

## EI Business Partners (BP) Programme and DERI NUI Galway make a match ...

What is the EI BP Programme: "The Business Partners Programme gives participating entrepreneurs first choice from Enterprise Ireland's portfolio of potential start-up companies springing from University Intellectual Property." Gerard Lande Enterprise Ireland.

## The National Stem Cell Manufacturing Facility in NUI Galway

### Overview

The National Stem Cell Manufacturing Facility (NSCMF) is a purpose built clean room facility for the production of cellular and gene therapy agents for clinical use. The only one of its kind in Ireland and with very few similar facilities in Europe, this facility is a resource which is available to researchers, both in academia and industry. Operating to Good Manufacturing Practice (GMP) standard the facility is managed by and is a key component of the Regenerative Medicine Institute (REMEDi) at NUI Galway, an Institute supported by Science Foundation Ireland and industry under the Centre for Science Engineering and Technology (CSET) programme. Galway has made significant advances in creating the infrastructure required to support human clinical trials activity through ongoing translational research programmes at NUI Galway, through the establishment of the Clinical Research Facility at the University College Galway Hospital with whom the NSCMF collaborates and through active engagement and collaboration with industry.

### Current status

The NSCMF is currently in the final stages of the process of obtaining an Irish Medicines Board (IMB) licence for the production of human cellular therapeutic medicinal products, enabling licensed processing/manufacturing activity for clinical trials to begin in 2010, with the overall objective of being compliant with EMEA and FDA guidelines.

The TTO have successfully matched Mr. Martin Cooke with a DERI, NUI Galway technology called SeDici, and are excited about the outcome this potential collaboration will bring. Martin is currently drafting a business plan as the deliverable from the EI Business Partner Program "SeDiCi" is our new online unique authentication service that allows authenticating users in such a way that a password never leaves the user's browser and the verifier is not able to impersonate the user. "Slawek Grzonkowski (SeDici Inventor) "I'm very impressed with the technologies presented by TTO and believe that SeDici will enter the commercial stage" Martin

### Future Clinical Trials

Upon attainment of its GMP manufacturing licence in Spring 2010, NUI Galway is planning clinical trials to assess the therapeutic efficacy of adult stem cell transplantation in the following indications with unmet medical need:

- Acute Myocardial Infarction
- Critical Limb Ischemia
- Osteoarthritis
- Inflammatory Bowel Disease

### Key features of the facility

- Working floorspace of approximately 250M<sup>2</sup>
- Equipped production suites
- 3 processing rooms for prep, downstream and filling
- Utility systems in place.
- Includes CO2 and liquid nitrogen & air handling systems
- Staffed by dedicated highly skilled personnel
- Access to Qualified Persons

### Services of the facility

- Bio-process Development and Optimisation
- Beta-testing of automated cell bioreactors
- GMP compliant Stem Cell production
- Adult stem cell culture expertise
- Scale-up to cGMP compliance
- In-process quality control
- Stem Cell Clinical Trial Consultancy

### Business Sought:

If you are a Clinical/Academic Investigator seeking to translate pre-clinical studies to clinical trial, a potential business customer of this facility or an interested investor please contact the NSCMF directly or NUI Galway Technology Transfer Office:

Cooke (Entrepreneur and EI Business Partner) "TTO are very happy with the experienced management team Martin is pulling together to evaluate the commercial prospects of SeDici, this is One to Watch" John McGuire – Commercialisation Executive, TTO NUI Galway



DERI, NUI Galway Inventors and TTO meet with Tony Buzan (<http://www.buzanworld.com/>) TTO Commercialisation Executive, John McGuire and Krystian Samp (DERI Researcher and ATOM Inventor) had the opportunity to meet Tony Buzan and present him the ATOM technology. This was a great experience for the Inventor Krystian Samp. "I'm very impressed with ATOM and would like to know more about it's capabilities of the future" Tony Buzan (Author and Educational Consultant)



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## Ignite TTO Business Supports

Ignite TTO offers many supports to our Industry Partners and to give you a flavour of how we can help you please read on ...

- Provide a link to key technology expertise in NUI Galway, the team will link you with the best person to assist your technical query whatever it may be
- Technology showcasing, the team regularly showcase NUI Galway new technologies to interested 3rd parties. The aim here is twofold, pitching protected technologies to gain serious business feedback or to look for investment opportunities. The TTO are continuously looking to partner with industry to build on their network of business partners and experts in all sectors. If you are

## KNOW HOW and how to protect it.

Know-how, an important form of intellectual property, is that secret or proprietary information which is of commercial value because of its secrecy. Typically, know-how includes technical and non-technical information related to production methods or techniques or which otherwise assists or enables the use or exploitation of intellectual property rights. As such, know-how is often coupled with patent rights for licensing purposes.

