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Official newsletter of the Young European Biotech Network (YEBN). Edited by the YEBN communication task group.

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# Young European Biotech Network

Newsletter | October 2014

Dear all,

Welcome to our newest edition of the YEBN newsletter. We start with our competition: "Your embarrassing lab mistake". Please send in your input, the competition is still running. We also present another, interesting interview of our new series "Careers after studying" on page 2. Staying on the career topic: we have an interesting article about the "I love science" funding platform (page 7), an event report on the "Life after PhD conference" (page 5-6) and two articles about the European Science Forum and how innovation and science go along (pages 3 and 4). In addition, there were interesting conferences in Edinburgh and Barcelona (just have a look at these articles on pages 5 and 6). In Spain, the National Year of Biotechnology was announced

in July (page 4), therefore, many interesting events are sure to follow. At our last two pages we talk about some other important topics: Our personal opinion about supplements is definitely a good read and also check out the link to John Olivers fantastic show. And the piece about Europes battle concerning the chief scientific advisor talks about the future of Science in the European Union.

Enjoy the reading!

The newsletter team

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## Competition: Your embarrassing lab mistake

As all of our Twitter, Facebook and LinkedIn followers have noticed already: we started a competition with the title 'Your embarrassing lab mistake'. People are already sending in their stories. The best ones will be published in the following newsletter editions.

So take your chance, think about your worst lab story and send it to [natascha.sattler@yebn.eu](mailto:natascha.sattler@yebn.eu). In order to protect the guilty, your full name will not be published on request. We are sure that your former mistakes will make other students laugh and feel better about their own failures.

When I started working in a biology lab, I needed to vortex my liposomes to mix them. However, I did not know the name of the machine and therefore wrote in the experimental part of my thesis that I have used a 'Vibrator' for 10 seconds to prepare liposomes (I have seen the vortex vibrate and I thought it should be a vibrator). I sent my thesis for correction, and well, there are still jokes going on in the institute about how vibrators are important in science :D .

A Master student

## Process Performance Qualification Expert

In our section "Careers after studying?" we are interviewing former students of bio-related fields of studies about their career paths. In this issue we are chatting with Sina Mayer, who is working at a big pharmaceutical company as a process performance qualification expert

### Please describe your education and professional career

I did my undergraduate and my Master's degree in microbiology and genetics at the University of Vienna (Austria). During this period, I had the great possibility to spend a year in Finland with the Erasmus program and work there as a Research Assistant in the Department of Process and Environmental Engineering.

In 2007 I moved to the UK to do my PhD in Biochemistry, I was lucky to receive my own research grant for my project. 4 and a half years later I submitted my PhD thesis in Structural Biology on working on malarial proteins. For almost 2 years now, I am working in a biotech company being responsible for process performance qualifications and process transfers.

### Why did you choose this career/field?

After spending more than 10 years in an academic environment I wanted to see how the world outside the walls of the University evolves. I guess I was curious and wanted a bit of a change after finishing my PhD. Moreover, long-term academic positions are rare and I asked myself - What else can I do?

### How did you find your current job?

I attended different career fairs and talked to former colleagues and supervisors about their jobs and experiences.

### What is your daily routine?

Normally, I start my working day checking my email or attending meetings. I spend the main part of my day planning studies or qualifications, reviewing and analyzing data and writing long documents. My position also requires me to attend lots of meetings and workshops. Most of the timelines are tight and priorities can shift quite quickly, so one needs to be flexible.

When health agencies come for inspections it gets a bit more hectic in my department. We need to prepare

presentations and documents for the agencies and must be ready to present them when needed. This time is more challenging and stressful, however I enjoy it.

### What do you like most about your job?

I really enjoy the various aspects my position offers and the interaction with different teams and department of the company. I work closely with the departments of manufacturing, regulatory affairs, process development, R&D and different quality functions.

### What are the most difficult parts in this job?

Long workshops or meetings are quite challenging for me, as I can be quite impatient. Sometimes it can be quite exhausting and time-consuming to reach a decision/ compromise with so many different participants/ stakeholders, who are involved.

Moreover, to draft and finish the different documents/ report I need raw data, rationales and various references from other teams, who are all very busy as well. So one needs to call up people twice or more and be a bit annoying.

### Did any special qualifications help you to find this job?

I believe my proficiency in English helped me to find this job, as almost all documents are in English. My knowledge in protein purification was/ is also quite useful in my daily work, to understand the different downstream process steps, not sure it was important for my hiring manager.

