

EFB Bioengineering & Bioprocessing Section



EUROPEAN FEDERATION OF BIOTECHNOLOGY

Newsletter 2015 – Issue 3

Dear EBBS Member,

In this issue of our newsletter we have some exciting news to share with you.

The European Commission president Jean-Claude Juncker has announced plans to establish a new independent Scientific Advice Mechanism (SAM) which is based on a high-level group of seven researchers who will draw on expertise from around Europe instead of having a chief scientific adviser, see comment below for detailed information.

You will also find an interview with Dr. Ana Cecília Roque in our "Introducing EBBS Board Members" series where she elaborates on her contributions for the section by co-organising the 3rd Applied Synthetic Biology in Europe Meeting (ASBE2016) which will take place next February in Lisbon; watch our social media, more information and registration information is coming online very shortly!

We also have a SynBio Summer School special where our advisory board member Dr. Victor de Lorenzo summarises his EMBO/EMBL summer school which was held in Heidelberg (Germany) last month and my experiences from the 2nd international SynBio summer school (SSBSS2015) in Taormina (Italy) organised in part by Jef Boeke.

Following on from our last issue, Dr. Matthew Edmundson (Univ. of Edinburgh) gives his views on

the EBBS endorsed Advanced Biomanufacturing Conference held in Sheffield in May.

Additionally, Tim and Louise are on the scientific committee for the 17th European Congress of Biotechnology 2016 (ECB2016) for which planning is well underway and registration will open shortly, but you can register your interest already [here](#). For more information and to keep up to date visit www.ecb2016.com and [@ECB2016](#).

We would like to thank our members who are actively in contact with us through our various news channels ([Twitter](#), [LinkedIn](#) and [Facebook](#)). Please, connect with us using these media for the latest news and updates on funding opportunities, conferences and the latest developments in European Biotechnology. You could also use these to network within the section!

We are now hoping for some section board members to take a leading role section activities. Also, this year there are some fantastic conferences. We would especially like to highlight the [Synthetic Biology UK 2015](#) in early September in London organised by [the Biochemical Society](#).

If you would like to share news, job opportunities and stories in our next newsletter, please contact Louise, Tim or myself!

Beatrice V Vetter, August 2015

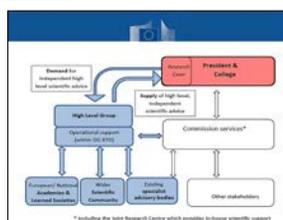
Replacement of EU Scientific Advisor with new independent EU Scientific Advice Mechanism (SAM)

In November 2014, the European Commission abolished the position of chief scientific adviser which was held by Prof Anne Glover, a biologist who was previously Scotland's chief scientific adviser. In May this year, the European Commission president Jean-Claude Juncker has announced plans to establish a new independent [Scientific Advice Mechanism \(SAM\)](#) which is based on a high-level group of seven researchers who will draw on expertise from around Europe. This panel will replace the post of chief scientific adviser and will provide the EU institution with 'high quality, timely and independent scientific advice for its policy making activities'.

Further, the European Commission has just announced the formation of an [independent identification committee](#) namely Sir David King (UK Foreign Secretary's Special Representative for Climate Change), Prof. Rianne Letschert (professor in victimology and international law) and Mr António Vitorino (President of the Jacques Delors Institute & lawyer) to assist in

finalising the composition of SAM where seven internationally renowned researchers are being recruited. SAM is aimed to be operational from autumn 2015. More Information can be found here:

<https://ec.europa.eu/research/sam/index.cfm>
go.nature.com/vlm91



Call for nominations for High-Level Group is now open. All nominations should be made using the "[statement of the qualifications of the candidates](#)" and to be submitted by 10th September by [email](#).



Section Co-chairs:



Dr. Louise Horsfall
[@Lehorsfall](#)



Dr. Tim Overton
[@Overtonlab](#)

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www.efb-ebbs.eu

Contributing Authors:



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(CNB, Spain)
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Dr. Matthew Edmundson
(Univ. of Edinburgh, UK)
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Introducing EBBS Board Members:

Prof. A. Cecília Roque

Universidade Nova de Lisboa (Portugal)

http://sites.fct.unl.pt/biomolecular_eng/home



BIOMOLECULAR ENGINEERING LAB

Can you tell us about your background?

