

The University of Manchester
Annual Review
2009 - 2010



Annual Review of the Year by Professor Dame Nancy Rothwell, President and Vice-Chancellor

This Annual Review covers just the first month or so of my tenure as President and Vice-Chancellor. Consequently, almost all of the achievements covered in these pages occurred during the leadership of my predecessor, the late Professor Alan Gilbert. I want to begin by paying tribute to Alan for his vision and his outstanding contribution to the transformation of the University over our first six years. He was a friend and a mentor and I miss him greatly, but he handed over to me a University that is in great shape and I welcome the opportunity to build on this legacy.

The core driver for all of our activities continues to be our “2015 Agenda” which can be summarised as our ambition to be amongst the top 25 universities in the world. I have been intimately involved in the development of this Agenda, so I feel close ownership. In 2004, our ambition was considered by many, internally and externally, to be bold, audacious, but probably unachievable. I believe that the vision was, and is still, exactly right. Moreover, I strongly believe that it is achievable, though the timing and routes to achievement may be influenced by the external environment that we face. I do, however, think that now is the right time for us to look beyond 2015, and to identify the key priorities that will enable us to invest real substance in the achievement of the three main goals of Research, Higher Learning and Social Responsibility.

The outstanding performance in the 2008 Research Assessment Exercise (RAE) helped to confirm the University's position as one of the UK's premier research institutions, alongside Oxford, Cambridge and the two leading London institutions. It is unfortunate that this strong

performance did not (for any of the leading universities) translate into a significant boost in research funding, but it is clear that the University's research profile was considerably strengthened by its performance in RAE 2008.

Building on the results of the RAE, the University has developed and undertaken a detailed institutional Research Profiling Exercise (RPE). This has allowed us to develop a detailed and authoritative understanding of the research strengths and weaknesses of the University. It has also improved the quality of research management data available within the University. As a result, we are better able to make informed strategic decisions about the kinds of investments in our research activities that are likely to have the greatest impact on our overall research performance and competitiveness.

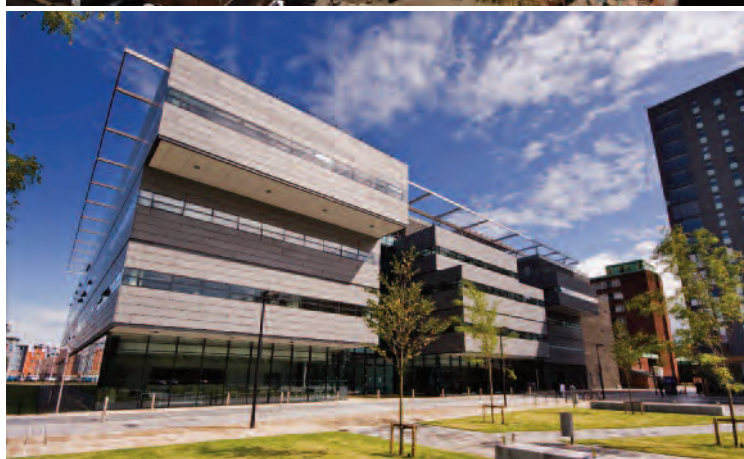
We are using the intelligence gained from this exercise to develop a comprehensive research strategy which addresses how we can significantly increase the proportion of our research that is world-class and world-leading, recruit and grow more research “stars”, attract and support outstanding postgraduate students, enhance interdisciplinary research and diversify research income.

We are likely to be the very best in the world in only a small handful of research areas. But we must be amongst the best in many more areas. These will change with time, so we need to monitor continuously our performance and external drivers. We face increasing pressures to undertake research that is of societal and economic benefit. This is important and is certainly a priority for us, but we will also

rigorously defend the importance of fundamental research, scholarship, academic endeavour and discovery, unencumbered by expected outcomes, which is very much the domain of universities.

An excellent example of the importance of this approach is the award of the 2010 Nobel Prize in Physics to Andre Geim and Kostya Novoselov for their discovery of graphene. This is wonderful news not only for Andre and Kostya, for this University and for Physics, but it is also a timely reminder of the huge value of research in British universities. Andre and Kostya's passion is discovering new things - exactly what is often referred to as “blue skies” research. I am sure that neither of them imagined the massive benefits that graphene could bring to society and nor could this have been predicted by others. I have been truly struck by the real and enormous shared pride in the Nobel Prize throughout the University community and further afield - with spontaneous applause in many meetings by people far removed from Physics and from outside the University.

A key focus during the past year has been the continued implementation of the Review of Undergraduate Education, initiated in mid-2007. It is clear that significant progress has already been made in implementing the recommendations of the Review. But some of the problems we are tackling remain stubbornly intractable. Thus the results of the most recent National Student Survey (NSS) show minor improvement but not nearly enough progress. One of the ways that we are helping individual Schools to improve their performance is by sharing good practice, such as the remarkable achievement of the School for Electrical and



Electronic Engineering, which launched a concerted effort to engage with students more effectively – and as a result, improved their NSS score from 67% to 98% in just one year.

Across the University, there is an increasing emphasis on the personalisation of the student experience, with a network of Academic Advisors now in place, and a formal resolution of Senate to ensure regular staff contact with individual students and to ensure good practice in the provision of “feedback” to students. We must now ensure that these important policy changes are adhered to and are effective. This re-personalisation of learning will be achieved, in part, through better use of online communication building on our major investment in the new Blackboard learning environment. But it will also mean improved face- to-face engagement of staff with students. Construction has also started on a Manchester “Learning Commons”, a major new student learning facility in the heart of the campus, which will be named in honour of Alan Gilbert in recognition of his commitment to this agenda.

