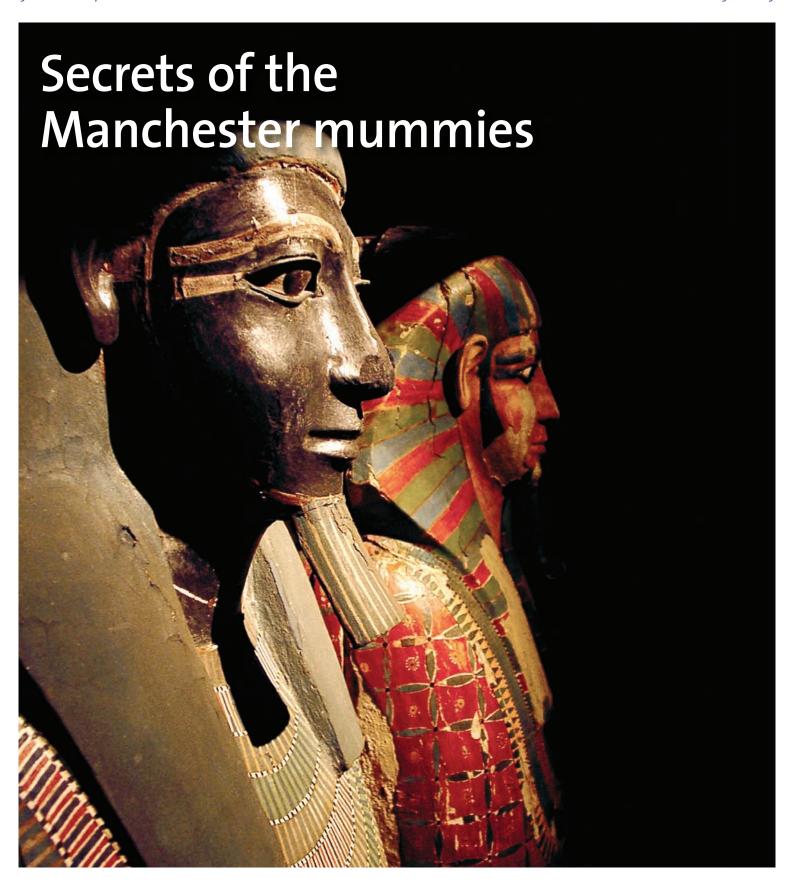


The University of Manchester

# Unilife

3 December 2007

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## Letter from the President



I have just been writing my Report to the Board of Governors, this time for the meeting on 10 December. I will be using this opportunity to express my considerable gratitude to colleagues right across the University community for the way in which they have coped with what has been a very demanding year.

Along with all my senior colleagues, I am deeply grateful to all the many colleagues who have not just kept the University going, but who have kept it on track strategically throughout 2007.

As a result of the decisive actions taken in recent months, the longer term picture for the University is bright. We always knew that 2007-08 would be the time when we had to tackle both the long-postponed structural deficit arising from the 2004 merger, and the decision - bold but thoroughly sensible - to go further into deficit to fund an ambitious RAE build-up.

The good news is that the hard decisions have already been taken. The ERVS Scheme will not extend into 2008, nor will there be any follow-up scheme for the foreseeable future. Business critical positions are being filled on a timely basis. The operating deficit is under control, and by the second half of 2008 we will have brought the operational "running rate" of the University (the relationship between recurrent income and recurrent expenditure) into balance, paving the way for surpluses that will enable us to continue to invest in the future.

In terms of the long term strategic agenda, we should all be pleased with the positives that have come out of the first three years of the new University of Manchester.

By the middle of next year, we will have completed – and fully funded – the first two phases of a capital programme designed to provide the University with state of the art facilities by 2015.

This represents a sustained programme of investment in modern facilities for staff and students, present and future.

However our RAE Submission is evaluated during 2008, the process itself has been a triumph of commitment and hard work all over the University, linking researchers, research managers, librarians, IT experts and administrators in a superbly coordinated effort.

The total audited research expenditure of the University has risen from £269m in 2004 to £398m at the end of the financial year 2006-07 and many of the new colleagues who have joined us since 2004 are researchers or research support staff funded by Research Councils. Has any other university in the UK grown so prodigiously over the same period?

These successes are matters of fact. We should not be afraid of celebrating them.

And we should celebrate them as achievements of the whole University community, academic and non academic staff alike. For the progress of a university is never a "command performance"; it is nothing if not a collegial achievement.

With gratitude to and pride in all my Manchester colleagues – and with very great confidence in the future - I therefore wish you all a happy and well-earned Christmas break and a splendid 2008.

Elan Gilbert

Professor Alan Gilbert President and Vice-Chancellor

# The untold secret of Manchester's Egyptian mummies

The 'Two Brothers' – Manchester's answer to Tutankhamen – are the subject of a new book by University Egyptologist Professor Rosalie David.

The pair of 4,000-year-old Egyptian mummies on display at The Manchester Museum were discovered in 1907 by a team led by the great Egyptologist Flinders Petrie.

Petrie uncovered a small tomb hidden high in the cliffs above the Egyptian village of Rifeh. The undecorated rock-cut chamber contained the undisturbed burials of two men. Although modest in size, the tomb was remarkable both for the quality of its funeral equipment and for the enduring mystery of its occupants, Khnum-Nakht and Nakht-Ankh, who soon became known as the 'Two Brothers'

In 1908, the mummies were unwrapped at The University of Manchester and

examined in one of the first scientific studies of bodies from ancient Egypt. In recent years the remains of the 'Two Brothers' have been re-examined using modern analytical techniques pioneered by the KNH Centre for Biomedical Egyptology in the Faculty of Life Sciences and more of the secrets hidden within their ancient bodies have been revealed.

"Modern scientific techniques have been used to diagnose the presence of some diseases in the mummies, including parasitic infestations, sand pneumoconiosis, pleurisy, heart disease and dental conditions," said Professor David OBF

"We have also used DNA analysis to try to determine whether or not the two men really were brothers.

"The book tells the story of the 'Two Brothers', describing the discovery of their intact tomb – one of the finest non-royal burials



of that period ever discovered, the arrival of the complete tomb group in Manchester, and the initial groundbreaking palaeopathological studies on the mummies.

"It traces continuing research at Manchester, showing how the rare opportunity to combine archaeology, inscriptions and biomedical studies can reveal new information about the lives and beliefs of two ordinary, yet remarkable, individuals."

Professor David's book - The Two Brothers: Death and the Afterlife in Middle Kingdom Egypt – is published by Rutherford Press and is available from The Manchester Museum Shop, Oxford Road, priced £18.00.

The 'Two Brothers' along with the complete contents of their tomb are on permanent display in the ancient Egypt gallery at The Manchester Museum.



www.manchester.ac.uk/museum

# Aerospace research institute takes off



The University has launched a major new Aerospace Research Institute (UMARI) to tackle the many challenges facing the growing aviation industry.

The Institute – which is aiming to become the leading aerospace research facility in the world – is set to play a crucial role in the

development of quieter, more efficient and more durable aircraft.

Its interdisciplinary approach will also see key issues such as environmental, health and economic impacts addressed and considered.

UMARI offers industrial access to world-class research and facilities, plus the expertise of 120 academic staff members in 12 industrially themed research areas, which map capability directly onto the National Aerospace Strategy (NATS).

It also boasts the second largest number of Engineering and Physical Science Research Council-funded (EPSRC) research projects for the aerospace and defence sector.

The interdisciplinary approach adopted by UMARI brings together aero engineers, materials scientists, electrical and mechanical engineers, mathematicians, electronics and computing experts, manufacturing specialists and environmental scientists.

The facility will be invaluable to investigations looking into structures of organic materials, measuring and predicting seismic activity, or revealing buried fossils. Another area the new Institute will focus on is the use of lightweight composite materials.

The official launch of UMARI was attended by Science and Innovation Minister Ian Pearson (pictured right), and senior figures from companies such as Airbus, BAE Systems, Rolls-Royce and Rapiscan.

lan said: "Aerospace is one of the UK's most successful business sectors and Manchester is one of our leading universities. I am therefore delighted to see the two coming together with the creation of UMARI, which will help maintain the UK's position as a world leader in aerospace research."

Director of UMARI, Professor Phil Withers, said: "This new institute puts The University of Manchester at the top table of university aerospace research in Britain.

"We are now better equipped than ever to play a lead role in working with UK companies to maintain and enhance their position as major players in the full gamut of aviation-related fields."



#### In brief

#### Solicitor General's Visit

One of the Government's most senior law officers visited the University's Legal Advice Centre last month

Solicitor General Vera Baird QC MP made the visit as part of National Pro Bono Week which promotes free work carried out by legal professionals. After dropping in on the advice centre she went on to the University to meet students and staff.

The event was organised jointly by the probono charity LawWorks Northwest, the Law Society, the Northern Bar Circuit and the University's School of Law.

