

2nd December, 2010

Dr. James O’Gara, UCD

“Elucidating biofilm mechanisms used by clinical isolates of methicillin resistant Staphylococcus aureus (MRSA)”



Dr. O’Gara is a BSc and PhD graduate of the Microbiology Department at the National University of Ireland, Galway. After completing Postdoctoral Fellowships at the University of Texas in Houston and Trinity College Dublin, he was appointed to the academic staff of the Department of Microbiology at the Royal College of Surgeons in Ireland. He joined University College Dublin as a Senior Lecturer in Microbiology in 2005 and is currently Head of Graduate Studies in the UCD School of Biomolecular and Biomedical Science.

Dr O’Gara’s research focuses on understanding the mechanisms of biofilm formation, which is an important virulence determinant in medical device-related infections and he has developed an international reputation in this field. His seminar will describe recent advances by his research group in elucidating biofilm mechanisms used by clinical isolates of methicillin resistant Staphylococcus aureus (MRSA).



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RESEARCH SEMINAR PROGRAMME

September – December 2010
Thursdays, 1 – 2pm

Venue: Institute Boardroom,
Main Campus

30th September, 2010

Dr. Patricia McAlernon,
AIT and Biolmages Ltd



“Monitoring of pH and Dissolved Oxygen in Mammalian Cell Culture Using Optical Sensors and their Potential for Use in Microfluidic Lab-on-a-chip platforms”

In this presentation PreSens oxygen and pH mini-sensors are discussed and their application for indirect non-invasive monitoring of both cell growth and cellular metabolism. The potential of using PreSens Oxygen Microsensors engineered in disposable microfluidic devices is also addressed. An overview will be given of bioanalytical instrumentation used for on-line bioprocess monitoring to include biomass monitoring with capacitance probes. The use of multivariate statistical analysis in bioprocess modelling will also be addressed.

Patricia McAlernon is an Honorary Research Fellow in the School of Sciences, AIT and is Founder and Director of Biolmages Ltd. A former student of the University of Ulster and the University of London, Birkbeck College, she holds a BSc.(Hons) In Applied Biochemical Sciences, a MSc. in Analytical Chemistry and a PhD in Multivariate Statistical Analysis of Sensor Data.

Her research interests are in the area of: Sensors, microsensors, on-line sampling and monitoring of bioprocesses, multivariate statistical analysis of sensor data. Her company Biolmages is a HPSU client of Enterprise Ireland and has obtained marketing and technical feasibility funding. Currently she is driving a proposal for an ‘Eco-Factory’ call for EU funding and is looking for industrial and academic partners.

14th October, 2010

Ms. Ann Marie Durkin,
CEO, Shasta Limited



“Unique Products for Parents and Babies...”

Shasta Limited, founded by Ann Marie Durkin, is a highly innovative energetic company based in the Midlands Innovation and Research Centre at AIT. Shasta specializes in baby care products and is leading the way in the development of portable baby care sterilization technologies.

Shasta’s first product, Steri Soother was the world’s first pre-sterilised ready to use baby soother. Steri Ova, the latest innovative product to be developed by Shasta, is the world’s first portable baby bottle steriliser. It is patented in Ireland and PCT patent pending in 140 countries. Steri Ova has been developed, prototyped and tested in collaboration with the Materials Research Institute and the Bioscience Research Institute at AIT. Steri Ova is now poised to launch worldwide.

Ann Marie was a participant on the Midlands & West Enterprise Programme in 2008. Shasta aims to be a world leader in baby care products and technologies, bringing to market an ongoing pipeline of innovative products with global market reach.

4th November, 2010

Professor Hugh J. Byrne, DIT



“Understanding the interaction of nanoparticles with biological cells”

In terms of concerns over potential human and environmental hazards, and also in terms of applications in the emerging field of nanomedicine, an understanding of the interaction of nanoparticles with biological cells is imperative. The presentation will describe efforts within DIT, in the framework of the Integrated NanoScience Platform for Ireland (INSPIRE) as well as the FP7 Concerted Action NanoImpactNet, to

establish structure property relationships governing the interaction of polymeric nanoparticles with a range of human cell lines. Dependence on particle size, surface chemistry and cell line will be discussed.

Prof Hugh J. Byrne is the Head of the Focas Research Institute of DIT, established under PRTL Cycle 1 in 2004. He is also DIT co-ordinator of research efforts under the PRTL Cycle 4 INSPIRE and NBIPI platforms. He received his BA (1985) and PhD (1989) from Trinity College Dublin, and returned to the position as a lecturer in the School of Physics, DIT after spells as a visiting Scientist in the Max-Planck-Institute for Solid State Research, Stuttgart, and the National Materials and Chemistry Research Institute, Tsukuba, Japan.

18th November, 2010

Dr. Thomas Roche, GMIT



“Challenges encountered in converting research into a commercial product”

Dr. Thomas Roche is currently a senior lecturer in the Mechanical Engineering Department of Galway Mayo Institute of Technology. He holds a M.Eng. degree in automation systems design and a Ph.D. in CAD integrated Decision Support systems for DFE. He joined GMIT in 1992 where he acted as lecturer until 1999 when he became the head of the department. Due to a large commitment to engineering research Dr. Roche resigned his management role in 2002 to lead masters and Ph.D. student teams in a number of national, EU and Industry funded projects. These projects included companies such as AST Comptuers, Transcat, Jaguar, Thermoking and Connaught Electronics. Dr Roche was successful over the years in working with the commercialization fund, the EU life program and the Leonardo De Vinci Program. He has been involved in the commercialization of work in the past and will discuss frankly his experiences with the commercialization of research and the many pitfalls involved.