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UNIVERSITY OF DUNDEE

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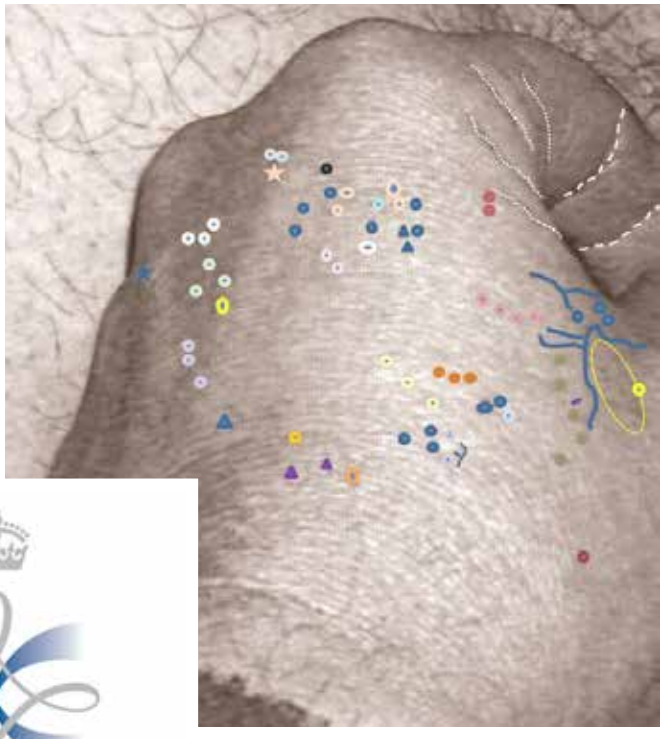
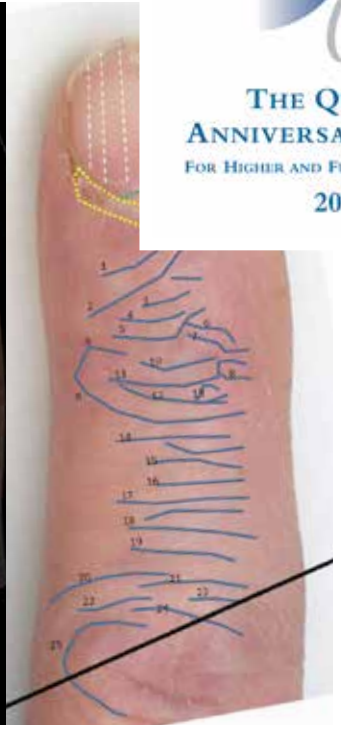
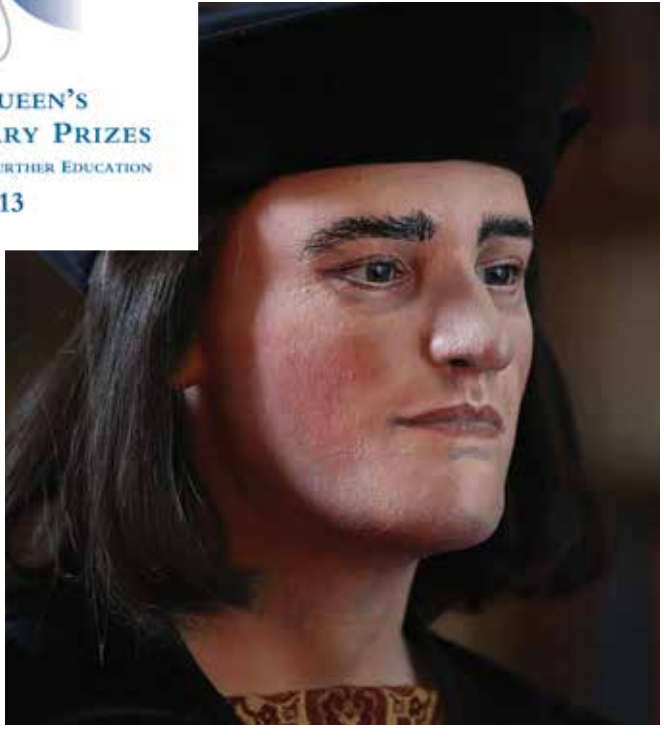




THE QUEEN'S ANNIVERSARY PRIZES
FOR HIGHER AND FURTHER EDUCATION
2013



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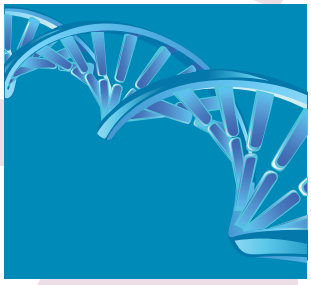

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from the principal...

As the year draws to a close I am looking forward to the challenges of making further progress in the realisation of the University Vision during 2014. I have no doubt that the coming year will provide plenty of challenges for the University but I remain convinced that we must have the confidence to create our own success and be even more determined to shape our own future.

The University Vision is, by its nature, focussed on the future and it sends a message about the kind of institution that we want the University to become (now just 24 years to go!). It also serves as a reminder that success will be measured in our own terms - against the scale of our ambition and against the depth of our enduring values. Our success will become clear from the impact that we will have made in addressing key global challenges and the transformations that we have facilitated through the generation and application of knowledge.

I am very pleased that as part of this process I will have the opportunity in the coming months to visit all parts of the University, to meet with as many staff as possible, in all Colleges and support services (www.dundee.ac.uk/transform/). This will be, I hope, more than simply a walk about – I hope that as many staff as possible will take the opportunity to engage with the transformation agenda and participate in the debate.

Regular readers of this column will recall that I promised to report on the efforts, in particular parts of the University, that exemplify the transforming lives agenda and I am pleased to have the opportunity, in closing this month's report, to commend the public outreach and engagement work of our colleagues in the College of Arts and Social Sciences. The role that universities have in exploring and extending cultural knowledge in its broadest sense is often taken for granted but I believe that the case studies outlined on the new CASS public engagement webpages demonstrate why we were right in putting cultural well-being right at the heart of our mission to transform lives:

The **Five Million Questions** project, led by Chris Whatley, that is informing and transforming the debate in the run up to the referendum;

Rob Duck's book **This Shrinking Land: Climate Change and Britain's Coasts**, that won the College's Prize for excellence in Public Engagement with research and formed the basis of a series of evening lectures;

The **Great War Dundee Commemorative Project** that seeks to rediscover some of the forgotten stories of a city at War – transforming the way that Dundee in the 21st century can connect with a period no longer in living memory;

The popular **Dundee Comics Day** that enables comics industry professionals, staff and students and a more general audience to appreciate the role that Dundee has in the history of comics and to benefit from expertise at the University that is leading the way in this emerging academic field;

The **'Women, Water and Wells' Exhibition** and a **Primary School Water Quiz** were examples of the outreach work of the Centre for Water Law, Policy and Science based at the University under the auspices of UNESCO. The link between water, food production and health are global concerns and the Centre takes a leading role in questioning the assumption that problems are confined to developing countries.

These case studies, and there are many more on the webpages, share a characteristic of linking world class research on global issues or cross-cultural creativity, to more local concerns and have a direct relevance to the social and cultural well-being of the wider community – in a way that makes a difference. This goes to the very core of the University Vision, the Transforming Lives agenda and why progress towards our goal of a stronger, better, more influential University of Dundee is so important. Not for its own sake but because it will enable us to make a difference - and how much of a difference will be the real measure of institutional success in the years to come.

Professor Pete Downes • Principal and Vice-Chancellor

For more news from the Principal read his blog at http://blog.dundee.ac.uk/principal

CAHID lands Queen's Anniversary Prize

The University's Centre for Anatomy and Human Identification has been awarded a prestigious Queen's Anniversary Prize for Higher Education.

Presented in recognition of `world class excellence' the Queen's Anniversary Prizes are among the most highly-regarded awards for the UK's universities and colleges.

CAHID, which is headed by Professor Sue Black, is one of the world's foremost institutions for the study and application of human anatomy, forensic human identification, disaster victim identification and forensic and medical art.

"This is a tremendous honour and testament to the hard work of all the staff, and indeed the students, who have worked in the Centre," said Professor Black. "Ours is a relatively short history, but in that time we have made great strides forward and the work that comes out of this Centre has significant local, national and international impact.

"We have also been fortunate to enjoy great support both from within the University and from external partners and agencies."

Professor Pete Downes, Principal and Vice-Chancellor of the University, said, "The range of CAHID's impact, from the face of Richard III to the victims of the Asian tsunami and to the work to help gain convictions of sex offenders, is truly amazing. The bold introduction of Thiel embalming of human bodies will revolutionise surgical training and pioneer new surgical techniques. This award is deserved recognition for Sue Black and each and every member of CAHID's staff."

CAHID is pre-eminent internationally through its work in forensic human identification, where staff have worked on high profile cases both at home and abroad. It has developed new techniques, including identifying perpetrators from images of their hands in photographs, that have led to successful prosecution in a significant number of cases of child sexual abuse.

The Centre has devised and implemented the world's first training programme for police officers and professional experts in Disaster Victim Identification (DVI). This was established in response to major events such as the Asian Tsunami, the London bombings and the Sharm-El-Sheikh bombings. The training programme has helped build a crucial response capability to major disasters. CAHID is also a partner in the creation of the FASTid system that has been adopted by Interpol.

CAHID is recognised as an international leader in craniofacial identification and forensic facial reconstruction for the identification of the living and the dead, the latter more recently including King Richard III.

The Centre's work has also rejuvenated the study of human anatomy and its application in teaching, training and research. For example, the introduction of the Thiel 'soft fix' method of embalming produces lifelike flexible cadavers that facilitate the development of new surgical procedures and approaches, new devices and more realistic training. This is the only centre to adopt this approach in the UK.

For more information on the Queen's Anniversary Prizes for Higher and Further Education, see: **www.royalanniversarytrust.org.uk**

Study highlights exercise link to academic success

A study jointly led by a psychology lecturer at the University has shown that regular moderate to vigorous exercise improves teens' academic performance, and particularly seems to help girls do better in science.

Dr Josephine Booth, and Professor John Reilly of Strathclyde University, headed up the study which showed a link between objectively measured physical activity and academic attainment in adolescents in the UK.

The improvements were sustained over the long term, with the findings pointing to a dose-response effect – the more intensive the exercise taken, the greater the impact on test results.

If confirmed by further research, this could have implications for public health and education policy, say the authors who worked in collaboration with the Universities of Georgia and Bristol.

The study has been published online in the British Journal of Sports Medicine.

The researchers based their findings on a representative sample of almost 5000 children who were all part of the 'Children of the 90s' study, also known as the Avon Longitudinal Study of Parents and Children (ALSPAC).

The duration and intensity of the children's daily physical activity levels were measured for periods of between three and seven days, when they were aged 11 and this showed that the average daily number of minutes of moderate to vigorous exercise the 11 year olds clocked up was 29 for boys and 18 for girls significantly less than the recommended 60 minutes.

The children's academic performance in English, maths, and science was then formally assessed at the ages of 11 (compulsory national test key stage 1), 13 (compulsory national test, key stage 2), and 15/16 (General Certificate of Secondary Education; GCSE; key stage 4).

Factors likely to influence academic attainment, such as birthweight, mother's age at delivery, oily fish intake and smoking during the pregnancy, whether the child had reached puberty, weight, and socioeconomic factors were fully adjusted for.