At the centre, law students under the supervision of legal practitioners give free legal advice to the public. It is based at University Precinct on Oxford Road.

Solicitor General Vera Baird said: "Pro bono is an important tool in the fight to better the lives of the people lawyers represent, and the University's Legal Advice Centre is an excellent example of pro bono in action.

"I congratulate all the students and staff who are volunteering their time to meet unmet legal need, in partnership with other local professionals, and in doing so make a valuable contribution to the local community".

#### **Elgar Prize**

The Elgar Society recently chose the University of Manchester to award an Elgar Prize to one of its students to mark the 150th anniversary of Elgar's birth. The competition required composers to write pieces for Psappha, Music's Contemporary Ensemble in Association.

A concert featuring all the entrants took place in the Cosmo Rodewald Concert Hall in the Martin Harris Centre attended by a large and enthusiastic audience. The winner was Chris Clark, who is currently studying for a MusM in Composition. Professor Grange, Head of Composition, said "we were delighted to be associated with such a prestigious award".

#### **Chemistry common room**

A refurbished common room for postgraduate students and other research workers has opened in The School of Chemistry.

The refurbishment was made possible thanks to a £10,000 donation from Degussa, which is already supporting an annual prize for the best undergraduate research project in the School.



## **United Faces of Manchester**

As part of the first-ever Manchester Science Festival (also see page 18), Nowgen, a centre for genetics in healthcare, ran the Wellcome-funded 'Faces of Manchester' project to stimulate public interest in genetics, medicine and identity. The project comprised a short film an art exhibition, and a series of free public events which focussed on the human face.

The project film and artwork were produced by specialist computer vision technology company, Genemation, from 300 photographs of the people of Manchester. The film, shown on the giant BBC Big Screen in Exchange Square and in the Arndale Centre, celebrates Manchester's diverse community with each face morphing gradually into the next.

All 300 photographs were also merged together to reveal Manchester's average male and female faces, alongside average faces of sub-groups such as United and City supporters. The exhibition was showcased at The Museum of Science and Industry (pictured) and at The Nowgen Centre, and will be displayed in Manchester hospitals throughout 2008.

Over 400 members of the public attended the free events throughout the week. BBC Radio Four's Material World presenter, Quentin Cooper, chaired a lively debate about the genetic, social and psychological factors that influence addiction. Speakers from this event and from the five lunchtime lectures at Nowgen were invited to participate in The Material World, which was effectively given over to Nowgen's Science Festival activities on 25 October.

The 'Faces of Manchester' film and artwork can be viewed online at:



#### www.genemation.com/fom.cfm

## **Best of British**

Three academics from The University of Manchester have been nominated as Great Britons.

Morgan Stanley Great Britons is an annual awards programme that recognises and celebrates outstanding British achievement over the past year.

Palaeontologist Dr Phil Manning and particle physicist Dr Brian Cox have been nominated in the science and innovation category, while Dr Philip Martin, from the School of Chemical Engineering & Analytical Science has been put forward in the environment category.

Members of the public have been encouraged to nominate their Morgan Stanley Great Britons 2007 through the website below.

Shortlist Judging Panels, who are experts in their field, will select a shortlist prior to the Final Judging Panel selecting the overall winners of each category.

The winners will be announced at a prestigious awards ceremony held in central London in January.



Dr Phil Manning



Dr Brian Cox



Dr Philip Martin





# Hi tech wizardry breaks new ground for music

A high tech studio which uses computer wizardry to create new forms of music and sounds was launched at The University of Manchester last month.

The £2.25 Million Novars Research Centre will also bring composers and traditional musicians into contact with the cutting edge technology.

Some of the world's leading exponents of 'electroacoustic' music, who are based at the University, will be able to access the £150,000 worth of equipment at the electroacoustic music studios within the centre.

A 'room-within-room' design of concrete blocks suspended on hundreds of rubber cylinders will create perfect acoustic isolation for the composers and musicians.

That and other innovations will ensure they get the most out of the 24 channel surround equipment - which works like a huge version of a home cinema.

The building was officially launched with a concert featuring compositions by the electroacoustic music pioneers Francis Dhomont and Gerald Bennett.



There were also contributions from John Casken who is Professor of Music at the University and Dr David Berezan, also from the University, who represents the new generation of composers.

It was followed by a weekend of concerts. Internationally acclaimed clarinettist Esther Lamneck and flautist Elizabeth McNutt from the US performed five new works written for the launch.

Director of the studios and the Mantis festival, Dr Berezan said: "The Centre was named Novars to celebrate the seminal electroacoustic work by Francis Dhomont.

"In Dhomont's own words: it's a reversed version of Ars Nova -New Art, New Science. We are grateful for his permission to use his title.

"The centre uses technology to explore the sounds that we hear in the everyday world.

"Most electro-acoustic compositions make use of sounds not available to, say, he traditional orchestra, often using pre-recorded sounds from nature or from the studio that are then further transformed and manipulated by the composer."

# Beacon will build bridges

People from Manchester and Salford will be given the chance to become more actively involved in the important work of the University, thanks to a new £9.2 million initiative.

Beacons for Public Engagement is funded by the UK higher education funding councils and Research Councils UK (RCUK) and supported by the Wellcome Trust.

It is the biggest initiative ever launched to support public engagement throughout the UK and brings together a number of different funders with the common goal of achieving a more joined up and embedded approach to public engagement.

A total of six beacons are to be set up in Manchester, Newcastle, Norwich, London, Cardiff and Edinburgh.

The Manchester and Salford centre is a collaboration between The University of Manchester, Manchester Metropolitan University, The University of Salford, the Museum of Science and Industry and Manchester: Knowledge Capital (M:KC).

The Manchester Beacon will be at the forefront of efforts to bring about a substantial change in the culture of academic institutions, encouraging and assisting staff and students to enthusiastically reach out, listen to and engage with the public.

The beacon will facilitate more researchers and academics to engage with the public, and will recognise, reward and support those individuals and departments who make the effort to break down old perceptions of universities being elitist ivory towers.

Professor Dame Nancy Rothwell, Vice-President for Research at The University of Manchester, said: "Some excellent public engagement work already goes on at our local universities, but this new initiative will allow us to integrate ourselves into local communities and discover what people really want to know about our work.

"We want to closely involve the public in our work and give those with no or little previous engagement with universities a chance to find out more and closely interact with our academics

"This is a chance for us to learn from people across the Manchester area, to build bridges, make universities integral to the wider community and seek opportunities to make an impact through engagement."



#### In brief

# **Events at the Centre for New Writing**

Poets Robert Crawford and Peter Sansom took part in another lively Literature Live event on 12 November, reading both selections from their collected works and new poems before participating in a Q&A session with the audience.

The Centre's events are proving extremely popular, and its next Martin Amis Public Event, Literature and Terrorism on 3 December, has sold out; but on 10 December writer and journalist Geoff Dyer will appear at its next Literature Live event. Dyer's books include *But Beautiful*, which won the Somerset Maugham Award and was proclaimed "the best book ever written about jazz" by Keith Jarrett, and the 2003 memoir *Yoga For People Who Can't Be Bothered To Do It*, which documents his search for 'peak experiences' over 20 years of travelling.

The event will take place at the Martin Harris Centre at 6.30pm, and everyone is welcome. Ticket prices include a complimentary drink, and discounts at the Blackwell bookstall on the night. For further info and booking details please visit



## www.manchester.ac.uk/arts/martinharriscentre

#### **New Director for Institute**

Kieran Walshe, Professor of Health Policy and Management at Manchester Business School will take up the post of Director of the Institute of Health Sciences (IHS) from February 2009.

Kieran will take up this new role after completing a year long sabbatical. In the interim, Professor Bonnie Sibbald (past Director IHS 2000-2006) will assume the Director's post. Kieran has been a member of the IHS board since 2002, and is also the research director of the National Institute for Health Research service delivery and organisation (SDO) research programme. His own research is centred on performance, quality and governance in healthcare organisations and systems.

# Careers fairs meet demands of students and employers

The University's programme of career fairs for 2007/08 has started off on a positive note with the success of its first two fairs, the Student-Part-Time Jobs Fair and the Ethnic Diversity Fair.

Carrying on from the popularity of last year's inaugural event, the Part-Time Jobs Fair attracted over 3,000 University students, keeping the 27 exhibiting companies busy all day and delighted with the turnout.

The Ethnic Diversity Fair attracted 42 exhibitors keen to encourage a diverse workforce and an estimated 1,000 students. Caroline Hutchinson, who organised the Fair, said: "We received excellent feedback from both students and employers who attended the Fair. Encouraging a diverse workforce is an important part of the agenda of many graduate recruiters, and events such as this Fair continue to be welcomed by employers and students alike."



Garry Herbert with the Manchester and Salford rowing team captains

## **Boat race launched**

Garry Herbert, Olympic Gold Medallist from the 1992 Barcelona Games has officially launched next year's Two Cities Boat Race. The 2008 event will take place at Salford Quays on Saturday, 10 May, the 37th year of the Race.

