

Paterson Triumph



Issue 20 - December 2010

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Director's Introduction



A major priority for the Paterson Institute for Cancer Research (PICR) is to encourage and promote close working relationships with clinical colleagues and to drive translation of laboratory-based research into clinically relevant strategies for cancer patients. This bench to bedside approach is achievable by facilitating assessment of new technologies and treatments in early trials allied with the identification and validation of biomarkers that will ultimately guide patient treatment. Cancer is a heterogeneous disease associated with a diverse range of mutations that drive tumour progression. This heterogeneity means that response to therapy is both disease specific and patient specific therefore the 'one size fits all' approach to treatment needs to be personalised so that treatment is tailored to molecular defects. By implementing a co-ordinated and cohesive research strategy that harnesses strengths and skills in basic, translational and clinical research we aim to facilitate this personalised approach.

The close partnership between the laboratory and the clinic is epitomised by research collaborations between the PICR's Clinical and Experimental Pharmacology Group (CEP) who have a strong focus on biomarker research, the early phase clinical trials unit and clinicians overseeing trials

within the unit. A tremendous boost to this partnership is taking place with the opening of the Christie's £35 million Patient Treatment Centre which will be home to the largest early clinical trials unit in the world. With the associated increase in research staff, the new and expanded facility will ensure that more innovative trials can be accommodated and more patients will have access to new and potentially more effective treatments. The growth in early clinical research activities together with laboratory research activity will spearhead a more tailored approach to patient treatment and parallels the PICR strategy and that of Cancer Research UK which provided £4.3 million towards the early clinical trials unit expansion.

Further growth of research capability will be supported by the development of a new dedicated cancer research building to allow the expansion of high quality research. Agreement has now been reached by Manchester Cancer Research Centre (MCRC) partners for the first phase of the project costing £25 million. The new building will be located close to the existing Institute and detailed design for the development will begin soon and the hope is to initiate preparation and construction work early in 2012. This new development allows us to build for the future and ensures that we have a solid foundation for strategic growth in order to meet our research objectives. It is crucial to continue to proceed with ambition and enthusiasm despite the challenging economic climate to come. Continued investment in providing the world-class facilities where cancer research and cancer researchers can flourish, such as the Patient Treatment Centre and the new MCRC building, demonstrates Manchester's commitment to building its cancer research strength.

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World's Largest Early Clinical trials unit opens at The Christie



The new £35 million Patient Treatment Centre at The Christie NHS Foundation Trust opened in November. Prior to the first patients being treated, a week of tours was organised for local supporters, dignitaries and partners of Manchester Cancer Research Centre.

Part of the centre will be the largest early clinical trials unit in the world and completes plans for a three-fold expansion of facilities for early phase clinical trials.

With the opening of these new facilities and planned future growth in research staff, more patients will be able to have early access to new therapies.

Harpal Kumar, the chief executive of Cancer Research UK, which funded half of the cost of the new trials unit said:

“The new clinical trials’ facility at The Christie will offer a lifeline to nearly two and a half thousand cancer patients every year who have not responded to other treatments by giving them the chance to be part of a clinical trial testing a new treatment. Not only will the new unit improve cancer outcomes and save lives

but we believe it is designed in such a way that it will also improve each patient’s experience of their treatment, especially chemotherapy. Cancer Research UK is very proud to be supporting such an important new facility for cancer patients.”

Visitors invited on the tours, included actor John Thompson, who had donated £150,000 he won in a TV show, and local supporters of Cancer Research UK. The Oswestry Committee were particularly pleased to be invited:

“On behalf of The Oswestry Friends of Cancer Research UK, we would just like to say a big Thank You for a wonderful day yesterday. We have all been friends of Cancer Research for many years. This has been the first opportunity we have had to visit The Christie and see for ourselves what happens to the funds. We were truly impressed and amazed at the scale of the operation there and enjoyed meeting with the dedicated team whose enthusiasm seemed boundless. We wish you all a very happy move into the new premises and may the Clinical Trials Unit produce continued successes in the fight against cancer.”

We won! Victory for Paterson team in CR-UK derby

Match report by Luke Harrison

The 16th of October saw the third inter-CRUK institute football game between Paterson Football Club (PFC) and Beatson football Club (BFC), held at the University football pitches at Hough End, South Manchester.

