

# New Generation Clonal Sequencer



Issue 19 - September 2010

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# Director's Introduction



Following a successful Tenure Review, Dr Angeliki Malliri, who joined the Paterson six years ago, has been deservedly promoted to Senior Group Leader in recognition of her contribution to research efforts in cell signalling at the Institute. Angeliki is now well placed to continue and build on her work, leading a team whose research aims to understand the Rac signalling pathway that regulates a variety of cellular process some of which are dysfunctional in cancers, facilitating tumour initiation and progression. I am delighted that the Institute will continue to support this work over the next few years.

We are all aware of the difficult economic climate currently being faced by academic and research institutions, a climate that will bring its own challenges over the next few years with University funding likely to be significantly impacted. Institutions able to identify and access a diverse range of funding streams will be best placed to successfully face these challenges by securing limited resource. Moreover, the ability to demonstrate value for money and return on investment in terms of high quality science will be increasingly important. As a partner within the Manchester Cancer Research Centre (MCRC), the Paterson Institute will be able to compete effectively for adequate funding and will benefit from the collaborative

strategy and the unity of purpose that the MCRC provides.

The current economic environment brings not only challenges but also exciting opportunities exemplified by the development of plans for the MCRC's new laboratory building, which will provide an inspirational state-of-the-art research facility. The University of Manchester and Cancer Research UK are providing £10 million each this year towards the initial phase of the development while The Christie is providing land for the building project. Planning the new development is now beginning in earnest and this project represents a tangible example of partnership in action. Securing this level of investment in the current economic climate is a clear demonstration of the extent of support and confidence generated by the Paterson and the MCRC partnership. The new facility will increase our research capability and help to ensure that the MCRC and its partners are able to realise their considerable potential, taking basic research through to clinical evaluation and translating improved understanding of cancer and its effects into meaningful patient benefit.

It is with great sadness that we reflect on the recent death of Professor Alan Gilbert, who until this summer was President and Vice Chancellor of The University of Manchester. He was a staunch supporter of the Paterson and the MCRC partnership – his vision allowed the MCRC to be formed – and he leaves behind a strong legacy and a culture which encourages us all to strive for excellence. On a personal note, Alan was a pleasure to work with; he was clear thinking, honest and committed, his leadership was an inspiration. Professor Gilbert will be greatly missed and gratefully remembered.

**Nic Jones**  
Director

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# Tenure review success for Angeliki Malliri

**At the end of July I successfully went through tenure review, the assessment process for promotion from Junior to Senior Group Leader.**

My tenure review was probably the toughest assessment I've faced since my University days. The report consumed weeks, distilling six years work into a one-hour talk was a major challenge, and then the interview that followed was intense. A few days on, and with equilibrium having been restored, I've finally got a free moment to reflect on the process. While I resented it at the time and it made me very anxious, I now see that it was a great opportunity to take stock, think hard and plan for the future. Plus, with the future proposals having been validated by my peers and scrutinised by the committee, who also gave me other food for thought, I feel the group can be confident that our next five years will be just as productive, if

not more. The process also made me reflect on how dedicated and talented my lab members are and I have a lot to be proud of, I have received some wonderful support from colleagues at the Paterson Institute and elsewhere, for which I'm very grateful.