The reality is that much of this activity will reap benefits in the medium- to long-term. In the meantime, improving the student experience remains a major and urgent priority. At a University level, we have now created a new Directorate for the Student Experience to bring together the leadership and management of all our support services for students. We are also developing plans to enhance the Manchester Leadership Programme and to enable students to study topics and develop competencies outside their principal area of study through the establishment of an Undergraduate College.

I am determined that social responsibility will be a defining feature of The University of Manchester brand, such that we will be not only a distinguished but also a distinctive University. We

are developing a comprehensive strategy and operational plans in this area. These will build on our successes in public engagement and widening participation, to further develop research strengths in major societal issues and to broaden the student experience to include, for example, personal ethics and global challenges. We must be positioned as an international University, but we must not forget that our near neighbours are facing some of the greatest deprivation in the UK. We need to engage them in “their” University.

Funding pressures will make it all too easy to focus our attention internally and take our eye off the bigger picture, i.e. the long-term future and the success of the University internationally. I take pride in our enormous success in recruiting international students and our excellent interactions with our alumni. This success now needs to pervade all of our international activities. We are developing a new International Strategy to benchmark our activities and achievements against the best universities across the world, to focus our international partnerships, optimise student and staff recruitment and identify global funding opportunities.

This University, like the rest of British higher education, faces financial pressures that are unprecedented. At the time of going to press, the proposal to increase the cap on the level of student fees to £6,000 or £9,000 has just been passed by Parliament. This represents a radical shift in funding for higher education from the public purse to graduates. The scale and speed of this change, coupled with cuts in other funding streams, will have a deep and damaging effect on the higher education sector in the UK. We still await any details of the precise impact of these changes and the criteria for charging the higher fee, the nature of access agreements that universities will be required to deliver, and the distribution of funding across subjects.

All these changes in our core funding are accompanied by some further known and likely additional costs arising from the impact of increased VAT and employer’s contributions to National Insurance, some loss of income from other Government departments and the North West Development Agency (NWDA) and the very likely need to increase pension payments. We know that we must also invest further in the student experience and in our research and general infrastructure.

The University of Manchester is in a relatively strong financial position, but we must be realistic about the challenges ahead. I have made it clear that the University’s reactions to financial adversity will be strategic, not *ad hoc*. If we must get smaller (which may be the fate of all UK universities) we are determined to do so in a strategic, targeted way that simultaneously make us stronger, rejecting *pro rata* approaches to cutting costs. We need to prioritise, and look at the value of everything we do. We have to ask, how does it deliver our mission of excellence and can we afford to do this? And, can we afford not to do it? We are already looking hard at where there are potential savings. We also have a real imperative to increase our income from non-government sources in order to offset some of the most damaging consequences of cuts in Government funding.

Despite these considerable challenges, the University is well placed to weather these stormy waters. We are in a strong position and we have made remarkable progress over the past six years thanks largely to the collegiality and the commitment of our staff. Their efforts will be the key to our future success in the testing times ahead.

Professor Dame Nancy Rothwell
President and Vice-Chancellor



Manchester scientists win the Nobel Prize for Physics

Professors Andre Geim and Konstantin Novoselov, who discovered graphene at the University in 2004, have been recognised for their outstanding contribution to science with the Nobel Prize for Physics. The welcome news broke just before the start of the 2010/11 academic year.

The outstanding accolade – regarded as the pinnacle of scientific achievement – was awarded to the pair for their work with the world's thinnest material.

Graphene, a two-dimensional layer of carbon atoms that has potential in novel applications such as ultrafast transistors just one atom thick, and

sensors that can detect just a single molecule of a toxic gas, has rapidly become one of the hottest topics in materials science and solid-state physics.

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

The award of the Nobel Prize means there are currently four Nobel Laureates at The University of Manchester – more than at any other university in the country.

Professor Geim said: "This is a fantastic honour. People have been talking about graphene as a possible prizewinner for a number of years.

"I have a fantastic working relationship with Kostya. We worked together in Holland and then I managed to bring him to England with me."

Professor Novoselov said: "We have had a fantastic seven years working together on this new material graphene. The University is well suited to this style of research - we have excellent facilities.

"It's great to be a young academic at The University of Manchester and I'm grateful to everyone who has collaborated with us."

Manchester Academic Health Science Centre opens

The Manchester Academic Health Sciences Centre (MAHSC) officially launched this year with the publication of its strategy, 'Partnership for the Patient: Bringing Benefit through Research, Education and Innovation'.

The showcasing event for Manchester's health research focused on the theme of partnership, which is core to delivery of the MAHSC strategy and realisation of the vision to be 'a leading global centre for the delivery of innovative applied health research and education into healthcare'.

MAHSC is a partnership between The University of Manchester, Central Manchester University Hospitals NHS Foundation Trust, Manchester Mental Health and Social Care Trust, NHS Salford (Salford Primary Care Trust), Salford

Royal NHS Foundation Trust, The Christie NHS Foundation Trust, University Hospital of South Manchester NHS Foundation Trust.

The Centre covers the entire spectrum of activity from 'molecule to metropolis' embracing laboratory discovery right through to NHS service innovation in the community. It focuses on five key health themes: cancer, cardiovascular disease, inflammatory diseases and repair, human development and mental health including neurodegenerative diseases.

To support the delivery of health benefits in these areas, MAHSC will also provide cross-cutting activities in technology, clinical trials and implementation of research findings into patient service.

Speaking at the launch event, Sir David Henshaw, Chair, Board of



Governors, MAHSC and Chair, NHS Northwest, said: "The Manchester Academic Health Science Centre now offers us a real opportunity to not only drive forward the quality of

healthcare for our local population through research and innovation, but also play our role on the global stage and attract the finest clinicians to our region."



University investment in students continues

Manchester is maintaining its commitment to offering students cutting-edge facilities, resources and opportunities for learning, with a series of new developments.