A great deal has changed since our first game against BFC last August – both on and off the pitch. PFC have got serious. Thanks to generous team sponsorship from Olympus, PFC were able to buy a team football strip and an abundance of training equipment, all of which added to a feeling of cohesion and team spirit in the Manchester camp. Training sessions in Fog Lane Park and some practice 11-a-side games allowed us to work on our weaknesses, build on our strengths and identify squad positions for the team.

Another dramatic change this year was the huge organisational effort which started many months before the game. In contrast to last year's game, which was played on an uneven pitch and watched by a man and his dog, this year the game was transformed into a Family Fun Day complete with raffle, refreshments, face painting and a bouncy castle.



The game kicked-off to a nervy start with neither side committing to attacking play in the opening minutes. However, PFC soon realised that route one football easily exposed BFC's defence with Nick Tobin (Molecular Pathology) and Maciej Dolniak (CEP) having some good early opportunities. It wasn't long before Maciej got on to the end of a through-ball supplied by Ryan Smith (Operations) to find himself one-on-one with the keeper before calmly slotting in the first goal of the game. Only a few minutes passed before Maciej registered his second goal of the day with a similarly worked goal. The second half soon opened into a midfield battle with plenty of tasty tackles coming from both sides. The Beatson had their fair share of chances in the first half and the Paterson had to rely on some heroic last ditch tackles and one remarkable save from keeper Chris Wirth (Bioinformatics) to avoid conceding. However, in the dying minutes of the first half, BFC scrambled in their first goal from a corner to leave the match poised at 2-1 at half time.

Ricky van Deursen (Cell Cycle) replaced Nick Tobin (Molecular Pathology) in the second half whilst James Dunphy (Operations) took over from Chris in goal, allowing Chris to use his pace in midfield. Andrew Price (CEP) swapped with Maciej to play as centre forward. It wasn't long before PFC were scoring again as Ricky got his head onto a Ryan Smith cross to flick the ball over the Beatson keeper making the score 3-1. At the other end James Dunphy made some good stops and was grateful to see a parried shot from the Beatson bounce back off the cross bar as the Beatson failed to capitalise on a number of good opportunities. The Paterson back four, consisting of Rob Clarke (Breast Biology), Ryan Smith, Paul Scutt (Bioinformatics) and Luke Harrison (CEP) were well organised to keep the Beatson out. At one point Rob made a couple of essential clearances off the line as the Beatson continued to apply pressure. Meanwhile, Owen McGinn (Immunology) and Matt Lancashire (CEP) worked like trojans in midfield to keep possession and to feed the more attacking wingers consisting of Chris Wirth, Damien Brown (CEP) and James Lynch (Leukaemia Biology). It wasn't long before Owen swung in the perfect cross for Chris to majestically chip the Beatson keeper to make it 4-1. The Beatson replied by scoring a deserved second goal from a well worked solo effort from one of their midfield players. Maciej could have had his hat-trick in the dying moments of the game but unselfishly rolled the ball to Andrew who then missed an absolute sitter and the game finished 4-2 to the Paterson.

One of the more memorable figures on the field was the referee who kept both teams on their toes with some interesting implementation of the rules of association football. Nevertheless, it was an entertaining game witnessed by an excellent turn out from the Paterson Institute staff and their family who helped us raise £1170, all going to Cancer Research UK and funding the vital research here at the Paterson Institute.

A huge thank you to everyone who helped make the family fun day happen, with special mention to Amy Weatheritt, Pippa McNichol, James Dunphy, Ryan Smith, Esther Walker and James Lynch whose efforts ensured that the day was a success. A special mention also goes to Jayne Whittaker, a local Cancer Research UK committee member, who provided catering on the day with all proceeds going to the Charity. Thank you to those who gave up their time to act as volunteers on the day: David Jenkins, Julian Blaser, Bill Harris, Filippo Ciceri, Susann Busch, Seema Alexander and Dominic James.

PFC would like to thank their team sponsor, Olympus, whose generosity bought PFC's team kit and training equipment making them look the part on the day.

A final thank you goes to the charming Bob Bean, CEO of Transnetyx, for his extremely generous sponsorship of the match, post-match meal and providing the Transnetyx CR-UK Football Challenge trophy. Bob and his delightful wife came from Memphis to watch the game and were enthusiastic supporters on the sideline with only minimal explanation of the rules of 'soccer' required. The trophy currently resides proudly on the stage of the Holt lecture theatre, just behind where the speaker stands. Isn't it about time we invited one of the Beatson's more prominent principal investigators to give a talk in the Holt lecture theatre...?



