

EUROPEAN  
BIOTECH  
WEEK

**The Evolution  
of the Revolution!**

2013: 1<sup>st</sup> ever European Biotechnology Week

Check our events: **p 4** Belgium | **p 6** Finland | **p 10** France – Germany | **p 11** Ireland | **p 12** Italy  
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"I very much welcome the launch of European Biotechnology Week. Crick and Watsons' breakthrough discovery sixty years ago opened up a whole new area of scientific research. They laid the foundations for cutting edge European research that is now enabling scientists to develop medicines tailored to the specific needs of individual patients, to find more efficient ways to use scarce resources like water and to develop new ways of producing essential chemicals and materials while protecting our environment. Europe is in the lead in many of these areas, and our biotechnology industries have an important role to play in Europe's economic growth and provision of high quality, long term employment across a range of sectors. This is why we support biotechnology research through the Framework Programme, and as a signal of continued support, biotechnology has been identified as one of the Key Enabling Technologies (KETs) that will be supported under Horizon 2020."

*Máire Geoghegan Quinn*

Máire Geoghegan Quinn

EU Commissioner for Research, Innovation and Science



## Participating Biotech Associations



BIO DEUTSCHLAND



# Biotech takes the floor!

The decision to launch an annual European Biotech Week comes at a time in Europe where knowledge and understanding of this vibrant science and industry is still too low compared to its actual contribution and increasing potential to respond to some of society's most pressing challenges including helping Europe out of its economic predicament.

The very 1<sup>st</sup> European Biotechnology Week took place across Europe between **September 30 and October 4, 2013** to mark the pivotal moment that **Watson and Crick discovered the structure of DNA 60 years ago**.

Thanks to that discovery, the deeper knowledge of genes, proteins, viruses, bacteria and genetic structures in general has allowed scientists and biotech entrepreneurs to translate knowledge into applications in sectors such as healthcare, agriculture, food, energy, water sanitation and biochemical processing, all of which have changed the world for the better.

## Raising awareness of the benefit

However, the contribution of biotechnology in terms of better health, safe and more affordable food, more sustainable and effective industrial processes, as well as greener products, is not common knowledge in Europe. There is a need to engage with all stakeholders in science-based discovery and discussion about the facts and benefits offered by this incredible science and its application in our everyday lives.

**For the first ever European Biotech Week**, European National Biotech associations joined forces with universities, charities, large and small biotech companies, and the general public to highlight biotech's achievements to date and to debate future opportunities for this booming industry, and Europe's role within it.

## Close to 100 events across Europe

Close to 100 events took place across Europe to highlight just that: from science cafes for students and company open days, to theatrical performances, art work displays and roving laboratories, there was something to catch the eye and imagination of anyone with a curious mind.

The week saw policy debates in individual member states about the incentives and obstacles faced by scientists, entrepreneurs, academia, end users and students in terms of making the best possible use of biotechnology.

Similar policy debates were held at a European level in Brussels with the 6th European Forum for Industrial Biotechnology and the Bioeconomy as well as a debate at the European Parliament entitled; 'Biotech in 2020: Is Europe still relevant?' with the unveiling of this year's Most Innovative European Biotech SME award.

## Engaging the general public

Member state biotech communities engaged students and the general public through laboratories visits, career fairs, open days in companies and technology museums with interactive expos. Biotech went digital with youtube competitions as well as coming alive on stage through theatrical performances transporting the public into the world of a scientist and his paper-eating clone or in the exploration of how data sharing through social media such as facebook will meet a challenge when we get knowledgeable about our genetic profiles through genomics.

Take a look below to find out what events happened where in Europe during the very 1<sup>st</sup> European Biotech Week . Congratulations to all of the National Associations, companies, academics, school students, and of course the public, who took part this year. It was a great success and we hope to see you all next year for the 2014 edition between 6 and 12 October!



<sup>1</sup> An interactive list of all the events that took place as well as of the media and social media coverage and some of the materials used can be found on the dedicated website [www.biotechweek.org](http://www.biotechweek.org)



# Belgium



## Two week interactive art work display – Brussels

The week began with a public interactive artwork display, showcasing our innovative and vibrant sector, at the European Parliament in Brussels.

Members of the Parliament as well as the general public and school students were encouraged to 'play the DNA game' on our touch screen TV and to learn more about how biotechnology is already a part of our everyday lives. Videos, posters and other educational materials showed a wide variety of biotechnology applications such as: DNA profile

matching, tissue engineering, crop protection, fresher and healthier food, cheese, beer and wine making, stone washing denim, cotton materials, washing clothes at lower temperatures, environmentally friendly bio-plastics, rare disease therapies, vaccines, life-saving insulin treatments for diabetics, and lots, lots more! To see some of the material that was displayed, simply visit [www.biotechweek.org](http://www.biotechweek.org). You'll be surprised at how often you are already using biotechnology every day!

## Biotech in 2020: Is Europe still relevant? And EuropaBio Most Innovative EU Biotech SME Award – Brussels

The EU launch of the European Biotech Week came in the form of a debate at the European Parliament entitled; 'Biotech in 2020: Is Europe still relevant?' which attracted an audience drawn from industry, policy, media and patient groups.

