



NovaUCD Newsletter



The Innovation and Technology Transfer Centre

March 2008

Dear Colleagues and Friends

Welcome to the first issue of the NovaUCD Newsletter for 2008.

Fifty inventions were disclosed by UCD researchers to NovaUCD during 2007. This high level of disclosure is indicative of a continuing increase in the level of potential intellectual property being generated by UCD researchers. In 2007 nine priority, nine PCT and eight national/regional patent applications were filed by UCD across all areas of research. In this newsletter we highlight examples of UCD patents filed during the last year.

In the last few months, Broadcast Learning, Neosera Systems and Visor have graduated from NovaUCD. A total of nine companies have now graduated and moved to new premises. This 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's thirteenth Campus Company Development Programme (CCDP) will commence shortly and a **limited number of places are still available**. The aim of the CCDP, which is supported by Enterprise Ireland, is to assist academic entrepreneurs in the establishment and development of new business ventures to commercialise the output of their research.

NovaUCD in association with UCD's Michael Smurfit School of Business has commenced the delivery of two accredited modules in the area of Innovation and Knowledge Transfer as part of UCD's Structured PhD Programme.

The tenth "Entrepreneurs Live!" seminar series which is supported by the Dún Laoghaire Rathdown County Enterprise Board has now been completed. To date 58 entrepreneurs have contributed to these seminars which have continued to attract a large audience and to stimulate a lively debate on issues relating to new venture formation. The series will run again in the Autumn.

In this issue we also report on recent developments for Celtic Catalysts, ChangingWorlds and gsmExchange.com, the presentation of two Enterprise Ireland Commercialisation Awards to UCD researchers and other news of interest.

I would welcome any comments or feedback on this issue or any articles for inclusion in future issues. Please contact Micéal Whelan on t: 01-716 3712 or e: miceal.whelan@ucd.ie.

Dr Pat Frain, Director

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UCD Innovation Strategy: Foundation Building (2008-2012)

Professor Mark Keane, UCD's Vice-President for Innovation is currently in the process of drafting UCD's Innovation Strategy: Foundation Building (2008-2012). He has already met with all College Executives, Principals and Vice-Principals for Research and Innovation to discuss ideas for this strategy and is now seeking input from the wider UCD community.



Professor Mark Keane

Guiding goals for this innovation strategy include growing UCD's innovation culture; meeting the 'real' expectations of the Government's Strategy for Science, Technology and Innovation; securing future research funding; supporting the varied career paths for post-graduate students and post-doctoral researchers and positioning UCD for future external income.

Over the coming years, the actions defined in this Strategy will be designed to build an innovation foundation for UCD which will be reviewed in 2012.

Any individual who wishes to discuss the Strategy face-to-face should contact caroline.murphy@ucd.ie to arrange a convenient date.

The plan is to collate all feedback received by April 2008 and to complete the document in Q2 2008. Some initial ideas of what this Innovation Strategy might contain along with a set of Powerpoint slides can be downloaded from the UCD intranet, <http://intranet.ucd.ie/vpinnovation/staff/> using your UCD Connect username and password.

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 2007 Invention Disclosures

Fifty invention disclosures were disclosed by UCD researchers to NovaUCD during 2007. This figure which is an increase of 35% on the 2006 number is indicative of a continuing increase in the level of potential intellectual property being generated across the University from its research programmes.



UCD 2007 Patent Filings

In 2007 UCD filed a total of 26 patent applications. This figure included 9 priority patent applications across all areas of life sciences, engineering and information and communication technology, 9 PCT and 8 national/regional patent applications.

UCD patents filed during 2007 include:

2-dimensional phase locked loop, Dr Neil Hurley, UCD School of Computer Science and Informatics. A PCT patent application.

A garment for monitoring posture, Dr Brian Caulfield, UCD School of Physiotherapy and Performance Science. A PCT patent application.

A meta search engine, Professor Barry Smyth, UCD School of Computer Science and Informatics. Irish and US national patent applications.