Iman van den Bout Appointed to BSCB Committee as Student Representative



The British Society for Cell Biology was founded in 1965 to promote the advance of cell biology. It does so by organising two meetings each year in spring and autumn that cover a large spectrum of cell biology research.

The BSCB also awards the prestigious Hooke medal for emerging leaders in cell biology of which three have made their way to scientists from the Paterson Institute: Iain Hagan, Elmar Schiebel (who is now working at the University of Heidelberg) and Karim Labib. It also promotes the attendance of other cell biology meetings by offering generous travel grants for PhD students and Postdocs.

Interestingly, Postdocs and PhD students make up a very large portion of the BSCB membership. A few years ago, it was therefore decided that positions within the BSCB committee

should be created for a PhD representative and a Postdoc representative - the idea being that having people on the committee who are themselves knee-deep in these respective stages of their careers would give some invaluable insight into the needs of these members.

Recently, I was lucky enough to be appointed as the BSCB Postdoc representative and I would therefore like to find out exactly what Postdocs want from the BSCB. Furthermore, I intend to organise some Postdoc events and will be involved in the organisation of the BSCB meetings. I hope that I will be able to make a valuable contribution to the BSCB by making it a more Postdoc-friendly society and helping the Society to better address the needs of Postdocs. I would welcome your feedback so if anyone has any ideas about points you think I should be addressing, or advice about how the BSCB can do this, please do get in touch.

University of Manchester scientists win the Nobel Prize for Physics



Professor Andre Geim and Professor Konstantin Novoselov have been awarded the highest accolade in the scientific world for their pioneering work with the world's thinnest material.

Graphene was discovered at the University in 2004. It has rapidly become one of the hottest topics in materials science and solid-state physics.

Professor Novoselov, 36, known as Kostya, first worked with Professor Geim, 51, as a PhD-student in the Netherlands. He subsequently followed Geim to the United Kingdom. Both of them originally studied and began their careers as physicists in Russia.

The award of the Nobel Prize means there are currently four Nobel Laureates at The University of Manchester.

Graphene is a two-dimensional layer of carbon atoms that resembles chicken wire. Since its discovery, Professor Geim and Dr Novoselov have published numerous research papers in prestigious journals such as Science and Nature, which have demonstrated the exquisite new physics for the material and its potential in novel applications such as ultrafast transistors just one atom thick – making it a potential successor to silicon – and sensors that can detect just a single molecule of a toxic gas.

Paterson Scientist elected as board member for the European Council of Doctoral Candidates and Junior Researchers

By Marisa Alonso Nuñez, Cell Division Group



The European Council of Doctoral Candidates and Junior Researchers (Eurodoc) is a European-wide federation of national associations for young researchers. It was founded in 2002 in Girona, Spain, and is composed of 34 national organisations across 33 countries.

The European Council of Doctoral Candidates and Junior Researchers (Eurodoc) is a European-wide federation of national associations for young researchers. It was founded in 2002 in Girona, Spain, and is composed of 34 national organisations across 33 countries. The organisation represents doctoral candidates and junior researchers in matters of education, research and professional career development, in order to advance the quality of doctoral programmes and the standards of research activity in Europe and to assist in the elaboration of policies about Higher Education and Research in Europe.

I started to work with Eurodoc in 2007 although I had been involved in the Spanish national association since 2002,

undertaking a number of different roles including spokeswoman and board member. In 2009 I was appointed as coordinator of the Gender Equality Workgroup and participated, as a Eurodoc representative, in the development of recommendations that arose from the European GenSet project on Gender Equality.

At the 2010 Eurodoc General Meeting in Vienna I was elected as a board member and my role is to be the main contact for the national associations and to promote collaboration between them, as well as managing the new memberships for the enlargement of Eurodoc. I have also been developing expertise in the adaptation of doctoral programmes and schools to the Bologna Process, the overarching aim of which is to create a European Higher Education Area (EHEA) based on international cooperation and academic exchange that is attractive to European students and staff, as well as to students and staff from other parts of the world.

In June I was invited to speak about the role of graduate schools and doctoral training programmes and the interleaving of the EHEA and the European Research Area (ERA) at the Universities 2020 conference, which was organised by the Spanish Presidency of the European Union and hosted by the University of Salamanca. I have also participated in the international committee that evaluated proposals submitted for the International Campus of Excellence programme of the Ministries of Education and Science in Spain. This aims to promote strategic collaborations between universities, research institutions and businesses.

