

## Hutchison/MRC Research Centre

# Newsletter

To undertake world leading research into cancer cell biology that can be translated into clinical practice

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Autumn 2013

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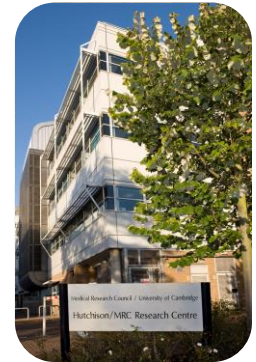
### Message from the Directors

Welcome to the autumn issue of the Hutchison/MRC Research Centre newsletter. This edition puts a spotlight on the recent organisational changes that have occurred within the MRC Cancer Unit. It also outlines the Unit's first venture into blogging, the achievements of a range of scientists within the Research Centre, and the Athena SWAN award achieved by the Clinical School.

Professor Ashok Venkitaraman  
Professor Sir Bruce Ponder  
**Joint Directors, Hutchison/MRC  
Research Centre**

## Medical Research Council Cancer Unit joins University of Cambridge

On the 1<sup>st</sup> October 2013, the MRC Cancer Unit (formerly known as the MRC Cancer Cell Unit), became a University Unit within Cambridge University's School of Clinical Medicine.


**UNIVERSITY OF  
CAMBRIDGE**
**MRC** | Cancer  
Unit

On the 1<sup>st</sup> of October 2013, a strategic alliance between Cambridge University and the Medical Research Council (MRC) saw the MRC Cancer Unit become a new department within the University's School of Clinical Medicine, whilst retaining its core funding and infrastructure support from the MRC.

*Continued on page 2.*

This new structure – the University Unit – is being more widely adopted by the MRC to better integrate its Units into their host Universities, enhance their research capacity, and offer new opportunities for both collaboration and funding.

Commenting on the strategic alliance, MRC Cancer Unit Director, Professor Ashok Venkitaraman, said, "*This alliance will enhance the Unit's ability to deliver its research goals, and better coordinate our work with that of other institutions within the Cambridge Cancer Centre. The Unit has already made several significant contributions to cancer research, and we look forward to continuing this work within the University whilst retaining our strong link with the Medical Research Council*".

Professor Patrick Maxwell, Regius Professor of Physic at the University of Cambridge, added, "*I am delighted to welcome the MRC's Cancer Unit into the University of Cambridge. The Unit has an excellent reputation for work on understanding how cancers develop, with a real drive to translate those findings into new approaches for diagnosis and treatment that can be applied in the clinic. The transfer of the Unit into the University therefore enhances the Clinical School's cancer research portfolio and I look forward to the impetus this will give to new collaborative and translational opportunities*".

Find the MRC Cancer Unit on the web:



[www.twitter.com/MRC\\_CU](http://www.twitter.com/MRC_CU)



[www.facebook.com/MRC.Cancer.Unit](http://www.facebook.com/MRC.Cancer.Unit)



[www.mrc-cu.cam.ac.uk](http://www.mrc-cu.cam.ac.uk)

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## Research Centre staff take up the Movember challenge



A number of staff within the Research Centre will be undergoing some facial changes in the coming weeks, as part of the global Movember initiative.

Movember is an independent charity which aims to improve men's health by raising funds and awareness for prostate and testicular cancer, and mental health. Movember challenges men to grow a moustache for the 30 days of November, thereby changing their appearance and the face of men's health.

The moustache growers of 'Team Muchison' are: David Huggins, Richard Hill, Isaac Johnson, Edoardo Gaude, Gavin Roe-Scott, Grahame McKenzie, Xiaodun Li, James Redman, Pierre Lao-Sirieix.

If you would like to support Team Muchison, please visit: <http://moteam.co/mutchison>

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## Professor Sir Bruce Ponder awarded Cancer Research UK Lifetime Achievement Award



*Dr Harpal Kumar, Cancer Research UK, presents Professor Sir Bruce Ponder with his Lifetime Achievement Award.*

Professor Sir Bruce Ponder, the first director of the Cancer Research UK Cambridge Institute, Head of the Department of Oncology at the University of Cambridge, and Joint Director of the Hutchison/MRC Research Centre and has been awarded Cancer Research UK's prestigious Lifetime Achievement Award.

The Lifetime Achievement in Cancer Research Prize is awarded to individuals who have produced exceptional research throughout their career, contributing towards furthering the understanding of cancer.