Unlike other forms of intellectual property, know-how is protected under the laws governing confidential information and no registration is required. Its protection and indeed its value last for as long as the know-how is question is maintained in confidence. To help maintain this confidentiality, appropriate policies and procedures should be adopted and consistently implemented for the use, handling, storage and disclosure of this confidential information. For example, this includes:

Ensuring that know-how and other confidential information are marked as confidential, dated and recorded (internally) in reasonable detail;

interested in partaking in one of our showcases please contact Ignite TTO.

- Industry collaborations, building relationships, partnerships and trust between industry and academia is of utmost importance to NUI Galway TTO. Examples of this outreach activity can be seen in the TTO involvement in licensing NUI Galway technologies to 3rd parties, high level of EI Innovation Partnership applications submitted for research funding, EI Innovation Voucher programme support and in general the vast amount of engagements taking place with Industry within the team. If you are interested in learning more about these opportunities contact the Ignite TTO and we will be happy to assist you.
- Entrepreneurial Programmes the programme Start Up Solution is designed to equip participants with the skill set to deliver a technology to the market successfully

Ensuring that know-how and other confidential information, data and files are stored in a secure location to which access is limited and controlled;

Ensuring that all contracts of employment and contracts with service providers and other third parties clearly set out legally binding obligations of confidentiality;

Ensuring that all relevant policies and procedures are communicated to all personnel;

Ensuring that appropriate non-disclosure agreements or confidentiality agreements are entered into before disclosing know-how or other confidential information to a third party;

Ensuring that know-how and other confidential information is disclosed only to those persons who require access on a need-to-know basis; and

Monitoring compliance with these obligations of confidentiality and taking such enforcement measures as may be reasonably necessary, having regard to all of the circumstances.

TSL are consultants, advisors and negotiators in the field of IP and specialise in a range of intellectual property matters. For more information, see [www.tsl.ie](http://www.tsl.ie) or contact us at 091 790330. November 2009.

## The Services Offered by the TTO:

Manage University IP – protection commercialization and enterprise development.

Encourage the establishment of spin-off companies and support a campus company programme (CCP) and start up programme (SUS).

Establish Partnerships with Industry and facilitate collaborative research projects.

Manage the Campus Business Innovation Centre and Bio-incubation facility (24 companies and 6 hot desks).

Deliver Policy, processes, guidelines and skills development for researchers and stakeholders.

Build on new business partnerships of investors, business angels and management for NUI Galway.



## Directors Words

### Enterprise Creation Through Technology Transfer

Over 97% of businesses in Ireland are SMEs. They are a vital part of our economy, accounting for more than half the private sector jobs in Ireland. Given the size of the sector, it is clear that the success of the SME sector is a vital determinant of the wellbeing of the whole economy. The prime goal of Technology Transfer in these challenging times is job creation through the formation of spin out companies, thus increasing the number of SMEs. We are also active in licencing technologies to existing enterprises.

To date in 2009 the TTO has facilitated the formation of six start up companies and three more are at the negotiation phase.

### QperCom Ltd. an NUI Galway Start up sign the deal ...

The Qpercom solution: All leading medical schools in the world now use Objective Structured Clinical Examinations (OSCE's) in which simulated patients ensure that students are presented with standard and consistent problems to solve. Until now, most of the assessment forms used by the examiners were paper based with laborious administrative workload once the assessment was over. Data retrieval and storage, reproducibility of results for each station and consistency between examiners was extremely difficult to analyse. This is no longer the case by using the Qpercom automated process.

There are around 140 medical schools with over one million students. Qpercom has already secured as customers the Medical School at Erasmus University in Rotterdam, and NUI Galway's School of Medicine and its School of Nursing and

# TouchPAPER

Newsletter of IGNITE Technology Transfer Office, NUI Galway.

Our message is: "we are open for business and are very flexible in getting deals done".

