



Paterson
Institute for Cancer Research

Paterson Institute

newsletter

The Newsletter for the Paterson Institute for Cancer Research

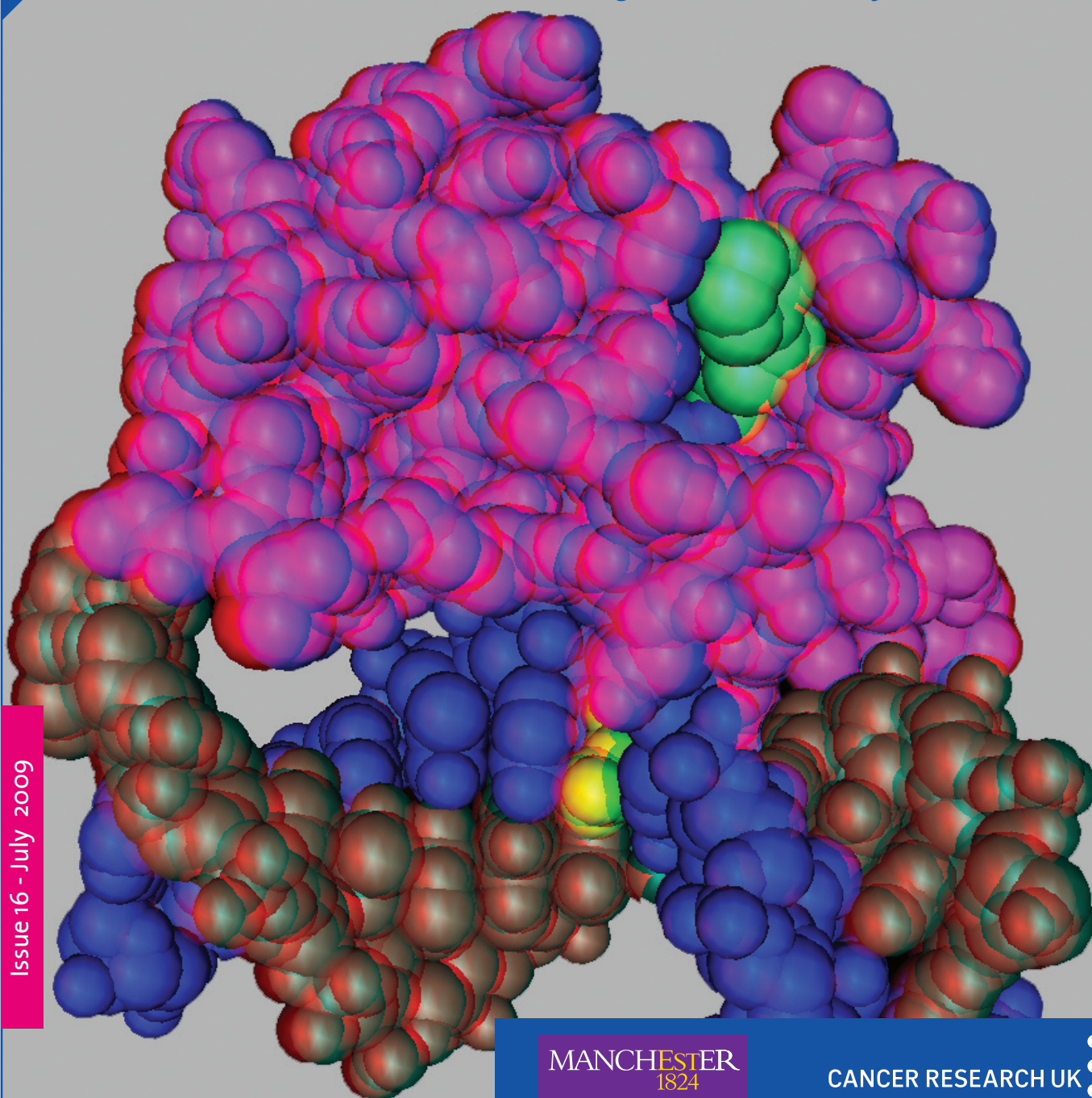
Paterson Review Success

See page 2

Bumper
Edition

Nature Papers for Paterson

Use the 3D glasses to see the crystal structure in 3D



Issue 16 - July 2009

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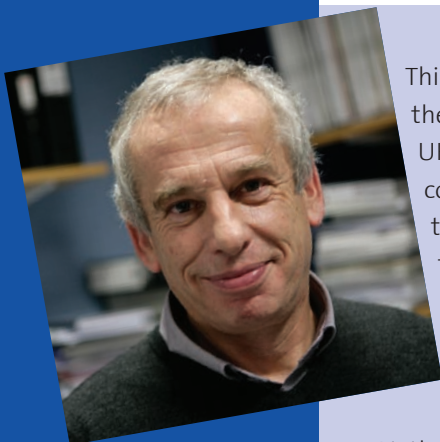
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CANCER RESEARCH UK



inside >> Paterson Review Success >> Art Meets Science >> Contribution Review >> Paterson at Race for Life

Director's Introduction



This summer has been a very important time for the Paterson with the completion of the Institute's Quinquennial Review. The Review is commissioned by Cancer Research UK (CR-UK) and carried out every five years to ensure that Institutes in receipt of CR-UK core funding are undertaking research of the highest quality. As part of the process, a team of world-leading scientists, experienced in running research institutes visited the Paterson over a two-day period (June 30th – 1st July) and assessed the Paterson's performance over the last five years and also reviewed the strategic direction and progress plans for the next five-year period. The review Committee also assesses how well the Institute can help to deliver the CR-UK research strategy.

At the Paterson's previous quinquennial review five years ago the review committee recognised the progress that had been made since 1999 in building the reputation of the Institute, improving the quality of its research and developing a supportive research infrastructure. The committee concluded that 'progress had been remarkable and had exceeded expectations'. A major theme of discussions during that review was on how best the Institute could influence the translational science agenda. A strong recommendation was made to develop strong partnerships with The Christie NHS Foundation Trust and The University of Manchester and subsequently this led to the establishment of the Manchester Cancer Research Centre (MCRC). The MCRC is uniquely placed to deliver ambitious and cohesive scientific and clinical research strategies. It is the vehicle through which the Paterson can truly influence the wider research agenda, achieve its goal to facilitate translational and clinical research and deliver key aspects of CR-UK's five-year strategy.

