

# EFB Bioengineering & Bioprocessing Section



EUROPEAN FEDERATION OF  
BIOTECHNOLOGY

Newsletter 2017 – Issue 2



Dear EBBS Member,

*We hope you have all had a fun and productive summer and that you had the chance to attend some exciting conferences. Miguel Cueva (Edinburgh, UK) did just that, and we have his conference report from the Second EUSynBioS symposium in this issue. With winter drawing in this is now the perfect time to start thinking about next summer's conferences; we of course have ECB 2018 in Geneva this coming July, and the discounted early bird registration is still open! Slightly further into the future we have some dates for you to save in your diary with Bioflavour 2018 and the Fourth Applied Synthetic Biology in Europe conference next September and October, respectively. Full details are on page 3.*

*Also this issue we're welcoming two new communications officers to the team, Virginia and Ian, who will be helping us increase our social media presence. Why not follow us on twitter [@EFB\\_EBBS](#) and look us up on [Facebook](#)? We now have over 750 followers so we can get your biotech news and job vacancies out to our community!*

*Enjoy this issue!*

EFB BBS Communications Team , November 2017

## The Second EUSynBioS Symposium

The second [EUSynBioS symposium](#) took place at the Spanish National Centre for Biotechnology in Madrid, from the 31<sup>st</sup> of August to the 1<sup>st</sup> of September. This follow-up meeting was multi-disciplinary, attracting delegates representing academia and research institutes. Providing a platform for PhD students and postgraduates to showcase the scope of applied synthetic biology in Europe and more importantly an ideal networking environment to form new collaborations across the continent.

The symposium explored the wealth of applied synthetic biology research, comprising four keynote presentations, six oral presentations by fellow members, open discussion, breakout sessions and poster presentations. The meeting opened with the plenary lecture by Prof. Victor de Lorenzo (CNB-CSIC, Madrid, Spain) who talked about the importance of synthetic biology and its role in reducing waste and the development of standardized tools for bacteria. The first keynote speaker, Hervé Vanderschuren (Liege University, Belgium), talked about green biotechnology and its role in our society, specifically in Sub-Saharan Africa. Vanderschuren highlighted how imperative the use of biotech is in helping developing countries kick start the use of industrial crops for the production of biofuels and food. The second keynote speaker, Filippa Lentzos (King's College London, UK) grasped the delegate's attention with a summary of 21<sup>st</sup> century biological threats, focusing on how the world views synthetic biology and how security and governance are changing today's policies on bioterrorism. The final keynote speaker, Piers Millet (Director of Safety and Security at iGEM) discussed how iGEM deals with ensuring the safe use of cutting edge biotechnology.

It was a successful symposium, which highlighted both the importance of synthetic biology in ameliorating natural resource shortages and the biosecurity and policies behind the development of such technologies. Details for the Third Symposium will be announced to EuSynBioS members in the near future.

**Miguel Cueva**

### Section Co-chairs:



Dr. Louise Horsfall  
[@lehorsfall](#)



Dr. Tim Overton  
[@Overtonlab](#)

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# Upcoming events

## EFB



[Bacterial Electron Transfer Processes and their Regulation; 11<sup>th</sup> to 14<sup>th</sup> March 2018](#) organised by the European Federation of Biotechnology  
Saint-Tropez - France



[Microbial Stress Meeting; 23<sup>rd</sup> to 25<sup>th</sup> April 2018](#) organised by the EFB Microbial Physiology Section  
Kinsale, Ireland



[2<sup>nd</sup> International Conference on Bioresource Technology for Bioenergy, Bioproducts & Environmental Sustainability; 16<sup>th</sup> to 19<sup>th</sup> September, 2018](#)  
Melia Sitges, Spain

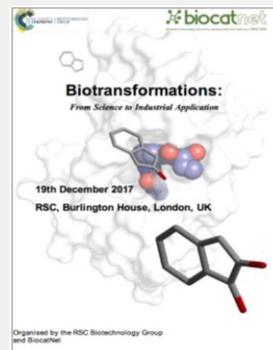
## EFB partners

[Antimicrobial Resistance: Meeting the Challenge; 23<sup>rd</sup> to 24<sup>th</sup> November](#) organised by SFAM  
London, UK



