



# NovaUCD Report 2010



The Innovation and Technology Transfer Centre  
An Lárionad Nuála agus Aistrithe Teicneolaíochta



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# Introduction

In 2010 UCD launched *Forming Global Minds*, its new strategic plan to 2014.

This plan sets out UCD's strategic direction for the next five years. A defining characteristic of the plan is to build on our excellence in teaching and research and to place greater emphasis on the impact which these activities have on the economic, environmental, social and political life of the nation.

This strategic plan will establish innovation as a third, constitutive pillar of UCD's activity and identity, building on UCD's achievements in education and research. This will simultaneously challenge our teachers and researchers to translate excellent education and research into contexts where they may be expected to have a high impact, all the while supplementing more traditional concerns with the development of innovative and entrepreneurial capacity amongst our students.

The university's ambition to link education, research and innovation more effectively will enable an increasing number of students to convert knowledge, ideas and inventions into the development of life enhancing products, services and policies in a manner that will enrich all aspects of social and economic life in Ireland and beyond.

A key driver of innovation is the establishment of an *Innovation Alliance* in partnership with Trinity College Dublin, including unprecedented levels of collaboration with government and industry. This Alliance is intended to be part of a wider national recovery programme leading to a *Smart Economy* within which our students and graduates will flourish.

Key initiatives which form part of UCD's strategic plan are:

- UCD will strive to produce a new breed of innovative and entrepreneurial PhD graduate through the TCD/UCD *Innovation Academy* which was launched last December

- UCD and TCD will establish a TCD-UCD joint venture in enterprise development, which will support commercialisation of university generated research findings, assist development of spin-in companies and foster partnerships with industry
- UCD will develop strategic partnerships with relevant government agencies, local authorities and other stakeholders to maximise the impact of the State's investment in research on economic development.

NovaUCD, as the hub of innovation and knowledge transfer activities at UCD, will be at the forefront of this contribution and in the development of the Innovation Alliance. The results contained in this Report demonstrate that NovaUCD has established itself as a national leader in the commercialisation of research and the development of new high-tech enterprises and that it has developed a strong international reputation.

NovaUCD's successes to date would not be possible without the financial support and confidence of its initial public-private partnership involving AIB Bank, Arthur Cox, Deloitte, Enterprise Ireland, Ericsson, Goodbody Stockbrokers, UCD and Xilinx.



**Dr Hugh Brady**  
President  
University College Dublin



# Foreword

The *Innovation Union*, published by the European Commission in October 2010, is a flagship initiative of the European Union's 2020 Strategy. It highlights the need for a sea change in the post-crisis world. It accepts that Europe must move away from business as usual and make innovation its overarching policy objective. In effect it places innovation at the centre of Europe's economic strategy.

The Innovation Union comprises 34 wide-ranging commitments including those aimed at facilitating effective collaborative research and knowledge transfer (KT), developing KT offices, increasing recognition of KT professionals and the introduction of the financial instruments to facilitate the establishment and growth of knowledge intensive ventures.

Many of these commitments are being increasingly enshrined in the national strategies of member states including Ireland. Funding for university research in Ireland has quadrupled in the last decade and, in line with best international practice and for the first time, significant support has also been provided to strengthen technology transfer offices in the higher education sector.

The growing importance of innovation is also reflected in the strategies of universities and other public research organisations. At the heart of *Forming Global Minds* UCD's Strategic Plan to 2014 is the drive to develop innovation as the third pillar of the university's core mission. This strategic plan has three core objectives for innovation which are to:

- Maximise the impact of UCD's knowledge and expertise to benefit Ireland
- Foster a culture of innovation and entrepreneurship at 3<sup>rd</sup> and 4<sup>th</sup> levels
- Foster innovation amongst all UCD staff.

These objectives are reflected in NovaUCD's priorities in relation to technology transfer, enterprise development, continuing professional development, communications and the fostering of strategic partnerships with industry.

The increasing funding for collaborative research, together with the strengthening of UCD's innovation strategy, has enabled NovaUCD to significantly increase the level of knowledge transfer and commercialisation of UCD research mainly through licensing to new and established ventures and the establishment of campus companies.

In consultation with the NovaUCD sponsors, new procedures have been introduced to enable NovaUCD to attract stronger spin-in companies, thereby strengthening its community of entrepreneurs. In the last year eight exciting spin-in companies have located at NovaUCD, with promoters from established high-tech companies.

The acquisition of major new facilities for second stage companies is nearing completion and this will enable NovaUCD 'graduate' companies to locate adjacent to the campus and to build partnerships with UCD. The development of such long-term strategic partnerships will facilitate new opportunities for collaborative research and commercialisation.

It is now seven years since NovaUCD officially opened. While it is recognised that there is a long lead-time involved in commercialising the results of university research, the significant achievements of UCD in the last number of years justify the faith of the initial sponsors who invested over €11 million in NovaUCD.

In this 7-year period, 16 new UCD spin-out companies have been incorporated and just under 60 high-tech and knowledge-intensive companies have located at NovaUCD. Total investment and realisations in UCD companies has now reached over \$200 million. The increasing strength of the IP pipeline is also encouraging. In the last 7-years alone, over 320 inventions have been disclosed by UCD researchers. In addition, over 100 priority patent applications have been filed and over 70 licence agreements have been signed with a range of indigenous and international companies.

In 2010 NovaUCD continued to develop its expertise, its comprehensive programmes and its state-of-the-art

facilities to support innovators and entrepreneurs in commercialising the output of their research and other knowledge-intensive activities of the university.

Key achievements during 2010 include:

- €650,000 generated from commercialisation of research
- Nine new companies located at NovaUCD
- Fifty-seven invention disclosures reported
- Thirty-eight patent applications filed across all areas of life sciences, engineering and information communication technology including:
  - 14 priority patent applications
  - 9 PCT (Patent Co-operation Treaty) applications
  - 15 national/regional patent applications
- Sixteen licence agreements concluded with a range of indigenous and international companies
- Fourteen new ventures completed the NovaUCD 2010 Campus Company Development Programme
- Socowave successfully raised €3 million in funding
- HeyStaks Technologies successfully raised €1 million in funding
- UCD's most successful licence to date, a BSE (*Bovine Spongiform Encephalopathy*) test, has now earned over €2 million in royalty income
- The NovaUCD 2010 Innovation Award was presented to the Fault Analysis Group, UCD School of Geological Sciences
- 37 knowledge-intensive ventures occupying over 90% of the incubation space located at NovaUCD at year end, including 8 companies in the desk space.

During 2010 NovaUCD continued its various initiatives to support researchers and entrepreneurs.

- NovaUCD arranged and hosted events to increase awareness of intellectual property and other commercial issues and to promote a culture of entrepreneurship and innovation among researchers, students and staff
- Accredited PhD modules in innovation and knowledge transfer were delivered as part of UCD's Graduate Studies' Structured PhD Programme
- Increasing levels of support were provided by NovaUCD and its network for innovators and entrepreneurs in bringing their ideas from the research laboratory through proof-of-principle and prototype development to successful commercialisation.

NovaUCD was also involved in a number of international innovation and technology transfer initiatives through organisations such as AURIL, the Institute of Knowledge Transfer and ProTon Europe. These initiatives have enabled NovaUCD to play a leadership role in exchanging best practice, providing advice on KT policies and strategies, increasing the status and recognition of the KT profession and enhancing the contribution of universities to innovation by increasing the efficiency of KT and university/industry collaboration.

These and other developments are outlined further in this year's Report.



**Dr Pat Frain**  
Director  
NovaUCD

# NovaUCD

NovaUCD, the Innovation and Technology Transfer Centre, is the hub of innovation and knowledge transfer activities at University College Dublin. NovaUCD's vision is to become an international leader in the commercialisation of research and other knowledge-intensive activity for the benefit of the economy and society.

NovaUCD is a purpose-built facility, based on-campus, supported by the NovaUCD private sector sponsors, Enterprise Ireland and UCD. Dr Pat Frain leads a team of 16 professional staff with expertise and experience in technology transfer, new venture formation, continuing professional development and communications.

Since the establishment of NovaUCD in 2003 the level of commercialisation of research-generated intellectual property at UCD has significantly increased. As the level of research and innovation increases in volume and sophistication the implementation of UCD's commercialisation strategy by NovaUCD is of critical importance to enable UCD to fulfill a strategic objective of translating its knowledge and expertise for the benefit of Ireland's economy and society.

Building on prior successes in technology transfer and campus company development, NovaUCD's support for innovation and knowledge transfer is built around 4 key areas:

- Managing technology transfer
- Incubating start-up companies
- Promoting a culture of innovation and entrepreneurship
- Building partnerships.



*NovaUCD winter 2010*

NovaUCD is located in a magnificent mid-18th century house formerly known as Merville House. NovaUCD is a state-of-the-art facility which was designed specifically to facilitate the development of a community of entrepreneurs and innovators. The concept for the centre was to restore the original house as the centrepiece of a complex of subsidiary buildings that surround it. The buildings are bright, airy and open with high-quality shared and circulation spaces that encourage the formal and informal interactions necessary for the development of our community.

