

UCD

# today

WINTER 2015



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INSIDE

## A crystal clear view of DNA damage:

Dr Susan Quinn led a groundbreaking study that captured details of the early stages of DNA damage

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## The legacy of an honoree



*ELLIS O'BRIEN*  
Director of Communication  
and Marketing

**Máire Geoghegan Quinn is a remarkable woman.**

In 2010 she became the first Irish woman to serve as an EU Commissioner and was assigned the portfolio of Research, Innovation and Science and pioneered the development and delivery of Horizon 2020, the world's largest public research funding programme with a budget of almost €80 billion over seven years. "We need a new vision for European research and innovation in a dramatically changed economic environment," she said, when she presented Horizon 2020 with an increased budget of nearly 30% in real terms compared with FP7. This translates into a coherent response by the EU to the economic crisis. It aims to deliver three objectives: strengthening the EU's global position in research, innovation and technology, investing in future jobs and growth, and addressing people's concerns about their livelihoods, safety and environment.

Within UCD, some of the projects to have received funding from Horizon 2020 to date include a centre of excellence in supercomputing, E-CAM, led by Luke Drury from the School of Physics, an energy storage project for households, called RealValue, led by Mark O'Malley from the School of Electrical, Electronic and Communications Engineering, a project to commercially develop a new diagnostic test for breast cancer patients led by William Gallagher's spin-out company, OncoMark, and a project to look at the relationship between diet and health, led by Lorraine Brennan from the School of Agriculture and Food Science.

But Maire Geoghegan Quinn's legacy extends way beyond her impact as EU Commissioner and earlier this month UCD bestowed an honorary degree of Doctor of Science on Geoghegan Quinn for her lifetime of transformational contributions to society.

In the year in which Ireland voted to amend the Constitution to enable same sex marriage, it is worth remembering that back in 1993, Máire Geoghegan Quinn, as Minister for Justice, introduced legislation to decriminalise homosexual acts, "framing the issue clearly and firmly as a necessary development of human rights," according to Professor Orla Feely in her citation.

In July of this year, she was appointed by the HEA to chair a national review of gender equality in higher education. We look forward to her energy and determination in this role and the further positive impact her work will have on our sector.

## UCD thanks...

**Contributors:** Judith Archbold, Jonnie Baxter, Carla Briggs, Jens Carlsson, Olivia Caslin, Lucy Collins, Michael Connolly, Eddie Cunningham, Jo Day, Jamie Deasy, Damien Dempsey, Sinead Dolan, Diarmaid Ferriter, Emma Fadden, Andrew Fogarty, Crystal Fulton, Suzanne Hayden, Sinead Hennessy, Shauna Hughes, Elva Johnston, Mark Jones, Linda Kavanagh, Sinead Kelly, Chen Ma, Órlaith Marnell, Kate Manning, Daniel McConnell, Joe McGrath, Peter McGuire, Clár Ní Bhuachalla, Bairbre Ní Fhloinn, Aicbhin Ní Shúilleabháin, Claire O'Connell, Andrew Parnell, Ron Pinhasi, Elaine Quinn, Susan Quinn, Susannah Riordan, Anthony Roche, Paula Russell, Colin Scott, Mark Simpson, Gavan Stanley, Mary Staunton, Fiona Sweeney, John Thompson, Brian Tobin, Regina Uí Chollatáin, Eamonn Walsh, Niamh Walsh, Gemma Watts, Micéal Whelan.

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Cover image: This image shows the X-ray crystal structure of a ruthenium metal complex (orange spheres) bound to a short double stranded DNA sequence. The crystallographic data was recorded by Dr. James P. Hall (Reading University, who is the first author on the paper) at the Diamond Light source facility in the UK.



## UCD Foundation Day Alumni Awards 2015

On 13 November, 400 of UCD's most distinguished graduates, friends and staff gathered to recognise and celebrate 15 outstanding alumni awardees at this year's UCD Foundation Day Alumni Awards in O'Reilly Hall.

The UCD Foundation Day Medal was awarded to former European Commission Secretary-General, Dr Catherine Day. She received the award for her outstanding impact on the European Union.

The Foundation Day Medal is presented to a distinguished alumnus of national and international recognition whose influence and contribution is a source of great pride to University College Dublin.

Former medalists include Dr Peter Sutherland, the UN's current Special Envoy on

Migration and former Attorney General; and Dr Patrick Hillery, former President of Ireland.

Dr Day served as Secretary-General of the European Commission between November 2005 and August 2015. She was the first woman to hold the position of Secretary-General of the European Commission.

She also served as Deputy Director General for External Relations of the European Commission and played a central role in the EU's enlargement in 2004, when 10 new member states joined the EU.

She played a critical role in the direction of policy under the Jean-Claude Juncker-led European Commission.

The Dublin native has remained an active contributor to UCD, assisting in the setup of an alumni chapter in Brussels.

At the special alumni event, President of UCD, Professor Andrew J Deeks, also presented awards to 15 other notable alumni who have achieved excellence in their fields and whose professional achievements are a source of inspiration to students.

### Tom Tynan - Agriculture and Food Science

Mr Tynan came from an agricultural consultancy background and served as an adviser to former Agriculture Minister, Ivan Yates and also worked for the Irish Farmers Association. He was recently appointed to the cabinet of EU Agricultural Commissioner, Phil Hogan.

### Yvonne Farrell & Shelly McNamara - Architecture

*Grafton Architects*

Yvonne Farrell and Shelly McNamara are both directors of Grafton Architects. They have been recipients of numerous architectural awards. Grafton Architects won World Building of the Year award in 2008 for its Bocconi University building in Milan. In 2015, they won the Jane Drew Prize for their influence on the architectural profession. They are both Adjunct Professors at the UCD School of Architecture, Planning and Environmental Policy.

### Jim Sheridan - Arts

*Film Director*

Jim Sheridan is a six-time Oscar nominee film director, whose highly acclaimed film, *My Left Foot*, starring Daniel Day Lewis won several Oscar awards. His other films include *In the Name of the Father*, *In America* and *The Field*.

### Nóirín O'Sullivan - Business

*Garda Commissioner*

With nearly 30 years professional policing experience, Ms O'Sullivan in 2014 became the first female Commissioner of An Garda Síochána since its inception in 1923.

### Dr Dave Burke - Engineering

*VP for Engineering, Google*

While studying for his PhD in Electronic Engineering in UCD, Dr Burke developed an online service called "Street Wise", one of the world's first mobile maps applications. He now leads a team of over 300 engineers at Google in Silicon Valley.

### Miriam O'Callaghan - Law

*Broadcaster*

Ms O'Callaghan received this award for her contribution to broadcasting. She has been the presenter of RTÉ's leading television current affairs show, *Prime Time*, since 1996 and won an IFTA for Best TV Personality in 2015.

### Professor Patrick Bradley - Medicine

*Leading surgeon*

Professor Bradley is internationally celebrated for his work and research in head and neck surgery. He is Emeritus Professor of Head and Neck Oncologic Surgery at the University of Nottingham and recently retired as Head &



Pictured at the UCD Foundation Day Alumni Awards 2015 were (l-r): UCD President, Professor Andrew Deeks; Dr Catherine Day, 2015 Foundation Day Medal recipient; and Dr Peter Sutherland

Neck Oncologic Surgeon at the University Hospitals Nottingham, Queen's Medical Centre. Professor Bradley has had a distinguished career as a surgeon, researcher and educator. He has published widely, with more than 120 peer-reviewed articles, on topics such as the diagnosis and management of head and neck cancer.

### Virginia Pye - Nursing, Midwifery and Health Systems

*Director Public Health Nursing, HSE*

Ms Pye is an innovative leader in the area of child welfare and health services. She is Director of Public Health Nursing for Longford/Westmeath. She was instrumental in launching the Family Needs Assessment Framework for public health nurses working in the Midlands in Ireland.

### Rena Buckley - Physiotherapy

*Chartered physiotherapist and GAA player*

Ms Buckley is a chartered physiotherapist and one of the most decorated players in GAA history, having won 16 All-Ireland medals, the most recent in both the 2015 Gaelic football and camogie All-Ireland championships for Cork.

### Dr Tony Holohan - Public Health

*Chief Medical Officer, Department of Health and Children*

After serving initially as Deputy Chief Medical Officer from 2001, Dr Holohan was appointed in 2008 as Chief Medical Officer, the most

senior government adviser on health. He is responsible for a range of public health campaigns including Healthy Ireland - a framework for improved health and wellbeing in Ireland, as well as guiding government response to medical and health crises.

### Fr Peter McVerry - Science

*Social activist*

Fr McVerry has dedicated his life to fighting poverty and homelessness. In 2014 alone, the Peter McVerry Trust supported approximately 4,500 individuals through providing over 2,300 residential placements.

### Orlaith Blaney - Social Science

*CEO, McCann Blue*

Ms Blaney received the Social Science award for her contribution to the Irish advertising industry. She has worked in the Irish advertising industry for 20 years. Having worked at McCannBlue, an international network agency, for the last 15 years, Ms Blaney was the youngest and only female to become MD of an international network advertising agency in Ireland.

### Dermot Weld - Veterinary Medicine

*Racehorse trainer*

Mr Weld is one of Ireland's most successful racehorse trainers. He holds the record for the most racehorse winners trained in Ireland. Mr Weld is also a dedicated veterinarian and Ambassador for Veterinary education and Research.



Students with Ambassador Xu (eighth from the left), UCD President, Professor Andrew Deeks (eighth from the right), Professor Liming Wang (fifth from right), Mr. Xiaochuang Wu (fourth from the right), First Secretary Head of Education Office; Mr. Ken Duggan (seventh from the right), Chairman of Ireland China Business Association; Mr Bao Shaojun (sixth from right), President of China Council for the Promotion of Peaceful National Reunification in Ireland; Professor Yongqiang Cai (far left), Chinese Director of UCD Confucius Institute / Irish Institute for Chinese Studies.

## Celebrating Art History at UCD

Fifty years ago, in October 1965, the discipline of Art History, then known as the History of European Painting, was offered for the first time at degree level in Ireland at UCD. Among the first students to study and subsequently lecture at the Department of the History of European Painting, now the School of Art History & Cultural Policy, were former colleagues Dr Eileen Kane and Dr John O’Grady.

Historically UCD’s association with Art History began in 1935 when the History of European Painting Lectures were delivered by Dr Françoise Henry who, in response to an invitation from President Denis Coffey, began to give a lecture course in preparation for the Purser-Griffith Scholarship and Prize Examination. The exam was held alternately at UCD and TCD, but only in UCD was a course of lectures originally offered in association with the scholarship. The course continues to this day as the Diploma in the History of European Painting.

Throughout 2015-16 the School of Art History & Cultural Policy is holding a number of events to mark fifty years since the Department of the History of European Painting was established under its founder Dr Françoise Henry. These will include a Distinguished Lecture Series in spring 2016 with former alumni returning to the School to share their research, and a publication, *Art History after Françoise Henry: 50 years at UCD*. The book will comprise a series of essays by members of staff past and present. Compelling in their variety, they will demonstrate the wide-ranging research interests of the staff, including Irish, European and American material from the medieval period to the present day.

The jubilee events began when the School hosted an afternoon of celebrations and recollections for students past and present on 28 November. This event, marked five decades of Art History at UCD under its founder Dr Françoise Henry, and the successive Chairs of Professor Alistair Rowan, Professor Michael McCarthy and Professor Kathleen James-Chakraborty, and concluded with a Keynote Address by School alumnus, Dr Brian P. Kennedy, Director of the Toledo Museum of Art, Ohio.

## Celebrating the 2nd Confucius Institute Day and the 9th Anniversary of UCD Confucius Institute for Ireland

On the occasion of the 9th anniversary of UCD Confucius Institute for Ireland, as well as the 11th anniversary of the establishment of the Confucius Institute worldwide, the 2nd Confucius Institute Day drew the attention of over 300 audience members at UCD O’Reilly Hall on September 26th. More than 200 students and staff of the UCD Confucius Institute participated in the Learning Outcomes Exhibition and Performances, demonstrating their achievements of learning Chinese Language and Culture.

Many distinguished guests attended the event, including H.E. Xu Jianguo, the Chinese Ambassador to Ireland; UCD President, Professor Andrew Deeks; Mr. Ken Duggan, Chairman of the Ireland China Business Association; Professor Dermot Moran, President of the International Federation of Philosophical Societies; and Mr Bao Shaojun, President of China Council for the Promotion of Peaceful National Reunification in Ireland.