[Synthetic Biology UK 2017; 27<sup>th</sup> to 28<sup>th</sup> November](#) organised by Biochemical Society  
Manchester, UK

[BIOTRANSFORMATIONS: From Science to Industrial Application; 19<sup>th</sup> December](#) organised by The Royal Society of Chemistry  
London, UK



## ECB 2018

Early bird discounted rates still available



[European Congress on Biotechnology- ECB 1018; 1<sup>st</sup> to 4<sup>th</sup> July 2018](#) organised by the European Federation of Biotechnology  
Geneva, Switzerland

# Save the dates

## [Bioflavour 2018](#)

[Biotechnology of Flavours, Fragrances and Functional](#)

[Ingredients; 18<sup>th</sup> to 21<sup>st</sup>](#)

[September 2018 Frankfurt](#)

am Main – Germany

Paper submission open

now



[4<sup>th</sup> Applied Synthetic Biology in Europe; 24<sup>th</sup> to 26<sup>th</sup> October 2018](#) Toulouse – France

Registration open soon



## Introducing EBBS Board Members:

**Dr. Urartu Seker**

**Bilkent University (Turkey)**

### [Can you tell us about your background?](#)

After I earned my PhD in Molecular Biology-Biotechnology and Genetics, I did my first postdoc in Singapore, Nanyang Technological University, I was focused on biophotonics and protein/peptide based biomaterials. Later, I started my second postdoc at MIT Biological Engineering and Integrative Synthetic Biology Research Center, where I did research on designing living material systems using synthetic genetic circuits. After that I started my own research group at Bilkent University- Materials Science and Nanotechnology Institute, Turkey, in 2014. Our research focus is designing synthetic biosystems to build living material systems, smart biosensors and theranostic cell systems.

### [What is your area of expertise?](#)

My area of expertise covers synthetic biology (designing cellular circuits for extracellular protein secretion, genetic logic gate operations, cellular biosensors), biomaterials and bionanotechnology (designing protein based scaffolds, protein based assemblies to use between biotic-abiotic interfaces, nanoparticle – protein hybrids for biosensing).

### [What is your current research?](#)

Currently we are carrying out research to

program cells for the controlled secretion of biofilm proteins, designing cellular sensors to monitor nanotoxicity and biomedical biomarkers in the blood stream, designing probiotic cells to diagnose and treat cancer conditions. To ability to sense the toxicity of nanomaterials and the biocompatibility of materials is crucial for their utilization in biomedical applications. The critical parameter here is to use correct cellular signalling pathways that can be activated upon exposure of the cells to the bio/nano-material systems. We are employing heat shock response regulation and taming it to be used as a well-controlled stress sensor for monitoring material biocompatibility. Designer cells are going to be very critical to address many health conditions, we are employing synthetic biology approaches to build probiotic bacteria to address disease conditions such as cancer and diabetes. Besides our interest in cellular biosensors we want to program/extend the abilities of the cells to detect clinically important biochemical markers.

### [Why did you join EFB/EBBS?](#)

EFB/EBBS are critical organizations for the advancement of all branches of biotechnology across Europe. In this regard being a part of this body

provides many opportunities in terms of networking and taking part in development of a new wave of the biotechnology policy in Europe.

### [Where do you see your contribution as a board member for EBBS?](#)

I think, for now, I am working like an ambassador for the EBBS Section at meetings and conferences in my country. I am announcing the meeting calendar and individual meetings to my fellow scientists from the biochemical engineering area. However, I believe that, not only me, but all the board member can take part in the formation of country sections for the EBBS in near future.

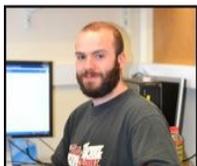
### [Where do you see EBBS in the future?](#)

EBBS can be a powerful player in bringing the European Biotech Industry and Academia together, in a more efficient way. But I also want to add that EBBS should spend more time on organizing a network for the European Synthetic Biology community. As a fast growing field, synthetic biology will revolutionize the whole biotech industry soon.