And where are you based now? I am an Assistant Professor and head of the Biomolecular Engineering Lab at Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa. I hold a degree in Chemical Engineering (Major in Biotechnology) and a PhD in Biotechnology from Instituto Superior Técnico in collaboration with the University of Cambridge where I have been a Visiting Scholar. During my PhD I worked in the downstream processing field by developing a small biomimetic of protein L for the purification of antibodies. Following my PhD, I set out to combine synthetic affinity reagents, with smart-responsive materials and sensor devices, which I pursued during postdoctoral projects in England, USA and Portugal. After setting-up my group in 2007, I extended these works with research activities centred on multidisciplinary, application-oriented projects and key technologies.

What is your area of expertise? My current research focus is on biotechnology, namely on the development of novel affinity receptors towards biopharmaceuticals and biologics, and on their combination with stimuli-responsive materials, namely magnetic

nanoparticles, for bioseparation, biosensing and biomedical applications.

What is your current research? I have currently several projects in hand covering the bioseparation, biosensing and biomedical areas. For example, I am working on the development of purification technologies towards viral particles, as well as on the implementation of magnetic nanoparticles in bioseparation processes. My group is also developing stimuli-responsive materials able to detect and identify bacteria, in particular those most prevalent in human infections and associated with antibiotic resistance.

Why did you join EFB/EBBS? I know EFB since my PhD times when I attended several conferences on biochemical engineering sciences. During a meeting organized by EFB in 2013 (Applied Synthetic Biology in Europe meeting) I heard about the creation of EBBS and got interested in joining and contributing with my areas of expertise. I was also interested in getting involved with the organization of scientific meetings and training events and in expanding my network of collaborators across Europe.

Where do you see your contribution as a board member for EBBS? I contribute

by participating in the events organized by EBBS and by participating in the organization of meetings and workshops. The next Applied Synthetic Biology in Europe meeting will be held in early 2016 in Lisbon. I am also on the scientific panel which selects abstracts to be presented at conferences. In addition, my research areas complement the expertise of other EBBS board members.

Where do you see EBBS in the future? I would like to see EBBS as an inclusive platform for networking among academics and industrial partners from all European countries. Bioengineering and bioprocessing can only progress through the involvement of all stakeholders to create attractive and competitive technologies. I think there is a lot that can be done here! In addition, EBBS can also be a platform to involve other non-European countries and to strengthen the interaction and collaboration with those.

Would you share an interesting fact about your persona? My favourite hobby is to draw and paint – it is definitely an activity different from science but with common processes of creative thinking.

Upcoming Conferences & Events

2015

27 July – 10 Aug 2015

[The Cold Spring Harbor Synthetic Biology Course](#)

Cold Spring Harbor, NY (USA)



BIOCHEMICAL SOCIETY

1–3 September 2015

[Synthetic Biology UK 2015](#)

London (UK)

CALL FOR ABSTRACTS!

Extended Abstract Deadline

More info [here](#).



9–11 September 2015

[Bioflavour 2015](#)

Frankfurt Am Main (Germany)



15–19 November 2015

[ACB2015 - Asian Congress on Biotechnology 2015](#)

(organised by [AFOB](#))

Kuala Lumpur (Malaysia)



2016

TBC – early 2016

[3rd Meeting on Applied Synthetic Biology in Europe](#)

Lisbon (Portugal)



3–6 July 2016

[ECB2016 - 17th European Congress on Biotechnology](#)

Krakow (Poland)

Meeting Report: ABC Conference Sheffield

The Advanced Biomanufacturing Centre at the University of Sheffield held the first of what will be annual international meetings on the 18th and 19th of May. Our venue was the Royal Victoria Hotel in Sheffield, with the plenary sessions and conference dinner being held in the rather grand hotel ballroom. After being welcomed by the Centre Director, Professor David James, the first plenary was given by Dr. Christopher Roberts of the University of Delaware, who spoke about different ways of investigating the interactions of proteins with water, solute and other proteins. Professor Richard Kitney was our second keynote speaker and he talked about the SynBIS, a web-based synthetic biology information system which among other features contains information of BioParts and associated metadata, and described its integration into a new DNA synthesis foundry. Our final keynote speaker was Dr. Paul Varley from MedImmune, a company involved in the production of antibody therapeutics using mammalian cells. Dr. Varley reviewed some of these products, and discussed some of MedImmune's recent developments in using cell factories to produce other classes of therapeutic proteins. EFB's vice-president Professor Diethard

Mattanovich also presented at the conference, talking about the use of

biology in helping to identify and remove limiting factors in using cells as producers of biopharmaceutical proteins and industrial enzymes.