“Confucius Institute Day has become a great opportunity for students who are enthusiastic about learning Chinese language and culture to share their work with others, and an annual celebration for the achievements of UCD

Confucius Institute. In 2016, at the 10th anniversary, we should expect the completion of a brand new building on campus for UCD Confucius Institute and I look forward to celebrating this with you all then” said UCD President, Professor Andrew Deeks.

Chinese teachers from the UCD Confucius Institute also arranged a series of cultural workshops and encouraged the viewing public to take part in a wide range of cultural activities.

Confucius Institute Day, launched in 2014, has become an annual event and a platform to promote both Chinese language and culture to the local community.

## ‘City of Physics 2015’

**Dublin becomes the first city in the World to connect physics with public places.**

During October and November, the ‘City of Physics’ team from UCD, Trinity College Dublin and CRANN ran a four week interactive and inclusive campaign to encourage everyone across the capital to explore and discover the beauty of physics around Dublin City. Dublin was transformed into a vibrant celebration of physics with notices on buses, the DART and on the street, as well as a variety of different public events. The city of Dublin came alive with discussions, installations, and an exciting events programme dedicated to showing how physics touches everyone’s lives and impacts on society.

The aim of the campaign was to encourage the people of Dublin to ask themselves simple questions, whose answers are rooted in physics, using a selection of insightful quotes and questions that were accompanied by illustrations created by Irish illustrators, in order to bring the question to life.

In addition to the guerrilla physics artwork element of the campaign, Dubliners were confronted with the beauty of physics by offering them the opportunity to see a live



Dr Aoibhinn Ní Shuilleabháin, UCD School of Mathematics and Statistics, pictured at the launch of the City of Physics 2015

projection of the sun (streamed as live from the Solar Dynamics Observatory, NASA) on Dame House, Dame Street, Dublin 2.

Dr Aoibhinn Ní Shuilleabháin, UCD School of Mathematics and Statistics, said “Albert Einstein once wrote: ‘The most beautiful thing we can experience is the mysterious.’ City of Physics offers a little bit of the mysterious in our everyday lives. With this campaign we hope to encourage people to think and talk about physics in the world around them.”

The City of Physics project received funding from UCD Research, Innovation and Impact, the UCD College of Science, the School of Physics and Education at Trinity College Dublin and financial and/or in-kind contributions from other partners.

# A crystal clear view of DNA damage

**UCD chemist Dr Susan Quinn led a groundbreaking study that captured details of the early stages of DNA damage.**

We all know that too much sun exposure can damage your skin, but it can damage your DNA too. The UV-light can change the all-important structure of genetic material in skin cells, and this can ultimately lead to cancer. On the flip side, we may also be able to use light in medical applications to target cells and tissues.

That is why it is important to understand the basics about how DNA gets damaged by light, but to date tracking that chemistry has been a tall order. Now a new study led by Dr Susan Quinn, a College Lecturer at UCD School of Chemistry, has developed a way to 'catch' the early stages of light-induced DNA damage in the act - and it's all down to crystals.

## All about electrons

By studying DNA bound to a light-sensitive molecule within a crystal and then shining light on the structure, the researchers were able to 'freeze frame' the chemical changes taking place.

The focus was on electrons moving between the DNA and the attached light-sensitive molecule, explains Dr Quinn, who carried out the study with collaborators from Trinity College Dublin and the UK.

"In chemistry everything is about reactions, and the key species are bonds and electrons," she says. "The ultimate goal is to be able to monitor how electrons flow from one species to another to track how the reactions are happening, and in this case we were interested in how DNA responds when you hit the attached light-sensitive molecule with energy in the form of light."

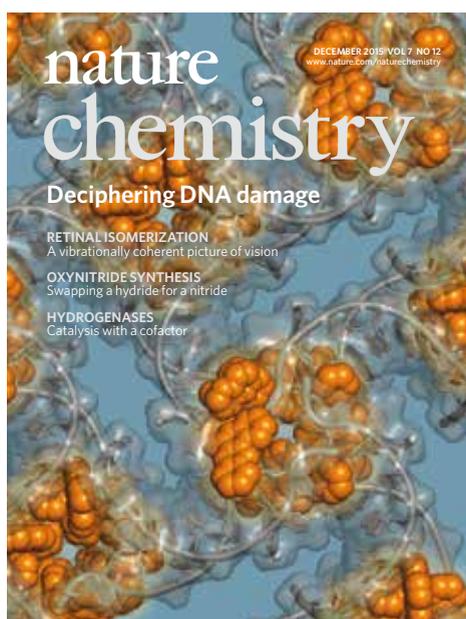
The light-sensitive molecule slides into the structure of DNA "like a CD disk into a rack" - but zoning in on its interaction with DNA can be tricky when the DNA is in solution, notes Dr Quinn.

"People have a model of DNA as a beautiful helix with a particular, restricted shape but the reality is that it is a very dynamic molecule, and so molecules can bind to it in lots of different places," she says. "So it is a real challenge to analyse reactions in solution."

## Crystal locks

To solve the problem the researchers grew crystals of one interaction between DNA and the light-sensitive molecule locked in place for a cleaner experiment. "There are lots of different ways that molecules can combine and in the crystal only one binding site was captured and so you are able to know where everything is," explains Dr Quinn.

DNA used in their experiments contained plenty of guanine, a component of DNA that



Cover of Nature Chemistry, December 2015. Copyright Nature Publishing Group.

tends to let its electrons go easily, she adds. "As a consequence it can be a site of easy damage."

Using facilities at the Rutherford Appleton Laboratory in England the researchers hit the crystal DNA sample with laser light to activate the attached light-sensitive molecule and start the process of DNA damage.

## Fingerprinting DNA damage

That process happens extremely quickly - the molecules enter an excited state within femtoseconds, then electrons shuttle between the DNA-guanine and the light-sensitive molecule over a timescale of picoseconds.

By measuring the spectral 'fingerprint' coming back from the crystals over the course of the experiment, the researchers could view the fingerprint change step by step on the screen, much like freeze-framing your way through a scene in a movie.

"There is a characteristic band in the infra-red that tells you that guanine has lost an electron," explains Dr Quinn. "We saw this clear band that was telling us yes we are watching guanine and we watched it get bigger and bigger and bigger," she says. "As a scientist you have more confidence in a result if you have less noise, and this was the case here."

## Thumbs up

But there was another hurdle to clear: the researchers needed to confirm that the crystal was still intact. "We had to look at a microscope and image the sample before and after the experiment to make sure we haven't just melted the crystal," explains Dr Quinn. "And when the

confirmation came, when the researcher who was looking at that gave it the thumbs up, that was fantastic."

This documented account of the very beginnings of light-induced DNA damage earned Dr Quinn and her colleagues a cover-story paper in Nature Chemistry that has generated interest in both the process and the findings.

She is now working with Professor John Kelly in Trinity College Dublin and Professor Christine Cardin in Reading on the stability of DNA in crystals, and the goal is to experiment with direct hits of light on more biologically relevant DNA samples.

"We are focusing on crystals of just DNA, not DNA with the drug bound to it, and again with the crystals it should be possible to confirm or monitor reactions that can occur in a very fast time."

## DNA machinery

DNA damage has long been of interest to science and medicine, particularly as it underpins cancer and potential light-based treatments, and in 2015 the Nobel Prize in chemistry goes to Tomas Lindahl, Paul Modrich and Aziz Sanchar for mechanistic studies of DNA repair.

The timing of that announcement in October could not have been better for Dr Quinn, whose Nature Chemistry paper came out shortly afterwards. "There's a nice symmetry about this," she says. "Those scientists have really worked to understand the machinery that repairs DNA damage and we are at the other end of the spectrum. We are trying to resolve at the very beginning of the DNA damage that prompts those repair mechanisms."

*Dr Susan Quinn was in conversation with Claire O'Connell, science writer and contributor to Silicon Republic and The Irish Times*

## On the right course – Dr Susan Quinn

When Dr Susan Quinn came to UCD to study as an undergrad, chemistry was not her initial focus. "I had no intention to do chemistry, I came here to do astrophysics," she recalls.

But she took chemistry as one of her subjects and around second and third year she was inspired to go full time. "Some of the lectures clicked, it seemed like this is the subject for me."

She carried out her PhD under the supervision of Professor Donald Fitzmaurice and then went to Trinity College Dublin to work as post-doc in chemistry with Professor John Kelly and Professor Thorri Gunnlaugsson.

"At that stage I was not sure whether it was going to be an academic career for me after my post-doc, and while in Trinity I worked on getting a chemistry graduate programme up and running, but I was still doing some research and I realised I would like to have an academic career."

Dr Quinn moved back to UCD where she was appointed as a temporary lecturer in 2009 and got her College Lectureship in 2012. Today, with a new Nature Chemistry paper generating interest about her studies, she sees it as the right move.

"Perhaps it's not a completely traditional career path, but it seems to be working," she says.

## Sparking bright ideas at UCD

**UCD Teaching and Learning recently hosted an event to celebrate the outputs of projects awarded funding under the SPARC initiative in 2014-15 and to launch the initiative for 2015-16.**

The initiative provides seed funding to staff and student project teams to support them to deliver projects aimed at enhancing or improving some aspect of university or community life.

SPARC accepted applications for the first time in 2014-15 when four projects were funded. Among these projects was a collaboration between Professor Aidan O'Sullivan and Phd student Niamh Kelly, both from the School of Archaeology, on a project entitled Outreach Archaeology and the Dublin Community. The pair developed a platform for information, education and direct engagement with Irish archaeology, for school children. Over the course of nine months this project saw the delivery of a range of workshops on site in libraries and schools throughout Dublin as well as a number of field trip visits to UCD's Centre for Experimental Archaeology and Ancient Technologies. In total over 900 individuals have had the opportunity to engage in immersive archaeological experiences and interact with current UCD research in the field through this project.

LabView 360 was also selected in the 2014/15 round of SPARC funding. As part of this project Mr Niall Watts and Mr Vincent Hoban from UCD Media Services, Ms Kate Connor, Phd Student, from the College of Science and Dr Gordon Cooke from the UCD Conway Institute of Biomolecular and Biomedical Research came together to create a virtual tour of a lab in the Institute. This virtual tour has enhanced the training and orientation process for UCD Conway Institute students and staff, allowed potential postgraduate students and employees to survey the institute labs and



At a recent event to celebrate the outputs of projects awarded funding under the SPARC initiative in 2014-15 and to launch the initiative for 2015-16, Professor Aidan O'Sullivan and Ms Niamh Kelly, Phd student, both from the School of Archaeology, showcase their SPARC project entitled Outreach Archaeology and the Dublin Community

equipment before they arrive on campus, and provided a series of video guides in relation to various pieces of equipment within the lab.

Applications are now under way for the 2015/16 SPARC cycle and with funding

available for up to ten new projects, the organisers are looking forward to supporting staff and students to bring a new crop of bright ideas to life.

## UCD welcomes Princeton-Fung Global Forum on 'modern plagues'

**In early November, UCD played host to nearly 300 public health experts and practitioners, government officials, scholars and students who gathered to discuss the lessons learned from the Ebola crisis as part of the third annual Princeton-Fung Global Forum.**

Speakers, moderators and attendees hailed from more than 20 countries, including several West African nations, with journalists from The New York Times, The Washington Post and NPR serving as moderators.

The two-day conversation investigated global health crises, using the recent Ebola outbreak in West Africa as a case study of a "modern plague."

"Recent viral outbreaks — Ebola, avian flu and the respiratory syndromes known as SARS and MERS — have presented the world with a formidable quandary," Princeton University President Christopher L. Eisgruber said during his introductory remarks. "Resolving these crises requires a multidisciplinary approach involving not only public health and medical knowledge but also an understanding of the economic, environmental, political and historical roots and consequences of these plagues."

The two-day forum at O'Reilly Hall brought together the foremost experts in each sector

related to the Ebola outbreak — from Nobel laureates, to historians, to on-the-ground responders — to talk about what happened, the lessons learned and how to move forward. It began with a historical examination of plagues and concluded with policy solutions. While the six panels and four keynote addresses were wide-ranging, several themes emerged.

One of the key takeaways woven throughout the two days was the need to be nimble, acting quickly during times of crisis.

"The disease was neither expected nor suspected," Margaret Chan, director-general of the World Health Organization, said during her address. "The virus circulated undetected off every radar screen for three months."

One solution to this quandary is the development of a global vaccine fund, as proposed by speakers Adel Mahmoud from Princeton and Jeremy Farrar from the Wellcome Trust. Supported by governments, foundations and pharmaceutical companies, this fund could carry promising vaccines from development to deployment.

