

## News / Meeting Report

### Biomedical Research Conference

Wednesday 9<sup>th</sup> April 2014; Anglia Ruskin University's Cambridge Campus, UK

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### The Biomedical Research Conference in the context of the Current Advances in Biomedical Science module

This meeting brought together staff from the Department of Life Sciences at Anglia Ruskin University and the 150 final-year BSc (Hons.) in Biomedical Science students taking the "Current Advances in Biomedical Science" module led by Richard Jones. The module aimed to promote students' career prospects and interest in exciting research through employability, studentship and biomedical research conference days at Anglia Ruskin University (ARU) in semester 2, 2014. The venue for all three conference days was the Mumford Theatre at ARU's Cambridge Campus. The Mumford Theatre has excellent acoustics and normally hosts theatre companies. Knowledge accumulated during these days was assessed at the end of the module using a 1 hour written examination.

### Plenary lectures

In the Biomedical Research Conference, speakers explained cutting-edge research techniques and their results and what they mean for biomedical science. The key note research lecture by Dr Mike Harrison (School of Biomedical Sciences, University of Leeds) outlined how the rotary ATPases function as nano-scale motors that drive biology. His lecture illustrated the physiological roles of the rotary ATPases, their structure and organisation, how they work, regulation and control, and inhibitor binding and therapeutic potential. Dr Dominika Gruszka (Department of Chemistry, University of Cambridge) gave a lecture on studies of protein folding, misfolding and aggregation performed with Professor Jane Clarke (Department of Chemistry, University of Cambridge) and Professor Jennifer Potts (Department of Biology, University of York). Dominika outlined the following: the basis of the protein folding problem; factors that can lead to protein denaturation; examples of experimental techniques used to study protein folding; the process of protein misfolding and aggregation including causes and examples of amyloidosis; and the formation of biofilms on implanted medical devices. Dr Phil Warburton (Department of Life Sciences, Anglia Ruskin University) explained high-throughput sequencing methodologies, and how advances in DNA sequencing could lead to hospital-based whole-genome sequencing at birth and personalised medicine within healthcare. Dr Benjamin Evans (Department of Life Sciences, Anglia Ruskin University) discussed how modern molecular and computational tools are enabling us to prepare for, and react to, outbreaks of infectious diseases.

### Students' contributions

The variety and high quality of questions posed by students to the speakers was a pleasing aspect. Students presented group coursework posters that reflected their own developing and wide-ranging biomedical science interests. The posters were assessed by staff on the day. First prize was awarded to the poster entitled "Is culture of prevascularised tissue constructs in matrigel superior over Dulbecco's modified eagle medium for promoting inosculation?" created by Akshay Joshi, Sagar Patel, and Harry Tracey. Second prize was awarded to the poster "Could inhibition of survivin have potential in the future of cancer therapy?" by Aaron Hardy and Simon Loydall. Third prize was awarded jointly to the poster "Potential utilization of the immune synapse and 5-HT signalling pathways in leukocytes in auto-immune disease" by Jason Iles and Mohannad Barayan, and to the poster "Quantum dots: the next generation fluorescent probes" by Arslan Atajanov, Irina Buckle and Ivo Campos Da Silva.

Feedback from students regarding the conference included the following. Prajawal Limbu said "I found everything interesting and intellectually stimulating today, and I personally feel that I have learnt a lot". Jamie Pope said "All of the lectures today were very interesting, and I enjoyed the whole day".

### Funding

The Biomedical Research Conference was supported by a Biochemical Society Sponsored Events Grant (SEG) of value £400 awarded to Richard Jones. The SEG was match-funded with £1500 authorised by Professor Michael Cole, Head of the Department of Life Sciences at Anglia Ruskin University. The combined sponsorship money was used to support student poster prizes, packed lunches, light refreshments during session breaks, and to reimburse travel costs for the external visiting speakers.



**Figure caption**

Richard Jones (1), Dominika Gruszka (2), Mike Harrison (3), Phil Warburton (4) and Benjamin Evans (5) give their presentations. A two-hour poster session (6, 7, 9, 10, 13) fuelled by coffee and biscuits (14). Abboss Shirvani, Craig Thompson and Raul Silva (from left to right, 6) stand by their poster. Peter Coussons (7) and Claire Pike and Dominika Gruszka (10) assess posters presented by students. Arslan Atajanov, Irina Buckle and Ivo Campos Da Silva (from left to right, 9) present their prize-winning poster on quantum dots. The Mumford Theatre at Anglia Ruskin University in Cambridge hosted the Biomedical Research Conference (8, 11-12). The photographs were taken by Jamie Pope and Chiyedza Heri (final year students taking the BSc (Hons.) in Biomedical Science programme).