The event discussed Europe's future in the global biotech sector, and whether Europe is equipping itself with the right policy framework to encourage innovation, and importantly, retain it. Key speakers included Jean-Paul Kress, President & CEO of Sanofi Pasteur MSD; US venture capitalist, G. Steven Burrill, founder and CEO of Burrill & Company; Jim Philp, Director for Science, Technology and Industry at the

OECD and MEPs Kay Swinburne and Philippe de Backer.

During the event, the winner of the 2013 'EuropaBio Most Innovative European Biotech SME Award' was named. **PsiOxus Therapeutics** saw off tough competition from four other finalists to be deemed the overall winner, due to their radical research and innovative breakthroughs in meeting societal grand challenges in the field of healthcare. The company is committed to developing a new approach to cancer therapy, by using oncolytic vaccines that are potent killers of cancer cells, but with minimal effects on normal healthy cells.



*Runners up and judging panel of this year's EuropaBio Most Innovative EU Biotech SME Award pictured with the winner, John Beadle of Psioxus Therapeutics*

*Site visit to Crop Design in Ghent*



*Participants network at the EuropaBio 'Biotech & Beer' reception, which followed on from the Biotech in 2020: Is Europe still relevant? Event*

## CropDesign site visit – Ghent

**A visit to the new BASF CropDesign facility in Ghent took place on 3<sup>rd</sup> October.**

More than 20 visitors from European and national Belgian Institutions and industry stakeholders were there to receive a tour of the labs and green houses and to hear from Crop Design's CEO Wim Van Camp and BASF Vice President Matthias Meder on current innovative research in plant biotechnology, as well as EuropaBio's Beat Spath on regulatory hurdles and opportunities in the EU. The visit furthermore marked the

30<sup>th</sup> anniversary of the first successful introduction of a gene into a plant, enabling the starting point of genetic modification (GM). Ghent is the birth place of GM technology, and today holds the highest concentration of plant biotechnology companies in Europe. BASF is part of this top-notch-network and has recently moved its CropDesign R&D centre into a brand-new building, consisting of more than 3500sq metres of labs and offices and a high-tech rooftop greenhouse.

## European Forum for Industrial Biotechnology – Brussels

The European Forum for Industrial Biotechnology and the Biobased Economy (EFIB) opened to a record delegation in Brussels at The Square.

Now in its 6th year, EFIB successfully made the transformation from a small specialised conference to a market leading, pan European flagship event for this vibrant and dynamic sector of Europe's bioeconomy.

The event had 700 delegates in attendance, 45 exhibitors and 20 technology showcase presentations. They took place alongside a formidable programme of senior leaders including Belgian Ministers, a record number of European policy makers and CEOs from Galactic, Ecover and several other multinational companies.



## Workshop for students at Université Libre – Brussels

A workshop was held for students from the Université Libre de Bruxelles (ULB) and members of the Belgian political, business and NGO communities.

A group of students enrolled in master's programmes in communication and information received the highest grade from an academic jury

for their work on genetically modified organisms (GMOs) conducted over the last semester. Students were assigned to look into the debate around GMOs in Europe, using the 2012 GM maize feeding study carried out by Seralini et al as a case study to analyse how the media report on this topic and the various interests at stake.



# Finland



## Finland's Science Education Centre LUMA celebrated European Biotech Week 2013

A variety of events took place at Finland's Life Science Education Centre, LUMA, including workshops, themed articles and an on-line competition.

Interactive workshops were organized every evening in the Chemistry Lab Gadolin and in the LUMARTS laboratory to introduce teachers to practical biotechnology experiments. Workshop topics included building a functional electrophoresis machinery from kitchenware,

biochemical separation techniques for milk and microbiology approaches to enzyme production. An on-line competition was launched with a multiple-choice question on biotechnology appearing daily. In addition, biotechnology-themed articles were published in national web-magazine LUMA Sanomat to support teachers with up-to-date information and to provide source material for classroom use.

## Chemistry and bioeconomy –seminar organized by the Chemical Industry Federation of Finland – Helsinki

The seminar was held in Helsinki and brought together almost 80 representatives from companies, state management and research institutes.

Presentations were given by Neste Oil, DuPont, Kiilto, Forchem and FIBIC, the Finnish Bioeconomy Cluster. The Federation published results from the bioeconomy survey carried out in its

member companies, and the seminar ended in a lively discussion on the actions needed to further develop the bioeconomy. The important messages were that multisectoral co-operation is crucial and that the use of biobased raw materials and biotechnology in the chemical industry has increased and will further increase in the near future.

## Seminar on the Life Science, Chemical and Pharma Industry – Turku region

The seminar introduced the impact of the powerful life science, chemical industry and pharma industry in the area of Turku and the vital importance of big pharma companies to the economy and employment of the City of

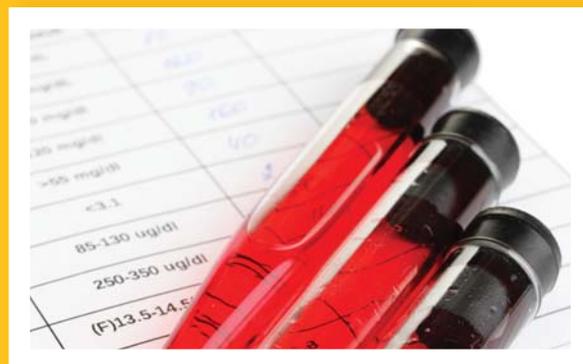
Turku. Turku is a long established centre of excellence in Finland for the healthcare life sciences sector due in no small part to the high level of university research and the well-functioning ecosystem.