On the local level, community health workers were especially vital during the Ebola crisis. Serving as cultural conduits, these frontline public health workers helped to identify and diagnose

those infected by the virus. In many cases, these workers were not even paid.

"You can't build resilient health systems if you don't have health workers," said Mary Robinson, former president of Ireland, U.N. special envoy for climate change and founder of the Mary Robinson Foundation — Climate Justice, during her luncheon keynote address.

Fear, hysteria and stigma surround enigmatic diseases. Many are terrified to come forward, concerned about community perceptions. Part of the stigma and fear is created by media reports and the spread of information. In many cases, the epidemic was shaped by unnecessary hype, alarm and panic.

"Today, information spreads so quickly. That's great because information is crucial, but there is a hyping of a crisis that induces panic. This is unnecessary panic, which is counterproductive when you are trying to prevent the spread of disease," Cormac O'Grada, Professor of economics at University College Dublin, said during the "History of Plagues" panel.

To better control epidemics using information technology, national and international coordination is needed, several speakers concluded. Protected data should be readily available to make smart and informed decisions.



Picture of the skeleton from Kotias Klde, Georgia analysed by Professor Pinhasi and his team

# Skeletons of the past: Ancient DNA, new evidence regarding humanity's secrets

**The conventional narrative sees modern humans evolving in Africa around 200,000 years ago, fanning out of Africa some 70,000 years ago and, then, gradually dispersing across the globe. The truth is much more complex.**

Genetic evidence already shows that, around 3,000 years ago, some of our ancestors from Western Eurasia migrated back into Africa, for reasons that are not entirely clear. Now, a new study, published in *Science* and led by Professor Ron Pinhasi of UCD's School of Archaeology, sheds new light on the human family, and shows that this wave of migration was up to twice as large as we previously thought. Not only this, but it has since affected the genetic make-up of populations throughout the African continent.

The new evidence comes from DNA extracted from a well-preserved skeleton found in south-west Ethiopia. It came about, Professor Pinhasi explains, when a fellow archaeologist, Dr Jay Stock of the University of Cambridge, presented a sample of the skeleton. Through a series of experiments carried out at the Pinhasi-ERC ancient DNA laboratory at UCD, Pinhasi discovered that one part of this skeleton, the petrous part of the temporal bone (the inner ear), yielded up to 600 times more DNA than what has been previously obtained by other teams.

"We started to get exceptional results. This was a 4,500 year old African skeleton. It was from Mota Cave, located at the south Ethiopian highlands. We found that this person had strong genetic continuity with a modern Ethiopian tribe: Ari Blacksmith, which shows that they have been in this region at least for the last 4,500 years. We've been able to compare the recent discovery to other genetic samples and, in doing so, prove that the West Eurasians who migrated back into Africa were closely related to early Neolithic farmers who had developed agriculture and brought it through Europe 4,000 years earlier."

Because of this, says Pinhasi, around 5-7 per cent of the modern East African genome is comprised of these Eurasian genes. It also means that - again, contrary to popular and perceived wisdom - modern Europeans are not the only ones to have some traces of Neanderthal DNA in their genetic code; modern Africans, including those in the sub-Saharan part of the continent, have around 0.3-0.7 of Neanderthal DNA in their genes.

The genetic study of this skeleton is hugely significant, and not just for giving us insights into our origins and our history, Pinhasi says. "This person was lactose intolerant, which would not be unexpected. We can see that they were also adapted to live in higher altitudes in this part of Africa. Changes in skin pigmentation, lactose and gluten tolerance, or the ability to digest starch, may not have existed in the past, but they do now. In order to understand this today, we need to get back to the past. We need to map it; this is what I, as an anthropologist, do."

This is one of several recent studies co-led by Pinhasi and his UCD team which now provide invaluable historical, anthropological and medical information, but also show the benefits that can flow when researchers from disparate parts of the globe work together. Indeed, he has had a particularly busy few months. In October 2015, the journal *Nature Communications* published the results of a major international investigation into two more prehistoric male skeletons. They hailed from modern-day Georgia and were 14,000 and 9,700 years old. Pinhasi co-led the study which found these men descended, in part at least, from herders in Ukraine and Georgia. But as to the rest of their lineage, they're not sure. How is this?

"When we study a genome, we ask how it is related to both modern populations and ancient genomes. But in this code, we saw something new, something not previously seen - a so-called 'ghost lineage'."

This suggests that they must have split from another, earlier population. "What we can say from this sample in Georgia is that the population sizes were small and that there must have been a relatively high amount of inbreeding and consanguinity," says Pinhasi. "These were tight bands of cavemen. From one of the two individuals, we can also see that light-skinned pigmentation already existed in this part of the world. And we can see that they belonged to a band of hunter-gatherers in the Caucasus which split from western hunter-gatherers not long after modern humans first colonised Europe."

But Pinhasi saves the best for last. A major study which was published in *Nature*, and co-led by Pinhasi, assessed evidence for selection in the largest number of ancient individuals ever sequenced and analysed for ancient genome-wide data: 230 archaeological individuals from across Europe, Russia, Siberia and Turkey, and spanning the period from 8,000 to 3,000 years ago. The team looked at 12 different genes to see what had changed since the origins of agriculture.

The results were surprising. "We found that a group of tall farmers from Turkey had colonised parts of Europe. We compared this against other data, including data on populations from the Iberian Peninsula. We had always suspected that this Turkish group had spread through Europe, colonising and bringing agriculture in their wake, and our investigations found it to be true: there was a perfect overlap between them and farmers from Bulgaria, Hungary, Germany and other parts of Europe. This was a continuous migration that must have taken many centuries."

The findings help settle a long-standing debate over whether agriculture spread through Eurasia by colonisation or by cultural contact. "Did the culture of agriculture spread, or was it that particular crops became popular with certain groups? Or, was it that people spread and brought their agriculture with them? With archaeology, we have never been sure, but here we have evidence from a good-sized sample of 230 individuals, with 1.2 million genetic markers. It is very certain: people moved through Europe, and they carried agriculture with them."

Discoveries and new revelations about these fully-formed, modern humans can help us learn from our past, but genetic research on ancient remains will also become medically important, says Pinhasi. "When we look for the origins of certain genetic conditions, this information will be invaluable. About four years ago, we had five ancient human genomes, whereas now we have around 230 sequenced in this study alone. Technology is moving at such a fast pace, so just imagine where we will be in a few years' time."

*Professor Ron Pinhasi was in conversation with Peter McGuire, a journalist with the Irish Times.*



Pictured l-r: Professor Orla Feely, UCD Vice-President for Research, Innovation & Impact and Professor Walter Kolch, Director, UCD Conway Institute & Systems Biology Ireland.

## UCD launches new €2.1m TOPMED10 Fellowship Programme

**A new EU Horizon 2020 Marie Skłodowska-Curie fellowship programme based in UCD has been launched.**

The UCD TOPMed10 programme, which offers 10 prestigious fellowships to experienced researchers working in personalised medicine, looks to attract the brightest and best scientists to Dublin over the next 5 years. The first call for applications was launched on 1 October with a second call in summer 2016.

Professor Orla Feely, UCD Vice-President for Research, Innovation & Impact announced the launch of the TOPMed10 programme at the awards ceremony of the 2015 UCD Conway Festival of Research & Innovation on Thursday, 10 September.

Speaking at the launch, Professor Feely said: "Given our growing reputation in these emerging disciplines, UCD is ideally positioned to put in place a programme that can act as a

blueprint for what biomedical training can look like in future. I am delighted at the potential of this programme to enable new collaborations and seed new projects in personalised medicine and ultimately shape future leaders in this frontier research initiative.

Professor Kolch and senior scientists from across UCD Conway and Charles Institutes, Systems Biology Ireland, the UCD Clinical Research Centre and affiliated teaching hospitals will work with successful applicants to develop new research projects in personalised medicine.

Professor Kolch, Director of Systems Biology Ireland and coordinator of the programme said;

"We look forward to welcoming our ten TOPMed10 Fellows to UCD over the coming years – through the programme, we will give them the opportunity to work with our world class researchers and facilities, and we will equip them with the necessary tools to forge successful careers in the area of personalised medicine."

## Big Interest in Big Data at UCD

With the explosion in popularity of Data Science, Big Data, and Data Analytics, the UCD School of Mathematics and Statistics set up the online MSc in Data Analytics in 2014, following on from a previous online Professional Diploma in the same subject. The school recently announced that the number of registrations on this programme has now exceeded 150 for the first time, making it one of the largest postgraduate programmes in UCD and Ireland generally. Dr Andrew Parnell, director of the online MSc in Data Analytics said: "This is a great programme for our school and we really look forward to expanding it in future years to provide maximum benefit to our students."

The skills taught on the course include many of the modern Machine Learning and Statistical Modelling approaches required for modern data analysis. Computing plays a particularly strong role in the programme, and modules on Python, R, C, Java and SAS are included. These online modules are also available to other programmes, provided the students meet the relevant pre-requisites. Many employers have found this programme to be a useful way to improve the skill set of their employees; the current cohort includes students from some of the largest Irish-based multinationals including Google, Apple, Microsoft and Dell.

Students coming into the programme are required to have an undergraduate degree which contains some mathematical courses. Students may choose to join the online Professional Diploma which will automatically lead into the MSc following satisfactory progress. For more information see [www.ucd.ie/online/dataanalytics](http://www.ucd.ie/online/dataanalytics)

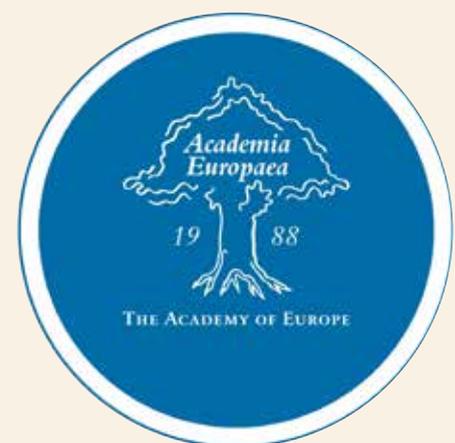
## Two UCD Professors Elected to the Academia Europaea

**Professor Robert Gerwarth, UCD School of History, and Professor Harry White, UCD School of Music have recently been elected to the Academia Europaea, a European, non-governmental association acting as an Academy.**

The members are scientists and scholars who collectively aim to promote learning, education and research. The object of Academia Europaea is the advancement and propagation of excellence in scholarship in the humanities, law, the economic, social, and political sciences, mathematics, medicine, and all branches of natural and technological sciences, anywhere in the world for the public benefit and for the advancement of the education of the public of all ages in the aforesaid subjects in Europe.

The primary criterion for membership is "sustained academic excellence in the candidate's field." Nominees are evaluated on the basis of their personal contribution to original research, major contributions to European collaboration or academic policy, publications, and honours and awards.

In total, there have been 41 members or former members from Ireland, including deceased poet Seamus Heaney. Academia Europaea members or former members from UCD include Emeritus Professor of Geography Anne Buttimer; Emeritus Professor of Celtic Archaeology George Eogan; Emeritus Professor of Sociology, Stephen J Mennell; Emeritus Professor of Electronic Engineering John Scanlan; Professor Cormac O'Gráda, School of Economics; Alun Jones, Professor of Geography at UCD School of Geography; Sinisa Malesevic, Professor of Sociology, UCD School of Sociology; Ian O'Donnell, Professor of Criminology, UCD School of Law; and Da Wen Sun, Professor of Food and Biosystems Engineering, UCD School of Biosystems and Food Engineering.





# PLAYING SOCIAL ROULETTE



Dr Crystal Fulton

**Gambling is Ireland's 'hidden addiction' and technological advances are making it even more secretive. We know so little about it in real terms that we don't even have official figures for the number affected.**

**Yet the implications for those involved – from gamblers to their families to the caring agencies – can be enormous. Helping to highlight the issue is recent research by Dr Crystal Fulton, Senior Lecturer, UCD School of Information and Communication Studies.**

**'Playing Social Roulette: The Impact of Gambling on Individuals and Society in Ireland' was a near two-year study into the social phenomenon of gambling and its impact on those who gamble, their families and friends. The study was funded by the Irish Research Council with support from the Department of Social Protection.**

**Here Dr Fulton discusses her findings and outlines the perceived challenges and needs ahead.**

After in-depth interviews with gamblers, their families, friends and addiction service agencies, Dr Crystal Fulton was left in no doubt about the impact of gambling in Ireland – and how urgently it needs to be addressed.