CR-UK is committed to ensuring 'return on investment' in terms of maintained high quality research of international standing. The quinquennial review is a reminder of the competitive environment we work in and the need to consistently deliver: there is no room for complacency. The review has tangible practical outcomes also: it informs the process by which CR-UK determines the level of core-funding to the Institute for the next quinquennium. We have just completed our quinquennial review with a very successful outcome. The overarching message from the committee is that the Institute has made fantastic progress and the development of the MCRC is a very exciting initiative with great potential. A key element of the review process is not just looking at past achievements but collecting valuable advice and suggestions from experienced scientists to ensure that we can build on this progress in the next five years. The bar has been set very high – we will be devoting our efforts to meeting or exceeding expectations.

As Director of the Paterson, I believe that since the last quinquennial review we have all worked together to enhance the reputation and scientific quality of work undertaken at the Institute and to fully engage with The University of Manchester and The Christie, through the MCRC alliance, to develop a unified purpose and strategic direction that will maximise opportunities in translational and clinical research. From a personal perspective, the positive review endorses the strategic direction we have taken at the Paterson and gives us all a strong sense of forward purpose as we continue to build on our achievements.

Nic Jones
Director

Many Thanks to:

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20/20 The Newsletter Interview:

By Stuart Pepper, our Science Editor

This month we focus our gaze on Morgan Blaylock, Head of FACS.

Stuart Pepper: How long have you been running the FACs unit here at PICR?

Morgan: I think it's around 19 months.

SP: Do you find working at PICR different to other places you have worked?

Morgan: Yes and no, previously I ran a similar facility which concentrated more on the benchtop side of cytometry with a smaller sorting arm. This was most likely due to the charging policy of the University which was fully cost recovered resulting in a suggested hourly sort cost of almost £300 per hour. In addition to running the facility I was required to maintain my own research area and also lecture to the undergraduates. Here I am able to concentrate fully on cytometry making sure we provide to best service to our users.

SP: For readers who aren't familiar with your work could you explain what the initials FACS stand for?

Morgan: FACS stands for Fluorescence Activated Cell Sorting and is a specialised form of flow cytometry. The technique allows us to separate individual cells on the basis of expression level of specific proteins. The acronym FACS is actually trademarked and owned by Becton Dickinson. Many scientists use this term frequently for all types of cytometry both sorting and non-sorting applications however it is not really a generic term for flow cytometry.

SP: It seems as though the FACS unit has expanded since you arrived. How many cell sorters and analysers do we have now?

Morgan: When I arrived we had two benchtop systems, the FACScan and FACSCalibur, capable of a maximum of four separate colours, and two sorters the FACSVantage and FACSARIA capable of four way sorting and a maximum of ten colours or flavours. We have expanded by adding two further benchtop systems: the FACSArray which is a four colour high throughput system and the LSRII which is a high end seventeen colour system. We also have a Guava PCA cell counting system and most recently we have added a new sorter to the facility the five laser fourteen colour Influx.



SP: Which is the oldest system we have still in use?

Morgan: Well Mike has been doing cytometry here for twenty eight years, but the longest running cytometer is the Vantage which has just had its sixteenth birthday.

SP: Recently you acquired the 'influx' system. Is it possible to explain the benefits of this system to non-specialists?

Morgan: Unlike current sorters the inFlux offers an open, configurable platform that can be fully optimised for researchers' unique application-specific requirements. This new level of choice and control is particularly important for life science research on the leading edge of biomedical discovery and is applicable to a range of applications including cell therapy research, and drug discovery. In terms of basic performance the inFlux provides the fastest and most stable sorting in the industry with sort rates of up to 50,000 cells per second.

SP: Looking ahead what do you see as the major demands that users will be making on your service?

Morgan: In the future I expect the majority of users to fully embrace the multicolour aspect of cytometry pushing the numbers of colours which we currently use; additionally I think that users will require smaller numbers of cells to be sorted but at very high purity.

'Art Meets Science' challenge provides showcase for local pupils' artwork

The Paterson has had a busy few weeks preparing for the quinquennial review, which is highlighted in the Director's introduction of this Newsletter.

The site visit by a team of internationally renowned scientists provides a good opportunity to take a fresh look at the Institute – not just in terms of the quality and relevance of the science undertaken – but also in terms of the work environment. Earlier this year, the Paterson continued to build links with the local community by establishing an 'Art Meets Science' challenge in collaboration with Sale Grammar School, based on an idea by Deepti Wilks (MCRC Biobank) whose son is a pupil at the school. Pupils in Years 9 and 12 were asked to develop an individual, relevant and contemporary artwork for display at the Paterson. The artworks, which were completed in time for the site visit, have been professionally framed and now adorn the walls of the Institute building for all staff and visitors to enjoy.

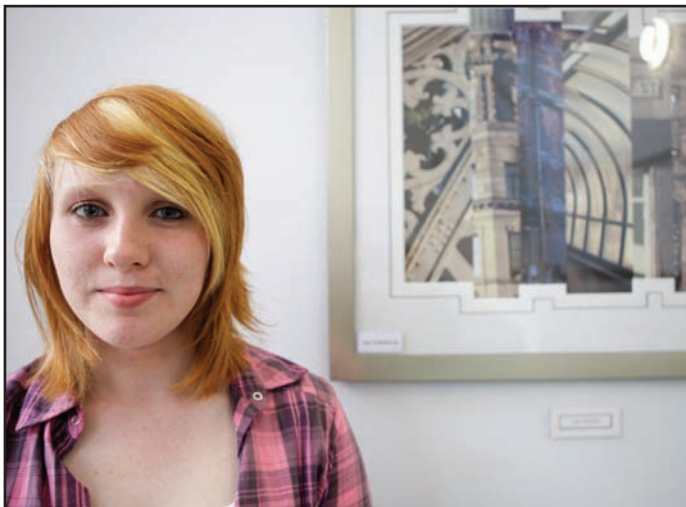


Art Meets Science Prize Winners 2009

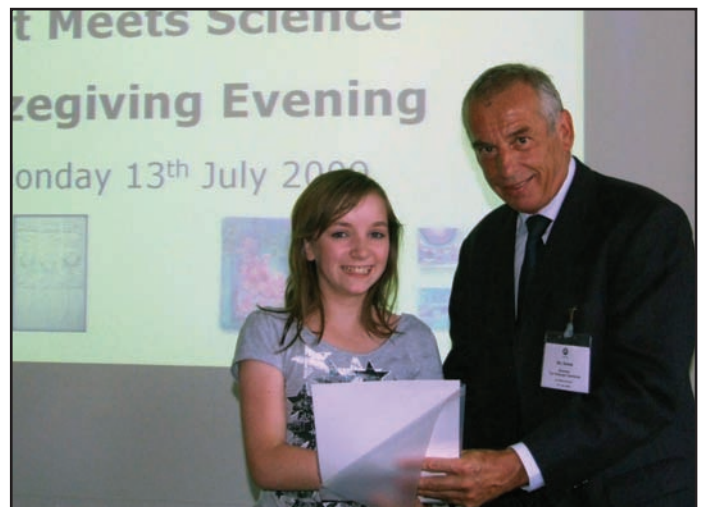
The high standard of the pupils' work, the maturity of the pieces and the enthusiasm with which they tackled the project prompted the Paterson to reward their efforts with an 'Art Meets Science' Award Evening which was held for the children and their families on Monday 13th July. Three winning entrants from Year 9 and six from Year 12 were announced and awarded a prize in recognition of the excellence of their work. "We have been absolutely amazed at the level of talent and ability shown by all the age groups – their work really brightens our Institute and brings a flavour of the community into our research environment. Working with a local school has been a very rewarding experience – and one which we hope will be repeated as a regular challenge," said Pippa McNichol, Director of Operations at the Paterson.