## Seminar on Biobanks

**New biobank legislation entered into force in Finland on 1<sup>st</sup> of September 2013.**

The purpose of this legislation is to support research that uses human-derived samples, to promote transparency in the use of samples, and to safeguard the privacy and integrity of the samples in dealing with biobanks.

The first biobanks start their operations already in 2013 and 150 experts came together to hold a seminar during the European Biotech Week to discuss key issues such as data protection. The focus of the seminar concentrated on the establishment of new biobanks and their importance as potential research tools.



## Challenges and opportunities of Genomics to healthcare – Helsinki

A seminar on how we can prepare for the challenge of human genome sequencing was held in Biomedicum, Helsinki.

130 experts discussed the various ways in which genomic data will change patient care and the subsequent development of next generation sequencing methods. Entire exomes and genomes can be sequenced with remarkably low expense and genetic data is quickly becoming an integral part of health care.



This imposes several challenges to health care and to societies in information technology, economics, legislation and ethics, to name but a few.

## Jubilee seminar – Helsinki

A jubilee seminar presenting the societal benefits of all three sectors of biotechnology, healthcare agricultural and industrial applications was held in The Finlandia Hall, Helsinki. The opening speech was given by MEP Sirpa Pietikäinen, and the plenary lecture by Director Marja Makarow from the Finnish Academy. The seminar ended with an open panel discussion

which included a member of the Finnish Parliament from the Green party. The seminar was covered in several newspapers including the most important business newspaper in Finland, Kauppalehti.



*MEP Sirpa Pietikäinen*

## Demonstrations and lectures on molecular life sciences and biotechnology, as well as learning opportunities for plant biotechnology research – Viikki campus

Presentations of what it's like to study biotechnology were given by students and lectures alike attending the University of Viikki to high school students wondering about joining this incredible area of science.

A greenhouse tour and demonstrations on plant biotechnology research gave visitors the

opportunity to learn how transgenic gerberas and strawberries are used as research material in flower developmental biology projects.



## Life After PhD Career Fair – Tampere

“Life after PhD – Find your future in biosciences” – seminar was organized in Tampere, Finland, by the Doctoral Programme in Biomedicine and Biotechnology, University of Tampere. Presentations by twenty excellent speakers from multiple fields provided a wide spectrum of career advice to PhD students.

Additionally, a CV workshop was arranged to provide evaluation on job applications. The event was followed by a networking cocktail between students and industry representatives.

## The Northern Highlights of Biotech and Health seminar – Oulu

The Northern Highlights of Biotech and Health seminar was held in the University of Oulu, offering the participating PhD students and researchers the opportunity to meet people from business development organizations, biotech companies, clinical laboratories and research organizations.

Speakers provided interesting overviews on clinical laboratory services, printed intelligence, food safety, local activities in drug development, and the importance of university-industry

collaboration in biobusiness. They included; Leila Risteli and Tommi Vaskivuo (NordLab), Marja Nissinen (Oulu University of Applied Sciences), Riitta Laitinen (MTT Agrifood Research Finland), Mari Leppilampi (Business-Oulu), Minna Komu (Admescope Ltd) and Johanna Myllyharju (Biocenter Oulu and Fibrogen Inc). The seminar was organized by the Working life and business skills for PhDs -ESF-project, Biocenter Oulu Doctoral Programme and Biocenter Oulu.

## Turku Crosslinks – Seminar on Microbiota and Human Health

Professor Pentti Huovinen opened the seminar telling how microbes are linked, not only to disease like type 1 and 2 diabetes and inflammatory bowel diseases, but also how they effect brain functioning.

Microbes seem to have far more connections to the human health than previously thought. Following on from the presentations experts in nutrition, genetics, immunology, oral health, endocrinology, diagnostics, drug development, bioinformatics as well as clinical medicine gave advice to the audience members.



## BIO-TIC workshop encouraged Finnish IB experts to debate, review and co-create an IB roadmap for the European Union

BIO-TIC, a European Commission funded project for Industrial Biotechnology, establishes an overview of the barriers to biotech innovation and aims to find solutions to accelerate the uptake of industrial biotechnology across Europe.

The Finish workshop brought together experts to discuss the current status and future of IB in Finland and more widely in Europe. The results of the workshop will be communicated in the BIO-TIC LinkedIN pages and incorporated in to the IB roadmaps produced in the project. More information about the BIO-TIC project: <http://www.industrialbiotech-europe.eu>



# France



## “Rendez-Vous de Concarneau: where Industry meets Science” – Concarneau

Approximately 60 people took part in the 5<sup>th</sup> edition of the Rendez-Vous de Concarneau that took place during the first European Biotech Week, where topics discussed included ERA Net Marine Biotech, Artic Sea and Fisheries and Aquaculture.



## Site visit to Roquette – Lestrem



In Lestrem, the largest biorefinery in Europe opened its doors to students and lecturers from the University of Lille. They had the opportunity to discover the site, the maize starch plant, and after to visit biotech pilots and an application development center.



# Germany



Germany Youtube event

BIO DEUTSCHLAND

## Digital showcase – German biotech companies compete on YouTube

The German biotech association BIO Deutschland hosted an interactive online media event where participants were asked to present a video clip in a specially created YouTube channel and compete with each other for the most clicks.

