



# NovaUCD Newsletter



The Innovation and Technology Transfer Centre

July 2010

Dear Colleagues and Friends

Welcome to the second issue of the NovaUCD Newsletter for 2010 in which we review key activities and events which took place during the second quarter of 2010.

NovaUCD's 2009 results and related developments are outlined in its annual report which was published recently. The significant innovation achievements made in UCD during 2009 and during the last number of years, which are outlined in the Report, justify the faith of our sponsors who initially invested in the establishment of NovaUCD.

NovaUCD client companies have created over 30 jobs since the start of the year. In the same period five new start-up companies, Cernam, LogScreen, SmartBuilder Software, Simplicity Technology and Tethras have located at NovaUCD and joined NovaUCD's growing community of entrepreneurs.

Sixteen new high-tech and knowledge-intensive business ventures, involving 34 individuals, have commenced NovaUCD's 2010 Campus Company Development Programme. The ventures and individuals participating on this year's entrepreneurship programme are commercialising research undertaken throughout the University.

The InterTradeIreland 2010 Innovation Conference, organised by NovaUCD and colleagues in UCD's Innovation Research Unit, took place in UCD at the end of June. The key message delivered by the influential business, industry and academic leaders who took part in the 2-day conference was that building collaborative networks is essential to develop Ireland as an innovation island.

In this issue we report on the results of the ProTon Europe 2009 survey. Over 300 European Knowledge Transfer Offices, including NovaUCD, from 10 European countries, took part in this Survey, the largest such survey in Europe. We also report on recent developments for Credit Expo and Restored Hearing.

**Diary notice:** Following the huge success and interest of the inaugural Innovation Dublin festival, Dublin City Council has announced that Innovation Dublin 2010 will take place from 10<sup>th</sup> to 21<sup>st</sup> November.

I would welcome any comments or feedback on this issue. Please contact Micéal Whelan on t: 01-716 3712 or e: [miceal.whelan@ucd.ie](mailto:miceal.whelan@ucd.ie)

Dr Pat Frain, Director

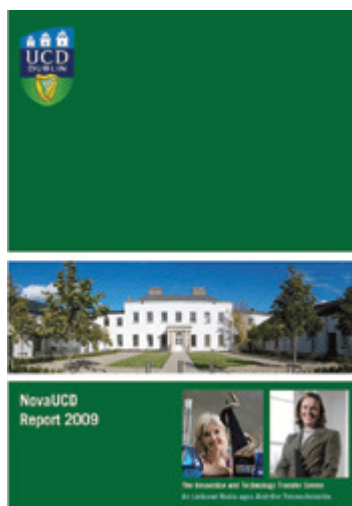
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## NovaUCD 2009 Report

It is now six 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 innovation achievements made in University College Dublin during 2009 and during the last number of years, justify the faith of the initial sponsors who invested over €11 million in the establishment of NovaUCD.

NovaUCD's 2009 results and related developments are outlined further in its annual report which has just been published.



### Summary of Key 2009 Metrics

- €300,000 generated from the commercialisation of research
- 7 new UCD spin-outs incorporated
- 85 invention disclosures
- 25 priority patent applications
- 17 PCT patent applications
- 5 national/regional patent applications
- 15 licence agreements
- 24 companies located at NovaUCD
- 15 new ventures completed NovaUCD's 2009 CDDP.

During 2009 NovaUCD continued its various initiatives to support researchers and entrepreneurs. NovaUCD arranged and hosted well over 100 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.

Since the introduction of Enterprise Ireland's Technology Transfer Strengthening Initiative, NovaUCD has supported an increasing level of commercialisation activity arising from UCD

research. This includes licensing to established companies and new ventures.

As set out in *Forming Global Minds*, UCD's new strategic plan, through the development of the Innovation Alliance with TCD, UCD should by 2014 witness a step-change in such activities, particularly in the establishment of campus companies. These outcomes will reflect a major shift in the research and innovation culture of the University.

By 2014, UCD's offerings at undergraduate and postgraduate level will also be transformed to embed aspects of innovation and entrepreneurship through the Innovation Academy.

At 3<sup>rd</sup> and 4<sup>th</sup> levels UCD will mainstream courses in innovation and entrepreneurship. This will give all postgraduate students access to a range of transferable skills and a knowledge of business, thus providing them with a wider set of career options beyond their core discipline.