My personal goal as a Eurodoc board member is to improve conditions for young researchers at the European level and ensure that our opinions are taken into account at all levels of the policy making process. If you have any concerns that can be addressed at a national or European level please get in touch.

New Students



Rebecca Foulger

Hello, my name is Rebecca and I'm from the lovely Isle of Man. I've recently finished my undergraduate degree at Bristol University where I studied Cancer Biology and Immunology which I really enjoyed. I'm now working in the inositide lab and so far so good! Everyone is really friendly and helpful, the resources are fab and Manchester seems to be a fun place so I'm looking forward to an exciting 4 years!



Elli Marinopoulou

Hi all, my name is Elli and I come from Greece where I completed my undergraduate degree in Biology. I moved to Manchester last year to do a Masters of Science in Cancer Biology and I decided to extend my stay for at least 4 years. I've recently joined the Stem Cell Biology group as a PhD student and hope to discover more about the role of Runx1 in haematopoiesis. Life in Manchester is great so far and I'm confident that it will be combined with an interesting research career.



Sara Cuvertino

Hello, my name is Sara and I am from Italy. I finished my Master's Degree in Medical Biotechnology at the University of Turin in July. Here, I started doing a 4 year PhD in Valerie Kouskoff's Lab in September and I am working on the role of Sox7 in leukaemogenesis. I am very please to be working at the Paterson Institute and I hope to enjoy my time here.



Eva Barkauskaite

Hi, I am Eva, a new PhD student in the DNA Damage Response group. I am originally from Lithuania, but I did my undergraduate in BSc Biochemistry at the University of Sheffield. I am excited to be a part of the Paterson Institute and especially the DNA Damage Response group.



Marija Maric

Hello, my name is Marija and I come from Zagreb, Croatia. I got my Masters degree in Molecular Biology from the University of Zagreb and in September I started my PhD project in Cell Cycle Group where I will be investigating DNA replication in budding yeast. So far I am really enjoying working here at the Paterson and I am looking forward to all that Manchester has to offer.



Hadir Marei

I'm one of the new CRUK PhD students for 2010. I'm originally from Cairo, Egypt. I graduated (Spring 09) from the American University in Cairo with a BSc in Biology and Chemistry minor. My interest in studying Cancer Biology started during my Junior Year Abroad at the University of St Andrews, Scotland and peaked during my 4th year of undergraduate study after taking a tumour biology course. Upon graduating I joined the Mammalian Cell Culture group at Rhein-Minapharm, an Egyptian-German joint venture pharmaceutical company. This was followed by a teaching experience at AUC as a Quantitative Biology teaching assistant. Finally, I spent my last 6 months in Egypt working in the Research Department of the Children Cancer Hospital in Egypt (CCHE). I joined the Cell Signalling Lab in September where I'll be investigating the role of Rac1, a small GTPase, in metastasis. I'm absolutely thrilled to be here and quite grateful for how helpful my lab mates have been and how scientifically spoilt we are for having the core facility.



Saladin Sawan

Hi I am Saladin, a Clinical Research Fellow with the Immunology Group. I am investigating epithelial ovarian cancer metastatisation. I started in March after the completion of NIHR Academic Clinical Fellowship in Obstetrics and Gynaecology. This scheme was established by NIHR to help reviving academic interests among clinicians subsequent to the sharp decrease in the number of academic clinicians in England. I am pursuing an academic career in Gynaecological Oncology and I am looking forward to a successful and enjoyable time at the Paterson.



Kyaw Aung

My name is Kyaw Aung. I am one of the CRUK-AZ clinical research fellows based in Clinical and Experimental Pharmacology. I have taken time out from my clinical training as a medical oncologist to do research. My PhD will focus on how somatic mutation testing from circulating free DNA (cfDNA) could be used to advance our understanding of tumour biology.

Histology Core Facility Update



The last couple of years have been a really exciting time as regards developments in the Histology core facility. Together with more space we now have two new members of staff, David Millard & Michelle Greenhalgh, in addition to Deepti Wilks joining us from the Cell Division group. There is still much we want to achieve but below is a summary of the developments over the last 12-18 months.

In anticipation of future demand from the expansion of tissue biomarkers and the requirements of the Biobank, in January 2010 the lab took delivery of the new ATA27 automated tissue microarray platform. The system is housed alongside our new laser capture microdissection system, of which more later. The lab has spent a large amount of time optimising this process and is now able to produce extremely high quality TMA's giving true representation. We can now offer high throughput, accurate TMA construction of tumour specific and custom arrays; this service has already been enthusiastically taken up by several groups.