# New Junior Group Leader – Signalling Networks in Cancer Group

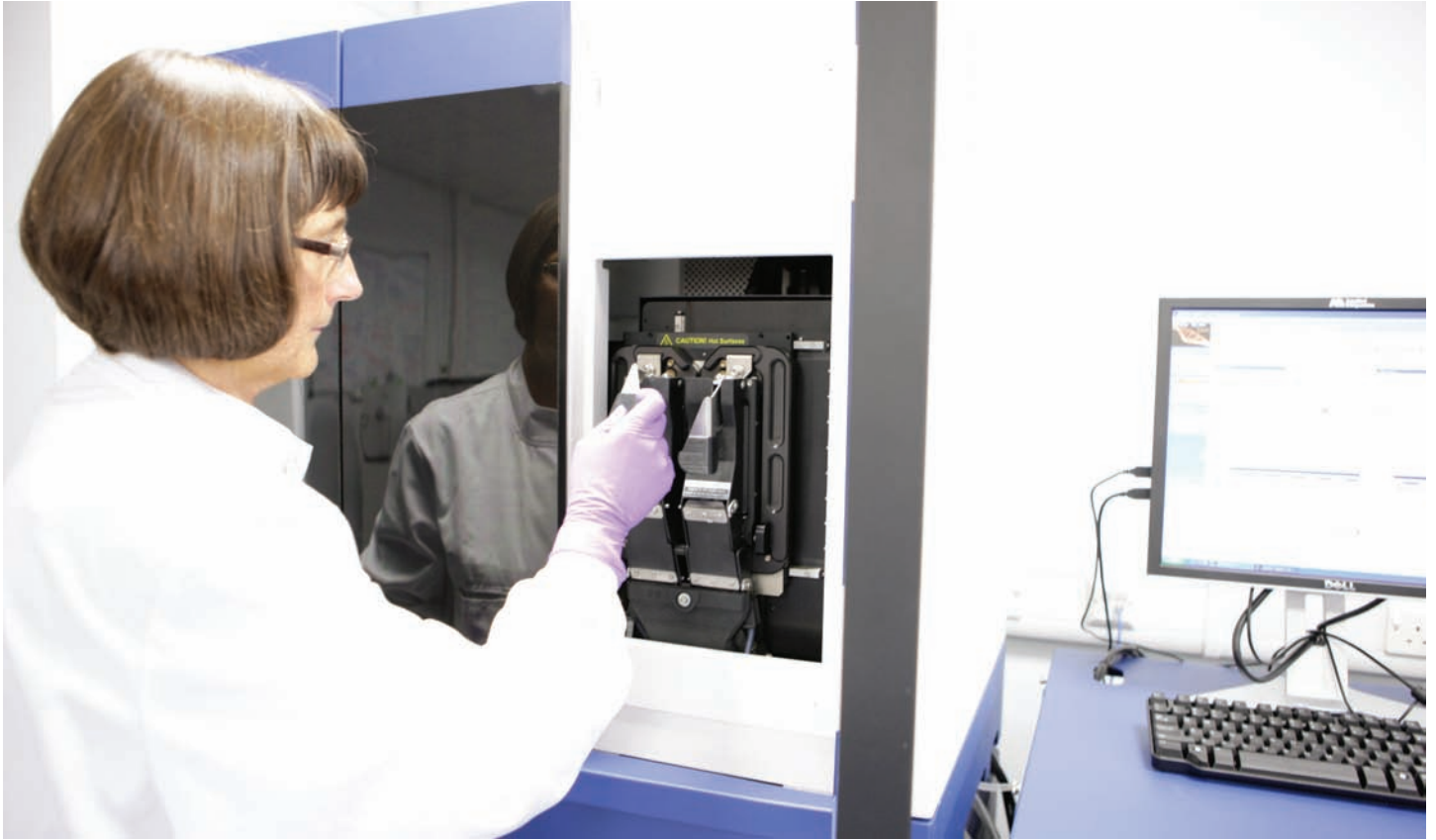


**A warm welcome to Dr John Brognard who will be starting at the Institute in September as the Group Leader of Signalling Networks in Cancer.**

I began my scientific training by studying chemistry and biochemistry at James Madison

University in Harrisonburg, Virginia, followed by graduate training in biotechnology at Johns Hopkins University in Baltimore, Maryland. I then joined Dr Phillip Dennis's laboratory at the National Cancer Institute in Bethesda, Maryland, where we discovered signalling pathways that promote resistance to

chemotherapy, elucidated mechanisms implicated in the initial stages of lung tumorigenesis, and developed small molecule inhibitors targeting activated signalling pathways in lung cancer. From there I moved to San Diego, California and performed my thesis studies in Dr Alexandra Newton's laboratory where we identified a novel phosphatase involved in cancer and other diseases. Lastly, I trained as a postdoctoral fellow in Dr Tony Hunter's laboratory at the Salk Institute (San Diego). Utilising bioinformatic tools we screened cancer genomes to identify novel enzymes (specifically kinases) implicated in cancer by the presence of functional somatic mutations. This research will serve as a foundation for my laboratory at the Paterson Institute where we will validate these new cancer-associated kinases and focus on understanding the tumorigenic signalling pathways activated or inactivated by these mutant kinases. A major goal of this research is to identify new targets for therapeutic intervention and new biomarkers to aid in the selection of therapies for cancer patients.



# New Equipment Platform: The SOLiD high throughput sequencer

By Stuart Pepper

**The Paterson Institute has purchased one of the new generation of clonal sequencers, in this article we look at how this technology works and why it will be so important for the future of cancer research.**

The single biggest project in the history of biological research has been the sequencing of the human genome. This project spanned two decades, had a cost estimated at hundreds of millions of dollars and involved world wide collaboration of academic and commercial facilities. The end result was that the entire human genome was sequenced and made publicly available for researchers. Having a reference copy of a human genome is of enormous value to medical research, but in a way is only part of the story; every human is an individual and will have some differences in their genome sequence to all other humans.

Ideally what we need for medical research is a clear picture of the amount of variation in the normal healthy population, and then we can look at the variations that go beyond this level and lead towards disease states.

