

SynBioStandards Network

**** February 2011 NEWSFLASH ****



A long-overdue inaugural newsletter for 2011 (the crocuses have started to appear in Edinburgh...) — hope it has been an enjoyable and productive start to the year for all! Read on for plenty of news bytes and recent publications, including a reflection by James King from his participation in the 2010 iGEM Jamboree.

NEWS bytes

Welcome to new Network members Caitlin Cockerton (BIOS) and Kim Martin (Edinburgh).

Spotlight on *E.chromi*: This speculative design project, developed by James King and Daisy Ginsberg as part of their interactions with the 2009 Cambridge iGEM team, has been nominated for the [Designs of the Year](#) award at the Design Museum! What a great chance to showcase this innovative design and science collaboration to a non-scientific audience. Daisy and James have just completed a [short film about *E.chromi*](#) as part of their exhibition (which started on 15 February). The awards dinner takes place on 15 March — good luck!

Network members Christine Merrick, Louise Horsfall and David Houston are planning a [symposium for students and early-career synthetic biology researchers](#), to be held in Glasgow on 4 April 2011. Confirmed speakers include Travis Bayer, Rainer Breitling, Jon Cooper, Jamie Davies, Ben Davis, Kim de Mora, Alistair Elfick, Emma Frow, Jim Haseloff, Daffyd Jones, and the St. Andrews 2010 iGEM team. MSc students, PhD students, and early-career researchers are encouraged to submit abstracts for posters and oral presentations by Friday 4 March — the two best abstracts will be selected for oral presentations. Please register for the symposium before 14 March at www.SynBioStudentSymposium.com.

On 14-15 Feb, Jane Calvert hosted the first of an ESRC-funded series of workshops on synthetic biology and social science. The event was held at the Genomics Forum in Edinburgh, and brought together 20 social science (mainly STS) researchers with the aim of starting to define a common research agenda for synthetic biology. A workshop report will follow. The next workshop will be held in Nottingham in June (date tbc).

On 10 Feb, the BBSRC ran a meeting in Bristol to follow up with the Networks about their Synthetic Biology Public Dialogue last year. Alistair Elfick, James King and Christine Merrick represented the SynBioStandards Network, please feel free to ask them about the event!

FOR YOUR READING and VIEWING PLEASURE...

- Newcastle Network members Neil Wipat and Jen Hallinan recently published an article in *Bioinformatics* with colleagues, about '[Model Annotation for Synthetic Biology: Automating Model to Nucleotide Sequence Conversion](#)'

- In November 2010, Claire Marris and Nikolas Rose published an [editorial commentary on public engagement in biosciences](#) in *PLoS Biology*.
- The Presidential Commission for the Study of Bioethical Issues published its long-awaited report on synthetic biology in December 2010. Entitled [New Directions: The Ethics of Synthetic Biology and Emerging Technologies](#), it's a long read but one that has been largely welcomed by the scientific community.
- Future Tense (a partnership of Arizona State University, the New America Foundation, and Slate magazine) ran a meeting at Google DC in February 2011 called '[Here Be Dragons: Governing a Technologically Uncertain Future](#)' that brought together a number of leading scientists, Internet thinkers, governance experts and science fiction writers. Several panel discussions focused on synthetic biology (and involved discussants including Drew Endy, George Church and Andrew Hessel). All of the discussions are available on video for your viewing pleasure...

COMING UP...

9 March: ELSI workshop on '[Synthetic Biology — A better future?](#)', hosted by the SPPI-Net network, Durham

4 April: The first UK Synthetic Biology Student Symposium, Glasgow. This meeting is being organised by and for early-career synthetic biologists; register by 14 March at www.SynBioStudentSymposium.com

15-17 June 2011: SB5.0 (Stanford, CA). The SynBioStandards Network is planning to sponsor a number of Network members to attend this conference, details forthcoming!

2-7 October 2011: ESF-EMBO Symposium on the Synthetic Biology of Antibiotic Production (Sant Feliu de Guixols, Spain). The deadline for applications is 30 June 2011.

If you would like to publicise an event, article, funding opportunity, etc. in the next Network newsletter, just email details to emma.frow@ed.ac.uk.

The iGEM 2010 Jamboree

Reflections by James King



iGEM 2010 was significantly different from iGEM 2009 — the projects were more ambitious and more varied, the presentations more polished, and there was a great deal more emphasis on the human practices track of the competition. I attended as an advisor to the [ArtScience Bangalore Team](#) — a collection of art students from the Srishti School of Art and Design who I have been working with alongside Yashas Shetty, their supervisor, and fellow designer Daisy Ginsberg.

The deserved winners of this year's competition were [Slovenia](#), who developed a method of using DNA as a scaffold to arrange biosynthetic pathways spatially in the cell, greatly improving the yield of the product being synthesised. They have produced a video describing their work in plain English which is worth watching and likens their technique to the way an assembly-line organises production in a factory.

Several projects eschewed *E.coli* in favour of more exotic (and multicellular) organisms. A few teams, including ArtScience Bangalore, worked with *C. elegans* and there was also a contingent who took the bold move of working with plants. [Harvard](#)'s iGarden is probably the best example of this – a tool-kit for engineering, transforming and growing your own genetically modified garden. Their project is also interesting as it was one that placed a great deal of emphasis on human practices. The iGarden itself was designed with an end-user in mind, it included safety protocols and was even packaged up like a product that you might one day buy off-the-shelf.

The human practices prize was won for the second year running by [Imperial College](#), who also took deliberate steps towards developing a product that might be used by real people. They created a bio-sensor to detect the Schistosomiasis parasite in water, designing it to be fast working, easy to store, transport and most importantly, use.

One of the highlights of the competition was the team from [BCCS Bristol](#), whose AggrEcoli was a cleverly conceived biosensor for determining the quantities of nitrates in soil. Their system could be used before applying fertiliser to a field, so that areas already rich in nitrates need not be fertilised so heavily.

The scope of iGEM 2010 extended beyond the single-celled organism and it was exciting to see so many teams considering the human-scale as well as the genetic-scale. It will be interesting to see if these trends continue for iGEM 2011.