In 2009 and after a thorough review the new Leica LMD6000 laser microdissection system arrived. Under direct microscopic visualisation the system permits the procurement of a pure population of cells from a section of complex heterogeneous tissue for downstream analysis. Cell identification can be based on morphology or immunophenotype. Applications include evaluation of tumour microenvironment interactions, real-time polymerase chain reaction (RT-PCR), proteomic and genomic molecular profiling. Several groups are currently using the system.

The Facility was also expanded to incorporate the MCRC Biobank. This is a regional cancer biorepository, collecting tissue and blood samples from 12 cancer disease groups across five hospital Trusts in Greater Manchester. Centralisation of the lab processes and developed SOPs ensure high quality samples fit for purpose. The lab has also been instrumental in driving the future strategy of the Biobank. Further focus will continue to be placed on sample procurement and stabilisation. The lab also now processes samples of blood and bone marrow from haematological malignancies. To date, samples from well over 1500 patients have been collected and over 25 projects have been submitted.

The routine and troubleshooting immunohistochemistry service offered by the facility has seen unprecedented demand recently. In addition research groups using the facilities to perform their own IHC has risen sharply. The lab now houses several epitope retrieval stations and the i6000 automated IHC platform which gives groups the flexibility to optimise and validate their own specific IHC projects. The i6000 platform is regularly oversubscribed and as a result we soon hope to purchase a Bond Max fully enclosed IHC platform. Both systems will compliment each other, offering high throughput antibody validation service availability and unrivalled standardisation and reproducibility. Both these systems will become invaluable with any new image analysis software.

Paterson Institute Annual Colloquium

The seventeenth annual Paterson colloquium took place on September 7th - 9th at St Martin's College in Ambleside. The talks and posters were all excellent, and Lilly Sommer won the prize of a £100 Amazon voucher for the best poster presented at the meeting.

The college has been the venue for the colloquium since its inception with just two years at different places, neither of which matched up to Ambleside. Unfortunately the college,

which strictly should be called the University of Cumbria - Ambleside campus, closed the day after our colloquium as part of rationalisation and cost cutting. We have had some great times there, and we will miss their friendliness and, of course, The Golden Rule. Next year we will be using the University of Lancaster which has impressive purpose built conference facilities with all ensuite accommodation. The format of the colloquium will remain similar to that of previous years, and the date for your diary is 26th-28th September 2011.

Drug Discovery Open Day

The Paterson Institute's Drug Discovery lab opened its doors to some very important supporters of Cancer Research UK this November. The 50 visitors had all been involved in the promotion and organisation of the charities local Shine, Race for Life and 10k events. These events had a total of 86,000 participants and raised over £5.5 million this year.

Having received £8 million for a 5 year funding programme, the newly established Drug Discovery Centre was perfectly placed to highlight how this money was spent.

The visitors were treated to talks from Allan Jordan and Donald Ogilvie before being invited in to the labs to see some of the science in action. Following this, the event concluded with an awards ceremony for volunteers of the charity. These were given to those volunteers that had supported the events team for a minimum of 3 years. Some had supported the team for an amazing 10 years, gallantly braving the worst of British weather to ensure the events took place.

After the event, one of the volunteers took the time to write to us:

"I just wanted to thank you for the excellent opportunity to view what Cancer Research UK has achieved during 2010 and to see where some of the funding ultimately ends up e.g. The Paterson Institute and the overall benefits to the end user at the Christie."

It was a rare opportunity indeed to both meet with the biologists, chemists and scientists and to interact with them all within a superb laboratory complex and although the science itself is beyond a mere mortal like myself, their passion for their work and ultimate aims and goals are not so far away from those of myself i.e. to fight/combat the effects of cancer.

I would like you to pass on my sincere thanks to all who gave up their time at The Paterson Institute on the day to discuss with us their progress to date and future improvement opportunities."