This annual event is a highly competitive boat race between teams from the Universities of Manchester and Salford, which has also raised thousands of pounds for charity over the years.

During his visit to Manchester and Salford, Garry accepted a cheque from the universities on behalf of last year's nominated charity SPARKS, the children's medical research charity.

The Two Cities Boat Race has a long and proud history; it was started back in February 1972

when more than 400 people gathered on city centre bridges as the River Irwell in Manchester city centre was used for Boat Racing for the first time since 1883.

In the early nineties, the event was moved to Salford Quays and the distances were shortened to create a series of sprints deemed to be more exciting for spectators.



#### www.twocitiesboatrace.co.uk

# **Poetry and Motion**

The Poet Laureate, Andrew Motion, gave the first Rylands Poetry Reading in the Rylands Library since its reopening.

The event was open to all and took place as part of the Manchester Literature Festival. Prior to the reading, Motion delivered a "masterclass" to the graduate students from the Centre for New Writing on the topic of biography. One of the aims of the masterclass was to insinuate archival resources into the learning process which also adopted a practice led research model.



#### Research



# Fly consortium uncovers swarm of novel findings

An international research consortium of scientists, including a team from Manchester, have compared the genome sequences of 12 closely related fruit fly species, 10 of which were sequenced for the first time.

The research, published in *Nature*, describes how evolution has shaped the genomes of these important model organisms for genetic research and identifies thousands of novel genes and other functional elements in insect genomes.

The lowly fruit fly is one of the most important model organisms in genetic research. In studies dating back nearly a century, researchers used fruit flies to discover the basic rules of inheritance and to study how a single cell, the fertilized egg, develops into a whole animal. Because fruit flies are easy to work with in laboratory settings, they continue to be used as a model to study fundamental biological processes that occur in many living things, including humans.

Although fruit flies have a genome that is 25 times smaller than the human genome, many of the flies' genes correspond to those in humans and control the same biological functions. In recent years, fruit fly research has led to discoveries related to the influence of genes on diseases, animal development,

population genetics, cell biology, neurobiology, behaviour, physiology and evolution.

Co-author Dr Casey Bergman, in the Faculty of Life Sciences, said: "One of the great opportunities of now having multiple closely related Drosophila genomes is to finally uncover the mechanisms of genome evolution that lead to the diversity of animal form and behaviour.

"Previous efforts that sequenced distantly related genomes allowed us glimpses into the product of evolution, but the evolutionary time between them was too vast to learn much about the evolutionary process."

Scientists observed that different regions of the fruit fly genomes, including protein-coding genes and gene families, are evolving at different rates. For example, genes involved in taste and smell, detoxification and metabolism, sex and reproduction, and immunity and defence appear to be the most rapidly evolving in the fruit fly genomes.

The findings suggest that these particular proteincoding genes likely evolve in the fruit fly genome as a result of adaptation to changing environments and sexual selection.

#### In brief

## Research symposium creates buzz of excitement

The third annual Research Symposium celebrated the research achievements of the Faculty of Life Sciences. The full-day event saw short-listed postgraduate and postdoctoral researchers give presentations of their work to approximately 800 of their peers, academics and support staff and invited quests.

The overall winners were Rebecca Richardson (postgraduate prize) and Nasreen Akhtar (postdoctoral prize). Both won a laptop computer, donated by UMIP and AstraZeneca. The final presentation of the day was given by Professor Andrew Sharrocks, the Faculty's 'Researcher of the Year'.

An exhibition of 99 posters by postgraduate students highlighted the great breadth of research ongoing in the Faculty. The prize for best poster (£100) was awarded to James Keeble.

Accompanying these were 21 trade and several Faculty exhibition stands.

Of the vibrant selection of research images shortlisted for the Carl Zeiss Science-based Art competition, David Brown and Simon Turner's was chosen by a Faculty poll to win a digital camera.

While for the postgraduate Lay Writing Summary competition, Amanda Kelly's piece entitled 'Geckos and mussels stick together' was selected for the £750 prize sponsored by the Wellcome Trust.

Attending the symposium to present the prizes, President and Vice-Chancellor, Professor Alan Gilbert, said: "On all the measures of success, this is a really exciting place to be – in research, in the world, not just in Manchester or the UK."

## Satellite images to aid university research

A satellite designed for the British government to take high resolution images of the Earth's surface is being made freely available for researchers.

Images captured by the £14 million TopSat satellite will be sent out on request by experts at The University of Manchester's national data centre, Mimas.

Last month, Mimas reached the unique agreement with Infoterra - a member of the TopSat Consortium - who contacted the University to suggest the collaboration.

The demonstration satellite, built by a QinetiQ-led consortium which also includes Surrey Satellite Technology Ltd and the Rutherford Appleton Laboratory, was funded by the Ministry of Defence and British National Space Centre.

Its images will be available for researchers during the remaining period of its operation.

## World's first major genome screen for osteoarthritis

University of Manchester scientists are part of the world's first search of the human genome for genetic risk factors for osteoarthritis.

The Arthritis Research Campaign (arc) plans to run a definitive genome-wide association study of osteoarthritis susceptibility called arcOGEN; the largest study of its kind ever undertaken. The study will involve screening the DNA of 8,000 people suffering from osteoarthritis of the hip and knee and 6,000 healthy people to compare the differences.

Professor Bill Ollier, Director of the Centre for Integrated Genomic Medical Research (CIGMR) and Dr Gillian Wallis from the Wellcome Trust Centre for Cell-Matrix Research are among several genetic experts who are part of the UK-wide consortium.

The aim of the arcOGEN study is to identify the genetic changes, known as polymorphisms, which increase the risk of people developing osteoarthritis. The charity expects that this could lead to several potential breakthroughs such as genetic tests becoming available to predict who is likely to develop osteoarthritis, particularly at a young age, and how severely. Ultimately it could lead to new drugs that could slow down disease progression and even prevent osteoarthritis occurring.

The two year study will be funded by a grant of £2.2m - the largest single grant ever awarded by the medical research charity.

Blood samples from all over the UK will be sent to the laboratories of CIGMR where DNA will be prepared for large-scale genotyping studies. CIGMR has automated processes for conducting large-scale population studies and already houses large collections of DNA for other disease studies.

Professor Ollier said: "This is a major study to help identify the underlying genetic factors explaining osteoarthritis and Manchester is pleased to be involved in such a significant project. The UK is leading the field in the area of genetic studies of common diseases such as arthritis, and this arc-funded study will take forward our understanding of why some people develop osteoarthritis."

Osteoarthritis (OA) is the most common type of arthritis, affecting more than two million older people in the UK, causing pain and stiffness as the cartilage at the ends of bones wears away.

# Manchester researchers identify gene behind rheumatoid arthritis

University of Manchester researchers have identified a genetic variant in a region on chromosome 6 that is associated with rheumatoid arthritis (RA), the most common inflammatory arthritis affecting 387,000 people in the UK.

Professor Jane Worthington and her team at the Arthritis Research Campaign (arc) Epidemiology Unit investigated nine genetic regions identified earlier this year as potentially harbouring DNA variants determining susceptibility to rheumatoid arthritis. Association to one of the variants on chromosome 6 was unequivocally confirmed and reported in *Nature Genetics* last month (November 2007).

Rheumatoid arthritis, which affects up to 1% of the adult population, is a chronic inflammatory disease that can affect nearly all joints in the body, particularly the hands and feet. Complications such as lung disease can occur.

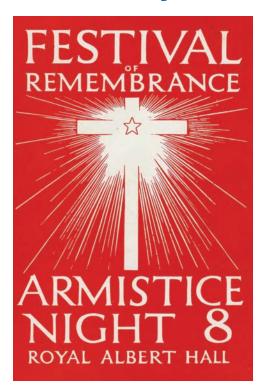
In addition, patients with RA are more likely to die from cardiovascular disease and some cancers. Some people respond well to treatment, but most suffer a lifetime of disability.

Professor Worthington and her team made their findings as part of the largest ever study of the genetics behind common diseases, the £9m Wellcome Trust Case Control Consortium (WTCCC). The WTCCC study has given a major boost to the understanding of the genetics of seven common diseases, including RA.

Professor Worthington said: "This is a very exciting result; the validation of this association takes us one step closer to understanding the genetic risk factors behind what is a debilitating disease for sufferers and an expensive disease for the NHS.

"We are indebted to the Arthritis Research Campaign (arc) and to our colleagues across the UK for helping us generate such a robust cohort."

# World Requiem was 'unofficially banned'



New research has revealed a conspiracy against maverick composer John Foulds - famed for directing the Albert Hall's Festival of Remembrance between 1923 and 1926.

James Mansell from The University of Manchester was given access to BBC archives and the British Library to research events surrounding what he regards as the unofficial banning of the World Requiem.