Given the effort required for the first human genome sequence it would not be realistic to think of sequencing hundreds of individuals by this approach, however a new generation of sequencing machines are now available that make genome

## How does it work?

The SOLiD platform is able to generate very high numbers of sequence reads by moving away from a traditional 'test tube' type of reaction to reactions carried out in an oil /water emulsion. By using a specific mixture of oils and water it is possible to generate a mix which has millions of tiny aqueous droplets suspended in oil; each droplet is in effect a separate reaction which will process an individual DNA molecule. The end result looks very much like mayonnaise, though just a few teaspoons full of this mixture can be used to sequence an entire human genome.

sequencing much less of a challenge. With the SOLiD platform that the Paterson Institute has now bought we are able to generate close to 1 billion sequence reads within a month. Each read is 50 bases long so the total data yield

is around 50 billion bases – enough to cover the human genome approximately 15 times! This means that a task that previously took 20 years and many millions of dollars, can now be achieved in a month or two by one person for less than £20 000. This amazing leap in sequencing capacity is fuelling a whole range of ambitious new sequence projects to look at large numbers of normal and cancer genomes.

At the Paterson Institute we are planning to use our platform for a range of studies making use of some of the other capabilities of the system. As well as straightforward genome sequencing we are looking at using the platform for transcriptome analysis. Microarrays have been a very powerful tool for transcription analysis and have helped in the development of diagnostic transcript profiles such as for breast cancer, however microarrays have a limitation that they can only detect genes that are already included on the array – you have to know what you are looking for in the first place. With a clonal sequencer it is possible to extract and sequence all the RNA from a sample thereby detecting previously uncharacterised RNA molecules. Our knowledge of RNA function has been revolutionised in recent years with the discovery of novel classes of RNA molecules that are not translated into proteins. With clonal sequencers we are able to detect and quantify any RNA species that are made.

One of the major challenges of working with the clonal sequencer is that the data sets are big – the processed data for a single run is around 200GB. Crispin Miller and the Applied Computational Biology and Bioinformatics group have been busy assembling appropriate hardware and software to support the analysis of these large and complex datasets.

Any groups who are interested in accessing this technology are encouraged to talk to the core facility to discuss their project.

#### The wider picture:

The potential to sequence genomes at much lower cost will have implications outside current cancer research. In environmental and evolutionary biology there is an ongoing revolution as new species have their entire genomes mapped. There was a surprise find recently when a portion of a Neanderthal genome was sequenced and it was discovered that the majority of people alive today carry genes that have been passed down from Neanderthal ancestors.

## Condolences



**In his introduction, Nic Jones commented on the recent death of Professor Alan Gilbert, President and Vice-Chancellor of The University of Manchester from its inauguration in October 2004 to 30 June 2010.**

Professor Gilbert passed away on Tuesday 27 July 2010 in hospital in Manchester having suffered from a serious illness for the past few months.

Professor Dame Nancy Rothwell, Professor Gilbert's successor as

President and Vice-Chancellor, said: "Alan's leadership has transformed the University. He will be remembered with enormous respect by everyone in the University and with great affection by all who worked with him closely. To me personally he was a remarkable friend and mentor, with incredible insight, integrity and intelligence. I will miss him. Our deepest sympathies are with Ingrid, their children, grandchildren and wider family at this sad time."

# Fundraising Events

## Claret Jug Visits the Paterson

Littleborough fundraisers came face to face with the British Open Trophy to celebrate their achievements in fundraising for Cancer Research UK. Andy and Kath O'Donnell held their annual golf day on 4 June 2010 this year raising an incredible £2,743.



This was the 5th "T-Off Trophy" Day the couple had organised to raise cash for Cancer Research UK and have now raised over £13,000 for the charity. To mark this wonderful achievement, Andy and Kath were invited to the Paterson Institute on a tour but more importantly have their picture taken with the iconic Open Championship Trophy.

As part of the Royal Bank of Scotland's sponsorship of the Golfing British Open and charity partnership with Cancer Research UK, they kindly offered the use of the trophy for the morning.

Andy and Kath are already looking ahead to next year's "T-Off" Trophy event in their ongoing bid to support Cancer Research UK.

## Manchester Race for Life

Thousands of runners, walkers and joggers brought Heaton Park to life when they took part in charity runs in memory of cancer victims.



Around 10,500 women – many wearing pink and carrying the names of loved-ones on their vests – descended on the park for this year's Race for Life. Three events had to be staged to accommodate the huge number of entrants. Glorious sunshine brought out huge crowds with many families flocking to the park to cheer on the participants. The flagship race – with 6,500 women braving the 5k course – took place on Sunday morning. It is hoped that all three Manchester events will raise £649,000 for the charity.

A team of researchers from the Paterson cheered the participants on their way at the start and entertained the families with some interactive science games during the day. Thanks to Chong Tan, Timurs Maculins, Ahmet Acar and Avinash Patel for their involvement in this event.

## Keswick to Barrow

The Paterson Institute entered two teams into the 40 mile Keswick to Barrow (K2B) 40 walk on what proved to be a celebratory weekend for the town of Barrow. Barrow Athletic Football Club won the FA Trophy Final at Wembley, and the 44th K2B walk also contributed to a great weekend for the region by fielding its highest turnout yet.

Overall a record 2,094 people completed the event, which included over 1,100m of ascent - and were rewarded with a warm welcome from the cheering crowd along with a medal, handshake, meal and free pint of their preferred refreshment.