It isn't just about those who have a problem with gambling; it is very much also about the 'ripple effect' it can have on mental health, relationships, finances and state services.

Above all, in the course of her study, Dr Fulton found a deep-seated desire and need from all involved for a legislative structure and a focused resource to identify and help those affected by the problem.

However, the Government admits proposed legislation might not be up for discussion for some time. That partially explains why our legislation "hasn't been updated in decades".

In the course of her research she tried to "capture as many voices as possible". And many of those voices called for education to be a priority. "Service providers see a real need to help people understand when they might be at risk," she says, emphasising that young people need to be especially targeted in education programmes. Dr Fulton explains: "They mightn't be doing it themselves per se but may see others around them gambling."

Many of those she interviewed advocated that education on gambling should even be part of the school curriculum as "it would be important in terms of life skills".

A campaign similar to those highlighting alcohol and drug addiction was viewed as highly desirable in getting key messages across.

All the while, however, the big challenge remains: how can services be structured to help with and prevent gambling addiction?

"Family and friends say that while there are a number of services for addiction generally, it is hard to find something that is just for them. How do we make a space for women, for example, who have a problem with gambling? Young people? What do we do about family and friends – there is very little for them." She also speaks of the practicalities involved in even using existing services. "Everyone identified the expense of availing of the services. If you have to find the money to take part in a service that can help you get better, it can be a problem. Even if you have to go to Gamblers Anonymous it may involve a big cost because you may have to travel. And gambling depletes incomes."

**"Grappling with the issue in a meaningful way is going to take real oversight and commitment by a central agency"**

She adds: "We forget that gambling has a ripple effect. So many people are affected: family and friends and community. Someone who gambles may endanger their family financially. But they might commit criminal acts as well which has a long-term implication."

She believes we have to start the process of tackling the problem by acknowledging there is one.

"People want to put it out in the open. My interest in this is that (gambling) is such a covert thing to do and so secretive. Gamblers can get to bills before their partner sees them; they can hide behind facades." Often, partners don't know there is a problem: "It is not obvious. It is just that we don't talk about it."

From her interviews with gamblers she was also struck by how large a role emotion played in triggering their addiction. "There is a huge emotional component but they also frequently talked about chasing losses, about not being able to back away. And therein lies the problem: how do you know the point at which things start to go really wrong?"

In contrast, we talk a lot about depression and suicide and people can get identifiable help for, and support on, those issues.

A complicating factor for gambling is that it crosses so many areas of support, intervention, treatment and education. That is why her report

advocates the establishment of a national strategy.

"In some ways I've only touched the surface. We really need to put some resource into this. The Government needs to devise a way to plan this."

So where do we start? Obviously with the government and its support, as she has outlined in detail. But before that it would be helpful to establish the quantitative extent of the problem. Dr Fulton explains: "I couldn't even tell you how bad the problem is because we don't have a prevalence study for here (Ireland). To a large extent we are 'guesstimating'."

"What I did was qualitative. So I couldn't tell you real problem numbers. We are dealing with an unknown quantity."

And with the advent and scale of technologically enhanced gambling, it may be getting worse.

"Today, if you want to gamble you can take your mobile, go into a room and gamble and no one will be the wiser. This hides the problem more. Previously you may have had a problem but people could see you going to the bookies. Now you can gamble in secret."

Grappling with the issue in a meaningful way is going to take real oversight and commitment by a central agency, she suggests. "There are a lot of stakeholders. It is a contentious area."

The Irish Research Council offers a neutral body to support the completion of much needed research in this area in Ireland."

Against that broad backdrop, Dr Fulton pinpoints three core elements needed for progress.

1. "People want legislation, political leadership and strategy. They want to know how we are going to approach this problem. That's why there is a recommendation around a national strategy (in her study)."

2. There is an urgent need for a "joined-up" service plan. "We need to know how to roll out a service and fund it and make it available to people. It requires proper funding for treatment and prevention. And it requires more education for younger people."

3. Finally, more research is required. "We need to know a lot more about it. We need to think about the changing landscape of gambling. For example, technology changes so quickly it is so hard to know – you can now gamble on your Apple Watch."

But what are the chances of a real improvement over the next five years?

"It is hard to know what the next government will do".

Dr Fulton's study shines a lot of light on the road ahead - if legislators have the will to take up the challenge.

*Dr Crystal Fulton was in conversation with Eddie Cunningham, a journalist with the Irish Independent*



Staff from UCD Library pictured at the launch of the digitisation of Kevin Barry papers and memorabilia, back row (l-r) Julia Barrett, Dari Montes, Registrar and Deputy President, Professor Mark Rogers; UCD Librarian, Dr John Howard; and Orna Somerville. Front row (l-r) Audrey Drohan, Orna Roche and Kate Manning.

## Digitisation of Kevin Barry papers and memorabilia

**UCD Library has digitised two wonderful and evocative collections, honouring one of Irish history's young heroes. Kevin Barry, a UCD medical student, was executed for his part in an ambush which resulted in the deaths of three British Army officers in 1920. He was hanged on 1 November 1920, despite numerous appeals for his life to be spared.**

The Kevin Barry Papers, held in UCD Archives, contain material associated with his days at Belvedere College, his year as a medical student in UCD, and his brief time in custody at Mountjoy Prison before execution. The Papers of the Kevin Barry Memorial Committee, recently purchased by the UCD Students' Centre and held in UCD Archives, comprise the papers and correspondence of the committee, which was formed to raise funds to create a memorial to Kevin Barry. The

Committee commissioned Harry Clarke Stained Glass Limited to create a stained glass window dedicated to Kevin Barry. The window, designed by Richard King, was erected in Earlsfort Terrace and unveiled on 1 November 1934. In 2010, the window was conserved, restored and relocated in the UCD Charles Institute. The digital collection of both sets of papers is freely available to all at [digital.ucd.ie](http://digital.ucd.ie)

A four panel exhibition was designed, with academic direction from Professor Diarmaid Ferriter, covering Kevin Barry's life and times, the creation of the memorial window and explains the digitisation project. This exhibition now forms part of UCD Library's outreach programme and will be on display on campus and around Ireland over the coming years.

Guests at the launch included members of the extended Barry family and were welcomed by UCD Librarian Dr John Howard and UCD President, Professor Andrew Deeks.

Professor Diarmaid Ferriter, UCD School of History, gave context to the events of 1920, describing it as a "bloody awful year". As well as the execution of Kevin Barry, 1920 was the year that saw the burning of Cork; the sack of Balbriggan; the murderous riots in Northern Ireland; the death of Terence MacSwiney; Bloody Sunday and the Kilmichael Ambush.

## UCD Sutherland School of Law hosts 18th annual UCD Irish European Law Forum Conference

The 18th UCD Irish European Law Forum Conference was held in the UCD Sutherland School of Law on October 9 and 10. The conference was very timely in addressing the extremely important theme of collective responsibility in the context of the current irregular migration crisis, ranging from search and rescue in the Mediterranean Sea to broader issues of managing refugee flows and resettlement across Europe. The forum brought together a range of scholars from across different disciplines, as well as relevant policy professionals and practitioners, in order to address important conceptual and practical questions in order to address European states' willingness to share in the burden of addressing this challenging issue.

The IELF delegates were particularly delighted to have an opening keynote address from Dr Peter Sutherland SC, United Nations Special Representative of the Secretary General for International Migration, as well as further keynote sessions involving regional and international policy representatives and leading experts in refugee law and human rights.

The IELF 2015 sought to engage academics from cognate social and human science disciplines in an interdisciplinary dialogue with professionals and policy-makers. The aim was to address the adequacy of international and European legal and policy frameworks, seen through the lens of 'collective responsibility'. By framing answers to this challenge the hope is to be able to suggest how the idea of collective responsibility can be better 'operationalised' at the European level in order to help in the effort to save lives at sea and to share in the burden of rescue and resettlement.

## UCD Hosts IUA Annual HR Conference

The 14th Irish Universities Association Annual HR Conference was hosted this year by UCD on October 8 and 9. The conference, which is the most important annual CPD and networking event for HR professionals in the sector, was opened by UCD President, Professor Andrew Deeks in O'Reilly Hall, and was attended by 130 HR professionals from across the sector. The theme of this year's conference was 'Leading Out' reflecting a focus on the post-austerity agenda which has dominated our recent history, and preparing to re-focus on the new challenges that come with growth and ambitious new institutional strategies.

An interesting and diverse panel of speakers included Professor Veronica Hope Hailey, Dean of the School of Management at the University of Bath, who spoke on 'Leadership Challenges' based on significant research she has carried out in this area, and Dr Marie Clarke, UCD Dean of Arts, who covered her research into 'The Academic Profession in Ireland'. UCD HR was honoured to welcome back Emeritus Professor and President of the Royal Irish Academy, Mary Daly as the after dinner speaker. Professor Daly gave a highly entertaining perspective on the



Pictured at the IUA Conference were, from left to right: Ms Claire O'Malley, UCD HR Relationship Director; UCD President, Professor Andrew Deeks; Professor Veronica Hope Hailey, University of Bath; and Tristan Aitken, UCD Director of Human Resources.

challenges faced by HR in the university environment.

Delegates had an opportunity to experience the FitzGerald Debating Chamber on the second day of the conference, with an organised debate between IBEC Head of IR & ER, Maeve McElwee, and ICTU Vice President, Sheila Nunan on the future of National Agreements.

The conference was concluded with some closing remarks by the newly appointed Director of HR Tristan Aitken who summarised the experience of the two days and thanked delegates for their participation and acknowledged the excellent work of the UCD HR organising committee.



Launching the UCD and IBM research co-lab at the UCD O'Brien Centre for Science are UCD President, Professor Andrew Deeks; Dr Eleni Pratsini, Director, IBM Research-Ireland; and Damien English TD, Minister for Skills, Research and Innovation.

## UCD and IBM Launch Research Collaboratory

**UCD and IBM have launched a new research collaboratory, or co-lab, allowing scientists from UCD and IBM Research-Ireland to work closely together on technologies for the next generation of smart and sustainable cities.**

The collaborative research programme, based at UCD O'Brien Centre for Science, will focus on applying cognitive computing technologies to augment human decision making and delivering the next level of advanced collaboration between people and computers.

Applications will cross a wide range of disciplines with global impact including agriculture, connected cars, healthcare management and personalised care, smarter energy and transportation.

Among the key priorities for the research co-lab is to develop and evaluate cognitive computing applications in the dedicated or controlled 'mini-city' environment of UCD's Belfield Campus, providing deeper understanding and optimisation of a city infrastructure as a whole.

Researchers will for example apply prediction and optimisation technologies to study the live dynamics of connected cars, integrating mobile applications, energy management and monitoring the results to transform the planning and economic management of sustainable transportation.

UCD President, Professor Andrew Deeks said, "Through our research co-lab with IBM, we aim to develop and evaluate technologies here at UCD that will expand our capabilities to deliver innovative Internet-of-Things (IoT) solutions to Ireland and around the world."

In personalised care and healthcare management, IBM scientists will augment UCD's world-leading research capability to study and improve social and healthcare planning and delivery. The goal is to enable better outcomes through end-to-end collaboration in personalised care planning and delivery through the application of cognitive computing technologies.

A pilot project on smarter buildings, fusing cognitive computing with IoT technologies, will employ sustainable energy design and operation approaches to evaluate and improve energy efficiency and renewable energy technologies. This will be integrated with innovative environmental, water and transportation solutions on the campus to optimise cost savings and environmental benefits at UCD.

## Phision Therapeutics Wins UCD 2015 Start-Up Award

**Phision Therapeutics, an early-stage life sciences venture, has won the UCD 2015 Start-Up Award after being declared overall winner of this year's UCD VentureLaunch Accelerator Programme.**

The new venture is developing proprietary therapeutic drugs to more effectively treat vision loss to prevent blindness associated with ageing or diabetes.

The retinal disease age-related macular degeneration (AMD) is a leading cause of vision loss in Western societies. In the US alone the retinal therapeutic market, to treat such diseases, is valued at \$3.5 billion annually.

The current treatment for patients experiencing vision loss due to AMD involves up to 12 eye injections per year. It is recognised that patients are also at risk of eye infections or retinal detachments due to the injections. In addition up to 30% of AMD patients do not respond to these injections, and for them there is currently no effective alternative treatment.

To address such issues and using an unbiased, systems-pharmacology approach Phision Therapeutics has identified, and is developing, novel small molecule drugs with novel mechanisms of action to curb the



Pictured at the UCD O'Brien Centre for Science is Dr Breandán Kennedy, founder, Phision Therapeutics, winner of the 2015 UCD Start-Up Award.

undesired growth of 'leaky' new blood vessels in the eye which lead to vision loss and blindness.