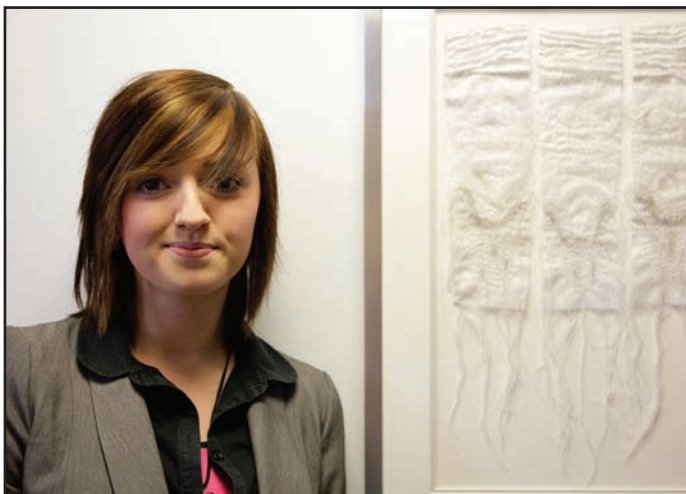
Kiera Wells (left) and Hannah Moffat (right) joint Year 9 canvas winners pictured next to their framed winning entry on display at the Paterson Institute



Lucy Crichton, Year 12 runner up



Eleanor Simpson, Year 9 painting winner accepting her award from Paterson Institute Director Professor Nic Jones



Sophie Whittaker, Joint Year 12 winner



Vicky Wong, Year 12 runner up

Budding scientists focus on *S pombe* at the EMBO course

A team of young scientists attended the European Molecular Biology Organisation (EMBO) practical course 'Molecular genetics with the fission yeast *Schizosaccharomyces pombe*' organised and held at The University of Manchester and the Paterson Institute for Cancer Research from 13-25 June 2009.

The bi-annual course began in 1994 with the first programme held at the Institute of Genetics in Copenhagen. The move to Manchester allowed course attendees the opportunity to use the world-class facilities available both at the Paterson Institute and at The University of Manchester, in the recently renovated teaching laboratories of the Faculty of Life Sciences, using advanced imaging, microarray, proteomics and other specialist facilities to provide an immersive teaching programme in the full range of *S pombe* genetic and cell biology techniques.

A key component of the course is drawing upon the expertise from within Manchester alongside invited key course

instructors, including the Nobel laureate Professor Sir Paul Nurse who was previously the Chief Executive of Cancer Research UK, to give participants hands-on experience with the latest techniques and technologies. The course, organised by Janni Petersen, Olaf Nielsen and Iain Hagan, has been developed to ensure that students are able to develop essential practical laboratory skills for the manipulation of *S pombe* but also to provide expert tutorials with daily lectures to augment practical learning. The course includes 21 experiments with a supporting manual, and didactic presentations to provide a thorough grounding on the rationale and role of *S pombe* in understanding more complex organisms.

Iain Hagan, one of the course organisers explains: "Cancer is a disease of uncontrolled cell growth – understanding the basic genetics underlying this loss of control is critical in understanding cancer and developing novel interventions for cancer treatment. *S pombe* provides an ideal model organism



for the analysis of core biological processes such as cell cycle control and epigenetics. As *S pombe* is a simple organism but with high evolutionary conservation of key cell cycle pathways, we are able to manipulate these yeast cells and carry out complex manipulations of conserved pathways that would simply not be feasible in other systems. At the core of these analyses lies the ability to generate a spectrum of mutations in pathways of interest that help to pinpoint specific genes and pathways involved in a particular cell process essential for cell survival, proliferation and growth – all processes that are aberrant in cancer cells.”

The EMBO course attracted 100 entrants but only 16 could be selected to participate in the prestigious programme. Several of the students may be the only fission yeast scientist in their laboratory. Once they have completed the course they are able to disseminate their knowledge to colleagues back in their own research environment. “Keeping participant attendance to a manageable number ensures that every student is able to fully benefit from the course with unlimited access to expert tutors and facilities. The selection process is designed to allow young scientists, who may have joined principle investigators who are just establishing their own laboratories, fast-track access to the latest research ideas and techniques that they can then share,” explained Iain Hagan. “There are little laboratory tricks that students pick up here that are only available because of the years of practical experience that the instructors have. Students can access a wealth of fission yeast knowledge and tips that are invaluable in developing their own research once they complete the course,” he added. EMBO provides a €30,000 grant that covers all but the student airfares, with course instructors donating their time to pass on their knowledge and experience.

There is also an additional €2,000 available to support travel costs for students from selected countries who may otherwise be unable to attend the course.

The 15 years since the EMBO course began, has seen many of the early participants themselves become course instructors. The Manchester programme includes five tutors who attended the course when they were young graduates first embarking on their scientific careers. “The course also provides students with the opportunity of developing long-term relationships. These relationships are maintained throughout the years leading to establishment of a vibrant yeast community,” said Iain Hagan. This year, an extra advantage is that the Pombe Club, which traditionally meets on the first Tuesday of every other month in London, met in Manchester the day after the official course programme ended (Friday 26 June), allowing course participants to attend the Pombe Club meeting.

“The course is an intensive and demanding 13 days of learning which takes a great deal of commitment, both from organisers and attendees. Despite the hard work, we all look forward to the programme because of the real benefits it provides. We can be proud of helping to promote advances in fission yeast to a new generation of potentially world-class scientists – scientists who will improve fundamental knowledge of the cell cycle and drive translational research for patient benefit,” said Iain Hagan.

Annual Paterson Colloquium

By Jenny Varley

The Sixteenth Paterson Colloquium will be held at Ambleside between the 7th and 9th September. As usual we have invited our September intake of new students, and this gives them an opportunity to meet members of the Institute in an informal setting prior to them starting in their respective laboratories. Feedback from students who have attended in previous years has been very positive, and although a bit daunting for them at first they are soon joining in robustly with both the scientific and the social programmes!

