

SynBioStandards Network

**** October 2010 NEWSFLASH ****



A newsletter to mark the passing of summer and the dawn of a new academic year. Thanks to all those who came to the Network meeting in Edinburgh last month, which proved to be a lively gathering (even though the Pope wasn't able to stop by in the end). Appended at the end of the newsletter is the fine verse penned by our roomful of budding poets!

NEWS bytes

**** The SynBioStandards Network Annual Report is due at the end of the month. To ensure that we capture a good cross-section of activities across the Network institutions, please email Emma with any highlights you'd like to see included — particularly any recent synthetic biology publications, grants that you've won, or talks that you've given. ****

Welcome to new Network members Alex Hamilton, Sara Tocchetti, and Joy Zhang, who are based at the BIOS Centre at LSE and have research projects underway on synthetic biology. Welcome also to Joe Gray from Glasgow, who works on yeast cell and systems biology, and to John Wilson-Kanamori and Donal Stewart, two informaticians based in Edinburgh.



The 2010 iGEM Jamboree is rapidly approaching! The Aberdeen, Bristol, Cambridge, Edinburgh, Imperial, Newcastle, Sheffield, St Andrew's, and UCL teams will be putting the final touches on their projects over the next month — find out what they've been up to over the summer on their [wikis](#).

The ESRC has funded a Seminar Series on synthetic biology and social science (PI: Jane Calvert). This will comprise 5 workshops over 18 months, starting in early 2011. Themes and provisional dates as follows:

- 1) Defining the agenda (Edinburgh, February 2011)
- 2) Promises and problematics (Nottingham, June 2011)
- 3) Interdisciplinary practices (Lancaster, October 2011)
- 4) Publics and politics (Durham, February 2012)
- 5) Connecting to policy (LSE, June 2012)

There is funding for scientists and engineers in the Standards Network to attend some of the meetings, and hopefully this will be a good chance to strengthen collaborations. Please contact Jane if you have any questions about the workshops or would like to be involved.



FUNDING CALLS

There are currently 3 FP7 calls for proposals in synthetic biology (see <http://wbc-inco.net/call/91479.html>)

- Towards standardisation in Synthetic Biology (KBBE.2011.3.6-03)
- Applying Synthetic Biology principles towards the cell factory notion in biotechnology (KBBE.2011.3.6-04)
- Ensuring the safety of Synthetic Biology applications (KBBE.2011.3.6-05)

The application deadline is 25 January 2011. Could anyone who is involved in a bid please let Emma know, so that we're aware of who in the Network is planning to apply? Thanks!

FOR YOUR READING and VIEWING PLEASURE...

- James King's work on *in vitro* meat was featured in a recent Guardian article (15 Sept): ['Hot or not? Designer foods of the future'](#)
- Lance Martin of the BIOFAB has published a ['BIOFAB Operations Manual'](#), which outlines the general strategy of the BIOFAB and details several of the protocols they are currently using.
- The 9 September issue of Nature contains a review article by Eldar and Elowitz on ['Functional roles for noise in genetic circuits'](#). Also Check out the [7 October issue](#) for an editorial and Feature article on Garage Biology
- The Cambridge iGEM team has produced a creative endorsement of the Gibson DNA assembly protocol, check out <http://www.youtube.com/user/cambridgeigem>.

COMING UP...

20 Oct: 'Horizons in Synthetic Biology,' a networking event at the University of Glasgow featuring Jim Haseloff, Jason Kelly, Ian Fotheringham, and Susan Rosser. Participation is free but registration is required: <http://www.nexxusScotland.com/events/show/892>

5-8 Nov: iGEM 2010, Boston

10-11 Nov: Imperial College: Institute of Systems and Synthetic Biology Autumn Symposium

22-23 Nov: Workshop on 'STS meets synthetic biology' in Sheffield, sponsored by the MATes, SynBioNT and SynBioStandards Networks

25 Jan 2011: Deadline for FP7 KBBE calls on synthetic biology

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.