Phision Therapeutics is a new venture emerging from research carried out over several years by founder Dr Breandán Kennedy with Dr Alison Reynolds at the UCD School of Biomolecular and Biomedical Science and the UCD Conway Institute.

Funders of this research to date include; Enterprise Ireland; Science Foundation Ireland; Irish Research Council; Health Research Board and the European Commission's Marie Skłodowska-Curie Actions Programme.

The overall objective of the annual, 3-month UCD VentureLaunch Accelerator Programme which is held at NovaUCD, is to support the creation, and to accelerate the launch, of sustainable and profitable new ventures based on intellectual property emerging from UCD.

The programme aims to equip UCD researchers with the knowledge, skills and understanding that is required to work as part of a team successfully leading a new commercial venture.

## UCD Launches New Online Licensing Platform

**UCD's technology transfer office at NovaUCD has launched a new online licensing platform (<http://licence.ucd.ie>) to promote and license technologies developed at the University.**

The platform provides three options to potential licensees to access UCD technologies, 'buy it now', 'obtain a non-commercial licence' and 'make an enquiry'.

The technologies included under the 'buy it now' option can be broadly classified as research tools, such as cell lines, vectors or certain software, with relatively low inherent value.

Until now members of UCD's technology transfer team spent significant time negotiating bespoke licences for such technologies. In order to streamline this process UCD partnered with Aficionado Technologies Ltd, a UCD spin-out company, to develop and launch the UCD Online Licensing Platform to license such technologies on a non-exclusive basis, to multiple users, for a relatively small one-time payment, in a seamless manner.

The easy-to-navigate and search engine optimised platform incorporates a simple, non-negotiable, one-page licence agreement for the 'buy-it-now' technologies available on the platform.

The platform also incorporates Stripe to accept, manage, and track online credit card payments thus eliminating the need for back office tasks such as manual invoicing or processing of payments. This considerably reduces the time required to complete licensing deals.



Pictured at NovaUCD are Dr Kevin McCarthy, CEO and founder, Aficionado Technologies and Brendan Cremon, UCD Director of Enterprise and Commercialisation

Potential licensees can also use the new platform to seek non-commercial licences to certain UCD technologies (mainly academic users). In addition enquires to the technology transfer team can be made through the platform, in relation to other UCD technologies, such as patented inventions, which require more bespoke licensing negotiations.

UCD has now licensed the technology behind the UCD Online Licensing Platform to Aficionado enabling it to market the platform to other technology transfer offices in Ireland and internationally.

The platform has already generated enquires from Ireland, UK, continental Europe, United States, South America, Asia and the Middle East and a number of commercial and non-commercial licences have already been executed through the Platform.



*Pictured at the Laurence Crowley Lecture Series 2015 were (l-r) : Professor Jan Rosier, UCD School of Biomolecular and Biomedical Science; Professor Tom Donaldson, Wharton Business School; Professor Ciarán Ó hÓgartaigh, Dean of UCD Business; and Professor Thomas Pogge, Yale University*

## UCD Michael Smurfit Graduate Business School in association with Perrigo presents the 2015 Laurence Crowley Lecture Series

On 5 November, UCD Smurfit School welcomed over 100 guests from the biotech and pharmaceutical industry, academia and students who came to participate in the eagerly anticipated Laurence Crowley Lecture Series, devoted to the Business of Biotechnology.

Internationally renowned Professors Thomas Pogge of Yale University and Thomas Donaldson of Wharton School shared their views on the conflict that exists for biotech firms between the development of highly effective drugs and their responsibility towards society and patients when

marketing them at very high prices. Professor Ciarán Ó hÓgartaigh, Dean of UCD Business opened the event, which is sponsored by Perrigo, to a full audience and Professor Jan Rosier, UCD School of Biomolecular and Biomedical Science, gave an introductory lecture to set the tone of the session.

This Series is an annual event - in 2016 the UCD Smurfit School looks forward to welcoming Gary Pisano, the Harry E. Figgie Professor of Business Administration at the Harvard Business School.

## The Economist and FT confirm UCD Smurfit School's status among top international business schools

**UCD Michael Smurfit Graduate Business School welcomed validation of its international standing confirmed in two separate highly respected international rankings for 2015 – the Financial Times Executive MBA rankings and The Economist full-time MBA rankings.**

The School's MBA programme increased its position to 56th in the world (up from 63rd last year) in The Economist full-time MBA ranking. It also improved its place in The Financial Times Executive MBA rankings climbing to 82nd in the world (up from 94th the previous year).

Commenting on the rankings Professor Ciarán Ó hÓgartaigh, Dean of UCD College of Business said "These two most recent announcements round off a successful year for UCD College of Business in terms of ranking results. These consistently high rankings help us to attract high calibre students and faculty and to partner with other leading business schools internationally. As a strong player in an international context, these results are testimony to ongoing curriculum innovations which are fast making our MBA programmes some of the most relevant and desirable on offer in Europe."



*Philip Berber (pictured), a distinguished alumnus from UCD Lochlann Quinn School of Business, has been recognised on the 100 AACSB Influential Leaders list of honourees. Dublin-born Philip Berber joins other notable alumni from business schools accredited by global accrediting body and membership association for business schools, AACSB International. The 100 leaders nominated by AACSB are making an international impact through their business acumen, leadership or entrepreneurial success.*

## UCD College of Business invited to join exclusive international business school network PIM

UCD College of Business has been formally admitted to the PIM network – an invitation only exclusive Business School network. Professor Ciarán Ó hÓgartaigh, Dean of UCD College of Business attended the 42nd annual PIM Conference, hosted by FGV-EAESP in São Paulo in October, and accepted the honour. The Partnership in International Management (PIM), is a consortium of top business schools from around the world that exchanges select graduate students for one academic term. UCD Smurfit School is now one of 63 business schools worldwide sharing a reputation for upholding the highest degree of academic excellence both regionally and globally and driving cooperation among its students, faculty and administrations. PIM member institutions including Duke, NYU, LSE, HEC, Warwick and Chicago Booth, have exchanged several thousands of students through the years.

Speaking about the PIM membership, Professor Ciarán Ó hÓgartaigh, Dean, UCD College of Business said: "These associations help us to attract high calibre students and faculty and to partner with other leading business schools internationally – as signalled by our new membership of PIM which we are delighted to have been invited to join this year. This creates a first-class learning environment in the service of our students and of Ireland as a considerable player in business education internationally. We remain dedicated to delivering education and research programmes to the highest standard to those who study at UCD Smurfit and Quinn Schools, so that we can develop their capacities for life in a highly competitive environment where our society and our economy depends on high standards and an openness to the world."



# New Approach Identifies Remains of Thomas Kent

**It is not every day that an academic, even a leading figure in their field, gets asked to undertake confidential work on behalf of the State.**

**And it is not every day that you develop a new technique which enables you to do a job 500 times cheaper than it would have been done previously.**

**But that is exactly what happened to Dr Jens Carlsson, of the UCD Earth Institute, who was earlier this year called upon by members of the Garda Technical Squad, who needed help to identify the remains of a body found in Cork prison last June.**

The unidentified body, uncovered in a shallow grave at the prison, was believed to be that of Thomas Kent, one of the 16 men executed in 1916 following the Easter Rising.

Thomas Kent, and his brother William, were arrested following a RIC raid at the family home on 2 May 1916.

Thomas and William were tried by court-martial at Cork Detention Barracks. William was acquitted, but Thomas was sentenced to death and was executed in Cork on 9th May 1916. He was unmarried.

As no formal records were available, after 99 years, the only way to be sure that they were the remains of Thomas Kent was to conduct scientific DNA analysis.

The analysis involved the State Pathologist's Office, the National Forensic Coordination Office at the Garda Technical Bureau, Forensic Science Ireland and scientists from UCD.

Dr Carlsson's role in the identification of the body, referred to as 'Mr X' came about as a result of an association with the Galana Conservancy, a Kenyan wildlife reserve back in 2014.

There he met John Byrne, who also happens to be the head of the Garda Forensic Coordination Office as part of the force's Technical Bureau.

When the body was discovered, Byrne knowing of Dr Carlsson's genetics expertise, reached out for help on trying to identify Mr X.

When they spoke, Byrne asked Dr Carlsson would it be possible to conduct a Mitochondrial DNA analysis on the remains.

Byrne made it known that the body in question could be a figure of significant Irish historical importance and Dr Carlsson asked him whether any relations of Thomas Kent were alive.

Byrne asked could a Mitochondrial DNA test be used because it was the technique to confirm the identity of British King Richard III, whose remains were discovered in Leicester in September 2012.

But Dr Carlsson was adamant that such an approach would not work in this Irish case as it would not tell anything about relatedness. "A lot of people in Ireland share Mitochondrial without being related. What you need is maternal relatedness, Mitochondrial is only on the maternal side," Dr Carlsson says.

"There was no mother of Thomas Kent, no living relatives on the maternal side," he adds.

But it turns out that he had two nieces on his brother's side.

"Because they were on the father's side there was no Mitochondrial," he says.

So Dr Carlsson said that they would need to use another method, a micro-satellite technique, which is used by law enforcement agencies in murder scenes across the world.

The pair met in July to discuss the matter further. In the meantime, Dr Carlsson had attended a Genetics conference about Next Generation Sequencing, where a group of archaeologists were talking about retrieving DNA, even in bodies going back thousands of years.

The archaeologists spoke of using the petrous bone, which is the densest part of the skull located behind the ear. It turns out it can contain up to 400 times more DNA than other bones.

Dr Carlsson and members of the Garda team went down to Cork a short time after to retrieve the necessary bone sample and then returned to Dublin to begin the analysis.

Forensics Ireland went to work on the femur bone in order to do the Micro-Satellite analysis while Dr Carlsson and his team began sampling the petrous bone material in a bid to confirm whether Mr X was the remains of Thomas Kent.

Forensics Ireland extracted DNA from blood samples from two of Kent's nieces and sent them to Dr Carlsson to test against the DNA in Mr X. The DNA sequencing was conducted in the PINHASI-ERC ancient DNA laboratory.

He used a shotgun or condensed concentration of DNA (65 base pairs as opposed to the 300bp capacity of the test machine) because of the degradation of the DNA from the exhumed body.

Crucially, because of the degradation, Dr Carlsson and his team decided to abandon examination of heterozygotes, and concentrate on one randomly selected allele per sequence, which proved to be a significant turning point in the process.

What they found was that the DNA matches were well within the range of what would be expected of a related class.

Given the new approach, the team had to use statistical simulations in order to verify their results.

"As we used a statistical approach, we had to ensure our work was robust and happily it was, the simulations proved that," Dr Carlsson says.

The team posed a number of questions to cross check their findings.

They asked: What are the odds that Mr X does not fit the model of being the uncle of these women? The result was 1 in 20 million.

They also asked how much more likely Mr X is related to the nieces than not at all.

The answer was 475 trillion times more likely to be related.

Therefore, Dr Carlsson and his team concluded that Mr X was Thomas Kent.

On foot of Dr Carlsson's confirmation, Taoiseach Enda Kenny offered a State funeral to the Kent family earlier this year. The family accepted the offer, and the State Funeral for Thomas Kent was held in Cork on 18 September 2015.

Dr Carlsson says before this, the old way of trying to establish a DNA link in the Thomas Kent case could have cost up to €780,000 where as his team were able to conduct it for less than €1,500.

"This is a revolution," he says.

Dr Carlsson adds that this new approach has huge potential for identifying missing relatives.

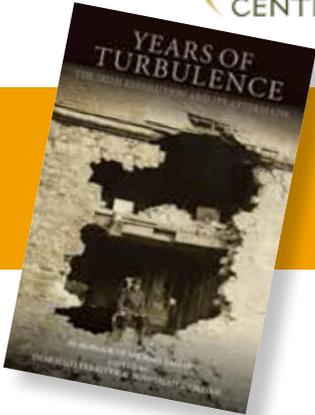
"This has really opened doors, looking at graves and mass graves, and we can look at the relatedness of those buried," he says.

He says he and his team have already been approached to potentially partake in several projects including one with Second World War victims to try and identify remains and another relating to the alleged mass murder of 57 Irish emigrants along a railway line in Philadelphia in 1832.

He says he and his team have also been approached by Human Rights Groups to try to help them with war crimes and the identification of bodies in mass graves.