A method and process for power analysis in digital circuits, Dr Damian Dalton, UCD School of Computer Science and Informatics. A European and US national patent



applications.

A method for producing a functionally gradient component, Dr David Browne, UCD School of Electrical, Electronic and Mechanical Engineering. European, US, China, Japan and South Korea national patent applications.

A Semliki Forest replication competent vector with enhanced biosafety, Professor Brian Sheahan, UCD School of Agriculture, Food Science and Veterinary Medicine and TCD colleagues. A PCT patent application.

A simulation method and tool, Dr Neil Hurley, UCD School of Computer Science and Informatics. A European and US national patent applications.

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

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

An encoding scheme and a decoding scheme using a series of LDPC codes based on finite inversive spaces, Dr Mark Flanagan, UCD School of Electrical, Electronic and Mechanical Engineering and Dr Marcus Greferath, UCD School of Mathematical Science. An Irish priority patent application.

Cluster aggregation point for load balancing in a sensor network, Gregory O'Hare and colleagues, UCD School of Computer Science and Informatics. An Irish priority patent application.

Compositions and methods for modulating an immune response, Professor Paul Moynagh, formerly UCD School of Biomolecular and Biomedical Science, now at NUI Maynooth and TCD colleagues. A PCT patent application.

Compositions for treating prion disease, Dr Hilary McMahon, UCD School of Biomolecular and Biomedical Science. A PCT patent application.

Data processing system and method, Professor Barry Smyth, UCD School of Computer Science and Informatics. A US national patent application.

FIBP as a target for manipulating ovarian follicle development, Professor Alex Evans, UCD School

of Agriculture, Food Science and Veterinary Medicine. An Irish priority patent application.

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

Methods and compositions for diagnosing progression of melanoma using the FABP5 marker, Professor Liam Gallagher and colleagues, UCD School of Biomolecular and Biomedical Science. European and US national patent applications.

Method and apparatus for evoking a response from a subject, Dr Edmund Lalor and Professor Richard Reilly, UCD School of Electrical, Electronic and Mechanical Engineering with NUI Maynooth. A PCT patent application.

Methods and compositions for identifying and using p21 regulated proteins, Professor Liam Gallagher and colleagues, UCD School of Biomolecular and Biomedical Science. A PCT patent application.

Method and apparatus for monitoring sleep, Professor Conor Heneghan, UCD School of Electrical, Electronic and Mechanical Engineering. An Irish priority patent application.

Microwave-expanded food products, Professor Dolores O'Riordan and colleagues, UCD School of Agriculture, Food Science and Veterinary Medicine. An Irish priority patent application.

Novel bacterial strains, Dr Fiona Doohan, UCD School of Biology and Environmental Science. An Irish priority patent application.

Novel genes as a target for manipulating ovarian follicle development, Professor Alex Evans, UCD School of Agriculture, Food Science and Veterinary Medicine. An Irish priority patent application.

Nuclear image analysis algorithms, Professor Liam Gallagher and colleagues, UCD School of Biomolecular and Biomedical Science. An Irish priority patent application.

PAPR reduction of OFDM signals. Professor Tom Brazil, UCD School of Electrical, Electronic and Mechanical Engineering. A US national patent application.



Surface plasmon resonance measurements, Dr Dominic Zerulla, UCD School of Physics. A PCT patent application.

Contact: For further information contact Dr Ciaran O'Beirne, Manager, Technology Transfer, t: 01-716 3713, e: ciaran.obeirne@ucd.ie.

Companies at NovaUCD

In the last few months, Broadcast Learning, Neosera Systems and Visor have graduated from NovaUCD. A total of nine companies have now graduated and moved to new premises.

This 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.

Evolution is the latest company to locate at NovaUCD. Evolution, whose promoter is Alistair Thacker is a software development house specialising in bespoke E-work/workflow and HR systems. www.evolution.ie.

A total of 22 knowledge-intensive companies occupying 86% of the available space are currently located in NovaUCD.