The requiem was performed at the festival set up by Manchester-born Foulds and his wife Maud MacCarthy, who donated all proceeds to the poppy appeal.

Though now regarded as a masterpiece, the piece with full orchestra and a 1000-strong choir of 'untrained singers' was branded as boring by the then Director of Music for the BBC - Sir Adrian Boult.

The School of Arts, Histories and Cultures researcher has been piecing together evidence to find out who took the final decision to silence Foulds's masterwork in 1926.

James said: "I don't yet know who took the final decision to axe this great work - though it could possibly have been Sir Adrian Boult, the BBC's then Director of Music. Foulds certainly felt persecuted by the BBC.

- "Other candidates included Field marshal Earl Haig who ran the poppy appeal for the British legion and editor of the Express Newspaper Ralph Blumenfeld.
- "But the reasons for its banning are clear: Foulds was an international socialist, whose minimalist style of music went against the more traditionalist approach of luminaries such Edward Elgar and Vaughan Williams who disliked him.
- "The BBC pigeonholed him as a composer of popular music even though Foulds saw himself as a serious composer.
- "But in my view, Foulds was a pioneering modernist whose interest in Indian culture led to him introducing the quarter tone to his work. It had never been used before in modern Western music."





# St Bernard study supports Darwin's theory

Biologists studying the skulls of St Bernard dogs say changes to the shape of the breed's head over the years can only be explained through evolution.

The team, led by Dr Chris Klingenberg in the Faculty of Life Sciences, examined the skulls of 47 St Bernards spanning 120 years, from modern examples to those of dogs dating back to the time when the breed standard was first defined

"We discovered that features stipulated in the breed standard of the St Bernard became more exaggerated over time as breeders selected dogs that had the desired physical attributes," said Dr Klingenberg, whose research was funded by the Leverhulme Trust.

"In effect they have applied selection to move the

evolutionary process a considerable way forward, providing a unique opportunity to observe sustained evolutionary change under known selective pressures."

The findings, published in the *Proceedings of the Royal Society: Biological Sciences*, are based on studies of St Bernard skulls donated by Swiss breeders to the Natural History Museum in Berne.

Compared to their ancestors, modern St Bernards have broader skulls, while the angle between the nose and the forehead is steeper in modern dogs and they have also developed a more pronounced ridge above the eyes.

"These changes are exactly in those features described as desirable in the breed standards. They are clearly not due to other factors such as general growth and they provide the animal with no physical advantage, so we can be confident that they have evolved purely through the selective considerations of breeders.

"This research once again demonstrates how selection – whether natural or, in this case, artificially influenced by man – is the fundamental driving force behind the evolution of life on the planet."

## Green house effect

The University has won a prestigious global award for innovation at the Institution of Engineering and Technology's annual Innovation in Engineering Awards.

Working in conjunction with house builder Barratt Developments, the University scooped the 'Built Environment' award for a research project around Barratt's EcoSmart Show village in Chorley.

A University team – led by Dr Tony Sung from the School of Mechanical, Aerospace and Civil Engineering (MACE) – and Barratt Developments, designed and built seven contemporary homes with the latest low carbon and renewable energy technologies in order to gather quality research data to evaluate the energy efficiency and performance of the technology.

The seven test homes, which include solar panels and wind turbines, are currently in the final phase of an 18-month data gathering exercise.

On completion of the data collection, Dr Sung and his team will produce a set of design guidance for house builders, building control bodies and planning authorities which will inform and promote the adoption of vital renewable and energy saving technologies in the future.

Robin McGill, CEO of the IET said: "These awards recognise the vital role that innovation in engineering plays in the global economy."



# Dental researchers to probe use of new x-ray



Researchers at the School of Dentistry are investigating the use of a new X-ray technology for dental imaging, Cone Beam Computed Tomography (CBCT).

CBCT provides images in three dimensions with a high level of detail, making it a very attractive method for many dental applications. It is, however, associated with a greater radiation dose and risk than is the case

with traditional dental radiographic methods. Despite this, in most EU states, dentists can purchase and use CBCT without any additional training.

Professor of Oral and Maxillofacial Imaging Keith Horner (pictured) and his team will investigate the use of CBCT, having been awarded a prestigious €2.45 million grant under the Seventh Framework Programme of the European Atomic Energy Community (Euratom) for nuclear research and training activities.

This grant is one of a number of additional Seventh Framework grants coming into the University. The EU Funding and Development Team have said that this is the first within this Framework that the University will be coordinating.

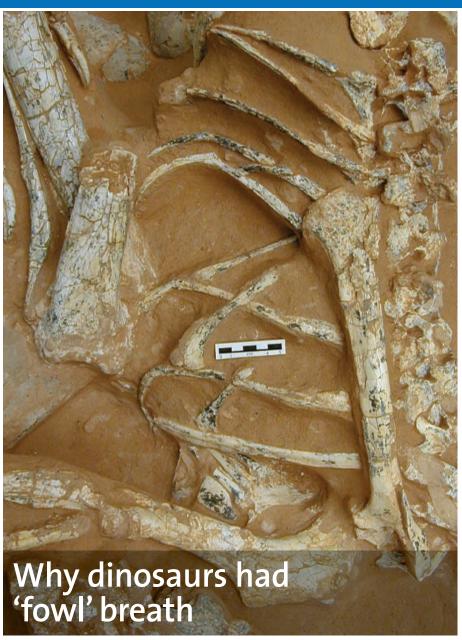
Professor Horner explained: "Unlike most 'medical' radiology, the bulk of dental x-ray imaging is performed in primary care by dentists with no postgraduate qualification or special expertise in radiology.

Approximately one third of medical X-ray exposures in European countries are performed by dentists. In most EU states, dentists can purchase and use CBCT without any additional training.

"There is evidence in the literature of inappropriate and excessive use of conventional X-ray techniques in dentistry. Similarly, there is evidence of poor image quality because of insufficient attention to quality assurance methods and inadequate training of users. The European Commission don't want to see the same problems developing with CBCT"

He added: "We are thrilled to have won this grant and to be the first school within the University to be coordinating a framework grant."

Dr Nick Grey, Dean of the School of Dentistry said: "This is a huge boost to the school and shows that the expertise of our staff puts us at the forefront of the competitive European research market."



Scientists have discovered how dinosaurs used to breathe in what provides clues to how they evolved and how they might have lived.

The University of Manchester team, led by Dr Jonathan Codd and Dr Phil Manning, has found that theropod dinosaurs like the Velociraptor had similar respiratory systems to present-day diving birds, such as marine birds and wildfowl

The findings, published in the *Proceedings of the Royal Society B: Biological Sciences*, present for the first time an explanation of how these dinosaurs may have breathed.

"A number of studies have shown that dinosaurs were the direct ancestors of birds and have identified a suite of avian characteristics in theropods," said Dr Codd, who is based in the Faculty of Life Sciences.

"Our findings support this view and show that the similarities also extend to breathing structures and that these dinosaurs possessed everything they needed to breathe using an avian-like air-sac respiratory system."

Birds, and in particular diving birds, have one of the most efficient respiratory systems of all vertebrates which they need in order to supply their bodies with enough oxygen to sustain the high levels of energy required for flight.

Palaeontologist and co-author Dr Manning, in the School of Earth, Atmospheric and Environmental Sciences, studied the fossilised remains of maniraptoran dinosaurs and found that breathing structures, known as uncinate processes, were also present in the dinosaurs.

Dr Codd said: "Our work on modern birds has shown that the way these animals breathe is more complex than originally thought. The uncinate processes are small bones that act as levers to move the ribs and sternum during breathing. Interestingly, these structures are different lengths in different birds – they are shortest in running birds, intermediate in flying birds and longest in diving birds.

"The dinosaurs we studied from the fossil record had long uncinate processes similar in structure to those of diving birds. This suggests both dinosaurs and diving birds need longer lever arms to help them breathe.

"Finding these structures in modern birds and their extinct dinosaur ancestors suggests that these running dinosaurs had an efficient respiratory system and supports the theory that they were highly active animals that could run relatively quickly when pursuing their prey."

## **Knowledge and Technology Transfer**



# Partnership to extend shelf-life

The University of Manchester and Syngenta have launched University Innovation Centre (UIC) will develop sensor sciences for applications in agriculture and the food supply chain.

One of the first research projects in the Syngenta Sensors UIC portfolio aims to develop devices that allow retailers to set more scientific and meaningful best before dates by accurately predicting shelf-life in fruit and vegetables.

The Centre has already secured more than £500k of funding from the UK government's Technology Strategy Board to develop next generation sensor technology for supply chain monitoring.

The new sensors, based on radio frequency identification (RFID) tags, will record stress factors throughout the fresh produce supply chain process and wirelessly transmit these forward.

Integrating this data with knowledge of the produce biology and farming practices the whole chain for fresh produce supply may be better understood and the possibility of wastage minimised.