In the spotlight with Julian Blaser from Leukaemia Biology

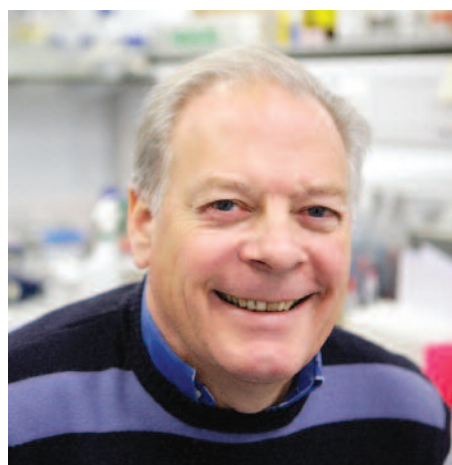


1. **What is your favourite part of the UK?**
Birmingham for the great architecture
2. **What is your favourite film?**
The Great Dictator (1940)
3. **If you had to change careers tomorrow, what would you do?**
Become a pineapple farmer in Hawaii
4. **What is the most important lesson that you have learnt from life?**
Don't bend yourself for other people – there are 6.7 billion other people on the planet, one must have the same curves just by pure chance
5. **What three things would you save from a burning house?**
iPad, iMac, iLife
6. **What is your greatest fear?**
I agree with Marianne Williamson – “Our Greatest Fear”
7. **How would you like to be remembered?**
In colour and HD
8. **If you could change one thing in your past what would it be?**
Back up my dissertation BEFORE the death (blue) screen
9. **What would be a perfect meal?**
Basashi and some Sashimi (White Tuna please)

10. **What trait do you most deplore in others?**
A lack of honesty to oneself and others
11. **You've just won the lottery and have £5 million pounds to spend. What do you buy first?**
A PhD and two tickets to Barbados
12. **Which words or phrases do you most overuse?**
Sweeeeeet
13. **What is your idea of perfect happiness?**
Shared happiness
14. **What keeps you awake at night?**
Insomnia?
15. **What question would you have like to be asked?**
Do you want fries with it?



Featured Publications



A collaborative study of the Immunology Group with Professor Henry Kitchener (St. Mary's Hospital) led by Dr Sai Daayana (joint Joseph Starkey Fellow) was a

featured article published in the British Journal of Cancer and was also highlighted in Nature Medicine in May 2010.

A combination of vaccine and local immunotherapy was used to treat persistent HPV infection of the vulva which can lead to

cancer. The phase 2 trial treated 19 women with HPV-associated vulval precancerous lesions with imiquimod (a immunostimulatory cream) followed by a therapeutic vaccine against key HPV proteins. We found that the combination approach altered the local balance between killer white cells (CD8 T cells), which help fight infection, and regulatory T cells, which suppress immune activity, so that a majority of women had objective clinical responses and no symptoms one year after receiving the treatment. One might say that there is a balance between the good guys and the bad guys and this treatment changes the local immune response so as to allow the immune system to work better. However there are still some women who fail to respond to treatment so further challenges remain.

Sai Daayana, Eyad Elkord, Ursula Winter, Peter L Stern, Henry C Kitchener. Clinical and immunological results of a phase II trial of imiquimod and HPV therapeutic vaccination in patients with high grade vulval intraepithelial neoplasia. British Journal of Cancer, 2010 Mar 30;102(7):1129-36.



Sonia Castillo-Lluva and Angeliki Malliri (Cell Signalling group) recently had a publication in Nature Cell Biology presenting recent work on the protein Rac1.

The small GTPase Rac1 is a key regulator of cell motility and is implicated in malignant progression of neoplasms. Understanding how Rac1's activity is spatially and temporally regulated in cells is critical for building a model of how Rac orchestrates cell migration. The paper describes a new mechanism, through SUMOylation – a post-translational modification, for regulating the GTPase Rac1 during cell migration. The story started with the identification of PIAS3, an E3 ligase for SUMO (small ubiquitin-like modifier), as a putative Rac1-interacting protein following mass spectrometry analysis of tagged Rac complexes isolated in response to hepatocyte growth factor (HGF), a migration stimulus. SUMOylation of Rac1

is enhanced by PIAS3 and is induced by conditions that promote Rac activation, such as cell-cell adhesion formation, as well as by expressing an oncogenic form of the HGF receptor (Trp-Met) found in tumours. Rac1 lacks a consensus motif for SUMOylation. We identified by mass spectrometry that the dominant modified lysines reside within the polybasic region (PBR) of the Rac1 C-terminus. Mutation of multiple lysines within the PBR inhibited SUMOylation of Rac and reduced the levels of active Rac1. Moreover, Rac1 null fibroblasts reconstituted with non-SUMOylatable Rac1 were defective in their ability to form lamellipodia-ruffle formation, cell migration and invasion but not for clonogenicity. This work suggests that SUMOylation of Rac1 is required for maintaining its activation, and may strengthen interactions with its activators (guanine nucleotide-exchange factors) or inhibit interactions with its inactivators (GTPase-activating proteins). Alternatively, the conjugation of SUMO might influence binding to particular effector molecules.

