

Mid-term Review Report

The Mid-term Review Report, detailing the SCI's progress against its strategic vision, agreed objectives and scientific outputs relating to its translational activities, is currently being prepared. It will be submitted to the Wellcome Trust & Medical Research Council on 4 August 2014.

New ISAB Member



Prof David Scadden has joined the SCI's International Scientific Advisory Board.

David is a practising haematologist/oncologist who focuses on bringing stem cell biology to patient care. He founded and directs the Center for Regenerative Medicine at the Massachusetts General Hospital and, with Douglas Melton, co-founded and co-directs the Harvard Stem Cell Institute and the Harvard University Department of Stem Cell and Regenerative Biology.

Candidate Presentations for Group Leaders

Group Leader candidate presentations will be held at the Sanger Lecture Theatre on Tennis Court Road in the afternoon of Tuesday 29 July.

The Institute is seeking new Group Leaders at both junior and senior level to complement and extend our existing programmes and contribute to ground-breaking discoveries in stem cell science.

Applications in any area of mammalian stem cell biology were welcomed and the Institute is particularly interested in interfaces with mathematical, physical or chemical biology; bioengineering; malignancy and regenerative medicine.



Visit the SCI website and Intranet for further information on SCI activities and to access members -only information.

www.stemcells.cam.ac.uk

Member Newsletter

Issue 5 • June 2014

New C1™ Single-Cell Auto Prep System

The SCI has a new C1™ Single-Cell Auto Prep System.

- *Single cell precision:* Greater accuracy lets you measure differences in gene expression profiles.
- *Easy to use:* Simplify cell isolation and preparation with a streamlined workflow and intuitive interface.
- *Fast:* Cell input-to-data with minimal hands on time.
- *All in one:* Comprehensive, automated workflow generates reproducible and reliable results.
- *Flexible:* Supports multiple single-cell applications, allowing you to run global transcriptome analysis, targeted gene expression, miRNA analysis, and whole genome amplification for DNA sequencing.



To arrange to use the new C1™ Single-Cell Auto Prep System please contact either:

Peter Humphreys, pdh36@cam.ac.uk

Maike Paramor, mp600@cam.ac.uk

Illumina HiSeq upgrade at CIGC.

The SCI's sequencing collaborator, the Cambridge Institute Genomics Core (CIGC), have just completed an upgrade to their two HiSeq 2500 sequencing machines. The new SBS V4 chemistry can produce more data per run (250-300M reads per lane, longer reads of 125bp) and runs are faster (PE125 in six days). The per-lane charges will now increase slightly to reflect the increase in reagent price, but the cost per read/per Gb will drop with this upgrade. As a result we will need to pool more samples per lane to benefit from the cost saving. If you want to know more about this upgrade, please contact Maike Paramor, mp600@cam.ac.uk

Personal Achievements

Congratulations to Jenny Nichols and José Silva for their recent promotions.

Jenny has been promoted to University Reader in Embryonic Pluripotency.

José has been promoted to Principal Research Associate.



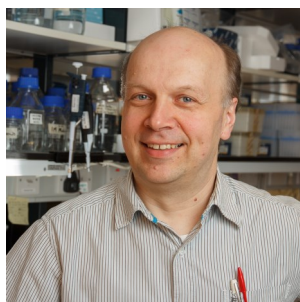
Cédric Ghevaert has been awarded £1.2m by the MRC to create an artificial bone marrow niche for *in vitro* platelet production.

The 3D structure will combine collagen-based scaffolds functionalised with recombinant proteins identified in a library of 400 novel constructs based on the ectodomain of membrane-expressed proteins from cells that promote platelet release from megakaryocytes within the bone marrow.



Bertie Göttgens has been elected to the Academy of Medical Sciences. Dr Philip Jones and Dr Douglas Winton — both SCI affiliates — were also elected to the Academy this year.

The Academy of Medical Sciences was established in 1998 and its objective is to improve health through research and promote medical science into benefits for society.



Azim Surani has been awarded a Jawaharlal Nehru Science Fellowship (JNSF), a new scheme aimed at boosting the research base in India by injecting talent from overseas.



Surani and four other distinguished scientists will work part time in a laboratory of their choice in India for a total of 12 months, spread over three years. They make up the first batch of 25 eminent scholars to be appointed in the initial phase of the scheme. Surani intends to do his research at the Institute for Stem Cell Biology and Regenerative Medicine in Bangalore.

India already has programmes in place that aim to reverse the country's brain drain, but the JNSF targets globally-renowned figures and offers substantial compensation: £60,000 salary plus a 5.5 million rupee (£55,000) research grant for the 12 months that they will spend in India.

SCI Imaging Facility

The Imaging Facility has new equipment:

- An **Incell high content screening system**, with liquid handling and environmental support.
- An **Incucyte Zoom** for timelapse imaging in fluorescence and phase. This can provide growth and colony metrics, wound/migration/apoptosis/spheroid assays, and whole well imaging.
- A **Zeiss 710LSM confocal**, with a tunable white laser ranging from 490 to 640nm and fluorescence lifetime imaging detectors. FLIM allows kinetic measurement of fluorophores, including FRET.



This is in addition to the existing live cell/confocal imaging, data analysis and reconstruction we offer. The facility has 2 Leica SP5 confocal, a Leica Matrix HCS live cell microscope, and an Andor Spinning Disk system.

Please feel free to discuss your requirements with Peter Humphreys, pdh36@cam.ac.uk



Health and Safety



Each month **Jeanne Estabel**, the SCI Principal Assistant, will focus on how she is improving our labs and facilities.

If you have any questions or would like to meet with Jeanne please contact her on je353@cam.ac.uk.