Congratulations to the Paterson teams who not only completed this arduous event but raised over £1,000 for Cancer Research UK and The Christie.



## Run 10k: Raise it, Run it, Beat it!

Cancer Research UK is asking men and women to sign up to Run10k, get sponsored and help beat cancer. Running 10k might sound like a challenge but it will all be worth it for the huge sense of achievement felt when you cross the finish line knowing you've raised vital funds to help Cancer Research UK beat cancer.

Enter now at [www.run10k.org](http://www.run10k.org)

Local races are at Tatton Park on Sunday 26 September and Heaton Park on Sunday 3 October 2010.

## Steve's Sponsored Slim

**Steve Morgan, Security Coordinator and Receptionist set himself a challenge, to lose 40lbs in 6 months and in the process raise money for CR-UK. Steve started his weight loss regime in February and on 5 July had his final weigh in, in total Steve exceeded his target weight loss by 16lbs and plans to keep shedding the pounds.**

Steve said 'Raising the money for CR-UK was a good motivator and the staff at the Institute ensured I didn't fall off the wagon'.

Thank you to all the staff that have supported Steve over the months and kindly sponsored him. Steve has raised over £1,200 in sponsorship money, which will be donated to Cancer Research UK. Congratulation Steve.



# BFC vs PFR - brought to you by Invitrogen

By Luke Harrison

**On Saturday 8 May the Paterson Football Club (PFC) travelled en masse to Glasgow to face the Beatson Football Club (BFC) in a match that can only be described as a clash of the titans. PFC travelled on the back of a 6-0 thrashing in last summer's game between the two teams in Manchester and the overriding feeling was to win at all costs.**

Unlike last year, PFC actually practiced some 11-a-side games prior to travelling to Glasgow and the change in the organisation of the team was profound. PFC dominated possession from the start, but lapses in defensive concentration allowed BFC to nick the first goal, which was slotted nicely into the bottom right hand corner. Despite this blow PFC kept their heads and continued to dominate the game as our midfield, consisting of Chris Wirth (Applied Computational Biology and Bioinformatics), Maciej Dolnjak (CEP), Owen McGinn (Immunology group), James Lynch (Leukaemia Biology) and Mark Holland (Children's Cancer group) worked hard to keep possession of the ball and supply good passes to our strike force; Dan Morris (CEP), Nick Tobin (Molecular Pathology) and Ricky van Deursen (Cell Cycle). Nick Tobin set up a nicely worked first goal for Dan Morris (CEP) to blast the ball beyond the 'keeper from 10 yards. Nick Tobin made a good run towards the area when he was hacked down by an awful challenge that led to a free kick from a dangerous position. Maciej Dolnjak delivered a beautiful ball to find Chris Wirth, who coolly headed in PFC's second goal of the game. As the whistle blew for half time, PFC was feeling confident as they led 1-2.

The second half could not have got off to a better start as Owen McGinn spotted the 'keeper off his line and curled in a superb shot from all of 40 yards. Moments later PFC conceded a free

kick to BFC in a dangerous area. The free kick was struck sweetly to beat our keeper making the score 2-3 and the BFC were suddenly back in the game. Following that, the game went through somewhat of a slow period where PFC's defence - rotating between Ryan Smith (IT), Goran Landberg (Molecular Pathology), Rob Clark (Breast Biology), Luke Harrison (CEP) and Paul Lu (Breakthrough Lab) - worked hard and were organised to keep BFC out. However, from a BFC attacking throw-in, a defensive blunder allowed BFC to equalise making the score 3-3. Following that, BFC rode their luck and scored a goal that was a country mile off-side, but was missed by the referee. BFC led 4-3. Had the PFC thrown away a perfectly good 1-3 lead? Were we going to lose again and endure yet another year of mocking from our Glaswegian counterparts? Fortunately that was not the case. With 10 minutes to go, Dan Morris went on a superb run and was one-on-one with the 'keeper, but the angle on the shot was too tight to score directly. James Lynch then came steaming into play and Dan had the vision to spot James, and unselfishly teed up a shot for James to blast it past the 'keeper. Both teams fought for a win in the final moments of the game, which ended in a democratic 4-4 draw.

It was a great day for science and football. BFC were warm hosts but supplied cool lager after the final whistle and then introduced us to some of the more unusual sights, sounds and smells of the Glasgow nightlife. All of this would not have been possible without the support of our sponsors, Invitrogen, who contributed £300 towards the cost of our visit.

The rematch is being held on Saturday 16 October 2010 in Manchester (please see back page for more details).





# Stockport Relay for Life

By Cassandra Hodgkinson



**On the 26-27 June 2010 the Paterson Scientists team took part in the Stockport Relay for Life.**

## What is 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. Teams get together before the event to fundraise for the charity. The aim is for the team to have at least one member of the team walking around the track at all times.

