



**The Institute of Materials, Minerals & Mining**

## **BIOMEDICAL APPLICATIONS DIVISION ANNUAL REPORT FOR 2013**

### **1. Board membership**

Chairman Prof Serena M Best, University of Cambridge  
Secretary Mrs Sue Dunkerton, TWI/HealthTech and Medicines KTN  
Dr Geoffrey Andrews, CEO, Ranier Technology  
Professor William Bonfield, Cambridge  
Dr Julian Braybrook, LGC  
Professor Justin Cobb, Imperial College  
Dr Elsie Damien, MHRA  
Professor Lucy Di Silvio, Kings College London (Former President of UKSB, secretary of European Society of Biomaterials)  
Professor Sandra Downes, University of Manchester  
Dr Mino Esat, Independent Consultant  
Dr David Farrar, Smith & Newpew  
Mr Roger Feneley, Independent (retired Urology surgeon)  
Dr David Gooch, Materials Science and Technology Board  
Professor Paul Hatton, University of Sheffield  
Dr Jie Huang, UCL  
Dr Andrew Jackson, The Technology Partnership plc  
Dr Julian Jones, Imperial College  
Dr. Judith Juhasz, University of Cambridge  
Mr Brian Kent, Independent  
Mr Brian Knott, IOM3  
Prof Jonathan Knowles, UCL  
Prof David Lee, Queen Mary University of London (and representative of TCES)  
Prof Andrew Lewis, Biocompatibles UK plc  
Professor Andrew Lloyd, University of Brighton  
Professor Brian Meenan, Nanotechnology & Integrated Bio-Engineering Centre, University of Ulster  
Professor John Nicholson, St Mary's University College  
Professor Neil Rushton, Cambridge  
Professor Elizabeth Tanner, University of Glasgow  
Dr Irene Turner, University of Bath  
Professor Matteo Santin, University of Brighton  
Professor Pankaj Vadgama, Director, Biomedical Materials IRC, Queen Mary University of London  
Dr Rachel Williams, University of Liverpool  
Dr Matthew O'Donnell, RepRegen Ltd  
Mr David Sharp, Consultant, Ipswich Hospital

## 2. Board meetings

### **21 January 2013, Carlton House Terrace, London**

#### Attendees

Chairman Prof Serena M Best

Dr Geoffrey Andrews

Professor Lucy Di Silvio

Dr David Farrar

Professor Matteo Santin

Dr Irene Turner

*(Weather prevented attendance by many members)*

### **20 May 2013, Carlton House Terrace, London**

#### Attendees

Chairman Prof Serena M Best

Dr David Farrar

Professor Matteo Santin

Dr Julian Jones

Prof Pankaj Vadgama

Mrs Due Dunkerton

Prof Neil Rushton

Dr Rachel Williams

Mr Roger Feneley

Dr Minoo Esat

Dr Irene Turner

Dr Brian Kent

Dr Jie Huang

Prof Liz Tanner

Ms Melanie Boyce

### **21 October 2013, Carlton House Terrace, London**

#### Attendees

Chairman Prof Serena M Best

Prof Matteo Santin

Dr Rachel Williams

Mrs Sue Dunkerton

Dr Irene Turner

Prof Neil Rushton

Prof Pankaj Vadgama

Dr Minoo Esat

Prof Brian Meenan

Prof Andy Lewis

Mr Roger Feneley

Dr Anna Angus-Smyth (EPSRC)

### 3. Activities during 2013

#### 3.1. Technical programme

##### Urinary Catheter Design Meeting, UCL, London May 2013

Roger Feneley (RF) reported on the Urinary Catheter Design meeting at UCL. This was seen as a good preliminary meeting but more work needed to be done. There was a good presentation of some of the issues around catheters and the need for new designs and new systems approaches. RF is keen to see how future meetings might take some of these topics forward. Serena Best (SB) noted that a small meeting was planned at Chicheley Hall with the Royal Society on 30 September & 1 October 2013, which would provide a report and lead to a grant application.