The analysis showed that at the age of 11, better academic performance across all three subjects was linked to the amount of moderate to vigorous physical activity undertaken. Physical activity benefited girls' performance in science, in particular. Academic performance at the age of 13 was similarly linked to how much moderate to vigorous exercise pupils had had at the age of 11.

By the age of 15/16 GCSE exam results also showed a link to exercise, with an increase in performance for every additional 17 minutes/day (boys) and 12 minutes/day (girls) spent doing more intensive exercise at the age of 11.

This study was funded by a grant from the BUPA Foundation to the University of Strathclyde. ALSPAC receives core support from the Medical Research Council, the Wellcome Trust and the University of Bristol.

Publishing success for Book Prize nominees

Three of the shortlisted titles for the 2013 Dundee International Book Prize will be appearing in book shops soon after being snapped up by publishers impressed by the standard of work in the UK's most lucrative award for debut novelists.

Irish writer Nicola White was unveiled as the winner of the 2013 Dundee International Book Prize for her book *In The Rosary Garden*, a crime thriller inspired by a notorious true case of infanticide in Ireland in the 1980s.

Nicola received a cash prize of £10,000 and a publishing deal with leading UK independent Cargo Publishing.

Now two others who were on the shortlist of 12 books have seen their work picked up by publishers on the back of this year's competition.

Paul Beaumont's *A Brief Eternity* is to be published by Dangerous Little Books, while *Falling Fast* by Neil Broadfoot has been picked up by Saraband.

Anna Day, Director of Literary Dundee, said, "It is fantastic that these shortlisted books have been recognised by publishers - it shows that the standard of entries for the prize has just got better and better each year. I can't wait to see these brilliant novels in a bookshop soon."

More than 350 entries were received from around the world for this year's prize. The judging panel included TV personality Lorraine Kelly, actor Brian Cox and Costa Prize-winning novelist AL Kennedy.

The Dundee International Book prize is a joint venture between the 'Dundee – One City, Many Discoveries' initiative, Cargo Publishing and the University of Dundee.

Professor McKean remembered

A memorial service to celebrate the life and work of Professor Charles McKean FRSE, Emeritus Professor of Scottish Architectural History at the University, was held in Dundee at the end of last month.

Church bells rang out across the city centre as friends, family and colleagues gathered in St Mary's Church to pay tribute to Professor McKean, who died in September at the age of 67.

Described as "inspirational" by Professor Christopher Whatley, Vice Principal of the University, Professor McKean was the foremost authority on Scottish architectural history, and his distinguished career also saw him appointed architecture correspondent for The Times newspaper and Chair of UNESCO Edinburgh World Heritage Trust.

He was appointed Head of the School of Architecture at Duncan of Jordanstone College of Art & Design in 1995, before taking up his position as Professor of Scottish Architectural History in the University's History department in 1997.

"Recruiting Charles McKean to History at Dundee was of critical importance in turning around what in the early 1990s was an under-performing department," said Professor Whatley.

"Charles's energy, commitment and enthusiasm were part of the transformation process, but above all was the brilliance of much of his academic work. Charles brought us 4* quality research and unprecedented volumes of 'impact', locally, nationally and internationally. He was a unique individual and genuinely inspirational."

Professor McKean was a passionate advocate of preserving Dundee's architectural history and led hundreds of walking tours of the city over the past two decades. He was awarded an Honorary Stephen Fry Award by the University in 2012 for his lifetime achievements in engaging the public with his research in Scottish architectural history.

His career was celebrated in October at an academic conference with its origins in his ground-breaking research into Scottish Renaissance Studies.

"A New Platform for Scottish Renaissance Studies", which took place in Perth, had been planned before Professor McKean's death. He had been at the forefront of this field of study, and his findings helped bring about a re-evaluation of the Scotland's cultural achievements during the period and the role played by Scotland in the European Renaissance.

Professor McKean held fellowships of the Royal Society of Arts, the Royal Society of Edinburgh and the Royal Historical Society, and was an Honorary Fellow of the Royal Institute of British Architects, the Royal Incorporation of Architects in Scotland and the Royal Scottish Geographical Society.

From 2003-09 he was a member of the Scottish committee of the Heritage Lottery Fund, one of many prominent committee positions he occupied. In 2005 he was appointed Honorary President of the St Andrews Preservation Trust. He was also a prolific author of architecture and history books.

DUSA Confirmed as Polling Station

The Dundee University Student's Association (DUSA) building in Airlie Place is to be used as an official polling station from next year.

Dundee City Council approved the premises following a successful campaign by DUSA and the Student Executive

It will be used for the first time during the elections for the European Parliament in May 2014 and will continue to be used for all elections to the local council, Holyrood and Westminster over the coming years. DUSA will also be used as a polling station for the Independence Referendum which will be held in September 2014.

DUSA President Iain MacKinnon said, "This is fantastic news for DUSA. We've always campaigned to increase student engagement in politics at all levels, from the local to the international, and having a polling station right here in our building will hopefully get more students to register to vote and cast their ballots on the day.

"We have been running a very successful political campaign all year which has included debates involving senior politicians, surgeries with local representatives and our own student council elections. This is great news which will only serve to push DUSA to campaign even further in the upcoming months and years. The first election which we will be a part of will be in May and this will be an excellent way to end a successful year of campaigning."

The polling station will be situated in the Level 2 reception area of DUSA.

Dundee iGEM team take two prizes at World Final

A ten strong team of students from the University enjoyed a double success at the world final of a prestigious international competition to advance science and education last month.

The students from the College of Life Sciences and the College of Art, Science and Engineering won two prizes at the World Final of the iGEM (Internationally Genetically Engineered Machine) competition in Boston.

They won Best Presentation and the iGEMers Prize, given to the project voted best by the students taking part. It followed the team's success in taking top spot in the European final of the competition in October.

Staff advisor Professor Tracy Palmer congratulated the winning team, saying, "This has been an amazing experience for our students and we are delighted that they have performed so well and have won two of the big prizes from the event."

The overall first prize was taken by Heidelberg, who Dundee had beaten in the European event.

"There are different judges for the World Final so the results can change from the European event to the overall event,' explained Professor Palmer.

"The judges were extremely impressed with the presentation skills of the Dundee team, which will come as no surprise to anyone who has seen the students engaging with public and the media. It is great as well to be recognised by their peers in the competition with the iGEMers Prize."

This is the third year Dundee has been represented in the iGEM Competition aimed at undergraduate university students. Dundee won successive gold medals at the 2011 and 2012 European Jamborees but this year was the first time they have been named as overall winners.

The competition requires students to use a kit of biological parts (issued by iGEM at the beginning of the summer) and to use these (and new parts of their own design) to build biological systems and operate them in living cells at laboratories in their own universities.

The Dundee team devised a project called 'Toxi-Mop' which uses synthetic biology to engineer harmless laboratory strains of bacteria to 'clean up' water that has become contaminated with toxic algal blooms. The local value of this became apparent in the summer when the warm weather led to algal blooms in Clatto Reservoir and in the boating pond at Camperdown Country Park.

The team also built a device ('the Mop-topus') that can be housed permanently at a lake or pond, which continuously monitors the temperature, pH and light levels that can be used to predict the likelihood of future algal blooms.

The 2013 Dundee inter-collegiate team consists of Kyle Harrison (applied computing), Nasir Ahmad (physics), Craig Johnston (mathematics), Rachel Findlay (mathematical biology), as well as Christopher Earl, Philip Rodger, Ewa Grabowiecka, Kyle Buchan, John Allan and Alice Rowan from Life Sciences.

University in bid for Athena SWAN Award

Staff from the Universities of Dundee, Abertay and St Andrew's celebrating the launch of the Women in Science portrait exhibition.

The University's commitment to supporting women in science was highlighted at the end of last month (November) when it submitted its application for an Athena SWAN award.

The awards recognise and celebrate good practice in recruiting, retaining and promoting women in Science, Technology, Engineering, Medicine and Mathematics (STEMM) in higher education.

Already a full member of the Athena SWAN Charter, the University is now hoping to achieve bronze award status. This requires a commitment to address issues outlined in the Charter's six principals including gender inequality, the need for cultural change within an organisation and recognition of some of the problems facing women in STEMM sectors.

Dr Helen Louise Murphy, Athena SWAN officer for the University, explained that putting the submission together has itself resulted in raised awareness of areas in need of improvement.

"We have been looking at the gender balance across the University," she said. "We have also carried out an equal pay audit, and looked at family friendly policies, appointment and recruitment data and staff turnover.

"Different departments have different issues. The gender balance in Computing and Engineering, Physics and Maths for example is lower than in other departments but even in female dominated areas there are fewer women in senior positions."

Dr Murphy added that although the submission for the bronze award has been made work will continue across the University.

"Part of what we want to do now is raise awareness amongst staff and managers across the University as a whole as often policies and career development opportunities which support women are already in place but not everyone knows about them," she said.

"We are also signed up to the Aurora programme which is a development programme, specifically aimed at women in higher education to develop leadership skills and strategies and our

> "The University has always been committed to supporting women"

working group, chaired by Professor Doreen Cantrell, will continue to work on the action plan submitted with our award application, which you can read on the University's Athena SWAN website.

"To help raise awareness we'll be organising events and I'll be doing some poster presentations in all the colleges. The Principal is also planning to blog about it."

A successful outcome in the bronze submission could bring benefits to the University as a whole and to individual departments as well as improving the workplace for women.

"The Royal Society of Edinburgh has recommended that the Scottish Government and funders should require Universities to have a strategy for achieving an Athena SWAN silver award, and there is also a parliamentary select committee looking into the careers of women in STEMM.

"The Chief Medical Officer for England has said that the National Institute for Health Research would only expect to shortlist medical schools for biomedical research centre and unit funding if they hold a Silver Athena SWAN award, all of which has created impetus for Universities to tackle the issue of gender imbalances.

"If the University is successful in attaining bronze status, that will allow schools and departments to apply for individual awards.

Professor Doreen Cantrell, who has been leading the award submission, praised the enthusiasm and commitment of the University towards Athena SWAN.

"The University of Dundee has always been committed to supporting women and indeed we have found that the number of female Professors at the University is both above the UK average, and the highest in Scotland, but there is room for improvement.

"Talented women are being lost at every stage of the career ladder and embedding the principles of Athena SWAN aims to put best practice in place to support women in STEMM and make sure that the University attracts and retains the best people it can."

To read the University's award application and Athena SWAN action plan visit **www.dundee.ac.uk/hr/AthenaSWAN**

Athena SWAN

For more information on the Athena SWAN charter visit **www.athenaswan.org.uk**

To follow the University's work in the area follow it on twitter at **@UoD_AthenaSWAN**

Prestigious European prize for Dundee researcher

Dr Victoria Cowling, a researcher in the College of Life Sciences, has been named as one of this year's winners of the prestigious European Molecular Biology Organisation Young Investigator Programme (EMBO YIP) Prize.

Dr Cowling, who is based in the University's Medical Research Council Protein Phosphorylation and Ubiquitylation (MRC-PPU) Unit, is one of a group of only 23 early stage researchers to receive this award this year. Her research aims to find new methods of killing cancer cells by targeting how proteins are made.

"I am delighted to join the EMBO Young Investigator Programme," she said. "I'm looking forward to working with the Fellows from across Europe and beyond. I'd like to thank the members of my lab for their contributions to this fellowship, and the MRC unit and the College of Life Sciences for their support."