At the start of the year, the John Rylands University Library underwent a £1.8 million refurbishment of its ground floor and reception area, resulting in increased public space, improved disabled facilities, a single welcome desk, quick access to PCs and new, attractive learning and social spaces.

The fresh look has received plenty of positive feedback from students, while the single welcome desk has enabled

visitors to orientate themselves more easily on arrival and better understand the Library's services and resources. Borrowing and returning of books can also be carried out more quickly through new self-service facilities.

Also continuing its roll-out across the University is Blackboard, a web-based virtual learning environment that offers thousands of Manchester students flexible, personalised learning experiences that they can access at their convenience, from anywhere in the world, at their own pace.

An ongoing development is the 'Learning Commons', which will become a focal point for

student learning from 2012. This £30 million landmark building will feature up to 1,000 open plan study spaces with a mixture of individual and flexible study spaces, including bookable rooms for group work, and will be open 24/7. There will be a huge emphasis on technology, with around 500 computers, scanning and printing facilities and wifi access throughout.

The Learning Commons will be run by the John Rylands University Library, as an extension of its current role in meeting the ever-changing needs of the 21st century student.

Show me the mummy

Professor Rosalie David helped to unveil the life, times and even the face of an ancient Egyptian mummy in the BBC Northern Ireland documentary, 'Show Me The Mummy: The Face Of Takabuti'.

Takabuti, one of the Ulster Museum's most beloved exhibits, took her second-ever boat trip across the Irish Sea to Manchester's KNH Centre for Biomedical Egyptology, where Professor David carried out a series of tests.

They included a CT scan in the hope that a detailed X-ray of Takabuti's skeleton could reveal her age, her diet and whether she had any diseases, and also shed more light on the mummification process. A small camera with minute forceps attached was then delicately inserted inside the body to collect samples of internal tissue for close analysis, while a sample of her hair was taken for carbon dating.

Professor David, at the Faculty of Life Sciences, said: "Our research specialises in applying scientific methods to examining Egyptian mummies that preserve evidence of disease, diet, lifestyle, lifespan, status and religious practices.

"Minute samples taken from the inside of the mummy were examined microscopically for evidence of disease; the teeth were studied; and tiny pieces of the hair were analysed to see if it had been dyed or if she was a natural blonde."

Professor David was one of a crack team of top scientists and historians that pieced together the remarkable history of the mysterious Takabuti, first brought to Belfast from Egypt in 1834 by a wealthy young man named Thomas Greg, who had bought the mummified remains at a 'mummy market' in Thebes (now Luxor).



Manchester Science Festival receives an electrifying start

In both 2009 and 2010, Manchester Science Festival ran more than 150 mostly free science, engineering, technology, engineering and maths events for families and adults in venues across Greater Manchester, including the University campus.

Uniting universities, organisations and key cultural partners from across the region, the festival is coordinated by the Museum of Science and Industry (MOSI) and supported by the Northwest Regional Development Agency and Siemens.

This academic year's festival opened with a bang when engineers at the National Grid High Voltage Laboratory at The University of Manchester used a Tesla Coil to put millions of volts of electricity through the festival's star-shaped logo. Huge sparks of electricity flew out of the edges of the star and into the festival banner, looking for the quickest route to the earth.

Leading University researchers Professors Andre Geim, Steve Furber, Dame Nancy Rothwell and Robin Marshall gave inspiring insights into their work at the festival's Bright Ideas lecture. More than 200 attendees learned about topics ranging from the discovery of the world's thinnest material to the development of a computing system that mimics the human brain.

Other events included a campus walk with actors playing the parts of academic luminaries Ernest Rutherford and Alan Turing, revealing what the giants of the past have contributed to the pioneers of today; and a fascinating public debate into childhood obesity in England, held at the John Rylands Library and organised by Nowgen – A Centre for Genetics in Healthcare.



Royalty at the Rylands

Their Royal Highnesses The Prince of Wales and The Duchess of Cornwall visited the University's John Rylands Library on Deansgate in February to view some of its most historic collections.

The Royal visitors were welcomed to the magnificent neo-gothic building by the University's then Deputy President and Deputy Vice-Chancellor Professor Dame Nancy Rothwell, as well as the University Librarian and Director Jan Wilkinson and Deputy University Librarian Dr Stella Butler.

During the visit, the Royal guests were able to see the £17m restoration and conservation work undertaken during the recent three-year transformation project called 'Unlocking the Rylands', conserving the Grade I listed building and its collections.

The Prince and Duchess met Library staff and viewed some of the most significant books and manuscripts ever produced, including the St John

Fragment, the oldest known surviving piece of the New Testament, dating from around 125AD.

They were also shown medieval illuminated manuscripts, the earliest example of European printing, the 1423 St Christopher Woodcut, and the personal papers of distinguished historical figures, including Elizabeth Gaskell.

Earlier in the day, the Prince met with key members of staff from the University's Joule Centre, a world leading centre for research in sustainable energy, led by its Director, Professor Peter Crossley.

Jan Wilkinson said: "We are truly honoured that The Prince of Wales and The Duchess of Cornwall chose to visit the John Rylands Library. We are very proud of the redevelopment of the Deansgate building, which has won a string of awards, including a prestigious 2008 RIBA Award."





New developments at Jodrell Bank

A new 'live science' centre to inspire budding young scientists and showcase cutting-edge research 'as it happens' is being developed at the famous Jodrell Bank Observatory.

The new Science Discovery Centre received £3.1 million in funding this year from the North West Development Agency (NWDA) and the North West European Regional Development Fund (ERDF).