NovaUCD welcomes proposals from the promoters of high-quality, knowledge-intensive ventures who are interested in locating in NovaUCD.

Contact: For further information contact Ciara Leonard, Project Manager, Enterprise Development, tel: 01-716 3714, email: ciara.leonard@ucd.ie.

NovaUCD 2008 Campus Company Development Programme

The 13th NovaUCD Campus Company Development Programme (CCDP) will commence in April and a limited number of places are still available.

The aim of the NovaUCD CCDP, which is supported by Enterprise Ireland, is to assist academic entrepreneurs in the establishment and development of new business ventures to commercialise the output of their research.

The NovaUCD CCDP is a nine-month, part-time enterprise support initiative designed to suit

the timetable of busy researchers and academics. It comprises a mix of practical training and consultancy support including 12 half-day workshops, one-to-one advice and consultancy meetings, and a series of networking events.

On completion of the CCDP participants will have developed a business plan and understand the strategy required for its implementation.

The CCDP culminates in an awards evening held each November during which each project which has completed the Programme is presented with a Certificate and an external judging panel declares an overall winner.

AP EnvEcon a provider of decision-support systems, solutions and specialist advice to the public and private sector for the management of environmental change was the overall winner of the NovaUCD 2007 CCDP.



AP EnvEcon co-founders, Professor Peter Clinch and Dr Andrew Kelly

AP EnvEcon is a spin-out from the Environmental Economics Unit of UCD's School of Geography, Planning and Environmental Policy and was co-founded by Professor Peter Clinch and Dr Andrew Kelly.

Contact: For further information contact Ciara Leonard, Project Manager, Enterprise Development, tel: 01-716 3714, email: ciara.leonard@ucd.ie.

NovaUCD CPD Initiatives

UCD Graduate Studies – Transferable Skills for Graduate Research Students

NovaUCD in association with the UCD Michael Smurfit School of Business has commenced running 2 modules in the area of Innovation and Knowledge Transfer.



Module 1: Introduction to Entrepreneurship (2.5 credits)

This module is focusing on the entrepreneurial process in the journey from identification of the innovative idea through to the launch of a successful business.

Further details on module 1 are available via: <http://www.ucd.ie/graduatestudies/transferableskills/Innovation%20and%20Knowledge%20Transfer%20I.pdf>

Module 2: Transferring Technology from Research to the Knowledge Economy (2.5 credits)

This module is covering the management process required to transform an innovative technology into a commercial opportunity or business proposition. It is detailing the stages and processes involved in the management and commercialisation of intellectual property (IP).

The potential routes to commercialisation and the key business feasibility questions are being considered with respect to technical and market assessment, negotiations with potential licensees, business plans and preparation for a company spin-out.

Further details on module 2 are available via: <http://www.ucd.ie/graduatestudies/transferableskills/Innovation%20and%20Knowledge%20Transfer%20II.pdf>

Contact For further information contact Caroline Gill, Project Manager, Continuing Professional Development, tel: 01-716 3715, email: caroline.gill@ucd.ie.

"Entrepreneurs Live!" Seminar Series

The tenth "Entrepreneurs Live!" seminar series, run by NovaUCD in association with Dún Laoghaire-Rathdown County Enterprise Board and which ran over four weeks has now been completed.

This series focused on funding raising a start-up and each of the guest speakers highlighted the different ways in which they have raised finance.

This seminar series was launched by Joe Drumgoole, CEO and founder of Putplace.com, which provides lifetime storage of home users' valuable digital content.



Joe Drumgoole (centre) with UCD students Eimear O'Herlihy and Enda Gallery

Joe Drumgoole is a member of the 'Paddy's Valley' group of Irish business and technology entrepreneurs who formed their own delegation and have already visited Silicon Valley to create closer bonds with companies and people, including venture capitalists located in the Valley.