Professor Dario Alessi, Director of the MRC-PPU Unit, added, "I am delighted that Vicky has been awarded this great accolade that is richly deserved. Vicky is the fifth PI from the MRC-PPU to be awarded an EMBO-YIP with John Rouse, Daan van Aalten, Karim Labib and Helen Walden previously receiving this honour. This is a great reflection of the strength and calibre of our Unit's researchers."

The EMBO Young Investigator Programme is for researchers under forty years of age who have established their first laboratories in the past four years. The successful candidates work in ten European countries, Israel and Singapore.

"The newly elected EMBO Young Investigators have the potential to be tomorrow's life science leaders," says Gerlind Wallon, EMBO Deputy Director and Manager of the Young Investigator Programme. "The status of Young Investigator offers a level of recognition that brings immediate benefits to scientists at an early stage of their careers."

Dr Cowling recently made a major molecular discovery about how genes are regulated and how mutations in cancer genes promote unrestrained cell growth which can result in tumour formation.

Earlier this year she was awarded a Medical Research Council Senior Non-Clinical Fellowship to continue her ground breaking research on how mutations in cancer genes can result in tumours forming. That award came with funding of £2.5million over seven years to build upon the discoveries that her research group has made over the last five years.

Ivory Chair appointment for Professor Chaplain

Professor Mark Chaplain, a leading figure in mathematical biology, has been appointed the Ivory Chair of Applied Mathematics at the University.

The Ivory Chair of Applied Mathematics was founded at Queens College, Dundee in 1964. The Chair's name commemorates the distinguished Dundee-born mathematician Sir James Ivory (1765-1842). Previous holders of the post have been Professor Douglas Jones, from 1965 to 1992, and Professor Brian Sleeman, from 1993-1995.

Professor Chaplain graduated from the University of Dundee with a degree in Applied Mathematics in 1986 and a PhD in 1990 and has worked within the Division of Mathematics of the School of Engineering, Physics and Mathematics since 1996, firstly as a Senior Lecturer, then as Reader. He has been Chair in Mathematical Biology since 2000.

"Mark's reputation as a researcher and leader in applied mathematics is undoubtedly stellar,' said Professor Stephen Decent, Vice-Principal and Head of the College of Art, Science and Engineering.

"The insight and elegance of his research in mathematical biology, tumour growth and angiogenesis is truly outstanding. Mark is also a great colleague for us here in Dundee. Recently he has attracted some brilliant early career staff into applied mathematics at Dundee, and I feel very fortunate to have Mark here as part of the University."

Professor Chaplain said, "I feel very honoured to receive the Ivory Chair, particularly given the rich history behind it. Working here, in the field of mathematical biology, is the ideal environment for what I do, and I get to collaborate with top class researchers, scientists and clinicians."

Mathematical biology is an increasingly important field of applied maths. Much of Professor Chaplain's work focusses on how mathematical modelling may be used to predict the growth and spread of cancer tumours.

Winter GRADUATION CELEBRATION 2013

Winter wonderland for graduating students

More than 1600 students celebrated their academic achievements with friends and family last month at the University's Winter Gradation at the Caird Hall.

In three ceremonies spanning two days the Graduation saw students from all four University colleges receiving undergraduate and postgraduate degrees and diplomas.

Professor Pete Downes, Principal and Vice-Chancellor of the University, congratulated all graduating students on their achievements.

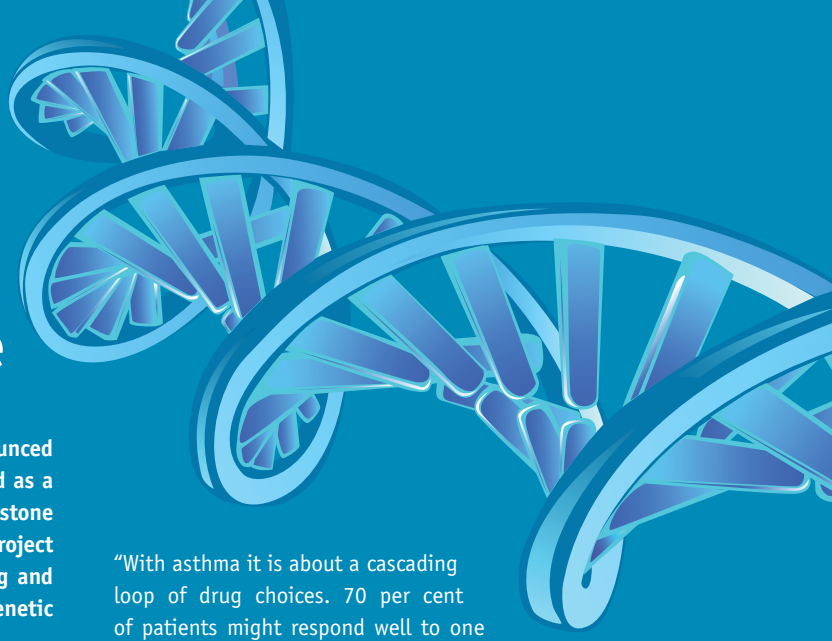
"Winter Graduation combines the best of tradition with the joy of the occasion and has established its own distinct feel," he said. "It is always a source of pride and delight to welcome students and their families here for graduation, which is a major milestone in anyone's life.

"This is a day to remember for graduands and their guests, and it is also one that will help to inspire current students to excel academically as they experience the very special atmosphere that surrounds graduation."

Following the ceremonies students and their guests were invited to a Winter Graduation Celebration in the Dundee University Students' Association where a programme of entertainment including live music, was laid on.

The winter graduations are held to allow students whose courses finish after the traditional summer graduation in late June to receive their awards as soon as possible after successfully completing their studies.

Managing the Genome



When the first 'rough draft' of the human genome was announced by Bill Clinton and Tony Blair in 2000 it was rightly hailed as a hugely significant scientific breakthrough. A major milestone had been reached in the largest collaborative biological project the world has seen, with the ultimate goal of sequencing and identifying all three billion chemical units in the human genetic instruction set.

While the achievement should not be understated, what soon became clear was that there was possibly an even greater task ahead in trying to unpick what all of this information actually meant and how we could make use of it.

"All sorts of human traits can be drawn out from the genome, from how the immune system works to why some people sneeze when they look at the sun or a bright light," said Professor Colin Palmer, Chair of Pharmacogenomics in the School of Medicine. "We know for instance that it is a genetic mutation that prevents some people from catching norovirus – 20 per cent of the UK population have the mutation which means they can't get it. Mutations mean that people can't get some forms of stomach infection. Male pattern baldness is a genetic mutation that is carried down from our maternal grandfather. So by looking at the genome just for those instances we are able to deduce that one man may sneeze when looking at the sun, won't catch norovirus but may be prone to stomach infection and will go bald by the time he is 30.

"That is relatively straightforward when you are just considering one person. Where it gets extremely tricky is when you try to produce something from that data that can be useful to a lot of people, because there are typically around three and a half million genetic differences between one individual and the next.

"This is a good thing in one very important sense. If we were all genetically identical we would have a situation like the plant world where Dutch Elm Disease can wipe out an entire species. One disease would kill us all!

"But we are all very different in how we respond to all diseases, medicines and many other factors. Where that makes things very complex is in trying to develop treatments that can work for enough people to be effective.

"There is no such simple thing as a person who does not respond to a drug. Our bodies will respond to it, but perhaps not in the way that the treatment is designed to take effect. This is why some people with asthma will respond well to a certain treatment while others will not.

"With asthma it is about a cascading loop of drug choices. 70 per cent of patients might respond well to one drug. Of the remaining 30 per cent, half may well get the desired effect from a different drug, and so on. It is about finding enough drug choices to make sure that 100 per cent of people have a treatment available that will work for them.

"In cancer we are looking to apply the best drugs from hundreds of different choices. Some of those will already have been developed and we will have to work out what the others may be. We are not yet at the stage of having truly personalised medicine but we are gradually moving closer towards it."

That movement is being helped by technological leaps which are making genomics one of the most dynamic areas of medical research. Trying to analyse the activity of multiple genes and decode the meaning of the billions of letters which make up the genome was until recently much too complex to even comprehend. However, advances in computing have placed researchers like Colin in a completely different place.

"For around 20 years we were working in molecular biology looking at genes one-by-one and one letter at a time," he said. "Now, over the last five years, the technology has been developed which allows us to look at millions, billions of letters at a time in an individual's genome. We are now doing things in a completely different way, enable to examine multiple genes at once and work out patterns of interaction across this massive jigsaw of genetic activity."

The computing power behind all of this is advancing so quickly that new horizons are coming into view all the time.

"We can do genetic sequencing now but it still costs thousands of pounds per person to do. In the next couple of years it will become cost-effective to look at the whole genome of a person.

"The technology that is coming which will give us genome machines the size of a USB stick that will be able to do a DNA test in less than a second. And it will allow us to catalogue all the letters in the genome."

This is the area of what was recently science fiction turning rapidly into science fact. But it still needs to be managed carefully and effectively if we are to harness this mass of information in a useful manner.

The GoSHARE project is a partnership between the University and NHS Tayside which is pioneering an easy way for people to help the fight against disease. It only takes one minute to sign up to GoSHARE but the benefits may be felt for generations to come, say researchers.

"Every day people are giving blood samples for testing at their doctor or in hospital but from each sample there is some blood left over," said Professor Palmer. "What we are asking people in Tayside is that they give us permission to use this blood for research. Over the past 15 years around 10% of the Tayside population (40,000 people) have signed up to genetic studies and this has resulted directly in major discoveries of genetic variants for eczema, asthma, diabetes and heart disease amongst others."

People can sign up at **www.goshare.org.uk** or complete FREEPOST brochures that have been widely distributed throughout Tayside including GP surgeries and pharmacies.

"There are services now available where people can have their own genome sequenced," said Colin. "The interesting thing is how that will inform their treatment. We have to ensure that this process is managed and developed in a meaningful way. People are already going to their doctors with a genetic profile and wanting their doctor to act on that. It simply isn't realistic to expect doctors to respond to that demand without the relevant information available to them. And if enough people start doing that then we will have chaos.

"What we have to do, and what is already happening here with projects like GoSHARE (see sidebar) is that we are gathering and managing that information in a way that it can be successfully applied to future healthcare. Rigorous, systematic methods are applied and it means we will get results that are meaningful and which can be applied across the population.

"We are always trying to work out how information from the genome can be managed positively. We have to be able to understand why we are different.

"That still presents a very difficult challenge in that there are three billion letters in the genome and most it is still gobbledegook. We are trying to decode what all of them mean, which is why we have to do large, population-based studies. With those we can start to work out what the whole genome says and draw out what human traits those letters relate to.

"Every time we sequence someone there are several hundred mutations which we haven't seen before, among the all the millions of differences from person to person. That is a staggering amount of information and decoding what it all means can only be done by mass studies."

> "We are always trying to work out how information from the genome can be managed positively"

Reigniting a passion for politics with 5 million Questions

understanding Scotland's referendum

As the countdown to the referendum on Scotland's constitutional future gathers pace and the political temperature continues to rise, the role of 5 Million Questions, the University's major knowledge exchange project, takes on a new significance.

Set up by the University a year ago to examine the issues surrounding the Constitutional debate ahead of the 2014 referendum, 5 Million Questions has established itself as a neutral forum where all shades of opinion can meet, discuss and share ideas and views

Its success so far can be measured in the calibre of speaker keen to be involved and the numbers of people attending the events, debates and discussions. Already this year audience figures have reached the thousands and some of the biggest names in Scottish politics have taken part in 5MQ events. Feedback from audiences has been overwhelmingly enthusiastic.