## A successful event

The Paterson Scientists team completed the full 24 hours with 11 team members: Cassandra Hodgkinson (team captain), Steve Lyons, Jessica Booth, Daniel Morris, Kalena Marti, Michael Walker, Bianca Teal, Rose Storey, Rachel Eckersley, Lisa Bickley & Damien Brown. A touch of science was brought to the event by educating children and adults with field genetics - performing DNA extraction on strawberries, as well as using the BioRad Genes in a Bottle kit so that people could extract their own DNA. Both were real crowd pleasers.

The event started with the Survivors' Lap of Honour, where cancer survivors walk the first lap of the course. This is a celebration of life and the efforts we are all making to help beat cancer.

As the sun set, everyone gathered together for the Candle of Hope ceremony. Bags that had been decorated and dedicated were placed around the side of the track, a glowing candle inside illuminating the messages of remembrance, celebration and hope through the night.

The organising committee announced that a total of £68,000 had been raised for Cancer Research UK. The Paterson Scientists team contributed £2,152 in cash and approximately £5,520 from Donation Station. This total reflects a fantastic effort from all involved and the team would like to thank everyone who

sponsored the team, made donations, or volunteered their help at the fundraising events.

## The importance of these events

Participating in this event has brought a huge appreciation for the time and hard work volunteers put in to make it all happen. This year, the committee announced that all of the money raised would go directly towards cancer research in Manchester. Some of this money will feed back into the Paterson Institute to aid our research. This is the second year that the Paterson Scientists have participated at the Stockport Relay and we would like to invite you to get involved, on your own or with your family, next year.

Paterson Scientists sponsored by



## Paterson Open Day

The annual open day was once again a resounding success. We welcomed 80 Cancer Research UK supporters and members of a Breast Cancer Support Group to the Paterson Institute earlier this year. The key scientific talk was provided by Donald Ogilvie, Head of the Drug Discovery Centre, and lab demonstrations were provided by Drug Discovery, Immunology, Carcinogenesis, CEP, Childrens Cancer, Histology, Breast Biology, Stem Cell, and Cell Regulation.



# There Will be Blood: A post tenure review reflection

By Georges Lacaud and Valerie Kouskoff

Six years ago, we took on the great opportunity to join the Paterson Institute to start our labs, "Stem Cell & Haematopoiesis" and "Stem Cell Biology". After the initial challenges of setting up the labs and hiring the right people, time seems to have flown by quite quickly in the pursuit of the molecular mechanisms underlying the formation of blood cells. Last December, the efforts of both teams were rewarded by our successful tenured appointments. It now seems the right time to reflect on our scientific accomplishments and on our future goals. We would also like to take this opportunity to warmly thank all our former and present lab members for their hard work, dedication, commitment and contribution to the scientific successes of the labs. We hope that we provided them with a challenging and rewarding environment to pursue scientific discoveries at the highest standard.

The human haematopoietic system produces around  $10^{12}$  new blood cells per day and even more upon infection or injury. This system relies entirely on the existence of a rare population of haematopoietic stem cells (HSCs) to constantly replenish throughout life all the haematopoietic lineages. HSCs are initially generated during embryonic life as a small pool of cells, later amplified and maintained throughout adult life. A relatively small number of transcription regulators control the development, maintenance and differentiation of HSC. One remarkable characteristic of these transcription factors is that most, if not all, have been implicated in the development of haematological malignancies following somatic mutations or chromosomal translocations. Understanding the function of these transcription factors during normal haematopoiesis should result in a better comprehension of how perturbations of these functions result in the development of leukaemia. Additionally, understanding how blood cells are generated has potential implications in the treatment of blood diseases.

In this context, we have studied in the Stem Cell Biology lab the functions of the transcription factor AML1/RUNX1 and the transcriptional co-activator MOZ. AML1/RUNX1 is one of the most frequent targets of gene rearrangements and mutations in acute leukaemia. Similarly the gene MOZ is involved in myeloid chromosomal translocations. We performed studies to determine the cellular and molecular events leading to the generation of haematopoietic cells from the haemangioblast. Our data demonstrated that the haemangioblast generates haematopoietic cells through the formation of a haemogenic

endothelium intermediate and that RUNX1/AML1 is critical for generation of haematopoietic cells from this haemogenic endothelium. In vertebrates, the transcription of the Runx1 gene is under the control of two alternative promoters, distal (P1) and proximal (P2), which generate specific Runx1 transcripts. We investigated the activities of distal and proximal Runx1 promoters at the single cell level and tracked the cell populations expressing the respective isoforms. We demonstrated that the activity of the proximal promoter marks a haemogenic endothelium cell population, whereas the subsequent activation of the distal Runx1 promoter defines fully committed definitive haematopoietic progenitors. Finally to specifically dissect the relevance of MOZ driven acetylation, we generated a mouse strain carrying a single amino acid change that inactivates the HAT activity of the MOZ protein. Analysis of these mice has revealed a profound defect in haematopoiesis. The numbers of haematopoietic stem cells and progenitors and their function is dramatically affected in homozygous mice.

