



Bioceramics 17, New Orleans, Louisiana, USA (8th-12th December 2004)

Mark Akhshi

In December of last year I attended the Bioceramics 17 conference in New Orleans, Louisiana, USA. This is an extremely important meeting which takes place every year and allows people in biomaterials to learn of the research that is taking place Worldwide. The conference attracted nearly 300 researchers with backgrounds in materials science, bioengineering, as well as cell and molecular science. Clinicians and manufacturers were also in attendance, demonstrating the benefits that the work presented at such a meeting have on patients throughout the World.

The Bioceramics 17 conference was very well organised with two parallel sessions taking place. Leading researchers were present at this meeting and some gave plenary lectures before the main sessions began each day. Some of these were highly thought-provoking, especially the opening talk by Professor Panjian Li who discussed the potential for the work carried out in the laboratories to make it into the medical market as new products and sometimes resulting in spin-off companies. I was also intrigued by the presentation by Professor Yang Leng from Hong Kong University of Science and Technology (China). His presentation, followed by our discussion later at the conference clarified some of the issues and problems I was facing with my own research. I am hoping to arrange to do collaborative research with him in the near future.

There were both oral and poster presentations at this meeting which were all published in the proceedings of the conference. I was privileged to be able to give an oral presentation on my research project. My oral presentation was entitled, "*In Situ* Apatite Formation on Bioactive Substrates Using Confocal Microscopy". I was able to present novel research that had been performed using the confocal microscope at the Department of Materials at University of Cambridge.

My oral presentation was in the session, “*In Vitro* Evaluation of Bioactivity I – in Simulated Physiological Solutions”. It was chaired by Prof T. Kokubo from Chubu University, Japan and Prof. X. D. Zhang from Sichuan University, China. There were six talks in my session all of which focussed on different methods of studying the *in vitro* behaviour of bioactive materials in simulated physiological solution that were being considered for use in the body. My presentation was on the second day and in the morning, parallel to another session. Despite this, my session was still able to attract a good number of people who demonstrated an interest in all the talks being given as well as provide ideas for further work in my area of research.

As well as the symposia, the organisers of the Bioceramics 17 Conference arranged social events for the delegates, allowing a more relaxed atmosphere to network and discuss work. During the symposia, there were coffee and tea breaks outside the ball rooms during which delegates could meet with each other and the manufacturers of biomaterials.

In addition to presenting my work and listening to talks on bioceramics, I was able to attend a wide range of topics throughout all the days of the conference. These included the methods employed to analyse the mechanical and biological stability of potential materials, as well as the results of clinical trials on ceramic hip-implants. It also made me realise the gap that still exists between medical and material science, but which is dramatically improving with such conferences where the people with these backgrounds can listen to each others requirements and help create even better implant materials.

Overall, the Bioceramics 17 conference was very well worth attending and the ideal place to present my work and I benefited immensely from the knowledge that I was able to take away with me and apply to my own work. I was also able to meet with other conference attendees who I am now keeping in contact with and with whom potential collaborative work is now being discussed.

I would finally like to thank the Royal Academy of Engineering for supporting my research work and enable me to attend this meeting.