In recent weeks Scottish Deputy First Minister Nicola Sturgeon and Labour's Shadow Foreign Secretary Douglas Alexander have had their positions questioned, probed and discussed in a series of in-depth public conversations led by 5MQ Associate Director David Torrance.

And at the end of October, Blair Jenkins, head of the Yes Scotland pro-independence campaign group, and Blair McDougall, head of the Better Together pro-union campaign group, came face to face at the Dalhousie Building to state their respective cases.

For Professor Chris Whatley, Chair of the 5MQ Steering Group and Professor of Scottish History at the University, the success of the project has been built on its neutrality and its desire to approach the constitutional debate in a way that is fair and is seen as being fair.

"It's the neutrality that is the key factor," he said. "Everyone involved in Five Million Questions has their own views but what we try to be is even-handed and I think that is the main reason for success. It is seen as being a neutral forum for bringing together all shades of opinion. This has been endorsed by the First Minister Alex Salmond and leading figures from all sides of the debate."

It has also, he believes, highlighted the renewed interest amongst the general public in live political debate.

"I think what Five Million Questions is demonstrating is that after decades of decline in people attending political debates and meetings and a view that the live political event is dead, there is actually quite an appetite for it.

"That is certainly what we are seeing at the events we have organised. People are turning out in their hundreds and are relishing the opportunity to ask in-depth questions. It is the independence debate that has been the catalyst for this rebirth of enthusiasm for live political debate."

Although there are many referendum inspired events taking place across Scotland, Professor Whatley believes Five Million Questions is unique in the scale of its ambition and also the mix of academic input and popular appeal.

"There are other events going on across Scotland," he said. "Other universities are organising events around the independence debate but many of them are smaller and more academic. What we are doing is bringing academic rigour to the debate but also trying to engage with the general public."

Plans for the coming year look certain to see audience figures grow even higher as more political and academic heavyweights are invited to join the debate including Scotland's First Minister Alex Salmond.

The first event of referendum year will take place on 15 January when defence studies expert Professor Sir Hew Strachan, Chichele Professor of the History of War at the University of Oxford, will look at the issue of defence in the context of the independence debate.

John Kay, Visiting Professor of Economics at the London School of Economics and one of the UK's leading economists, will also be taking the stage in the Spring while moves are underway to bring in political leaders of the calibre of John Swinney, Cabinet Secretary for Finance in the Scottish Government, and Alastair Darling, former Chancellor of the Exchequer and chairman of the Better Together campaign.

"In April we will also be having Wha's Like Us, an academic conference comparing Scotland's situation with other countries who have gained independence or who have had independence movements," added Professor Whatley. "So we'll be looking at the Baltic states, Spain and the Basque and Catalan movements and hopefully we'll also have someone from Canada.

"And in May Professor Calum Colvin, will be looking at creativity in an independent Scotland."

5 Million Questions is also reaching out to the business community through events co-sponsored by the Chambers of Commerce, and a new generation of voters with a series of talks planned for Dundee High School and hopes that more schools will follow suit.

"We think there is a job of work to be done in terms of 16 to 18 year olds who will have the vote for the first time. We are very keen to connect with that age group."

Perhaps with an eye to the younger voter 5MQ also has active Facebook and Twitter accounts already notching up hundreds of likes and followers. The website too (http://fivemillionquestions.org/) also has podcasts of past events, a weekly digest and regular blogs from David Torrance.

Future plans include a book based on the issues highlighted by members of the public via the website and at 5MQ events. Written as a layperson's guide to the referendum, the book will be published by Edinburgh University Press and include sections on the economy, pensions, defence, culture, the monarchy and history.

"We have a dozen authors who will be writing on the topics that the public have been asking about," explained Professor Whatley. "The hope is that it will become the definitive guide to the independence debate."

Hopes are also high that the project as a whole will leave another legacy in the form of funded research on a variety of subjects linked to the independence debate.

"We can't know at this stage what the research will be until the outcome of the referendum but we are building up a body of expertise which should provide a resource for research papers and funded projects," he added.

"The world's attention will be on Scotland and we are significant contributors to the debate. We are making space available for speakers and although we are based in Dundee the impact we are having goes far wider.

"There is still a way to go yet. The debate is far from over and we are hoping to bring some very key players to Dundee over the coming months."

> "The Independence debate has been the catalyst for a rebirth of enthusiasm for live political debate"

Calculating sexism in computing and technology

Dr Karen Petrie, a senior lecturer in computing in the College of Art, Science and Engineering, has come up with a novel method of highlighting the problem of gender imbalance in the computing and technology sector.

A passionate computer scientist and an active campaigner for improved female participation in the industry, Dr Petrie has given numerous talks over the years to raise awareness of the problems facing women in computing. Her role as Chair of the British Computing Society Women's Group between 2008 and 2011 gave her an ideal platform to raise the issue.

But she has at times faced a less than enthusiastic reaction from her usually overwhelmingly male audiences. She has been criticised for being a feminist and even accused of being a "man-hater." One particularly hostile reception recently provided the catalyst for a different approach.

"I had been given a really hard time for raising the issue of gender imbalance," explains Dr Petrie. "I was accused of being offensive just for talking about it. But it is a major issue in computing. Women are outnumbered by men in the industry by more than five to one and it's getting worse rather than better. The percentage of women employed as IT & telecoms professionals declined from 22% in 2001 to 18% in 2010 and only 15% of acceptances to computing degree courses are female.

"There are also issues surrounding the way women are treated in the sector and I have tried to raise these and encourage people to talk openly about them. The problem with this approach however, as I have found out, is that it makes many men feel uncomfortable and criticised. They felt as if I was saying all men are in the wrong."

Recognising the need for a different approach Dr Petrie turned to maths and came up with a counter-argument which highlights the increased sexism experienced by women in computing without blaming men in general.

"I remembered a conference I had attended where one guy would chat up every female in the room and I started thinking about the impact that one person could have," she explained. "If there were four women at the conference and he tries it on with a different woman every day then over the course of the conference all of them will have had this attention. So that's 100% of women as a result of only one man.

"That got me thinking and I came up with a very simple bit of maths which shows that if the percentage of men and women in the room who make questionable remarks to the other sex is equal and if the percentage of women in the room is lower than the percentage of men then the average woman experiences far more sexist comments than the average man.

"The wonderful thing about this is that there is nothing in it about men being worse or more sexist than women and yet still we have women experiencing dramatically more sexism than men in the technology and computing sector.

"It is because of the gender disparity in the industry and the fact that this multiplies up to the detriment of the minority group. So an attack on sexism in computing is not an attack on men."

Dubbed the "Petrie Multiplier" by St Andrews University Professor and blogger Ian Gent, the model has created something of a social media stir with more than 25,000 blog posts and in excess of 500 tweets in a matter of weeks.

"I mentioned my idea to Ian and he decided to write a blog on the subject," said Dr Petrie. "Since then the response has been amazing and most of the feedback has been positive. At the very least it really seems to have started the conversation about gender in computing.

"Now we have to keep that conversation going and make sure computing and technology don't continue to be seen as a "boys own" club. If we want the best people in the field we have to think about why some people may be being put off simply because of their gender."

In the meantime Dr Petrie continues to highlight the benefits of a career in computing to everyone regardless of gender. She has been involved in events at Dundee Science Festival aimed at schoolchildren, she coordinates the annual Strathmore Trophy competition for secondary school pupils and she is one of the organisers of the School of Computing Christmas lecture which will take place on 16th December.

"I spend quite a bit of time selling computing as a potential career to schoolchildren," she said. ""It is an excellent career choice. We have 95% employability amongst our graduates and many will be in a very good salary bracket. I can't imagine working in any other industry. I love computing and particularly the creativity of it. Not only can I use digital content on my computer but I can create it. If I want a new app I can design my own and that is incredibly empowering.

"But we need to work harder to make it a more welcoming environment and do what we can to make it a better community not just for women but for everyone."

> "Women are outnumbered by men in the industry by more than five to one and it's getting worse rather than better"

Director of Education role for Dr Petrie

Dr Petrie has been appointed Director of Education for the Scottish Informatics and Computer Science Alliance (SICSA).

SICSA is a collaboration of Scottish universities whose goal is to develop and extend Scotland's position as a world leader in informatics and computer science research and education. As Director of Education, Dr Petrie will promote computing in Scotland to an external audience as well as representing the sector in dealings with the Scottish Government, Scottish Qualifications Authority, other industry bodies and schools and colleges.

"I am absolutely delighted to have been appointed Director of Education for SICSA and look forward to promoting Scottish computing and informatics education programmes and development, along with my core work at the University," said Dr Petrie.

"This is an exciting time for universities in Scotland, but also a challenging one and it is essential that our computing programmes are given the support they require to enable them to compete in a global marketplace and maintain our position as a leader in the development of technology."

Dean of the School of Computing Dr Janet Hughes congratulated Dr Petrie on her appointment, saying, "Karen will continue to deliver her excellent outreach work but also now will be in a position to extend her influence across all Scottish universities. The potential impact is great and this is a very well-deserved recognition of her fantastic engagement and education work."

SICSA Education is a forum for members to articulate and realise collective interests, and a portal for schools and colleges, industry and government to engage with the organisation. SICSA members work cooperatively by providing mutual support and sharing facilities for the betterment of computing education across the whole of Scotland.

More information is available at **www.sicsa.ac.uk/education**

"This is an exciting time for universities in Scotland, but also a challenging one and it is essential that our computing programmes are given the support they require"

Burnsiana - a new perspective on the Bard

The life and legacy of Robert Burns is the inspiration for a new book and exhibition by Calum Colvin OBE, Professor of Fine Art Photography at the University's Duncan of Jordanstone College of Art and Design.

Burnsiana ccombines Professor Colvin's intriguing photographic artworks with poems written in response by Scots poet Rab Wilson.

The result is a witty, controversial and at times tender reflection on the influence of Burns on Scottish culture and society.

"The idea for this whole project was to start with Burns, and somehow end up with Burns but, in the process, contemplate subjects such as politics, mortality, tartanry, sectarianism and portraiture," explained Professor Colvin.

"I wanted to look at characters from the time of Burns and hold a mirror up to aspects of contemporary society. I hope it will encourage people to reflect on the continuing relevance of Burns' legacy to our recent past and forwards into 21st Century Scotland."

He added that the book and the exhibition followed on from an earlier exhibition he had staged at the Robert Burns Birthplace Museum in Alloway and to which he had invited Gavin MacDougall, Director of Luath Press.

> "I wanted to hold a mirror up to contemporary society"

"That exhibition was called 'Burnsiana' and contained a selection of works made over the last ten years or so which have some connection to the Bard. Burnsiana is a word which does not appear in any dictionaries. However, it's generally understood to loosely refer to any collection of literary odds and ends relating to Robert Burns. For this new exhibition this has been extended to also encompass a visual representation of these 'odds and ends'.