The first objectives of the Stem Cell & Haematopoiesis lab were to define the growth factor requirements for the efficient differentiation of haematopoietic precursors from embryonic stem (ES) cells and the identification of new molecular players involved in the control of blood specification. Using serum-free culture conditions, we established the minimal growth factor requirement for the efficient and directed differentiation of ES cells to haematopoietic lineages. The sequential addition of BMP4, Activin A, bFGF and VEGF was sufficient to promote the progressive differentiation of ES cells to mesoderm, haemangioblast and then committed haematopoietic precursors. In an effort to identify novel regulators of blood specification, we performed several global gene expression profilings on subpopulations isolated at various stages of the differentiation process. A thorough comparative analysis of these datasets led to the selection of novel candidate genes whose expression was differentially regulated at the onset of blood specification. Among them, Sox7, Etv2 and Mad4 were chosen for further study. Using several approaches to perturb or track the expression of these genes, we established the importance of Sox7, along with its close homologue Sox18, in controlling the balance between proliferation and differentiation of early haematopoietic precursors. Similarly, our work identified Mad4 as a critical regulator of the cell cycle status in committed precursors poised to further proliferate before differentiation. Finally, Etv2 also proved to be an



extremely interesting gene, acting at several levels along the differentiation of blood specification.

Altogether, our work has pushed forward the understanding of blood specification, identifying new molecular players in the control of this complex developmental process and establishing the exact functions of others. Ongoing work is now aimed to further understand and integrate the function of these genes into the network of molecules orchestrating the haematopoietic

programme. In this context, we were recently awarded a large grant allowing us to further explore, through a consortium of 5 labs, the molecular mechanisms of haematopoietic development at the genome wide level (system biology). Another aim is to push forward to the translation of our findings to human cells using human ES cells. Finally an important goal will be to further explore the role of the molecular players, we have identified and studied, in the context of the development and maintenance of leukaemia and lymphomas.

## Featured Publication

**Chris Morrow, from Caroline Dive's Clinical and Experimental Pharmacology group, gives a brief overview of his recent paper that was published in Cancer Research.**

The paper investigated the effect of the novel anticancer drug saracatinib on other drugs used to treat colorectal cancer. The target of saracatinib, the non-receptor tyrosine kinase Src, is thought to contribute to colorectal cancer progression and therefore treating colorectal cancer patients with saracatinib is a likely scenario. However, pragmatically, saracatinib would be combined with other drugs currently used to treat colorectal cancer. The main finding was that saracatinib impaired the efficacy of oxaliplatin, a DNA-damaging agent commonly used in colorectal cancer treatment, by reducing the amount of

oxaliplatin taken up by cancer cells. This was because saracatinib prevented the drug transporter responsible for carrying oxaliplatin into cells, Organic Cation Transporter 2, from functioning effectively, resulting in reduced oxaliplatin uptake. Therefore, this work suggests that combining saracatinib with oxaliplatin in the clinic should be treated with caution, with the schedule the two drugs are given and the effect on oxaliplatin cytotoxicity being of upmost importance.

Morrow *et al* (2010) **Src Family Kinase Inhibitor Saracatinib (AZD0530) Impairs Oxaliplatin Uptake in Colorectal Cancer Cells and Blocks Organic Cation Transporters** *Cancer Research* 70; 5931-41.

# BACR/Gordon Hamilton-Fairley Young Investigator Award Winner



The 2010 BACR/Gordon Hamilton-Fairley Young Investigator Award was won by Malgorzata (Gonia) Gozdecka, a PhD student in Nic Jones' Cell Regulation laboratory. The award recognises and encourages the talents of junior cancer researchers. Applicants must be clinically or scientifically qualified, but not more than 5 years post PhD/MD, and must have held BACR membership for at least one year. The prize of £300 was awarded to Gonia at the annual BACR conference; she was chosen as a recipient of the award based on the quality of her abstract and poster presentation.

It's not the first time that this award has been won by someone from the Paterson as Chris Morrow, Preclinical Pharmacology Associate Scientist in CEP, won the award in 2007.

The award was established in memory of Gordon Hamilton-Fairley who was Professor of Medical Oncology at Bart's Hospital, London and was killed by a terrorist bomb in London in 1975 aged only 45. Although foremost a clinician, he was also a teacher and clinical research worker of high attainment and his efforts were of major importance in achieving recognition in England of oncology as a modern multidisciplinary medical speciality.

## CEP Lab Wins £10,000

Martin Greaves, a Senior Scientific Officer in the Clinical and Experimental Pharmacology (CEP) Group led by Caroline Dive, won £10,000 in a prize draw organised by Scientific Laboratory Supplies Ltd (SLS).

Around 600 SLS customers entered the competition, which aimed to increase traffic to their website. Thanks to Martin, the prize money has been used to purchase new equipment for the lab.



