

SUMMER 2009



Welcome to the first Newsletter from our new address. Moving office, although exciting, is never a pleasant experience and as Lister House contained a "spare" room and several large cupboards packed high with material gathered over the years, a tremendous amount of hard work and clearing was required. Now that we are happily installed, however, we can appreciate the wonderful, uncluttered feeling that comes with freshly refurbished offices designed to meet our specific requirements.

Our in-house meeting room seating up to 30 people is very welcome, obviating the need and expense of hiring rooms elsewhere. In terms of office space, however, the total area is not as large as Lister House, which will no doubt encourage us to keep on top of the filing!

We are pleased to be in good shape financially in the current difficult economic climate. At the present time we are committed to a minimum of £630,000 research funding over the next 12 months and the purchase of Furlong House has proved to be a shrewd long-term move in the light of the turmoil we have seen in the investment market.

We are receiving many exciting research proposals and are particularly glad that, in these difficult times, we are still in a position to support important new developments in orthopaedics.

Janice Dixon
Editor

MOVING WITH THE TIMES

The first half of this year has been exceptionally busy, not only because of the large number of activities taking place but because on 7th May we moved offices. It was always our intention to commemorate our founder, Ronald Furlong FRCS, by naming our headquarters after him.

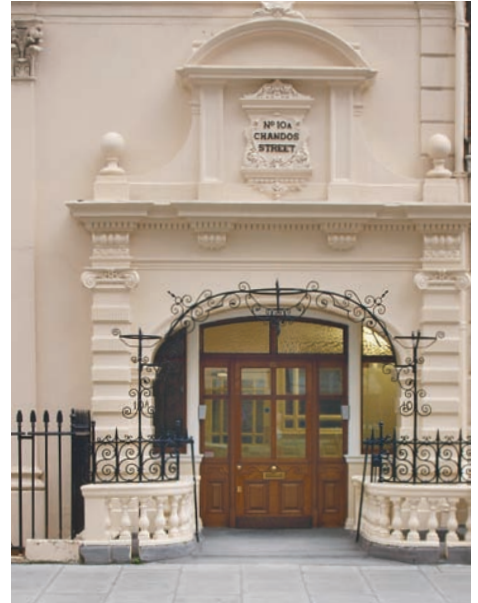
As you may know, Mr & Mrs Furlong left everything to The Foundation. As a charity, we must adhere to the rules and guidelines laid down by The Charity Commission and one of the requirements of the Commission is the preservation and diversification of our assets. To this end, the Board of Trustees decided to purchase a "prestigious" building as near as possible to Harley and Wimpole Streets. FRFCF would then use part of the building, the remainder being let, thus creating a steady stream of income and reducing outgoings, as we would no longer be paying rent. Chandos Street fits the bill perfectly being next to Harley Street and only five minutes walk from our old office at Lister House.

As you know FRFCF owns JRI Ltd, the Sheffield manufacturing company set up by Mr Furlong to manufacture the Furlong prostheses. All profits from JRI are gifted to the Foundation to further research – it is therefore necessary to produce consolidated accounts to meet Charity Commission rules.

Consequently it makes sense that the Finance and general Administration Departments of the JRI operation should remain in London. The Trustees therefore decided to let the top two floors of Furlong House to JRI at the current commercial rent for a London property. FRFCF and JRI are entirely separate within Furlong House.

One big advantage of our new office is that we now have a meeting room with state of the art facilities capable of taking 30 people. This is ideal for speciality days and similar-sized gatherings.

Furlong House is an attractive Georgian building and we have included a display cabinet of Furlong memorabilia in the reception area, which helps preserve some of the "feel" of Lister House.



LECTURES AND MEETINGS



As you know we like to end the year on a "festive" note with our traditional Furlong Christmas Lecture, which was held on 17th December 2008 at The Royal College of Surgeons of England. Professor William Bonfield CBE, FRS, FREng, Emeritus Professor of Medical Materials in the University of Cambridge delivered a fascinating lecture on "From Concept to Patient – Biomaterials Solutions to Tissue Regeneration". Following Ronald Furlong's seminal development of a hydroxyapatite coated hip prosthesis, Professor Bonfield described three developments in which novel biomaterials involving hydroxyapatite and therefore favourably bioactive within the body rather than simply bioinert, have been translated from laboratory concepts to clinical applications. The first application involved middle-ear prostheses, the second a bone graft substitute used for spinal fusion and thirdly a generic approach to cartilage repair. Professor Bonfield explained how such mimicking of biological structures provides the basis for biomedical devices which empower tissue regeneration.

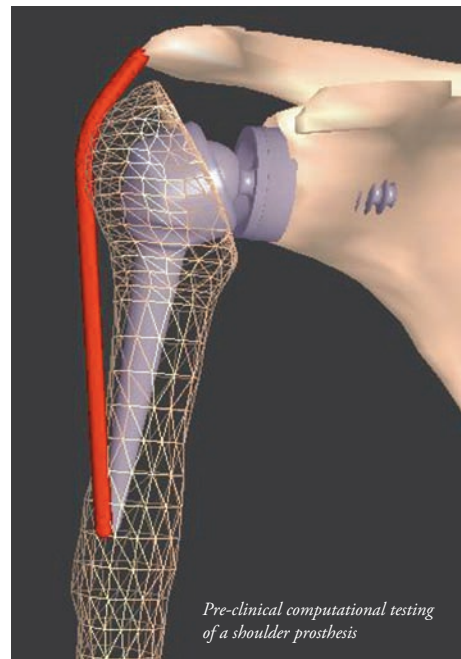
SPECIALITY DAYS

Three Speciality Days took place at Lister House, the Metal-on-Metal in January, the Upper Limb Speciality Day in February and the HA Speciality Day in April. These occasions are very valuable, providing as they do a forum for Furlong funded projects to present their work and findings so far. Each presentation is followed by a short brainstorming session allowing an opportunity for the groups to exchange ideas, learn from each other's research and horizon scan.