This conversion to a modern innovation and technology transfer centre was funded by a unique public-private partnership. Six private sector sponsors; AIB Bank, Arthur Cox, Deloitte, Ericsson, Goodbody Stockbrokers and Xilinx contributed 75% of the €10 million raised to develop the first two phases (3,750m<sup>2</sup>) of the complex.

These sponsors were chosen to bring an appropriate mix of expertise and experience to the support programmes offered by NovaUCD. The balance of funds for the first two phases was contributed by Enterprise Ireland and UCD. Additional 'wet-lab' facilities and equipment to accommodate biotechnology start-up companies was funded (€1.3 million) by Enterprise Ireland and UCD.

In addition over €12.5 million has been generated in grants and earnings by NovaUCD since its establishment.



*NovaUCD foyer*

### Key 2010 Metrics

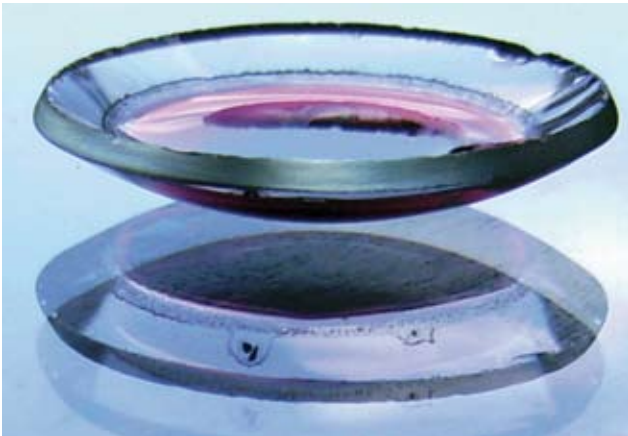
€650,000 generated from commercialisation of research
9 new companies located at NovaUCD
2 new UCD spin-outs incorporated
57 invention disclosures
14 priority patent applications
9 PCT patent applications
15 national/regional patent applications
16 licence agreements
14 new ventures completed NovaUCD's 2010 CCDP

### Key Metrics Since 2004

ChangingWorlds acquired for \$60 million
€3.6 million generated from commercialisation of research
56 start-ups availed of NovaUCD's incubation facilities
16 new UCD spin-outs incorporated
326 invention disclosures
107 priority patent applications
54 PCT patent applications
43 national/regional patent applications
71 licence agreements
96 new ventures completed NovaUCD's CCDP

# Technology Transfer

The technology transfer team within NovaUCD is built around the key activities of (i) identifying intellectual property (IP) arising from UCD research programmes; (ii) protecting this IP as appropriate and then (iii) commercialising this IP whether through licensing to a commercial partner or through the creation of a spin-out company.



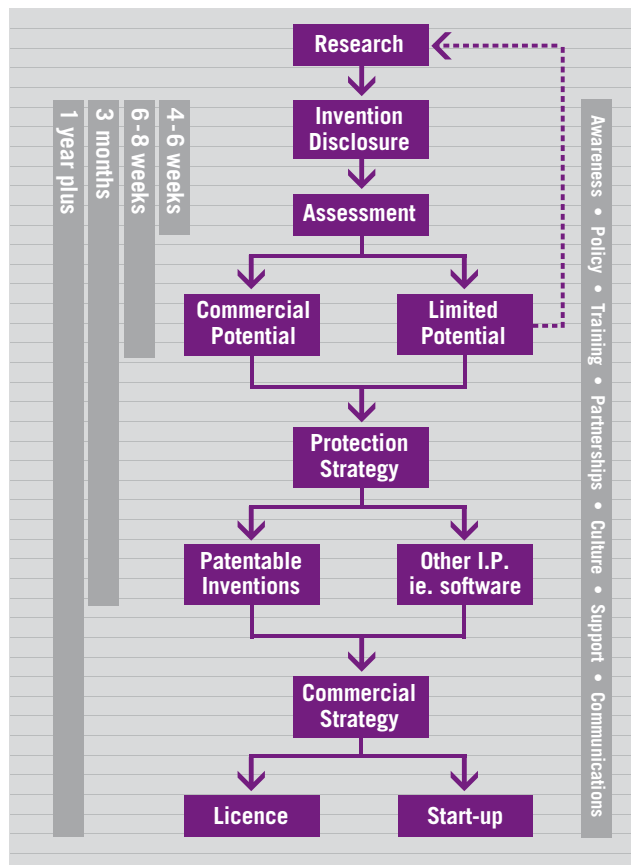
NovaUCD's technology transfer operations are partially supported with funding provided by Enterprise Ireland under the Technology Transfer Strengthening Initiative.

## Identifying, Protecting and Commercialising Intellectual Property

NovaUCD has a structured approach to ensure that intellectual property is identified and appropriately protected at University College Dublin. Members of the technology transfer team regularly meet with UCD researchers to provide advice on commercial aspects of research proposals and contracts, to monitor the progress of research projects, to provide appropriate assistance to the researchers at the different stages of their research projects and to remind researchers of UCD's contractual obligations to funding agencies and companies and implement UCD's policy on intellectual property.

When UCD researchers have an idea, service or product that they believe has commercial potential, NovaUCD's technology transfer team is on hand to help translate the innovations into licensable opportunities and/or spin-out companies. NovaUCD's innovation and technology transfer process is summarised in Figure 1.

Figure 1: NovaUCD's Commercialisation Process



The key steps in this process are

- Review and assessment of invention
- Protecting the invention
- Development of a commercialisation strategy
- Marketing and licensing of the invention or
- Creating a new start-up company.



NovaUCD's technology transfer team is also responsible for the drafting, reviewing, and/or negotiating a range of agreements including:

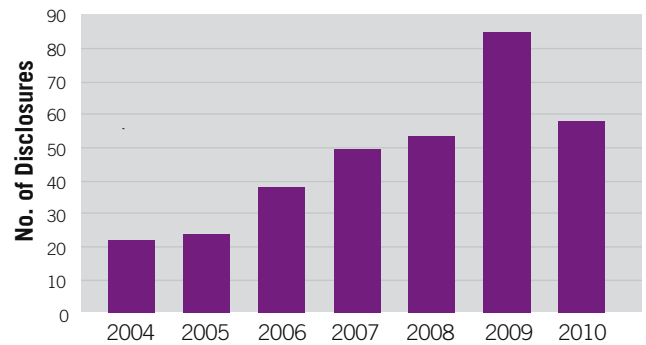
- Material transfer and non-disclosure agreements
- Contract research agreements
- Collaborative research agreements with other public research organisations and industry
- Consortium agreements such as FP7, Strategic Research Clusters, CSETs and Competence Centres.

NovaUCD is primarily responsible for ensuring that the intellectual property terms on ownership and access rights reflect the objectives of the project, do not conflict with any other agreements that the university has entered into, comply with State Aid Rules, the requirements of the Funding Agency Guidelines and National Codes of Practice, and importantly preserve wherever possible the researchers right to publish and use the intellectual property in future research projects.

During 2010 a total of 57 invention disclosures were submitted to NovaUCD. While this figure is down on the number of disclosures submitted in 2009, it does follow the average upward trend in the number of disclosures submitted since 2004 and reflects the increasing commitment of UCD researchers to innovation.

However, as per international norms, the number of disclosures also correlates with research income and in this regard it is anticipated that additional efforts will have to be expended by the team in 2011 and subsequent years to ensure that intellectual property is identified and disclosed given the current drop in UCD research income. Since 2004 a total of 326 inventions have been disclosed to NovaUCD, Figure 2.

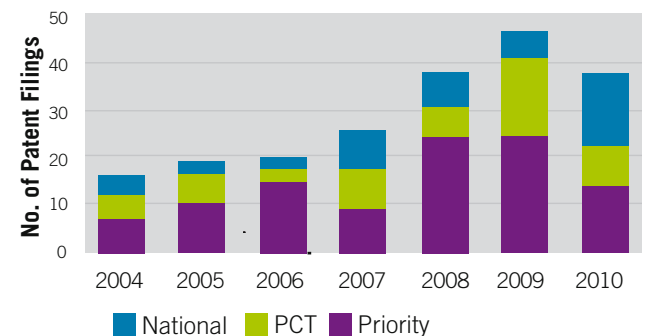
Figure 2: UCD Invention Disclosures (2004-2010)



Fourteen priority patent applications that were based on invention disclosures were filed by UCD in 2010. These applications spanned all areas of life sciences, engineering and information and communication technology. This number is down on the number of priority applications filed in 2009. This was due to a combination of factors including, the reduced number of invention disclosures, a more rigorous review of these invention disclosures and also uncertainty on the patent budget.

In addition, a further 9 PCT (patent co-operation treaty) and 15 national/regional patent applications were filed in 2010. Since 2004 UCD has filed a total of 204 patent applications including 107 priority patent applications, Figure 3.

