



Queen's University
Belfast



CCRCB
Centre for
Cancer Research
& Cell Biology

Bulletin

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Employment and Learning Minister Visits CCRCB

Employment and Learning Minister, Dr Stephen Farry, acknowledged the key role Queen's plays in the knowledge economy during a visit to the University on 8 June 2011.

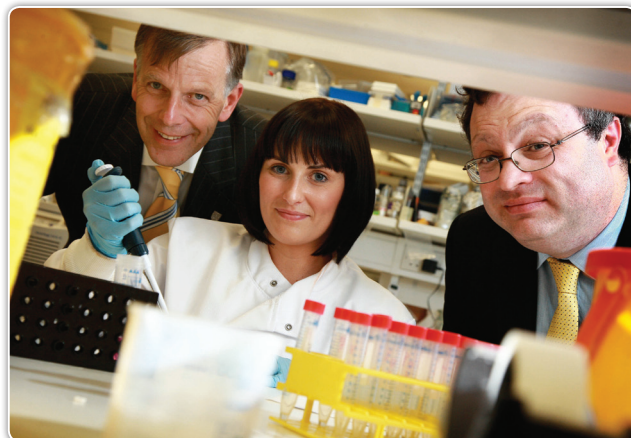
The Minister was given a tour of the McClay Library, the 'ANSIN' research hub in the School of Maths and Physics and the CCRCB by Vice-Chancellor, Professor Peter Gregson.

Speaking after the visit, the Minister said: "The University has a proud tradition of academic excellence and plays a key role in today's knowledge economy. I welcome the opportunity to visit Queen's today and see at first hand how funding provided by my Department continues to support the University in that role.

"Today, I have toured two of Queen's University's leading research centres.

The Centre for Cancer Research and Cell Biology, which was established with over £18m investment from my Department, has become a by-word for cutting edge research which is socially and economically relevant to Northern Ireland and indeed, the world."

The Minister continued: "I commend the University for its commitment to research collaboration, both with other higher education institutions and with industry. This approach is vital in the current economic climate. By collaborating together, we are pooling research expertise and leveraging



Dr Stephen Farry, Employment and Learning Minister (right) pictured with Queen's Vice-Chancellor Professor Peter Gregson and DEL funded Cancer Research PhD student Claire McCourt from CCRCB

additional investment to support projects that will have significant benefit in a wide range of industrial sectors."

Queen's Clinician Scientist Recognised with UK Appointment



L-R: Chief Executive of the Medical Research Council Sir John Savill, Chair of the Translational Research Strategy Board of the Medical Research Council Professor Patrick Johnston and Vice-Chancellor of Queen's University Professor Peter Gregson

Congratulations to Professor Patrick Johnston who has been appointed Chair of the Translational Research Group of the Medical Research Council (MRC).

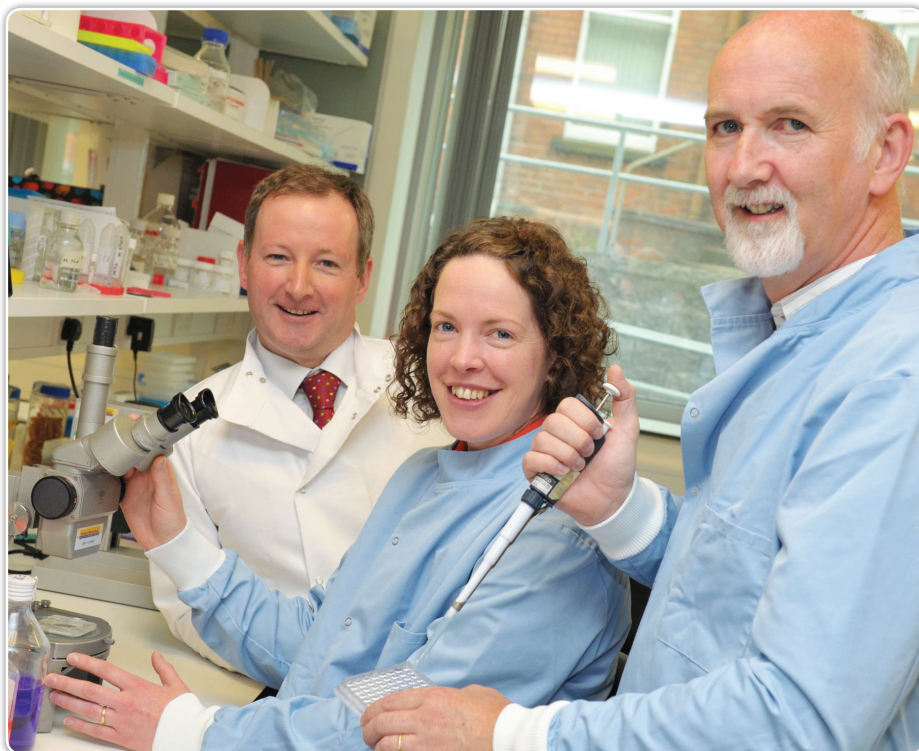
Announcing the appointment at Queen's University, Sir John Savill, Chief Executive of the Medical Research Council, said: "Professor Johnston's appointment is extremely important. The role as chair of the Translational Research Group is key to its success in the UK, which is one of our main objectives. The MRC has to deliver the economic benefits from its investments and getting the right strategy to achieve that is essential. Professor Johnston is very committed to translational research; he has particular expertise in cancer and is clearly someone who has chosen a very receptive translational research environment at Queen's."