The programme looks excellent this year, with the first two sessions comprising talks from our second year students, which

are always of a very high standard and set the meeting off to a great start. This year we are back to having two poster sessions, and there will be prizes awarded for the best posters as an extra incentive.

The abstract deadline for speakers and posters is strictly the 7th August.



Paterson researchers in action at Race for Life and Relay for Life

Representatives from the Paterson were out in force in June taking part in the Stockport Relay for Life and supporting the Manchester Race for Life.

A team from the Institute entered the Stockport Relay for Life three months ago and have so far managed to raise an impressive £2000. This was a through a wide variety of fundraising activities including a cake sale (see cakes for life article) and collecting second hand goods through the Donation Station.

Team Leader Cassandra Hodgkinson who is a Scientific Officer at the Paterson stated:

“The last couple of months have really opened our eyes to how difficult fundraising can be and how persistent you have to be to help you reach your target”

The Paterson Scientists team completed the full 24 hours with 9 team members; Cassandra Hodgkinson, Sian Dibben, Jenny Brettel, Emma Saunders, Chris Clark, Steve Lyons, Jeff Barry, Shaun Villa and Dominic James. The team donned lab coats for the duration of the walk and thoroughly enjoyed their experience. In the afternoon they took time to conduct Strawberry DNA extraction experiments for the teams at the event. This was well received by adults and children alike with the team conducting 40 experiments and using the opportunity to help explain more about the research they do in the Paterson.

This successful engagement activity was replicated at Manchester Race for Life in Heaton Park. Here Tom Southgate, Cristina Martin-Fernandez, Monique Melis, and Chong Tan delivered an impressive 110 demonstrations to approximately 450 supporters (including a four year old and the Lord Mayor of Manchester).





Tom Southgate said:

“Extracting DNA from strawberries is a fantastically simple way of engaging people in science. Every person that came to our tent left with a little bit more knowledge about our work and most importantly a smile”

Life events and it is hoped they will raise over £535,000. The Stockport Relay for Life committee announced that they had raised over £40,000. Thanks for everyone who was involved in these events.

It was an incredibly successful weekend for everyone - nearly 12,000 participants took part in the two Manchester Race for



Cakes for Life!

Thursday 14th May

As part of the fund raising efforts of the Relay for Life team a cake sale was held in May. The stall was run by Siân Dibben and Jenny Brettell (pictured) with help from Kath Spence. Staff were able to choose from a delicious selection of well over 200 home made cakes with contributions from Cassandra Hodgkinson, Yvonne Hey, Jodie Whitaker, Steve Lyons, Kath Spence, Siân and Jenny. The organisers would like to

mention Mrs Carney (next door neighbour to Stuart Pepper) for supplying a selection of more than 100 assorted cakes.

It seems that a lot of people were keen to support the Relay for Life team as all the cakes sold out within a couple of hours raising over a £100.

The organizers would like to thank everyone who contributed cakes, and of course everyone who came along to buy them!



Siân Dibben (left) and Jenny Brettell (right) before the rush began.

Welcome to Donald Ogilvie, new Head of Drug Discovery



It's hard to believe that it's now almost six months since I started working at the Paterson. I have really appreciated the warm welcome and help that I have received from many different people in the Institute. It's also good being located adjacent to The Christie, close to the people most likely to benefit from our discoveries and able to access so much clinical expertise.

After a twenty year career in industry I decided to volunteer for redundancy and start out all over again. In parallel with making what seemed like a momentous personal decision I was approached about an opportunity to set up and lead a CR-UK-funded Drug Discovery Centre at the Paterson Institute, within the MCRC. This

resulted in a number of visits to "The Vine" (Nic Jones, The Director's local) for exploratory discussions. The first occasion was particularly memorable because, shortly after we arrived, the pub was taken over by the local Quiz Night event (including PA) so that we could barely communicate with each other without shouting! Nic assures me that this was not a deliberate tactic to unsettle me or test the limits of my general knowledge.

The MCRC Drug Discovery Centre arose from a CR-UK strategic initiative to increase their investment in small molecule drug discovery alongside the major core-funded institutes in Manchester and Glasgow (at the Beatson Institute). Subject to a successful review

of the plans, CR-UK will provide £8 million funding to each centre over the next five years. This will be used to build and equip a drug discovery laboratory and to recruit 20 scientists to work in it. The primary aim is to generate a portfolio of novel cancer drug discovery projects, some of which will hopefully progress to clinical testing. There are many hurdles to cross in drug discovery and most projects do not make it all the way to the clinic. The knack is to try and identify the "losers" as early as possible and to move resources behind the potential "winners". All is not necessarily wasted in terminated projects; these can often yield valuable chemical biology tools for use by other researchers.

So what have I been doing for the last six months? The first, and rate-limiting step, in the programme is to design and build a drug discovery laboratory. Because the requirements of a modern synthetic chemistry laboratory are more stringent than in the past (you can no longer smell it half a mile away) we have been taking expert advice and will be installing new, state-of-the-art fume hood facilities. The design, which also incorporates biology facilities, has now been finalised and building is scheduled for completion by end November. I am grateful to Steve Alcock and Jenny Varley for their help and patience during this iterative process. In parallel, with help from the HR team and other assessors we have been running recruitment campaigns for the heads of

chemistry and biology. As a result, Dr Allan Jordan will be joining us as head of chemistry in July. Despite two campaigns, we have not yet identified a candidate for head of biology. Another major activity has been to develop the target selection criteria for the drug discovery centre. If we are going to make our mark in the global drug discovery effort we need to work on targets where we can compete and hopefully lead the way. To this end I have spent time talking to clinical and preclinical leaders to identify particular areas of interest and research strength in the MCRC. Finally, I have written and submitted my formal grant application to CR-UK and this will be reviewed at the Drug Discovery Coordinating Committee on July 8th.

Subject to a successful outcome from the CR-UK review, we will be on the road and hope to recruit further scientists in the autumn, equip the new laboratory in December and start our first wet project work in January 2010

Staff News

by our Current Affairs Editor, Amy Weatheritt



Congratulations to

[Jennifer Loconto](#), (Medical Oncology), on the birth of gorgeous baby Oscar, who was born on November 18th, 2008 at 1:25 am, weighing 7 lb 4 oz. He's now 7 months old and is settling into the nursery while his mother has returned to work.

[Monika Antkiewicz](#) for winning a prize for her poster at the recent Cancer Research UK Students Conference.

