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## The Development of Molecular Gastronomy as a Subject Discipline at the Dublin Institute of Technology

Roisin Burke

*Technological University Dublin, roisin.burke@tudublin.ie*

Pauline Danaher

*Technological University Dublin, pauline.danaher@tudublin.ie*

Mark Traynor

*Technological University Dublin, mark.traynor@tudublin.ie*

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The Development  
of Molecular  
Gastronomy as a  
Subject  
Discipline at the  
Dublin Institute  
of Technology

Róisín Burke, Pauline Danaher and  
Mark Traynor



# Development of Molecular Gastronomy as a Subject Discipline in DIT

- Two day workshop in Molecular Gastronomy
- Two seminars in DIT on Molecular Gastronomy by Co-founder Dr. Hervé This
- Writing and validating modules in Molecular Gastronomy at basic, intermediate and advanced educational levels
- Getting started

# Molecular Gastronomy Workshop in DIT: Making Ice-cream the new fashioned way



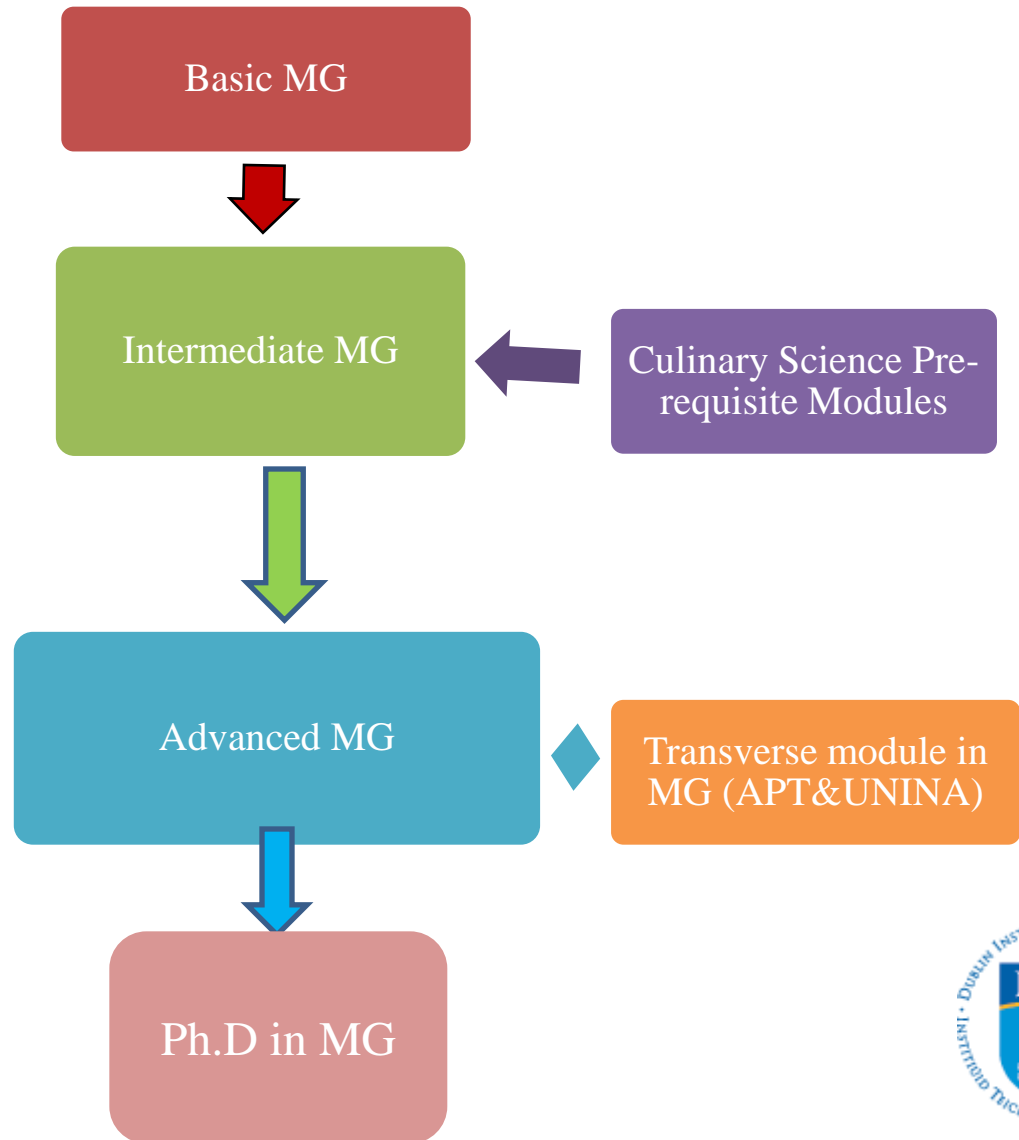
# Fruits with an extra zing



# Joana makes some caviar during a two day molecular gastronomy workshop in DIT



# Molecular Gastronomy in DIT





# Module Learning Outcomes

## Fundamental Molecular Gastronomy (Level 6)

- Demonstrate know-how and skills in the science of food which is prepared in the kitchen.
- Apply knowledge and skills when developing food products.
- Work in an organised manner as part of a team in the kitchen.
- Evaluate and learn from feedback in lectures and practicals.
- Reflect on and discuss information received in class relating to Molecular Gastronomy.

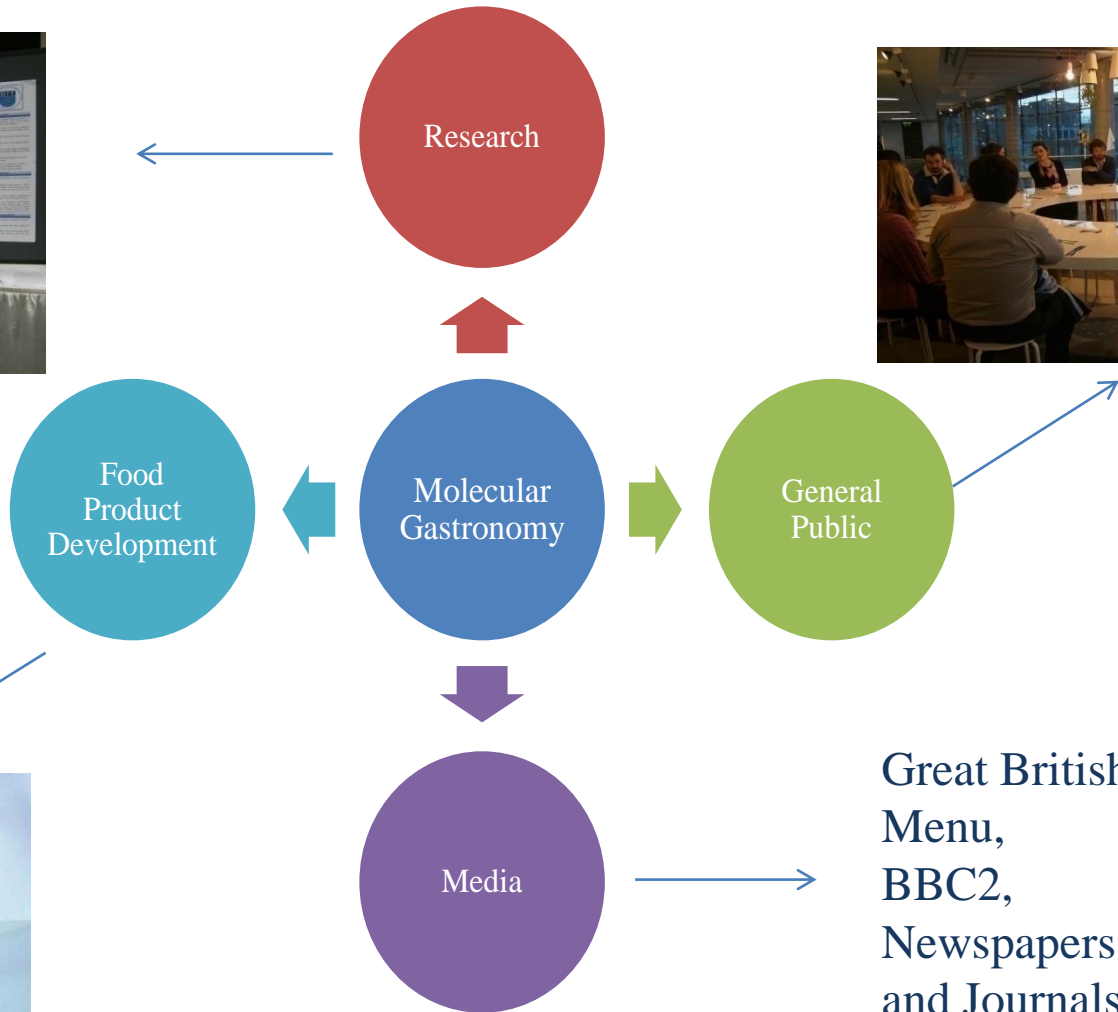
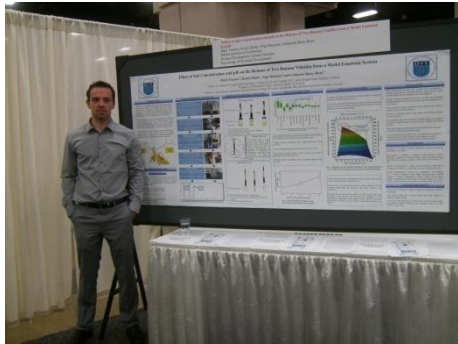
## Intermediate Molecular Gastronomy (Level 8)