Since 2008, courses delivered by NovaUCD, on starting a business and on commercialisation of intellectual property have been introduced into the structured PhD programme.

The availability of PhD graduates with a knowledge and interest in commercial issues should make a significant impact on the generation of spin-out companies.

### Key 2005-2009 Metrics

During the period 2005 to 2009, 13 new UCD spin-out companies were incorporated and a total of 50 high-tech and knowledge-intensive companies, 33% of which were UCD spin-out companies, have located at NovaUCD. A further 40 promoters of new ventures occupied desk space at NovaUCD.

The increasing strength of the IP pipeline is also encouraging. In the last 5-years, nearly 250 inventions have been disclosed by UCD researchers. In addition, over 120 patent applications have been filed and over 50 licence agreements have been signed with a range of indigenous and international companies.

Hard copies of the Report are available on request.



The complete Report is available online via

[www.ucd.ie/nova/mediacentre/novaucdannualreports/2009/](http://www.ucd.ie/nova/mediacentre/novaucdannualreports/2009/)

**Contact:** For further information, or to receive a copy of the Report, contact Micéal Whelan, Communications, t: +353 1 716 3712, e: [miceal.whelan@ucd.ie](mailto:miceal.whelan@ucd.ie).

### NovaUCD Companies Create Jobs

NovaUCD client companies have created over 30 new high-tech jobs since the start of the year. Five new start-ups, Cernam, LogScreen, SmartBuilder Software, Simplicity Technologies and Tethras, have now located at NovaUCD since January and joined NovaUCD's growing community of entrepreneurs.



Brian Farrell, co-founder, Tethras

A total of 28 high-tech and knowledge-intensive companies, occupying 39 incubation units, are now based at NovaUCD. These companies currently employ 170 individuals.

An additional 9 entrepreneurs are also based in NovaUCD's desk space facility available to individuals involved in the design of new ventures generally at the pre-incorporation stage of their development.

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### Protection and Commercialisation of Intellectual Property

NovaUCD is responsible for the implementation of UCD's policies relating to the commercialisation of intellectual property and for the management of the intellectual property arising from UCD's research programmes.

A key priority of NovaUCD is to work with UCD researchers in identifying, protecting and commercialising the intellectual property arising from their research programmes and to take innovative ideas from proof-of-principle to full commercial success.

### UCD 2010 Invention Disclosures and Patent Filings

Thirty invention disclosures have already been disclosed by UCD researchers to NovaUCD during the first six months of 2010.



**UCD patents** filed to date during 2010 include:

*A method and system for monitoring sleep*, Professor Conor Heneghan, UCD School of Electrical, Electronic and Mechanical Engineering. A US national patent application.

*A method for the selective concentration of a specific low abundance biomolecule*, Professor Kenneth Dawson, UCD School of Chemistry and Chemical Biology. A PCT patent application.

*A new design for DSSC*, Professor K. Ravi Thampi, UCD School of Chemical and Bioprocess Engineering. A national and provisional US patent application and a regional Europe patent application.

*A system level power evaluation method*, Dr Damian Dalton, UCD School of Computer Science and Informatics. An Irish priority patent application.





*Compounds*, Dr Matthias Tacke, UCD School of Chemistry and Chemical Biology. An Irish priority patent application.

*Digital predistorter for RF power amplifiers*, Dr Anding Zhu, UCD School of Electrical, Electronic and Mechanical Engineering. A PCT patent application.

*Energy monitoring system*, Dr Antonio Ruzzelli, UCD School of Computer Science and Informatics. An Irish priority patent application.

*Fibrosuppressant biotherapeutics*, Professor Catherine Godson, UCD School of Biomolecular and Biomedical Science. A PCT patent application.

*Heat expanded food products*, Professor Dolores O'Riordan, UCD School of Agriculture, Food Science and Veterinary Medicine. A national US patent application.

*Method and apparatus for stimulating pelvic floor muscles*, Dr Brian Caulfield, UCD School of School of Physiotherapy and Performance Science. A PCT patent application.

*Method and system for analysing most recently used registry keys*, Yuangdong Zhu, UCD School of Computer Science and Informatics. A PCT patent application.

*MSTN polymorphism*,  
*MSTN insertion/discovery*, *Thoroughbred*, Dr Emmeline Hill, UCD School of Agriculture, Food Science and Veterinary Medicine. An Irish priority patent application.