### Any advice you can give to students?

My advice would be to go to different events- job fairs, careers talks ... and talk to people. Sometimes it is difficult to understand advertised job descriptions and to know what you will be doing on a daily basis.

The most important thing, I believe, is to stay positive and not to give up - finding the right job might take some time!

### What did you want to become when you were little?

When I was little I wanted to become a builder, and later on a mathematician.

Interviewee: Sina Mayer, Interviewer: Natascha Sattler

## Event Report

### Science and Innovation do get along!

At ESOF2014, YEBN's Innovation Task Group took up the challenge to organize and conduct a Science-2-Business session on "Unconventional Science Innovators", featuring three enthusiastic young scientific innovators from across Europe. Juan Diego Cordón Toledano (CEO of Grupo Hesperides Biotech, Spain), Eimear O'Carroll (CCO of Restored Hearing, Ireland) and Nicolas Frédéric Delahaye (expert scientist and intrapreneur at GSK Vaccines, Belgium) captivated the audience with their stories of successful innovation, combining scientifically motivated ideas with an explicit willingness to implement change. These are a few lessons learned from them:

A good idea per se or even a patent does not yet make a business. However, once matched to an actual market need and tackled by a group of sharp and dedicated individuals, scientific ideas may readily transform into tangible value.

"At the beginning, you don't need money", recounted Juan Diego his company's origins in the initial phase of getting a good idea off the grounds, especially a pro-active attitude and utter dedication of individual team members will make a project roll or fall. A team's



Photo by Ashwin Narayanan

"superpowers" of successful scientific entrepreneurs and intrapreneurship were named by Nicolas Delahaye to be: crucial knowledge, extreme flexibility, resilience and endurance, mental strength and the inner conviction to provide a solution to a pressing problem. Very few people are born with these skills – most acquire them through experience, including prior failure. It is not without reason that one of the mantras of Silicon Valley, the biggest hotspot of innovation, is "Fail fast, fail early, fail often!".

Next, to building up a supportive network of committed teachers and professors, career and business advisors and even companies themselves may serve as a gate opener to additional business coaching, seed money and needed resources. Ultimately, potential investors will judge a young business by a) the idea at stake (is there a problem in the market that is being addressed and if so, is the problem big enough to earn money on), b) the team as such (do members of the executive board hold complementary skills?) and c) the feasibility of the suggested product (e.g. is there a functioning prototype?). Eimear O'Carroll and her colleague Rhona Togher were proud to present their idea at a Young Scientist competition early on in their careers as entrepreneurs, only to realize afterwards that this public display prohibited them from filing a patent. Luckily, this did not stop them! They further developed the prototype and successfully filed a patent on the advanced version.

At current, most scientists are trained to be experts in their respective fields, but often lack basic knowledge of common business procedures and communication skills, which would enable them to successfully pitch their ideas to non-scientist. If you feel intrigued by the idea of being more innovative yourself, but are unsure on how to possibly get started, you may check out a complementary study program aimed at scientists and designed to enhance a student's practical knowledge on "science based business". Such study programs are now increasing in numbers throughout Europe, as University curricula have started to adapt to the need of equipping a scientist with additional sets of skills to prepare them for career opportunities outside of academia.

Tabea Sturmheit

## The Spanish Secretary of State for R&D inaugurates the National Year of Biotechnology

Last 15th July came the long-awaited inauguration of the Year of Biotechnology in Spain. In a solemn act chaired by the Secretary of State for Research Carmen Vela, the Chairwoman of FEBiotec, María José Conde, exposed the goals and motivations of the Year: to celebrate a sector of increasing importance in our economy and to give the Spanish society some understanding of this matter. Also representatives of the Spanish Foundation for Science and Biotechnology, the Spanish Bioindustry Association and the Spanish Society of Biotechnology were present. These organisations are together with FEBiotec and the Spanish Government, responsible for the organization of the commemoration. Just a small foretaste of what is to come: the National Museum of Science and Technology (MUNCYT) will dedicate a grand new exposition to Biotechnology: from the Neolithic till the 21st century.