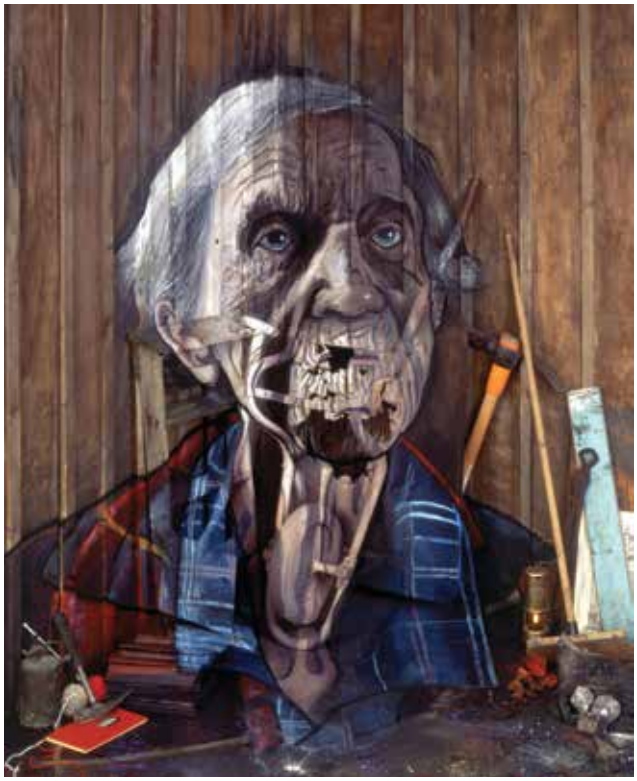
"For the book I expanded the idea of 'Burnsiana' further to include works related to Burns poetry and political ideas. Gavin suggested the collaboration with Rab Wilson. I thought it was a great idea, particularly as Rab is a highly accomplished writer in Scots, which is of course Burns' language.

"We got together, I talked him through the ideas behind the pictures in the exhibition, and he produced his first poems quite quickly after that. He responded to a number of portraits of Robert Burns, but also images such as 'Portrait of Colin McLuckie' an image of an ex-miner and reciter of Burns poetry from the village I grew up in, a tender homage to the working class autodidact Burns scholars who still populate much of Scotland."

Burnsiana: Poems and Artworks inspired by the Life and legacy of Robert Burns is published by Luath Press and features a foreword by acclaimed Scottish writer Janice Galloway.

The exhibition at the Scottish Storytelling Centre in Edinburgh will run until 31 January 2014.

Professor Colvin is planning a major restrospective "installation" at Edinburgh Printmakers Workshop during the Edinburgh International Festival next year.



"It will be a kind of archaeology of my creative practice, focusing upon my archive of image transparencies that date back to the early 1980s," he explained.

"This project will engage with aspects of history, creativity, performance, audience participation, and public discourse. A unique form of presentation – a series of especially constructed light boxes displaying 10" x 8" original transparencies changing at regular intervals – will allow a large amount of work to be seen over a period of time.

"Printmaking, ceramic works, mirror stereoscopes and other experimental works will feature. New work will be created in residence including painting, constructing and photographing."

A catalogue and an events programme are also being planned.

> "It will be a kind of archaeology of my creative practice"

SATURDAY EVENING 2014
LECTURE SERIES

SELS celebrates 90 fascinating years

2014 marks the 90th anniversary of the University's Saturday Evening Lecture Series and to mark the occasion an extended programme of events is being planned to run throughout the year.

Speakers so far include geologist Iain Stewart, historian Max Hastings, award winning author Caroline Shenton and entrepreneur Chris van der Kuyl. Some of the University's leading professors will also be joining in the anniversary celebrations and more speakers are expected to be announced over the coming months.

The series begins on 1 February with **Dr Caroline Shenton** who will be talking about her book *The Day Parliament Burned Down*, which won the Political Book of the Year Award and was shortlisted for the Longman-History Today prize.

Dr Shenton, a former Director of the Parliamentary Archives at Westminster, is an honorary teaching fellow for the Centre for Archive and Information Studies at the University.

On 1 March SELS will be celebrating International Women's Day with four formidable women, all of whom are recognised leaders in their fields of expertise.

Professor Sue Black, Director of the University's Centre for Anatomy and Human Identification, **Professor Fiona Raitt**, Professor of Evidence and Social Justice at Dundee Law School, **Alyson Leslie**, an expert in child care enquiries now based in CAHID and **Professor Niamh NicDaeid**, an expert in fire investigation and drug analysis from the University of Strathclyde will be exploring their professional drives and experiences.

The evening will be led by international crime writer **Val McDermid**.

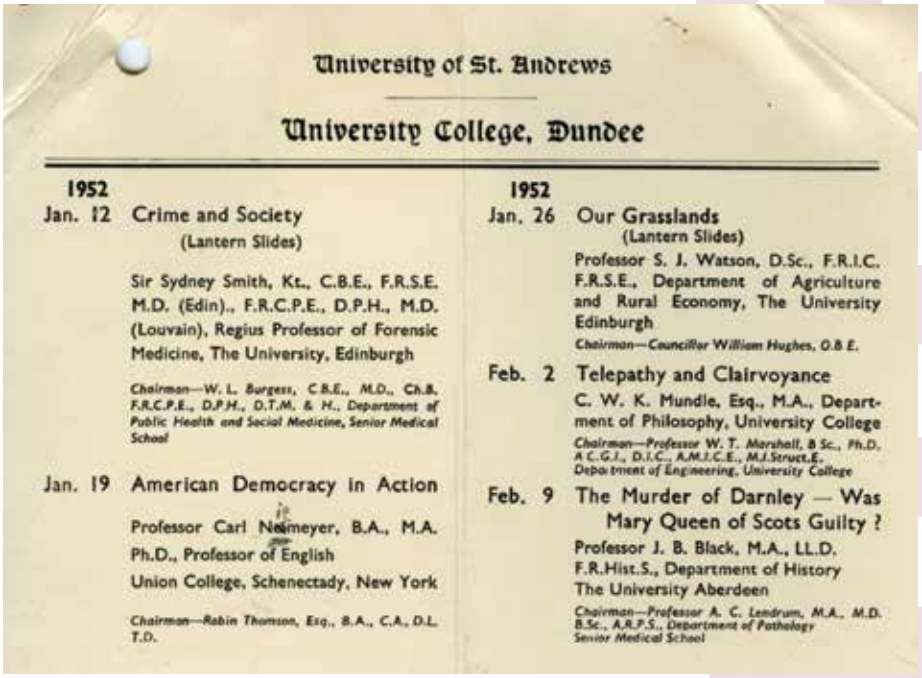
Later in March (22nd) geologist and TV presenter **Iain Stewart**, Professor of Geoscience Communication at Plymouth University, will be joining the SELS celebrations while in April (26th) historian and author **Sir Max Hastings** will be discussing his new book *Catastrophe: Europe Goes to War 1914* at the Graduate Council and World War One Centenary lecture.

A lecture focussing on the University's **Peto** collection of photographs is also planned as is a talk by **Professor Andrew Morris**, Professor of Medicine at the University's medical School and Chief Scientist with the Scottish Government. Other talks are also expected to be announced in the New Year.

All lectures take place in the Dalhousie Building and begin at 6pm. They are followed by a drinks reception. For more information visit the Events Office website at **www.dundee.ac.uk/events**

Tickets for all lectures are available online at **www.dundee.ac.uk/tickets**

From the Archives...



University of St. Andrews

University College, Dundee

1952
Jan. 12 Crime and Society
(Lantern Slides)

Sir Sydney Smith, Kt., C.B.E., F.R.S.E. M.D. (Edin)., F.R.C.P.E., D.P.H., M.D. (Louvain), Regius Professor of Forensic Medicine, The University, Edinburgh

Chairman—W. L. Burgess, C.B.E., M.D., Ch.B. F.R.C.P.E., D.P.H., D.T.M. & H., Department of Public Health and Social Medicine, Senior Medical School

Jan. 19 American Democracy in Action

Professor Carl Niemeyer, B.A., M.A. Ph.D., Professor of English
Union College, Schenectady, New York

Chairman—Robin Thomson, Esq., B.A., C.A., D.L. T.D.

1952
Jan. 26 Our Grasslands
(Lantern Slides)

Professor S. J. Watson, D.Sc., F.R.I.C. F.R.S.E., Department of Agriculture and Rural Economy, The University Edinburgh

Chairman—Councillor William Hughes, O.B.E.

Feb. 2 Telepathy and Clairvoyance

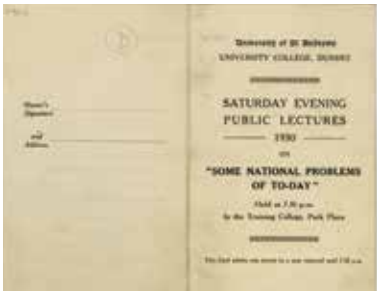
C. W. K. Mundle, Esq., M.A., Department of Philosophy, University College

Chairman—Professor W. T. Marshall, B.Sc., Ph.D., A.C.G.I., D.I.C., A.M.I.C.E., M.I.Struct.E., Department of Engineering, University College

Feb. 9 The Murder of Darnley — Was Mary Queen of Scots Guilty ?

Professor J. B. Black, M.A., LL.D. F.R.Hist.S., Department of History
The University Aberdeen

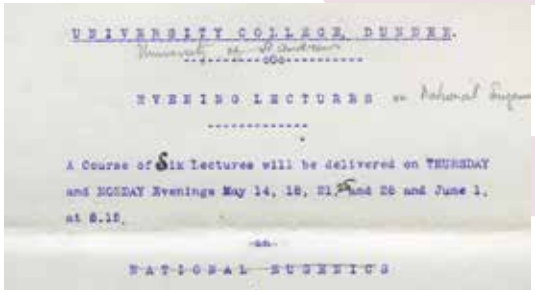
Chairman—Professor A. C. Lendrum, M.A., M.D. B.Sc., A.R.P.S., Department of Pathology Senior Medical School



SATURDAY EVENING PUBLIC LECTURES

1930

"SOME NATIONAL PROBLEMS OF TO-DAY"



UNIVERSITY COLLEGE, DUNDEE.

EVENING LECTURES on National Eugenics

A Course of Six Lectures will be delivered on THURSDAY and MONDAY Evenings May 14, 18, 21, and 28 and June 1, at 8.15.

NATIONAL EUGENICS

Looking back at 90 years of public lectures

The tradition of holding public lectures dates right back to the founding of the University as University College Dundee in 1881. The early professors and staff were keen to establish and strengthen ties with the people of Dundee and Tayside holding evening classes, giving public lectures and undertaking welfare projects such as those of the Dundee Social Union with which Mary Lily Walker was involved.

The public lecture programmes reflected research interests of College staff as well as topics that were of a more general nature. Popular issues and fashions in research can be discovered through an examination of the syllabus for each session, as the advertisement for the Eugenics lecture by David Heron in 1914 demonstrates.

The evening lectures as we know them today can be traced back to a series of lectures held jointly with the Dundee Naturalists Society beginning with a lecture by Principal Mackay on Primitive Man in October 1924. The lectures were held on Tuesdays in the 1924-5 session, Thursdays in 1925-6 and Fridays in 1926-7.

A pamphlet celebrating the jubilee year of the lectures in 1977 points to a lecture by the College's Professor of Natural History, Alexander David Peacock, on Experiments in Insect Behaviour and delivered on 4 February 1927 as the first really regular lecture designed as 'a popular meeting place for Town and Gown' and 'a contribution to adult education'. It wasn't, however, until 1928 that they moved to their permanent home of Saturday. From that point until the jubilee in 1977, only seven years were missed, five of which were during the Second World War.