Figure 3: UCD Patent Filings (2004-2010)





## Links with Industry & Commercial Opportunities

Bridging the gap between academic research and industry and building relationships with industry is a key element of NovaUCD's commercialisation strategy. During 2010, 16 licences, options and assignments were executed with a range of indigenous and international companies.

There has been a steady increase in licensing activity at UCD which is promising. UCD now has a growing portfolio of licence deals which will benefit the companies to whom the technology was licensed by making them more competitive, create new products, scale, generate employment and hopefully, with time, provide financial returns to the university and the inventors.

Examples of the portfolio of licensing, collaboration and business development opportunities available for exploitation by industry and campus companies are listed on page 11. Non-confidential summaries of these technologies are available directly from NovaUCD and on the NovaUCD website.

### Case Study - Weedle

In 2010 Weedle.com and UCD scientists at CLARITY received an Enterprise Ireland Innovation Partnership Award. The €200,000 award will be used to combine expertise by both parties to enhance Weedle's online Search and Connect™ technology platform.

With users in over 60 countries, Weedle.com, a social media company headquartered in Dublin, is fast establishing its online presence as The World's Trusted Network of People with Skills™.

CLARITY is a Science Foundation Ireland funded multi-disciplinary research centre based at UCD in partnership with Dublin City University and Tyndall Institute at University College Cork.

The Enterprise Ireland Innovation Partnership initiative brings together private enterprises and third-level researchers to work on specific R&D projects. The Innovation Partnership contract between Weedle and UCD was negotiated through NovaUCD.

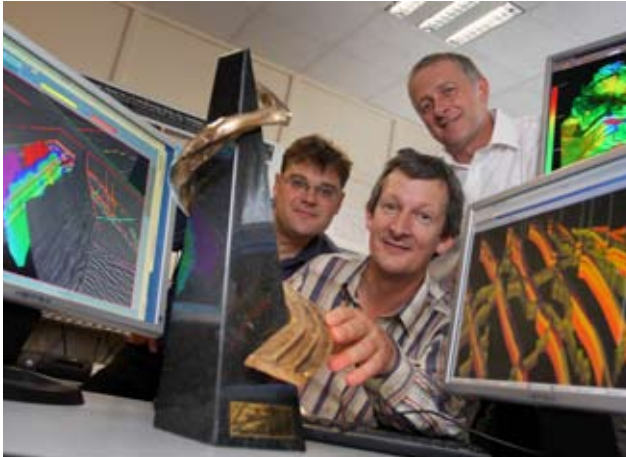
### NovaUCD 2010 Innovation Award

The Fault Analysis Group, a leading research group within the UCD School of Geological Sciences, received the NovaUCD 2010 Innovation Award.

The Award was presented to the Group in recognition of its successes in the establishment of strategic and collaborative research links with global industry partners and in acknowledgement of its successful commercialisation activities.

The Group, which includes 13 researchers, is recognised as one of the leading international teams studying the geological and engineering properties of faults and in applying its research outputs to solve practical problems encountered in hydrocarbon and mineral exploration and production activities.

The Fault Analysis Group was founded in 1985 by Professor Juan Watterson and Professor John Walsh within the Department of Earth & Ocean Sciences at the University of Liverpool. Professor John Walsh succeeded as Director in 1996 and oversaw the re-location of the Group to University College Dublin in 2000. The Group is now jointly directed by Dr Conrad Childs, Dr Tom Manzocchi along with Professor John Walsh.



*Dr Tom Manzocchi, Professor John Walsh and Dr Conrad Childs, co-directors of the Fault Analysis Group*

Since 2000 the Group has been awarded €6 million in research funding. This funding has been secured predominantly from industry partners, including British Gas, Shell, Statoil and Tullow Oil. The Group has also received funding from Enterprise Ireland, IRCSET, Science Foundation Ireland and the European Union.

The Group's research output is embodied into software systems which have been licensed to Badley Geoscience, a leading UK software vendor, resulting in the joint development of commercial software products. The software licences have provided a significant royalty income to both UCD and the University of Liverpool with recent software packages generating royalties of €350,000 over the last number of years.

## UCD 2010 Priority Patent Applications

Title	Patent Application	UCD Inventor(s)	UCD School of
A new design for DSSC	A US provisional patent application	Professor K. Ravi Thampi	Chemical and Bioprocess Engineering
A polymeric nanoparticle	A UK priority patent application	Professor David Brayden	Agriculture, Food Science and Veterinary Medicine with TCD
Catalyst for the release of dihydrogen from ammonia borane	A UK priority patent application	Dr Andrew Phillips and Dominique Schreiber	Chemistry and Chemical Biology
Compounds	An Irish priority patent application	Dr Matthias Tacke, James Claffey and Dr Helge Mueller-Bunz	Chemistry and Chemical Biology
Effective product recommendation using the real-time web	A US provisional patent application	Professor Barry Smyth, Dr Michael P. O'Mahony and Sandra Garcia Esparza	Computer Science and Informatics
Energy monitoring system	An Irish priority and US provisional patent application	Dr Antonio Ruzzelli, Professor Gregory O'Hare and Anthony Schoofs	Computer Science and Informatics
Markers of oocyte quality	A European priority patent application	Dr Lorraine Brennan	Agriculture, Food Science and Veterinary Medicine with National Maternity Hospital and Merrion Fertility Clinic
Methods of manufacturing photovoltaic electrodes	An Irish priority patent application	Dr Denis Dowling and Mohamed Awais	Electrical, Electronic and Mechanical Engineering
MSTN polymorphism, MSTN insertion/discovery	An Irish priority patent application	Dr Emmeline Hill	Agriculture, Food Science and Veterinary Medicine
Non-linear magnetophoretic separation device, system and method	A UK priority patent application	Professor Gil Lee and Dr Peng Li	Chemistry and Chemical Biology
Novel biomarkers for cardiovascular disease	An Irish priority patent application	Dr John Baugh	Medicine and Medical Science with Heartbeat Trust and St Vincent's University Hospital
Phenotyping tumour-infiltrating Leukocytes	A US provisional patent application	Dr Donal Brennan	Biomolecular and Biomedical Science with UCSF
Plasma shutter	An Irish priority patent application	Dr Fergal O'Reilly, Dr Tony Donnelly, Dr Thomas Cummins and Marie Mazoyer	Physics
Protease anti-prion protease	An Irish and European priority patent application	Dr Hilary McMahon	Biomolecular and Biomedical Science

## Examples of UCD Technology Transfer Opportunities

Title	Principal Researcher(s)	UCD School of
A method for the transformation of plant cells	Dr Fiona Doohan and Dr Ewen Mullins	Biology and Environmental Science and Teagasc
Amyloid and Amyloid-like structures as mechanically functional biomaterials	Professor Suzanne Jarvis and Dr Anika Mostaert	Physics and Conway Institute of Biomolecular and Biomedical Research
Biomarkers for early detection of cardiac disease	Dr John Baugh and Dr Chris Watson Professor Kenneth McDonald and Dr Mark Ledwidge	Biomolecular and Biomedical Science, St. Vincent's University Hospital and Heartbeat Trust
Digital pre-Distortion for RF power amplifier for wireless communication	Dr Anding Zhu and Lei Guan	Electrical, Electronic and Mechanical Engineering
Fibrosuppressant	Dr Madeleine Murphy, Dr Victoria McEaney, Professor Finian Martin and Professor Catherine Godson	Biomolecular and Biomedical Science
Generation of an improved biocatalysts	Dr Kevin O'Connor	Biomolecular and Biomedical Science
High-rate LDPC codes for data storage applications	Dr Marcus Greferath, Ms Cornelia Roessing and Dr Mark Flanagan	Mathematical Science and Electrical, Electronic and Mechanical Engineering
Low power NMR imaging	Dr Marcus Greferath and Professor Bernhard Bluemich	Mathematical Science and RWTH Aachen University
Magnetophoretic bionanosenor technology	Professor Gil Lee and Dr Peng Li	Chemistry and Chemical Biology
Methods for producing Polyhydroxyalkanoate (PHA)	Dr Kevin O'Connor	Biomolecular and Biomedical Science
Power composer	Dr Chris Bleakley	Computer Science and Informatics
Power saving enhances IEEE 802.15.4 for better networking performance	Dr Xiaoyun Li, Dr Chris Bleakley and Wojciech Bober	Computer Science and Informatics
Promoter sequences for expression from human cells	Professor Therese Kinsella, Dr Anne Marie Gannon, Dr Garret Keating and Dr Libby Turner	Biomolecular and Biomedical Science
Repositioned therapeutic for treatment of multiple sclerosis	Dr Keith Murphy and Dr Mark Pickering	Biomolecular and Biomedical Science
Treatment of prion disease	Dr Hilary McMahon	Biomolecular and Biomedical Science

Further details are available via [www.ucd.ie/nova](http://www.ucd.ie/nova)

# Start-up Companies

NovaUCD has a proven track record in supporting entrepreneurs and start-up companies from the early feasibility stage through to business development, growth and investment.