[Laura Humes](#), HR, for completing the CR-UK Race for Life, 10K women's race, at Tatton Park in 56 minutes and raising £200 in sponsorship money.

A warm welcome to:

[Chris Clark](#), Scientific Officer 1
[Achille Dunne](#), Scientific Officer 2
[Sedia Fofana](#), Lab Aide
[Julie Jarratt](#), HR Administrator
[Leila Khoja](#), Clinical Fellow
[Rolf Kraehenbuehl](#), Senior Scientific Officer
[Yaoyong Li](#), Postdoc
[James Lynch](#), Postdoc
[Francisca Marti Marti](#), Clinical Fellow

[Anthony Price](#), Senior Scientific Officer
[Paul Scutt](#), Senior Scientific Officer
[Alex Siddons](#), Scientific Officer 1
[Ryan Smith](#), Web Developer
[Mark Wappett](#), Scientific Officer 2
[Amy Weatheritt](#), Acting PA to the Director and Director of Operations
[Leanne Westgate](#), Scientific Officer 2
[Jodie Whitaker](#), Scientific Officer 1
[Christopher Wirth](#), Programmer

Goodbye and many thanks to:

Clare Lawrence
 Laura Norton
 Michelle O'Hara
 Najma Rachidi
 Claire Rooney
 Emma Saunders
 Brain Truman

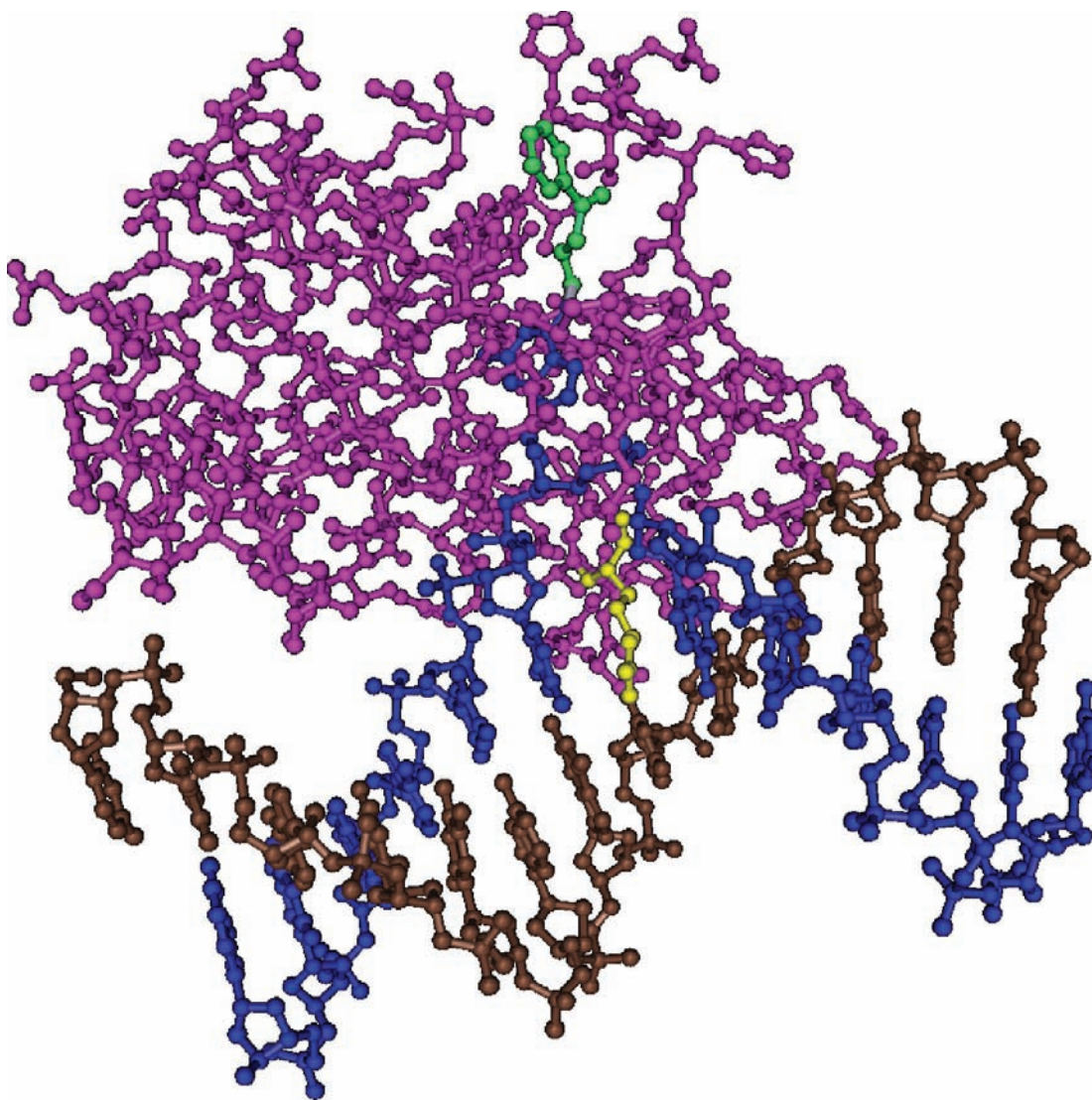
Nature paper for Carcinogenesis

By Geoff Margison

The Carcinogenesis group is interested in DNA repair mechanisms which combat the biological effects of specific types of damage that are generated in DNA by alkylating agents. Some compounds of this type are known human carcinogens and others are used in cancer chemotherapy. A few years ago, with Mauro Santibanez-Koref in Newcastle, we started to investigate the fission yeast version of the human protein, MGMT, a “damage reversal” protein that simply transfers the damage to its own active site; an autoinactivating (“suicide”) mechanism. We cloned the genes from yeast (*S.pombe*) and *E.coli* and found that the encoded proteins, Ath1 and eATL, respectively, did not operate by damage reversal, nor any other known pathway. However, in collaboration with David Williams in Sheffield, we demonstrated that they bind strongly to short oligonucleotides containing a wide variety of alkylation damage types. We then provided evidence that Ath1 flags the damage for processing via another pathway called nucleotide excision repair (NER), in effect unmasking an invisible DNA lesion. Oliver Fleck, now in Copenhagen, also showed that Ath1 protected *S.pombe* against the mutagenic effects of alkylating agents. At a meeting in Oslo in late 2007, we presented these findings and learned from John Tainer that his group in the US had crystallised the *S.pombe* protein bound to lesion-containing DNA. Thus was conceived a collaboration that resulted in a recent article in *Nature*, which precisely describes how Ath1 grabs damaged DNA and flips the offending base into a binding pocket, simultaneously bending the DNA by 45° (see figure). Exactly what happens next we have yet to establish, but NER is engaged and this results in the

elimination of the lesion from DNA.