While it is clear that public evening lectures have been a feature of the University since its foundation, it seems fitting, in honour of Principal John Yule Mackay, to acknowledge 2014 as the 90th anniversary of the lecture series.

Discovery Days 2014

Eighteen of the University's newest professors will be highlighting their research in a fast-paced series of short talks over two days as part of the 11th annual Discovery Days lectures.

Subjects as diverse as diabetes research, the effects of the Scottish weather on emigration and how buildings can be protected from earthquakes will all be on the agenda on Thursday 9th and Friday 10th January 2014.

Joining the newly appointed professors will be three of the University's award-winning teachers who will be discussing problem-solving for engineers, employability in the curriculum and the benefits of exercise for people with cancer.

All the talks, which are limited to around 15 minutes, are designed to entertain as well as educate and inform.

The two day showcase of academic and teaching talent will finish with the announcement of the 2014 winner of the Stephen Fry Award for Excellence in Public Engagement with Research.

"There's a really good, diverse range of subjects this year," said event organiser Dr Jonathan Urch. "We have speakers talking about cancer, urban regeneration, market regulation and national identity. It should be a very entertaining and informative two days."

All presentations will take place in the main lecture theatre at the Dalhousie Building. Free tickets for Discovery Days 2014 are available by calling 01382 386669, sending an e-mail to RevealingResearch@dundee.ac.uk or collection from Tower and Dalhousie Building receptions.

For more information visit **www.dundee.ac.uk/discoverydays**

Thursday 9 January 2014

SESSION 1 11.15AM – 12.50PM

Karl Leydecker • *A Vision for Excellence in Learning and Teaching at Dundee*

Graeme Hutton • *When is a House not a House?*

Charlotte Proby • *Shedding Light on Skin Cancer*

Amin Abdolvand • *Making Light Work*

SESSION 2 1.40 – 2.50PM

John Rowan • *Soil Erosion and its Significance to Global Food Security*

Bruce Burton • *Elastic Bands and Oil Tankers – The UK's Approach to Regulatory Change in the Corporate Sector*

David Horn • *Decoding a Deadly Parasite*

SESSION 3 3.10 – 4.20PM

Ewan Pearson • *Targeting Treatment in Diabetes*

Ruth O'Riordan • *Future Proofing Our Graduates – Careers Education in the Curriculum*

Graeme Morton • *Wind, Rain and Scottish Emigration*

Friday 10 January 2014

SESSION 4 10.00 – 11.20AM

Anna Campbell • *Cancer Rehabilitation: Movement Matters!*

John Baldacchino • *Within the Outwith. Undoing Art, Unlearning Education*

Karim Labib • *Machines that Copy Chromosomes*

SESSION 5 11.40AM – 1.00PM

Fraser Smith • *Engineering the Engineers of the Future*

Ioannis Anastasopoulos • *Rocking Isolation: Protecting Buildings from Earthquakes*

Deborah Peel • *Urban Regeneration: A Titanic Task?*

iGEM team • *Toximop – Stopping Harmful Algae in its Tracks*

SESSION 6 1.40 – 2.50PM

Ioan Fazey • *Social Dimensions of Environmental Change*

Graham Chadwick • *Dental Erosion – A Lifestyle Window*

James Livesey • *Did Reason Sleep? The French Revolution, Terror and the History of Reason*

SESSION 7 3.10 – 4.30PM

Mark Robson • *What Do We Want Theatre To (Want To) Be?*

Rory McCrimmon • *When Too Little Sugar is Not Good for You*

Presentation of the Stephen Fry Award for Excellence in Public Engagement with Research

court news

The Court met in September for the annual Court Retreat and again at the end of October for the first full meeting of the new academic year.

The Court Retreat

The annual retreat in early September considered a range of important issues. At the business meeting the Dundee University Student's Association (DUSA) President presented the DUSA manifesto, strategic priorities for 2013/14 and revisions to the DUSA Constitution, and members also discussed the implementation of the recommendations within the Scottish Code of Good Higher Education Governance (published on 18 July 2013 and available from http://www.scottishuniversitygovernance.ac.uk/).

Outwith the business meeting, the Court participated in a number of interactive strategic discussion sessions, receiving presentations from: the Director of Human Resources on the preliminary results of the Staff Survey; the Deputy Principal (Internationalisation), Professor Margaret Smith, on the University's Internationalisation Strategy; the University Secretary and Director of Policy, Governance & Legal Affairs regarding the quinquennial review of Court Effectiveness; the Vice-Principal for Research, Professor John Connell, regarding the Research Excellence Framework 2014 submission; and the Principal regarding the University's future financial strategy.

University Vision and University Strategy to 2017

Continuing with the series of presentations relating to the University Vision, the Vice-Principal for Wider Impact, Professor Stephen Decent, gave a presentation to the Court outlining current examples of excellence, future projects and the strategy for the coming year. In doing so, Professor Decent highlighted the importance of focussing wider impact efforts around the three central challenges of the University Vision (improving social, cultural and physical wellbeing; shaping the future through innovative design; and promoting the sustainable use of global resources). He also highlighted the importance of considering wider impact activities such as knowledge exchange, commercialisation and public engagement as key academic priorities alongside research and teaching.

The Court also considered a report outlining progress toward the University's performance across Key Performance Indicators (KPIs) within the first year of the planning period covered by the University Strategy to 2017.

Learning & Teaching

The Court received a paper from the Vice-Principal (Learning & Teaching) summarising the University's performance in the 2013 National Student Survey (NSS). Student satisfaction had fallen by 2% resulting in a drop from 11th to 33rd within NSS rankings, however the University was ranked number 1 in Scotland for student satisfaction in 11 individual subjects. The Court was interested in the planned approach to communicating and addressing issues raised within the survey. The Court was also interested to hear an update on the Enhancement-Led Institutional Review (ELIR) taking place in October and November 2013 and looked forward to hearing updates on the review and other aspects of the Learning & Teaching agenda in December when the Vice-Principal (Learning & Teaching) would present his vision for learning & teaching at the University.

Human Resources

The Court was interested to learn about how the results of the staff survey would be communicated to all staff and what plans were being developed at the University and the College/Directorate level to address emerging themes and issues.

Farr Institute of Health Informatics Research

The Court considered a paper that highlighted governance and operational matters relating to the Farr Institute - a network of e-Health Informatics Research Centres established across the UK to improve patient care and public health, for which the University was the lead in Scotland. A consortium of 10 funders including the Medical Research Council, Government and charities had invested £39m in the UK-wide research institute, and the University's involvement was expected to further enhance its profile as an international leader for health informatics research.

Other Business

The Court continued to pay an interest in student admissions figures ahead of a comprehensive report later in the year on 2013/14 entry figures.

Contact

The next edition of Contact will be published in February 2014. The copy deadline for that edition is Monday 13 January 2014. Submissions should be send to h.mcnally@dundee.ac.uk by that date.

appointments

Professor Bruce Burton

Personal Chair of Finance

Professor Bruce Burton graduated from the University of Dundee with a BAcc (Hons) First Class in 1991 and a PhD in Finance in 1998.

He was first employed by the University as a Lecturer in 1999, becoming a Senior Lecturer in 2003 and a Reader in 2011.

Prior to joining the University, Professor Burton worked in the Management School at the University of Bath and for the accounting firm PWC in Nottingham.

His research is concentrated on examining governance and regulatory failings in both developed and developing markets as well as analysing corporate and market behaviour in incomplete information environments.

He is the founding editor of the journal Qualitative Research in Financial Markets, the first dedicated outlet in the field, and director of the Centre for Qualitative Research in Finance.

Professor Rory McCrimmon

Chair in Experimental Diabetes and Metabolism

Professor McCrimmon trained at the University of Edinburgh and completed his clinical and speciality training in the South-East of Scotland before becoming an NHS Consultant Physician in Diabetes and Endocrinology at University Hospital Aintree, Liverpool, in 2000.

In 2002, he joined the faculty at Yale University, Connecticut, to further develop his clinical and basic research in diabetes and the central regulation of glucose homeostasis, before returning to the UK in Oct 2009 to establish his laboratory at the University of Dundee, where he is currently Professor in Experimental Diabetes and Metabolism and Lead Clinician for the Scottish Diabetes Research Network.

Prof McCrimmon is currently lead PI on 6 grants. His laboratory has successfully obtained ≈£1.5 million in funds for laboratory research into Type 1 diabetes since re-location to Dundee as well as obtaining significant funds through collaborative research. In particular, the McCrimmon Laboratory has been continuously funded by the Juvenile Diabetes Research Foundation (JDRF) for more than 10 years.

In addition to his work in research and clinical practice, Prof McCrimmon serves on the editorial board of the Journal of Clinical Endocrinology and Metabolism and HypoDiab, an on-line journal focused on Hypoglycaemia in clinical practice. He is also a panel member on the MRC Clinical Fellowship Training and Career Development Awards, the Scottish Translational Medicine Training Initiative, and the Diabetes Research & Wellness Foundation.

Professor Ioannis Anastasopoulos

Chair of Civil Engineering

Professor Anastasopoulos obtained his Diploma in Civil Engineering from the National Technical University of Athens (NTUA) in 1999, followed by an MSc from Purdue University (2001), and a PhD from NTUA (2005).

During his PhD, he studied the interaction of fault ruptures with foundation–structure systems, combining field studies, centrifuge model tests (conducted at Dundee), and numerical analyses. Professor Anastasopoulos has been the driving force behind the development of a new Experimental Facility for Simulation of Soil-Structure Systems at NTUA, where he was elected as Assistant Professor in 2011.

His research is in the broader area of geotechnical earthquake engineering, with a particular focus on seismic hazard mitigation. Lately, he has also been working on the development of novel concepts for offshore wind turbine foundations, and recently filed for a patent.

He also has extensive professional experience, as he has worked in a variety of projects in Greece, but also in the US and the middle East.

He is a Reviewer in several Journals and serves as Editorial Board Member of the ICE–Geotechnical Engineering Journal. In 2012, he won the Young Researcher Award of ISSMGE and the Shamsher Prakash Research Award in Geotechnical Earthquake Engineering.

Professor Karim Labib

Personal Chair of Genome Integrity

Professor Labib studied Natural Sciences at the University of Cambridge. After graduating in 1989 he spent seven years studying the regulation of chromosome replication in fission yeast, firstly as a PhD student with Sir Paul Nurse at Oxford University, then as an European Molecular Biology Organisation (EMBO) postdoctoral fellow with Sergio Moreno in Salamanca, and finally back in Oxford with Stephen Kearsey.

After a period at Clare Hall research laboratories in London he received a Senior Cancer Research Fellowship to start his own group at the Cancer Research UK Manchester Institute in 2001.

Professor Labib was a member of the EMBO Young Investigator Programme from 2004 to 2007 and was elected a member of EMBO in 2010. That same year he was also awarded the Hooke medal by the British Society for Cell Biology.

In October 2013, he joined the MRC Protein Phosphorylation and Ubiquitylation Unit, and was appointed as Professor of Genome Integrity in the College of Life Sciences.

His group aims to understand how the molecular machinery at DNA replication forks allows eukaryotic cells to preserve their highly complex chromosomes from one generation to the next.

Visions of Discovery

This year's Visions of Discovery exhibition, currently on show in the Dalhousie Building, provides fascinating insights into many aspects of biomedical research being undertaken within the University. The exhibition is the culmination of a competition open to researchers across the College of Medicine, Dentistry and Nursing and the College of Life Sciences.