Autumn 2010 Network meeting — Programme

9.00–9.30 Poetry warm-up (led by Network poet Susan Rosser)

9.30–10.00 Network overview (Alistair Elfick)

10.00–10.30 Network Updates I

- EPSRC/NSF Sandpit grants for Synthetic Biology research
 - **Susan Rosser:** *Synthetic Integrons* and related research at Glasgow
 - **Jane Calvert & Daisy Ginsberg:** *Synthetic Aesthetics*

10.30–11.00 Tea / coffee

10.00–10.30 Network Updates II

- **David Gilbert:** Synthetic Biology activities at Brunel
- **Wendy Smith:** *Bacillus* Registry
- **Donald Bruce:** Public engagement — Democs report
- **Jane Calvert & Emma Frow:** Upcoming social science meetings

11.30–13.00 Short Research Talks

- **Elise Cachat & Jamie Davies** (Edinburgh): Synthetic Morphology
- **Tom Ellis** (Imperial): Synthetic Promoter Libraries
- **Jen Hallinan** (Newcastle): Stochasticity and Standardization in Computational Modelling
- **Baojun Wang** (Imperial): The Effect of Context on Part and Device Behaviour

13.00–14.00 Lunch

14.00–15.00 Emerging topic: Biosafety

- Short talks by **Brian Crook** (Health & Safety Laboratory) and **Kim de Mora** (Edinburgh), followed by discussion.

15.00–16.00 Standards activities in the Network and at the BIOFAB

- Skype sessions with **Adam Arkin** (BIOFAB) and **Fernan Federici** (Cambridge)

16.00–16.15 Tea / coffee

16.15–16.45 Plenary discussion

16.45 Close

Autumn 2010 Network meeting — *POETRY COMPETITION ENTRIES*

WINNING ENTRY

Pohl Yr Hen Ogledd

“Insane arrogance” declares the Pope
As to synthetic life we all grope
We pay him no heed
And press on with speed
With a mixture of skill, hype and hope.

Some scientists based in this city
Had ideas that they thought quite witty
They developed the art
Of making new parts
But none of them worked — what a pity!

RUNNER-UP

Synthetic biology (a haiku)

Intelligent designers
Sensitively clone modelled bridges
Across arrogant divides

— Fiddling Sticks

RUNNER-UP

For a standard to be standard
What should we do
One person’s standard
Is another’s bugaboo
Synthetic biology
Need not be tautology
If only a standard was not something new

~~~~~

My brick fits your brick  
Because we standardised  
But is my brick the best brick  
Since we standardised  
My new brick is a better brick  
But we standardised  
And it won't fit  
Is creativity fossilised  
If we standardise?

~~~~~

Similar, mimic, the same
As what? For whom?
To bring the expected
To innovation, to create,
A space to fill
And fear?
A change of tack,
A better way.
How to start
With ends in mind.

— Warm Fusion

HONOURABLE MENTION (LATE ENTRY)

“DEMOCS”

Biofuel
Is very cool
And pharma
Adds drama
But messing with food
Is just plain rude
(and don't release
Or we'll call the police).

— Synthetic Poetics

There once was a plain little brick
Who tried to fit but didn't quite stick
It was difficult and hard
Without being standard,
His life had no aspect of logic

So...

He reinvented himself as a part
In a molecular machine, he was the heart,
As part of a device
He did more than suffice
And his synthetic life he did start.

— The Right Honourable Captain Doger Hans Bubbleberry III

From standard primordial slime
Bacillus evolved over time.
But then we stepped in
(The Pope says it's a sin)
We created a new paradigm!

— B. P. McAlpine

Model me first
Plug me on
Switch my key
I'll be your beast

— The Newborn

Sensing molecules
Creating value
Assembling standardized parts

— The Engineers (Fiddling Sticks)

“MANIFESTO”

Our current GM innovation
Has problems with organization
Let's make a new start
With standardized parts
To give it a firmer foundation

— Synthetic Poetics

“VENTERPRISE”

There was a young man named Craig Venter
Who opened a DNA centre
He created new bugs
For making cheap drugs
In his magic synthetic fermenter.

— Synthetic Poetics

Free Venter-prise

There was a slime mould called Venter
Self-considered a world-class inventor
He was put through a sieve
Didn't think he would live
But he did, 'cos his dad was a computer.

He sailed round the world on a yacht
Trawling for things we forgot
He caught a nasty bug
Synthesized a new drug
But the Swedes dismissed him as rot.

He fled back to the ol' USA
Saying tomorrow was a new day
He went for a swim
Thinking 'life is too grim'
Fortunately this time did(n't) go the whole way.

— The Sorcerer's Apprentice

What can synthetic biology do for me?
Is it real or fantasy?
I'm not sure if I really care,
As long as one day I can grow synthetic hair!

— BioBrick McGonagal

There was a dodgy geezer in a cloak and a hat,
Who came to a third world country for a chat
Venter thought it was odd
Because he thought he was God
But actually he was a