



THE COMPANY OF

Biologists

WORKSHOPS

**New Technologies and Applications
for Genome Engineering**



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

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

Transchromosomic 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

Programme

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**

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 Herault	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