# In the Spotlight With Julie Jarratt, Recruitment Co-ordinator



**1. What is your favourite part of the UK?**

Cornwall

**2. What is your favourite book?**

Pride & Prejudice (Jane Austen)

**3. What is your favourite film?**

Love Actually

**4. If you had to change careers tomorrow, what would you do?**

Nursing

**5. What is the most important lesson that you have learnt from life?**

So long as you're happy (which is what my daddy used to say to me)

**6. What three things would you save from a burning house?**

The children's memory boxes, my photographs and for my third I'm struggling between my husband's guitar and my jewellery!

**7. What is your greatest fear?**

Not being active

**8. How would you like to be remembered?**

With a smile

**9. If you could change one thing in your past what would it be?**

I would have owned a dog earlier than just this year - the cats we have are absolutely lovely but a dog is absolutely wonderful

**10. What would be a perfect meal?**

Ideally it would be anything 'al fresco' - my favourite food is Indian curry

**11. What trait do you most deplore in others?**

Lies

**12. You've just won the lottery and have £5 million pounds to spend. What do you buy first?**

A car

**13. Which words or phrases do you most overuse?**

My colleagues in HR tell me it is 'actually' all though I am now working on this!

**14. What is your idea of perfect happiness?**

Having my family around me and enjoying a more simple (and slower) life and enjoying the outdoors.

**15. What keeps you awake at night?**

Nothing

**16. What question would you have like to be asked?**

What do you do to relax? Drink alcohol (following an exercise class though)!

## New Chairman of CR-UK Announced



In July the Paterson Institute hosted a visit for Michael Pragnell the incoming chair of CR-UK to introduce him to the research and work that is undertaken at the Institute, he met with several scientists and was taken on a tour of the Institute.

Michael Pragnell was the founder Chief Executive Officer of Syngenta AG, a world

leading company in crop protection and plant bioscience, and was formerly CEO of AstraZeneca's crop protection business. He will be visiting CR-UK Institutes across the country in order for him to see as much as possible of the charity's work before taking up the Chairman role officially at the end of October 2010.

# HR News

**The Paterson Institute recognises that everyone can benefit from the right help and advice at some time in our lives, and therefore provides an independent, impartial and confidential service for all staff.**

This service is provided by PPC, an established Employee Assistance Programme company.

PPC offer services in confidence 24 hours a day, seven days a week for expert independent advice and guidance on a wide range of subjects such as:-

## General Enquires

- Consumer issues and faulty goods
- State benefits
- Housing queries
- Self help organisations

## Specialist legal and financial advice

**Money Management** - Advisors can help manage help with

questions on mortgages, investments, tax, loans and pensions

**Legal Advice** – Qualified solicitors can offer practical help and expertise on many aspects of the law

## Supporting the home

- Childcare
- Looking after dependent relatives
- Family relationships
- Moving house
- Neighbourly disputes
- Tenancy and landlord issues
- Education and schooling

To contact PPC, call anytime day or night, free and in confidence on **0800 282 193**

If you would like to find out more about PPC then contact the HR Department on extension x3064/3124.

## Congratulations

We are delighted to announce that the following promotions and appointments were approved at the recent meetings of the panels:

### Promotions

**Corrine Hand** (Lab Services) from Lab Aide to Lab Support Technician

**Lisa Bickley** (BRU) from Scientific Officer 1 to Scientific Officer 2

**Deepti Wilks** (Histology) from Scientific Officer 2 to Senior Scientific Officer

**Brian Poole** (IT) from P1 to P2

### Appointments

**Chris Morrow** (CEP) from Postdoc to Associate Scientist

**Ricky van Deursen** (Cell Cycle) from Senior Scientific Officer to Principal Scientific Officer

## Contribution Review Panel

The Contribution Review Panel has now reviewed all the Contribution Review forms for the 2009/2010 review year. Staff are given a rating by their manager based on their contribution of either 'Less than Expected', 'Expected' or 'Greater than Expected'. The panel then moderates each form checking for fairness and consistency throughout the Institute and conducting interviews and subset panels where necessary to obtain more information.

164 forms were submitted to the panel. After ratification, 76.5% of staff were awarded an Expected rating. Greater than Expected ratings were awarded to 23.5% of staff.

The pay awards resulting from the contribution reviews were paid in June's salary and backdated to 1 June 2010. Thank you to everyone for submitting their forms on time.

## Recruitment Co-ordinator

Due to volume of work, the Recruitment Co-ordinator post has been extended to become a full-time post. Julie Jarratt now deals with all aspects of recruitment such as placing adverts, arranging and attending interviews, obtaining references, offer letters and pre-employment medicals.

Julie will also be providing assistance to new starters on their first day by providing them with a HR induction. If you have any queries about any of these issues, Julie can be contacted by email: [jjarratt@picr.man.ac.uk](mailto:jjarratt@picr.man.ac.uk) or by phone: extension 3231.