*Novel biomarkers for cardiovascular disease*, Dr John Baugh, UCD School of Medicine and Medical Science. An Irish priority patent application.

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## NovaUCD 2010 Campus Company Development Programme

Sixteen new high-tech and knowledge-intensive business ventures, involving 34 individuals, have joined NovaUCD's 2010 entrepreneurship programme.

The NovaUCD 2010 Campus Company Development Programme (CCDP), which has commenced, assists UCD academic and research entrepreneurs in bringing their innovative ideas from intellectual concepts to fully developed and sound commercial businesses.

Now in its fifteenth year, 156 new ventures and 235 individuals, have completed this programme which is supported by Enterprise Ireland.

The ventures and individuals participating on this year's programme are commercialising research undertaken throughout the University, including research in UCD Schools of Agriculture, Food Science and Veterinary Medicine; Electrical, Electronic and Mechanical Engineering; Medicine and Medical Science and in UCD's National Folklore Collection, Innovation Research Unit and Urban Institute of Ireland.

The CCDP is a nine-month, part-time programme designed to suit the busy timetable of researchers and academics. It offers a mix of monthly workshops, mentoring and one-to-one consultancy. It is delivered by NovaUCD staff, with support from the NovaUCD sponsors, Enterprise Ireland, as well as other outside experts.



Dr Emmeline Hill and Jim Bolger, co-founders, Equinome, overall winner of the NovaUCD 2009 CCDP

The CCDP is designed to assist entrepreneurs by providing them with the skills necessary to transform their ideas into commercially feasible new ventures.

The programme culminates with a high profile Awards Evening which this year will be held on 16 November 2010 in the William Jefferson Clinton Auditorium.

Participants on this year's Programme include:

**Cypro Laboratories** is developing technology to identify cybercrime on large Internet networks. Cypro Laboratories offers this software-as-a-service to parties affected by these cybercrimes, resulting in real-time analyses of the scale and distribution of their problem on the Internet.



The promoters of Cypro Laboratories are Alan Hannaway, Mark Scanlon and Professor Tahar Kechadi, UCD School of Computer Science and Informatics.

**Restored Hearing** is a web-based venture which offers a unique online and tailored, minute-long therapy sessions for individuals who suffer from temporary tinnitus.

Rhona Togher, an undergraduate student in UCD's School of Physics is taking part on this year's Programme. The other two promoters are Eimear O'Carroll and Anthony Carolan.

**SustainableMeter** is developing technology to provide a real-time web-enabled water flow information system to domestic and industrial water users.

The promoters of SustainableMeter are Dr Tom Curran and Miguel Angel Prieto Lage, UCD School of Agriculture, Food Science and Veterinary Medicine.

**Tetra Materials** aims to produce multi-scale tools (centimetre size tools with micro-scale and nano-scale features) from a new family of metals called metallic glasses which will be used in manufacturing high-value polymer and soft metal components.

The promoters of Tetra Materials are Dr David Browne, Dr Cormac Byrne and Dermot Stratton, UCD School of Electrical, Electronic and Mechanical Engineering.

**Contact:** For further information contact Dr Ciara Leonard, Project Manager, Enterprise Development, t: +353 1 716 3714, e: [ciara.leonard@ucd.ie](mailto:ciara.leonard@ucd.ie).

## InterTradeIreland 2010 Innovation Conference

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

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.



Aidan Gough, InterTradeIreland, Professor Woody Powell, Professor Petra Ahrweiler, UCD Innovation Research Unit, Damini Kumar, European Ambassador for Creativity and Innovation and Dr Pat Frain, NovaUCD

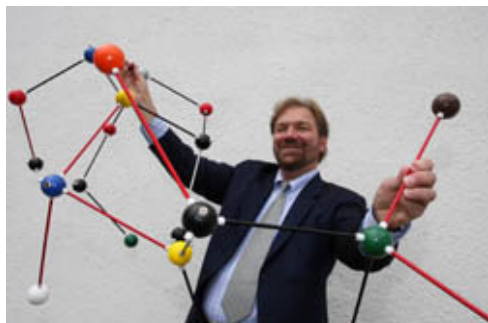
The common theme, which emerged from all speakers, was that such networks are essential to drive and facilitate innovation and to develop a dynamic and indigenous knowledge-based economy on the island of Ireland.

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.

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.