The main elements of the NovaUCD's support programme for entrepreneurs and start-up companies includes:

- Advice and assistance on all aspects of new venture formation including:
  - Feasibility study
  - Project development
  - Building the entrepreneurial team
  - Developing the business model
  - Preparing business plans
  - Company formation
  - Access to sources of finance
  - Business growth
- Advice for entrepreneurs and researchers on ideas with commercial potential:
  - Academic entrepreneurs - The Campus Company Development Programme, a business start-up programme which has run annually since 1996
- Other supports:
  - Clinics and advice from the NovaUCD sponsors and other organisations covering areas such as legal issues, banking, finance, marketing, sales, intellectual property, licensing and new venture formation
  - The NovaUCD Network of professional business contacts including seed and venture capital funds
  - Training and workshop programmes
  - Introductions to industry networks including the European Connected Health Campus and WirelessLAB
  - Introduction to UCD's research expertise and facilities.

## Facilities

NovaUCD provides incubation and other related facilities for entrepreneurs, campus companies and knowledge-based ventures.

NovaUCD offers 14 desk spaces for individuals who are at the early stages of forming a company allowing them to undertake feasibility studies. NovaUCD also contains 52 incubation and bio-incubation units for high-tech knowledge-intensive companies. The incubation units at NovaUCD range in size from 15m<sup>2</sup> to 64m<sup>2</sup>.



*A business office at NovaUCD*

The bio-incubation units are equipped with power and water supply, sinks and benching as well as voice and data points. Shared facilities available include fridge freezers, de-ionised water, ice machines, dishwashers etc. Companies locating in these laboratories are facilitated in accessing the full range of technology and general facilities available in UCD.

Other facilities and services include a wireless network, a permanent boardroom which seats 22, numerous seminar and meeting rooms, a café, a dedicated server room and reception services.



*Bio-incubation space at NovaUCD*

The location of second stage companies, including companies graduating from NovaUCD, adjacent to the campus is considered essential by UCD for the development of long-term strategic partnerships. Such partnerships are needed for the generation of collaborative research and licensing opportunities.

The establishment of a facility to house such companies at UCD would also allow NovaUCD to expand its facilities for knowledge-intensive ventures, to meet the requirements and targets of the UCD strategic plan, to free-up space in NovaUCD's existing facilities and to increase support for early-stage companies and commercial activities.

In this regard UCD is acquiring, Belfield Office Park (Buildings 9 & 10) which will be known as NovaUCD North. NovaUCD North consists of two four storey buildings with a total gross floor area of 5,263m<sup>2</sup>.

It is hoped that the first clients will occupy space in NovaUCD North in early 2011.

## **Academic Entrepreneurs - NovaUCD Campus Company Development Programme**

The NovaUCD Campus Company Development Programme (CCDP), which has run annually since 1996, is the main support programme run by NovaUCD for academic entrepreneurs who are spinning-out campus

companies. This annual Programme, which in 2010 was delivered in association with Enterprise Ireland, offers a mix of monthly workshops, mentoring and one-to-one consultancy. It is delivered by NovaUCD staff, with the support of the NovaUCD sponsors and other outside experts.

The CCDP is designed to assist academic entrepreneurs in the establishment and development of knowledge-intensive enterprises by providing the skills necessary to transform ideas into commercially feasible ventures.

In the last fifteen years 170 new ventures and 260 individuals have completed the Programme. Current NovaUCD client companies which previously participated on the Programme include Berand Neuropharmacology, BiancaMed, Celtic Catalysts, Equinome and RendezVu.

The NovaUCD 2010 CCDP Awards Evening took place in November in front of a packed audience comprising members of Ireland's research, state agencies, venture capital, industry and business communities in UCD's William Jefferson Clinton Auditorium. The guest speakers at the event were Michael Moriarty, Enterprise Ireland and Philip Sharpe, Chairman, DANU Technologies.

**JLizard**, a new software development company, was the overall winner of the NovaUCD 2010 CCDP and received the NovaUCD 2010 start-up award. In addition to the Award, JLizard was also presented with a cheque for €5,000, €5,000 worth of legal services from Arthur Cox and six-months free desk space at NovaUCD. JLizard also received a year's free subscription to the AccountsIQ software which allows SMEs to manage their entire accounting requirements via the internet.

JLizard has developed a cloud-based product to enable organisations to reduce the time required to analyse the log data of their IT systems from days to minutes. JLizard was established by Dr Trevor Parsons and Dr Viliam Holub as a spin-out from the Performance Engineering Laboratory in UCD's School of Computer Science and Informatics.



*Dr Trevor Parsons and Dr Viliam Holub, co-founders, JLizard*

Log data, analogous to CCTV for IT systems, is currently the fastest growing data source in large organisations, and is a particular problem for those using cloud-based systems. Many large organisations may produce up to 10,000 log events per second across their IT infrastructures, ranging from mobile phones to large enterprise applications.

Log data contains information on the state of IT systems and is often reviewed in real-time to assist in the understanding of what is happening as a system runs. Such data is also often reviewed afterwards to understand what was happening at some point in the past, in the case of security threats, performance issues or system crashes. However log data analysis can be difficult, time consuming and costly, especially when a critical issue occurs and a system requires a quick resolution.

To solve this problem JLizard has developed a software-as-a-service log management tool ([www.logentries.com](http://www.logentries.com)) which is focused on the system reliability of IT applications, especially those running on cloud-based infrastructures. The tool, which is scheduled to go live in 2011, will be the first to market logging-as-a-service tool focusing on cloud-based systems.

Using [logentries.com](http://logentries.com), organisations can automatically collect, analysis and visualise live log data and automatically detect system problems in real-time. The product also enables organisations to avoid the need for complex log management set-ups in the cloud environment which can be difficult for them to manage and maintain.

Two other ventures, **Restored Hearing** and **Belfield Technologies** received runner-up awards at the NovaUCD 2010 CCDP.

**Restored Hearing** has developed and is marketing Somtus™. Somtus™ is an online sound therapy for the sufferers of temporary tinnitus which alleviates the effects of this form of tinnitus after only one minute. Temporary tinnitus, or ringing in the ears, occurs when an individual experiences loud noise or music and can last from a couple of hours to a few days.



*Rhona Togher, a co-founder of Restored Hearing*

The company, co-founded by Anthony Carolan, Eimear O'Carroll and Rhona Togher, is based at NovaUCD.

**Belfield Technologies**, a new energy management venture, has developed a technology to assist public and private organisations to reduce their energy costs and associated carbon footprints. The HID LightSaver™, a High Intensity Discharge (HID) lighting control system, is programmable and compatible with Building Management Systems and is easily retrofitted into existing lighting control systems.





*Dr Kevin McDonnell, Dr Ger Devlin and Brian McDonnell, co-founders, Belfield Technologies*

The promoters of Belfield Technologies are Dr Ger Devlin, Dr Kevin McDonnell, David Megan, Barry Bowen and Brian McDonnell, Bioresources Research Centre, UCD School of Agriculture, Food Science and Veterinary Medicine.

### Other NovaUCD 2010 CCDP New Ventures

The 11 other new ventures which completed the NovaUCD 2010 CCDP are:



*Participants on the NovaUCD 2010 CCDP*

**Advanced Microbe Control** is developing services, using ozone technology, to control the effects of odours and microbial contamination in the food processing and waste management industries.

*Promoters: Dr Tom Curran and Professor Colm O'Donnell, UCD School of Agriculture, Food Science and Veterinary Medicine.*

**Dublin Ethical Testing** is developing products and services, using micro-organisms, for the ethical testing of drugs and chemicals in the pharmaceutical industry assisting industry players comply with new EU legislation.

*Promoters: Dr Cormac Murphy and Jessica Amadio, UCD School of Biomolecular and Biomedical Science.*

**EDCo Industrial Development Company** aims to exploit modern power generation methods to create a local market for sustainable biomass, and simultaneously catalyse local economic development through the provision of green electricity in Sierra Leone and in Sub-Saharan Africa.

*Promoters: Donal Lennon, Dr William Smith, Dr Sheila Convery and Dr Finbarr Brereton, UCD Urban Institute of Ireland.*

**Innovation Research Unit Business Branch** is developing an advanced software suite and consultancy service to enable commercial and non-commercial users scan, map, analyse and simulate their innovation networks in order to improve their business strategies or policies.

*Promoters: Professor Petra Ahrweiler and Dr Michel Schilperoord, UCD Innovation Research Unit.*

**Irish Centre for Design and Manufacturing Innovation** is developing an "internationally networked" centre of excellence in applied research to support Irish industry in design, development and manufacture of high-value products for global markets.

*Promoters: Professor Gerry Byrne, Dr Eamonn Ahearne, UCD School of Electrical, Electronic and Mechanical Engineering and Paul Killeen, UCD Research.*

**Magnetic Diagnostics** is developing an easy-to-use and portable point-of-care biosensor that can detect trace amounts of disease causing agents and thus rapidly identify multiple infectious diseases within minutes.

