

# BIOTECH FOR BUSINESS

## “Collaboration is Key”

## Shannon ABC host third annual Open innovation Conference

Shannon ABC hosted its third annual Open Innovation Conference at Limerick Institute of Technology (LIT) on the 15th of April 2014. Shannon ABC welcomed over 100 delegates representing a number of regional and national industry and academic sectors. A number of Irish and international speakers emphasized the benefits of collaboration at the Open Innovation Conference. Presenters at the conference included Dr Jonny Finlay (Director, Pfizer) and Dr Siobhan Roche (Scientific Programme Manager, Science Foundation Ireland) who outlined the development and launch of their Industry-Academic partnership using the SFI-Pfizer Biotherapeutics Innovation Award Programme as a new model.



Academic and industry contributors provided an insight into the necessity and benefit of external collaborations to enhance innovation and profitability within their organisations.

Contributors to the 2014 Open Innovation Conference included:

- Dr Eoin Whelan (Cairnes School of Business and Economics, NUI Galway),
- Dr Martino Picardo (CEO, Stevenage Bioscience Catalyst),
- Ms Aine Hallihan (Head of R&D, Carbery Ingredients),
- Dr Ronan MacLoughlin (Senior Scientist, Aerogen, Galway),
- Mr Bill Liao (CoderDojo and SynBio axlr8r co-founder).

The Open Innovation Conference provided an ideal platform to promote the benefits associated with collaboration for both academia and industry. By focusing on innovation through a collaborative approach, conference delegates were presented with a number of case studies outlining how Research & Development has enabled many Irish businesses to expand and improve their operations”. Speaking about the conference, Dr Tim Yeomans (Shannon ABC Centre Manager) added: “The relationship between the third level sector and industry has changed significantly in the last decade. Ground breaking collaborations now operate at the interface of these stakeholders, contributing to the performance and research focus of both”.

The remit of Shannon ABC is to develop, enhance and commercialise biotechnology, food and life sciences in Ireland, and beyond, through confidential collaboration with industry to promote product diversification and enhancement, increasing market growth and aiding competitiveness. The next Open Innovation Conference will take place in Spring 2015 at the Institute of Technology, Tralee (ITT), please contact Dr Yeomans for further details and to participate (tim.yeomans@staff.ittralee.ie).



*Left to right: John O'Connell, Managing Director, CW Applied Technology and Dr Alison Campbell OBE, Director of Knowledge Transfer Ireland.*



*Shannon ABC Open Innovation Conference delegates attending Dr Siobhan Roche's presentation entitled "Industry-Academic partnerships: The SFI-Pfizer Biotherapeutics Innovation Award Programme as a new model".*



*Aine Hallihan, Head of Research and Development, Carbery Food Ingredients and Tom Tierney, Operations Director and CFO, Lifes2good discussing research by Shannon ABC post graduate students during the networking session.*



*Left to right: Ms Natalie Heffernan and Dr Catherine Collins, Post-Doctoral Researchers, Shannon ABC, Limerick Institute of Technology.*

## Shannon ABC Researchers present at international conferences

Dr Shane O'Connell, Shannon ABC Principal Investigator, ITT recently presented at the Informa Life Sciences, "Biostimulants and Plant Growth Conference 2014" held in Brussels on the 14th and 15th of May (<http://www.informals.com/event/biostimulant>).



The title of Dr O'Connell's talk was "Composition and Analysis of Biostimulants". The theme of the conference was very relevant to the EU FP7 project, NatuCrop, which Dr O'Connell is currently involved in which aims to develop a naturally derived plant protection and biostimulant product project for the horticulture and agriculture industry.

The Biostimulant and Plant Growth Conference is industry focused and is open to researchers, small and medium enterprises and multinational companies alike. This year's conference was specifically designed to provide the latest regulatory guidance as well as to explore the most novel scientific innovations within the plant health products sector.

Dr Tanya Beletskaya, Shannon ABC Post-Doctoral Scientist, LIT recently presented at the 2nd UK Conference on Supercritical Fluids – Applications and Opportunities at The BioComposites Centre, Bangor University, Wales, United Kingdom from the 20th to 22nd of July ([http://www.bc.bangor.ac.uk/scf\\_conference.php](http://www.bc.bangor.ac.uk/scf_conference.php)).



The title of Dr Beletskaya's presentation was "Marine Bioactive Molecules for Human Health: Supercritical Fluid Extraction Methodologies"; the presentation outlined Dr Beletskaya's research at Shannon ABC in the area of Supercritical CO<sub>2</sub> for the extraction of carotenoids and omega-3 fatty acids.

The conference served to bring together both academic researchers and industry to promote the application of supercritical fluids such as CO<sub>2</sub> and water for the extraction of natural compounds and in nanotechnologies to identify new opportunities to replace traditional solvent based processes with cleaner and greener technologies.