Dr Bruce Grieve, Director of the UIC, said: "The idea is simple but previously the need

to have an internal power supply and means of storing and transmitting the data made the sensors too expensive and cumbersome to be viable".

"Our research aims to develop smaller simplified sensors that will operate rather like Oyster cards on the London Underground. They will use a battery-free method to store data and then receive pulses of energy from transmitters that will provide just enough power to transmit their data in return."

Chemists, engineers and physicists will work together to develop low-cost technology - and potentially bring the individual sensor cost down to less than \$0.10 instead of the current price of between \$10 and \$50.

Syngenta have a long history of collaboration with Universities worldwide. The formation of the Sensors UIC represents a new model for strategic partnership between the University and Syngenta, covered by a formal long-term agreement.

## MSP tenant

Proteintech, a Chicago-based company that started its European operation in the Manchester International Innovation Centre (MIIC) on Manchester Science Park (msp), is graduating to msp office space in Kilburn House to become a "full" msp tenant.

Companies in the MIIC are all from overseas; the MIIC provides them with a 'soft landing' to establish their business in the UK, or to assess the viability of expanding into the UK and, for some, using Manchester as a base for their European operations.

The companies are supported with assistance from MIDAS (Manchester's inward investment agency) and from msp's own business support programme. Proteintech's business here is

developing very successfully and they receive orders from universities throughout the UK; Manchester Science Park, with its proximity to the University, has obviously been an ideal start for this stage of the company's development.

Proteintech's mission is to develop and manufacture a wide spectrum of antibodies against all human proteins known as the Human Antibody Projects, thus providing the most effective tools for the identification and quantization of the vast number of known or unknown disease markers. The company's principal R&D activity is in Chicago and in Wuhan (which is twinned with Manchester), but they will be carrying out R&D here in Manchester within the next three years to further the diagnostic applications of those antibodies they have developed



# Innovation awards

NHS trusts across Greater Manchester have swept the board at the fifth TrusTECH North West innovation awards including a team led by Rachel Belk (pictured) a PhD student at the University and genetic counsellor specialising in deafness.

The awards recognise NHS employees and teams who have used innovative ideas, services and medical products to help improve the care that patients receive. Among the winning Trusts were Central Manchester and Manchester Children's University Hospitals NHS Trust, who were recognised in the 'Software or Systems Category' of the regional awards for a novel application of voice recognition software that would improve care for deaf patients.

The voice recognition software that was pioneered by Rachel and the team at the MRI and Hope Hospital, will significantly improve care for patients with profound acquired deafness. The software is used to record and transcribe a consultant's speech onto a screen so that the patient can fully understand and be involved in what is being said to them. Rachel Belk said: "To enable a patient to make an informed decision they need to be able to discuss detailed information with healthcare professionals."

Rachel was also short listed for the national awards event run by the National Innovation Centre on Monday 3 December at the Wellcome Trust in London.

Dr Richard Deed, TrusTECH Innovation Unit Manager, said: "This year's awards have seen some excellent examples of innovation. The winning NHS trusts from across Manchester have shown that their innovations can improve the lives of patients and they should be congratulated for their excellent achievements. I am sure these innovations will continue to provide many benefits to patients for years to come."

Each Trust received £1000 to spend on ensuring their innovative entries improve the care that patients receive.

# Flexible . WORKING

Last December the University held its first Equality and Diversity Conference. The conference established a number of groups which were tasked with exploring various aspects of Equality and Diversity. One of the groups identified a need to promote flexible working within the University and highlight existing good practice. As a result this feature outlines the experiences of four members of staff with different flexible working arrangements.

The term 'flexible working' has no hard and fast definition but essentially it means any working pattern that is different from the standard one operated by an employer.

Requesting flexible working could mean any number of things such as changing the number of hours you work, the times you work between or asking to work form home for all or part of the week.

It could also mean being part of a job-share arrangement or a compressed week ie working the same number of hours over fewer days. But there are other arrangements.

The law as it currently stands states that the *right* to request flexible working is open to those with a child aged under six, a disabled child and those caring for an adult – subject to having been employed continuously by their employer for at least 26 weeks. New legislation announced in last month's Queen's Speech could extend this right to all parents with a child aged under 17.

Although all the case studies in this feature are mothers, flexible working is not restricted to women or those with childcare responsibilities and other employees' requests can be considered.

The University has already outlined its commitment to "progressive improvements in the equality of opportunity" and to aim to be an "exemplary employer" through the *Manchester 2015 Agenda*. During 2005-06 it implemented a number of initiatives including a report and recommendations

on ways to improve the University as a workplace for women and the instigation of a major project to identify priorities and develop policies in relation to equality and diversity.

Professor Aneez Esmail, Associate Vice-President for Equality and Diversity, said:" I think that it is really important that the University recognises the importance of life outside the working environment. The experience of flexible working that we have gained from those parts of the University which have adopted these policies is hugely encouraging and very positive.

"It shows that staff feel valued and respected and we know that working flexibly should not mean that you can't continue to participate fully in all aspects of University life. In my view a better work life balance can allow you to be more productive without sacrificing the importance of your life outside the University. It's one of the many initiatives that we are developing to support our staff because they are our most valuable resource."

There are a number of staff at The University of Manchester who work flexibly on a formal basis although it is different from many other types of organisation in that certain aspects of academia have traditionally permitted informal flexible working: holiday periods coincide roughly with children's school holidays, and there is usually wide scope for part-time working and working from home.

A survey carried out among 250 organisations by *The Guardian* earlier this year on their family policies, featured The University of Manchester as being the top employer in its sector for working parents.

The survey focused on the larger HEIs and their provision for maternity and paternity pay plus other benefits including provision for flexible working. In many areas The University of Manchester exceeded its legal requirements. See the link below for full details.



#### **Working Pattern**

As a full-time Senior Lecturer within Life Sciences and mother to four boys aged 4 to 12, juggling her responsibilities requires flexibility in all aspects of Dr Kathryn Else's life.

While her academic career as a parasite immunologist has always allowed a certain degree of flexibility, over the last year she has put this on a more formal footing when her eldest son started secondary school.

Her flexible working arrangements see her start work at 7.30am each day, while her husband, a Professor in the University's School of Computer Science is able to drop the children off at school. Come 2.30pm Kathryn leaves to collect them.

She says:" The decision to formally work flexibly came when our eldest started secondary school. There is no after—school care for children older than 11 and we didn't want him coming home to an empty house with a key".

Kathryn says that academia can be hard for working parents especially when the children are young and more prone to illness. It becomes very unpredictable whether you can even get in to work on any one day but the work will still be there when you are able to come in: you can't just hand your research or teaching onto someone else. She says: "I am lucky as I lead a large research group. I have a significant teaching load but have been able to keep my teaching sessions to the morning and everyone has bent over backwards to help me organise this. As I have become more senior working flexibly has actually got easier as I can conduct my research through my experienced post docs. When I was more junior I had just one post doc and spent a lot more time in the lab. If I was unable to get in to work the experiments couldn't always happen."

Kathryn says that personally she has found it difficult to attend overseas conferences with four young children at home, although it would have been useful to. She feels however that her publications and grant income are good and so her career has not been affected, although inevitably the pace of publications can slow during periods of maternity leave.

"For working parents being able to work flexibly is one of the most underrated perks of our job and it has got easier over the years with better financial support during maternity leave."

#### **Useful links:**

The Guardian Survey

Flexible Working Policy and Request Form

Family Friendly Policies www.staffnet.manchester.ac.uk/employment/staffbenefits/familyfriendly.







#### **Annualised Hours**

Bridget Fitzpatrick is Publications Editor within Design Studio of the Communications, Media and Public Relations Division of the Central Administration. She has been doing the job for three years and works annualised hours which allows her to take the whole of August off, so spending most of the summer holidays with her three boys aged six, eight, and 12.

Throughout the year she works part-time (60%) over four short days. Her contracted hours are 21 per week but to make up for the time taken off in August, she works 23 hours per week - a formal arrangement which she applied for through her line manager.

Her pay remains the same each month spread out over the whole year, as do her terms and conditions.

"It can be hard to come back after a whole month off but this way I can drop off and collect the boys from school and my annual leave means I can cover virtually all of the other school holidays as well."

The main responsibilities of Bridget's role are producing the undergraduate and postgraduate prospectuses and subject area brochures which means that she can generally predict her busier times of the year as dictated by the publications' production schedules and so plan ahead.

"I'd find it very difficult to do the job if I couldn't work in the way I do. It's questionable whether I would be able to do the job if I couldn't work flexibly. If I had to pay for holiday clubs or other childcare for three boys, financially it wouldn't be worth coming to work. I think the flexibility of the way the job works is one of the best things about it. It means I can do a demanding job which I enjoy, and still have plenty of time with my family."

