



THE COMPANY OF

Biologists

WORKSHOPS

Programme

**New Technologies and Applications
for Genome Engineering**



25 - 28 March 2012 • Wiston House • Steyning • West Sussex • UK



THE COMPANY OF **Biologists**

Meet top researchers at The Company of Biologists Workshops

Students, P.I.s or post docs can apply to attend for free*

Go to workshops.biologists.com



2011 Workshops

Cancer as a Microevolutionary Process
Fish Muscle Growth and Repair:
Models Linking Biomedicine and Aquaculture
Growth, Division and Differentiation:
Understanding Developmental Control



2012 Workshops

New Technologies and Applications for
Genome Engineering
Epigenetic Memory
Imaging in Cell Biology: Where Next?



*Terms and conditions apply

We welcome proposals for future topics



Development

DMM Disease Models
& Mechanisms

Journal of
Cell Science

The Journal of
**Experimental
Biology**

**BIOLOGY
OPEN**

New Technologies and Applications for Genome Engineering

Wiston House • West Sussex • 25 - 28 March 2012

Programme

Sunday 25 March 2012

12:30 – 14:00	Lunch
14:00 – 14:15	Introductions
	The Company of Biologists Claire Moulton
	Workshop Elizabeth Fisher, Andrew Smith and Victor Tybulewicz
	Gene Targeting and Genetic Screens Chair - Elizabeth Fisher
14:20 – 15:00	Allan Bradley Messing with complex genomes
15:05 – 15:45	Bill Skarnes Large-scale genome engineering in mouse and human stem cells
15:45 – 16:05	Tea break
16:05 – 16:45	Wolfgang Wurst Genetic tools to study neuropsychiatric diseases
16:50 – 17:30	Aris N Economides New approaches to conditional alleles and directional strategies using site specific recombination
17:30 – 17:50	Tea break
17:50 – 18:30	Junji Takeda Cell-based phenotype screenings using bi-allelically mutagenized ES cell bank
18:30 – 19:30	Pre-dinner drinks and poster session
19:30 – 21:00	Dinner
21:00 – 22:00	Slide presentations
22:00 – 23:30	Bar open

All meals will be served in **The Great Hall**

Monday 26 March 2012

08:00 – 09:00 Breakfast

Chromosome Engineering and Humanisation

Chair - Nancy Jenkins

09:00 – 09:40 **Elizabeth Fisher and Victor Tybulewicz**
Transchromosomal mice

09:45 – 10:25 **Yann Hérault**
Improving chromosome engineering to explore gene dosage defects and aneuploidies

10:25 – 10:50 Tea break and group photo

10:50 – 11:30 **Andrew Smith**
Are 'genomically humanised' mouse models really authentic?

11:35 – 12:15 **Maria Jasin**
Double-strand break repair and the modification of the mammalian genome

12:20 – 13:00 **Clyde Hutchison**
Building and installing a synthetic genome

13:00 – 14:00 Lunch

14:00 – 15:30 Walk (meet at Reception)

15:30 – 16:00 Tea break

Transposons

Chair - Andrew Smith

16:00 – 16:40 **Francis Stewart**
BAC transposons and recent progress with recombineering

16:45 – 17:25 **Nancy Jenkins**
Harnessing transposons for cancer gene discovery

17:30 – 18:10 **Tian Xu**
PiggyBac transposon mutagenesis in mammals

18:15 – 19:00 Pre-dinner drinks

19:00 – 19:30 History talk on Wiston House

19:30 – 21:00 Dinner

21:00 – 23:30 Bar open

All meals will be served in **The Great Hall**

Tuesday 27 March 2012

08:00 – 09:00 Breakfast

Stem Cells

Chair - Bill Skarnes

09:00 – 09:40 **Pentao Liu**
Sanger human iPS cells, their production and applications

09:45 – 10:25 **Mario Capecchi**
The generation of good iPS cells

10:25 – 11:00 Tea break

11:00 – 11:40 **Michele Calos**
Engineering iPS cells for cell therapy

11:45 – 12:25 **Ivo Lieberam**
Formation and artificial regeneration of respiratory motor circuits

12:30 – 13:30 Lunch

Tools and Technologies

Chair - Victor Tybulewicz

13:30 – 14:10 **Philip Gregory**
Genome editing with engineered zinc finger nucleases