The TTO has a portfolio of technologies that are investment ready. We are seeking business partners to commercialise these technologies. The office is staffed by a team with wide technical and business expertise who are experienced in commercialisation. Currently there are 24 campus companies and we have facilities available to house further enterprises. Bio-incubation, laboratory and office accommodation are available. We also provide support for entrepreneurs in business start up mode. If you have a technology that you wish to exploit, we can discuss spin ins or bundling your technology with NUI Galway technology or indeed bundling with any of the Irish Universities' technologies. Currently we are commercialising two technologies where our intellectual property is bundled with Trinity College Dublin's IP and are working with the University of Limerick to jointly

exploit a new medical device technology. In a small country like Ireland, I believe that collaboration will be a key element of success.

These may be financially difficult times but finance is out there. For example a new €26 million fund, managed by Kernal Capital, for investing in start-up and early stage companies has been announced. An all-Island Halo Business Angels Network has launched a €6 million fund for early stage entrepreneurs. The European Investment Bank (EIB) has extended three new generation EIB loans for small and medium sized enterprises (SMEs) in Ireland for a total of €300 million.

We welcome contact from individuals wishing to develop their ideas; SMEs that need R&D or technical support; or investors looking to exploit technology. Please come and talk with us.

John Kavanagh is the Director of the Technology Transfer Office at NUI Galway and can be contacted at [john.kavanagh@nuigalway.ie](mailto:john.kavanagh@nuigalway.ie)

Midwifery. University of Maastricht (NL) and University of Leuven (B) consider joining this project. Online assessment of critical skills also has potential in other markets where instantaneous results from forms or check-lists would be of benefit - including industrial education, sports education, agriculture, health and safety, dentistry, veterinary medicine, Human Resource online Appraisal Forms police force and fire brigade services. In fact it could replace all kinds of paper assessment procedures currently in use.

Dr John Kavanagh Director of Ignite TTO says "Qpercom has been established to turn a post-graduate software engineering project supported by NUI Galway into a commercial venture with customers across the globe; this type of innovation is what makes the current entrepreneurial environment so exciting for TTO's"

Dr Thomas Kropmans Director of Qpercom states, "not only does the system improve quality assurance, the financial benefits are compelling, our customers

are realising savings of up to 70 per cent in administrative costs, not to mention savings on paper and printing. Our solution would be perfect in stressful situations on-the-job where consistency of skills is highly required."

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(L-R) Dr John Kavanagh Director Ignite TTO, Dr Thomas Kropmans Director Qpercom Ltd., David Cunningham Director Qpercom Ltd. Pictured at the signing of the commercial agreement between NUI Galway and Qpercom LTD

## Start-Ups in 3rd level Innovation Centres Really Do Work

### A Company profile : Zerusa Limited

**Location:** NUI Galway Business Innovation Centre  
**Name:** Zerusa Limited www.zerusa.com  
**Sector:** Less invasive medical devices

### Why does the Company Stand Out?

Our strength lies in developing close partnerships with our physician inventors, entrepreneurs or partner companies to identify and exploit an unmet need in the market. We work the front lines with the physicians in coronary cath labs, peripheral radiology labs and neuroradiology labs to understand physician needs, challenges and opportunities. We have the capability to realize those product improvements or new product ideas that larger medical device companies overlook. Yet, we are willing to work with those same companies to market our innovative technologies.

### Origins of the Company:

Zerusa Ltd is a medical device company formed in 2003 by a team of medical device professionals with a broad range of experience and an innovative approach to product development. We understand the challenge physicians face when trying to generate interest in a unique product idea. Zerusa's role is to facilitate the product development process and offer our physician partners a way to bring their concepts to reality. Zerusa has a proven track record for taking product concepts through development, and regulatory approval, to global commercialization. We commit to you that we will quickly assess your product ideas from an intellectual property, market potential, and product development perspective.

## Ignite TTO Supports JCI Young Entrepreneur Awards in Galway

An eventful night dedicated to local entrepreneurs was hosted by the Junior Chamber International when Galway's Young Entrepreneur Awards 2009 were announced. The awards night (after 1st round selection and site visit by the judges had taken place) involved an interview for each of the 8 finalist's after which the judges had to make the final decision on this year's winners. The Galway Bay Hotel in Salthill was the venue for the gala evening which took place on November 13.

The winner Johnny Donnelly from Arcana an events and entertainment management company was presented with

the Galway Young Entrepreneur perpetual trophy, in addition to a substantial package of consultancy and professional services from local businesses, such as Galway Advertiser, DHKN Corporate Finance, Snap Printing, RDJ Glynn Solicitors, Ignite TTO NUI Galway, BaseDesign, Blueprint Coaching & Training, M6R Public Relations, and Roche Accounting.