The tagline of the concept “Show us what you’ve got” allowed the participants

to portray an entertaining and informative picture of the German biotechnology industry. Underlining the diversity of the biotech sector, the videos showed a wide range of themes, including biotech material used to bake a pizza, treating infectious diseases, producing biofuels and using DNA analysis to identify war victims.



## “Flesh and Blood”: Genetics meets Genealogy – Dublin

**Until recent years the genealogist or family historian was dependent on public records, church registers and other archival materials to find evidence of their ancestry.**

Genetic techniques can now prove the linkage between individuals and their ‘lost’ family connections and are becoming a powerful tool for genealogists and family history enthusiasts. They also have huge relevance for historians and archaeologists.

Over 50 people attended the BioConnect Ireland event on Genetics and Genealogy in Dublin to gain an insight into the technologies and the companies that are offering genetic genealogy services and their approaches.

The event entitled, “Flesh & Blood – Genetics meets Genealogy” was addressed by experts in the genealogy area with the relatively new twist of using genetic research techniques to trace ancestors and relatives.

Professor of Genetics at Trinity College Dublin, Daniel Bradley provided an overview of the genetic approaches to determination of human origins and familial connections.

He is currently researching the genomes of ancient humans and animals, which promises to be a very interesting area of research in the years ahead, both for historians and scientists.

Dr. Maurice Gleeson introduced genetic genealogy, and presented an overview of the companies involved, the services they provide and what the future might hold for this sector.

Finally, Dr Tyrone Bowes explained how the results of a commercial ancestral Y-DNA test can pinpoint where ones direct paternal ancestor lived approximately 1000 years ago. Dr Bowes is an experienced Biotechnologist and the creator of the Irish, Scottish, and English Origenes websites, where he works full time as a Genetic Genealogist. His method of pinpointing a paternal origin exploits the link between the Y chromosome, surname, and land, which are typically passed along the paternal line.





# Italy



## Opening Ceremony, in collaboration with National Committee for Biosafety, Biotechnology and Life Sciences – Rome

The event took place in Rome and was dedicated to exploring the contribution of biotechnology in different sectors, 60 years after the

discovery of the structure of DNA. The event was attended by about 60 people.

## Growth and competitiveness of Italy: the role of biotechnology – Rome

**A debate took place in Rome, in collaboration with EY Italy, regarding the role of biotechnology for the Italian economy.**

The European Commission has identified biotechnology among the Key Enabling Technologies (KET) able to contribute, in terms of added value, to the management of the many

challenges that our society is facing in terms of health, agriculture, energy and the environment. The event included a policy discussion on a strategy to use biotechnology as a tool for growth and competitiveness, as well as ways to develop youth employment in Italy and was attended by about 50 people.



## Quality is in the DNA – Lodi

The meeting in Lodi, hosted by the Parco Tecnologico Padano was attended by approximately 100 stakeholders from companies and research institutes alike. During the meeting the focus was on the relationship between DNA and agri-food products and quality control systems via DNA analysis.



## The importance of being DNA – Milan

**In collaboration with CusMiBio, University of Milan – Faculty of medicine and surgery**

This event celebrated the anniversary of the discovery of the structure of DNA, illustrated the history of this molecule and the enormous impact of molecular biology discoveries on

scientific research and society. Visits to advanced research laboratories (in groups, open to all) and laboratory activities that illustrate applications of molecular biology (for high school students) were also included.

## Biotechnology and quality of life – Genoa

**The event in Genoa explored the topic of large research infrastructures at European level, focusing in particular on the role that biobanks play in research.**

The event was attended by about 70 people and was organised in collaboration with the Ligurian regional poles on Life Sciences: Tecnobionet, Si4life, Politecmed, and the National Centre for Biological resources.

## Universities and Biotech Companies: together for research and development of innovative drugs – Milan

**In 2030 it is estimated that 80% of new drugs will be derived from biotech.**

How are Universities preparing to take up this challenge? How can we promote and enhance technology transfer between universities and biotech companies? A symposium, held at the

University of Milan, compared the views and experiences of representatives from the world of research, academia and biotech companies in the pharmaceutical field. Two case studies were presented: Telethon - GSK and Telethon - Shire.

## Biotechnology in medicine – Naples

Biotechnology is a resource for the development of new drugs, innovative and more effective therapies and new diagnostic tools.

In such a context, the collaboration with research institutions is certainly a model that has proved to be virtuous. The event in Naples, organized in collaboration with Telethon included around 30 participants and compared the views and experiences of representatives from the world of research and biotech companies in the pharmaceutical sector.



## Biorefi

**What are biorefineries, where does the biomass they use come from, and what are the implications for soil and agriculture?**

These were the topics discussed at an event in the University of Turin, with expert insights from industry representatives such as Novamont, Biochemtex and Novozymes, as well as universities, research centers and farmers' associations.

In the afternoon, a round table discussion took place, entitled “Bioeconomy to overcome the economic and environmental crisis”, with Member of the EU Parliament Paolo Bartolozzi,

## – Turin



Rapporteur of the “Bioeconomy Dossier” in the European Parliament. The event was attended by about 125 people.

## Biotechnology and bioeconomy: A round-table discussion on regional and national measures to foster biotechnology – L’Aquila

The section of the National Association of Italian Biotechnologists in Abruzzo organised the event, which was aimed at involving the main regional actors in order to underline the potential, the perspectives and needs of the biotech sector. The event was attended by about 45 people.