Commenting on his appointment, Professor Johnston said: "This appointment is not only an honour for me but also for Queen's University

and Northern Ireland. It is also a major recognition of the research work undertaken in the School of Medicine, Dentistry and Biomedical Sciences. It will allow me to further develop translational research across the UK and also direct research at Queen's into areas that will be more successful."

Professor Peter Gregson, Vice-Chancellor of Queen's University, said: "Queen's University is delighted that Professor Johnston has been honoured through his appointment to this key strategic role within the Medical Research Council. It is testament to his research reputation and his contribution, made through Queen's, in the area of translational research. Importantly, it places Northern Ireland at the heart of strategy and policy development in the MRC."

Information Day for Teachers



L-R: Professor Patrick Johnston with Ms Ursula Grimley and Mr Aidan Lagan, Biology teachers from St Columb's College, Derry

Over fifty AS and A-level Biology teachers from around Northern Ireland had the opportunity to become involved in the latest cancer research techniques at a special event at CCRCB on Friday 10 June 2011.

As well as hearing about the latest developments in gene technology – a key aspect of the AS and A-level Biology syllabus – they were able to watch CCRCB's researchers at work and, under their expert guidance, got the opportunity to extract DNA from cancer cells.

CCRCB Director, Professor Dennis McCance, said: "Belfast is recognised worldwide for ground-breaking cancer research, and CCRCB is at the centre of that research. Our scientists are developing cutting edge techniques in the prevention, diagnosis and treatment of cancer, which help alleviate human suffering around the world.

"To ensure that this important work continues, we must continue to attract the best and brightest young scientists from across Northern Ireland and

around the world. Today's A-level students could be at the forefront of tomorrow's scientific breakthroughs, and that is why we work closely with local schools.

"Through our relationship with teachers and students, we show budding young scientists how what they learn in the classroom relates to the ground-breaking research being conducted here at CCRCB. I hope that some of the students from the schools represented here today will pursue their passion for science by choosing to study at Queen's School of Medicine, Dentistry and Biomedical Sciences and follow a career in cancer research."

During the day, Professor McCance gave a unique insight into the use of genetics in personalised medicine, and how scientists can identify genetic markers in a patient's blood to predict how that patient will respond to various treatments. Breakthroughs in this area of research are enabling doctors to plan more personalised treatment for cancer patients.

Teachers also heard how new DNA technology is helping unlock the secrets of the past and present. Professor Patrick Morrison gave a presentation explaining how DNA from the skeleton of a 17th century giant was used to trace its present-day relatives, and how gene technology is used by forensic scientists to solve otherwise 'perfect' crimes.

The Information Day event was a great success and received positive feedback from the researchers and teachers who participated in it.

CCRCB Schools Workshop

Twenty three students from eight schools across Belfast took part in a practical workshop in the CCRCB on Saturday 9 April 2011.

The students worked alongside researchers in the labs for the day and gained a valuable insight into some of the procedures and topics from their AS level Biology syllabus. The Schools Workshop was a great success and all the students who attended said they would now consider a career in cancer research.