President of JCI Galway, Brenda Gannon, says "the GYE competition received an outstanding caliber of entrants this year. We are very grateful to those who got involved in this difficult yet enjoyable judging process.

Fiona Neary from Ignite TTO says "The night was a great success and Ignite TTO was delighted to be involved in such an event where enthusiasm, drive, commitment and perseverance are an everyday occurrence for these hard working entrepreneurs"



### Regional Impact of the Company- e.g. Employment.

While the core team remains below 5 full-time professionals, Zerusa out-sources all its manufacturing in Ireland as well as employing industry professionals on a consultancy basis as needed.

### How Company is Progressing Financially and Examples of Funding Received.

Zerusa has raised finance from a number of private and public sources. Have also worked with Ignite TTO on various programmes over the years

### Future Plans

- Zerusa recently received both the CE mark and FDA clearance for its innovative Next Generation Guardian II hemostasis valve. The product has been very well-received clinically.
- Work with Zerusa's international distribution partners to succeed in a competitive market-place.
- Develop further innovative medical devices in the same space as and when finance allows.

# Profile

## A Date For Your Diary

Thursday December 3rd 2009

### "Engaging with Higher Education - Employer Perspectives" Symposium

Sharing ideas, knowledge and experiences is a well-proven method of learning and communicating information. Awareness of various Employer-Academia engagements can be of enormous benefit and invaluable to all. Understanding and appreciating this relationship between Employer and Higher Education Institutions (HEI) is of immense value to any organisation.

It is widely recognised that different types of partnership engagements take place between the HEI and Industry

bringing with them their own benefits, idiosyncrasies and complexities.



The REAP (Roadmap for Employment - Academic Partnerships) project team in the TTO has organised a symposium titled "Engaging with Higher Education - Employer Perspectives" for Thursday 3rd December 2009 in NUI Galway, in conjunction with 7 other partnering institutes. The aim of this symposium is to explore and better understand this collaborative partnership. The speakers are from Industry/Enterprises and the aim of the symposium is to examine the

challenges and opportunities that are faced when working with a HEI - from an employer perspective. A cross section of engagement examples will be presented to stimulate interesting discussions and dialogue between all parties.

The opening address will be conducted by Ms. Jane Williams, CEO, Forfás and a number of key speakers from Industry will follow - outlining their experiences to date. An opportunity will be given for all the attendees to voice their individual experiences.

Further information on the symposium can be found at the following link <http://www.nuigalway.ie/tto/events.html>

# Diary

Time	Event	Speaker
10.15	Registration, Arás Moyola Foyer, NUI Galway	
10.45	Welcome	Prof Terry Smith, VP for Research, NUI Galway
11.00	Opening Address	Ms Jane Williams, CEO, Forfás, Dublin
11.30	How accessing research capabilities in HEIs can enhance Company Development	Mr Ivan Mooney, Engineering Manager, Brivant Ltd., Galway
11.50	Influencing Change and Course Development in a HEI	Mr Paul Comiskey, Intel Ireland, Dublin
12.10	Recap and Discussion	Mr John P. Murphy, REAP Project Coordinator, CIT
12.30	Lunch in Friars, Cairnes Building, NUI Galway	
13.30	Corporate Partnerships and Networking	Ms Natasha Kinsella, CEO, Irish Hospitality Institute
13.50	Incubation Company and development within a HEI	Mr John Mee, CEO, SolanoTech Ltd., Athlone
14.10	Bridging the Gap between SMEs and a HEI	Dr Sean Mythen, Former CEO, Wexford Enterprise Board
14.30	Recap and Close	Dr Terry Maguire, REAP Team Member, ITTD

## An NUI Galway Start Up Making Good Grounds

A spin-out company from NUI Galway, Analyze IQ Limited, is providing solutions for the more accurate analysis of complex mixtures such as illegal drugs, pharmaceuticals and contaminants.

With technology licensed from NUI Galway, Analyze IQ Limited offers an innovative software suite for the analysis of the composition of mixtures, based on molecular spectroscopy data. Molecular spectroscopic techniques can effectively 'fingerprint' materials. This is done by assessing the manner in which laser light is scattered by the molecular structure of the gas, liquid or solid being tested.

The company's products have applications in fields as diverse as manufacturing inspection, law enforcement, emergency services and the pharmaceutical industry.

Analyze IQ sells its software suite directly to end users and through partnerships with manufacturers of spectroscopy instruments. The company has recently signed a partnership deal with Florida-based Ocean Optics, which is now marketing and selling the Analyze IQ software suite. Ocean Optics is a diversified photonics technology firm and a global leader in optical sensing with locations in the US, Europe and Asia. Analyze IQ has further partnerships in the pipeline.