#### Job Share

As Widening Participation Managers for the Faculty of Medical and Human Sciences, Dr Sue Bates and Sara Gonzalez applied jointly for the post of full-time Widening Participation Manager in 2004 as they knew each other before coming to the University.

Sue explains: "Neither of us wanted a full-time job so we offered ourselves as a package and applied for the job in the same envelope but had separate interviews."

Sue, who has two children at primary school, works 21 hours over three days while Sara who has three children including a one-year old, works four mornings totalling 16 hours.

Their role involves a mix of both projects around various outreach activities with local schools including a mentoring scheme and the more immediate day to day work as well as overseeing the Faculty's widening participation work generally. They don't split the work and either deals with whatever comes up, they have a generic email address and share a telephone number.

While the University has supported their working flexibly, they in turn have been able to be flexible to some degree with their work pattern and their hours. As Sara went on maternity leave to have her third child, Sue increased her hours, and Sara says: "If one of us has to attend an evening event then we will take the time off in lieu in the week."

Any changes to their hours are discussed with their line manager as it means a change to their contract, but they are able to choose their work patterns providing there is cover every day.

Sara said: "I think we feel as though we are pioneers and have been trailblazing job share within the Faculty. We have wanted to show that it can work for the benefit of other women or men who may want to work flexibly. We feel that we have been setting a precedent and it has worked out very well, we care about what we do and we work as a team."

#### Part-time

When Jessica Bowler returned to work last year after her maternity leave, being able to work part-time was crucial she says.

As Executive Assistant to the Dean in the Faculty of Life Sciences she was able to return on an 80% basis, achieving a work-life balance she feels happy with which allows her to spend time with her 21-month old son.

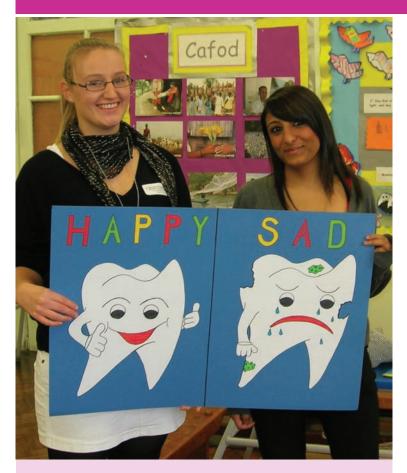
She says:"I wouldn't have been able to come back to this job if I hadn't been able to work part-time as I didn't want to put my son in nursery full-time, five days a week."

Now she works four days, with Wednesdays off, her core hours which she needs to be at work are generally 9-4pm, but some days she works longer hours when her husband is able to collect their son from nursery. Although she is contracted to do 80% of the full-time hours (28), her working pattern is left fairly flexible allowing her to make up her hours on an *ad hoc* basis.

Her job is a mix of day-to-day and projectdriven work, chiefly she is secretary to the Faculty Management Team, manages various aspects of research grants for the Dean and works with the Head of Faculty Administration on operational and strategic projects.

"I feel busier than I did before working full-time, there is no formal cover for me when I am not here but it has made me more organised as you have to plan further ahead knowing you are not going to be there every day."

## **Reaching Out**



# Dentists in the classroom

Dental students from The University of Manchester are taking their skills into the classroom as they visit schoolchildren across the City to highlight the importance of developing and maintaining good dental oral health.

Schoolchildren will be visited by teams of student dentists and Oral Health Sciences students who will work together to give the positive oral health messages about diet and tooth brushing by interacting with the children through a variety of games and activities that students have devised.

Clare Jones, Honorary Lecturer in Dental Public Health, who has coordinated the visits said: "The Dental School appreciates that it has a social responsibility to the wider community; visiting local schools provides an opportunity for students to reinforce promotion of healthy eating habits and positive dental health behaviour to children, some of whom may not receive regular dental care.

"Additionally, the visits will enable students to develop their communication skills and feel confident interacting with children in a non-clinical setting prior to their clinical placements. For many students, this will be the first time they have come into professional contact with young children and it will help to provide an insight into the children's perspective of dentistry."

The visits to the school children aged five-11 years have taken place each year and the students are joined by health promotion professionals from Manchester Primary Care Trust (PCT) who reinforce the messages to help the children understand more about the importance of good dental health.

Dr Nick Grey, Head of the Dental School said: "These visits are not only about the students learning but also about the children learning too. By talking to the students the children can learn about careers in dentistry and health promotion with the students acting as ambassadors for the profession. Who knows, we might one day have a future dental student studying with us who was inspired by one of these visits!"

# Children's University expands to Egypt and the environment

Youngsters curious about the world we live in can now explore the secrets of Ancient Egypt and find out more about energy and the environment with the launch of two new subject modules on the Children's University of Manchester website.

The new modules have been designed to fit in with the rest of the website, which aims to provide fun and stimulating online learning resources for children aged between seven and 11, based on research carried out by academics at The University of Manchester.

The Ancient Egypt module has been developed with expert input from Professor Rosalie David, Director of the KNH Centre for Biomedical Egyptology in the Faculty of Life Sciences. Children can explore important sites in Ancient Egypt, learn to write their name in hieroglyphs, find out about ancient Egyptian gods and discover to make a mummy with a step-by-step interactive which guides children through the embalming process.

They can also discover the Giza Pyramids with University student John Beech, and travel back in time with the interactive ancient Egyptian timeline. Professor David said: "It was good to be able to show young people how our research in the biosciences can be used to study and find out more about the lives of the ancient Egyptians, and to encourage them to explore the excellent Egyptology collection at the Manchester Museum."

Dr Ian Cotton and Teresa Chilton from the Faculty of Engineering and Physical Sciences led the development of the Energy and the Environment module. This gives children an interactive insight into the world of electricity, explaining how it is made from renewable and non-renewable energy sources and revealing the advantages and disadvantages of each. Children learn about global warming and are encouraged to consider ways that they can help the environment in their daily lives in the interactive house, and try to work out energy saving phrases before they run out of energy.

Dr Cotton said: "The module has been produced as part of a public engagement project with EPSRC, the Engineering and Physical Sciences Research Council, that is intended to stimulate the interest of the next generation of scientists and engineers. The importance of using energy responsibly is a key message that we have been promoting as part of this project. This new module will help children understand how electricity is produced, explains about greenhouse gases and teaches them ways of saving energy and we have been delighted to produce it for the Children's University.

For further information, contact the Children's University Team:







# High achievers

Students who enrolled on the Manchester Academic Enrichment Programme in the summer return to the University this week (8 December).

The programme, sponsored by the Goldman Sachs Foundation and the Sutton Trust, is an exciting initiative for high achieving Year 12 students whose parents have not been to university and are in non professional occupations.

The 97 students enrolled one of the following academic streams that was organized and delivered by one of the four faculties:

- Business, Management, Economics, Accounting and Finance
- Genetics and Biotechnology
- Modern Foreign Languages
- Psychology
- Science and Engineering.

The Widening Participation team has organised the first study day with a theme based on revision and time management skills. The students will be treated to a special guest appearance from local news reader, Gordon Burns,

from North West Tonight. Gordon will be delivering a workshop on how to present yourself. After the educational part of the day the students will be getting into the festive spirit with a buffet and Christmas karaoke in Christie's café.

Saskia Metcalf, Widening Participation Officer commented, "The students are very much looking forward to coming back to the University. We have an informative day planned for them followed by a festive celebration; it should be a lot of fun and help the students who are now in Year 13 plan for their final year."



# Community film space

A new space – The Contact Zone – has recently opened at The Manchester Museum. It will provide a dedicated area for people to explore museum objects and share the stories surrounding them. Facilitated 'round table' conversations will be recorded and made available on the Museum's website, opening up interpretations for all.

With the help of Renaissance in the Regions funding, the Museum has developed an award-winning process - 'Collective Conversations' - for working with a wide range of communities. Until very recently, the team had been working in an *ad hoc* manner, setting up and dismantling their equipment each time these conversations took place.

Curator of Community Engagement, Gurdeep Thiara said: "The Museum is committed to providing opportunities for people to tell stories that are not only woven into the fabric of real life, but challenge the traditional orthodoxies of the museum-as-authority. This area is intended to be an active, informal and relaxed space, in which to facilitate the collective conversations project".

With a busy schedule of 'conversations' planned for the year ahead, the Contact Zone will aid the Museum's development, building community collaboration into the future interpretation of its collection and exhibitions. Through its development, the Collective Conversations programme is already attracting interest from museums across Britain and Europe, with some looking to set up a similar facility.

# Manchester's backing the Blue Planet Live!

The University is to deliver an exciting educational programme based around the forthcoming UK tour of The Blue Planet Live! - one of the most breathtaking shows ever seen in the city.

The University has developed a unique partnership with World Class Service to deliver this new educational programme, based on the award-winning BBC documentary series.