For free online teaching resources from Cancer Research UK, please visit: <http://info.cancerresearchuk.org/youthandschools/>



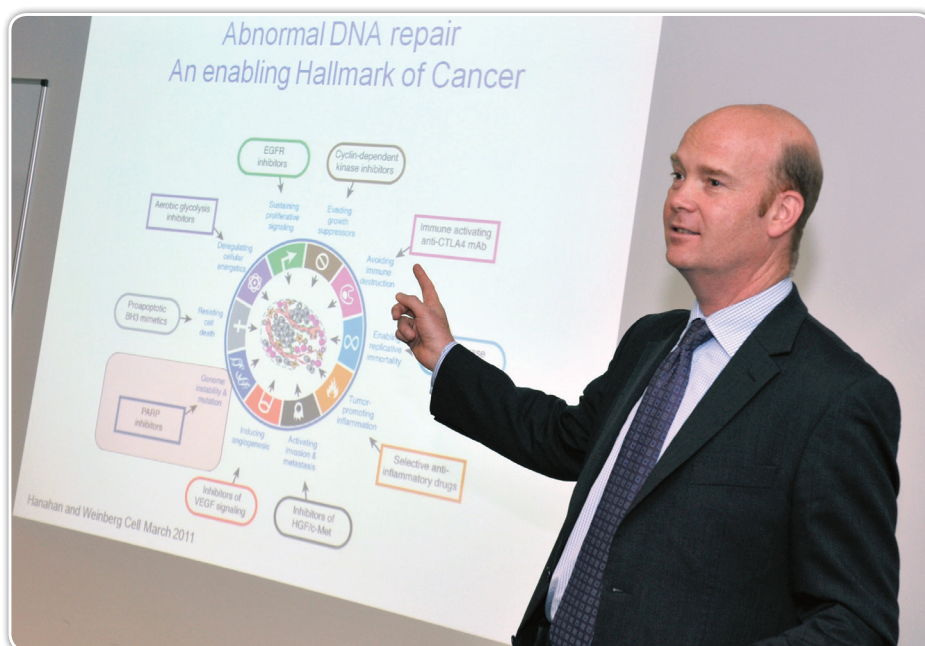
CCRCB Researcher Alexandra Henry (right) with pupils at the CCRCB Schools Workshop

Cancer Research UK Centre Lecture 2011

The Cancer Research UK Centre Lecture took place in CCRCB on 23 June 2011. The lecture was given by Dr Andrew Tutt, Director of The Breakthrough Breast Cancer Research Unit, King's College London.

Dr Tutt combines his role of directing a research unit with the position of Consultant Oncologist in the multidisciplinary Breast Unit at Guy's and St Thomas' NHS Foundation Trust. Dr Tutt qualified in medicine at Bristol University in 1990 and, after postgraduate training in general medicine, trained in clinical oncology at the Royal Marsden Hospital. He then went to work with Professor Alan Ashworth at the Institute of Cancer Research on a Medical Research Council Research Training Fellowship. Here, Dr Tutt worked on functions of the BRCA2 breast cancer predisposition gene and was awarded his PhD in 2002.

Working with Professor Ashworth, Dr Tutt has developed a translational clinical programme which focuses on cancers associated with functional deficiencies in BRCA1 and BRCA2. He is also Chief Investigator for the Cancer Research UK and Breakthrough Breast



Dr Andrew Tutt at CCRCB

Cancer BRCA Trial, the Triple-Negative Trial and the ICEBERG studies into a potential new drug. Known as olaparib (a PARP inhibitor), the drug is being developed for women with hereditary breast and ovarian cancer.

During his visit Dr Tutt met with several of the Principal Investigators in CCRCB and had an opportunity to talk to the Post-doctoral Research Fellows and Postgraduate Research Students about their research programmes.

Northern Ireland Cancer Trials Centre Launch



The Northern Ireland Cancer Trials Centre (NICTC), formerly known as the Northern Ireland Cancer Clinical Trials Unit, launched its new name, logo and website on 1 April 2011.

NICTC, the co-ordinating centre for cancer clinical trials in Northern Ireland, based at Belfast City Hospital, is a joint project between Queen's University and the Belfast Health and Social Care Trust. The work of the Centre is funded by the Health and Social Care R&D Division of the NI Public Health Agency and by the charities Cancer Research UK and the Friends of the Cancer Centre.