Professor Woody Powell, Stanford University

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 his presentation by saying 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 of 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 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 InterTradeIreland 2010 All-island Innovation Conference was organised by NovaUCD and UCD's Innovation Research Unit.



Damini Kumar, European Ambassador of Innovation and Creativity

The conference formed part of the InterTradeIreland All-island Innovation Programme which aims to promote and encourage innovation across the island of Ireland. This Programme is organised by InterTradeIreland, Queen's University Belfast, NovaUCD and the Centre for Innovation and Structural Change, NUI Galway.

[www.innovationireland.org](http://www.innovationireland.org)

The conference presentations and podcasts of Professor Powell's keynote addresses are available via [www.ucd.ie/nova/intertradeireland2010innovationconference/](http://www.ucd.ie/nova/intertradeireland2010innovationconference/)

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### ProTon Europe's 2009 Results

ProTon Europe, the pan-European network of national knowledge transfer associations and companies affiliated to universities and other public research organisations, has announced the results of its 2009 Survey.

The Survey, the largest knowledge transfer survey in Europe, refers to the fiscal year 2008 and demonstrates a significant increase in knowledge transfer activities in European universities.





# ProTON

## EUROPE

Innovation from Public Research

A total of 305 European Knowledge Transfer Offices (KTOs), including NovaUCD, from 10 European countries, took part in the 2009 Survey.

A key finding of the 2009 survey was that a total of 5,841 inventions were disclosed to European KTOs in 2008, an increase of 30.5% compared to the number reported in 2005. On average, each KTO registered just under 20 invention disclosures and together registered a total of 2,951 priority patent applications, an increase of 56.3% compared to the 2005 figure.

The 2009 survey indicates that the number of patents granted per year to members of ProTon Europe is progressively increasing with the average number of patents

granted rising from 1.3 in 2005 to 3.4 in 2008 per KTO. The 2009 Survey also reports that the total number of spin-off companies created with the support of European KTOs during 2008 was 495 compared to 435 in 2005.

Dr Pat Frain, Director, NovaUCD is the incoming Chair of ProTon Europe.

[www.protoneurope.org](http://www.protoneurope.org)

### Companies at NovaUCD

Twenty-eight innovative new ventures, occupying 39 incubation units, or 90% of the available incubation space, are currently located in NovaUCD.

**Simplicity Technology** is the latest company to locate at NovaUCD. Simplicity Technology is a software development and services company specialising in Physical Security Information Management (PSIM) software solutions for industry and government.

[www.simplicitytechnology.com](http://www.simplicitytechnology.com)

**HomeInstead** recently graduated from NovaUCD. A total of 17 companies have now graduated and moved on to new premises.

The continuous turnover of companies 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 continues to welcome proposals from the promoters of high-quality, knowledge-intensive ventures who are interested in locating in NovaUCD.

**Contact:** For further information contact Dr Ciara Leonard, Project Manager, Enterprise Development, t: +353 1 716 3714, e: [ciara.leonard@ucd.ie](mailto:ciara.leonard@ucd.ie).

### Companies in the News

#### ***Credit Expo***

Credit Expo the NovaUCD-based credit risk management company, has announced that it is targeting the international financial market with a web-enabled version of its credit risk management software.

This new version of Credit Expo's Empirical Credit Risk Management (ECM) software will allow national and international financial institutions to have easier access to a powerful and strategic credit risk management tool.



Patrick Shallow, Founder & MD, Credit Expo

A healthy financial system is vitally important to everyone, borrowers, depositors, investors or taxpayers, and is dependent on disciplined credit risk management. Given the recent financial crisis, there is understandable public interest in ensuring that credit institutions are managing credit risk to the level of best practice.

To assist with this process Credit Expo has developed and is marketing its ECM

software system which can deliver full transparency of a lender's credit risk to senior management.

ECM is a patented software system for measuring and managing credit risk in instalment and consumer lending. It is an industry-certified system based on statistical algorithms, programmed for loan loss forecasting and provisioning. The scope of the application ranges from tracking well performing, or non-delinquent loans, through to loans having a high risk of default.

The ECM software system, originally launched in 2004 as a client server application, analyses and tracks credit risk from the portfolio level, through various loan characteristics to the account level. The resulting risk assessment can be used by financial institutions to better inform loan pricing and collection management.

When credit risk is identified, bad debts are substantially reduced, proper pricing is established, cross subsidisation is eliminated and internal resources can be deployed more rationally.