If a similar mechanism occurred in human cells, it would have very important implications both in terms of cancer causation, or prevention, and also in cancer chemotherapy, where the sensitivity of normal cells to the toxic side effects of treatment, and the resistance of tumour cells to drugs, are recurrent problems. The search is on.



*Shown in purple is Ath1 bound to a short stretch of DNA (complementary strands shown in blue and brown). The yellow structure is the amino acid in Ath1 that pokes into damage-containing strand (blue) and flips the damage into the binding domain of the protein. The damage, in this case the type that is produced in DNA by one of the many carcinogens in cigarette smoke, is shown in green and almost protrudes out of the other side of the protein. Download CN3D software from pubmed or look at our cover image using the 3-d glasses for a better view of how the structures interlock. We know that *S.pombe* doesn't smoke: This is just an example.*

Nature paper for the Stem Cell Biology Group - Birth of a Blood Cell

By Georges Lacaud

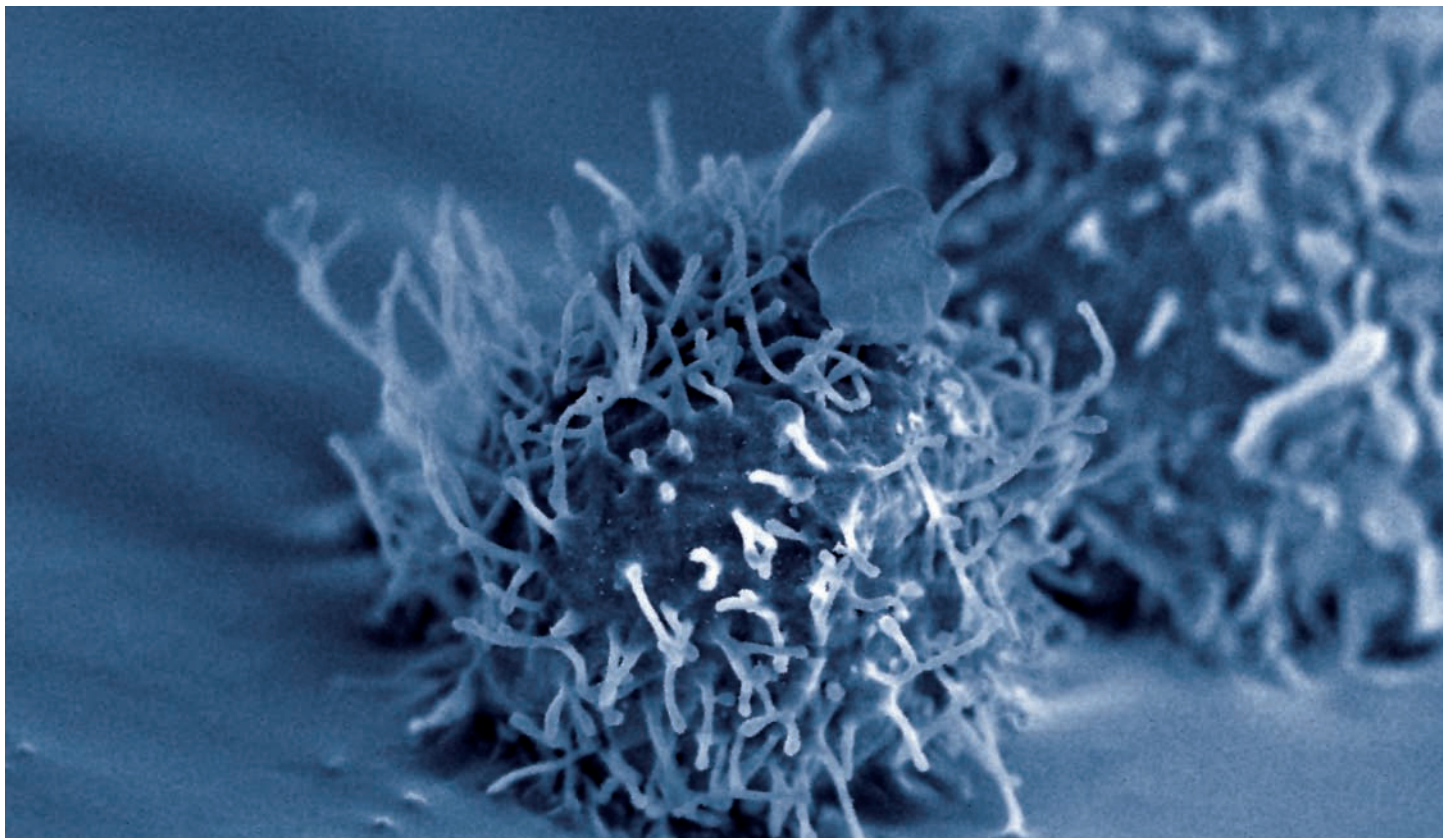
The earliest site of blood cells development in the mouse embryo is the yolk sac where blood islands, consisting of haematopoietic cells surrounded by angioblasts, develop by day 7.5 of gestation. The parallel development of these lineages lead to the hypothesis that they arise from a common precursor called the haemangioblast. A conflicting theory instead associates the first haematopoietic cells to a phenotypically differentiated endothelial cell with haematopoietic potential, i.e. a haemogenic endothelium.

Support for the haemangioblast concept was provided by the identification during embryonic stem (ES) cells differentiation of a clonal precursor, the blast colony-forming cell (BL-CFC), which gives rise after 4 days to blast colonies with both endothelial and haematopoietic potential. In this study, we analyzed the cellular and molecular events leading to the generation of blast colony from the BL-CFC. Our results demonstrate that the haemangioblast generates haematopoietic cells through the formation of a haemogenic endothelium intermediate. A similar haemogenic endothelium population was detected in

gastrulating embryos. At the molecular level, we demonstrated a critical function of the transcription factor Scl/Tal1 in the establishment of the haemogenic endothelium population whereas the transcription factor Runx1/AML1 is essential for generation of definitive haematopoietic cells from the haemogenic endothelium.

These results indicate that the two theories on the origin of haematopoietic development can be merged into a single linear developmental process leading to the formation of the first committed haematopoietic precursors. The identification of these discrete developmental steps will provide the opportunity to further explore the regulation of haematopoietic development.

Citation: Christophe Lancrin, Patrycja Sroczynska, Catherine Stephenson, Terry Allen, Valerie Kouskoff, Georges Lacaud, (2009) The haemangioblast generates haematopoietic cells through a haemogenic endothelium stage. *Nature* 457(7231): 892-5. Full text doi:10.1038/nature07679



Blood cells generated during haemangioblast differentiation

Contribution review: the view from the inside

by Nigel Smith

Love it, loath it or just plain 'lump it'; All core funded Cancer Research UK staff have to undergo an annual contribution review.