Professor Bernie Hannigan, Director of HSC R&D, welcomed the launch saying: "Cancer clinical trials are essential for continued progress towards even more effective treatments and care for patients with cancer. We are very pleased to continue supporting this

important activity and we applaud the very significant achievements being made by clinicians and researchers based in Northern Ireland."

Dr Richard Wilson, the Centre's Clinical Director said: "Clinical trials allow the development of personalized medicine specifically targeted to each individual and their cancer. Last year over 1,100 patients in Northern Ireland took part in our clinical trials or other high quality cancer research studies. Our patients with cancer who take part in clinical trials are helping us to develop better and safer treatments. They also help us through translational research to identify who is most likely to benefit from a given therapy, and who is most at risk of side effects."

Cancer Research UK Lead Research Nurse Anne Croudass said: "We fund the highest quality research into the treatment causes and prevention

of cancer. It is through supporting scientists, doctors and nurses, such as those here in Northern Ireland, that we continue to improve outcomes for cancer patients."

The NICTC is also launching a strategy to increase personal and public involvement in cancer research in Northern Ireland. Anyone living with or beyond cancer, or relatives or carers of someone with cancer may want to consider getting involved in helping to influence cancer research. If you are in one of these groups and interested in finding out more, you are invited to get in touch with NICTC. You can find details at the website, or by contacting Ruth Boyd, Cancer Research UK Senior Nurse at the NICTC, Tel: (028) 9026 3903 or e-mail: nictc@belfasttrust.hscni.net

Information about current clinical trials in Northern Ireland is available on the website at: www.qub.ac.uk/nictc

CR-UK Centre Update

Cancer experts from leading centres in Dundee and Belfast gathered in Dundee recently to discuss the latest advances in research and foster future collaborations.

Sixteen researchers from CCRCB attended the Dundee-Belfast Cancer Centres' Joint Symposium, which took place on 12-13 May 2011 at the University of Dundee.

Dundee and Belfast are both Cancer Research UK Centres, drawing together world class research and medical expertise to provide the best possible results for cancer patients nationwide. Themes of the symposium included breast cancer, colorectal cancer, skin cancer and responses to radiation. Professor Dennis McCance, Director of CCRCB, said: "There are strong common themes across the two Centres with complementary rather than overlapping expertise and so it makes for an ideal collaboration on breast and bowel cancers and responses to radiation."

Belfast Cancer Research UK Centre is helping to set the pace for national



L-R: Professor Dennis McCance, Director of CCRCB; Mrs Sharon Dunwoody, Belfast CR-UK Centre Manager; Dr Emma Hill, Dundee Cancer Centre Manager and Dr David Meek from Dundee University, co-organiser of the symposium.

and international progress in bowel, breast and oesophageal cancer and radiation biology. The Centre brings together researchers and support from Queen's University Belfast, the Belfast

Health & Social Care Trust, the HSCNI Research & Development Division of the Public Health Agency and Cancer Research UK.

CCRCB Summer Research Programme 2011

The CCRCB welcomed twenty students from the UK, EU and the USA to our Summer Research Programme 2011 on Monday 4 July 2011.

Following on from last year's successful Programme, our current cohort of students come from a diverse range of backgrounds including biomedical science, medicine, biochemistry and computational biology. In addition, school pupils who are between years 13 and 14 from Northern Ireland schools have been awarded Nuffield Foundation bursaries to undertake internships in the Centre.

Students have been assigned to projects within the Centre's focus groups which encompass haematological malignancies; breast and ovarian cancer; gastrointestinal cancer; lung cancer; prostate and bladder cancer; radiation biology and bioinformatics.

While participating in original research as part of a dynamic group, students

acquire practical laboratory techniques, gain knowledge of data analysis and interpretation and obtain first-hand experience of an academic research environment. At the end of the Programme, all summer students will present their work to the CCRCB at a poster presentation symposium and will prepare a report for their academic and laboratory supervisors. Participation in summer research enables students to make informed career choices in addition to enhancing their personal and technical skills portfolios.



CCRCB Summer Research Programme 2011

Funding for this year's Summer Research Programme has been granted from the School of Medicine, Dentistry and Biomedical Sciences, the Wellcome Trust, NI Leukaemia Research Fund and the Nuffield Foundation.