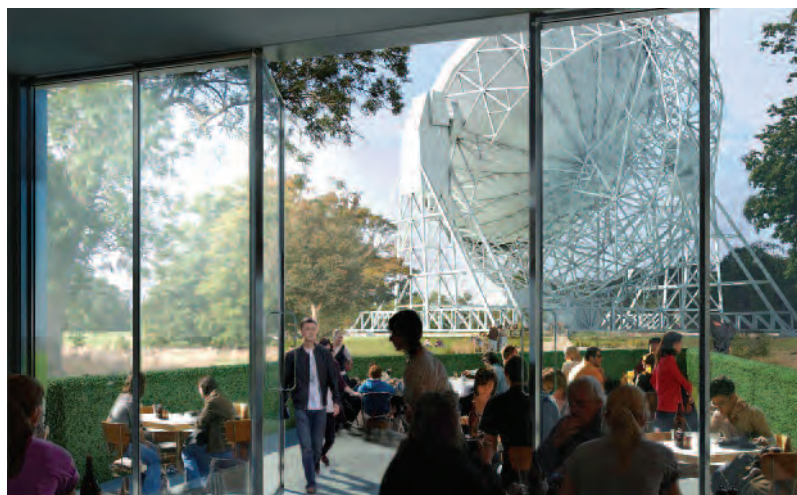
It is predicted to attract thousands of extra visitors to the Observatory every year and will help to generate an additional £26 million for the regional economy over the next decade.

The project includes: a Planet Pavilion entrance building with an orientation centre and café with spectacular views of the Lovell telescope; a Space Pavilion for exhibitions and events, as well as an education space; and landscaping of the Arboretum to create a new Galaxy Maze and a Space Garden.

Jodrell Bank is at the forefront of research into astrophysics. Most recently, its astronomers discovered one of the hottest stars in the Galaxy, with a surface temperature of around 200,000 degrees, 35 times hotter than the Sun. The mysterious dying star had never been seen until the Observatory released a spectacular set of images earlier this year.

Steven Broomhead, Chief Executive of the NWDA, said: "Jodrell Bank is already an icon in the North West and a visitor attraction in its own right, but it has the potential to attract many more national and international visitors to the region. This investment will help create a richer, more inspiring visitor experience which is more fitting to this beacon of science and research."

The Planet Pavilion is set to open by the end of 2010. All work will be completed by summer 2011.



Sustainable Consumption Institute launches

The Sustainable Consumption Institute (SCI) at the University marked its official launch in October 2009 with the release of a report on the important role of consumers and business in tackling climate change.

The SCI has been established at The University of Manchester with financial support from Tesco, and exemplifies the deep commitment of both organisations to researching and developing solutions to some of the difficult questions of how we move to a low-carbon society.

More than 280 guests of then University President and Vice-Chancellor Professor Alan Gilbert and Sir Terry Leahy, CEO of Tesco, attended the high profile conference at the Royal Society in London.

The Institute's new report set out why consumers are part of the solution to climate change and why sustainable consumption should be given greater attention in the climate change debate. It will be used to shape subsequent international negotiations.

Professor Dame Nancy Rothwell chaired the launch event and Conservative MP David Cameron (now Prime Minister) gave the conference keynote address. Sir Terry Leahy presented highlights of the report from a business perspective.

The University itself is also constantly seeking new ways to boost its internal sustainability strategies. This year, Manchester became one of the first universities in the UK to commit to playing its part in halving the amount of construction, demolition and excavation waste being sent to landfill by 2012.

The University signed up to the voluntary commitment in conjunction with WRAP – the Government-funded Waste and Resources Action Programme.

Sustainability measures are also taking precedence in plans for new University developments such as the Learning Commons, which will be one of the most environmentally sustainable buildings on campus when it opens for student use in 2012.

Professor Alan Gilbert: A tribute

The University community mourned the untimely death of Professor Alan Gilbert this year, who was President and Vice-Chancellor of The University of Manchester from its inauguration on 1 October 2004 to 30 June 2010.

Professor Gilbert died in the early hours of 27 July 2010 in a Manchester hospital, having suffered from a serious illness for some months. His death came less than a month after his retirement from the University.

Mr Norman Askew, Chairman of the Board of Governors, said: "Alan was responsible for shaping the vision for the new University and delivering the enormous success that it has enjoyed over its first six years. He will be greatly missed by me and all who worked with him."

Professor Dame Nancy Rothwell, President and Vice-Chancellor, said: "Alan's leadership has transformed the University. He will be remembered with enormous respect by everyone in the University and with great affection by all who worked with him closely."

"To me personally he was a remarkable friend and mentor, with incredible insight, integrity and intelligence. I will miss him."

A large number of University staff contributed to a Book of Condolence, which was presented to Professor Gilbert's family.

A tribute to the former President was also paid at the 2010 Foundation Day in October, the sixth anniversary of the University's inauguration by Her Majesty the Queen, at which Professor Gilbert was due to give the opening lecture. The event was attended by Professor Gilbert's two daughters, pictured below with Professor Dame Nancy Rothwell and the artist who produced Alan Gilbert's portrait.

In his final official address to University of Manchester staff, in the June issue of the institution's 'Uni Life' magazine, Professor Gilbert expressed his "immense satisfaction" in the unfaltering momentum of the University since the merger in 2004, and thanked his colleagues for "a phenomenal achievement over the past six years".





Researchers unzip symptoms of the 'male menopause'

For the first time, scientists have identified the symptoms associated with late-onset hypogonadism, or 'male menopause', caused by a reduction in testosterone production in ageing men.

The researchers say that, unlike the female menopause, which affects all women, the male menopause is relatively rare, affecting only 2% of elderly men, and is often linked to poor general health and obesity.

The findings should provide new guidance to physicians prescribing male testosterone therapy, a practice that has increased by 400% in the United States since 1999.

University of Manchester researchers, working with colleagues at Imperial College London, University College London and other European partners, found that only nine of the 32 candidate symptoms were actually associated with low testosterone levels.

The study concluded that the presence of three sexual symptoms – decreased frequency of morning erection, decreased frequency of sexual thoughts (sex drive), and erectile dysfunction – together with low testosterone levels, was required to diagnose the male menopause.