### [Would you share an interesting fact about your persona?](#)

It is not an interesting fact but I like to share, that outside the lab I like to spend time on preparing articles for popular science magazines (in Turkish). I believe that popular science media is the best way to attract the attention of the next generation into science and technology. Additionally I am preparing a blog (not broadcasting yet) on identifying “fake science news”.

## Introducing the comms team



Ian Eggington,

Communications Assistant  
University of Edinburgh  
ian.eggington@ed.ac.uk

I am a recent graduate from the University of Edinburgh with a Masters in Synthetic Biology and Biotechnology. Since completing this course I have been dedicatedly volunteering in the scientific field to boost my experience and employability, and that hard work paid off when I was accepted for a PhD position this October.

I am a firm believer in the idea of a scientific community that works together rather than independently, and am lucky to be in a lab that is inclusive, helpful and interdisciplinary. With this in mind I accepted the opportunity to become a communications officer, to help to spread the work of all those involved in EFB, via this newsletter and by use of social media.

My current experience with social media is limited, but I am excited to learn and I am sure I will have the hang of it in no time, especially with Virginia's help.

I am also the author of the comic, debuting in this newsletter, which I will be adding to the newsletters for the foreseeable future. "The Sound of Science" is just meant for fun, so please enjoy.



Virginia Echavarri-Bravo

Communications Assistant  
University of Edinburgh  
virginia.echavarri@ed.ac.uk

I am currently a post-doc at the University of Edinburgh. I have a multidisciplinary background as I graduated in Agricultural Engineering (MEng) in 2004 (UPNA, Pamplona, Spain) specializing in Soil Sciences. Afterwards I worked in IT for a few years, and with the aim to return to the Environmental/Biological Sciences field I studied an MSc in Marine Biodiversity and Biotechnology (2010), followed by a PhD in Microbiology & Nanotoxicology (2015) at Heriot-Watt University (Edinburgh).

Since my PhD I have been working on a few different projects that involved the synthesis of biogenic metallic nanoparticles and the valorisation of lignin as one of the feedstocks of manufacturing for the future.

I will be mainly concentrating on the EFB accounts for these, along with Ian's help. I will do my best to bring you the latest news about scientific journals and reviews, as well as upcoming conferences and application deadlines.



Matt Edmundson,  
Communications Officer  
University of Edinburgh  
medmunds@exseed.ed.ac.uk  
Twitter: @Dr Eddy 1



Konstantinos Vavitsas,  
Communications Assistant  
University of Queensland  
k.vavitsas@uq.edu.au  
Twitter: @konvavitsas

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



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## Do you want to get involved?

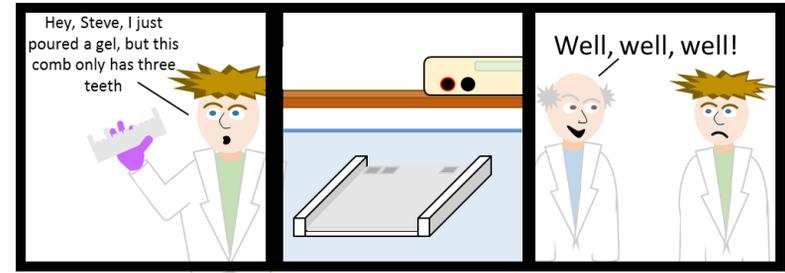
We welcome any and all contributions to the section. If you have an idea for a new meeting in an area of bioengineering or bioprocessing, or if you would like to assist in section activities, please contact the section co-chairs:

Louise Horsfall [louise.Horsfall@ed.ac.uk](mailto:louise.Horsfall@ed.ac.uk) Tim Overton [t.w.overton@bham.ac.uk](mailto:t.w.overton@bham.ac.uk)

Do you have an idea for an article for the newsletter? Have you been to a conference and would like to report on it? Is there a particular topic in bioengineering and bioprocessing that you'd like to write about? Is there a position coming up in your lab? Please contact

Matt Edmundson [medmunds@exseed.ed.ac.uk](mailto:medmunds@exseed.ed.ac.uk)

### The Sound of Science



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In case you missed them...

[EBBS newsletter 2017 issue 1](#)

May 2017

[EFB newsletter October 2017](#)

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