Queen's University Belfast - Vanderbilt University

As part of the University's drive to establish and consolidate international links and to generate links around cancer research, researchers from CCRCB and the School of Pharmacy travelled to Vanderbilt University, Nashville to participate in a two day internationalisation event on 17-18 March 2011.

The event had excellent scientific presentations given by Principal Investigators from both Universities. One of the first talks of the day was given by Dr Eva Harth, Vanderbilt School of Chemistry, about the use of novel drug delivery systems – Nanosponges. These synthetic sponges can be made to exact and reproducible sizes by how the chemistry is conducted. This was reported to be very important for transport through the body and into the blood stream. The Nanosponges use drugs via a non-covalent manner and are delivered to

irradiated cells via a known peptide targeting sequence on the outside of the sponge. This allows for cell specific drug delivery with no impact upon non-irradiated cells.

Dr Tom Yankeelov gave some insight into research conducted within the Vanderbilt Imaging Institute (VUIIS) and the use of MRI in breast cancer screening. This novel screening technology, which measures the mobility of water molecules within breast tissue, is being used to accurately measure the 3D topography of tumours. Dr Yankeelov also provided a tour of the state of the art Imaging Institute which was very impressive. In one of the VUIIS labs they have coupled together CT with SPECT and/or PET imaging which can be used with various animal models.

Dr Karen McCloskey met with Dr Craig Lindsley, head of CNS drug discovery, to

talk about the use of anti-muscarinics as therapies for an over-active bladder. As part of the NIH driven MLPCN tool compound discovery network, Vanderbilt have developed the highly selective compounds that can be used for the first time to truly tease apart the biology of bladder physiology. All of these compounds are provided free of charge to researchers who request them. For more details on what kind of probe compounds and biological targets are available, please visit the website: <http://mli.nih.gov/mli/mlp-probes/>

Presentations were also given by Dr Marie Migaud (School of Pharmacy), Dr Karen McCloskey, Dr Rich Williams, Dr David Waugh and Professor Dennis McCance (CCRCB) and were all positively received and generated a lot of interest in the research carried out at Queen's University.

Mullaghsandall Tea Party for Mesothelioma Research

Kathy Delargy presented a cheque for £900 to Dr Dean Fennell and members of his research group in CCRCB on Friday 24 June 2011.

Kathy organised a tea party in Mullaghsandall, Larne on the day of the Royal Wedding, 29 April 2011, to raise funds for Mesothelioma Research. Fifty people attended the event and others, who could not attend, sent donations.

Many thanks to Kathy for organising this event to help fund research in CCRCB and to all who helped out on the day and also to those who baked for the event and donated to the tombola.

Mesothelioma is cancer of the lung pleura or the abdominal peritoneum. Research is central to our approach. It is imperative that we learn more about mesothelioma so that we can help current patients as well as patients of the future. What we learn about mesothelioma will also help us understand other types of cancer such as breast, bowel and conventional lung cancer.



L-R: Dr Sara Busacca, Dr Dean Fennell, Dr Niall McTavish, Ms Kathy Delargy and Mr Ben Wilson

2011 ESTRO - Jack Fowler University of Wisconsin Award



L-R: Chair: J. Malicki (PL), Conor McGarry, Professor Jack Fowler and Chair: G. Kovács (DE)

Congratulations to Conor McGarry who received the 2011 ESTRO - Jack Fowler University of Wisconsin Award at the ESTRO Anniversary Congress held in London on 8-12 May 2011.

Conor McGarry's work, for which the Jack Fowler Award was received, involved creation and delivery of clinically relevant radiotherapy treatment plans to cell culture models within a specially fabricated phantom. Each treatment plan was delivered to human prostate cancer cells and normal primary fibroblast cells. Different

clinical radiotherapy protocols varying in the pattern of radiation delivery and the time of delivery were compared but overall giving the same uniform dose. The results confirm that effects due to delivery time are most prevalent in more radiosensitive cells and that cell survival data generated from uniform beam deliveries may not always be accurate in predicting response to more complex clinical radiotherapy delivery techniques. The work is part of ongoing studies to develop new biologically relevant models for the delivery of advanced radiotherapies.