The award recognises his contribution to the identification and understanding of genetic susceptibility to breast cancer and other

common cancers, and for his achievements in building cancer research in Cambridge into a world-renowned centre of excellence.

Professor Ponder was presented with his award at a ceremony at the National Cancer Research Institute (NCRI) Cancer Conference in Liverpool, in November. Dr Harpal Kumar, Chief Executive of Cancer Research UK and chair of the NCRI, said: "I'm delighted to announce all our award recipients this year, who are receiving prizes for their extraordinary and wide-ranging contributions to cancer science.....through their pioneering work they open up new opportunities to detect and treat cancer which, in turn, helps us save lives." We would like to join Dr Kumar, in congratulating Professor Ponder on this well deserved award.

Earlier this year, Professor Ponder was also appointed as an inaugural Fellow of the newly formed American Association for Cancer Research (AACR) Academy. The AACR Academy will recognise and honour distinguished scientists whose major scientific contributions have propelled significant innovation and progress against cancer. Fellows were selected through a rigorous peer review process that evaluated individuals on the basis of their stellar scientific achievements in cancer research.



*Image credit: Cancer Research UK*

## Other news

### MRC Cancer Unit Annual Lecture

The MRC Cancer Unit Annual Lecture took place on Monday 1<sup>st</sup> November, with guest lecture Professor Sir David Lane.

Sir David, the Chief Scientist at the A\*STAR programme in Singapore, spoke on the subject of "*The p53 pathway: 21 years of the "guardian of the genome"*". A packed audience at the Max Perutz Lecture Theatre in the MRC LMB were able to hear about the latest developments in this field, as well its evolution over the past two decades.

We are very grateful to Sir David for taking the time to visit the Unit and delivering our annual lecture.

We hope to announce details of next year's annual lecturer in early 2014.

## Conference appearances for Research Centre scientists

Congratulations to PhD student Luke Wylie, and post-doctoral researcher Dr Tatiana



Papkovskaia (**Philpott** group), who won the best poster prize at the recent Neuroblastoma Society Symposium in Liverpool. Their poster was entitled, "*Phosphorylation status of Ascl1 regulates neuroblastoma proliferation and differentiation*".

The Graduate School of Life Sciences at the University of Cambridge held a symposium on the 6<sup>th</sup> November, to celebrate the MRC Centenary and the associated MRC Centenary Awards. A large number of Centenary awardees, including Dr Christian Frezza, Dr Jacqui Shields, and Dr Carla Martins from the MRC Cancer Unit, presented posters. Professor Rebecca Fitzgerald and Dr Carla Martins also spoke on "*Combining simple devices with high tech science for the early detection of oesophageal cancer*" and "*p53-targeted therapy in p53-mutant lung tumours*", respectively.



Also earlier in November, Dr Phil Jones was selected to give an oral presentation at the National Cancer Research Institute's (NCRI) annual conference. In a session on Cancer Models, Dr Jones spoke on "*Lineage tracing reveals the cellular basis of early metastasis in oesophageal squamous carcinoma*".

And finally, Dr Matt Lakins, a post-doctoral researcher in the **Shields** group, was on the other side of the fence as an organiser of the recent Stromal Immunology Group (StIG) Conference. This two day meeting took place in Cambridge, and as co-founder and President of the StIG,



Matt has taken a major role in its expansion over the past year.

## MRC Cancer Unit blog launched

We are delighted to announce that our new MRC Cancer Unit blog was launched in October. The blog provides a slightly more informal platform for our scientists to describe their latest work, as well as write about other research-related activities. Fittingly, our first post was written by a new arrival to the Unit, graduate student Jennifer Harris. Jennifer will be blogging regularly about her experiences as a research student starting out on a career in cancer research. Other regular features will include the

Research Update- an in-depth look at some of our research publications, and an Image of the Month, as well as plenty of other posts on interesting activities within the Unit.

You can find out blog here- [mrccancerunit.wordpress.com](http://mrccancerunit.wordpress.com) and please do feel free to leave a comment or any other feedback.



## Grants news

Professor Sir Bruce Ponder, Department of Oncology, has been awarded a research grant from the Breast Cancer Research Foundation, to investigate "*Beyond GWAS : Network approaches to breast cancer genetics*".

Dr Phil Jones, MRC Cancer Unit, has been awarded a Cancer Research UK programme grant to

investigate "*Clonal evolution in oesophageal squamous preneoplasia*".