Arturo Blázquez Navarro



Photo by Spanish Foundation of Science and Technology

## Bridges to a better future: The Euroscience Open Forum

Science Building Bridges was the theme of this year's Euroscience Open Forum (ESOF). More than 4000 students, scientists, policy makers, entrepreneurs and journalists had gathered in Copenhagen to explore and discuss the advances and challenges of European Science. One of the biggest subjects was actually one of the smallest objects, the Higgs Boson. This long-predicted, sub-atomic particle had been discovered with the help of the Large Hadron Collider operated by the Conseil Européen pour la Recherche Nucléaire (CERN). The range of topics was broad and covered almost every area of science. Unlike most scientific conferences though, discussions focussed less on the technicalities of scientific findings, but rather on the impact that science has on society, healthcare, economy and politics. The science programme included headings like "Green Economy", "The Health Society", "Learning in the 21st Century", and "Science, Democracy and Citizenship". It was refreshing to experience again that science can actually have a meaning which goes beyond lectures, grants and publications.

Besides the actual science programme, there were also sessions about career, policy and Science2Business. One of the latter sessions was organised by YEBN. Based on our goal to promote innovation, we had invited three young scientists who had started their own business. They told us and the audience what it is like to start a company at young age, what help they got on the way

and what obstacles they had to circumvent (see also article on page 3).

As it is with all conferences, the ESOF was a place to meet up with likeminded people to discuss new initiatives and collaborations. As representative of YEBN, I was involved in two major gatherings, both with the intent to improve the situation of students and young scientists in Europe. More than 20 career advisers from all over Europe came together at ESOF for the first official meeting of CARE – Career Advisers Supporting Researchers in Europe. Their aim is to exchange best practices and find out what career support researchers and students really need. They already have a [LinkedIn Group](#) where they post career advice. The 2nd meeting was by the European Young Researcher Platform. This platform consists of representatives from European scientific societies. Together they could be strong enough to influence the policy of the European Commission, especially in regards to issues like career prospects and mobility of young researchers.

In Summary, ESOF is a great event to broaden your horizon and to make a difference in Europe. The next ESOF will take place in 2016 in Manchester, UK. Hope to see you there.

Robert Schwamborn

## **16th European Congress of Biotechnology, 13-16th July**

This July, more than 700 Biotechnologists gathered in the beautiful city of Edinburgh, birth place of many great inventors as well as the first ever cloned mammal, the sheep Dolly. In more than 20 symposia, a broad range of biotechnological topics were covered, from stem cell application, biomarkers, novel vaccines to industrial biopolymer production, plant genetics and synthetic biology. Notably, a large contingency of attendees came from outside of Europe, especially from China and South Korea, indicating Asia's increased interest in the field, and a Memorandum of Understanding was signed between the European Federation of Biotechnology and the Asian Federation of Biotechnology.

A central discussion focused on Europe's bioeconomy strategy, a longterm vision of sustainable development based on renewable resources. We were warned that the success of biotechnology will only be judged by the success of the bioeconomy. A number of speakers urged that Europe must focus more on bio-based chemicals, a message reinforced by impressive plenary talks by experts in the field.

Prior to the conference, young scientists had the opportunity to practice their communication skills at a workshop initiated by YEBN and funded by the Scottish Life Science Alliance. Communication skills are important to get in touch with potential collaborators or future employers, but this is not all. In the first key note speech of the congress, Anne Glover, Chief Advisor to the European President, highlighted how important it is for scientists to communicate with the public, and to talk not only about the risks, but also about the rewards for society.

Scientists also need to step up against miscommunication and fact distortion. A young doctorate presented a mixed view of Biotechnology in Poland, where biotechnology is rejected in food products, with "GMO-free" labelled products being more expensive than "normal" groceries. In contrast, Biotechnology is endorsed by cosmetic companies [1], [2]. Advertisements include many scientific or pseudo-scientific terms, e.g. "DNA Repair Crème", "DNAge Cell Renewal Firming System", and "Co-enzyme Q10 Plus Anti Wrinkle Day Cream".

In both areas, scientists need to make an effort to inform the public better. Less than 50 % of Europeans know that ordinary tomatoes also contain genes [3]. Many of the beneficial effects of anti-wrinkle creams need yet to be scientifically proven, as cosmetics are not regulated in the way that medicines are.

In summary, the 16th European Congress of Biotechnology presented a comprehensive spectrum of the promises and challenges of Biotechnology in the 21st century.