Head of Widening Participation at the University, Julian Skyrme, said: "We are delighted to be teaming up with BBC Worldwide and composer George Fenton on these important events. Through a range of innovative activities and resources - both online and face-to-face - we plan to make exciting connections between The Blue Planet Live! and our world class research and teaching across the sciences and humanities, particularly in the marine environment and its ecology.

Through this partnership, we will be able to reach out, inform and inspire scholarly curiosity in the educational issues The Blue Planet Live! raises among huge numbers of school and college pupils."

The dramatic underwater world of the oceans is brought to life on some of the largest screens ever used in the UK. The show comes to Manchester



Central (formerly G-Mex) on 20 April, 2008, but can also be seen at Wembley, Cardiff, Nottingham and Birmingham.

These stunning sequences are synchronised with George Fenton's epic score and it will also be conducted by the five-time Oscar nominee himself. The music will be brought to life by two magnificent full scale orchestras; in Manchester, Nottingham and Birmingham by Manchester Camerata.

# What's On



#### Contact Theatre

Thu 13 Dec 7.30pm (Free)

#### Raw Jam

Thu 13 - Sat 15 Dec 7.30pm

#### Malibu

David Duchovny escapes his beloved disco, Malibu, in search of his fond new love. How much dinosaur can this girl be? Bringing you the hot gossip: Joseph and his sexy cyborg. New writing meets new theatre.

Thu 13 - Sat 15 Dec 8pm

#### The Cyac Xmas Show

Oxford Road, Manchester Tickets/Info 0161 274 0600 www.contact-theatre.org

#### Centre for New Writing

Our unique events bring the best-known contemporary novelists and poets to Manchester to discuss and read from their work. Everyone is welcome, and ticket prices include a complementary glass of wine or soft drink (except Martin Amis public events)

#### Martin Amis public event: Literature and Terrorism

Martin Amis will discuss the role of literature in the context of the terrorist threat.

Tickets: £3/£2 Mon 10 Dec

#### Literature Live with Geoff Dyer

Geoff Dyer reads from and discusses his work.

#### Literature Live: The Rylands Poetry Reading with **Paul Muldoon**

Free event but pre-booking essential. Phone 0161 275 3541

The Martin Harris Centre for Music and Drama Bridgeford Street, Manchester M13 9PL 0161 275 8951/8950

email boxoffice@manchester.ac.uk www.manchester.ac.uk/martinharriscentre

#### Courses for the Public

The Centre for Continuing Education (CCE) runs a large and varied programme of courses designed for adults studying part-time, whether for pleasure or personal/ professional development. Most are open to beginners and no prior knowledge is assumed unless stated. Concessions are available to staff and graduates of the University of Manchester. Brochures and application forms are available on request.

CCE, 1st Floor, Humanities Devas Street 0161 275 3275

www.manchester.ac.uk/continuingeducation

#### **International Society**

#### Lincoln Christmas market

#### **Opening hours**

Mon-Fri 9.30am – 7pm (during term time) Mon-Fri 9.30am – 5pm (during vacation)

#### Small World Café opening hours

Mon-Fri 11am - 3pm

**327 Oxford Road** (next to Krobar) 0161 275 4959

email int.soc@anchester.ac.uk www.internationalsociety.org.uk

#### Chaplaincies

#### St Peter's House Chaplaincy

SUNDAY WORSHIP

11am Holy Communion

12.15am Bible Study

12.45 Lunch (1st Sunday)

6.30pm Evening Worship (term-time only)

FOYER 10am - 5pm

An area where students and staff can relax and meet friends. A tea/coffee machine is available.

**Precinct Centre** 

0161 275 2894

email sph.reception@manchester.ac.uk

#### RC Chaplaincy, Avila House

Mass Times (term-time only)

SUNDAY: 7pm (in the Holy Name Church) next door to

Mon, Wed, Fri: 6pm in the Chaplaincy Chapel Tues, Thurs: 12.15 pm in the Chaplaincy Chapel Oxford Road (opposite the Students' Union) 0161 273 1456

email info@rc-chaplaincy-um.org.uk www.rc-chaplaincy-um.org.uk

#### The Jewish Student Centre and Synagogue

Hillel House, Greenheys Lane. 0161 226 1139

email rabbiyy@hotmail.com www.rabbiyy.com

#### John Rylands Library (Deansgate)

Visit the historic John Rylands Library on Deansgate, central Manchester, home to one of the country's greatest collections of printed books, manuscripts and archives. Regarded as one of the city's most beautiful buildings, the Library has just been voted Manchester's Best Iconic Building in the MCR Awards 2007. Permanent exhibitions tell the story of the Library, display treasures from the collections and include interactive exhibits to engage visitors.

#### CURRENT EXHIBITIONS

#### A Joy Forever: The Manchester Art Treasures Exhibition in Print (extended until the end of Jan 08) This exhibition marks the 150th anniversary of Britain's most spectacular art exhibition, held in Old Trafford in 1857, and tells the story of the event from different points of view.

The Sword and the Book (until 13 Jan 08) Traces the history of the translation of the Bible into English, including examples from the Library's worldfamous collection of lavishly illustrated Bibles.

#### 'O for a Thousand Tongues to Sing' Charles Wesley and the Rise of the English Hymn

(until 20 Dec 07)

Charles Wesley is regarded as one of the greatest hymnwriters of the Christian Church. Original manuscripts and books from the Methodist Archives tell the story of a remarkable man whose spiritual poems became a part

#### **Designer Bookbinder Annual Competition 2007**

(until 12 Jan 08)

Entries from professionals, amateurs and students, showcase original designs demonstrating technical and artistic skills.

#### Public opening hours

Mon and Wed-Sat 10am-5pm Tues and Sun 12pm-5pm

#### Reader opening hours

Mon-Sat 10am-5pm FREE ADMISSION

The John Rylands Library 150 Deansgate, Manchester, M3 3EH 0161 306 0555 email jrl.visitors@manchester.ac.uk www.manchester.ac.uk/library







#### The Whitworth **Art Gallery**

DISPLAYS/COLLECTIONS

Autonomous Agents: The Art and Films of Lynn

**Hershman Leeson** *until 12 Dec 2007* Lynn Hershman Leeson's impressive and influential work spans the forms of painting, photography, performance, film and video, robotics and artificial

Flights of Fancy: Select Decorative Schemes of the 1920s & 30s, until Oct 2008

In the early 20th century the influence of Modernism encouraged a move away from highly patterned walls. This change in fashion affected wallpaper production as a whole and manufacturers, keen to retain their customers, produced numerous fancy paper decorations to add interest to plain or textured backgrounds.

Trade and Empire: Remembering Slavery until 27 April 2008

The exhibition explores slavery and its impact on trade and empire through objects picked from the Gallery's collection. These range from a pair of 18th century watercolours by Thomas Hearne that show day-to-day life in the Leeward Islands.

Sleeping Beauties: Walter Crane and the Illustrated Book until Feb 2008
The Whitworth Art Gallery presents a new exhibition of highlights from the recently acquired Walter Crane Archive. Spanning the career of the artist and designer Walter Crane, the late 19th and early 20th century, the display presents his book illustrations. It features Crane's early commissions as well as original drawings fro his famous Toy Book illustrations flower books and

The Uncertainty of Identity: The Biographies of Things until Feb 2008

This exhibition explores the contexts in which the identity of an art or design object is formed and destabilised – creating its 'life history' or 'biography' Where does the object come from and who made it?

**Collection Exhibitions Archive Now Online** The Whitworth's online 'Collections Catalogue' now allows you to browse and search selected exhibitions held at the Gallery over the past 10 years. Follow the link from homepage at: www.whitworth.manchester.ac.uk

The Whitworth Art Gallery Oxford Road, Manchester 0161 275 7450 email whitworth@manchester.ac.uk

#### Jodrell Bank

**Geminids Meteor Shower Party** 

Watch the Geminids meteor shower and use telescopes to view the planets (weather permitting). Admission by ticket only.

**Opening hours** 

Closed on Mondays Tuesday to Friday 10.30am - 3pm Saturday and Sunday 11am-4pm

Jodrell Bank Observatory Visitor Centre, Macclesfield, Cheshire 01477 571339

www.manchester.ac.uk/jodrellbank/viscen

#### The Manchester Museum

SPECIAL EXHIBITIONS

- Tooth & Claw: Living alongside Britain's **Predators**
- Revealing Histories: Myths About Race
- After Life

TALKS AND EVENTS

Big Saturday - Predators Day

Saturday 8 December, 11am–4pm Come face to face with some of our predators and find out more about Manchester's wild animals. Ring 0161 275 2648 for further details and booking.