# Student Farewell



## Magdalena Foltman - Cell Cycle

As I'm approaching the end of my PhD programme I wanted to say big thank you to the Paterson Institute of Cancer Research and Cell Cycle group in particular. You made my last four years in Manchester truly exciting. I'm amazed with the amount of support and experience I got in here. Big thank you to Cell Cycle group and Karim Labib for making my PhD so worthwhile, and for sure this amazing experience would not be the same without you. My PhD project was based on DNA replication and preserving epigenetic changes, so I would like to continue this pathway in my future Postdoc research.



## Sarah Lewis - Stem Cell Research

I've enjoyed my time in the Stem Cell Research group so much that I'm staying on for just a little while longer in order to tie up a few loose ends and hopefully submit a publication or two.

Next April I'm getting married to Chris, who I met at the same time as starting my PhD. No more wedding planning, though, until after my viva!



## Danny Bitton - Applied Computational Biology and Bioinformatics

I have really enjoyed my PhD journey here at the Paterson Institute and I appreciate having had this wonderful opportunity to work at the forefront of cancer-informatics. During these last four years I have been provided with all the support, encouragement, inspiration and guidance that a student needs to excel, especially from my superb-visor, Crispin Miller, and previous/current members of the bioinformatics team. The multidisciplinary project that I undertook enabled me to develop my bioinformatics, and wet lab skills, knowledge, and experience in proteomics and molecular biology. This would have been impossible without the numerous motivating, and instructive discussions with and the guidance of Duncan Smith, Yvonne Connolly, Richard Unwin, Iain Hagan and Agnes Grallert. With many of you, I have shared memorable moments of friendship which I am sure that will continue in the years to come. As for my future, I'm not entirely sure what I want to do next.



## Cristina Martin-Fernandez - CEP

Choosing to do my PhD here at the Paterson is probably one of the best choices I have made in the past 4 years. I have been able to take advantage of the great facilities this institute has to offer and I have gained knowledge and experience as a cancer researcher in the field of Pharmacology. I have also expanded my non-scientific skills by volunteering with CR-UK and meeting the people that make this experience possible. Last but not least I would like to mention the many good friends I have made along the way and that have been there for me.



## Natalie Mack - Cell Signalling

I have thoroughly enjoyed developing as a scientist the last 4 years in Angeliki Malliri's Cell Signalling lab at the Institute. I think I have had a typical PhD experience consisting of some tough times but also many good. It has been challenging, but I am pleased with what I have achieved so far. I plan to continue with the work I have started and hope to publish some of the findings in the next year. I would like to continue working as an academic scientist for the foreseeable future and hope to have a successful and stimulating career.



## Dorota Fennessy - Cell Division

Great studying times are about to end so I would like to thank Cell Division group and many friendly people around the Institute for making my time here a truly great experience. I received fantastic training and went to many inspiring scientific meetings and seminars that will surely pay off in my scientific future.



## Malgorzata (Gonia) Gozdecka - Cell Regulation

I am going to finish my PhD program this September. I am currently writing my thesis which is based on the investigating the role of Atf2 and Atf7 in models of liver cancer. I would like to thank all members of the Cell Regulation group, a team of cooperative, cheerful and helpful colleagues who greatly supported me from the scientific and personal point of view. I would like to especially thank Nic Jones, Wolfie Breitwieser and Steve Lyons for opening my mind to science, for their great guidance, precious advice and support I could always receive. Additionally, I would also like to say thank you to two research group where I was able to do my rotation projects: thank to George Lacaud and Caroline Dive for their guidance and support.

## Congratulations to...

Dorota (Cell Division) and Carl Fennessy who tied the knot on 15 August 2010 in Rzeszow, Poland. We wish the newly married couple all the best.



## A Warm Welcome to Paterson's New Starters

**Becky Allen**  
Administration Coordinator,  
Operations

**Stefan Bennett**  
Scientific Officer, CEP

**Ashapurno Biswas**  
Postdoc, Cell Division

**Maud Fleury**  
Postdoc, Stem Cell Haematopoiesis

**John Higgins**  
Lab Aide, Lab Services

**James Hitchin**  
Senior Chemist, Drug Discovery

**Paul Kelly**  
Scientific Officer, CEP

**Rahima Patel**  
Senior Scientific Officer, Stem Cell  
Biology

**Muhammad Raja**  
Finance Assistant, Operations

**Ali Raoof**  
Senior Chemist, Drug Discovery

**Danielle Shaw**  
Clinical Fellow, CEP

**Ye Dee Tay**  
Postdoc, Cell Division

**David Vernon**  
Domestic Assistant, Operations



# FAMILY FUN DAY



## Charity Football Match

### Paterson Institute vs Beatson Institute

Bouncy Castle | Face Painting | Refreshments available

Tickets: Adults £1 | Children 50p

## Saturday 16 October 2010 from 12pm

In aid of Cancer Research UK  
Enquiries to [funday@picr.man.ac.uk](mailto:funday@picr.man.ac.uk)



Wythenshawe  
Sports Ground





MANCHESTER  
1824  
The University of Manchester



CANCER RESEARCH UK