Robert Schwamborn and Calum MacKichan

[1] <http://www.nature.com/nbt/journal/v25/n6/full/nbt0607-617.html>

[2] <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2581859/>

[3] [http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_244b\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_244b_en.pdf) page 57

## **"Life After PhD" Conference 2014**

This year I was fortunate enough to represent my university at the annual "Life After PhD" conference, held at the educational charity, Cumberland Lodge, in the heart of Great Windsor Park. Traditionally, Cumberland Lodge was home to the ranger of Windsor Park, and being the ranger was considered a massive honour and was bestowed upon many notable members of royal families from the past including Prince Phillip and Prince Albert. The charity has, under different names, been based at Cumberland Lodge since 1947. The organisation was backed by Elizabeth the Queen Mother, who was as its patron until her death in 2002.

The purpose of Cumberland Lodge is to inspire conversation between academics, and provide a bastion for scholars to temporarily reside and let their ideas come to fruition, under probably one of the most beautiful

of settings that England has to offer. The residence also boasts a large conference venue, which is used by organisations such as the National Health Service; in fact it is the hosting of such conferences, which provides the subsidy for academic retreats, such as the "Life After PhD" conference I attended.

The aim of the event was to reinvigorate PhD students and help them to understand their value, and develop some key skills along the way. As all PhD students will know, there are many ups and downs along the PhD journey, and dealing with them can sometimes be tough and can have a detrimental effect upon your work. This conference aimed at trying to re-inject the energy and passion into student's work which some of us may have lost. They do this by hosting sessions such as an ice breaker quiz, set in the drawing room occupied by royal families of the past, by providing breakfasts, lunches, dinners, and wine of course, and by hosting individual and team building exercises. In the latter case, the charity encourages a group of 5 - 7 PhD students, each from different disciplines, to come up with an idea for a project, which incorporates skills from each member. This sounded hard to me at first, because as an electrochemist, I was in a group with a psychologist, a fashion designer, a classics with mythology student, an agricultural student, and a lady who had a passion for improving awareness of leprosy in Nigeria. Our group pulled together to come up with a sustainable idea to improve public perception of leprosy, diagnose, cure, reintegrate people, and eventually set up a foundation to create jobs for a long-term community project. Our group won first place along with a second group as our ideas could not be separated. Only pride was won; nothing material was necessary!

Above all else, this conference made me realise my worth and employability. I have not attended things like this before, but after my experiences, I would encourage any PhD student to attend things like this, as they are just as valuable, if not more valuable, in the long term than the PhD itself.

Edward Randviir @RandviirScie

<http://www.cumberlandlodge.ac.uk/>

## Biotech Annual Congress 2014

The 8th Congress of FEBiotech - Biotech Annual Congress 2014 (BAC2014), the largest annual event of biotechnology in Spain and one of the congresses with the greatest impact in southern Europe, was held in Cosmocaixa Barcelona last July.

The event was promoted by the Spanish Federation of Biotechnologists and organized by the Biotech Association of Catalonia. The attendance of more than 350 young researchers, students and entrepreneurs, together with the presence of several featured scientists, such as Dr. Werner Arber, Nobel Laureate in Medicine or Physiology in 1978, Dr. Jean Weissenbach, Prince of Asturias Award for Research in 2001 and Dr. Maria Blasco, King Jaume I for Basic Research 2007 and director of CNIO ensured BAC 2014 to be, without a doubt, a memorable conference.

The Biotech Annual Congress was also a great meeting point and an incredible opportunity for learning and connecting with a wide cross-section of talented people. It promoted several specialized and affordable training courses, related to flow-cytometry (organized by BD Biosciences), science writing (organized by Fundació Dr. Antoni Esteve), biostatistics and project management (organized by IUCT).

The organization and development of the Biotech Annual Congress was possible through the support of several entities and companies, such as Fundación La Caixa, Ayuntamiento de Barcelona, Fundació Dr. Antoni Esteve, BD Biosciences, Laboratorios Conda, Acefesa, IUCT, CNAG, Eppendorf, Universitat de Vic-Universitat Central de Catalunya, Biocat, CRG, Solfranc and iLoveScience. BAC 2014 counted on the collaboration of the Catalan Association of Science Communication and the Spanish Association of Science Entrepreneurs.

Ángela Bernardo Álvarez



## **I love SCIENCE**

Explaining your findings to a lay audience is not an easy task, but getting funding for performing that research might be even harder. "IloveScience" is an online crowdfunding platform that aims to get funding for small scientific projects by disseminating them in a way that all people would understand. This way people might decide to make small donations. All that little money together will allow the development of the project.