*Promoters: Dr Gemma Cannon, Professor Gil Lee and Professor William Hall, UCD National Virus Reference Laboratory, UCD School of Chemistry and Chemical Biology, UCD Centre for Research in Infectious Disease.*

**NanoOpticSolutions** is developing specialist high-resolution imaging tools that enable detailed information about the chemical make-up of materials in very small volumes or material areas to be made known which is greatly in demand especially in nanotechnology industries.

*Promoter: Dr James Rice, UCD School of Physics.*

**PreTract** has developed a magnetic resonance imaging method that provides health professionals with a unique insight to screen for the early onset of injury in athletes.

*Promoters: Dr Kathleen Curran, Dr Niall Colgan and Stephen Meredith, UCD School of Medicine and Medical Science and UCD School of Electrical, Electronic and Mechanical Engineering.*

**Sruth** is being established to brand and disseminate the publications of Comhairle Bhéaloideas Éireann, largely based on the National Folklore Collection at University College Dublin, to a wider national and international customer base.

*Promoter: Dr Kelly Fitzgerald and Professor Ríonach Uí Ógáin, UCD Folklore Collection of Ireland.*

**Tetra Materials** is developing novel mould inserts for high volume injection moulding of microfluidic devices.

*Promoters: Dr David Browne, Dermot Stratton and Dr James Mulcahy, UCD School of Electrical, Electronic and Mechanical Engineering.*

**Veutility** is developing a hosted utility consumption portal and benchmarking service.

*Promoters: Dr Antonio Ruzzelli and Anthony Schoofs, UCD School of Computer Science and Informatics.*

## NovaUCD Enterprise Support

The level of support for client companies from the NovaUCD Network has continued to develop in the last year. The NovaUCD private sector sponsors and other organisations provide a mix of expertise (e.g. accounting, financial, IP, legal, sales, marketing and strategic management) to complement the NovaUCD team in supporting innovators and entrepreneurs in bringing their ideas from the research laboratory through proof-of-principle and prototype development to successful commercialisation.



*A NovaUCD meeting room*

## NovaUCD Companies

37 innovative new ventures, occupying 47 incubation units, or 92% of the available incubation space, and 8 desk spaces, are currently located in NovaUCD. Several of these companies are commercialising research specifically undertaken at UCD while the remaining start-ups have located in NovaUCD in order to interact more closely with UCD.

20 client companies have now graduated from NovaUCD and moved on to new premises. It is an important element of NovaUCD's strategy to continuously refresh our community of entrepreneurs and to have the capacity at all times to take on new projects.

## NovaUCD Companies include

**3 Strata Technologies** - aim is to create an interconnected travel vaccine market

**Advanced Diagnostics Laboratory** - is Ireland's first commercial and diagnostic laboratory for animal health and toxicology

**AIB Seed Capital Fund** - provides venture capital for companies at the seed and early stages of development

**Amdocs-ChangingWorlds** – is the market leader in customer experience systems innovation, enabling world-leading service providers to deliver an integrated, innovative and the intentional customer experience

**Aonta Technologies** - provides carrier grade voice conferencing solutions to conferencing service providers, telcos and enterprises

**AP EnvEcon** – provides products and services including high-quality systems and analytical solutions for public and private-sector level responses to environmental and economic policy challenges

**Berand Neuropharmacology** - is a pre-clinical drug research company that offers a full spectrum of in-vivo neuropharmacology and pre-clinical neurobiology services, resources and expertise

**BiancaMed** – is a technology company which offers leading health technology solutions for monitoring everyday living



*Dr Conor Hanley, co-founder, BiancaMed*

**bioMérieux** - develops and evaluates in-vitro diagnostic tests for use in food, pharmaceutical and veterinary microbiology laboratories

**Bioscientific Diagnostics** – is a contract research organisation providing outsourcing services to the drug development industry, with a specific focus on diagnostics, biomarkers and biopharmaceutical product characterisation

**Biosensia** – is a point of care in vitro diagnostics company that has a novel point of care platform

**Celtic Catalysts** – has developed ground-breaking chemistry that enables its clients in the pharmaceutical, biotech and fine chemicals industries to realise significant manufacturing cost savings

**Cernam** - is a specialist digital investigations company focusing on online investigations

**Credit Expo Research** – is a credit risk management company which has developed a patented empirical credit risk management methodology

**Doco System Solutions** - develops document management software solutions for global markets

**Enzolve Technologies** – develops and manufactures specially-designed enzymes, using proprietary technologies, for applications in healthcare, fine chemical and life science markets



*Enzolve Technologies' PKU test*

**Equinome** - is developing genetic tests to optimise decision-making in the breeding and racing of Thoroughbred horses

**HeyStaks Technologies** - has developed a patent protected, desktop mobile solution that allow users to harness their social networks as they search on the internet

**Ionic Business Systems** - provides a range of technology products including website design, implementation and hosting

**LogScreen** - is a managed security solutions provider providing event or activity log management services to small and medium-sized enterprises on the basis of business process outsourcing

**OncoMark** - focus is centred on the development and application of biomarker panels, particularly in the areas of oncology and drug development

**Q-Validus** - is a leading provider of international certification and management services

**RendezVu** - has developed a next generation learning platform to provide immersive education for languages and other subjects using virtual world and gaming technologies



*Paul Groarke and Garrett Hussey, co-founders, RendezVu*

**Restored Hearing** - has developed and is marketing Somtus™, an online sound therapy for the sufferers of temporary tinnitus which alleviates the effects of this form of tinnitus after only one minute

**ScrazzI** - has developed an innovative web-platform which integrates scientific networking with the comparison, review, purchase and sharing of scientific products

**ServiceFrame** - has developed a governance tool for supplier management, sourcing and shared services

**Simplicity Technology** - develops Physical Security Information Management (PSIM) Solutions to assist clients in integrating and managing disparate proprietary technologies in their security infrastructure

**SmartBuilder Software** - is developing mobile software for use on building and engineering sites

**Socowave** - is a leading innovator of wireless access technologies and products

**Talentevo** - is developing on-demand productivity and performance tools that will allow companies to align their employees with their business strategies

**Tethras** - is developing web-based localisation tools for Smartphone application developers

**The Innovation Foundation** - assists in the acceleration of innovation in businesses and organisations.

## NovaUCD Graduate Companies

A total of 20 companies have now graduated from NovaUCD. Companies which recently graduated from NovaUCD include

**AER** - is a leading Irish biofuels company

**Biosystems Engineering** - provides specialist services and research capabilities to the agricultural, food processing, renewable energy and environmental protection sectors

**Evolution** - is a software development company specialising in bespoke e-work/workflow and HR systems

**HomeInstead Senior Care** - provides comprehensive home care services for the elderly.

## NovaUCD Company Success Stories

During 2010 **BiancaMed**, a leading medical technology company and a UCD spin-out company, won the inaugural Irish Times All-island Innovation Award in association with InterTradelIreland during 2010.

BiancaMed was presented with the Product/Service Innovation Category Award, sponsored by UCD's Michael Smurfit Graduate Business School, for its breakthrough wireless sensor technology for non-contact monitoring of sleep and breathing in the home.



*Dr Philip de Chazal and Dr Conor Hanley, co-founders, BiancaMed with Paul Haran, UCD Michael Smurfit Graduate Business School*

BiancaMed was co-founded in 2003 by Dr Philip de Chazal, Dr Conor Hanley and Professor Conor Heneghan, as a spin-out from UCD's School of Electrical, Electronic and Mechanical Engineering.

**Equinome**, the UCD equine genomics spin-out company, was established to assist the bloodstock industry to maximise the genetic potential of Thoroughbred horses. During 2010 Equinome officially launched the Equinome Speed Gene Test. The test can be used to predict the optimum racing distance for an individual Thoroughbred by analysing the DNA sequence of a gene related to muscle mass development.



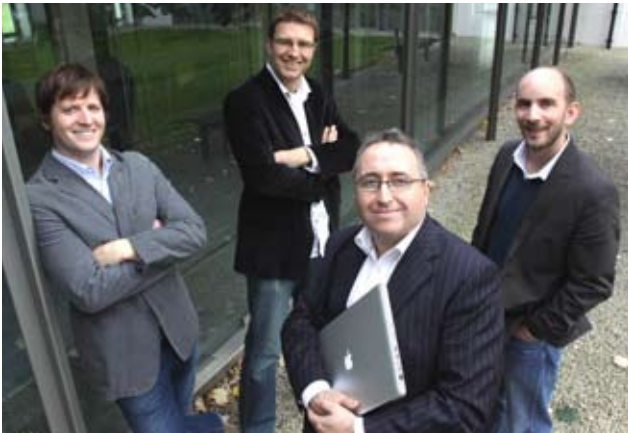
*Donal Ryan, Managing Director with Dr Emmeline Hill, co-founder, Equinome at the launch of the Equinome Speed Gene Test*

Since launching its service Equinome has secured major clients in Australia, France, Ireland, New Zealand, Singapore, South Africa, UK and USA. With new products scheduled for release in 2011 and 2012, Equinome's vision is to become the global industry standard for the provision of genetic information to the Thoroughbred horse industry.

