

**European Society for Biomaterials 25<sup>th</sup> Anniversary Conference**  
**12-14 September 2001**

The 25<sup>th</sup> Anniversary Conference of the European Society for Biomaterials took place at The Brewery, Chiswell Street in the City of London. The Conference was hosted by the IRC in Biomedical Materials, University of London. Due to events in the USA the previous day some speakers and delegates, including Professor Larry McIntire of Rice University Texas, the Plenary Lecturer, were unable to travel to London. However, despite these problems, 580 people were able to attend the meeting making this the largest meeting in the history of European Society for Biomaterials. There were 240 oral presentations, 152 posters and 45 last minute posters details of which are given in the two books of abstracts.

As there was no ESB conference in 2000, due to the World Congress in Hawaii last May, the 2000 George Winter and Jean Leray prize lectures were given this year, in addition to the 2001 George Winter lecture. The 2000 George Winter Lecture was given by Professor Luigi Nicolais of the University of Naples Federico II entitled "Biomimetic Materials". This paper covered his work looking at the properties of natural materials and structures and then developing fibre reinforced polymer or ceramic-polymer composites, including hydrogel based materials, to reproduce these mechanical properties. The applications covered ranged from intervertebral discs to the vitreous humor of the eye. The 2000 Jean Leray prize was awarded to Enriques Fernández of the Technological University of Catalonia (UPC) and his lecture was on "New Perspectives on Calcium Phosphate Bone Cements". The work presented was principally on alpha-tricalcium phosphate based cements for bone augmentation and reconstruction. The precipitation of new mineral on the surface of the cement and the dissolution of the calcium phosphate cement were considered from the phenomenological and theoretical viewpoints. Finally methods of controlled the injectability and setting behaviour were discussed. The 2001 George Winter Prize was given to Mario Barbosa from the University of Porto and his lecture was entitled "Surface Chemistry – The Role of Electrical Charge". Professor Barbosa covered the effect of surface charge on biomaterials from electrochemical oxidation, that corrosion, to conducting polymers and the effect of surface electrical charges on protein-surface and cell-surface interactions. The clinical applications include applying thin hydroxyapatite coatings for orthopaedic implants and the repair of nerves. To replace Professor McIntire's lecture a debate was held on "What expertises or technologies does biomaterials need to embrace in the future?" The three lead speakers were Professor Luigi Nicolais from Naples, Professor James Kirkpatrick from Mainz and Professor Pankaj Vadgama from London. Their opening thoughts were followed by lively debate and ideas from the rest of the delegates at the conference.

Two student prizes were given by ESB for the best oral presentations and one for the best poster presentation. The oral presentation prizes went to Matthias Lutolf from ETH in Zurich for his paper entitled "PEG based hydrogels that mimic the degradation and adhesion characteristics of collagen" and to Malin Nilsson from UPC in Barcelona and from Lund for her paper "Characterisation of cement materials in the system  $\alpha$ - $\text{Ca}_3(\text{PO}_4)_2$ - $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ ". The best poster prize went to Jos Malda from IsoTis and

University of Twente in The Netherlands for his poster "Determination of oxygen gradients in tissue engineered constructs". The organising committee would like to thank Professor Gino Ambrosio and Professor Bill Bonfield for chairing and organising the judging of these prizes. The four ESB Travel Awards were given to Isabelle Catelas from Canada and Mexico, Drahoslav Humenik from Slovakia, Lilia Luchachova from Russia and Janusz Swewczenko from Poland. These awards are to allow younger scientists to attend the conference who would not otherwise be able to afford the travel and registration.

The major areas of interest in the main conference proceedings were Cell-Material Interactions which were discussed in 6 sessions, Bone Cements, of both the polymeric based and calcium phosphate types, with 5 sessions and Tissue Engineering and Wear each with 4 sessions. There was a range of new ideas for biomaterials presented throughout the conference, novel methods of device manufacture and different methods of measuring the responses to the presence of biomaterials. New areas presented this year included Biosensors, Dental Materials and Urological and Vascular Biomaterials. It is to be hoped that these additional applications of biomaterials will continue to grow through the next few years of the ESB as this will lead to many more clinical applications and thus patients benefiting from biomaterials.

The 2002 European Society for Biomaterials conference will be hosted by the Technological University of Catalonia (UPC), in Barcelona, 11-15 September and further details may be obtained from <http://www.esb2002.com>. Nominations for the 2002 George Winter and Jean Leray prizes close on 31 December 2001 and should be sent to either the President of ESB Professor Peter Revell or the Secretary Dr Joost de Bruijn. Some abstract books are available and may be obtained from the conference secretariat (ESB2001@qmw.ac.uk).