- Demonstrate the application of scientific and gastronomic knowledge and skills.
- Apply concepts, theories and analysis in the development of novel recipes, dishes and food and beverage products.

## Advanced Molecular Gastronomy (Level 9)

- Critically evaluate the fundamental scientific and gastronomic theories of Molecular Gastronomy.
- Produce a novel and innovative dish/cocktail using ingredients and techniques associated with Molecular Gastronomy.
- Develop new skills to a high level including novel techniques

# Application of Molecular Gastronomy in DIT



Great British Menu,  
BBC2,  
Newspapers  
and Journals



# Intermediate Module in Molecular Gastronomy



# Deconstructed Fruit Salad

By David Smith (Student of the Intermediate Molecular Gastronomy Module, 2011, BA in Culinary Arts, DIT)



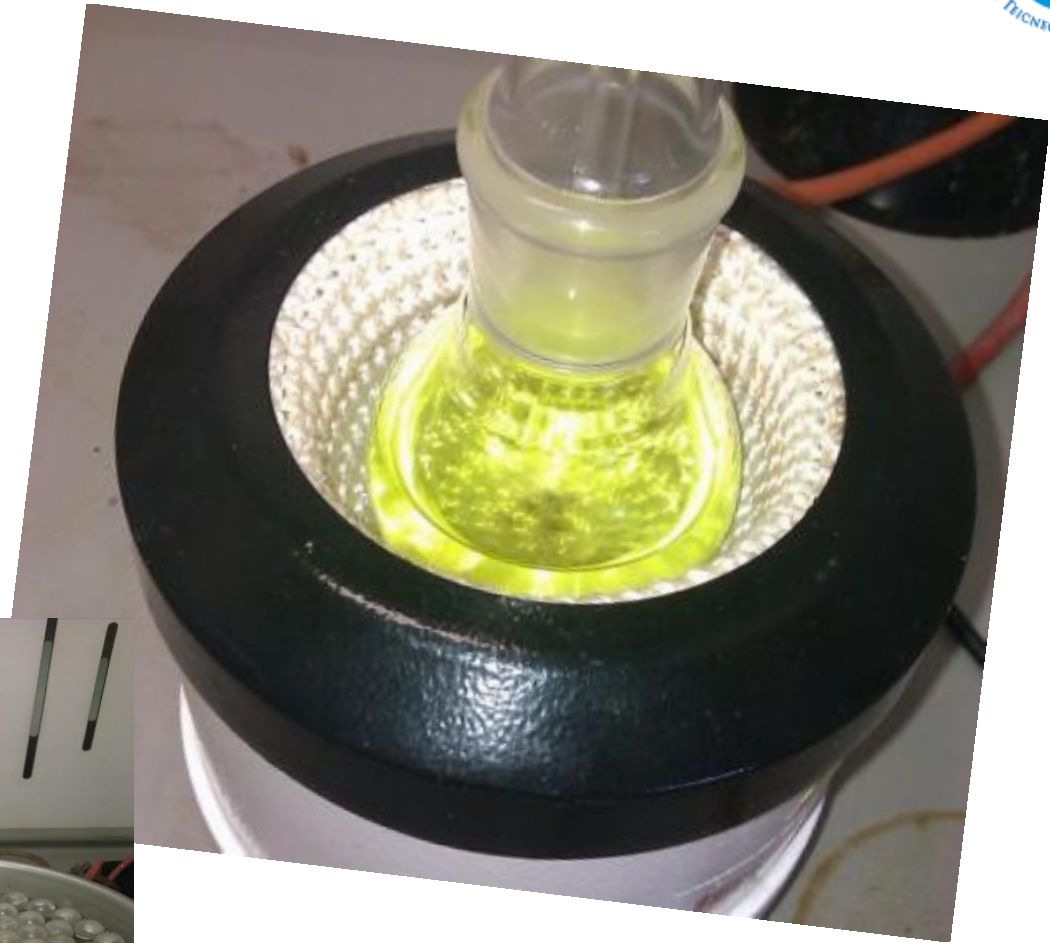
Classical Irish traditional dishes with a modernist twist.  
A sensorial blend of tastes, textures, colour and aromas.