Dr Christian Frezza, MRC Cancer Unit, has been awarded a project grant by the Association for International Cancer Research to investigate, "*Metabolic permissiveness and chemoprevention in Hereditary Leiomyomatosis and Renal Cell Cancer*".

## Athena SWAN at the Clinical School



When the MRC Cancer Unit joined the School of Clinical Medicine it also became part of the School's Athena SWAN family, along with the rest of the Research Centre, sharing the Silver award the School recently achieved for its commitment to gender equality. The Athena SWAN Charter was set up in 2005 by the Government's Equality Challenge Unit to advance the retention of women in science, technology, engineering, medicine and mathematics (STEMM). The University of Cambridge is a founder member of the Charter and holds a Bronze award. Achieving an award became a priority for the School in 2011, when the Chief Medical Officer announced that the NIHR would only shortlist medical schools for Biomedical Research Centre and Unit funding if they had a Silver Athena SWAN award within five years.

Professor Fiona Karet led the steering group that produced the School's award submission, and stresses that whilst much of the work has been to level the playing field and offer development opportunities for women, the aim is for changes to processes and practices, such as family-friendly policies, to have a positive effect on working culture and improve the intellectual environment for everyone. She says, *"We now have the tools in place to recruit more effectively, to support our staff more comprehensively, and to celebrate achievements more widely."*

The Silver award must be renewed in 2016. Anne Marie Catchpole has been recruited to support Fiona and the School's Athena SWAN Governance Group going forward to ensure we all deliver on the commitments laid out in the submission's Action Plan. Please visit <http://athena-swan.medschl.cam.ac.uk/> for more information.

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## Arrivals and Departures

We would like to welcome our new graduate students to the building: Callum Campbell, Saif Ahmad, Max Fries (Venkitaraman group); Isaac Johnson (Frezza group); Jennifer Harris (Shields group); Frances Turrell (Martins group); Eleanor Gregson (Fitzgerald group); Aoibhean McNally, Magdalena Sznurkowska (Philpott group).

We also welcome researchers Angela Riedel, Hamza Chettouh, Sebastian Zeki, Xiaodun Li, Tsun-

Po Yang; and Samita Baga and Julie Ainley, who join the MRC Cancer Unit administration team and the Unit Director's Office, respectively.

We would like to wish Sarah Pearson and Mariagnese Barbera all the best in their careers since leaving the Research Centre.

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# Hutch scientists in the media



New research on mRNA export and chromosomal instability led by Dr Vihanda Wickramasinge from the **Venkitaraman** lab, was featured in an article in the Cambridge News.



**Professor Ashok Venkitaraman's** recent visit to India as part of a delegation from the University of Cambridge, for the opening of the new collaborative Centre for Chemical Biology and Therapeutics in Bangalore, was widely reported in the Indian press, as well as Business Weekly.



**Professor Rebecca Fitzgerald** is quoted in recent editions of the Daily Mail and Daily Mirror in articles highlighting the rise in male obesity and other risk factors associated with oesophageal cancer.

## Recent publications

*Research advances in esophageal diseases: bench to bedside.* di Pietro M, **Fitzgerald RC**. *FI000Prime Rep*. 2013 Oct 1;5:44.

*British Society of Gastroenterology guidelines on the diagnosis and management of Barrett's oesophagus.* **Fitzgerald RC**, di Pietro M, Rangunath K, Ang Y, Kang JY, Watson P, Trudgill N, Patel P, Kaye PV, Sanders S, O'Donovan M, Bird-Lieberman E, Bhandari P, Jankowski JA, Attwood S, Parsons SL, Loft D, Lagergren J, Moayyedi P, Lyratzopoulos G, de Caestecker J. *Gut*. 2013 Oct 28. doi: 10.1136/gutjnl-2013-305372. [Epub ahead of print]

*A genome-wide association study identifies new susceptibility loci for esophageal adenocarcinoma and Barrett's esophagus.* Levine DM, Ek WE, Zhang R, Liu X, Onstad L, Sather C, Lao-Sirieix P, Gammon MD, Corley DA, Shaheen NJ, Bird NC, Hardie LJ, Murray LJ, Reid BJ, Chow WH, Risch HA, Nyrén O, Ye W, Liu G, Romero Y, Bernstein L, Wu AH, Casson AG, Chanock SJ, Harrington P, Caldas I, Debiram-Beecham I, Caldas C, Hayward NK, Pharoah PD, **Fitzgerald RC**, Macgregor S, Whiteman DC, Vaughan TL. *Nat Genet*. 2013 Oct 13. doi: 10.1038/ng.2796. [Epub ahead of print]