Analyze IQ Limited was established in 2008 as a spin-out company from NUI Galway. The company's technology is the result of a five-year research collaboration between analytical chemists with expertise in spectroscopic techniques and software engineers with expertise in data mining and machine learning. The research phase received substantial support from Enterprise Ireland.

The founders of the Analyze IQ include Dr Michael Madden, who led the

development of the technology within NUI Galway, while a lecturer in the College of Engineering and Informatics.

According to Dr Madden, CEO of Analyze IQ: "The software suite has been designed to address the need for accurate analysis of spectroscopic data from mixtures of materials. For a wide range of real-world applications, it is essential to be able to work with mixtures to quickly and accurately assess the composition of their main components. Taking law enforcement as an example, it is extremely valuable in a drug seizure to be able to assess the composition of the drugs and cutting agents, as it provides is useful intelligence that indicates from where in the 'supply chain' the drugs have come".



The fifth iteration of the Campus Commercialisation Programme (CCP) comes to a close on Wednesday 18th November 2009. A diverse range of participants from Bio Engineering, Civil Engineering, Environment Change Institute, DERI, IT, Cairnes School of Business are currently completing this 8 week course. Since CCP started, the participant profile has now widened to include academic lecturers, industry people and researchers from other campuses. Feedback from a current participant demonstrates the opportunity CCP represents... It's a fantastic course, the best I have done by a long shot... and I am very grateful for having had the opportunity to participate.

Ten Entrepreneurs are currently completing the Start Up Solution (SUS) programme which started in October 2009. SUS is broken into three Cycles with

Cycle I focusing on proving the business case. At this time, the participants are investigating their 'new innovative idea' from an evidence-based market position. The participants are building up their skill set and knowledge of their target customer base, of the market and of relevant

resources and networks to take them over their first commercial hurdle.

If you are interested in being notified about forthcoming events or would like to know more about CCP & SUS please email [Clodagh.barry@nuigalway.ie](mailto:Clodagh.barry@nuigalway.ie)



## TTO Commercial Connexions Sept

Cormac Kilty... The four pillars to success

## Oct

Donagh Kiernan.. A proven process for International Sales

## Nov

Chris Horn... Boxing above your weight

...Dr Chris Horn was the most recent guest speaker with the seminar 'Boxing Above your Weight', this seminar highlighted how Irish technology start-ups have to think globally. Chris Horn co-founded and became CEO of IONA Technologies in the early '90s which at one point was one of the largest top ten software companies by revenue in the world. He has also served as chair of various technology companies and Irish national policy groups, including UNICEF Ireland and the Irish Management Institute.

Currently, among other activities, he is President of Engineers Ireland, the professional body for Engineering in Ireland and a member of the Innovation Taskforce....



## NUI Galway at Enterprise Ireland "BIG IDEAS" Showcase

Enterprise Ireland's first "BIG IDEAS" Showcase was held at the Croke Park Conference Centre in Dublin on October 13th 2009. In addition to 21 start-up opportunities presented to a room full of potential investors, about 20 posters and a range of demonstrations were presented in the "Technology Tunnel" area of the showcase.

NUI Galway was represented in the form of a presentation by Tim McSweeney on the Safeguard Cutting Angioplasty technology, invented by Dr. Bruce Murphy while at NUI Galway. The technology is a 'flexi-cutting sheath' device, a new design to make blades on artery unblocking angioplasty balloons safer. Other NUI Galway technologies to be presented by poster and demonstration included "Silver Nanoparticles" a joint technology portfolio

with Trinity College Dublin, which featured on the RTÉ "Six-One" News that evening. This technology portfolio, invented by Dr. Margaret Brennan-Fournet and her team at NUI Galway's School of Physics in collaboration with Prof. John Kelly and his team at TCD's School of Chemistry, has applications in electronic engineering and life sciences. NUI Galway's Digital Enterprise Research Institute (DERI) was represented by several posters, promoting their embedded video manuals, 3-d wiki, and zero knowledge protocol encryption technologies. Recent NUI Galway start up companies Qpercom and AnalyzeIQ were also represented at the showcase.

The showcase was a sell-out, and was the largest collection of potential investors seen at one event this year. Investor sentiment at the showcase appeared upbeat, underlining the fact that many individuals have significant net wealth and are increasingly seeking a "smart" investment in technology start-ups.