Equinome, was established in 2009 by Dr Emmeline Hill, a leading genomics researcher in UCD's School of Agriculture, Food Science and Veterinary Medicine partnership with Jim Bolger, the renowned Irish racehorse trainer and breeder.

**HeyStaks Technologies**, the UCD social web-search start-up company, secured €1 million of equity funding from The Ulster Bank Diageo Venture Fund, which is managed by NCB Ventures. The funding will be used to develop the company's unique product offering, expand its existing operations, and open an office in San Francisco, California, the heart of one of the company's target markets.

The company has developed a patent protected, desktop mobile solution that allows users to harness their social networks as they search on their favourite search engines, and thereby get the benefit of their trusted peers' searches.



*Dr Maurice Coyle, Professor Barry Smyth, Leo Hamill, NCB Ventures and Dr Peter Briggs*

HeyStaks Technologies was established in 2008 by Dr Peter Briggs, Dr Maurice Coyle and Professor Barry Smyth, as a spin-out from the Science Foundation Ireland funded CLARITY Centre for Sensor Web Technologies at University College Dublin.

During the year **OncoMark**, the UCD life sciences spin-out, whose vision is to make a mark in the fight against cancer appointed Dr Dara FitzGerald as its new CEO. Dr FitzGerald, who has 20 years of experience in the IT and biotechnology sectors, plans to drive and accelerate the company's growth and development.



*Dr Dara FitzGerald, CEO, OncoMark*

OncoMark, which has secured over €2 million in research funding from European Framework 7 Programmes, is dedicated to the discovery and development of novel diagnostics and therapeutics that help to improve the quality of life of cancer patients.

OncoMark's primary focus is on the discovery of reliable cancer biomarkers and the development and provision of automatic and high-throughput multi-marker assays or tests. Such tests will improve the monitoring of the therapeutic response in patients undergoing anti-cancer therapy.

OncoMark was co-founded by Professor William Gallagher and Steve Penny in 2007 as a spin-out from the UCD School of Biomolecular and Biomedical Science.

Towards the end of 2010 **ServiceFrame**, won the *Emerging Software Business Award* at the 2010 Irish Software Awards. ServiceFrame is an evidence-based governance tool for outsourced and shared services. Having identified a new market opportunity that is currently underserved with an alternative SaaS based business model, ServiceFrame offers a compelling capability at a price point significantly below competitors.

ServiceFrame was founded in 2009 by Traoloch Collins and Daniel Berman.

During 2010 **SmartBuilder Software** launched a new iPhone application to assist building firms of all sizes to clean-up their construction sites more efficiently and cost effectively.

The problem for main contractors is that sub-contractors are often slow in cleaning sites or leave sites without cleaning them. This results in untidy and potentially unsafe sites with main contractors having to employ additional staff to clean-up the sites. In addition to environmental and safety issues this can cost main contractors hundreds of thousands of euro each over the course of a year.

The new app gives the contractor the ability to record and action sub-contractors to clean-up by a set date or face penalties. The app also contains a handy dashboard which displays all items, including the status of the number of pending, late or closed-out issues. The Site Clean Up app also contains reporting functionality so that a user can benchmark the performance of different sub-contractors.

SmartBuilder Software was established in 2010 by two experienced entrepreneurs Richard Mulcahy and Peter Daly.

**Socowave**, the developer of advanced wireless access systems for mobile communications, secured a €3 million Series A investment round led by Balderton Capital. The funding will enable Socowave to accelerate the development of technology that substantially increases the data handling capacity of cellular radio infrastructure whilst reducing the energy consumption.

Socowave's Active Antenna System technology allows the cellular base station, for the first time ever, to detect the direction of incoming signals from user groups and to actively optimise the radio link using digital techniques.



*Joe Moore, founder, Socowave*

This new class of base station technology increases wireless data handling capacity five-fold, while reducing the energy consumption of the overall base station system by 50% through eliminating inefficient base station components and locating certain elements inside the antenna housing.

Socowave was founded in 2008 by Joe Moore.

In 2010 **The Innovation Foundation** launched the Irish Innovation Index. The Irish Innovation Index is a new, free, online tool developed to assist Irish companies, of all sizes, to grow and develop their businesses through innovation. The Irish Innovation Index offers organisations a rigorous, original and definitive online tool to assess and develop their innovation capabilities.



*Peter Robbins, founder, The Innovation Foundation*

The Irish Innovation Index has been developed by The Innovation Foundation in conjunction with the UCD Geary Institute and was partially funded through Enterprise Ireland's innovation voucher scheme.

The Innovation Foundation was founded in 2009 by Peter Robbins.

**Veutility** was declared the overall winner of the Globe Forum's *Innovators Challenge Competition* which took place as part of the Innovation Dublin 2010 festival.

Veutility, a participant on the NovaUCD 2010 Campus Company Development Programme, is developing a hosted utility consumption portal and benchmarking service. Veutility is offering large and SMEs enterprises real-time, personalised, hosted community, utility consumption data which enables them to benchmark their utility consumption against others of a similar industry, size or geography and also enables them to understand their utility-use profile by site, building, room and even appliance level energy consumption fingerprinting from a single point energy monitor.

The co-founders of Veutility are Dr Antonio Ruzzelli and Anthony Schoofs, UCD School of Computer Science and Informatics and the CLARITY Centre for Sensor Web Technologies.

**Dr Emmeline Hill**, a leading genomics researcher in UCD's School of Agriculture, Food Science and Veterinary Medicine, and co-founder of Equinome was presented with the 2010 IMAGE Entrepreneur of the Year Award.

Dr Hill was presented with the accolade in recognition of her innovative idea and its transformation into a commercial success as a UCD equine genomics spin-out company.



*Dr Emmeline Hill, co-founder, Equinome*



# Culture of Innovation and Entrepreneurship

The development of a culture of innovation and entrepreneurship is critical for the successful identification and commercialisation of intellectual property at UCD. By promoting awareness and embedding the ethos of innovation, knowledge transfer and commercialisation with the research community, NovaUCD is encouraging the seeds of valuable intellectual property which can be harnessed at a later stage for the benefit of all stakeholders.



*NovaUCD coving*

NovaUCD has arranged over 800 events since 2003 to assist in creating this culture by increasing the awareness of entrepreneurship, innovation and technology transfer among the next generation of entrepreneurs and innovators. These events, which are aimed at researchers, staff and students, cover all aspects of commercialisation including intellectual property identification, protection and exploitation, commercialisation and new venture formation.

## Transferable Skills Training

NovaUCD's Continuing Professional Development (CPD) Programme offers specialised training courses for graduate students, researchers, technology transfer professionals and senior executives and managers from industry who wish to develop their professional skills in the management and exploitation of research results and innovative concepts.



*Colm Lyon, Realex Payments, prior to speaking at a 2010 NovaUCD 'Entrepreneurs Live!' seminar*

## Courses Offered

- Postgraduate education, accredited PhD modules
- Bespoke training courses for researchers, technology transfer professionals and industry.

## Postgraduate Education

A complete accredited training module appropriate for graduate students participating in a structured PhD programme is available from NovaUCD. This module covers the management process required to transform an innovative idea into a commercial opportunity or business proposition. A fundamental understanding of the different forms of intellectual property (IP) is provided and students are guided through the stages and processes involved in the creation, capture, management and commercialisation of IP.

## Bespoke Training Courses

NovaUCD has also developed detailed training material (course book, workbook, case studies), which provides the foundation for seminars and workshops on key topics relevant to innovation and technology transfer and

supports the development and delivery of specialised training courses to organisations for training of:

- Researchers and Principal Investigators
- Technology Transfer Professionals
- Company R&D, Licensing and IP Managers.

### Specific Training Topics

- The role of the researcher in the innovative process
- IP policy and national guidelines for management of IP
- The different forms of IP
- Patents and the patent system
- Managing the capture, reporting and protection of IP
- Evaluating and valuing IP
- Developing a business plan
- Negotiating and licensing IP
- Preparing agreements for disclosure of information, R&D cooperation, evaluation and exploitation of IP.

### Training Outcomes

On completion of the training courses participants will be able to demonstrate a thorough understanding of

- The commercialisation process
- Conduct research using best laboratory practice
- Implement processes for managing technology transfer
- Assess the most appropriate routes to market
- Value and market research outputs and make the business case to potential funders
- Prepare a technology offer
- Negotiate and conclude collaborative research and licensing agreements
- Advise researchers and their colleagues on how to manage and exploit the commercial potential of research projects.



*Howard Beggs, Helix Health, prior to speaking at a 2010 NovaUCD 'Entrepreneurs Live!' seminar*

### InterTradelreland All-island Innovation Programme

During 2010 an innovation conference and an innovation lecture programme were held at UCD as part of the InterTradelreland All-island Innovation Programme.