"IloveScience" was created by four young professionals in 2012 in Spain. They put together their knowledge in Science, Finance and Web Design to create this platform, which has just been launched this year. The four personally evaluate each project candidate to ensure the technical viability and scientific accuracy before online advertisement. At this stage the researcher must explain the subject of the project and why it is important, to the possible fundraisers. Note:

only projects with short term goals are accepted. The project is then given 60 days to achieve its funding goal, which cannot exceed 10,000 Euros; if it is successful, the researcher will receive the money. Alternatively, if the goal is not reached, the donors will get their money back.

So far, "IloveScience" has successfully funded one project, which aims to develop a new Alzheimer diagnosis method. During the fundraising period Ricardo, the researcher, explained his idea and answered peoples' questions. That way he not only got the money but also awoke peoples' consciousness about that research area.

If you want to know more about this platform, go to <https://ilovescience.es/> you may fall in love with a project and decide to be part of it!

Carmen Aguirre

## Personal opinion

### **Know Your Supplements!**

June 2014, in my opinion, was a great month for America. I'm not American – I'm English; yet I empathize with any person living in the United States, who is coaxed into purchasing dietary supplements due to aggressive marketing tactics. I am of course referring to Dr Oz, the charming American scientist, who markets weight loss supplements such as raspberry ketone and green coffee tablets. The problem is not the fact that he is selling these products, but the way he sells them. In his unscrupulous methods, he basically tells his audience that the tablets are "magic little pills" which will induce weight loss. That was until June 2014, when the American government smelled a rat and invited him to explain himself to congress.

During his interrogation in congress, Dr Oz was flustered under questioning. When the pressure finally took its toll, he admitted that no dietary supplement will work without diet and exercise. Such an admission is huge, and it could spell the start of an awareness for people to not spend too much money on such products without thinking how they really work. There are numerous examples of company marketing strategies which use "science" to market their product, knowing full well that the vast majority of the general public is ignorant to the chemical complexities of their product (I find that the cosmetic industry is probably the worst offender in the UK). This horrible beast must be stamped out across the world.

Thankfully the media (such as CNN) latched on to this story and made the general public aware of the unscrupulous behaviour of Dr Oz. He was rightly berated at length by John Oliver on "Last Week Tonight" (watch it on YouTube – it is funny), yet has since been seen to defend his "miracles".

How does the supplement industry get away with selling whatever they like without real scientific evidence to back up their preposterous claims? The scary thing about this story is that the industry is more or less unregulated, because the regulatory body has no power over the industry. When the regulatory authorities tried to make a stance, the industry issued a rallying cry to get the general public to stop the inquiry. It thus seems

that people are a victim of their own ignorance in this situation, which makes me sad. But for now, I will remain happy that Dr Oz has been cut down to size. I am pleased that the government have made people aware of this, and this is why June 2014 was a good month for America.

As a footnote, anybody who has a query about a claim made by any company can contact the scientific charity, Voice of Young Science (VoYS), and follow their Ask For Evidence initiative, which has resulted in some companies to change their marketing strategies.

Edward Randviir

## The battle over Europe's chief scientific advisor

When Jean-Claude Juncker starts his term as President of the European Commission in November many eyes will be watching how he decides to fill the post of his Chief Scientific Advisor (CSA). The role of the CSA is to provide independent expert advice on science, technology and innovation.

On the 22nd of July a group of 9 NGOs, including Greenpeace, wrote an [open letter](#) urging Juncker to scrap the position of CSA entirely. They claim the position concentrates too much influence on one person.

This open letter prompted many strong responses of the scientific community who are keen to support evidence-based policy decisions at the European level. In all over 50 organisations replied, and their letters contained hundreds of signatories.

The post of CSA was created in 2012 and filled by Anne Glover, previously Chief Scientific Advisor to the Scottish First Minister for five years. Glover's willingness to speak up for science in European politics has made her popular in scientific circles, however, her vocal style has not won her many friends in the NGOs, who are now campaigning for the post to be removed.

A move by Juncker to axe scientific advice entirely would surely send out the wrong messages as to how such decisions are made in Brussels, however, the transparency and the structure of the CSA's role is likely to come under scrutiny. The final outcome will have a strong influence on how scientific are decision at the European level.

In a further development Carlos Moedas from Portugal has been appointed as the European Commissioner for Research, Innovation and Science. The Euroscience organisation [has urged](#) Moedas to help protect scientific budgets from severe cuts.

Calum MacKichan

Check also our  
all new website on:  
**yebn.eu**

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