One particular highlight of the conference was the after-dinner talk given by Professor Tilli Tansley, head of the History of Modern Biomedicine at the Queen Mary University of London. Professor Tansley spoke about the importance of properly recording the history of science, and mentioned that some famous stories of discoveries as told by Noble laureates weren't necessarily the versions remembered by the post-docs and PhD students on the projects!

All in all the conference underlined just how much progress is being made in biomanufacturing, and how the tools of systems and synthetic biology are helping accomplish this progress. It was very exciting attending this conference and seeing all of the many potential practical applications being developed in our field right now.

Dr. Matthew Edmundson



www.sheffieldbiomanufacturing.org

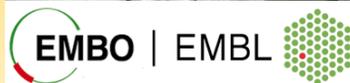


Summer Special: European SynBio Summer Schools



Advanced Synthetic Biology Training at the EMBL: Synthetic Biology in Action - an EMBO Practical Course

EMBL Heidelberg, 8 - 20 Jun 2015, [#synbioembo2015](#)
<http://www.embl.de/training/events/2015/SYN15-01/>



course on the fundamentals and applications of Synthetic Biology to different areas of Biotechnology, from metabolic engineering to programming of cell tissues. The Course, which was co-sponsored by the European Molecular Biology Organization (EMBO) and the ST-FLOW Project of the 7FP, took 20 PhD students and young postdocs from the most diverse geographic origins through an intense Program of talks by European and US leaders in the field. This was combined with a very busy experimental schedule in which each 4-student teams had to run projects on bacterial production of bioplastics, engineering barriers to horizontal gene transfer, developing tools for assembling microbial consortia, production of added value chemicals in yeast, and robotic optimization of biosensors. Amazingly, most of the experiments worked successfully! Participants left the place with a clear awareness of the value of the subject and even considering future career choices based on what they saw and learnt during the days of the Course.

*Dr. Victor de Lorenzo,
Course Co-organizer*

SYNBIOEMBO
Course Co-organiser:



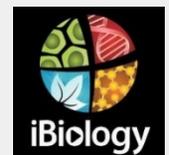
Víctor de Lorenzo
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SynbioEMBO talks were shot for **iBiology** open-access videos series
[@iBiology](#)

2nd International Synthetic & Systems Biology Summer School

Taormina, 5 - 9 Jul 2015

[#ssbss2015](#)

<http://www.taosciences.it/ssbss2015>

Synthetic	2	Taormina, Italy - July 5-9, 2015
Systems	0	
Biology	1	
Summer	1	
School	5	

For the second year in a row, the International Synthetic and Systems Biology Summer School (SSBSS), took place in the beautiful Sicilian town of Taormina (Italy) from the 5-9 July 2015. This 5-day course on cutting-edge advances in systems and synthetic biology was filled with lectures delivered by world-renowned experts, such as Adam Arkin (University of California), Angela DePace (Harvard University), Forbes Dewey (MIT), Karmella Haynes (Arizona State University), Richard Kitney (Imperial College London), Ron Weiss (MIT) and Nicola Zamboni (ETH Switzerland) and industry experts Zach Serber (Zymergen Inc.) and Jon Chesnut (Life Sciences Solutions Group- Thermo Fisher Scientific, USA). The school provided a stimulating environment

for the 169 participants (50% students, 20% early career researchers, 15% academics and industry leaders) from 50 different countries. The packed schedule of lectures, workshops, tutorials and student oral & poster presentations covered everything from gene circuit design, CRISPR/Cas for mammalian cell engineering, quantitative modelling of molecular pathways, DNA assembly methods and large scale industrial fermentation, only being a few highlights! All in all, a great experience learning from world-renowned experts and connecting to the new generation of synthetic biologists. Sun & science, what is not to like? The next SSBSS will be held next summer, possibly in London.