*Innovating for growth , Naples*

## **Innovating for growth: a bioeconomy for Italy – Naples**

The bioeconomy was explained in detail to approximately 300 high schools students in the Campania Region, with presentations by expert academics, clusters managers, start-up biotech companies and DSM Capua, the Italian subsidiary of the Dutch multinational biotech company.

In the afternoon, students attended the “The DNA meets Facebook” theatrical performance. These events in Naples were held in collaboration with Assessorato al Lavoro e alle Attività Produttive del Comune di Napoli, Ufficio scolastico regionale per la Regione Campania, Università Suor Orsola Benincasa and Technapoli.

## **Molecular biology in the development of innovative diagnostic systems – Rome**

Molecular biology has allowed us to revolutionise diagnostics, allowing us to perform previously impossible analysis of many diseases and reducing diagnosis’ costs, thus increasing sustainability of the national healthcare system.

The event, in collaboration with the National Institute of Health, provided the opportunity to discuss these important topics, with the support of representatives from the clinical, academic and industrial world. The event was attended by about 120 people.

## **New frontiers for genetic and Agriculture: plant biotechnology in Italy – Florence**

The event in collaboration with Enea and Accademia of Georgofili, was focused on the evolution enabled by gene transfer in plants, and the new improved techniques of cultivated

varieties: the multiple applications of green biotechnology were analysed and compared in a global and local context. The event was attended by about 100 people.

## Technology transfer and enterprise creation – Milan

How can we enhance research and innovation and create business for biotech companies? The event, in collaboration with NetVal and PLG

and Acquario e Civica Stazione Idrobiologica, explored the themes of technology transfer and incentives for biotech start-ups.

## The future of Biotechnology – Milan

Meeting and discussion with first year students at the University of Milan, studying Medical Biotechnology, Veterinary, Pharmaceutical,

Industrial and Environmental; Plants, food and agri-environment.

## FutureCamp Europe: Biotech – Milan

**FutureCamp Europe offers a detailed overview of the jobs of the future in the areas that present the greatest opportunities for development.**

FutureCamp Europe is a format that provides an interactive and open debate aimed at young people, teachers and parents interested in discovering and understanding how to orient

themselves in the professional fields emerging in Europe in the near future. The event offered participants the opportunity to analyse the areas Biotech / agro-food, health and industrial applications through the experiences and skills of business representatives, Universities and Research Centres. The event was attended by about 130 people.



## Theatrical performance: The African clone, Coleretto Giacosa – Turin

Theatrical performance, on the adventure of a researcher and his unpredictable clone, “built” in a biotechnology laboratory and able to digest any form of paper, becomes a moment of reflection on the role of science and scientists in a

world having reached a complex technical and scientific level. A play on our society’s contradictions and on human limits in the understanding of life’s secrets.

## Theatrical performance: DNA meets Facebook – Naples

**The theatrical performance in Naples, was based on a Sergio Pistoï book, awarded by the Literary Award “Galileo 2013”.**

More than 100 people gathered to hear the story of a new world of genomics that allows us to

look in our genes obtaining information about future risk of disease, tolerance to drugs, genealogical and ethnic profiles, and the meaning of sharing this data in social networks.

## Genetically, art: The genes of art – Milan

An artistic reinterpretation under the theme of Water was held in Milan, in collaboration with the Nuova Accademia di belle Arti. Water was

chosen as a theme because it is the source of nourishment and life. Expo 2015 elected it as a central theme to feed the planet.



## Play Decide @ BiotechWeek: biotechnologists today and tomorrow – Bologna

PlayDecide is a discussion game to talk in a simple and effective way about controversial issues. It is a project of UNIAMO, the Italian Federation of rare diseases.

The perspectives of synthetic biology were analyzed and debated by more than 100 students playing different roles: patients, politicians and professionals in research, treatment and government.

## PlayDecide: Stem cells and Orphan Drugs – Palermo, Bari and Lecce

At three separate events, held in Palermo, Bari and Lecce, stem cells and orphan drugs issues were analyzed and debated from the different points of view of many key players: rare disease patients and all professionals in research,

treatment and government (researchers and associations, health professionals, students, institutional representatives). The discussion also analysed the social impact of the ethics, science and economics behind stem cell research.

## VI Foresight Training Course, “Biotech and Innovative Science to meet Patient Needs” – Bari

The Foundation for Pharmacological Research Gianni Benzi Onlus and the District High Technology H -BIO Puglia organized the VI Foresight Training Course entitled in Bari “

Innovative Biotech and Science to meet patient needs”, which addressed the issue of how biotechnology and Innovation can meet the treatment needs of patients.

## NovartisBioCamp Italia 2013 – Siena

**The Novartis BioCamp Italy was held for the first time in Siena, in the Novartis Vaccines and Diagnostics Research Center facilities. Thirty students from Italian Universities, selected from 1,600 applications, had the chance to meet high profile Novartis speakers, as well as top tier research and management experts.**

The participants were able to increase their understanding of R&D in companies which are leaders in the biotech and pharma fields, such as Novartis. They were also encouraged to open their minds to University/Industry cooperation. They were involved in discussions about the entrepreneurial approach to research, generated by the presentation of successful startup case studies.

In order to make the experience as concrete as possible, participants had the chance to visit the labs at the Novartis Vaccines and Diagnostics Research Center, to talk with researchers and to be part of a team exercise case study, leading to a presentation of a research project to investors.

The Italian Minister of Research endorsed the initiative and relevant institutions openly endorsed the Novartis commitment toward R&D and growing young talent.