Thematic areas outlined in the conference included:

- Extraction and fractionation,
- Reactions,
- Particle generation,
- Technological applications.

**informa**  
life sciences

 **BioComposites Centre**  
Innovation in biomaterials for industry

*Funding Opportunities to collaborate with Shannon ABC – Irish and European Funding Options*

### Enterprise Ireland Funding Deadlines: Innovation Vouchers (€5,000)

#### Opening Date

17th September 2014 at 3pm

Co-funded Fast Track vouchers can be submitted at any time (50:50) (€10,000)\*

#### Closing Date

1st October 2014 at 3pm

### Innovation Partnership and Feasibility Study

#### Full Proposal Submission Deadline

Sept 10th 2014

Oct 8th 2014

Nov 3rd 2014

#### IRCC Funding Decision Deadline

Oct 22nd 2014

Nov 19th 2014

Dec 10th 2014

### European Commission Funding Deadlines: Horizon 2020 Dedicated SME Instrument – Phase 1 2014

Industrial Leadership (70%-100% SME Funding)

Intermediate Deadlines Phase 1 (2014)

Phase 1 Deadline

24th of September 2014

17th of December 2014

\*Limited to small (limited registered) companies (less than 50 employees) in Ireland

## SHANNON ABC



*Delegates attending the 2014 TRADEIT Entrepreneur Summer Academy at the Institute of Technology, Tralee.*

The inaugural TRADEIT Entrepreneurial Summer Academy: "Opening Minds and Opening Doors", was held at the Institute of Technology, Tralee between the 15th and 18th of June, 2014. The TRADEIT project is co-ordinated by Dr Helena McMahon (Shannon ABC, ITT) and its remit is to increase the competitiveness and inter-regional advantage of Traditional Dairy, Meat and Bakery Producing Small and Medium Enterprises (SME's) in Europe. The TRADEIT Entrepreneurial Summer Academy provided an opportunity for food related PhD researchers, research centre managers and industry representatives to network and share the commercial potential of their food related research. A total of 26 PhD students and research centre managers were selected to participate in the three day intensive summer academy. In addition delegates also included keynote speakers, industry and academia representatives, panellists and mentors, all contributing to the success of the summer academy.

The three day intensive training programme was designed to promote:

- entrepreneurship among the food research community,
- innovation in the food sector,

- strategic and appropriate management of Research, Development and Innovation (RDI) activities in the food sector,
  - commercialisation and economic impact in the food sector.
- PhD researcher's and research centre manager's research was evaluated throughout the academy via poster presentations, a one minute pitch of the commercial impact of their research to an existing business and through an extended pitch to an applied expert panel comprised of food related SME's, MNC's and research leaders. Winners of the inaugural TRADEIT Entrepreneurship Summer Academy awards were:

1. Research and Business Collaboration Award: Ricardo Alhandro, University of Porto and CIMO - Mountain Research Centre of the School of Agriculture of the Polytechnic Institute of Bragança, Portugal.
2. Research Centre Manager Award: Silvia Bellato, CRA-QCE Research Unit for Cereal Quality, Rome University.
3. Food Enterprise Award: Esereosa Dilenu Ama Otiwa Omoarukhe, Healthy Natural Beverages, University of Reading.

Dr McMahon outlined that "Traditional and artisan food producers tend to be on the small- to micro-scale and typically are under-resourced to meet increasing market demands in areas such as traceability, sustainability, convenience, food safety and supply chain management. It is essential that these enterprises engage in innovation led activities if they are to be competitive and grow".

The next TRADEIT Entrepreneurial Summer Academy will be hosted by the Agency for the Promotion of European Research (APRE), Italy in June 2015. Applications to attend the 2nd Summer Academy will open in December 2014, please visit the TRADEIT website for further information ([www.tradeitnetwork.eu](http://www.tradeitnetwork.eu)).

# TRADEIT



## Shannon ABC supports the 2014 Young Life Scientists Ireland Conference

Dr Sushanta Kumar Saha, Ms Michelle Breathnach, Ms Norma Browne, Ms Katrina McPhillips, Ms Jaswinder Kuar, Ms Fiona Donovan and Dr. Bridget Breen attended the Young Life Scientists Ireland (YLSI) 2014 conference in the Trinity Biomedical Sciences Institute (TBSI), Trinity College Dublin on Saturday the 1st of March 2014. Ms Michelle Breathnach was involved in the YLSI organising committee as sponsorship coordinator for this year's event. Shannon ABC researchers delivered four poster presentations and Dr Sushanta Kumar Saha also presented a workshop entitled "Technology in Life Sciences" showcasing technology offerings available to industry and academia at Shannon ABC.

