spain specializing in museum education, science education, teacher training, research and evaluation, and new technologies. Participants will enjoy lectures, round tables, museum visits, interactive workshops and practical activities. The working language will be English but materials will be available in different languages. Teachers and museum educators can apply for funding through Comenius or Grundtvig grants. For more information, visit: [www.museoscienza.org/smec/courses\\_sixthed\\_eng.htm](http://www.museoscienza.org/smec/courses_sixthed_eng.htm)

**12th International Public Communication of Science and Technology Conference Florence, Italy, 18 - 20 April, 2012**  
 This conference will be held for the first time in Italy, at the Palazzo dei Congressi in Florence. The Italian bid was selected after a rigorous competition with other cities. The theme of the event will be Quality, Honesty and Beauty in science and technology communication. Proposed areas of analysis include science journalism, science communication and science in society research, science museums and communication activities by research institutions. Plenary speeches will be delivered by key international experts in science communication research and practice. Visit the conference website for more information: [www.pcst2012.org/](http://www.pcst2012.org/).

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If you wish to receive information about the Corporate Donorship programme, please contact the Ecsite Executive Office in Brussels: [info@ecsite.eu](mailto:info@ecsite.eu) • <http://www.ecsite.eu>

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