Conor McGarry was awarded a doctoral research fellowship from the Health and Social Care Research & Development Division of the Public Health Agency in 2009 for a project entitled 'Studies of the biological implications of different intensity modulated radiation therapy (IMRT) planning and delivery techniques'. The work is supervised by Professor Kevin Prise and Dr Alan Hounsell and is a joint collaboration between the Northern Ireland Cancer Centre, Belfast Health and Social Care Trust and the CCRCB, Queen's University Belfast.

Recent Grants Awarded

Investigator(s): Kevin Prise and Richard Kennedy
Sponsor: Prostate Cancer Charity
Title: Optimal Radiation Targeting of PTEN Deficiency in Castrate Resistant Prostate Cancer in Combination with Modulators of DNA Damage and Repair
Amount: £99,273
Period: 01/10/11 – 30/09/14

Investigator(s): Peter Hamilton
Sponsor: EU FP7 Marie Curie
Title: FAST-PATH: High Throughput Tissue Imaging for Biomarker Discovery and Tissue Analysis in Prostate Cancer
Amount: €1.96 million
Period: 01/09/11 – 31/08/15

Investigator(s): Tom Flannery
Sponsor: Irish Institute of Clinical Neuroscience
Title: Targeting Radiation Resistance in Glioblastoma (Travel Award - Dr Pankaj Singh)
Amount: £7,900
Period: 01/07/11 – 30/09/11

Investigator(s): Richard Kennedy
Sponsor: Invest NI / McClay Foundation
Title: Almac-QUB Cancer Target, Biomarker and HIT Finding Programme
Amount: £1,295,040
Period: 01/07/11 – 30/06/14

Investigator(s): James Murray
Sponsor: Wellcome Trust
Title: Analysis of the Mechanism by which the Pseudokinase, hVps15, Binds

to and Activates the Lipid Kinase, hVps34 (Summer Studentship)
Amount: £1,440
Period: 01/07/11 – 31/08/11

Investigator(s): Sandra Van Schaeybroeck
Sponsor: Cancer Research UK (Renewal of Clinician Scientist Fellowship)
Title: Evaluation of ADAM17 as a novel drug target and potential biomarker in colorectal cancer
Amount: £688,624
Period: 01/01/12 – 31/12/14

Investigator(s): Ken Mills
Sponsor: NILRF
Title: Funding for NILRF Co-ordinator
Amount: £55,884
Period: 01/09/11 – 31/08/13

Donation from Crossdernott Indoor Bowling Club

Our thanks to the members of the Crossdernott Indoor Bowling Club, Donaghmore, Co Tyrone for raising £1,868 for brain cancer research at CCRCB. Alan Watt, who had been a member of the club since his teenage years and was Captain for the past number of years, was diagnosed with a malignant brain tumour in May of last year and sadly passed away in March 2011. The members of the Bowling Club raised the funds at a Bowling Tournament in April. Dr Tom Flannery, who heads this research area within the Centre, attended an event on 23 May 2011 to give a talk on his research and was presented with a cheque for £1,728 (£140 has been received after the cheque presentation) by Alan's wife, Mrs Sylvia Watt.



L-R: Mr Bertie Watt (Alan's father), Mrs Sylvia Watt (Alan's wife), Dr Tom Flannery (CCRCB), Mrs P Forde (Club Secretary), Mr Richard Montgomery (Club Chairperson) and Mr Colin Barnes (Club Captain)

Recent Publications

CHAHAL, H.S., STALS, K., UNTERHÄLTER, M., BALDING, D.J., THOMAS, M.G., KUMAR, A.V., BESSER, G.M., ATKINSON, A.B., MORRISON, P.J., HOWLETT, T.A., LEVY, M.J., ORME, S.M., AKKER, S.A., BELL, R.A., GROSSMAN, A.B., BURGER, J., ELLARD, S. and KORBONITS, M. AIP mutation in pituitary adenomas in the 18th century and today, *N Engl J Med*, 2011;364:43-50.

HAIDER, S.M., AUTIERO, I. and NEIDLE, S. Surface area accessibility and the preferred topology of telomeric DNA quadruplex-ligand complexes, *Biochimie*, 2011:1-5.

HAIDER, S.M., NEIDLE, S. and PARKINSON, G.N. A structural analysis of G-quadruplex/ligand interactions, *Biochimie*, 2011:1-13.