The three other guest speakers in this current series were John O'Shea, zamano; Jamie Jenkinson, Cush'n Shade and Fabrizio Memon, Delta Index.

zamano, is a leading provider of mobile services which has raised €6 million via a listing on the London's Alternative Investment Market. Cush'n Shade which has developed the patented and award winning Cush'n Shade sunbathing accessory successfully raised £100,000 on the hit BBC TV programme 'The Dragons' Den' last November. Delta Index, the financial spread betting firm has raised over €4 million from private investors.

A total of 58 well known entrepreneurs, have now participated on this very popular seminar series. The aim of the "Entrepreneurs Live!" seminar series is to promote a spirit of entrepreneurship among the academic, research and student population at UCD.

The 11th series will commence in the Autumn and further details will be available in due course.

Contact For further information contact Caroline Gill, Project Manager, Continuing Professional Development, tel: 01-716 3715, email: caroline.gill@ucd.ie.

Companies in the News

Celtic Catalysts

Celtic Catalysts, the UCD School of Chemistry and Chemical Biology spin-out was declared the international winner of the "Rising Star Award" at the BioIndustry Association (Scotland) Thistle Bioscience Forum 2008 which took place in early February in Edinburgh.



Kevin Dalton and Dr Brian Kelly, Celtic Catalysts

Celtic Catalysts, a leading supplier of chiral products and technology to the Fine Chemical, Pharmaceutical and Biotech industries, was among the four Irish biotech companies, all members of IBEC's Irish BioIndustry Association (IBIA), who took part in the international "Rising Stars Showcase" competition along with 8 other companies from Scotland and Israel.

Each of the participants pitched their companies and development strategies to a panel of experts and an invited audience before Celtic Catalysts was announced the overall winner after a confident and polished pitch by Kevin Dalton, Sales Director.

Celtic Catalysts which was co-founded by Professor Declan Gilheany and Dr Brian Kelly focuses on the area of chiral synthesis. It has developed a comprehensive portfolio of intellectual property and carved out a uniquely strong niche for itself in the specialised area of P-chiral technology. This technology can be used in the production of a range of drugs which are particularly prevalent in anti-viral and anti-cancer therapeutic areas.

Earlier this year Dr Brian Kelly was appointed CEO of Celtic Catalysts. He replaces the former CEO Brian Elliott who has been appointed Chairman of the Board of Directors. Dr Kelly graduated from University College Dublin in 2000 with a PhD in chiral chemistry and he has been Celtic Catalysts' Director of Business Development since then.

ChangingWorlds

ChangingWorlds, the UCD School of Computer Science and Informatics spin-out signed a seven figure deal with leading mobile operator Vodacom during the An Taoiseach led Trade Mission to South Africa in February. Vodacom, one of Vodafone Global's most important operations, is the number one mobile operator in South Africa with over 23 million customers.



Mr Vincent Ryan, VP of International Sales & Marketing, ChangingWorlds; Mr Peter Matlare, Chief Strategy Officer, Vodacom; Minister Micheál Martin TD, Minister Enterprise, Trade and Employment; Mr Ian Finnegan, EMEA Sales Director, ChangingWorlds and Mr Frank Ryan, CEO, Enterprise Ireland.

Vodacom will deploy ChangingWorlds' entire ClixSmart Intelligent Portal Platform over its mobile portal Vodafone Live! This will incorporate ChangingWorlds' suite of intelligent content discovery and personalization solutions for mobile data as well as sophisticated portal management. Based on advanced artificial intelligence technology, the ClixSmart™ Platform will significantly enhance mobile content relevance and will optimise the user experience of Vodafone Live!, resulting in greater ARPU (Average Revenue Per User) for Vodacom.

ChangingWorlds, the global expert in intelligent content discovery and subscriber intelligence for the Mobile Internet was co-founded by Professor Barry Smyth and Paul Cotter in 1999 to commercialise their research into personalisation and artificial intelligence technologies at UCD's Smart Media Institute.

Based on advanced artificial intelligence technology, the company's ClixSmart™ Intelligent Portal platform offers a personalised content discovery solution that enhances content relevance and optimises the user experience of the wireless internet, resulting in greater ARPU for the network operator.