Café Scientifique: Particle size and pattern formation in granular flows

Monday 3 December 6.30-8pm

A look into hazardous geophysical flows (eg, snow avalanches), complete with demonstrations! Book at www.cafescientifique.manchester.ac.uk free

Ideas Café: The role of aesthetics in (re)-shaping a cosmopolitan Manchester

Monday 3 December, 6.30-8.00pm Lively conversations challenging the perceived identities of some of Manchester's well known urban spaces. Book, free

**Showcase: The Manchester Museum** Research Seminar

Revealing Histories: Presenting contested pasts

Wednesday 5 December, 3-5pm Talk on the foundation of the British Empire and Commonwealth Museum, Bristol. Drop-in, free

Ideas Café: Eagles in Britain and Ireland

Monday 10 December, 6.30-8pm

Look into the historic and future trends in British eagle populations, and Irish re-introduction programmes.

**Opening hours** 

Open: Tues-Sat 10 - 5pm Sun-Mon (and Bank Holidays) 11- 4 pm **FREE Admission** 

The Manchester Museum Oxford Road, Manchester 0161 275 2634

www.manchester.ac.uk/museum

**Burlington Society** 

The Society of Mature Students and Postgraduates in the Universities of Greater Manchester.

**Burlington Rooms, Schunck Building,** Burlington Street (next to JRUL) 0161 275 2392 www.burlington.man.ac.uk

Gig Guide

**MANCHESTER ACADEMY 1, 2 & 3** 

Wed 5 Dec

From the Jam

Fri 7 Dec

Shed Seven

Tues 11 Dec

Hellogoodbye

Weds 12 Dec

Bondi Beach Party

Thu 13 Dec Rodrigo Y Gabriela

Sun 16 Dec

Gorol Bordello

Weds 19 Dec The Wildhearts

Thu 20 Dec

Shed Seven

Fri 21 Dec

Ocean Colour Scene

Tickets from:

Students' Union, Oxford Road Piccadilly Box Office @ easy Internet Cafe (c/c) 0871

Royal Court (Liverpool) 0151 709 4321 (c/c)

Students' Union Oxford Road, Manchester, M13 9PL 0161 275 2930

www.manchesteracademy.net

#### Music and Drama at Manchester

Tue 4 Dec 7pm

The University of Manchester Big Band

Wed 5 Dec 5pm

Affirmative Ethics and Bio-Politics (CIDRA Lecture

Thu 6 Dec 1.10pm

Psappha

Sun 9 Dec 7.30pm

The University of Manchester Chorus and Symphony Orchestra

Wed 12 Dec 7pm

Ad Solem: The University of Manchester Chamber

Thur 13 & Fri 14 Dec 7pm

In Place of War (Muslim Young Women's drama group)

Fri 14 Dec 1.10 & 7pm

KAIROS/Beneath the Cold

The Martin Harris Centre for Music and Drama Bridgeford Street, Manchester M13 9PL 0161 275 8951/8950

email boxoffice@manchester.ac.uk www.manchester.ac.uk/martinharriscentre

# Dinosaurs, dogs and drink help spread the word of science

Stephen Spielberg's dino-flick Jurassic Park caused a storm of public debate when it was released in 1993: Could it really be possible to one day create living, breathing dinosaurs from traces of ancient DNA? Would the daddy of the dinosaurs, the fearsome T. rex, actually have been able to chase down speeding vehicles? In short, how much of the movie was based on science fact and how much was science fiction?

As part of the first ever Manchester Science Festival, which was held 20 to 28 October, a special screening of the Oscar-winning movie was shown at the Printworks Odeon Cinema. The film was followed by a question-and-answer session about the science behind the film

The dinosaur discussion continued when University of Manchester palaeontologist Dr Phil Manning, biomechanics expert Dr Bill Sellers and colleagues explained to visitors of the Manchester Museum their recent research that has accurately predicted the running speeds of five meat-eating dinosaurs.

Their study, which used a sophisticated supercomputer to produce running models of each dinosaur, showed that even the six-tonne T. rex would have been able to outrun a sportsman such as a professional footballer.

More snarling gnashers were on display at the Manchester Museum when science historian Dr Emm Barnes recreated scenes from Victorian Manchester when rabid dogs routinely roamed the streets. The reenactment focused on historically recorded bite victims from Hyde and Stalybridge, some of whom were treated at the Pasteur Institute in Paris where the first rabies vaccine was developed by Louis Pasteur.

The event, which aimed to raise awareness of a disease that still kills 50,000 people worldwide each year, also feature a make-up artist who created some all-too-realistic bite marks on the limbs of children attending the sessions!

For those who like their science washed down with a pint of beer, University of Manchester technology historian Dr James Sumner gave a public talk on 'science, beer and pubs in history' at the Briton's Protection pub in central Manchester.

Dr Sumner talked about the role of science in brewing over the past 300 years, including the role of brewers









such as Sale's James Joules in the history of science, as well as the unique place of the British public house as a place for working people to discuss scientific ideas in the days before widespread free education.

A final highlight from the week-long festival was the chance for members of the public to join an audience with Sir Bernard Lovell at the Manchester

Museum of Science and Industry.

The event was a rare opportunity to hear the founder and first director of the University Jodrell Bank Observatory talk about his life and his achievements in astronomy, not least the construction of the giant radio telescope at Jodrell Bank which now bears his name.

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www.manchestersciencefestival.com



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#### **FREE SEMINAR**

**Intellectual Property Case Study:** A Hands on Illustration of the Issues, Tactics and Strategies in **Protecting and Commercialising Intellectual Property** 

UMIP's Best Practice Commercialisation Seminars

TThe University of Manchester Intellectual Property Limited's (UMIP) free seminar this month will focus on the issues, tactics & strategies in protecting and commercialising Intellectual Property.

The seminar takes place on:

Friday 14th December, 9:45am to 12:30pm (registration from 9:30 with tea and coffee) at the Core Technology Facility (CTF), 46 Grafton Street (off Oxford Rd) Manchester, M13 9NT

Please book online at www.umip.com/events

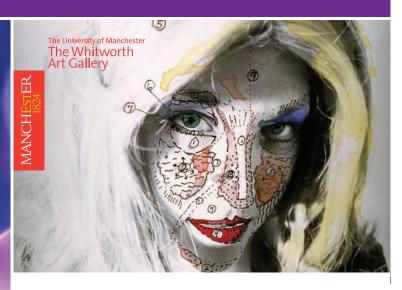












#### **Autonomous Agents:** The Art and Films of Lynn Hershman Leeson

until 12 Dec 2007

Lynn Hershman Leeson's impressive and influential work spans the forms of painting, photography, performance, film and video, robotics and artificial intelligence.

The Whitworth Art Gallery

The University of Manchester, Oxford Road, Manchester M15 6ER tel 0161 275 7450 email whitworth@manchester.ac.uk www.whitworth.manchester.ac.uk Monday to Saturday 10am-5pm, Sunday 12-4pm.

## KING BOOKINGS FOR CHRISTMAS LUNCH

Located just minutes away from the John Rylands library, Café on the Park is the perfect location to have your office/department lunch for Christmas 2007. We offer a full 3 course nterprise House, N T: 0161 232 9

meal, which is available over lunch for £17.95.

Call 0161 232 9172 or email cafe@mspl.co.uk for a booking form

Have a look at our menu: STARTERS

Chicken Satay on Winter

Leaves

Melon with Winter Berries (V)

Tomato and Basil Soup (V)

Crayfish and Sweet Chilli

Fillet of Turkey Breast filled with Chestnut and Cranberry Stuffing with a Sage and Onion Jus

Roast Duck Breast with a Parsnip and Apple Tart

Baked Sea Bass with Samphire Grass and Beurre Blanc

**Butternut Squash and** Cashew Nut Roast with Orange and Redcurrant Sauce(V)

#### **DESSERTS**

**Traditional Christmas** Pudding and Rum Sauce (V)

Lemon Posset

Eaton Mess (V)

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Coffee

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# Tooth & Claw: Living amongst Britain's predators

Wild animals need to kill each other to survive, but why does this provoke such extreme reactions in us? A new exhibition Tooth & Claw: Living amongst Britain's predators at The Manchester Museum explores our fears, prejudices and inconsistencies towards our wild animals.

Through a series of case studies led by powerful wildlife photography, *Tooth & Claw* raises and debates issues such as the recent discoveries of peregrine falcons nesting in Manchester City Centre and their impact on its pigeon population. Should we be saving these wild predators or killing them?

Photographers, Peter Cairns and Mark Hamblin, travelled extensively throughout Britain interviewing conservationists, researchers, farmers, hunters and ecotourism operators. These views are presented throughout the exhibition.

As predators ourselves, *Tooth & Claw* explores our own place in nature and considers the future of our relationship with our wild cousins. It provides not only a visually stunning spectacle but a thought-provoking insight into our changing relationship with nature.

Why not join our online debate at www.toothandclaw.org.uk or take part in some of the related activities including:

Big Saturday: Predators Day Saturday 8 December 11am-4pm

Ideas Café: Eagles in Britain and Ireland Monday 10 December 6.30-8pm







www.manchester.ac.uk/museum

# **Burbidge Joinery** and Construction

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Next issue is 4 February 2008

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Deadline Noon 17 January

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