**Aperitif :Oysters three ways with Guinness**



# Scientific Aspect

Extraction of seaweed colour using a Soxhlet apparatus and rotary evaporation.



## Main Dish: Scallop with cauliflower black pudding and scallop purée



- *Scallop purée*
- *White pudding scallop, made with cream, white pudding and gelatine*
- *Black pudding made with Cauliflower, squid ink, agar, gelatine, pearl barley, bread crumbs and butter*
- *Onion glass*

# Hugh Higgins receives first prize in the education section of the 7<sup>th</sup> Competition of Sciences and Cuisine from Dr. Hervé This



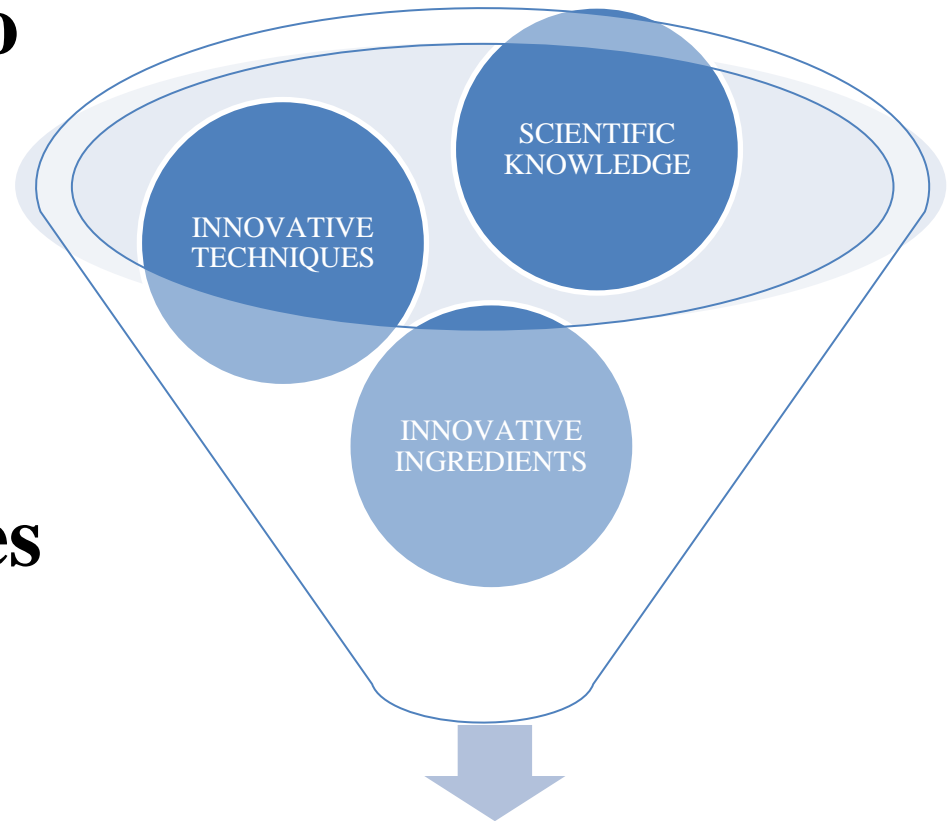


# 'Edible' at The Science Gallery, TCD



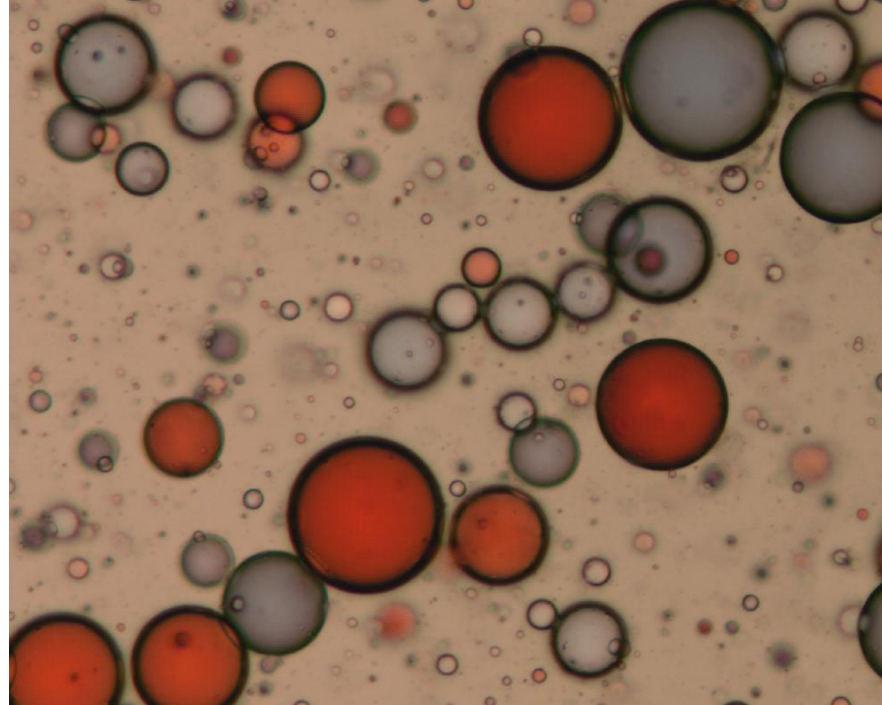
# PhD in Molecular Gastronomy

- **An Investigation into the Development of Innovative Food Products using Molecular Gastronomy Theories**
- Mark Traynor,
- Dr. Róisín Burke
- and Dr. Catherine Barry-Ryan