Current ECM clients include leading Irish and US banks and most recently an Irish Credit Union. ECM is Basel II, (capital adequacy), and International Financial Reporting Standards (IFRS, accounting standards), compliant and is Irish Revenue approved for the purposes of provisioning and of profit reporting.

Basel II is an international accord developed by the Basel Committee on Banking Supervision to establish a global standard for how banks and other financial institutions measure and recognise risk.

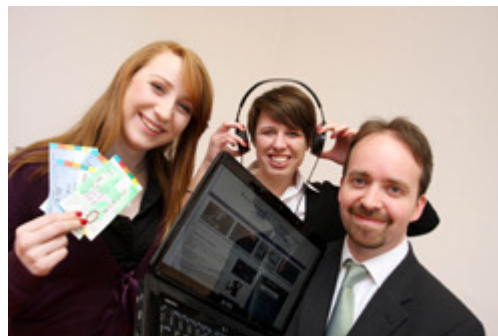
Credit Expo was founded in 2003 by Patrick Shallow, a former senior banker.

[www.creditexpo.ie](http://www.creditexpo.ie)

### **Restored Hearing**

Restored Hearing the web-based company is assisting world cup fans who are suffering from the effects of listening to the Vuvuzela horn at this year's World Cup or at other sporting events.

Restored Hearing has developed and provides a low frequency therapy for people who are suffering from temporary tinnitus.



Rhona Togher, Eimear O'Carroll & Anthony Carolan, co-founders, Restored Hearing

Temporary tinnitus, or 'ringing in the ears' is caused by exposure to loud environments, for example listening to the noise of the Vuvuzela horn at sporting or other events, loud music at concerts or operating loud machinery. In such noisy environments damage can be done to the sound receptor cells in the cochlea.

The cochlea is that part of the ear which converts wave-vibrations into electric signals before sending these signals onto the brain. When these receptor cells, or tiny hairs, get bent or damaged during exposure to the loud noises, signals continue to be sent to the brain even after the exposure to the noise has ceased. This results in a continued perception of a noise that isn't there.

To alleviate this problem and to assist sufferers, Restored Hearing offers a unique online and tailored, minute-long therapy sessions for individuals who want to clear their ears of the 'ringing' sensation and regain 'buzz free' hearing. The therapy is based on sound and wave theory, using a low hum to physically stimulate the cochlear hairs back into their original upright position.

The therapy sessions, which have a 99% success rate, can be purchased singly by SMS payment or in batches of ten using a credit card. Restored Hearing also provides a subscription payment that provides monthly, quarterly or annual use of the sound therapy.

Restored Hearing was established in May 2009 by Rhona Togher, Eimear O'Carroll and Anthony Carolan and was formally launched in August 2009. Since then the company has received international interest and sales in UK/Ireland, Europe, North America and Australia.





The company, which originated in Co. Sligo, has previously been supported by the Sligo County Enterprise Board and the Business Innovation Centre, Sligo IT.

[www.restoredhearing.ie](http://www.restoredhearing.ie)

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## Innovation Dublin 2010

In 2009 the Innovation Dublin festival was launched to promote innovation and creativity in the city of Dublin.

During Innovation Dublin 2009, a total of 465 events, 35 in UCD alone, took place across Dublin over a 7-day period. Over 40,000 visitors attended these events.



Following the huge success and interest of the inaugural festival, Dublin City Council has announced that the 2010 festival will take place from 10<sup>th</sup> to 21<sup>st</sup> November.

[www.innovationdublin.ie](http://www.innovationdublin.ie)

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## NovaUCD and Social Media

### **Social Media Tools**

NovaUCD is now on Twitter. If you would like to follow NovaUCD visit [www.twitter.com/novaucd](http://www.twitter.com/novaucd).

NovaUCD has also established a LinkedIn Group. The purpose of the NovaUCD LinkedIn Group is to connect members of the NovaUCD community which includes entrepreneurs, innovators, UCD staff and researchers, the NovaUCD network of professional contacts, along with any individual who is based or has

been based at NovaUCD or is otherwise linked with NovaUCD or who would like to become involved with NovaUCD.

If you wish to become a member of this group please use the URL below or visit the LinkedIn website, [www.linkedin.com](http://www.linkedin.com), and search for 'NovaUCD' under 'Groups'.

<http://www.linkedin.com/e/gis/149865>

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