*Location of Lymph Node Involvement in Patients with Esophageal Adenocarcinoma Predicts Survival.* Talsma AK, Ong CA, Liu X, van Hagen P, Van Lanschot JJ, Tilanus HW, Hardwick RH, Carroll NR, Spaander MC, **Fitzgerald RC**, Wijnhoven BP. *World J Surg*. 2013 Oct 8. [Epub ahead of print]

*A review of the current understanding and clinical utility of miRNAs in esophageal cancer.* Sakai NS, Samia-Aly E, Barbera M, **Fitzgerald RC**. *Semin Cancer Biol*. 2013 Sep 3. doi:pil: S1044-579X(13)00081-3. 10.1016/j.semcancer.2013.08.005. [Epub ahead of print]

*The 'omics' revolution and oesophageal adenocarcinoma.* Weaver JM, Ross-Innes CS, **Fitzgerald RC**. *Nat Rev Gastroenterol Hepatol*. 2013 Aug 27. doi: 10.1038/nrgastro.2013.150. [Epub ahead of print]

*Barrett's oesophagus: diagnosis, surveillance and treatment.* Bornschein J, **Fitzgerald RC**. *Br J Hosp Med (Lond)*. 2013 Aug;74(8):444-50. No abstract available.

*Diagnosis and treatment of Barrett's oesophagus.* Lim YC, **Fitzgerald RC**. *Br Med Bull*. 2013;107:117-32. doi: 10.1093/bmb/ldt025. Epub 2013 Aug 6.

*Changing presentation of prostate cancer in a UK population - 10 year trends in prostate cancer risk profiles in the East of England.* Greenberg DC, Wright KA, Lophathanon A, Muir KR, **Gnanapragasam VJ**. *Br J Cancer*. 2013 Oct 15;109(8):2115-20. doi: 10.1038/bjc.2013.589. Epub 2013 Sep 26.

*Mitochondrial cristae shape determines respiratory chain supercomplexes assembly and respiratory efficiency.* Cogliati S, **Frezza C**, Soriano ME, Varanita T, Quintana-Cabrera R, Corrado M, Cipolat S, Costa V, Casarin A, Gomes LC, Perales-Clemente E, Salviati L, Fernandez-Silva P, Enriquez JA, Scorrano L. *Cell*. 2013 Sep 26;155(1):160-71. doi: 10.1016/j.cell.2013.08.032. Epub 2013 Sep 19.

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*Wild Type p53 Transcriptionally Represses the SALL2 Transcription Factor under Genotoxic Stress.* Farkas C, **Martins** CP, Escobar D, Hepp MI, Donner DB, Castro AF, Evan G, Gutiérrez JL, Warren R, Pincheira R. PLoS One. 2013 Sep 6;8(9):e73817. doi: 10.1371/journal.pone.0073817.

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*Master regulators of FGFR2 signalling and breast cancer risk.* Fletcher MN, Castro MA, Wang X, de Santiago I, O'Reilly M, Chin SF, Rueda OM, Caldas C, **Ponder** BA, Markowitz F, Meyer KB. Nat Commun. 2013;4:2464. doi: 10.1038/ncomms3464.

*Maximizing the biochemical resolving power of fluorescence microscopy.* Esposito A, Popleteeva M, **Venkitaraman** AR. PLoS One. 2013 Oct 28;8(10):e77392. doi: 10.1371/journal.pone.0077392.

*Human inositol polyphosphate multikinase regulates transcript-selective nuclear mRNA export to preserve genome integrity.* Wickramasinghe VO, Savill JM, Chavali S, Jonsdottir AB, Rajendra E, Grüner T, Laskey RA, Babu MM, **Venkitaraman** AR. Mol Cell. 2013 Sep 26;51(6):737-50. doi: 10.1016/j.molcel.2013.08.031.

*A cancer-associated BRCA2 mutation reveals masked nuclear export signals controlling localization.* Jeyasekharan AD, Liu Y, Hattori H, Pisupati V, Jonsdottir AB, Rajendra E, Lee M, Sundaramoorthy E, Schlachter S, Kaminski CF, Ofir-Rosenfeld Y, Sato K, Savill J, Ayoub N, **Venkitaraman** AR. Nat Struct Mol Biol. 2013 Oct;20(10):1191-8. doi: 10.1038/nsmb.2666. Epub 2013 Sep 8.

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