Beatrice V Vetter



SSBSS2015 Course Organisers:

Jef D. Boeke

New York University, USA

Giuseppe Nicosia

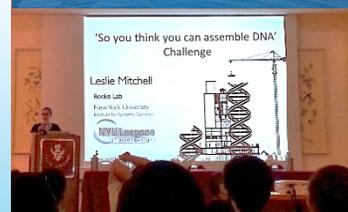
University of Catania, Italy

Mario Pavone

University of Catania, Italy

Giovanni Stracquadanio

University of Oxford, UK





#ecb2016

3 - 6 July • 2016
Krakow • Poland

ECB2016

17th European
Congress on
Biotechnology

a European Federation of Biotechnology event
incorporating Eurobiotech

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New Biotechnology is the official journal of the **EFB** and is published bimonthly. It covers both the science of **biotechnology** and its surrounding political, business and financial milieu.



New Impact Factor: 2.898



Member's input invited!

If you have interesting news, suggestions or job vacancies that you would like to advertise, please, get in touch!

Email us:

[info\[at\]jefb-ebbs.eu](mailto:info[at]jefb-ebbs.eu)

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As with the Edinburgh congress, alongside the symposia and plenary speakers there will be highlight events, poster sessions and plenty of networking opportunities. Registration will open shortly, but you can register your interest now at www.ecb2016.com/registration/. For more information, keep up to date at www.ecb2016.com and [@ECB2016](https://twitter.com/ECB2016) on twitter. And, of course, EBBS will provide updates via [@EBBS_EFB](https://twitter.com/EBBS_EFB).

Dr Tim Overton, Section Co-Chair

Yup Lee. The scientific committee are currently finalising symposium topics and selecting invited and plenary speakers for 2016, and details will be available on the website (www.ecb2016.com). EBBS section co-chairs Louise Horsfall and Tim Overton are members of the congress scientific committee, and are ensuring that symposia appeal to section members and provide links between bioengineering, bioprocessing and the other EFB sections.

Planning for ECB 2016, which takes place in Krakow, Poland from the 3rd-6th July 2016, is well underway. Following the wealth of exciting science and technology in Edinburgh in 2014 at the last congress, the 2016 congress will be the place to present your research, meet other European scientists and build new collaborations. At Edinburgh, we heard from plenary speakers Professors Anne Glover, Jay Keasling, Martin Fussenegger and Sang

Funding Opportunities & Programmes



InnovateUK Funding
InnovateUK is the UK funding organisation that funds, supports and connects innovative businesses to accelerate sustainable economic growth. Currently of interest from a biotechnology perspective are the five

Industrial biotechnology Catalyst (IB Catalyst) grant schemes, which go from academic research with applications in industry, through industrial feasibility studies, to full scale industrial research. The schemes are co-funded by the UK Biotechnology & Biological Sciences

Research Council (BBSRC) and Engineering & Physical Sciences Research Council (EPSRC). The five schemes have different restrictions on participation and different funding levels; details are available at <https://interact.innovateuk.org/>.

Thank you all for your patience and support while we have been setting up the section. We hope you have enjoyed [our section newsletters](#) and seen our increasing activities via [social media](#). We are now hoping for some section board members to take a leading role section activities. We would also like to hear your suggestions for future meetings and where you would like them to be hosted. We are currently planning a biomaterials meeting in early 2017.

WE NEED YOU!



POSITIONS AVAILABLE:
TREASURER
INDUSTRIAL COORDINATOR

Further, the European Commission has just issued their last ["Preliminary Opinion on](#)

[Synthetic Biology III](#)". The commission has invited comments, explanations or contributions on the scientific basis of the opinion to be submitted by the 16th Sept 2015. Therefore, we would like to encourage you to send us your input, such that the EFB can compile & submit a strong response! So, if are interested in being involved in any of this, please contact us!

Louise & Tim



www.efb-ebbs.eu

Do you want to get involved?

If you would like to be part of the new section, if you have an idea for a new meeting in an area of bioengineering or bioprocessing, or if you

would like to assist in section activities, please contact the section co-chairs:

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