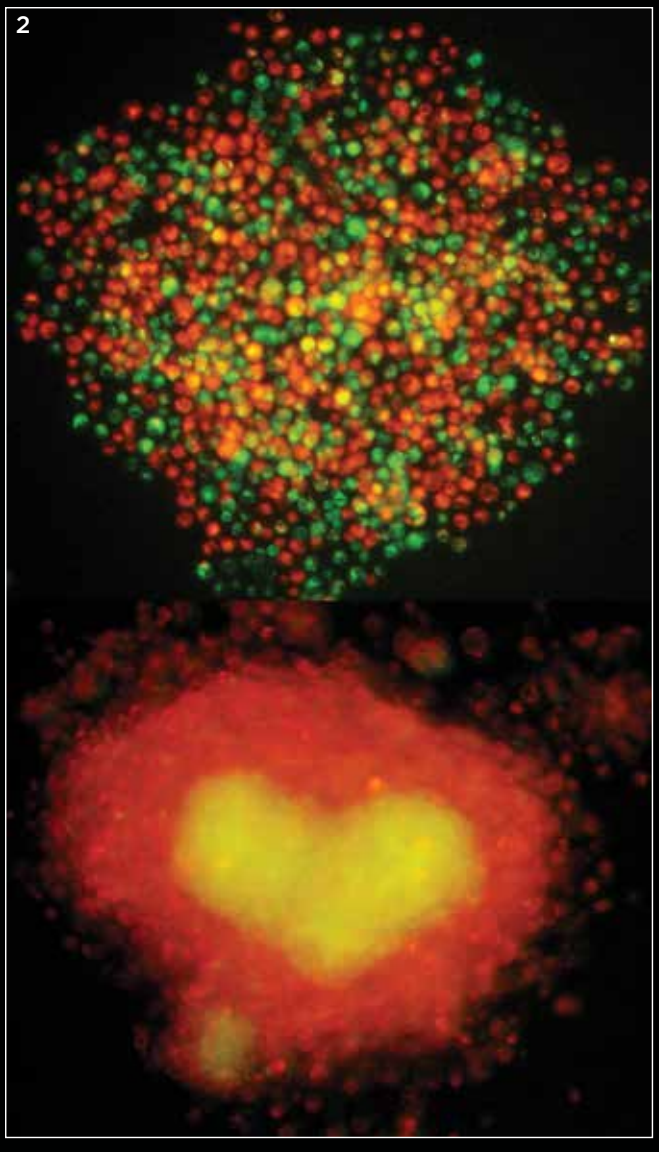
Entrants submitted images relating to their research, resulting in a dazzling display covering diverse aspects of molecular and cellular bioscience through to novel clinical applications. The featured topics range from molecules influencing gene expression to bacterial morphology, from magnetic resonance scans of the cardiovascular system to the detailed cellular components of the gut, and from dividing cancer cells to bubble jetting as a means to punch holes in cell membranes.

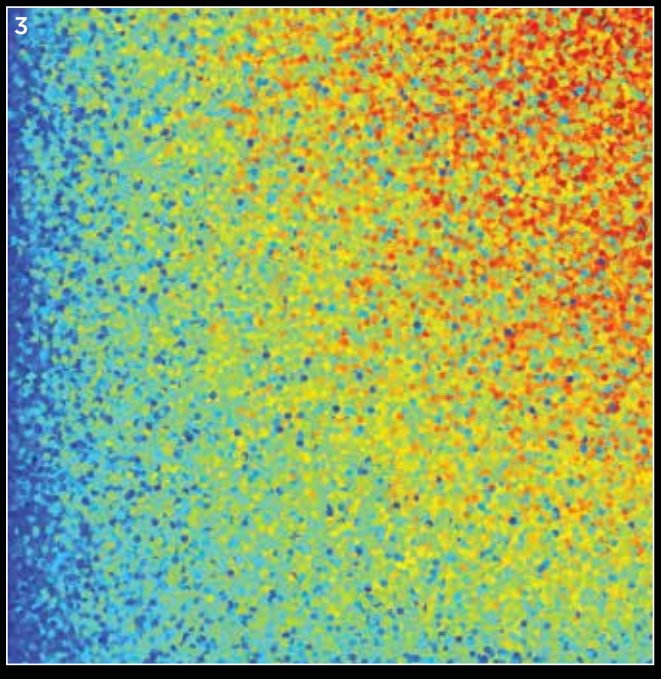
"The competition attracted entries from right across the spectrum of research activity in the two Colleges" said Dr Jenny Woof, competition and exhibition organiser, and Reader in Immunology in the Division of Cancer Research, College of Medicine, Dentistry and Nursing. "The breadth of subject matter, ranging from clinical areas, such as laparoscopic devices and dental braces, through to basic science addressing molecular and cellular function, is remarkable. The images are not only visually attractive, but tell the story of the pioneering research going on in Dundee, using state-of-the-art technologies. Such detailed images also contribute to a better understanding of the underlying medical or biological issues."

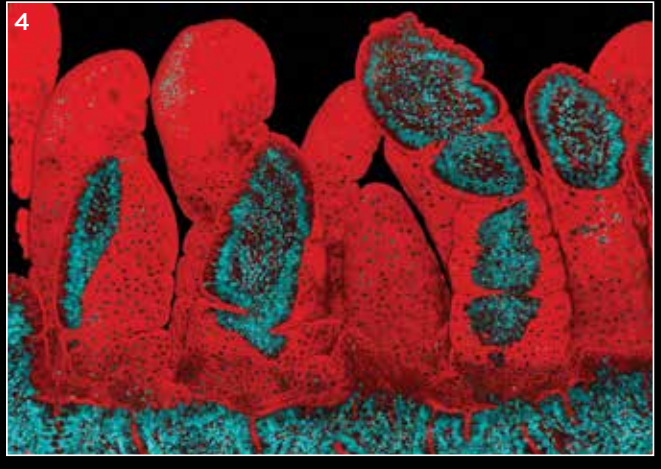
The winning entry from Professor Luc Bidaut, from the Clinical Research Imaging Facility, College of Medicine, Dentistry & Nursing, illustrates the value of collaborative approaches and shows the insights to be gained from modern imaging techniques. His image shows different views of a Peruvian mummy generated via CT scanning and three-dimensional rendering and reconstruction, with input from teams at the Clinical Research Imaging Facility and the Centre for Anatomy and Human Identification.

The judges for the competition brought a mix of expertise in science communication and publishing, image analysis, public engagement, and biomedical research. They were Catherine Draycott, Head of Wellcome Images, one of the world's largest repositories of medical and scientific images; Adam Goff, Picture Editor for the popular science publication New Scientist; and the University's Principal Pete Downes. They scored the anonymised entries based on their visual impact, originality, informational content, and technical proficiency. The winners took away cash prizes provided through sponsorship by Wellcome Images, and diagnostic and biomedical supply companies.

The exhibition will remain open to the public through December and January, providing a visually appealing and thought-provoking means to present the University's biomedical research efforts to a wider audience.







1 Luc Bidaut, Clinical Research Imaging Facility, College of Medicine, Dentistry & Nursing *Forensic CT scan analysis and 3D-rendering of Peruvian mummy*

2 Yok Zuan Vincent Lim, Division of Cancer Research, College of Medicine, Dentistry & Nursing *Cutaneous Squamous Cell Carcinoma cells*

3 Richard Bickerton, Division of Biological Chemistry & Drug Discovery, College of Life Sciences *Molecular size versus lipophilicity of molecules in medicinal chemistry database*

4 Paul Appleton, Division of Cell & Developmental Biology, College of Life Sciences *Human small intestine*

5 Nicola Stanley-Wall, Division of Molecular Microbiology, College of Life Sciences *Bacillus subtilis biofilm*

Revisiting South Georgia's whaling industry

A PhD student at the University's Duncan of Jordanstone College of Art and Design is digitally reconstructing the South Georgia whaling industry as part of a unique two month research trip to the sub-Antarctic Island.

Scott Smith (42) will be using computer animation techniques to visually depict the island's now abandoned industrial whaling sites. Supported by the South Georgia Heritage Trust, the study should enable tourists and visitors to better engage with the island's cultural history.

Scott, who was previously Programme Director in 3D Computer Animation at the University of Wales Trinity Saint David, is now completing his doctorate at DJCAD and exploring the way that computer visualisation of cultural heritage is presented to a population, and the effect that has on how people learn and recall information across varying interactive platforms.

"The main objective of the research is to take the existing knowledge of the whaling stations on South Georgia Island and repackage it, be it cinema, virtual reality, computer or mobile screen displays that enables a wider public understanding of the historical context and cultural heritage of the whaling industry," he explained.

Whaling ended on the island in the 1960s but it was once home to several industrial whaling sites and around 2000 workers. The former whaling station at Grytviken hosts the burial site of the great explorer Sir Ernest Shackleton and a museum managed by SGHT, the co-funders of Smith's research trip.

Today the island has no permanent residents apart from a small number of scientists inhabiting the British Antarctic Research Stations, Government Officials and the seasonal museum team. The museum, based in a former whaling manager's villa, charts the history of the island's whaling heritage and will be Scott's base during his research trip.

"On South Georgia, the loss of the whaling industry has had a fundamental impact on the island's habitation and much of the former bustling whaling stations lie empty although the area's native flora and fauna have made significant recoveries since the end of the commercial whaling in the region," added Scott. "Computer visualisation can be a very effective way of preserving the practices that once shaped and served communities."

Smith's research project is supported by the SGHT, the Engineering and Physical Sciences Research Council, Swedish explorer Dr Frederik Paulsen, the Government of South Georgia and South Sandwich Islands, and the Association for Industrial Archaeology (AIA) providing Smith with a Peter Neaverson Student Travel Bursary.

Braverunners raise cash

ise hosted its first 'Braverunner' event in the autumn and raised £285 for its own MoveMore Programme.

Over 50 intrepid athletes completed the short but tough course which included hill sprints, beam balances, tyre hops, jerry can carryings, bear crawls, leopard crawls, camouflage crawls, crab slaloms and a fantastic waterslide to finish.

The fastest finishers were Athletics club member Tim Gommersall who led the men home in a time of 11 minutes and 8 seconds and Jenny Wood, Sports Union Vice President, who was first lady over the line in 12 minutes and 53 seconds.

The MoveMore programme, which was launched by ISE earlier this year is aimed at encouraging people living with a cancer diagnosis to stay active or become more active.

Time to Transform 2014

ise is issuing its own University Challenge for the New Year in a bid to help staff members get fit for 2014.

The Transformation Challenge will run over three months from the start of the New Year and will offer individual members of staff and teams the chance to earn points every time they work out.

"We'll keep an eye on how often people are active and every bit of effort counts," explained Nik Long, Gym Programme Manager at ise. "So whether it's an exercise class, a game of squash or a blast in the gym it will give you and your team points.

"There will be awards for those who attend the most but we're also planning prizes for those who show the most motivation and enthusiasm.

"We know it can be difficult to stay motivated through the winter months so we want to say there's no need to do it alone. We'll help you transform."

For more information visit the website at :
www.dundee.ac.uk/ise or contact **Nik at n.long@dundee.ac.uk**

Onwards and upwards for Rucksack Club

Past and present members of the University's Rucksack Club have been celebrating its 90th anniversary this year.