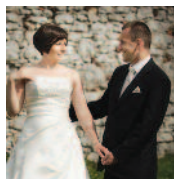
Sonia Castillo-Lluva, Michael H. Tatham, Richard C. Jones, Ellis G. Jaffray, Ricky D. Edmondson, Ronald T. Hay and Angeliki Malliri. SUMOylation of the GTPase Rac1 is required for optimal cell migration. Nature Cell Biology 2010(12):1078–1085. Cancer, 2010 Mar 30;102(7):1129-36.

Staff News

Congratulations to:



James Dunphy on the birth of Theo, born weighing 8lb 9 on the 17th September.



Monika Antkiewicz from Stem Cell Biology became Monika Stefanski when she married Grzegorz, on the 5th June 2010 in the beautiful city of Krakow.



Amanda Eustace married Ross Williamson on the 3rd July in Warkwork, a village on the North East of Northumberland.



Christophe Lancrin

In January 2004, I started my post-doctoral research in the newly established labs of Georges Lacaud and Valerie Kouskoff. My project was focussed on understanding how Runx1/AML1, a gene frequently translocated in

leukaemia, triggers the formation of the first blood cells during embryonic life. It was a great experience as I could witness the challenges in setting up a lab and see how as a team we have been successful in overcoming them. After 7 years of post-doctoral research at the Paterson, I am now going to start my own research group in the field of embryonic haematopoiesis. Next January, I will be a group leader at the EMBL Mouse Biology unit in Italy. Similarly to Cancer Research UK, the EMBL is very supportive to junior group leaders and I will receive an excellent start-up funding to initiate my research. None of it would have been possible without the support of Georges and Valerie. They have been very good mentors. Likewise, I am very grateful to Nic Jones who supported me by giving me enough time to publish my post-doc work, which has been instrumental in finding my new job. Finally, a big thank you to past and present members of Georges and Valerie's groups who gave me a lot of support over the years. Overall, I have been very happy at the Paterson and I hope my next job will bring me as much satisfaction as this one.

Julie Jarratt on successfully completing her Certificate in Personal Practice and obtaining a merit grade.

Welcome to:

John Brognard
Signalling Networks, Group Leader

John Griffiths
MBCF, Senior Mass Spectrometrist

Rasilaben Vaghjiani
Immunology, Postdoc

Michelle Greenhalgh
Histology, Scientific Officer

Jonathan Lloyd
Logistics, Porter

Kuan Yoow Chan
Cell Division, Senior Scientific Officer

Jian Li
Immunology, Senior Scientific Officer

Janet Taylor
Bioinformatics Analyst, Bioinformatics

Eleanor Trotter
Signalling Networks, Senior Scientific Officer



Participate in the 2011 Stockport Relay for Life

Relay for Life is a 24 hour event that brings the community together to raise awareness and funds for Cancer Research UK.

For more information, or if you would like to join or sponsor the *Paterson Scientists* team, please contact Cassandra Hodgkinson by telephone (ext 3172) or email (chodgkinson@picr.man.ac.uk).

Current sponsors: **BIO-RAD**

HR Update

Contribution Review Dates 2010/2011

The dates have been set for the Contribution Review Panel for 9-13 May 2011.

It would be useful if Group Leaders and Managers can keep their diaries as free as possible during the week Wednesday 11 May 2011 to Wednesday 18 May 2011 in case the panel need to meet with people to discuss reviews in further detail.

Probation Online System

There is a new online Probation system which will be launched over the next couple of weeks. This will allow individuals to record their probation objectives online. The Group Leader/Manager will be required to complete and sign off the individual after each of their review meetings. This online system is managed through the Contribution Review system.

All new members of staff will be required, on joining the Institute, to serve a minimum probationary period. Group Leaders and Senior Staff Scientists will be subject to a probation period of one year, Postdoctoral Scientists will be subject to a probation period of eight months and all other staff will have a probation period of six months. Clinical Fellows are assessed through the Education Committee, but subject to the probation policy.

As a result of taking part in the probation period the individual will:

- Get a clear understanding of what is expected from them
- Have a constructive dialogue with their manager about what the expectations for job and skills are
- The employee will get help with their development and receive feedback on their progress
- Be able to clearly understand how they can contribute to the success of the Institute

An individual will not go through the Contribution Review process until they have passed their probationary period and the form has been signed off by their manager. Once the probation period has been completed the process will then feed through into the Contribution Review process.