## Genes in laboratory @ START Laboratory of Creative Cultures – Bologna

Child-friendly experimental labs for science experiments, as well art and technology

workshops we located in four different areas of Bologna.

## Baby Science Lab @ START Laboratory of Creative Cultures – Bologna

A baby science lab was set up in a padded area for young children and their families in Bologna, where sensory activities, experiments cognitive games and stories were heard, to allow children to learn about science through touch, observance, measurement, and sight.

While children were taking their first steps towards scientific discovery, accompanying adults had fun learning something new about micro-organisms, genes and technologies.

## DNA AperiNight @ Life Learning Centre – Bologna

In collaboration with Fondazione Marino Golinelli, a White Night for the general public took place at the Life Learning Center Bologna, the first Italian center for training and research on life sciences where, for the past 13 years, thousands of students experienced laboratory activities in the field of genetics.

Researchers, animators and students conducted experiments, demonstrations and games to highlight how biotechnology can be used, for example, in the control of food quality, improving food production, in cultivation and botanical studies, in archaeology and paleontology and in medical research.



*Students visit a biotech company in Siena*

## Sherlock and Watson at the discovery of DNA @ START Laboratory of Creative Cultures – Bologna

In Bologna, fun and interactive activities, animations, and lab experiments revealed the discovery of DNA and its applications, to children, teens and families. Microscopy, DNA extraction techniques, simulation of a police

investigation that enabled the comparison of trace DNA samples belonging to different individuals to discover the culprit, games and experiments to simulate the work of the archaeologist were some of the exciting activities that took place.

## DNA on the Road @ Piazza Re Enzo – Bologna

The Car Lab, the mobile laboratory of Life Learning Center, arrived in the center of Bologna with pipettes, electrophoresis cells and microscopes, to involve the public in demon-

strations, workshops and discussions about the history and applications of DNA and open new frontiers in the field of medical, agricultural, food, and art.

## Genes in laboratory @ START Laboratory of Creative Cultures – Bologna

An interdisciplinary course was held in Bologna to observe the intertwining world around us, through the eyes of the artist and of the scientist. Activities included: photographs and works by young contemporary artists that evoked

images of living organisms, cells and genetic fingerprinting; construction of origami in the shape of DNA; animated readings and experiments for children.



## Genes in laboratory @ START Laboratory of Creative Cultures – Bologna

This event in Bologna invited artists and scientists to explore the laws of genetics, with the aim of creating jewelry that contained scientific codes. The participants were able to prepare

and wear a bracelet of beads arranged with the DNA codes of a butterfly, and a necklace colored with the genetic traits of some plants.

## i.lab Biotechnology e i.lab Genetics: DNA in your pocket – Milan

i.lab Biotechnology e i.lab Genetics gave an opportunity to second level students to scrape, separate, extract DNA using enzymes, soap

and toothbrushes. The end result was two meters of DNA that are present in the cells in each of our own bodies.

## i.lab Biotechnology e i.lab Genetics. Meet the expert – Milan

A debate with researcher Massimo Galbiati, Department of Biosciences, University of Milan – on Platform Models Plants, took place for

teachers in order for them to learn more about the state of research in the world of biotechnology and genetics.

## Biotech Lab – Milan

In collaboration with Acquario e Civica Stazione Idrobiologica di Milano, and the Centro di Genomica Traslazionale e BioInformatica, Istituto Scientifico San Raffaele and l'Università Vita-Salute San Raffaele, some simple science

experiments were proposed under the first Italian edition of the European Biotech Week.



## Sunday dedicated to Biotechnology – Milan

The museum della Scienza e della Tecnologia Leonardo da Vinci, in Milan offered visitors a chance to participate in experimental activities

such as an interactive i.lab dedicated to Genetics and Biotechnology.



## Open Doors – across Italy

Visits to research laboratories and biotech companies took place throughout the Italian edition of European Biotech Week:

- **Abbvie** – Campoverde di Aprilia (LT)
- **Areta International** – Gerenzano (VA)
- **Clonit** – Milano
- **CNR**
- **Istituto di Fisiologia Clinica** – Pisa
- **Istituto di Biomedicina ed Immunologia Molecolare** – Palermo
- **Istituto di Biochimica delle Proteine** – Napoli
- **Fleming Research** – Milano
- **Grape** – Alba (CN)
- **IGA Technology Services** – Udine
- **Merck Serono** – Colliere Giacosa (TO)
- **MolMed** – Segrate (MI)
- **Parco Tecnologico Padano** – Lodi
- **Porto Conte Ricerche** – Santa Maria La Palma (SS)
- **Toscana Life Sciences** – Siena
- **ViroStatics** – Sassari
- **Xeptagen** – Marghera (VE)



## Lithuania



### Life Science Action Lab- Informal conference for students and young scientists – Vilnius

More than 100 participants gathered over the course of two days at the Communication and Information Center, Vilnius University, to take

part in workshops and open days about biotechnology.

### Cafe Scientifi – Vilnius

At a Caffe in Vino, Vilnius, more than 30 people came to discuss Stem Cell therapy and its

potential for changing the way we treat patients.



Students take part in the Life Sciences seminar at the Institute of Biotechnology, Vilnius University

## Seminar on Life sciences for school children – Vilnius

A two-day seminar for school children in Institute of Biotechnology, Vilnius University.