This Programme, a partnership between InterTradelreland, Queen's University Belfast, NovaUCD and NUI Galway, aims to promote and encourage innovation across the island of Ireland. The Programme enables international expertise and best practice innovation to be shared with business leaders, students, academics, knowledge transfer professionals and policy makers across Ireland via innovation lectures, seminars and master classes.

### 2010 Innovation Conference

Building collaborative networks is essential to develop Ireland as an innovation island. That was the key message delivered by influential business, industry and academic leaders who took part in InterTradelreland's 2010 All-island Innovation Conference at UCD.

The objective of this innovation conference, which took place over two days at the end of June, was to explore and deepen the audiences' understanding of the potential economic opportunities which arise from building collaborative networks.

The common theme, which emerged from all speakers, was that such networks are essential to drive and facilitate innovation and to develop a dynamic and indigenous knowledge-based economy on the island of Ireland.

During a keynote address at the conference, Professor Woody Powell, a leading economic sociologist at Stanford University, California outlined key factors required to build robust business clusters within an economy.



*Dr Pat Frain, NovaUCD, Aidan Gough, InterTradelreland and Professor Woody Powell, Stanford University*

His address focused on the development of the biotech industry in the United States. Each of the 11 regions he studied were rich in resources such as scientific knowledge, money and business skills and had the potential to form biotech clusters. However only three of the regions formed robust clusters while the other eight failed to do so.

Professor Powell concluded that the successful clusters were marked by the presence of local 'anchor tenants' who fostered the values of openness and transparency in the region and encouraged exploration, a diversity of types of organisations and a dense web of local relationships. According to Professor Powell collaborative networks are the locus of innovation and explain why high-tech clusters form in some regions but not others, even when the regions have comparable resources.

The implication for all industrial sectors is that successful clusters require the thorough mixing of people, ideas and resources across the university, business and financial communities. Having organisational diversity and catalytic

organisations which provide the relational glue to hold clusters together and facilitate the transfer of best practices are also essential.

He concluded that the development of true collaborative networks will be instrumental in the development of a robust and innovative knowledge-based economy on the island of Ireland.

Other speakers at the opening day of conference included some of the island's leading business and industry leaders who discussed the theme of building collaborative networks for innovation in a knowledge economy.

Speakers included, Dr Leonora Bishop, Manager, Strategic Investments and RD&I Policy, IDA Ireland; Bernie Cullinan, CEO, Clarigen; Dr Martin Curley, Director, Intel Labs Europe; Dr Peter FitzGerald, founder and MD, Radox Laboratories; Dr Hubert Henry, Director of Innovation, Bord na Móna, Damini Kumar, European Ambassador for Creativity and Innovation and Dr John O'Dea, CEO, Crospon.

Day 2 of the conference focused on Creating Innovation Communities and brought together academic researchers from the across the island of Ireland and internationally. These speakers explored and examined current research on the topic of innovation networks including the role that multi-national companies have to play in the development of such networks.

The InterTradelreland 2010 All-island Innovation Conference was organised by NovaUCD and UCD's Innovation Research Unit.

## 2010 Innovation Lecture

The generation of good ideas is generally not the bottleneck in the innovation process for Irish companies. Their real challenge is the successful commercialisation of those ideas. This requires companies giving their employees the freedom to act as entrepreneurs and providing them with adequate structures and processes to create an entire entrepreneurial environment within the company.

This was the main message from Professor Peter Russo, an international entrepreneurship expert, who in March delivered the InterTradelreland 2010 Innovation Lecture at UCD.

Organised by NovaUCD and held in front of a packed audience in the UCD William Jefferson Clinton Auditorium, his lecture was entitled *Corporate Entrepreneurship - the Key to Making Innovation Happen*.



*Professor Peter Russo, European Business School*

While at University College Dublin Professor Russo also facilitated three Master Classes in NovaUCD. He held an academic dialogue with researchers entitled, *Undertaking Corporate Entrepreneurship Research – The Way Forward*, a Master Class for students entitled, *Being Entrepreneurial in a Corporate Environment – The Challenges and Opportunities* and a Master Class for SMEs entitled *From Idea to Market*.

Professor Peter Russo is Founder, Director and Chairman of the Strascheg Institute for Innovation and Entrepreneurship within the European Business School.

## **NovaUCD Open Morning**

NovaUCD hosted an Open Morning as part of the Dún Laoghaire-Rathdown 2010 Enterprise Week, Dublin's largest pro-enterprise initiative. The aim of the Open Morning was to give existing and budding high-tech entrepreneurs an opportunity to discover the unique services, supports and facilities available at NovaUCD.

Ray Nolan, the award winning serial internet entrepreneur and founder of Web Reservations International and Worky.com, was the guest speaker during the Open Morning.



*UCD students Rhona Togher and Sarah Kenny with serial entrepreneur Ray Nolan at NovaUCD's 2010 Open Morning*

During the Open Morning visitors also had an opportunity to meet with NovaUCD staff members, listen and talk to members of NovaUCD's successful community of entrepreneurs.

The Dún Laoghaire-Rathdown 2010 Enterprise Week featured a series of county-wide activities aimed at entrepreneurs, micro-enterprises, the recently unemployed and others who are thinking of setting-up a business.

## **Innovation Dublin 2010**

The Innovation Dublin 2010 festival took place over 12-days in November. The aim of the annual festival, which is now in its second year, is to raise public awareness of the innovation and creativity that is happening on a daily basis in Dublin, to inspire and stimulate innovation and creativity and to encourage networking opportunities.

As part of the 2010 festival UCD hosted over 30 events in various locations around the University and around Dublin. These events took place in areas such as education, research & development, science, business,

enterprise and culture and included seminars, workshops, conferences, exhibitions, performances, showcases and competitions.

As part of the festival NovaUCD, which co-ordinated UCD's participation in Innovation Dublin 2010, hosted several events, including the NovaUCD 2010 CCDP Awards Evening and an 'Entrepreneurs Live!' seminar,



*Damini Kumar, inventor and European Ambassador for Creativity and Innovation, launching UCD's participation in Innovation Dublin 2010 at NovaUCD*

NovaUCD together with TCD's Technology Transfer Office jointly organised an event to showcase the entrepreneurial impact of research undertaken in both institutions as part of the festival. The event entitled *Entrepreneurial Universities Showcasing the Impact of Research* took place in the Science Gallery and involved 5 spin-out companies from each university.

These companies, ranging from early-stage to well established, currently employ 100 people between them and plan to grow to 250 within the next 2-3 years. The event, which attracted a diverse audience, involved a series of product/service demonstrations and presentations by company promoters.

### **'Entrepreneurs Live!'**

NovaUCD, with the support of Dún Laoghaire-Rathdown County Enterprise Board ran 8 seminars during 2010 in the extremely popular 'Entrepreneurs Live!' series. The aim of the seminars is to promote a spirit of entrepreneurship among the academic, research and student population at UCD.



*Vincent Cleary, Glenisk, prior to speaking at a 2010 NovaUCD 'Entrepreneurs Live!' seminar*

The seminars involve well known entrepreneurs who talk about their experiences of setting up and running their own business, emphasising the highs and lows encountered on their entrepreneurial journey, and highlighting the lessons they have learnt along the way. During each seminar, attendees have the opportunity to participate in lively question and answer session with the guest entrepreneur.

By the end of 2010, over 80 well known entrepreneurs have taken part in this NovaUCD seminar series. The series continues to attract large audiences and to stimulate a lively and enthusiastic debate between the speakers and the students. There is clearly a growing culture of entrepreneurship on UCD's campus which augurs well for UCD's ability to generate new ventures and high-tech employment for UCD graduates in the future.



*Audience at a NovaUCD 'Entrepreneurs Live!' seminar*

# Communications and Networks

## Communications

The primary focus of NovaUCD's communication strategies and programmes is to support the implementation of NovaUCD's vision, mission and strategic objectives. NovaUCD is committed to communicating the activities, achievements, functions and services of NovaUCD and the successes of its client companies to opinion-formers within and outside of the university and to a wider general public.

NovaUCD communicates key messages to internal and external stakeholders, both nationally and internationally, through the media, by hosting visiting delegations, organising key events and attending conferences and exhibitions. The primary focus is to support NovaUCD's vision and to assist in achieving NovaUCD's objectives through the use of internal and external communication tools and media. This includes managing NovaUCD's strategic marketing activities, media relations, public relations, internal communications and event management activities.

Given the dramatic growth in the use of social media, NovaUCD has embraced social media as a means of enhancing communications with its stakeholders. NovaUCD actively uses twitter (@NovaUCD) and has also established a LinkedIn Group ([www.linkedin.com/groups/149865](http://www.linkedin.com/groups/149865)) to connect members of the wider NovaUCD network.



NovaUCD window view

## International Media

NovaUCD and NovaUCD client companies featured in international media including US publications such as, Bloomberg.com and The Chronicle of Higher Education.

*Bloomberg.com* reporter John Cookson and his camera crew were in Dublin at the end of October as part of the Dublin Web Summit event. While in Dublin they visited and filmed at NovaUCD and interviewed **RendezVu**, the e-learning venture, as part of a report entitled *Ireland May Be EU's Comeback Kid*.