Non-sexual symptoms that might also be present included: inability to engage in vigorous activity, such as running; inability to walk more than 1km; inability to bend, kneel, or stoop; loss of energy; sadness; and fatigue. However, these non-sexual symptoms were only weakly related to low testosterone.

Symptoms that the study was able to discount as not being testosterone-related included changes in sleeping pattern, poor concentration, feeling worthless, nervousness or anxiety, and difficulty getting up from a chair.

Lead author Professor Fred Wu, from the University's School of Biomedicine, said: "Our findings have, for the first time, identified the key symptoms of late-onset hypogonadism and suggest that testosterone treatment may only be useful in a relatively small number of cases where androgen deficiency is suspected."



Archaeologists discover Britain's earliest house

Archaeologists working on Stone Age remains at a site in North Yorkshire say it contains Britain's earliest surviving house.

A team from The Universities of Manchester and York revealed that the home dates to at least 8,500 BC – when Britain was part of continental Europe. The research team unearthed the 3.5-metre circular structure next to an ancient lake at Star Carr, near Scarborough, a site comparable in archaeological importance to Stonehenge.

The team was excavating a large wooden platform next to the lake, made of up timbers that have been split and hewn. The platform is the earliest evidence of carpentry in Europe.

The house predates what was previously Britain's oldest known dwelling at Howick, Northumberland, by at least 500 years.

First excavated by the team two years ago, the house had post-holes around a central hollow,

which would have been filled with organic matter such as reeds, and possibly a fireplace.

Hunter-gathers inhabited the site just after the last ice age, for between 200 and 500 years. According to the team, they migrated from an area now under the North Sea, hunting animals including deer, wild boar, elk and enormous wild cattle known as auroch.

While they did not cultivate the land, the inhabitants did burn part of the landscape to encourage animals to eat shoots. They also kept domesticated dogs.

Dr Conneller said: "This changes our ideas of the lives of the first settlers to move back into Britain after the end of the last Ice Age.

"We used to think they moved around a lot and left little evidence. Now we know they built large structures and were very attached to particular places in the landscape."



Capturing carbon: the key to halting global warming?

A Manchester geochemist has discovered that the greenhouse gas carbon dioxide has been stored safely and naturally in underground water in gas fields for millions of years.

Carbon is emitted into the atmosphere whenever fossil fuels are burned, with main sources being cars, lorries and power stations. While scientists and engineers have developed ways of capturing carbon dioxide, there are still problems with the long-term storage of millions of cubic metres of the gas.

But new research by Professor Chris Ballentine and his Manchester team, working with colleagues in Edinburgh and Toronto, could have a significant impact in the battle to slow climate change – and brings large-scale carbon capture one step closer.

Professor Ballentine said: "We cannot change our society overnight to a low-carbon economy. While we are in this transition, we have to bury our excess CO₂ emissions.

"Developing a clear understanding of how natural systems behave means that when we inject CO₂ into similar systems we know exactly where it will go. This verification is essential to provide public confidence in the safety of this disposal technology."



Led by Manchester, the international team of researchers, funded by the Natural Environment Research Council in the UK, measured the ratios of the stable isotopes of carbon dioxide and noble gases, like helium and neon, in nine gas fields in North America, China and Europe, which were naturally filled with carbon dioxide thousands or millions of years ago.

They found that underground water is the major carbon dioxide sink and has been for millions of years.

In the future, it is hoped the new data can be fed into future computer models to make modelling underground carbon capture and storage more accurate.

Body clock drugs could ease psychiatric disorders and jet lag

Researchers from the University successfully used a drug to reset and restart the natural 24-hour body clock of mice in the lab. This opens up the possibility of dealing with various human difficulties, including some psychiatric disorders, jetlag and the health impacts of shift work.

The research was led by Professor Andrew Loudon in Manchester's Faculty of Life Sciences, and Dr Mick Hastings, of the MRC Laboratory of Molecular Biology in Cambridge, working with a multidisciplinary team of scientists from Pfizer, led by Dr Travis Wager.

Most living creatures and plants have an internal body timing system called the circadian clock. This is a complex system of molecules in every cell that drives the rhythmicity of everything from sleep in mammals to flowering in plants.

An ancient breed of sheep called Soay has a body clock that dates back to the Bronze Age, which has proved useful for research.

Light and the day and night cycle are important for resetting the clock. Fine adjustments are made through the action of several enzymes – including one called casein kinase 1.

Professor Loudon's team found a drug that slows casein kinase 1 down and used it in mice whose circadian rhythm had ceased. They were able to re-establish the ticking of the clock by using the drug to inhibit casein kinase 1.

Professor Loudon said: "We've shown that it's possible to use drugs to synchronise the body clock of a mouse – so it may also be possible to use similar drugs to treat a whole range of health problems associated with disruptions of circadian rhythms.

"This might include some psychiatric diseases and certain circadian sleep disorders. It could also help people cope with jetlag and the impact of shift work."





Grant for Gallery's 'cultural entrepreneur'

Maria Balshaw, Director of The Whitworth Art Gallery at the University, was awarded £260,000 as one of five recipients of the 2010 Paul Hamlyn Foundation Breakthrough Fund.

The Breakthrough Fund was launched by the Paul Hamlyn Foundation Arts programme to support exceptional 'cultural entrepreneurs'.

Appearing in a range of roles, cultural entrepreneurs each possess a pressing and persuasive vision, a

drive and a strong track record of making things happen. The Breakthrough Fund aims to support these individuals in their determination to make a difference to the cultural landscape in which they work.

The grant will, over three years, enable Maria to conduct research and development, as well as provide seed-corn funding for new programming strands emerging from the R&D. This includes a part-time, six-month sabbatical for Maria, research trips, a new curator-

collaborator post for 30 months and a programming fund to explore ways of working differently with the collections, artists and audiences.