##### Clinicians Meeting (Ophthalmology) Liverpool, 22 May 2013

The ophthalmology meeting of 22 May was very successful. Two key clinical areas of glaucoma and surface ocular disorders were chosen and in each section there were three speakers; a clinician, an engineer/scientist and a manufacturer. The manufacture of specialised contact lenses was presented and interesting work on the development of lenses that continuously measure intraocular pressure were discussed. The design and application of material gels for corneal replacement therapies were presented. To aid the discussions the number of participants was limited to thirty but it was very pleasing that the full range of expertise was represented from clinicians to scientists and engineers. It was an extremely enjoyable and informative event with discussions continuing late into the evening. Another similar meeting is being considered addressing eye disease in the posterior segment.

##### UKSB, University of Birmingham, 24-25 June 2013

This was organised by Rachel Sammons. A good number of abstracts were received, Matteo Santin reported on the meeting saying he considered it one of the best he had attended. Attendance was growing year on year and attracting more overseas participants. Costs are kept low to attract young researchers. There was good industrial sponsorship and the event hosted the award of the Larry Hench Medal. The meeting in 2014 will be in Ulster with John Hunt leading.

##### ESB 2013, Madrid, 8 – 12 September 2013

This was a well organised meeting which covered a wide range of topics. There had been a move from harder to softer tissues and cellular topics being covered. It was agreed that the keynote talks had been excellent. Matteo Santin has now become President of ESB subsequent to elections for new ESB council members.

Summary; details in Appendix

#### **FUTURE MEETINGS**

##### 11<sup>th</sup> WBC 2020 Conference Centre of Scotland, Glasgow

The Division was given advance notice of this conference to be held in 2020, as it is a major event attracting an audience of 2000 attendees.

##### ESB and UKSB August 2014, Liverpool

### **3.2. Web-site developments**

The Division kept up to date with changes to the website over the year, and has worked to include articles of relevance to the biomaterials community.

### **3.3. Engagement with technical community and/or local societies**

#### Educating Teachers in Biomaterials

Diane Aston (Training and Education Executive) of IoMM joined the October meeting by telephone. She was seeking input from the Division to create materials to be shared with teachers to increase their knowledge and capability to teach in materials and biomaterials specifically as this is seen as a topic which might appeal to pupils and have an impact on their education and subsequent career choices. The aim was to produce a Powerpoint presentation and ideally short videos people who have taken various career paths in materials. The final package would be launched in September 2014 and it was agreed to make this an agenda point to discuss at the January 2014 meeting. Rachel Williams (RW) offered to send some materials to Diane that had been previously developed via IPEM for Year 11 students.

### **3.4. Contributions to IoM3 house journals**

### **3.5. Other**

Sustainability initiatives

Other

## **4. Foresight / Innovation and Growth**

The Division has kept abreast of innovation activities through the HealthTech and Medicines KTN, in particular inputting to call topics for regenerative medicine and in supporting meetings addressing clinical need where materials might provide new solutions.

## **5. Strategy and Objectives for 2014**

### **5.1. Opportunities and constraints**

### **5.2. Specific targets**

## **6. Other matters**

### Appendix: Technical Programme as of December 2013

Date (YY/YY/MM)	Status (Held /Progressing /Planned)	Title	Location	Organising Division(s) /Committee(s) /Collaborators	Financial Underwriter (IOM3/ Local/ Other)	100% Target No's	Actual No's
May 2013	Held	Urinary Catheter Design Meeting	UCL	UCL	UCL		
22 May 2013	Held	Clinicians Meeting (Ophthalmology)	Liverpool				tbc
24-25 June 2013	Held	UKSB	University of Birmingham	UKSB	UKSB		tbc
8-12 September 2013	Held	ESB 2013	Madrid	ESB	ESB		tbc
30 Sept/1Oct	Held?		Chicheley Hall	Royal Society			
August 2014	Planned	UKSB and ESB 2014	Liverpool	ESB and UKSB			
11 <sup>th</sup> WBC 2020	Planned		Glasgow	WBC	WBC	2000	n/a