*Dr Jens Carlsson was in conversation with Daniel McConnell (BA 2000), Political Editor with the Irish Examiner.*

# Books



## Uncovering untold experiences of the Irish Revolution and its aftermath

**Editors, Professor Diarmaid Ferriter,** Professor of Modern Irish History, UCD School of History and **Dr Susannah Riordan,** lecturer, UCD School of History

**University College Dublin Press**

Many muted voices of the revolution are given a platform for the first time in *Years of Turbulence: The Irish Revolution and Its Aftermath*. The collection demonstrates a determination to uncover personal experiences and protests that until now have remained relatively undocumented and ignored. Such themes as the experience of violence in its various forms, the specific circumstances of individual counties, tensions between constitutionalism and radicalism, between elites and the grassroots, the extent to which the IRA's campaign was effectively co-ordinated and controlled, as well as the challenge of writing about women and what they experienced, are deeply considered. Historians in this collection also recognise the need to address, not just events of the revolutionary period, but its afterlife, assessing what the revolution and its leaders came to symbolise, the extent to which a hierarchy of benefit existed in its aftermath, and what the implications were for survivors.

Making use of a variety of recently released archival material – including censuses of Ireland of 1901 and 1911, the Bureau of Military History collection, the Military Archives and Service Pensions Collection – *Years of Turbulence* reveals a fascinating web of different experiences during the revolutionary era and is a fitting contribution, not only to the pioneering scholarship of renowned historian Michael Laffan, who this collection honours, but also to the current decade of commemoration of the centenary of the revolution. The book is richly illustrated with rare images of the period from the Des Fitzgerald collection.

Professor Michael Laffan's legacy lies, in part, in his graduates, like Professor Diarmaid Ferriter and Dr Susannah Riordan, whose work continues where he left off after setting them on a path of intellectual development.



## Exploring the function of memory in the work of contemporary women poets

**Editor, Dr Lucy Collins,** UCD School of English, Drama and Film

**Liverpool University Press**

'For Irish women poets, past and present exist in thematic and aesthetic alignment, making their treatment of memory of enduring importance to readers' so states Lucy Collins in introducing her latest book *Contemporary Irish Women Poets*.

This study examines the intersection of private and public spheres through the representation of memory in contemporary poetry by Irish women. The author explores how memory shapes creativity in the work of well-known poets such as Eavan Boland, Eiléan Ní Chuilleanáin and Medbh McGuckian as well as in that of an exciting group of younger poets. This book analyses, for the first time, the complex responses to the past recorded by contemporary women poets in Ireland and the implications these have for the concept of a national tradition.

The book also considers the broader temporal framework within which the poetry must be read, in both political and aesthetic terms. This study is concerned with issues of tradition and innovation as well as with the negotiation of public and private roles for these poets.



## Reviewing progressive politics, historical analysis, policy priorities and the challenges ahead

**Editors, Dr David B. Woolner,** Senior Fellow and Resident Historian of the Franklin and Eleanor Roosevelt Institute, Senior Fellow of the Center for Civic Engagement at Bard College, and Associate Professor of History at Marist College and **Dr John M. Thompson,** Lecturer at the Clinton Institute for American Studies, UCD

**Oxford University Press**

For several decades conservatives set the political agenda in the United States, allowing them to focus the conversation on topics such as tax cuts, national security, and social issues. It is increasingly becoming apparent, however, that this has begun to change. Factors such as the election of the first African-American President and the increasing diversity of the population, the dramatic rise of income inequality, and the social liberalism of younger Americans indicate that progressive political ideas are more influential today than at any point in four decades. This book is the first to offer a comprehensive overview of progressive politics, combining historical analysis, a discussion of policy priorities today, and a survey of the challenges ahead. Featuring essays by leading scholars, analysts, and commentators, including Jonathan Alter, Alan Brinkley, Rosa Brooks, Christopher Caldwell, Ellen Chesler, E.J. Dionne, Jacob S. Hacker, Michael Konczal, Mark Lytle, Jeff Madrick, Kevin Mattson, Charles Postel, Mark Schmitt, Joseph Stiglitz, Elizabeth Thom, John M. Thompson, Dorian T. Warren and David B. Woolner, it is an indispensable guide to the ideas and debates that will shape American politics in the coming years.



## Examination of the practice of corporate regulation and enforcement

**Editor, Dr Joe McGrath,** UCD Sutherland School of Law

**Manchester University Press**

*Corporate and white-collar crime in Ireland* is the first monograph to analyse the transition in Ireland from a sanctioning, 'command and control' model of corporate enforcement to the compliance-orientated regulatory model. It is also unique in locating this shift in its broader sociological and jurisprudential context. As such, the distinctive contribution of this volume is not in the analysis of corporate or white-collar crimes but rather in its analysis of the emerging legal architecture which attempts to manage rather than punish crime. It provides a definitive account of a State at a critical stage of its economic development, having moved from an agrarian and protected society to a free-market globalised economy which is trying to cope with the negative aspects of increased corporate activity, having experienced an economic boom and depression in a remarkably condensed period of time.

This book explores the emergence of a new architecture of corporate enforcement in Ireland. Traditionally, the State invoked its most powerful weapon of state censure, the criminal law, but was remarkably lenient in practice because the law was not enforced. The contemporary model is much more reliant on cooperative measures and civil orders, but also contains remarkably punitive and instrumental measures to surmount the difficulties of proving guilt in criminal cases.

## ■ UCD awarded centre of excellence status in rheumatology

An Taoiseach, Enda Kenny TD has officially announced a “Centre of Excellence” award for the Centre for Arthritis and Rheumatic Diseases at UCD by European League against Rheumatism (EULAR). This is the first such centre of excellence in Ireland where one in five people are likely to experience some form of rheumatic disease during their lifetime.

EULAR is the umbrella organisation representing the national societies for rheumatology and the People with Arthritis and Rheumatism in the EU. It aims to improve treatment for the rheumatic diseases by fostering excellence in research and education in the field of rheumatology.

Speaking at the official announcement in November, An Taoiseach paid tribute to all those involved in the clinical, translational and basic science research in rheumatology whose hard work and dedication ultimately benefits those affected by rheumatic diseases in Ireland.

He also acknowledged the investment by Atlantic Philanthropies through Arthritis Ireland into two Professorships of Rheumatology in Ireland - Gerry Wilson, Professor of Rheumatology, UCD School of Medicine and Professor Ursula Fearon, Chair of Molecular Rheumatology at Trinity College Dublin,

Together these Professorships aim to create a critical framework for the engagement of the two universities towards the establishment of Ireland as a global leader in the area.

“The designation as a EULAR Centre of Excellence recognises the dedication and application in the clinical and the scientific research laboratories by our patients, our graduate students, nursing staff, scientists, allied health professionals and doctors working together as one team to one common goal



At the recent unveiling of the award of centre of excellence in rheumatology status were (l-r) Professor Ursula Fearon, Trinity College Dublin; An Taoiseach, Enda Kenny TD; Principal of the UCD College of Health and Agricultural Sciences, Professor Cecily Kelleher; and Director of Translational Research, UCD School of Medicine, Professor Douglas J Veale

– to improve the care and treatment of patients who suffer from arthritis and rheumatic diseases,” said Professor Douglas J Veale, Director of Translational Research, at the UCD School of Medicine.

The centre at UCD comprises rheumatologists, scientists, nurses, allied professionals and patients in St. Vincent’s University Hospital, Our Lady’s Hospice and Care Services, Harold’s Cross and

Mater Misericordiae University Hospital involved in the clinical care, education and research of rheumatic diseases. It is headed up by Douglas Veale, Professor of Medicine, UCD School of Medicine, Consultant Rheumatologist at St Vincent’s University Hospital and a Fellow of the UCD Conway Institute.

## ■ UCD breaks into the world’s top 100 for Clinical, Pre-Clinical and Health Sciences

**UCD has secured a place in the Times Higher Education Top 100 Subject Rankings of best academic faculties, having been ranked 99th in the Clinical, Pre-Clinical and Health Sciences category.**

This is the first time an Irish university has broken into this Top 100 subject ranking and the first Irish Medical School ever to be included in this top tier. The rankings rate Universities according to the 13 performance indicators used by the Times Higher Education for its annual institutional rankings which places UCD (176) in the top 200 universities worldwide.

The ranking reflects the contribution of the following UCD Schools to UCD’s Clinical, Pre-

Clinical and Health Sciences portfolio: School of Nursing, Midwifery & Health Systems; School of Public Health, Physiotherapy & Population Science; School of Biomolecular & Biomedical Science; School of Medicine; School of Chemistry; and School of Physics.

UCD Dean of Medicine, Professor Patrick Murray said “We are pleased to break into the top 100 and note that there are 2,409 medical schools across the globe. While rankings are increasingly important, we continue to be guided by the pursuit of improving healthcare in Ireland and around the world by educating and training health professionals and biomedical scientists who together form a community that is driven by a commitment to service, enquiry and continuous health improvement.”

## ■ Heart surgery advances in 3D

**3D Printing is becoming an increasing feature of anatomy research at the UCD School of Medicine and it is no surprise that surgical colleagues have enthusiastically embraced the technology also. A team of surgeons at the Mater Misericordiae University Hospital, in conjunction with colleagues at UCD Anatomy recently developed a 3D printed, colour-coded heart model to aid them in the preparation and performance of complex heart transplant surgery.**

The 41-year-old patient suffered from multiple heart anomalies leading to end stage heart failure including right atrial isomerism, dextrocardia, left inferior and superior vena cava to a single atrium, single ventricle with right ventricular morphology, double outlet right ventricle with transposition of the great vessels and total anomalous pulmonary venous drainage to the superior vena cava.

The surgery/anatomy team included Dr Michelle L. Smith and Prof James F. Jones (both Anatomy) and Mr Lars Nolke and Dr M.K. O’Reilly (Cardiothoracic Surgery, and Radiology respectively, Mater Misericordiae University Hospital).

This group created a 3D printed colour-coded model to aid visualisation of the aberrant anatomy to enhance surgical planning for transplantation and provide a more informative aid than is possible with 2D images.

Data were obtained using a Somatom Definition AS+ 128 slice scanner to deliver a cardiac gated contrast enhanced Computed Tomography image at 120kV with automatic mAs modulation. Images were acquired in 0.6mm slices and reconstructed using a Siemens Syngo system. All data were anonymised in keeping with local ethical guidance.

The colour-coded patient-specific model was qualitatively verified in conjunction with the CT images by the Consultant Radiologist. The model was utilised immediately preoperatively and was considered very helpful by the surgical team, particularly in the setting of dextrocardia.

This project published in the *Proceedings of the Physiological Society* showed that colour-coded models of CHDs can be utilised as an adjunct to anatomic study and surgical planning particularly in understanding of complex anatomy.



Image of the winning vase animation showing Nike, the bull and two athletes

## ■ Animating Ancient Greece in the Classical Museum

The ancient world meets the twenty-first century thanks to animations of scenes on Greek vases in the UCD Classical Museum. September saw the launch of a new animation made by Panoply, creators of animated scenes based on ancient Greek vases for educational uses. The animation, called “Bad Karma”, uses figures painted on a red figure krater, a vessel used for mixing water and wine at the all-male drinking party known as a symposium. The launch was the culmination of a national competition held in collaboration with the Classical Association of Ireland Teachers, where school students were asked to submit a storyboard based on the krater. The actual scene on the vase shows the goddess Nike, a bull, and two athletes – using their knowledge of ancient Greece, students had to imagine what might have happened prior to the moment frozen in time by the vase painter.

The winners were Frank O’Grady and Eamonn O’Broin from Gonzaga College. Animator Steve Simons and museum curator Dr Jo Day visited the boys’ class before the summer to talk about both the vase and the animation process. This is not the first animation of this vase though; in autumn 2014 students taking the Ancient Materialities module as part of the MA in Classics in UCD produced a pilot animation, “The Procession” and a related museum display. This pilot project was funded by a UCD College of Arts and Celtic Studies Research Project /Initiative Scheme. Both animations and related information are available online as well as in the museum on an iPad, right beside the vase itself. This juxtaposition of ancient and modern encourages the visitor to engage with issues such as interpreting ancient imagery and the choices made by ancient painters. The launch was well attended by students past and present, staff, UCD Deputy President and Registrar, Professor Mark Rogers; UCD College of Arts & Humanities College Principal, Professor Maeve Conrick; CAIT members, the Panoply team, and, of course, the winners and their families. Both animations, and accompanying information, can be viewed at: <http://www.panoply.org.uk/nike.html#aboutkarma>



Pictured at the Globalising the History of Revolutions Conference were: Front row: Dr Conor Mulvagh, UCD School of History; Professor Jane Ohlmeyer, IRC Council Chair; Dr Mark Jones, UCD/FU Berlin; Back row: Dr Fergus Robson, TCD; Dr Mercedes Peñalba-Sotorio, UCD School of History; Dr Susan Grant, Liverpool John Moores; Dr Dmitar Tasic, UCD School of History; Dr Matteo Millan, UCD School of History

## ■ International History experts converge at UCD hosted conference

Globalising the History of Revolutions Conference took place in Ardmore House on 23 and 24 October. This conference was funded by UCD Decade of Centenaries and Irish Research Council (New Foundations 2014). The conference brought together 24 speakers from leading universities in 6 countries, including experts in the history of revolution in Mexico, China, Ottoman Turkey, Russia, as well as Europe, and Ireland. There were keynote lectures from Professor Stephen Smith (Oxford

University) and Professor John Horne (Trinity College Dublin). The event, which was organised by UCD School of History IRC Elevate Fellow, Dr Mark Jones, began with a welcome address from Irish Research Council Chair, Professor Jane Ohlmeyer. Over the course of the conference, participants discussed the problem of how to undertake historical research beyond the confines of nation states. A follow on event is planned for Autumn 2016.