This process will alleviate the issues that we have encountered in the past; where individuals have completed a contribution review process whilst still in their probation period. Another benefit to the probation system is that it uses the same system as the Contribution Review process. This means that an individual will be able to see their whole progress from Probation period through to Contribution Review.

Once this system goes live guidance notes will be issued from the HR Department.

Christmas Bank Holidays

Please note that as this year Christmas Day, Boxing Day and New Years Day fall over the weekend the following days are classed as Bank Holidays:-

Monday 27 December - Bank Holiday
Tuesday 28 December - Bank Holiday
Monday 3 January 2011 - Bank Holiday

Also Friday 24 December is a Paterson local day.

However the Institute will still be open on these days for people who have a requirement to be in work.

For part time workers (who work less than 5 days a week) - please note that your bank holiday entitlement has been included in your annual leave allowance. Therefore if a bank holiday falls on a day that you would normally work then you need to take it as a day's annual leave.

Any queries please contact a member of the HR Department.

The Paterson 100 club



Whilst the post doctoral and post graduate student population of the Institute has a constant turnover of new faces, there is also a stable core of staff, many of whom have served for many years. Here we hear from three people who between them have clocked up 100 years of service to cancer research at the Paterson Institute.

Aside from the Rolling Stones there are very few groups of people who have worked together for several decades. CEP currently has a group of three people who have worked together on and off for thirty years: Tim Ward who started in 1975, Martin Greaves in 1976 and Martin Dawson who joined a little later in 1981. Back in 1975 the Paterson Institute was known as the Christie Hospital and Holt Radium Institute. The building was somewhat smaller as the Kay Kendall labs and the Phase 5 block at the south end of the building had not been built and TRF2 was

a long way in the future. Laboratory space was allocated by the director at the time, Laszlo Lajtha who was known to measure out space with his feet. It was an era when only Group Heads had offices, everyone else had desks within the labs and administration for the whole institute was run by two people.

It is hard to imagine now but health and safety in the '70s was nothing like today. Eating and drinking were allowed in the laboratories; even smoking was permitted whilst working at the bench. It was unremarkable to see people eating lunch beside the fume cupboard whilst smoking a cigarette and distilling ether! The wooden benches were stained from years of chemical contamination and had numerous cigarette burn marks on the edges.

Tissue culture was performed on open benches as Safety cabinets were not available. The combination of alcohol for swabbing benches and Bunsen burners still being in common use meant that often the lab looked like a special effects studio as either chairs, benches or even on occasion members of staff caught fire!

Tim, Martin and Martin started work together in Experimental Chemotherapy. As well as contributing to research they have also contributed to the culture of the Institute, being responsible for inventing the Paterson Bar Rally in 1982. After several years in which the three were split to different groups they are now all working alongside each other in CEP and still enjoying being here. Why have they all stayed so long? Martin Greaves summed it up nicely: "I simply couldn't have imagined finding a better place to work, both for the science and the friendly atmosphere".

University of Manchester, Foundation Day



On 20 October 2010, the sixth anniversary of the University's inauguration by Her Majesty the Queen was marked with a tribute to the late Professor Alan Gilbert.

The 2010 Foundation Day Lecture, which was to be delivered by

Professor Gilbert, was replaced by a special tribute event to honour his contribution to the University and higher education generally.

The tribute was followed by the unveiling of Professor Gilbert's official portrait at the Whitworth Art Gallery, whose Turner Exhibition has also been dedicated to Professor Gilbert.

Also on Foundation Day, honorary degrees were conferred upon Norman Askew, Rory Brooks, Professor Jamilur Reza Choudhury, Professor Thomas Schelling, and posthumously upon Professor Alan Gilbert.



Enthusiastic? Energetic? Hard Working?

...then please may we borrow you for a day to help in any one of our charity shops this December?

Have the chance to do a different job for a day and work with some of our amazing shop volunteers... ***we need you!***

What do I do?

- Choose two possible shops where you'd like to volunteer (click on 'Shop with us' from the home page of the CR-UK site)
- Agree a date in December with your line manager
- Email date and shop details to jdunphy@picr.man.ac.uk
- If you can't volunteer in our shops this Christmas then you can still help by encouraging family and friends to shop with us online at: ***www.shoptobeatcancer.org.uk***