To raise awareness, we organised an afternoon event with a supplier (ARCO) to promote eye protection. Several samples (stylish, comfortable and cheap) were on display for post-docs, PhDs students, and PIs to try on and discuss when eye protection should be used in their day-to-day experiments. This event was fun and a real success!

arco
Experts in Safety



Be wise, protect your eyes.

In the last three years, 66 accident/incidents involving "eyes" have been reported to the University Safety Office. No major injuries yet; have we been lucky?

The eyes are the most vulnerable part of the body and even a very small quantity of solvent, harmful or corrosive chemical could cause permanent damage. Most accident/incidents reported involved chemicals like formaldehyde, ethanol, Virkon disinfectant or Tri-gene.



An accident could happen in a second, when opening a microfuge flip-top lid, when pipetting, pouring or transferring liquids. These routine procedures are done daily in research laboratories. Eye protection is often identified in Risk Assessments for these procedures but not worn. Ken Woodward, blinded in an industrial accident in 1990, described the moment when he lost his eyesight: *"In a split second when the colour goes out of your eyes, it becomes black and white. Then you see silhouettes. Then you see white. Then it's grey"*.

Training

- **1 July:** Risk Assessment of GMOs
- **15 July:** Chemical Safety, (*mandatory* for anyone either directly working with chemicals or who is responsible for persons working with chemicals)
- **15 July:** Principal Investigators, do you know how to fulfil your health and safety responsibilities?
- **22 & 23 July:** CIEH Level 2 Award in Health and Safety in the Workplace (two mornings)

Anyone interested in the courses should visit:

<http://www.training.cam.ac.uk/ohss/>

Public Engagement Activities

On 11 June Aoife O'Shaughnessy-Kirwan Anzy Miller, Sarah Gharbi and Maria Barreira-Gonzalez attended the STEM Fair Young Investigators day at IWM Duxford to run the EuroStemCell "Start with a stem cell" activity.

They had two groups of Year 3 - 8 students from local schools and spent 90 mins with each group, allowing each student to play the game. There was a discussion at the end of the activity where students could ask any questions they had. The students enjoyed it and the SCI scientists gained some useful feedback as well as ideas for future public engagement activities.



On 19 June Alzheimer's Research UK announced its Stem Cell Research Centre, supported by the Alborada Trust, as one of the first new developments emanating from its Defeat Dementia campaign.



This major, five-year fundraising and investment drive will seek to raise at least £100m to fund a new phase of research that will provide real benefits for people living with dementia.

Rick Livesey and colleagues have been busy promoting this initiative, including local TV coverage on BBC Look East and ITV Anglia as well as an interview on the Today programme on BBC Radio 4, aired to coincide with the Alzheimer's Research UK announcement.

Open Access

HEFCE has a new Open Access policy for the next REF.

Any paper to be included in the next REF submission must have been uploaded to an Institutional Repository within three months of acceptance by the journal.

Authors are required to upload their accepted articles and conference proceedings to the University of Cambridge's repository (currently <https://www.repository.cam.ac.uk/>). This must happen no later than three months subsequent to acceptance.

At the SCI we already help you with the University's new requirements and also the funders' policies.

Since July 2012 all SCI members were required to publish all papers as "open access" and we already have a process to help pay for your open access fees.

The process is as follows:

- once your peer-reviewed manuscript has been accepted, contact the SCI Records Assistant with details of your manuscript. We will help with:

- ⇒ the Copyright Transfer Agreement or Open Access form
- ⇒ uploading your paper into the University's repository and the Symplectic system
- ⇒ advising you on the right licence options in order to comply with the Wellcome Trust's policy.

All SCI publications must state the Institute's affiliation (Wellcome Trust - Medical Research Council Cambridge Stem Cell Institute).

If you have any questions about open access, please contact the SCI Records Assistant.



Tell us about your publications and get your open access fees paid!

sci-records@stemcells.cam.ac.uk

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Upcoming Events

SCI PhD Day

All SCI members are welcome.

This is a great way for everyone in the SCI to see what other labs are doing.

Tuesday 22 July 2014, 09:00 – 19:00

Talks: Biochemistry Lecture Theatre, Sanger Building

Poster Session: Level 3 Seminar Room (canteen), SCI.

- PhD students starting their final year in October 2014 (currently in their second year of a 3-year PhD, or the third year of a 4-year PhD) will be giving oral presentations.
- All other SCI PhD students will present a poster.

Stem Cell Club

Invited speakers are members of, or visitors to, the Cambridge stem cell community. The talks are followed by refreshments and an opportunity to discuss the topics of the evening. From September onwards Stem Cell Club will take place on a Wednesday:

Thursday 24 July

Wednesday 17 September, TBC

Wednesday 29 October

Wednesday 26 November, TBC

Please contact Austin Smith with any breaking stories: ags39@cam.ac.uk

Chalk Talks

All PIs and Affiliate PIs are welcome

Monday 30 June, 16:00

Dr Brian Hendrich & Dr Mark Kotter

Herchel Smith suite, Herchel Smith Building for Brain and Mind Sciences, Forvie Site, Addenbrooke's.

Refreshments provided.

Future Chalk Talks:

25 July, 16:00, Katrin Ottersbach/Jose Silva

26 September, 16:00, Thora Karadottir/Christine Watson

27 October, 16:00 Ludovic Vallier/Alfonso Martinez Arias

Fri 28 November, 16:00, Anna Philpott/B. K. Koo

Dates for your Diary

14-15th July 2014

4th Annual Cambridge Stem Cell Symposium, 'Stem Cells in Medicine'

15-16th December 2014

SCI Annual Meeting and International Scientific Advisory Board Meeting