Ms Paddle Blaney, Director AIIHPC; Professor Philip Larkin, Professor of Clinical Nursing (Palliative Care), UCD School of Nursing, Midwifery and Health Systems and Our Lady’s Hospice & Care Services and Chair of AIIHPC; Dr Leo Varadkar TD Minister for Health; Dr Karen Ryan Clinical Lead National Clinical Programme for Palliative Care and Senior Clinical Lecturer UCD School of Medicine; Dr Michael Connolly, Lecturer UCD School of Nursing, Midwifery and Health Systems, Head of Education AIIHPC and Coordinator Global Colloquium 2015.

## ■ Experts gather in Dublin to develop the global future of palliative care

**A Global Colloquium on Palliative Care was recently hosted in Dublin Castle by the All Ireland Institute of Hospice and Palliative Care (AIIHPC) and the World Health Organisation (WHO). Both UCD and the Dublin Academic Medical Centre, are consortium members of AIIHPC and are currently represented on its management committee by Professor Philip Larkin (UCD School of Nursing, Midwifery and Health Systems).**

The purpose of the Global Colloquium on Palliative Care was to gather national level policy makers and clinical experts from 39 countries across the globe to provide an international response to the recent World Health Assembly Resolution (WHA67.19) which called on member states to strengthen the integration of palliative care services into national health systems. Themes explored included a public health approach to palliative care, models of palliative care provision, palliative care and chronic illness and the integration of palliative care into various care settings. The challenges for palliative care leadership, research, education and practice were also debated. Minister for Health, Dr Leo Varadkar TD welcomed the international delegates to

Dublin and confirmed the Irish Government’s commitment to palliative care.

“Here in Ireland, we want to ensure that everyone has access to the type of palliative care that they need, regardless of their diagnosis, how old they are, or whether they are cared for in a hospice, an acute hospital, a nursing home or at home.”

The role of education as a tri-partite model within the World Health Organisation public health approach (Education, Access to medication and Political advocacy), offers a strong challenge to third level organisations involved in palliative care education to embed training across all healthcare professional curricula, to ensure a competent skilled workforce for the future.

## Cass R Sunstein speaks at launch of new College of Social Sciences and Law

**Cass R Sunstein, Harvard Professor and former Administrator of the White House Office of Information and Regulatory Affairs in the Obama administration, delivered the UCD Garret FitzGerald Lecture at the launch event of UCD College of Social Sciences and Law on Monday, 19 November in UCD Sutherland School of Law.**

Co-author with Richard Thaler of the influential book *'Nudge'*, which details the power of 'nudges' to positively influence the behaviour of citizens, Sunstein's lecture described the increasing use of behavioural science in democratic nations, with many nations including the United States, the United Kingdom, and Germany establishing 'nudge units' to implement policy interventions that encourage people to make choices in their own best interest. Sunstein addressed the question of whether behavioural science is compatible with democracy by providing evidence of instances where nudging has improved consumer welfare without coercion or punishment.

The Sunstein lecture marked the end of the 2015 UCD Garret FitzGerald School, which saw a series of parallel seminar sessions that highlighted current research by UCD academics on the theme 'The Significance of the Social Sciences for 21st Century Ireland.' An audience of policymakers, practitioners, alumni, staff, faculty and students attended the event to explore the impact of research in social sciences



*Pictured at the Launch of UCD College of Social Sciences and Law at the UCD Garret FitzGerald Autumn School and Lecture on 19 October in UCD Sutherland School of Law were (l-r) College Principal Professor Colin Scott; Harvard Professor Cass R. Sunstein; and UCD Vice-President for Research, Innovation and Impact, Professor Orla Feely*

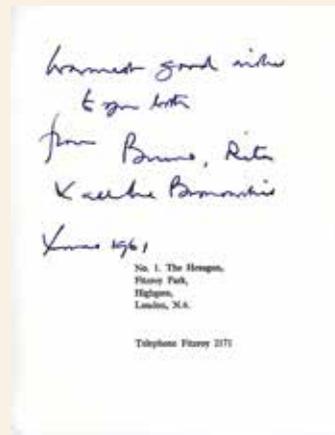
and related disciplines in understanding society and human behaviour, identifying policy and social problems and addressing the challenges of contemporary society.

As he launched the new UCD College of Social Sciences and Law, Professor Colin Scott, College Principal, stated, "We are signalling a commitment to further build on the recognised strengths of UCD in the social sciences and cognate disciplines to identify and address social, economic and political challenges that cross disciplinary boundaries within and beyond the social sciences." He added, "This is important for our mission in graduate and undergraduate education, in which we have more than 5000 students; the training of the next generation of researchers through our doctoral and postdoctoral programmes; our highly ranked research activities; and our engagement and outreach with alumni and policy and practice communities."

In her remarks at the launch of the new College, Professor Orla Feely, UCD Vice President for Research, Innovation and Impact, noted the very high standing of UCD in the social sciences internationally and the importance of the social sciences for our understanding of key societal challenges, and the significance of collaboration between the social sciences and the science, technology, engineering and maths (STEM) disciplines.

A society with the capacity to understand its own structures, relationships and values is well placed not only to address the social and political challenges it faces, but also to foster better understanding of the potential for, and limits of, economic, scientific and technological progress. Research in the social and behavioural sciences underpins societal wellbeing as well as economic achievement.

The social sciences have a vital role in UCD, in Ireland and internationally.



*UCD Archives, LA52/41 Papers of John L. (Jack) and Máire MacNeill Sweeney ©2015 The Rita Bronowski Trust. Used by permission.*

## Bronowski Christmas Cards in the John L. (Jack) and Máire MacNeill Sweeney Papers in UCD Archives

Jack Sweeney was curator of the Harvard Poetry Room and his wife, Máire MacNeill (daughter of Eoin MacNeill) was a folklorist who worked for the Irish Folklore Commission and later taught in the Department of Celtic Studies at Harvard. The collection of their papers deposited in UCD Archives, consists mostly of letters to Jack and Máire from a large number of poets, playwrights, artists and critics, concerning the progress of their own work and its publication. They also discuss developments in contemporary culture and

letters, Irish writers and literature, their views of the work of other writers, arrangements for public readings, news of mutual friends, and personal and social affairs and travels.

The letters sometimes include additional items. Examples include photographs by noted photographers Henri Cartier-Bresson (1908–2004) and Alvin Langdon Coburn (1882–1966) and prints of wood and copper engravings by artist and poet David Jones (1895–1974). A small selection of Christmas cards sent from the renowned polymath,

Jacob Bronowski (1908–1974) and his wife, sculptor and artist, Rita Bronowski née Coblentz (1917–2010) forms part of the collection. Each of the five cards reproduced consist of original art by Rita and original poems by Jacob (Bruno). In a BBC interview with Michael Parkinson broadcast in 1974, Jacob Bronowski commented that while he no longer wrote poetry for publication, he wrote one poem a year which he printed on Christmas cards for his friends.

## Collaborative Programme Signing Ceremony



*Pictured at the Signing Ceremony to extend an exciting 2+2 Collaborative programme between the UCD School of Agriculture and Food Science and South China Agriculture University in Beijing on 22nd October 2015 were, back row (l-r): Leo McAdams, Enterprise Ireland; Minister for Education and Skills, Jan O'Sullivan TD; and Irish Ambassador to China, H.E. Paul Kavanagh. Front row (l-r): UCD President, Professor Andrew Deeks; and President Chen, South China Agricultural University.*



*Dr Maurice Manning, Chancellor, NUI presenting Dr Elva Johnston, UCD School of History, with the NUI Irish Historical Research Prize 2015*

## UCD Students, Staff and Graduates Excel at NUI Awards Ceremony

**At a ceremony on 10 November in the Royal Hospital Kilmainham, Chancellor of the National University of Ireland Dr Maurice Manning presented awards valued in excess of €850,000 to graduates and students of NUI.**

The highly prestigious Irish Historical Research Prize was awarded to UCD School of History lecturer, Dr Elva Johnston for *Literacy and Identity in Early Medieval Ireland* (Boydell & Brewer, 2013), while a Special Commendation Prize was awarded to UCD graduate Professor James Kelly for *Sport in Ireland 1600-1840* (Four Courts Press, 2014). Dr Elaine Farrell, another UCD graduate, was awarded the NUI Publication Prize in Irish History.

At the ceremony, the Chancellor also presented Professor Gerard Casey, Associate Professor of Philosophy at UCD, with a Doctor of Literature degree on Published Work. The DLitt degree is at the highest level awarded by the University, signifying a scholar of international distinction.

Three other UCD graduates also received awards to support their research. Conor Meleady was awarded a four-year Travelling Studentship in History, which will support his doctoral research in the University of Oxford on Islamic reform in India and Britain's approach to the Middle-East, 1882-1924.

Kevin Krieger was awarded a six-month Travelling Studentship in Biomedical Engineering, to support his research in UCD and Harvard University into the development of flexible microneedle electrodes as wearable sensors for long-term evaluation of dynamic muscle performance.

Finally, Annmarie Kelleher received the NUI Denis Phelan Scholarship in connection with the Travelling Studentship in the Humanities and Social Sciences for her research on Spanish literature.

In addition to research awards, UCD students were presented with prizes for their work at undergraduate level. Aedamar Kirrane was awarded the Pierce Malone Scholarship in Philosophy. Seven students were awarded medals in the Dr H H Stewart Literary Scholarship competitions, while eighteen students, including a student from UCD Penang, were awarded prizes in the Dr H H Stewart Medical Scholarship competitions.

## Léacht Uí Chadhain 2015

**Tá breis is tríocha bliain ó shin ann ó cuireadh tús le Léacht Uí Chadhain, sraith thábhachtach sa Choláiste Ollscoile, Baile Átha Cliath, in ómós do dhuine de mhórscribhneoirí comhaimseartha na Gaeilge, Máirtín Ó Cadhain (1905-70). Is mórócáid ó shin í i bhféilire bliantúil na Gaeilge anseo sa choláiste a thugann deis thábhachtach theagmhála don bhfoireann le pobal Gaeilge na hardchathrach agus an cheantair máguaird.**

Bhí slua mór i láthair ar léacht na bliana seo, 'Fuaimint Gaeil', ar 15 Deireadh Fómhair, a thug an craoltóir agus an cumadóir ceoil iomráiteach Peadar Ó Riada ó Chúil Aodha i nGaeiltacht Mhúscraí. Tá cáil fhorleathan ar an bhfeor ioldánach seo, gan dabht, toisc é a bheith ina Stiúrthóir ar Chór Chúil Aodha, dualgas atá comhlíonta go feilmeanta ar fad aige le cheithre bliana is dhá scór anuas. Ina theannta san, bhunaigh sé Cór Ban Chúil Aodha sa bhliain 1985, agus tá cáil ar leith ar na mná seo as ceann de na dánta Múscraiocha is mó tábhacht, b'fhéidir, *Caoineadh Airt Uí Laoghaire*, a chur i láthair le ceol — saothar ceoil, dála san, a chum Ó Riada féin.