The article reported on Irish entrepreneurs and foreign technology firms that are starting to draw investment back into the country helped by the skills of the local workforce.

Goldie Blumenstyk, a senior writer with *The Chronicle of Higher Education*, and a colleague, Aisha Labi, also visited Dublin in October. The Chronicle is a leading media organisation for higher education news, based in Washington D.C.

The overall purpose of their trip was to report on how Ireland is using its universities and technology transfer system to help revive the Celtic Tiger. The reporting trip was part of The Chronicle's expanded international effort which is an element of a new Global Chronicle.

While in Dublin Goldie and Aisha visited NovaUCD and met with several company promoters, UCD researchers and NovaUCD staff members. They also visited TCD, DCU and DIT and attended Enterprise Ireland's *Big Ideas Showcase* in Croke Park.

Goldie's article, *Ireland Looks to Academe to Re-ignite Its Economy*, was published in November.

## Book Launch at NovaUCD

Ireland has more than 3 times its total energy requirements available from readily accessible renewable energy sources on its own doorstep. Yet despite access to such vast and plentiful clean energy resources, Ireland is still heavily dependent on volatile foreign fossil fuel, importing almost 90% of its energy needs. As conventional energy sources run out Ireland has an extraordinary opportunity to use its own natural resources, in a cost competitive way, to achieve energy independence and become a world leader in the use of clean energy.



*John Travers launching Green & Gold – Ireland a Clean Energy World Leader? at NovaUCD*

That was the key message delivered at NovaUCD by John Travers when he launched his new book entitled *Green & Gold – Ireland a Clean Energy World Leader?*

Other conclusions outlined in the book are that 20% of total Irish energy needs can be met by renewable energy within the next ten years and 80% by 2050 and that 20% of Irish GDP can be derived from clean energy exports.

## International Visitors to NovaUCD

During 2010 NovaUCD hosted 24 visiting national and international delegations from around the globe. These delegations included government, university and local state agency representatives, industrialists and others interested in innovation and technology transfer. These delegations came to NovaUCD to learn of UCD's experiences of supporting innovation and technology

transfer on a university campus and to learn how an Innovation and Technology Transfer Centre such as NovaUCD has been developed, operates and to learn of its successes.



*NovaUCD courtyard*

## Networks

NovaUCD is a member of the European Connected Health Campus (ECHC) and WirelessLAB.

The ECHC aims to transform healthcare delivery by enhancing the quality and effectiveness of care with changing demographics, clinical priorities and focus on patient expectations. It brings together clinicians, researchers, innovators, policy developers, investors and a wide range of specialist enterprises. WirelessLAB, which is located at NovaUCD, is a new innovation network for Ireland's wireless technology community. It was established in 2009 to foster and stimulate the development of an innovation environment for Ireland's wireless technology community.

## International Knowledge Transfer Networks

Dr Pat Frain, Director of NovaUCD was the Chair of ProTon Europe during 2008 and is the incoming Chair for 2011. ProTon Europe, headquartered in Brussels, is the pan-European association of knowledge transfer organisations linked to universities and public research organisations. With over 160 knowledge transfer organisations, including NovaUCD, as members, ProTon Europe reaches out to nearly 600 universities and public research organisations across Europe.



ProTon Europe was established in 2003 by the European Commission. Its primary aim is to promote European innovation by increasing the effectiveness of knowledge transfer and collaboration between public research organisations and industry.

Major objectives of ProTon Europe include:

- Further development of Europe-wide network of national knowledge transfer associations
- Advising the European Commission on knowledge transfer policy
- Providing data for monitoring and benchmarking performance
- Increasing recognition of the knowledge transfer profession
- Developing expertise and skills of knowledge transfer professionals
- Facilitating exchange of best practice in knowledge transfer.

NovaUCD also participates in other knowledge transfer associations (Irish Technology Transfer and Innovation Group, Institute of Knowledge Transfer, AURIL, Licensing Executives Society and the Association of European Science and Technology Transfer Professionals etc) which represent a valuable source of information and best practice.

NovaUCD contact details:

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Belfield, Dublin 4, Ireland.

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f: 00-353-1-716 3709

e: [nova@ucd.ie](mailto:nova@ucd.ie)

w: [www.ucd.ie/nova](http://www.ucd.ie/nova)



*Front of NovaUCD*



# Personnel

Dr Pat Frain is the Director of NovaUCD and leads a team of professional staff with expertise and experience in technology transfer, new venture formation, communications and continuing professional development.

The members of the NovaUCD team and contact details are given below.

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	Aileen Kelly (am)	Reception	t: 00-353-1-716 3700 e: nova.reception@ucd.ie
	Marie Caffrey (pm)		

# Location Map and Directions

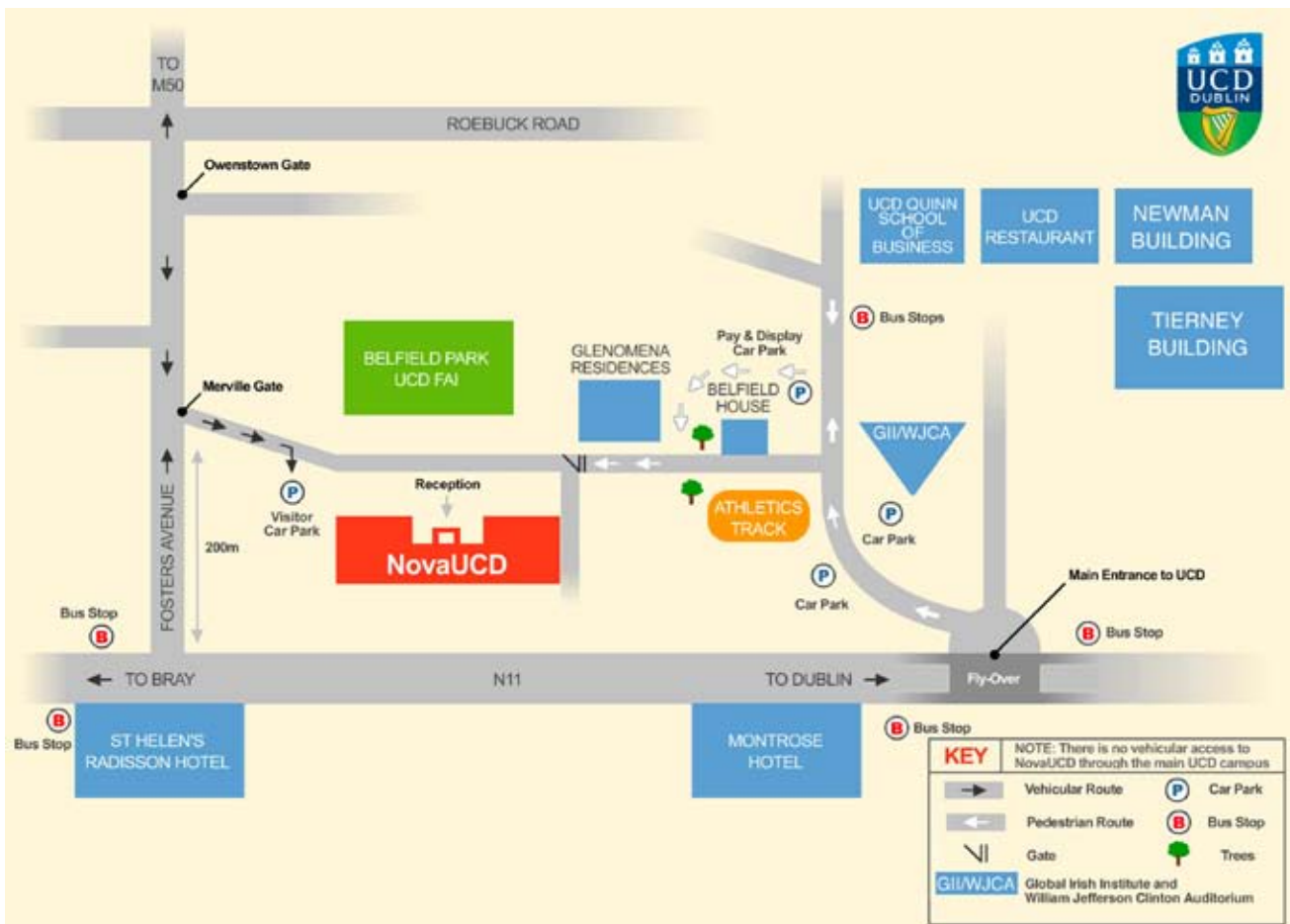
The vehicular entrance to NovaUCD is located on Fosters Avenue, approximately 200m from the Stillorgan dual carriageway (N11). The road from this gate leads directly towards NovaUCD. Car parking for visitors is on the right hand side of the road, before reaching NovaUCD. The main entrance to the NovaUCD Reception is through the front door of the building as indicated in the map below.

Visitors may also park in one of the University car parks and approach NovaUCD on foot.

For further information contact:

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