All of this takes place alongside the major capital redevelopment she is leading at the Gallery, infusing new thinking into a 'new' Whitworth.

Maria said: "Finding time to develop big ideas and retain the creative side of my Director's role at the Whitworth is my perennial challenge. The Breakthrough funding will buy me thinking time

at a critical time for me and for the organisation.

"As we steer through a major capital expansion of the Gallery, I will be able to research and develop some completely new ways of working with our wonderful collection, with artists, our audiences and our new and old spaces. It is so unusual to have the trust of a funder at the beginning of the creation process, so I feel extraordinarily honoured to receive this grant."

Manchester Leadership Programme continues to grow

A record 900 undergraduates, representing all academic Schools, took part in the University's flagship Manchester Leadership Programme (MLP) in 2009/10. MLP students gain insight into the key challenges facing 21st century society through a Leadership in Action unit that they complete as part of their degree, and up to 60 hours of volunteering.

High profile speakers presenting on the unit this year included Nobel Peace Prize Co-Laureate Lou McGraith, Chief Executive of Mines Advisory Group; Brian Gilvary, Group Vice-President at BP; Julia Rogers, Assistant Chief Officer of Greater Manchester Police and CBI Business Woman of the Year; David McCullough, Trading Director at Oxfam GB; and Christine Farnish, Director of Public Policy at Barclays.

MLP students completed a total of 35,850 hours of voluntary work, which translates to a financial contribution of over £170,000 (based on minimum wage).

Katy Crinnion, from the Royal Manchester Children's Hospital, said: "Our charity has been a major beneficiary of the MLP. Many of our events have been successful due to the excellent quality of the student volunteers."

The MLP is also helping students to stand out in a highly competitive recruitment market. Carl Gilleard, Chief Executive of the Association of Graduate Recruiters said: "The MLP is one of the most outstanding and innovative employability initiatives offered by a UK university."

Student satisfaction with the academic unit was high, with 83%



of students saying that it either met or exceeded their expectations.

The University hopes the MLP will grow and develop even further;

more than 1,200 students have signed up for the 2010/11 programme and the ambition is that, by 2015, half of all undergraduates will complete the MLP.

Manchester Beacon shines its light

A week-long celebration of people and projects that bring universities and communities together took place at the University in November 2009. Diverse activities arranged during this 'Manchester Beacon Summit' included learning and sharing events, training workshops and networking opportunities.

The Summit was organised by the Manchester Beacon for Public Engagement, a partnership of the University, MMU, Salford University, Museum of Science and Industry (MoSI) and Manchester: Knowledge Capital – one of six pilot HEFCE-funded Beacon projects in UK universities.

Led by the University, the Manchester Beacon for Public Engagement is part of the UK's largest public engagement initiative. It aims to engage partners and stakeholders – staff, students and local residents – to encourage public

and community engagement to become a valued part of everyday university life.

The University of Manchester is running nine successful pilot projects from across all Faculties and the Museum, looking at public engagement in local communities and on campus.

The Centre for the History of Science, Technology and Medicine is developing engagement activities with Rusholme's Somali community, collecting oral histories to assist in accessing health services, changing the Centre's outreach policy to a broader community perspective from previous work with schools.

Other projects include working with local SE Asian communities to widen knowledge exchange on Vitamin D deficiencies; partnership with a youth worker in consulting young



women from local youth centres on their attitudes and aspirations to universities; and an ideas workshop supporting researchers in devising interactive ways to explain their research to families.

Professor Dame Nancy Rothwell, who is spearheading the Beacon project at Manchester, said: "Public engagement is an important exercise, individually for staff and students, and as an organisation."

Local A-level students 'Engage with Experts'

Students from local schools were invited to take part in highly interactive practical sessions this year alongside scientists from a variety of different disciplines, thanks to the Manchester Museum.

The latest offering, as part of the Museum's 'Engage with Experts' A-level study days, was developed by Louise Sutherland and Andrew Gray from The Museum in collaboration with Dr Mark Dickinson of the Photon Science Institute. It provided sixth-form students with a first-hand experience of how physics can help us investigate biology.

More specifically, it deepened students' understanding of how and why researchers at Manchester are applying innovative imaging techniques to investigate the properties of amphibian skin.

Students from Whalley Range High School for Girls, The Verdin High School, Macclesfield, and Ashton Sixth Form College visited The Museum and the laboratories in the Photon Science Institute, where they got to grips with a wide range of equipment that allowed them to investigate for themselves the frogs' thermo-regulation and infra-red reflecting pigments.

Pete Brown, Head of Learning and Interpretation at The Manchester Museum, said: "This is another great example of collaboration between research and teaching, using the Museum's public engagement expertise to inspire young people to become the next generation of scientists."



University welcomes new President and Vice-Chancellor

Professor Dame Nancy Rothwell was appointed President and Vice-Chancellor of The University of Manchester this year.

Dame Nancy was selected following an international search that produced an impressive shortlist of candidates. She took up her position on 1 July 2010, following the retirement of the University's inaugural President and Vice-Chancellor, Professor Alan Gilbert.

A distinguished Life Scientist, Dame Nancy has been a member of staff at the University since 1987 and Deputy President and Deputy Vice-Chancellor since 2007. She is now the first woman to lead The University of Manchester, or either of its two predecessor institutions.

Commenting on her appointment, Dame Nancy said: "I am honoured and delighted to be invited to lead the University at this exciting time. I am determined to maintain the strategic focus that we have developed over the past six years and to work closely with colleagues to identify new priorities and opportunities for the University in the very challenging external environment that we will face over the next few years."