Metal-on-Metal: Six projects were included on this very important subject, two from the University of Oxford, one each from University of Leeds, Imperial College, London, UCL and Royal National Orthopaedic Hospital, Stanmore.

The Upper Limb Speciality Day: This was the second time The Foundation had organised a meeting devoted to the upper limb. Two projects related to the shoulder, the first, by Imperial College, concerned preclinical testing and design of a shoulder prosthesis and the second being undertaken at University of Newcastle involved musculoskeletal mechanics – an analysis of shoulder implants. The following two speakers, from Universities of Strathclyde and East Anglia described their work on the wrist and hand respectively. The Strathclyde project is studying load transfer characteristics in normal and pathological wrists, while E Anglia are studying Dupuytren's Disease of the hand.

HA Speciality Day: This took place on 6th February and covered seven projects being undertaken in this field. Ronald Furlong would be delighted to see how widely Hydroxyapatite is now used in the field of orthopaedics. Studies are underway on such subjects as a new generation of structural bioceramic bone graft substitutes and HA-multiwalled carbon nanotubes surfaces. The surgeon's view of advances in HA was given by Mr James Buchanan FRCS.



ORTHOPAEDICS – THE CUTTING EDGE

This symposium was held on Monday 16th March at The Royal College of Surgeons of England.

Dr Minoos Esat, our Director of Research, and Dr Serena Best, Chairman of the Board at The Institute of Materials, were joint convenors at this first collaboration between the Furlong Research Foundation and the IOM³

The event, which was by invitation only, was designed to create a forum for discussion between consultants, young orthopaedic surgeons, engineers, orthopaedic SPRs, academic professors and PhD students. The theme and focus was to horizon scan potential research areas for orthopaedic implants and to discuss novel materials and methodologies in orthopaedic practice.

The first presentation was given by Dr Geoffrey Andrews, CEO of Ranier Technology. The theme was the pioneering work that is currently being carried out using softer materials and its role in spine reconstruction.

Mr John Edge FRCS, Worthing and Southlands NHS Trust, gave a fascinating presentation, which evolved from his twenty years of surgical experience with ceramic on ceramic articulations.

Mr David Langton from the University of Newcastle talked about recent studies into metal-on-metal hip articulation and this was followed by Mr John Dougall, who presented a view of current materials in knee replacements and the need for further research into novel materials. This laid the foundations for the next two presentations given by Dr Andrew Lynne, Orthomimetics Ltd, and Mr Tim Briggs, The Royal National Orthopaedic Hospital, Stanmore.

Andrew described advances in regeneration medicine while Tim gave a most illuminating account of his exemplary research into cartilage repair.

The evening provided an excellent opportunity for networking and exchange of ideas and was found by all to be thoroughly informative and enjoyable.



FRCF FILES ITS FIRST PATENT APPLICATION

An exciting project has reached fruition – FRCF's collaboration with University College London (UCL) has resulted in the filing of its first ever patent application. The inventors are a research team in the department of Mechanical Engineering at UCL, whose members are Dr Xiang Li (Researcher), Dr Jie Huang (Lecturer), Professor Mohan Edirisinghe (Chair of Biomaterials) and Professor William Bonfield (Emeritus Professor of Biomaterials, FRS) and also Dr Minoos Esat from FRCF.

This British patent application is the invention of a new method of surface coating which has led to an interlocked bioactive coating on a metallic or other substrate, useful in orthopaedic engineering. The research leading to the patent application has its origin in an EPSRC supported generic research, carried out by UCL on generating nanotopographies on substrates by Electrohydrodynamic methods and has been further developed using a research grant from FRCF, in order to innovate a unique template-assisted coating technology.

The work was part of the doctoral research carried out by Xiang Li, an overseas student from China, who worked with Professor Edirisinghe and Dr Huang, gaining his PhD in March 2009. The results of this research have already appeared in several publications.

Implant Club Members

It is of course important to remember that all our work is for the benefit of patients and we therefore like to hear from you. Traditionally, our Christmas edition contains articles, letters and photos from patients, so please write or email your contributions. It is not only very reassuring for new patients to see how they can regain their former active lifestyles, but very rewarding for those at "the cutting edge" to see the results of their work. We look forward to hearing from you.



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THE FURLONG BASIC SCIENCE COURSE AT UNIVERSITY OF YORK

Our popular Furlong Basic Science Course takes place on 23-24 July and will for the first time be held at the University of York.

Course Convenors are Mr Kevin Sherman, Ex-examiner FRCS(Orth) 1998-2006 and Dr Minoos Esat, FRCF.

FELLOW OF THE INSTITUTE OF MATERIALS

Congratulations to Dr Minoos Esat, Director of Research, who has been awarded the Fellowship of the Institute of Materials (IOM³)