This year, five teachers and sixty three school children from all over Lithuania took part in the seminar. Two lectures were included in the

programme of the seminar. Participants were also give a choice of half- day science experiments that they could take part in, to give them a hands on feel for what it's like to work in or study biotechnology.



## Netherlands



## DNA cocktail Party – Delft

The Dutch edition of Biotech Week was kicked off in Delft with a 'DNA cocktail party'.

Speakers from DSM, BE-Basic, Bioprocés Pilot Facility, HollandBIO en the Technical University Delft discussed the results of 60 years of DNA research and the important role of biotechnology for the development of a sustainable biobased economy. Students also had the

opportunity to present their view on the future of biotechnology. BE Basic announced that they will invest two million euros for an education programme dedicated to biobased economy.

During the event, a hair sample from 60-year old representatives from the university, was taken and will be stored for the next 60 years, only being thawed in 2073 for DNA research.



*Basic invests 2 million euro in biobased economy education in the Netherlands*



## Launch of European Executive MBA Biotechnology

HollandBIO, in collaboration with DuPont, organized a seminar about entrepreneurship in life sciences.

The main topics were: How to become a successful biotech entrepreneur and manager, and what is the role of training and education in this process? For many years HollandBIO has organised with great success the Dutch BioBusiness Masterclass, and in February 2014,

the first edition of the Executive MBA Biotechnology will be launched at the University of Leicester. This accredited MBA programme is targeted for professionals working in the broad field of life sciences and organized in collaboration with HollandBIO. Please contact Vincent Pieterse ([vp111@le.ac.uk](mailto:vp111@le.ac.uk)) if you would like to have more information about this MBA programme.



## Debate with members of Dutch Parliament on 25 years of biotechnology in the Netherlands

During the HollandBIO MPs Debate, Anne Will Lucas (VVD), Sjoera Dijkers (PvdA) and Annemiek Verkamman (HollandBIO) discussed the value and role of biotechnology for the Dutch economy.

Sjoera Dijkers focused on the opportunities of biotechnology for agriculture and global food supply. In addition, Anne Will Lucas and

Annemiek Verkamman discussed the ideal business environment for innovative life sciences companies and how the top sector policy, combined with newly announced tax measures, can contribute. Anne Will Lucas announced a new 45-points plan for innovative SMEs. Her initiative aims to provide start-ups with better support to develop their companies.

## Keygene symposium: Wat do we eat tomorrow, the future of our food

At the Dutch biotech company Keygene the future of our food was discussed in a well-attended symposium sponsored by HollandBIO.

Expert speakers gave their vision on the subject and came up with interesting and surprising

insights and solutions. One of the conclusions was that biotechnology can play a role in the biodiversity and the development of new food crops.



## Romania



### Plants for the future

In Romania, the 'Plants for the future' seminar attracted 37 speakers, professors, students and official participants from the Ministry of

Agriculture and Rural Development, Ministry of Environment (National Agency for Environmental Protection).



*Prof Dr. Erwin Balazs, Prof Elena Rakosy-Tican and Prof Dudits Denes at the "Crops for the Future" seminar in Romania*



# Spain



## Spanish Forum on Bioeconomy – Toledo

**The first Spanish Forum on Bioeconomy took place in Toledo, Spain.**

Among the barriers and factors identified it was the need to improve dialogue and participation among the different actors in the value chain by engaging in these processes not only the industry and the public administration, but also other areas such as agriculture, entrepreneurs, end users and consumers, in order to define measures for the integration of bioeconomy activities and processes in our day to day life.



## 4<sup>th</sup> Biotech Meeting with the Media – Toledo

**In parallel to the Spanish Bioeconomy Forum, the 4<sup>th</sup> Biotech Meeting with the Media was also held at the Toledo Conference Centre, where some of the major biotechnology trends for the future were discussed.**

At this meeting, the managing director of the Health Service of Castilla La Mancha (SESCAM), Luis Carretero, explained that biotechnology is essential for innovation in national health systems. Professor Juan

V. Esplugues, Professor of Pharmacology, University of Valencia, spoke about the revolution of biologic drugs, which are a major advance in the care of serious chronic diseases. In the area of food biotechnology, Soledad de Juan, director of the Antama Foundation, analyzed the situation faced by biotech crops in the EU and how the EU regulation is hindering progress.

## Visit with students at the Repsol Technology Centre – Madrid

**ASEBIO, in collaboration with FEBiotec and AsBioMad, organized a visit with biotechnology students to the Repsol Technology Centre located in Móstoles (Madrid).**

During this visit, students visited the laboratory facilities and were able to discover the importance of biology to develop renewable energy.





# Switzerland



## OECD report launch

Switzerland's health industry has an excellent longstanding reputation throughout the world. As a result, chemicals, pharmaceuticals and biotechnology have been among Switzerland's largest export industries.

The biotech industry in Switzerland benefits simultaneously from the inputs of Swiss world leading pharma enterprises and cutting-edge public research institutions. The report,

launched during European Biotech Week, was produced by the State Secretariat for Education, Research and Innovation (SERI) of the Swiss Federal Department of Economic Affairs, Education and Research and constitutes a voluntary contribution to the Organization for Economic Cooperation and Development (OECD) and the Swiss Biotech Association.

## Regional meeting – Renens

The NTN Inartis, a Network for Life Sciences in Western Switzerland conducted a half day event on the subject of "Process Control in the Medtech & Biotech Industry".