Chairman of the Appointment Panel and Chairman-elect of the University's Board of Governors, Mr Anil Ruia, said: "Dame Nancy will bring her own distinctive strengths, perspective and style to the role of President and Vice-Chancellor, which will enable the University to build upon the remarkable progress that we have made under Professor Alan Gilbert's leadership."



Professor Dame Nancy Rothwell: the facts

- Born in Tarleton, near Preston; educated at Penwortham Girls' Grammar School
- Obtained a First class degree in Physiology, a PhD and a DSc from the University of London
- 1984: Awarded a Royal Society Research Fellowship
- 1994: Awarded a Chair in Physiology at Manchester
- 1998: Awarded a prestigious Medical Research Council Chair
- 1999: Elected as a Fellow of the Academy of Medical Sciences
- 2003: Won the prestigious Pfizer Research Prize
- 2004: Elected a Fellow of the Royal Society
- 2005: Honoured with a DBE
- Has served as president of the British Neuroscience Association, a council member of the MRC, BBSRC, the Academy of Medical Sciences and Cancer Research UK

- Honorary fellow of the Royal College of Physicians
- Member of the Royal Society Council and Vice-President of the Royal Society
- Chair of the Royal Society Education Committee
- President of the Society of Biology
- Non-executive director of AstraZeneca

Dame Nancy began her research career in the field of obesity and metabolism, an area in which she rapidly acquired an international reputation. More recently, she has investigated how brain cells are damaged as a result of several different diseases, such as stroke and Alzheimer's.

Dame Nancy takes a strong and active interest in the public communication of science and regularly gives talks to schools and the public, and contributes to television, radio and press, particularly on sensitive issues in science. In 1998, she delivered the Royal Institution Christmas Lecture, televised by the BBC.



New Distinguished Achievement Awards for 2010

For the first time this year, the University's Distinguished Achievement Awards honoured members of the Professional Support Services (PSS), as well as the Teacher, Researcher, Postgraduate Research Student and Undergraduate of the Year from each of the four Faculties.

The PSS winners were deemed to show outstanding performance against one or more of the values of the PSS – namely, professionalism, teamwork, openness to change and a commitment to continuous improvement.

Award-winner and Research Contracts Officer Sam Bibby was deemed by his colleagues to show great expertise and professionalism in his work dealing with contracts within the Faculty of Life Sciences and a number of Schools.

Fellow winner Arthur Clarke, Building Attendant in the Ellen Wilkinson Building, was praised for his

endeavours in helping to create a pleasant study environment for students, teachers and researchers during his nine years working for House Services.

Susan Fidalgo, International Co-ordinator for undergraduates in Manchester Business School, received her award following plaudits from parents and students for her kindness, understanding and willingness to 'go the extra mile' to support exchange students, while Finance Manager for the Faculty of Engineering and Physical Sciences, Steve Hamer, was deemed a 'team player' who has epitomised the PSS's shared values during his 18 years at the University.

The final PSS winner Scott Taylor, part of the JRUL Information Systems Department, was praised for his 'can-do' and customer-focused attitude in the face of high pressure on the Manchester eScholar repository service that he provided support on

during the University's first annual Research Profiling Exercise.

The full list of winners included: researchers Dr Jaclyn Smith (Translational Medicine), Karel Williams (Manchester Business School), Professor Hugh Piggins (Life Sciences) and Professor Richard Winpenney (Chemistry); postgraduate research students Daniel Hanson (Biomedicine), Dr Katharine M Earnshaw (Humanities), Dr Elizabeth Pawson (Life Sciences) and Dr Richard Pearson (Computer Science); undergraduate students Thomas Ward (Psychology), David Tagg-Oram (Music), Natasha Bray (Cognitive Neuroscience/Psychology) and Martin Schuster, Electronic and Electrical Engineering; and teachers Dr Richard Oliver (Dentistry), Dr Nuria Yáñez-Bouza (Languages, Linguistics and Cultures), Dr Tracey Speake (Life Sciences) and Dr Danielle George (Electronic and Electrical Engineering).

From TV to OBE: Professor Brian Cox

It's been quite a year for Professor Brian Cox: first he became an international media star, thanks to a hit TV series on the origin of the solar system; then he was made an OBE in the Queen's Birthday Honours List for services to science.

Based at the University's School of Physics and Astronomy, the 42-year-old Professor presented this year's acclaimed BBC TV series 'Wonders of the Solar System', which showed him visiting locations around the world to explain how the laws of nature carved spectacular landscapes throughout the Solar System. A second series is scheduled for 2011.

This is Professor Cox's second taste of fame, having been a member of nineties pop act D:REAM while studying for his PhD at The University of Manchester.

He is also a regular presenter on the BBC science programme Horizon and was scientific advisor on the 2007 film Sunshine, directed by Danny Boyle and written by Alex Garland.

The OBE is the latest in a line of honours bestowed on Professor Cox for his efforts to publicise science. In 2002, he was elected an International Fellow of The Explorers Club; in 2006 he received the British Association Lord Kelvin Award.

He now spends much of his time at the Large Hadron Collider at CERN, the famous scientific research centre in Geneva, where the team hopes to recreate conditions in the Universe less than a billionth of a second after the Big Bang and uncover some of its unsolved mysteries.

Professor Cox said: "This is a wonderful accolade for me personally, but credit must also go to The University of Manchester and the Royal Society for allowing me to pursue these projects.

"Many employers would not have gone so far to support me, or could have made it hard for me to have the freedom to do the TV work, but the University has been totally supportive.

"I could never have dreamed when I was a student here that I would be receiving such an important honour as an OBE. This is a fantastic way of promoting science and I am delighted to accept the honour."



Inspiring female engineer scoops top award

A Manchester student scooped a major national award this year for her work to promote science and engineering to young women.