LEE, C.H., SPENCE, R.A.J., UPADHYAYA, M. and MORRISON, P.J. Familial Multiple Lipomatosis with clear autosomal dominant inheritance and onset in early adolescence, *BMJ Case Reports*, 2011;10.1136/bcr.2010.3395, 18 February 2011.

MCDADE, S.S., PATEL, D. and MCCANCE, D.J. p63 maintains keratinocyte proliferative capacity through regulation of Skp2-p130 levels, *J Cell Sci*, 2011 May, 15;124(Pt 10):1635-43. Epub 2011 Apr 21.

MCMAHON, S.J., HYLAND, W.B., MUIR, M.F., COULTER, J.A., JAIN, S., BUTTERWORTH, K.T., SCHETTINO, G., DICKSON, G.R., HOUNSELL, A.R., O'SULLIVAN, J.M., PRISE, K.M., HIRST, D.G. and CURRELL, F.J. (2011) Biological consequences of nanoscale energy deposition near irradiated heavy atom nanoparticles, *Scientific Reports* (In press).

MORRISON, P.J. The iris – a window into the genetics of common and rare eye diseases, *Ulster Med J*, 2010;79:3-5.

MORRISON, P.J. et AL; on behalf of CIMBA, Common Breast Cancer Susceptibility Alleles and the Risk of Breast Cancer for BRCA1 and BRCA2 Mutation Carriers:

Implications for Risk Prediction, *Cancer Res*, 2010;70(23):9742-54.

MORRISON, P.J. et AL; on behalf of Consortium of Investigators of Modifiers of BRCA1/2 (2010), Common Genetic Variation at 9p22.2 is associated with ovarian cancer risk for BRCA1 and BRCA2 carriers, *J Natl Cancer Inst*, 2011;103(1):1-12.

MORRISON, P.J., DONNELLY, D.E., ATKINSON, A.B. and MAXWELL, A.P. Advances in the Genetics of Familial Renal Cancer, *The Oncologist*, 2010;15(6):532-8.

NESBIT, M.A., HANNAN, F.M., GRAHAM, U., WHYTE, M., MORRISON, P.J., HUNTER, S.J. and THAKKER, R.V. Identification of a Kindred from Northern Ireland with Familial Hypocalciuric Hypercalcaemia Type 3 (FHH3), which maps to Chromosome 19q13.3, *J Clin Endocrinol Metab*, 2010;95(4):1947-54.

OLMOS, D., BARKER, D., SHARMA, R., BRUNETTO, A.T., YAP, T.A., TAEGMTMEYER, A., ALLRED, A.J., SMITH, D.A., MURRAY, S.A., LAMPKIN, T.A., DAR, M.M., WILSON, R.H., DE BONO, J.S. and BLAGDEN, S.P. Phase I study of GSK461364, a specific and competitive Polo-like Kinase 1 (PLK1) inhibitor in patients with advanced solid malignancies, *Clinical Cancer Research*, 2011;17(10):3420-3430.

PACEY, S.C., WILSON, R.H., WALTON, M., EATOCK, M.M., HARDCASTLE, A., ZETTERLUND, H., ARKENAU, H-T., BEECHAM, R., AHERNE, W., DE BONO, J.S., RAYNAUD, F., WORKMAN, P. and JUDSON, I. A phase I study of the Heat Shock Protein 90 inhibitor alvespimycin (17-DMAG) given intravenously to patients with advanced, solid tumours, *Clinical Cancer Research*, 2011;17(6):1561-70.

PAUL, I., SAVAGE, K.L., BLAYNEY, J.K., LAMERS, E., GATELY, K., KERR, K., SHEAFF, M., ARTHUR, K., RICHARD, D.J., HAMILTON, P.W., JAMES, J.A., O'BYRNE, K.J., HARKIN, P., QUINN, J.E. and FENNEL, D.A. PARP inhibition induces BAX/BAK-independent

synthetic lethality of BRCA1-deficient non-small cell lung cancer, *Journal of Pathology*, 2011;224:0-0, doi:10.1002/path.2925.