Bhí feidhm bhreise ag Léacht Uí Chadhain i mbliana sa mhéid is gur chuir sí tús chomh maith le sraith shuntasach léachtaí cuimhneacháin ar Éirí Amach na Cásca 1916 dar teideal Seacht mBua an Éirí Amach. Léachtaí is ea iad seo a phléifidh tionchar claochlaitheach an Éirí Amach, mar aon leis na



*Peadar Ó Riada a thug Léacht Uí Chadhain 2015 i dteannta An Dr Meidhbhín Ní Úrdail, Ceann na Nua-Ghaeilge, UCD*

blianta corraitheacha díreach ina dhiaidh, ar ghnéithe éagsúla de shaol agus de chultúr na hÉireann. Seacht gcinn de léachtaí míosúla ar fad atá ar chlár na sraithe féin, idir seo agus an Cháisc seo chugainn, ar a seacht a chlog tráthnóna Déardaoin, i Léachtlan R, Áras Newman. Gheofar tuilleadh eolais ar shuíomh lín Scoil na Gaeilge, an Bhéaloidis agus an Léinn Cheiltigh (<http://www.ucd.ie/icsf/>).

## UCD Sport appoints Ger Brennan as new Gaelic Games Executive

**Two-time All-Ireland winning footballer Ger Brennan has been appointed the new Gaelic Games Executive with UCD Sport. The post was previously held by his close mentor and former Dublin GAA selector, Dave Billings.**

Brennan played at centre-back for Dublin and retired from county football in October of this year. His two All-Ireland titles were won in 2011 and 2013. In the same year as his second All-Ireland triumph, he captained his club side St. Vincents to victory in the Dublin Senior Football Championship.

"I want to do justice to the spirit and the work of Dave and the influence that he had on the college over 18 years," Brennan said. "I'm basically trying to build upon the legacy he left behind him at UCD."

His predecessor Billings worked in the position for 18 years. He had a strong association with University College Dublin. Arriving to Belfield in the 1970s, Billings studied commerce and graduated with a first class honours degree.

More than 300 students, former students, staff and friends came together on campus to pay tribute to him when his death was announced in April.



Back Row L-R: Tommy Moolick (GAA), Mark Nagle (Basketball), Matthew Gill (Rugby), Tristen Dent (Soccer), Rob McDaid (GAA) Seated L-R: Andrew Burke (Rugby), Ross King (Hurling), Kate McDonald (Camogie) Sam Burke (Hockey), David Hyland (GAA)

## UCD Graduate Sports Scholarships 2015/2016

**Ten students were honoured as this year's Graduate Sports Scholars. Director of Student Services, Dominic O'Keeffe acknowledged the contribution that these students have already given as undergraduates and hopes that now, as graduates, they set examples for both athletes and students to aspire to, and become leaders both on and off the field.**

Director of Sport, Brian Mullins thanked all the academic colleges and leaders present at the reception including Smurfit School of Business Head of Admissions, Colm Small; Centre for Sports Studies Director, Dr Seamus Kelly; School of Education Head of School, Professor Dymrna Devine; and College Principal and Dean of Science, Professor Joe Carthy; which, without their support this scholarship programme would not be possible.

The scholarships currently are available in Science, Sports Management, the Smurfit School of Business and the Professional Masters in Education. The scholarship programme has doubled since last year and it is hoped that it continues to grow and expand to assist and support our talented sporting students continue their education on into masters level.

## Footballer of the Year for UCD's Jack McCaffrey

**UCD's Sigerson Captain, Jack McCaffrey was named Footballer of the Year and was named as one of the seven Dublin All Stars at this year's GAA-GPA football All Stars Awards which were held in the Convention Centre on November 6.**

McCaffrey was outstanding for Dublin this year earning recognition for his performances for Dublin in the Allianz Football League during the spring campaign that ended in a third successive title for the county. The spring-heeled wing back was phenomenal as the second trophy of the year was gathered in the Leinster final and McCaffrey scored one of the goals against Westmeath.

He then dragged himself through the All-Ireland final win over Kerry despite a serious midweek bout of food poisoning.

Jack paid tribute to "unbelievable" Dublin manager Jim Gavin after collecting the award.

The defender took the honour after an outstanding summer which ended in the Dubs lifting Sam Maguire.

McCaffrey was a key figure in his county's 25th All-Ireland SFC triumph, but insisted he and his team-mates merely follow in the footsteps of Dublin's management team.

"Jim's unbelievable," McCaffrey said.

"Dublin have been lucky to have had a few very good managers but Jim is the man I've done most of my playing under.

"This is an unbelievable honour, but it comes at the end of us winning the All-Ireland, which was our primary goal," he said.

"It could have been any Dublin lad – once we won Sam Maguire we were going to be very happy how this year went".

UCD were well represented on the night as Sigerson Vice-Captain, Monaghan's Ryan Wylie was nominated for Young Player of the Year but the award went to Mayo's Diarmuid O'Connor.

All Stars were also in abundance for UCD as in addition to Jack McCaffrey, Rory O'Carroll, Brian Fenton, Cian O'Sullivan (all Dublin Football) and Cillian Buckley (Kilkenny Hurling) all received All Star Awards. Laois' Donie Kingston was also nominated for an All Star but missed out on the night.

## UCD's all-international GAA team compete in Shanghai

**Twelve international students travelled to Shanghai to represent the UCD International Ladies' GAA team in the FEXCO Asian Gaelic Games on October 24 and 25.**

The UCD team comprised players from China, Nigeria, Poland, Estonia, France, England, USA and the Philippines, most of whom had no prior experience before being chosen from over 100 international students who put themselves forward to join the squad.

Two exhibition matches against Queen's University were held in Belfast and Dublin as preparation for the event. The first of these took place in Belfast on September 9 while the second was played as a curtain-raiser to the All-Ireland Sevens final at Naomh Mearnóg on September 26.

UCD and Queen's were the only all-international teams departing from Ireland to challenge for the Asian Gaelic Games title.

Football was not the only sport to feature during the tournament with both hurling and camogie competitions also on the bill. 200 fixtures were played which ensured a full



In attendance at the launch of the 2015 UCD International Ladies GAA Jersey, back row, from left, Micheal O'Muircheartaigh; Damon Crowe, Red Torch Ginger; Agata Blasiak, Ryan Wylie, both UCD GAA; Eoin O'Brien, ESB International; Glenda Wilson, Bank of Ireland; Carol Murphy, ESB International; UCD President, Professor Andrew Deeks; Precious Nwafor, Jack McCaffrey, UCD GAA; Brian Mullins, UCD Sport; Front row, from left, Doyinsola Ishola, Gladys Pascual, Bethan Murphy Hand, Doris Obialor, Claire O'Neill, Jasmine Zaibek, Bo Zhang, Vicki Pesti. Photo © Brendan Moran / SPORTSFILÉ

championship selection for those in attendance to choose from.

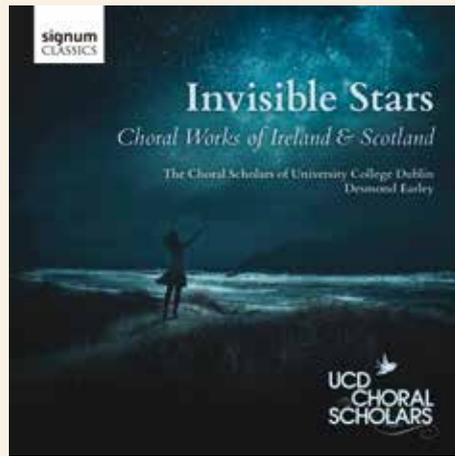
This year's competition marked the 20th anniversary of the Asian Gaelic Games. The 2015 event saw the UCD International Ladies' Gaelic football team make it to the Intermediate

Cup Final but they were narrowly defeated by Japan A Ladies. As recognition of their drive and determination, both Vicki Pesti (Estonian) and Doris Obialor (Nigerian) were awarded 2015 First Derivatives PLC Ladies All Star Awards.

## UCD Choral Scholars album launch

UCD Choral Scholars launched their album on one of the world's leading classical-music labels, Signum Records (London), on December 11. The launch of *Invisible Stars: Choral Works of Ireland and Scotland*, took place in the Royal Hibernian Academy.

The disc is an enchanting collection of Irish and Scottish traditional and contemporary choral music. It features arrangements and new compositions by some of Ireland's most celebrated composers for choir, including Michael McGlynn, Brendan Graham, Bill Whelan, and Dr Desmond Earley, UCD School of Music. The production team for this album are globally recognised for their excellence: the producer is Nigel Short (former King's Singer and director of Tenebrae Choir), and the sound engineer is Andrew Mellor (awarded a Grammy in 2011 for his work on the album *Light & Gold* – Decca Records).



UCD Choral Scholars are the first Irish university choir to release with Signum Records, who boast a seriously impressive catalogue of artists ranging from The King's Singers, Royal Northern Sinfonia, Tenebrae, London Chamber Orchestra, Voces8, to the Orchestra of the Age of Enlightenment (Simon Rattle). *Invisible Stars* is available to purchase on Amazon and iTunes now: <http://amzn.to/1QaqN8o>

## Audio Description Service at UCD Cinema

UCD Cinema is delighted to offer an audio description service on many of their screenings.

Audio description is designed to allow visually impaired customers enjoy a cinema experience through the use of headphones. The headphones receive a commentary which describes the scene allowing visually impaired users to enjoy the films as much as their fully sighted counterparts.

UCD Cinema cannot control what films are available with audio description available, however, they do intend to offer audio description on all screenings where it is possible.

To check if any film is being screened with audio description available please email [cinema@ucd.ie](mailto:cinema@ucd.ie) or contact 01 7163810.



Pictured on a visit to the Scottish Parliament Debating Chamber during the Bord na Gaeilge UCD / The University of Edinburgh 'Colmcille Programme', were: Clár Ní Bhuachalla, Bord na Gaeilge UCD Irish Language Officer (centre) with Teach na Gaeilge Scholars (l-r) Jamie Mac Uiginn, Ceithleann Ní Dhuibhir Ní Dhulachain, Sophie Osborne and Aoife Nic Einrí

## Bord na Gaeilge UCD Scholars visit University of Edinburgh

Thug mic léinn scoláireachta Theach na Gaeilge cuairt ar Ollscoil Dhún Éideann don chéad uair le déanaí, áit a raibh deis acu aithne a chur ar chainteoirí agus ar fhoghlaimoirí Gàidhlig tréimse leathan d'imeachtaí cultúrtha agus sóisialta. Le linn an turais, bhí deis ag na mic léinn freastal ar léacht a thug Iseabail Mactaggart, Stiúrthóir Forbairt agus Caidrimh le MG Alba. Labhair Iseabail ar chúrsaí craoltóireachta in Albain agus ar an domhandú, ábhar inar chuir na mic léinn spéis faoi leith, tharla iad a bheith i mbun podcraoltaí a ullmhú le craoladh ar Belfield FM, mar chuid den mhodúl Horizons, 'Scileanna Cumarsáide'. Bhí an tOllamh Máire Ní Annracháin, duine de bhaill an Bhoird atá ina saineolaí ar an nGaidhlig i láthair ag an léacht seo freisin rud a d'éascaigh an chumarsáid idir an dá ghrúpa teanga.

Tá ag éirí thar barr leis an gcumarsáid Éireannach /Albannach seo ó thosaigh an tionscnamh le breis is cúig bliana ó shin. Maireann an caidreamh idir na mic léinn, fiú agus a dtréimhse scoláireachta i dTeach na Gaeilge críochnaithe acu. Beidh grúpa mac léinn, cuid acu ó Theach na Gaeilge 2013 agus cuid eile ó 2014 ag tabhairt cuairte ar a seanchairde in Ollscoil Ghlaschú a luaithe is atá scrúduithe na Nollag thart. Go maire an cairdeas agus gura fada buan é.

Bord na Gaeilge UCD recently extended its International Programme to The University of Edinburgh, Scotland. In November, scholars residing in the Bord's Irish Language Residence Scheme, *Teach na Gaeilge*, took part in a three-day programme in Edinburgh organised in cooperation with The University of Edinburgh Gaelic Language Officer, Bria Mason. The

purpose of the programme was to enhance the understanding of the language and culture between Irish and Scottish Gaelic speaking students and to strengthen the language in their respective communities. The visit included a guided tour of the Scottish Parliament by Dr Alasdair Mac Callum of the Scottish Parliament's Gaelic Service. Bord na Gaeilge scholars already have regular contact with their Scottish counterparts through the *Teach na Gaeilge UCD / Taigh na Gàidhlig, University of Glasgow Project*, now in its 5th year. Teach na Gaeilge UCD scholars will visit *Taigh na Gàidhlig, University of Glasgow* in the new year and host a return visit in February 2016, during *Seachtain na Gaeilge UCD*.

The agency 'Colmcille' supports the Bord in its projects with both universities and has facilitated language tuition in The University of Highlands and Islands, Sabhal Mór Ostaig.