Twenty-six-year-old Rebecca Robinson, a third-year PhD student in the School of Electrical and Electronic Engineering, fought off stiff competition to win the WISE (Women into Science, Engineering and Construction) Excellence Award for her enthusiasm and commitment to encouraging girls into science and engineering.

The award was presented by Her Royal Highness the Princess Royal at the Royal Academy of Engineering in London.

Rebecca, who studied Electrophysiology, has been a key ambassador for the University, heavily involved in inspiring hands-on activities such as Girls in Aerospace, Physics Tricks, Maths Squad and Ice Cream Fun. These events aimed to raise awareness of, and aspiration to, higher education amongst individuals from underrepresented groups.

Rebecca was also a student co-ordinator for WiSET (Women in Engineering, Science and Technology) at the University. The WiSET initiative aims to support all women, from undergraduates to professors, and encourages female graduates to develop careers in science, technological, engineering and maths.

Rebecca said: "There are still only seven per cent of professional engineers that are women. This doesn't have to be a male-dominated world; girls can do it too."



Aaisha and Ashley follow MAP to success

A record number of Manchester Access Programme (MAP) students progressed to higher education this year, including 92 at The University of Manchester.

One of the University's most successful 'widening participation' schemes, MAP supports outstanding local school and college students in applying for university, where there is little tradition of higher education participation.

Organised in the Student Recruitment, Admissions & International Development Division (SRAIDD), MAP enables sixth-form participants to demonstrate their potential through campus-based activities, including an academic assignment produced with the support of a University tutor, one-to-one mentoring and a three-day 'University Life Conference', where students stay in halls of residence.

MAP students Aaisha Akhter, from Oldham Sixth Form College, and Ashley Wallis, from Winstanley College, Wigan, successfully made it to Manchester this year.

Medical student Aaisha said: "Before completing the Manchester Access Programme, I thought university was a very big place and that there were too many people there to get to know, and I felt that it would be quite daunting.

"After spending so much time on campus, it now feels very familiar to me and I know so many other students through the programme... so I don't have any worries about being on my own.



"I'll be living at home while I study, as I want to stay close to my family, and it's great that the University has a special Scholarship for students like me who come through the Manchester Access Programme."

Computer Science undergraduate Ashley said: "Before I joined the Programme, I wasn't sure about whether I wanted to go to university after college. My parents did not attend university, but had always wanted me to. MAP made me realise just what a great opportunity studying at



university was and I decided to apply to Manchester.

"My perception of university had always been that it was very formal and strict and that there wasn't much help once you got there, but my experiences on MAP have definitely changed my perception and I have learnt about the different support for students.

"I'm glad I came to Manchester as I have fitted in well and the course is even better than I thought it would be."

Manchester's Joseph Akinagbe voted 'Student of the Year'

A University of Manchester undergraduate won the prestigious NUS/ Endsleigh 'Student of the Year' award in 2010.

Joseph Akinagbe, 19, had just completed his second year of studying Economics and Finance, when he was recognised for his outstanding work supporting fellow students, the Students' Union and a range of community and business projects.

The achievements of the international student from Nigeria greatly impressed the distinguished panel of judges. The entrepreneur, consultant, student activist and community worker is currently the youngest-ever President of Manchester Entrepreneurs, a University of Manchester Society that supports future businesses and community leaders.

A National Consortium of University Entrepreneurs award recipient, Joseph is a member of the Ernst and Young Top 30 UK Undergraduates and the youngest member of RAW Northwest, a group of the top 250 entrepreneurs in the region.

He is also a National Black Achievers winner and the youngest member of the Lord Davies' Black Entrepreneurs Roundtable, which gave policy advice to the Labour Government on supporting black and ethnic minority entrepreneurs.

He was elected as a world youth leader with One Young World, a project supported by Archbishop Desmond Tutu, Bob Geldof, Muhammad Yunus



and former UN Secretary General, Kofi Annan among others.

He was also elected onto the University of Manchester Student Union executive as the International Student Officer.

Joseph said: "I think being at University is a brilliant way to help different people so that you can apply what you have learned. I strongly

believe that students have a duty to use their skills and position to help others.

"I've been extremely lucky to be in the right place at the right time – but, on the other hand, I've worked really hard to achieve this.

"Indeed, if you are prepared to work hard, you will be surprised at just what you can achieve."



Students

Of the 39,438 students registered at the University, 28,313 are undergraduates and 11,125 are postgraduates.

	Home/EU	Overseas	Total
Undergraduate	24,676	3,637	28,313
Postgraduate taught	4,359	3,193	7,552
Postgraduate research	2,362	1,211	3,573
Total	31,397	8,041	39,438

Staff

The University is one of the largest employers in Greater Manchester, with more than 5,800 academic and research staff.

Breakdown of staff

Academic (including 1,865 teaching-only staff)	3,846
Research	1,829
Administrative/management	1,145
Clerical/secretarial	1,647
Academic support	1,442
Manual/craft	1,076
Other	241
Total	11,226

Headcount figures at 31 July 2010



Income

The University has an annual income of £788 million.

Funding council grants	£209m
Tuition fees and educational contracts	£228m
Research grants and contracts	£195m
Other operating income	£145m
Endowments and investments	£11m
Total	£788m

Figures rounded to the nearest £1 million

The University of Manchester at a glance

Mission and vision

"To make The University of Manchester, already an internationally distinguished centre of research, innovation, learning and scholarly enquiry, one of the leading universities in the world by 2015."

Senior officers

Chancellor	Mr Tom Bloxham
Pro-Chancellor and Chairman of the Board of Governors	Mr Norman Askew
Pro-Chancellor	Admiral Sir John Kerr
President and Vice-Chancellor	Professor Dame Nancy Rothwell

Estate

347 buildings
711 acres

Undergraduate applications per annum

More than 50,000

Alumni

240,000 in 200 countries

Information correct at time of print.

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J3115 01.11 Royal Charter Number: RC000797