ChangingWorlds has rolled out the ClixSmart™ Intelligent Mobile Portal platform to 45 mobile network operators worldwide, including Vodafone Global Group, O₂ Ireland and Germany, TeliaSonera, Celcom Malaysia and Hong Kong CSL.

The company now employs over 120 highly qualified staff including staff based in its Advanced Research Centre based at NovaUCD. The company is headquarters in Dublin with offices in the Far East and USA.

gsmExchange.com

gsmExchange.com the web-based trading company located at NovaUCD has been commissioned by Vodafone to develop a business-to-business platform that enhances the purchase and distribution of their mobile handsets worldwide.



Essam Bishara, gsmExchange.com

The internet-based platform is called the 'Vodafone Spot Market Trading Platform'. It operates very much like a 'Commodity Stock Exchange', where offers and requests are matched up, and buyer and seller can agree on the terms, and conclude their transactions, quickly and efficiently online and within hours.

The platform is already servicing selected Vodafone operating companies and the plan is to rollout the service during 2008 across the Vodafone family.

gsmExchange.com is the brain child of Managing Director Essam Bishara, who in the late 1990s, recognised the need to link industry players, e.g. network operators, distributors, retail chains to form a 'stock exchange' for mobile handsets. Today, gsmExchange.com has achieved industry leadership with over 20,000 members worldwide and approximately 500,000 handsets per day being placed on the site.

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Commercialisation Award Winners

[Professor Ciaran Regan](#)

Professor Ciaran Regan has been presented with the inaugural Enterprise Ireland Lifescience and Food Commercialisation Award.

Professor Regan, winner of the NovaUCD 2007 Innovation Award is Professor of Neuropharmacology at UCD's School of Biomolecular and Biomedical Science, and co-ordinator of the Applied Neurotherapeutics Research Group, is a named inventor on 6 UCD patents.



Mr Micheal Ahern TD Minister for Innovation Policy Professor Ciaran Regan and Dr Paul Roben Enterprise Ireland

In 2004, he co-founded a successful UCD spin-out company, Berand Neuropharmacology. Berand is an independent pre-clinical drug research company that offers a full spectrum of in vivo neuropharmacology and pre-clinical neurobiology services, resources and expertise. Berand also applies its technical platforms and expertise to in-house drug discovery programs directed to developing neurotherapeutic strategies for the treatment of brain illness.

Berand is located in NovaUCD with research facilities based in the UCD Conway Institute.

Professor Regan's outstanding achievements also include securing €10 million in funding from Wyeth Discovery and Science Foundation Ireland to establish the Applied Neurotherapeutics Research Group. The group, which aims to identify novel neurotherapeutic targets, has already



generated 8 invention disclosures. This link was of critical importance in Wyeth's later decision to establish a €13 million biopharmaceutical drug discovery research facility at UCD.

Professor Gerry Byrne & Eamonn Ahearne

Professor Gerry Byrne and Eamonn Ahearne, UCD School of Electrical, Electronic and Mechanical Engineering have been presented with a Commercialisation Award by Enterprise Ireland for their innovative advancement of water pumping technology. Their research into the development of a proprietary process technology at the UCD Advanced Manufacturing Science centre is now licensed to the ABS Group in Wexford. The research, which was funded under Enterprise Ireland's commercialisation scheme, came up with a process for improving the performance of ABS pumping systems.

Other News

NovaUCD Open Day

NovaUCD held an Open Day at the end of January as part of the Dún Laoghaire-Rathdown Enterprise Week.

The aim of the NovaUCD open day, which was very successful was to give budding high-tech entrepreneurs a chance to drop-in to visit the NovaUCD facility alongside and to discover the unique services and facilities available to entrepreneurs.

The NovaUCD open day consisted of a series of talks, facility tours along with opportunities to meet with and talk to members of NovaUCD's successful community of entrepreneurs and to experience technology demonstrations.

The Dún Laoghaire-Rathdown Enterprise Week featured a series of county-wide activities designed to support the ambitions of aspiring entrepreneurs and small business owners.