PETRACCONI, L., FOTTICCHIA, I., CUMMARO, A., PAGANO, B., GINNARI-SATRIANI, L., HAIDER, S.M., RANDAZZO, A., NOVELLINO, E., NEIDLE, S. and GIANCOLA, C. The triazatruxene derivative azatrux binds to the parallel form of the human telomeric G-quadruplex under molecular crowding conditions: Biophysical and molecular modeling studies, *Biochimie*, 2011:1-10.

REA, G., MCCULLOUGH, S., MCNERLAN, S., CRAIG, B. and MORRISON, P.J. Delineation of a recognisable phenotype of interstitial deletion 3(q23q25.1) in a case with previously unreported truncus arteriosus, *Eur J Med Genet*, 2010;53:162-7.

RICKETTS, C.J., FORMAN, J.R., RATTENBURY, E., BRADSHAW, N., LALLOO, F., IZATT, L., COLE, T.R., ARMSTRONG, R., AJITH KUMAR, V.K., MORRISON, P.J., ATKINSON, A.B., DOUGLAS, F., BALL, S.G., COOK, J., SRIRANGALINGAM, U., KILLICK, P., KIRBY, G., AYLWIN, S., WOODWARD, E.R., EVANS, D.G., HODGSON, S.V., MURDAY, V., CHEW, S.L., CONNELL, J.M., BLUNDELL, T.L., MACDONALD, F. and MAHER, E.R. Tumour Risks and Genotype-Phenotype-Proteotype Analysis in 358 Patients with Germline Mutations in SDHB and SDHD, *Hum Mutat*, 2010;31(1):41-51.

STEAD, M., CAMERON, D., LESTER, N., PARMAR, M., HAWARD, R., KAPLAN, R., MAUGHAN, T., WILSON, R., CAMPBELL, H., HAMILTON, R., STEWART, D., O'TOOLE, L., KERR, D., POTTS, V., MOSER, R., DARBYSHIRE, J. and SELBY, P. Strengthening Clinical Cancer Research in the United Kingdom, *British Journal of Cancer*, 2011;104(10):1529-1534.

Events 2011

1st Leeds International Oncological Engineering Conference

"A unique meeting of engineers and clinicians to explore novel ideas and collaborations in the field of oncology"
25-26 September 2011

Leeds

For further information and registration please refer to:
www.engineering.leeds.ac.uk/surgical-technologies/ocs/

NCRI Cancer Conference

6-9 November 2011

BT Convention Centre, Liverpool

For further information and registration please refer to:
<http://www.ncri.org.uk/ncriconference>

CCRCB Events

STO-CCRCB Conference

"Challenges in Cancer"
7-8 September 2011

Waterfront Hall, Belfast

For further information and registration please refer to:
www.qub.ac.uk/research-centres/CentreforCancerResearchCellBiology/Events/JointSTO-CCRCBMeeting/
or contact
sto-ccrcbconf@qub.ac.uk

Mitchell Lecture 2011

3 November 2011

CCRCB Building

Professor Joan Brugge,
Professor of Cell Biology, Department of Cell Biology, Harvard Medical School, Boston
For further information please refer to:
<http://cellbio.med.harvard.edu/faculty/brugge/>

Scientific Advisory Board Review Visit

27-28 March 2012

CCRCB Building

Measures of Esteem

Congratulations to Anna Acheva who has been awarded a European Radiation Research Society Travel Award, to Colman Trainor and Martin Lawlor who have been awarded Radiation Research Society (US) Scholars in Training Awards and to Karl Butterworth who has received an International Association for Radiation Research Travel Award. All four have received these to attend the 14th International Congress of Radiation Research being held in Warsaw, Poland on 28 August - 1 September 2011.

New Appointments

Welcome to the following new staff who have recently joined the Centre:

Visiting McClay Professor:
Professor Richard Kennedy

Clinical Research Fellows:
Dr Gareth Irwin
Dr Michael Moran

Research Staff:
Dr Francois Fay
Dr Keara Redmond
Dr Dorota Tkocz

Technical Staff:
Miss Victoria Bingham
Miss Claire Kitson

Visiting Researchers:
Ms Janine Keilmann
Ms Orlagh McGlade
Dr Caroline Greenan
(seconded from Almac)
Dr Steven Walker
(seconded from Almac)

Comments on the CCRCB Bulletin or suggestions for future editions should be forwarded to Margaret-Rose Mervyn: m.mervyn@qub.ac.uk