I always had mixed feelings about contribution reviews in general; I was often of the opinion that if you did your job well and your 'boss' was happy then there was no point in having a process at all. However, when we return from 'fairy land' and look at this laterally, the review process we undergo is much more than just a 'can you do your job' exercise.

You might say... What is the point....? How do you piece together a fair system of contribution assessment for a relatively large group of people performing a wildly diverse set of tasks so everyone is treated the same?

Are contribution reviews ever going to be perfect? Well may be not, but having gone through the whole process this year I can say that this system works pretty well. The panel works hard to look at all forms in an impartial and impersonal manner (in a good way!) to ensure that everyone is treated fairly and equally. It is worth bearing in mind that most of us only have to concern ourselves with one form. Line managers may have to do a few, but members of the review panel have to look through them all! (Except the ones they work with directly).

Earlier I stated that the process was much more than just a 'can you do your job' exercise. Everybody should look on this form as an opportunity to develop their personal role, fulfilling the needs with their niche environment, enhancing their influence and increase their profile as a citizen of the Institute.

Look at your form and ask yourself if your work has given you a sense of achievement? Does it make you feel you are progressing and following a development path? Do you feel you have done

your job well? If your year has been difficult and challenging, did you feel that this process was a waste of time or was it part of making you feel that help and support was there and you felt that progress was being made?

We are all part of a big machine and each part is important to the overall success of our Institute and cancer research in general. Yes we need those, excellent, blue sky innovative thinkers who drive the forefront of science, but they need brilliant technical staff, who facilitate these ideas in well run labs. This relies on allsorts of other contributions, some we notice (like the service units and finance) and some that people don't always notice (like having bins emptied and clean glassware for example). What ever your contribution to this 'machine' the important thing is that you can say 'I have done a damn good job'!

Now having sat on the review panel for a year I can say in all honesty that the system works hard for each one of us and we should seize the opportunity to continually develop our own contribution to our working environment. We should feel comfortable in giving suggestions and opinion in an appropriate manner and hence undergoing this contribution review process should be part of our continued development of our role in our work area and in the Institute as a whole.

As for the panel, yes I read through well over 100 forms and took part in the meetings to discuss them, but it became a privilege to do so and a great experience. Sometimes I felt great because I thought the same as the rest of the panel and sometimes I was amazed at the level of detail some more experienced panel members picked up on that I never even considered. Above all the greatest insight I had was how this review is a two way process and not just a 'can you do your job' exercise. I wonder who will volunteer to be the staff rep next year?

Contribution review: the statistics

by Rachel Powell

This year 144 forms were submitted to the panel. After ratification, 74% of staff were awarded an Expected rating. Greater than Expected ratings were awarded to 24% of staff and 2% of staff being given a Less than Expected contribution rating.

This year the panel has upgraded 5 members of staff from Expected to Greater than Expected and re-assessed ratings from Greater than Expected to Expected for 2 members of staff.

Researchers of the future visit the Paterson Institute

The Paterson Institute for Cancer Research in Manchester recently welcomed 42 local sixth form students. They all took part in practical scientific research as part of the Institute's annual schools day. The aim of the day is to engage with local schools, giving students an insight into a potential career in cancer research, whilst also highlighting the impact of our research.

This is the fifth year the event has taken place with eight local schools snapping up the available spaces in record time. The programme was developed in line with the A-Level syllabus but also expanded to highlight the work that happens beyond the student's current learning. The event, originally developed by Dr Les Fairbairn has recently been run by Stuart Pepper, Head of Molecular Biology Core Facility.

Throughout the day the students had the opportunity to visit three areas of work for 90 minute sessions. The Paterson had representatives from five groups (Flow

Cytometry, Cell Division, Immunotherapy, Clinical Experimental Pharmacology and the Molecular Biology Core Facility) to help facilitate the activities. Amongst other things, the students were given the opportunity to read DNA sequences, perform cell culture and sort cells.

Their feedback from the event was excellent, with everyone saying they enjoyed the activities and found them relevant with many saying they'd consider a career in cancer research. Two enthusiastic students said:

"It was good to experience the different practical techniques actually in use in a real lab. Great to see how it actually works rather than in a textbook."

"I enjoyed participating in experiments as this gave a good indication of what a



future science career would be."

Nick Snowden, Head of Biology at Manchester College School added: "I think it's fantastic for the students to have the opportunity to visit such a research facility, it provided excellent support for various parts of the A-Level syllabus. A most useful day."

The day was a great success both in terms of student experience and the support provided by the groups involved with all taking time to plan meticulous, interactive, enjoyable sessions.





The Paterson opens its doors to CR-UK supporters in Manchester

The Institute opened its doors once again in June to local volunteers and supporters of Cancer Research UK to show them how their incredible support helps to fund work at the Institute.

The Annual North West Supporters Conference, held on 6th June was a huge success with over 115 people attending including the Lord Mayor of the City of Manchester, Alison Firth and John Leech MP.

The day included a fundraising update from Cancer Research UK's Serena Daw, a presentation from Professor Caroline Dive, and Judith Smithson gave an account of her role as a volunteer with the charity.

Judith said

"I have been here three times now and each time it inspires me to raise even more money for Cancer Research UK."

The supporters were given the option of visiting one of ten lab demonstrations held within the Institute or for a tour round the clinical trials unit at The Christie.

Thanks to all the groups who gave demonstrations and those people that acted as guides at what a very successful day.

Cancer Research UK Grand Store Re-opening

By Stuart Pepper, our Science Editor

The CR-UK shop in Urmston has recently been completely refurbished and was planning a grand re-opening. As Urmston is my home town I went along to represent the Institute at the opening ceremony (not just for free champagne) and was introduced to Julie Downie, the shop manager, and Beryl Fielding (pictured right).

Beryl is the longest serving volunteer in the shop with over 20 years experience. As with many of the shops, Urmston is lucky to be supported by a core of highly committed volunteers, who work hard to make the shop a successful fund raising venture. The charity shops are run very much the same as any other shop, a lot of care and thought goes in to stock turnover, how to best display items and what price to charge. This last point is a tricky one; on the one hand there is a responsibility to the people who donate items to the shop to get a good price for each item, after all if you donate your possessions to charity you don't want them to be practically given away. At the same time people shopping in charity shops are always looking for bargains and simply won't buy anything that seems overpriced.