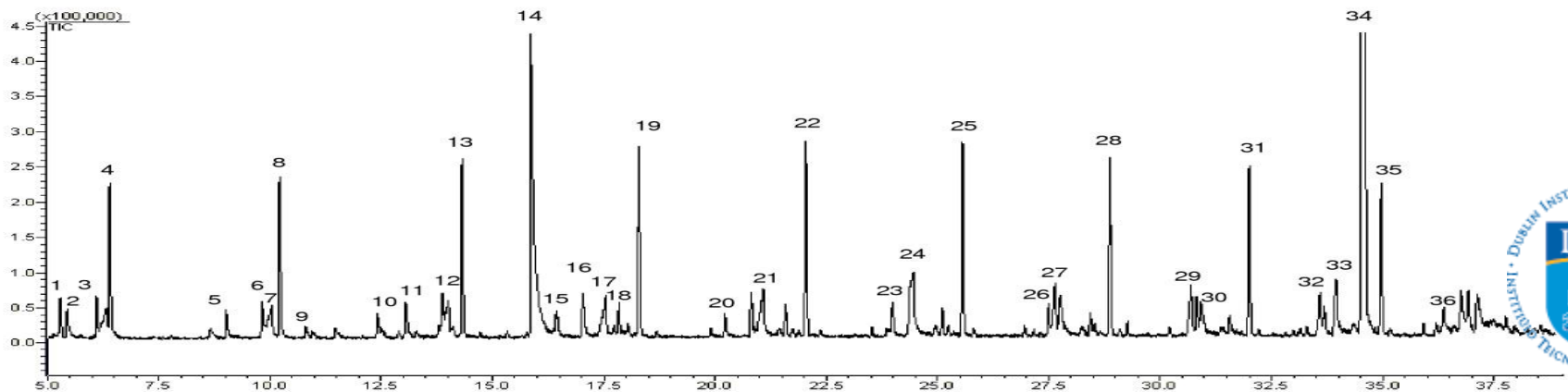


# Aims and Objectives of research project

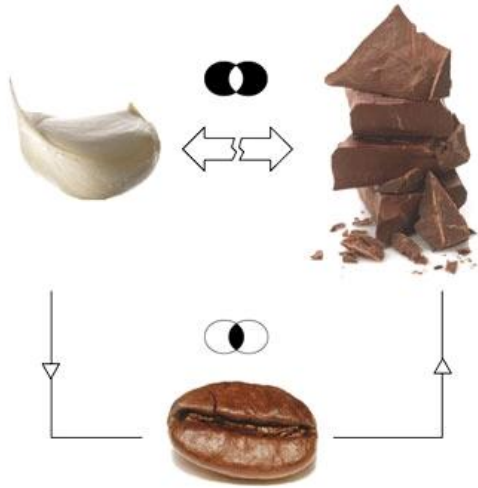
# Optimisation of dispersion model system formation



# Optimisation of flavour volatile release from the dispersion model system.



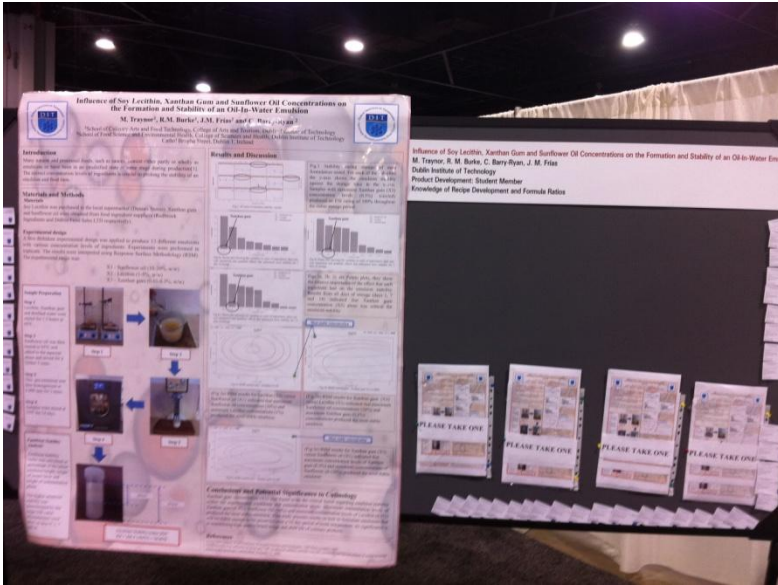
# Investigation of novel flavour combinations.



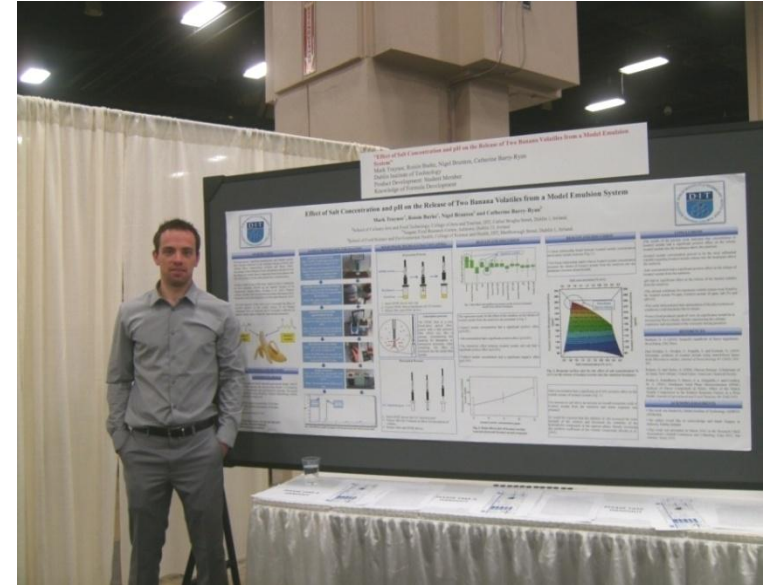
# Utilisation of technologies and innovative techniques to produce novel food product.



# Research Chefs Association Conference



**Atlanta, Georgia, March 2011**



**San Antonio, Texas, March 2012**



**Research Chefs Foundation  
scholarship 2012**





# Latest Developments

- Transverse Molecular Gastronomy module between DIT, AgroParisTech and University of Naples. – **A module on the Erasmus Mundus Master's Programme in Food Innovation and Product Design**





Erasmus Mundus Masters Students some of whom will take the transverse module in Molecular Gastronomy with DIT, AgroParisTech and University of Naples