More than 80 people gathered in Nethy Bridge for an anniversary Big Weekend in the autumn while last month the club hosted "A celebration of the outdoor life" with films and speakers including journalist and author Alan Rowan and acclaimed rock climber Dave MacLeod.

"We invited past members to join us at a club meet for our Big Weekend and hired out a hostel at Nethy Bridge and organised a ceilidh in the village," said former Club President Brett Gregory.

"We had lots of past members joining us including someone who first joined the club when they started University in 1967.

"We also had a past member return an ice axe inscribed with "QCD Rucksack Club" which means it dated back to when the University was Queens College Dundee and still part of St Andrews University. So the ice axe is from sometime before 1967!"

Brett added that the club was founded on 7th December 1923 and the first club meet is believed to have been held in June 1924. A look through the University archives also shows that the club had two separate sections - one for men and one for women with different degrees of success in terms of numbers.

"Typical male meets in the 1920s and into the 30s were usually attended by between one and four people and tended to last a week or even longer," he said. "Meanwhile, the women's meets showed much higher numbers, often into double figures."

However the club as a whole struggled with low numbers during the early years of World War Two. A relaunch in 1943 sparked renewed interest and by 1948 numbers were climbing again.

"The club is currently very well attended and has a very large, diverse membership," said Brett. "We have club meets every weekend of both semesters."

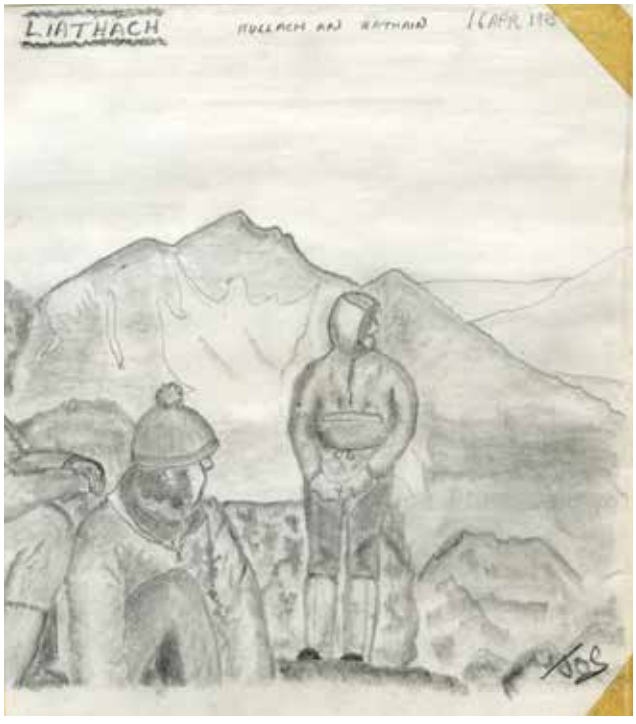
For more information about the club visit the website at **www.durc.org.uk**

From the Archives... 90 years of the Rucksack Club

The Rucksack Club was established in 1923 to 'further the interests of the members in all matters appertaining to mountaineering, hill climbing, camping, tramping and similar open air past times.'

The University Archive Services holds records dating back to the foundation of the club including meets books, minutes, financial records, visitor books and a Bothy Song Book.

The records of the club are complimented by other mountaineering collections including the Grampian Club and the Carn Dearg Mountaineering Club, the personal records of Syd Scroggie, hillwalker, writer and poet and the photographic collection of Irvine Butterfield.



Green light for nursery bike racks

Children at the University Nursery have been celebrating their success in joining the green travel campaign on campus with the official opening of their own dedicated bike racks.

Increasing numbers of children opting to travel to nursery by bike meant there was insufficient room inside the nursery building to safely store the items.

Unwilling to give up their environmentally friendly means of transport a number of children and their parents campaigned for a bike rack similar but on a smaller scale to those provided for adult bikes around the campus.

Trudy Cunningham, the University's Environment and Sustainability Officer, was only too happy to help and now the nursery children, aged between two and five years old, can leave their bikes, trikes and scooters safely and securely next to the nursery garden located just behind the DUSA building.

"I'm all in favour of encouraging the next generation to choose green travel," said Trudy. "The children clearly love their bikes and I think their enthusiasm is wonderful. Maybe they will inspire some more adults to follow in their bike tracks."

Images courtesy of Lena Ogilvie

Alumni boost for University projects

More than £100,000 has been raised for the Dundee Alumni Fund thanks to the efforts of a team of student callers in this autumn's fundraising campaign.

Launched in 2004 the Fund, which boasts University rector Brian Cox as Patron, provides cash for a number of University programmes including the Student Hardship Fund.

This year's funds will also help Access Student Bursaries, a project which helps those in need qualify for Higher Education entry, refurbishment of the Medical School, Social Work student research internships, the DRIVE formula student team and Keeping Kids Alive in Scotland, a University project project aimed at protecting children in Scotland.

The 23-strong team of student callers worked in shifts over the course of six weeks in October and November and for the first time made calls to the Western hemisphere, the Middle East and the Far East including Australia and New Zealand. As a result more than £110,800 was raised in donations and pledges.

"As always 60% of the funds raised go towards relieving student hardship and the remaining 40% to fund the projects selected by the alumni themselves," explained Development Services manager Rachel Marsh, who stressed the importance of the fundraising campaign.

"Without the support of our graduates, programmes like the Student Hardship Fund and the Access Student Bursaries would not exist. In fact, without the generosity of our alumni many students would not be able to continue with their studies."

She added, however, that the purpose of the campaign is not solely monetary.

"The calls also give our students a chance to connect with alumni and gain valuable career advice and help keep alumni up to date with what is happening at the University.

"Many of our callers this year have had such wonderful conversations with alumni that they have been offered support in the form of mentorships and internships. With several of our callers in the fourth year of their degree, this has been invaluable for them."

To find out more about the projects the Fund supports go to **www.dundee-reunited.com/projects**

To take part in the 2014 Spring Campaign or to donate call Rachel Marsh at **r.z.marsh@dundee.ac.uk** or on **01382 384822**.

Donations can also be made securely online at **www.dundee-reunited.com/donate**

Award sets Dundee's expertise in concrete

World-leading research into concrete at the University's internationally renowned Concrete Technology Unit has been recognised with a major award from the Institution of Civil Engineers.

A research team from the CTU were awarded the 'Paper of the Year' award from the Institution for their work on the carbonation of concrete and accelerated test methods.

The Institution annually recognises work published by authors from both industry and academia that peers judge to be of exceptional quality.

The paper was authored by Professor Tom Harrison (visiting Industrial Professor at the CTU), in collaboration with five others including Professor Rod Jones (Director of CTU) and Dr Moray Newlands, (Civil Engineering Lecturer and member of CTU).

Professor Tom Harrison said, "Our paper shows that the Dundee accelerated test, which is in the process of becoming a British Standard and which will form the basis for a future European Standard, is reliable. It can be used to design concrete structures effectively and efficiently, allowing engineers to achieve the specific balance of engineering performance and environmental sustainability."

The winning paper had been published in the Magazine of Concrete Research, the global journal in the field of concrete science, technology and engineering.

The Concrete Technology Unit was established in 1989 and has grown into a world class research centre for excellence. It has a broad research base covering a wide range of concrete-related research such as durability, recycling/reuse of materials and sustainability issues and novel construction applications.

what's on...

11 December 2013

Staging Scotland: The National Theatre of Scotland and Shifting Conceptions of Scottish Identity

4.15pm

Room 1.36, Baxter Suite, Tower Building

Dr Trish Reid of Kingston University will look at Scottish identity and the National Theatre of Scotland as part of the School of Humanities Seminar Series.

8 January 2014

Café Science Extra: Sonic screwdrivers and tractor beams: From Science Fiction to Real Life

CAFE SCIENCE EXTRA
Latest news from up and coming scientists

6pm to 7pm

Infusion Coffee Shop, Dundee Science Centre

Dr Mike MacDonald will discuss how new ultrasound technologies can be harnessed to improve diagnosis, reduce the side-effects of cancer therapy and for use in tissue engineering.

For more information email Jonathan Urch at **cafescience@dundee.ac.uk** or by phoning **01382 386669**

9 and 10 January

Discovery Days 2014

DISCOVERY DAYS 2014

Various times

Dalhousie Building, University of Dundee

The University's newest professors will join forces with its award winning teachers and communicators in this annual showcase of academic talent. For more information contact Jonathan Urch, Publich Outreach Coordinator at RevealingResearch@dundee.ac.uk or on 01382 386669

27 January 2014

Café Science: Using the Force: Lasers Under the Microscope

CAFE SCIENCE DUNDEE.co.uk
Conversations about science, over coffee

7pm

Chambers Coffee House & Restaurant, 34 South Tay St.

Dr David McGloin will discuss the physics of how it is possible to pick up and manipulate microscopic particles using nothing but light. He will use examples from some of the ground-breaking work that is being carried out in Dundee to study inside the human body and the environment.

For more information visit the Café Science website at **www.cafesciencedundee.co.uk**

Darkest Dreams on display

An exhibition that takes viewers into the darkest corners of artists' minds is running until 11 January 2014 in the University's Lamb Gallery in the Tower Building.

"Darkest Dreams" features stunning works from the University's Fine Art Collections that were inspired by our darkest dreams and nightmares. It promises to take visitors on a journey through bizarre landscapes and introduce them to some unsettling characters.

The exhibition features paintings, drawings and prints by notable artists including Arthur Rackham, Graeme Todd, Tommy Crooks, Alan Michael, Derrick Guild and Edward Summerton.

It will be on display until 11th January, but will be closed for Christmas between 25th December and 2nd January.

Visitors to the exhibition will be given the opportunity to record their own interpretation of the exhibition by completing response cards which will be displayed alongside each of the works.

For more information Contact Museum Services on **01382 384310** or **museum@dundee.ac.uk**

Carols by Candlelight

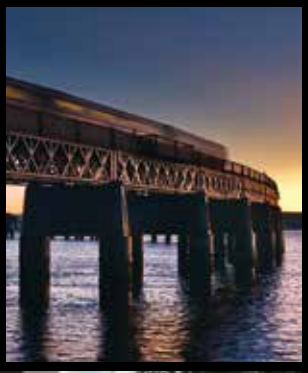
The University's annual service of Carols by Candlelight will take place at 5pm on Sunday, 8th December at St Paul's Cathedral.

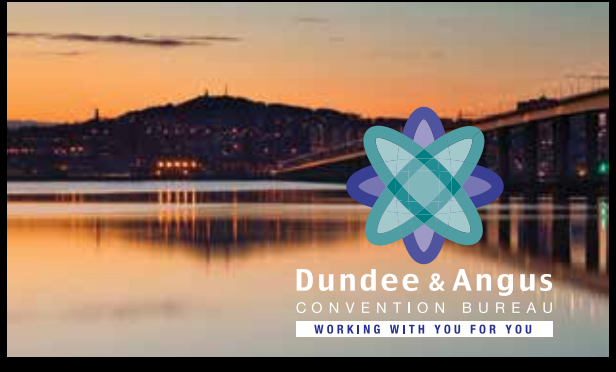
The service takes the form of the traditional nine Lessons and Carols, and the singing will be led by the University Choirs.

"This is one of the highlights of the academic year," said University Chaplain, the Rev Dr Fiona Douglas. "It is a time when members of the local community, the University and their families come together."

Mince pies and mulled wine will be served after the service, to which all are welcome.

welcome
your delegates
TO DUNDEE AND ANGUS





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