Topics varied from control and automation to robotics in this dynamic segment of Life Sciences.

Key speakers from academia and industry covered the various topics. More than 70 people attended and used the opportunity for networking and one-to-one partnering discussions.

## Regional meeting – Lausanne

More than 100 participants took part in the first Swiss Biotech Day in Western Switzerland, where discussions included the importance of science results, technology transfer practices and regional, national and international networks.

Various case-studies from biotech companies and networks were heard, and innovative ways to accelerate drug development were demonstrated.



*Applied Science Projects explained by an expert in Switzerland*



# United Kingdom



## Cambridge MP roundtable discussion – Cambridge

Representatives from eleven UK biotech companies and the Right Honourable Sir Jim Paice, MP for South East Cambridgeshire took place in a roundtable discussion at Cambridge Science Park.

The lively discussion covered topics such as the UK government’s support for innovation and Cambridge’s position as a life science hub.

Guests emphasised to Sir Jim that market access and appropriate reimbursement are crucial factors for the development of new medical solutions, and also suggested some pragmatic policy ideas the government could explore such as enabling the investment of pension funds into innovative sectors.

(Link to the blog here: <http://bia.me/1eTGcax>)

## Biomedical research charity store public engagement – Peterborough

The UK is unique in Europe in terms of the amount of research and development that is funded by the public’s voluntary donations to medical research charities, such as the British Heart Foundation (BHF).

The BIA, in collaboration with the Babraham Institute and Papworth Hospital, took display stands and interactive activities to a BHF charity

store in Peterborough in order to celebrate this fact with the public. We highlighted the role of biotechnology in developing medical solutions (among many applications!). Children and adults alike learned about cardiovascular medical research, practised resuscitation technique, and took home European Biotech Week balloons.



*Members of the public learn about the role of biotech in medical care at a British Heart Foundation charity shop in the UK*

## European Medicines Agency Day – London

To kick start European Biotech Week in the UK, EuropaBio hosted its first EMA-EuropaBio Information Day.

Prof. Guido Rasi (European Medicines Agency Executive Director) led an EMA delegation composed by Melanie Carr (Head of EMA SME office) and several EMA officials who presented the latest in the areas of healthcare biotechnol-

ogy applications as dealt with by EMA. Approximately 60 EuropaBio members joined the meeting and the very lively discussions on key issues for the healthcare biotech companies: TTIP, personalised medicines, Health Technology Assessment and biosimilars. Speakers also presented the recent EMA reorganisation and the services provided by the SME office.

## World Agri-Tech Investment Summit – London

The World Agri-Tech Investment Summit was held in London during European Biotech Week. With a specific focus on agricultural biotechnology and software-driven precision farming, the summit brought together global leaders in resource-efficient agriculture with the world's most innovative technology developers and the international clean tech investment community.

The inaugural summit addressed the growing importance of advanced agricultural technologies in meeting global food demand, and the

opportunities this presents for the investment community to engage with and support the development of agricultural innovation. Highlights of this year's agenda included Vipula Shukla, Senior Program Officer at the Bill & Melinda Gates Foundation discussing the growing importance of technology in meeting global food demand and Lord Rupert de Mauley, Parliamentary Undersecretary at DEFRA, who presented what the new UK Agri-Tech Strategy means for investors.



*Hon. Adam Malima, Deputy Minister of Agriculture, Tanzania speaking to guests during the World Agri-Tech Investment Summit in the UK*





## Biotech & Agriculture



Plant-made pharmaceuticals

<http://btwk.eu/188kYID>

DNA: Did you know

<http://btwk.eu/17RNGZc>

DNA double helix

<http://btwk.eu/1aEkHDe>

Crime scene biotech

<http://btwk.eu/1845w54>

Insulin

<http://btwk.eu/1e5dPWs>

Diabetes  
Diabetes  
high blood su  
cukula is the

Vaccines

<http://btwk.eu/15mkt0h>

Tissue engineering

<http://btwk.eu/16my4f>

## Biotech & Health

Advanced Therapies

<http://btwk.eu/18WwY5C>

Musculoskeletal disorders

<http://btwk.eu/15TCaMN>

Rare disease

<http://btwk.eu/1d76ZF>

Industrial biotechnology uses enzymes and micro-organisms to convert renewable raw materials, instead of fossil fuels, into biobased products in sectors such as chemicals, food and feed, detergents, textiles, pharmaceuticals and energy

Healthcare biotech is helping you to live healthier for longer by providing you with medical choices and solutions. Currently more than 20% of all marketed medicines is biotech and it is estimated that by 2015, 50 % of all medicines will come from biotech

## Industrial Biotech

Cheese

<http://btwk.eu/14NHLOC>

Bread

<http://btwk.eu/18460rG>

Detergents

<http://btwk.eu/1as7Azc>

Cotton

<http://btwk.eu/19KJ60J>

Crops with improved oleic profiles

<http://btwk.eu/15YCoeD>

Drought resistant corn

<http://btwk.eu/1b8cc0j>

Jeans

<http://btwk.eu/15VELzG>

Bioplastic

<http://btwk.eu/15VELQo>

# EUROPEAN BIOTECH WEEK



### Contact:

Rosalind Travers

Manager Communications and National Associations, EuropaBio

E: [r.travers@europabio.org](mailto:r.travers@europabio.org)

T: +32.2.739.1173

[www.biotechweek.org](http://www.biotechweek.org)