From outside the shop doesn't look like a traditional charity shop, the displays match the quality of any of the other shops nearby. So next time you are in Urmston, or nearby any Cancer Research UK charity shop, pop in for a look round and spare a thought for the effort that goes in to raising the funds to support our research efforts.



From left to right: Sandra, Beryl Fielding and Stuart Pepper.

In the Spotlight.....

This edition it is the turn of Kathryn Simpson, from CEP

1. What is your favourite part of the UK?

Croyde in Devon. Either at The Thatch pub, or on the beach, camping with friends (although last summer my friend's tent nearly got washed away, thankfully the kind people next to us tied it to their landrover...).

2. What is your favourite book?

Rebecca, by Daphne du Maurier

3. What is your favourite film?

This one took me ages. I'm going to go with Gladiator.

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

I've always fancied being Curator of an Art Gallery/Museum.

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

Don't panic.

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

Photo albums, my gran's jewelry and my handbag (see 12).

7. What is your greatest fear?

I tried to think of one, but I ended up feeling quite depressed, so I stopped thinking about it.

8. How would you like to be remembered?

With love (cheesy I know).

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

I wish I'd tried loads of random sports when I was younger. I'm quite convinced that I could have been an Olympic champion at something; it was just a case of finding out at what.

10. What would be a perfect meal?

Christmas Dinner with all the family. I love it.



11. What trait do you most deplore in others?

Excessive use of the exclamation mark, especially in pairs!!

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

A ridiculously extravagant handbag, either one that is so impractical you could never use it, or one of those ones you could pretty much sleep in.

13. Which words or phrases do you most overuse?

Really Martin, it's not that bad...

14. What is your idea of perfect happiness?

Two handbags (see 12).

15. What keeps you awake at night?

Scallies stealing our wheelie bins so that they can set fire to them by the Mersey. Apparently they love it.

Recycling...

We received a certificate of 'Environmental Accomplishment' from Shred-it (our recycling company) as we saved 141 trees in 2008 by participating in their shredding and recycling programme



Paterson researchers walk 40 miles for charity

A team researchers from the Paterson Institute for Cancer Research completed the 40 mile Keswick to Barrow charity event. The team hope to raise over £2500 which will be shared between Cancer Research UK and The Christie.

The Keswick to Barrow Walk is a 40 mile sponsored stroll through some of the country's finest landscapes. The route starts on the southern side of the lake district town of Keswick and winds its way through some of the most beautiful scenery to the Victorian town of Barrow in Furness on the coast of the Irish Sea. This year a 2300 entrants made the start line for the 43rd event

Overall a record 1905 persons completed the 40 mile distance which included over 1100m of ascent, despite some of the worst weather in the events history. The Paterson team which included friends and family also had to contend with wind, rain and hail stone storms, making their achievement even more impressive. This is the 5th year that a team from the Paterson has entered and it was an incredibly tough year but our team showed real determination and did incredibly well.

Well done to all those who took part and thank you to Catriona Parker who did excellent job in the support car.

Photo Competition

By Pippa McNichol

We will be having a photo competition this summer so that we can fill the coffee room with some new pictures. All staff and students working within the Institute are eligible to submit a maximum of 2 pictures.

Photos should be submitted to Amy Weatheritt (Acting PA to the Director and Director of Operations) on a named cd-rom by Friday 25 September. They should be of a suitable quality and resolution to be enlarged and framed to go in the Coffee Room.

If you currently have photos on the wall in the Coffee Room (or did have prior to the Site Visit) please let Amy know by 25 September whether you would like your pictures returning or whether you are happy to donate them to the Greater Manchester CR-UK charity shops who have offered to sell them.

The judging panel will be chosen in September and will not be able to participate in the competition.

Sports Desk

By our Sports Editor, James Dunphy

Paterson FC prepare to beat the Beatson Institute

The Paterson's football club meets every Tuesday to play a social game of 5-a-side or 6-a-side football. Luke Harrison, CEP, who organises the club has arranged an 11-a-side match against the Beatson Institute for Cancer Research which will take place on Saturday 29 August in Manchester, with a second game taking place in Glasgow. There is the possibility of this becoming an annual fixture, which would be a great way of linking the two CR-UK institutes.

The team is looking for people to come and watch the match and lend their support, and possibly even the formation of a Paterson team of cheerleaders. All enquiries to Luke in CEP.

Paterson Charity Football Team

On July 12th a team from the Paterson Institute entered a charity 5-a-side tournament. The event was organised by Middlebrook Retail Park and was held at Bolton Arena with all proceeds going to Cancer Research UK. The Squad included Cassandra Hodgkinson, Matt Lancashire, Robert Sloane, James Lynch, and James Dunphy. The team were in a group of five with the top two teams in each group going through to the final. They performed brilliantly in the first two games coming out on top 5-1 and 8-1. The next two games proved to be a sterner test particularly as the team had no recognised goalkeeper. Despite a battling performance the Paterson team lost 1-4 to the early favourites for the competition – JJB sports. The final group game was against Scotts with the winners going through to the semi final. Aided by a dubious penalty decision Scotts defeated the Paterson 5-3 and took the last semi final place, leaving us languishing in third place in our group. The tournament was won by JJB who defeated Scotts in the final with many pitchside experts stating that the Paterson was definitely the third best team in the tournament and the ones to watch next year!

It is hoped this event will raise over £500 for Cancer Research UK.

Fantasy Football

By Pippa McNichol

This year for the first time ever the Paterson ran a Fantasy Football competition, with 29 teams battling it out for the coveted Paterson Fantasy Football Shield. Each week of the football season, there was much heated debate across the institute as team captains decided whether to play Cristiano Ronaldo, Frank Lampard or Steven Gerrard or all three if their team finances allowed. City fans struggled with their consciences as to whether to have United players in their teams and there were general groans from all when Arteta (Everton) was badly injured part-way through the season. The main topic of conversation, though, was how anyone could catch Lee Lancashire and Luke Harrison (both from CEP) who were miles ahead in the points league for most of the season and how poor Garry Ashton (Histology) could languish at 29th for so long. However, during the second half of the season, fortunes changed

and Garry moved up from 29th to finish at 26th and Steve Alcock (Estates) stormed in to take first place.

Each captain had paid £5 to enter and so there was a total of £145 in the prize fund. A small prize giving ceremony was held in the Paterson's Coffee Room and the prizes were awarded to Steve who won £80 plus the coveted shield, Lee finished 2nd with £40 and Luke received £25 for finishing third.

The challenge for next year is for each captain to recruit a new player so that it spreads across the Institute. It is hoped to have a section of the new Paterson Intranet - PICRboo (Peek-a-boo) devoted to fantasy football so that the weekly league table can be accessed by everyone.