Shannon ABC poster presentations at the YLSI conference included:

1. "Evaluation of Irish Marine Cyanobacteria for sunscreen Compounds", Norma Browne, Dr Patrick Murray and Dr Sushanta Kumar Saha.
2. "Phycobilipigments from Irish Marine Cyanobacteria and their Potential Applications", Fiona Donovan, Dr Patrick Murray and Dr Sushanta Kumar Saha.
3. "Mining of Fungi Found in Irish Habitats for Pharmaceutically Important Compounds", Jaswinder Kuar, Dr Patrick Murray and Dr Catherine Collins.
4. "Purification and Characterisation of a  $\beta$ -1,4-Xylase from the Thermophilic Fungus *R. Thermophila* and its potential in Functional Foods", Katrina McPhillips, Dr Daniel Walsh and Dr Patrick Murray.

In addition to Enterprise Ireland, Eli Lilly and Trinity College Dublin, LIT and Shannon ABC also provided sponsorship for this year's conference.



*Left, Cyanobacterial fluorescent phycobilipigments, phycocyanin and phycoerythrin showcased during Dr Sushanta Kumar Saha's workshop entitled "Technology in Life Sciences" at the YLSI conference. Right, Dr Sushanta Kumar Saha, Post-Doctoral Researcher, Shannon ABC.*



*Left to right: Ms Michelle Breathnach and Ms Norma Browne at the YLSI poster presentations. Post graduate researchers at Shannon ABC*

*Left to right: Ms Jaswinder Kuar and Ms Michelle Breathnach at the YLSI poster presentations. Post graduate researchers at Shannon ABC*

## Industry Partners



# KASTUS



CARA  
PARTNERS



# Case Studies

**Lifes2good**  
health & beauty

## COMPANY NAME:

Irish Response Ltd T/A Lifes2good

Funding Source: Enterprise Ireland

## TITLE:

Biotechnological solutions for a hair restoral product - Development of a biological fingerprint and treatment process

## THE COMPANY:

Irish Response Ltd T/A Lifes2good is a rapidly expanding, global nutraceutical business, marketing and distributing a portfolio of category-leading, exclusive and clinically proven brands across Europe, the Americas, the Middle East and Australia.

Their flagship brand, Viviscal, holds numerous awards and is globally recognised as the leading hair-growth supplement. With endorsements from an A-list line up of red carpet celebrities, Viviscal has experienced meteoric success as a result of Lifes2good's dynamic marketing promotion, coupled with efficacious clinical trials.

## THE QUESTION:

Like many nutraceutical and pharmaceutical companies, Lifes2good faces counterfeiting challenges. Counterfeit detection is a problem for many companies and can seriously compromise a company's reputation and bottom line. While packaging can in some respects combat this problem, there is always some potential for packaging to also be copied. The extent of the counterfeiting issue is illustrated in the following example - in September 2011, the Irish Medicines Board, in conjunction with the Revenue Customs service and An Garda Síochána took part in an Interpol co-ordinated co-operation called Pangea IV and detained 51,612 counterfeit tablets, capsules and creams in excess of €150,000 within one week. Lifes2good need to minimize the risk of counterfeiting of the Viviscal brand.

## SOLUTION THROUGH SHANNON ABC TECHNOLOGY GATEWAY:

As one part of an Innovation Partnership, Shannon ABC provided a defined, repeatable, stringent biological fingerprint of the Viviscal product. The selection of which components to include in the fingerprint was developed based on Shannon ABC's expertise with bioresources and natural products.

## IMPACT FOR THE COMPANY:

Since development of this fingerprint, Lifes2good have been able to implement a scientific led counterfeit management process in order to protect Lifes2good's solid reputation, which is a vital part of their success, built on almost a decade of sales of Viviscal. Counterfeit products have the potential to seriously damage the company's reputation and impact on their bottom line. The biological fingerprint provides Lifes2good with a rapid, indisputable way to prevent this.

## TESTIMONIAL:

*"Lifes2good has been working with Shannon ABC since early 2012, as a result of an initial meeting at a conference in Paris. At the time we were looking to increase the scientific and research aspect of our product as an aid to future product development and as an assist to our commercial marketing efforts. Over the last two and a half years we have achieved substantial results in understanding the nature and biological impact of our product and have now built up a significant knowledge bank on our product. Results from this work has led to further more in depth analysis to focus on the creation of a cell culture model to demonstrate cause and effect of the product on the relevant cells in the body. Shannon ABC has greatly assisted in enhancing our scientific and technical capability while offering us access to state of the art facilities and resources and people with the expertise and knowledge to provide real value added solutions".*

**Tom Tierney, Operations Director and CFO**



## CONTACT SHANNON ABC:

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