14:15 – 14:55 **Philippe Duchateau**
Meganuclease and genome engineering

15:00 – 15:40 Tea break

15:40 – 16:20 **Toni Cathomen**
Cut & paste: genome engineering with ZFNs and TALENs

16:25 – 17:05 **Andras Nagy**
Genetic “Mighty Machines” from Cre, Dre, Flp, PhiC31, PiggyBac, tet and other parts”

17:05 – 17:30 **Elizabeth Fisher, Andrew Smith and Victor Tybulewicz**
Overview of meeting

18:00 – 19:00 Pre-dinner drinks

19:00 – 21:00 Dinner

21:00 – 24:00 Bar open

Wednesday 28 March 2012

07:30 – 09:00 Breakfast and depart

All meals will be served in **The Great Hall**

Grants for Science

The Company of Biologists Grants



The Company of Biologists finances a range of awards and charitable grants through the publication of its five journals

Development • Journal of Cell Science • The Journal of Experimental Biology
Disease Models & Mechanisms • Biology Open

These include:

Scientific Meeting Grants • Travelling Fellowships • Small Meeting Grants

For details of deadlines, or for more information see biologists.com/grants.html
or email the Charity Administrator - charity@biologists.com



THE COMPANY OF

Biologists

Development

Journal of

Cell Science

The Journal of

**Experimental
Biology**

DMM Disease Models
& Mechanisms

BiO

BIOLOGY
OPEN

Attendees

Name	Institute
Sarah Allan	<i>Disease Models & Mechanisms</i> , UK
Allan Bradley	Sanger Institute, UK
Erika Brunet	MNHN, INSERM, France
Michele Calos	Stanford University, USA
Mario Capecchi	University of Utah, USA
Toni Cathomen	Hannover Medical School, Germany
Neal Copeland	The Methodist Hospital Research Institute, USA
Anny Devoy	UCL, UK
Natalia Dinischiotu	MRC NIMR, UK
Philippe Duchateau	Collectis, France
Aris N Economides	Regeneron Pharmaceuticals, USA
Elizabeth Fisher	UCL, UK
Philip Gregory	Sangamo BioSciences, USA
Yann Hérault	ICS, France
Clyde Hutchison	Venter Institute, USA
Yasumasa Ishida	Nara Institute of Science & Technology, Japan
Maria Jasin	Sloan-Kettering Institute, USA
Nancy Jenkins	The Methodist Hospital Research Institute, USA
Ivo Lieberam	King's College London, UK
Pentao Liu	Sanger Institute, UK
Claire Moulton	The Company of Biologists, UK
Andras Nagy	Samuel Lunenfeld Research Institute, Canada
Stephen Pettitt	Institute of Cancer Research, UK
Steven Pollard	UCL, UK
Owen Siggs	Oxford University, UK
Bill Skarnes	Sanger Institute, UK
Andrew JH Smith	Universities of Edinburgh and Oxford, UK
Francis Stewart	Dresden University of Technology, Germany
Junji Takeda	Osaka University, Japan
Victor Tybulewicz	MRC NIMR, UK
Tian Xu	Yale University, USA
Wolfgang Wurst	Helmholtz Zentrum München, Germany



THE COMPANY OF Biologists

The Company of Biologists is a UK based charity and not-for-profit publisher run by biologists for biologists. Established in 1925, the company's aims are to promote research and study across all branches of biology. The Company publishes three established journals, *Development*, *Journal of Cell Science*, *The Journal of Experimental Biology* and two newer Open Access journals, *Disease Models & Mechanisms* and *Biology Open*.

In addition to publishing, The Company makes an important contribution to the scientific community, providing grants, travelling fellowships and sponsorship to noteworthy scientists, meetings, societies and collaborative projects around the world. The Company also runs a series of transdisciplinary workshops.



Development

Advances in developmental biology and stem cells

dev.biologists.org

Journal of Cell Science

The science of cells

jcs.biologists.org

The Journal of Experimental Biology

At the forefront of comparative physiology and integrative biology

jeb.biologists.org

DMM Disease Models & Mechanisms

Basic research with translational impact

dmm.biologists.org

Bio BIOLOGY OPEN

Facilitating rapid peer review for accessible research. Launched September 2011.

bio.biologists.org

For more information please visit our website

biologists.com