Staff at the NIHR Biomedical Research Unit for Musculoskeletal Disease were delighted to welcome Her Royal Highness the Duchess of Cornwall to the official opening of the Centre for Biomedical Research.

The Centre, which houses both the NIHR Biomedical Research Units, for Cardiovascular Disease and Musculoskeletal Disease, was officially opened by Her Royal Highness on the 4th May 2011.

The Duchess of Cornwall has a strong, personal interest in research into osteoporosis, having witnessed the devastating toll it took on the lives of both her grandmother and mother. She has been a patron of the National Osteoporosis Society (NOS) since 1997 and was made President in October 2001. During her first public speech at the 2002 World Congress on Osteoporosis, the Duchess (then Mrs Parker Bowles) called upon the NHS to increase spending on osteoporosis research, and has frequently emphasised the preventable nature of this common disease.

The Lord Lieutenant of South Yorkshire, David Moody, presented our visiting guests to Her Royal Highness at the entrance of the building. These included The High Sheriff of South Yorkshire, Mr Andrew Coombe DL; his wife, Mrs Sue Coombe; the Leader of Sheffield County Council, Mr Paul Scriven; the Chief Executive of Sheffield County Council, Mr John Mothersole; the Chief Executive of the National Osteoporosis Society, Mrs Claire Severgnini; the Chairman of Trustees of NOS, Mr David Reid; and Director of the Biomedical Research Unit for Musculoskeletal Disease, Prof Richard Eastell. Her Royal Highness was escorted around the Clinical Research Facility by Prof Richard Eastell. He first presented to her the Chairman of Sheffield Teaching Hospitals NHS Foundation Trust (STH NHS FT), Mr David Stone; Chief Executive of STH NHS FT, Sir Andrew Cash; Vice Chancellor of the University of Sheffield, Prof Keith Burnett, Pro Vice Chancellor for Medicine, Dentistry and Health, University of Sheffield, Prof Tony Weetman; and Scientific Advisor to

“It has been very interesting to see the work at this impressive new research facility and it has showed me how vital this facility will be for the advancement in research into bone and heart conditions”

Camilla, Duchess of Cornwall
The Duchess spoke with one of our undergraduate BMedSci students and PhD student Amy Evans, as well as some of our clinical fellows studying for higher degrees. She also spoke with representatives from both of our lay advisory panels.

Before leaving, Her Royal Highness unveiled a plaque to officially open the Centre and signed the guestbook. Prof Eastell commented,

“We were truly honoured to welcome The Duchess of Cornwall to officially open the new Centre. We are fortunate to have some of the best experts in the world working here in Sheffield and have amazing support from patients and the public who continue to participate in research trials.”

Pro Vice Chancellor, Professor Tony Weetman, echoed his sentiments, saying, “I am extremely proud that we have opened this outstanding facility, which is a great example of the close partnership between the Sheffield Teaching Hospitals Foundation Trust and the University of Sheffield. The teams in the Centre have already made significant progress in improving the treatment of bone and heart diseases, and I am sure there will be many future breakthroughs from their work.”

As the Duchess walked to her car, she took some time to speak to members of staff lining the car park, asking about their work within the centre and receiving a number of posies. Staff agreed that Her Royal Highness was very interested in their work, and found her to be likeable and witty. Camilla then departed for her remaining engagements within Sheffield.
Regular readers of our newsletter will be familiar with the XTremeCT scanner, which is an invaluable tool in the study of osteoporosis, helping us to understand how osteoporosis develops, why bones fracture, and how different treatments work to prevent this.

The first study using the XTremeCT, comparing bone mineral density in men and women of different ages, is now complete. One of the new studies that the scanner is to be used in is the Fat and Bone study, looking into the effects of different fat compartments on bone.

A recent press release by the Sheffield Teaching Hospitals NHS Foundation Trust was picked up by BBC Sheffield, who came to film at the Centre for Biomedical Research for Look North. Scan technician, Selina Simpson, was on hand to demonstrate the XTremeCT in action with one of our willing patients. Jennie Walsh spoke to Look North’s Health Correspondent, Penny Bustin, about the benefits that this piece of high-tech equipment will bring to research in the Unit, and how this will translate to better treatment for patients with osteoporosis and bone disease.

Focus on the Clinical Trials Research Unit

The Clinical Trials Research Unit (CTRU) is part of the School of Health and Related Research (ScHARR), and provides advice and practical support to investigators planning or running clinical trials. Working out of Regents Court (pictured), Tim Chater and John Martindale are data managers at the CTRU and have been heavily involved in the set-up of our clinical research databases.

They first became involved with our Unit in June 2009 as part of a project to migrate the TRIO data from an Access database into a more robust regulatory-standard database, designed using their Prospect system.

Prospect is a web-based database system which has been developed using the latest open source coding tools and is based on an original concept devised by Tim and John some years ago. Prospect is built and maintained in collaboration with programmers at epiGenesys, a software company spun-off from the University of Sheffield.

Prospect continues to evolve as new studies require new functionality – benefitting users across all studies. Recent new developments include a validation tool which is a valuable aid in
Focus on the Clinical Trials Research Unit cont.

“cleaning up” study data. Another exciting addition is the new reporting system which can be used to produce a variety of customer-specified reports, such as summaries of patient/form entry.

Storing and processing the TRIO data in Prospect brings a number of advantages. In addition to the secure login system and regulatory-standard audit trail, Prospect allows easy data entry through its user-friendly interface. If required, staff can opt to verify (double enter) records to help reduce errors in the transcription from paper onto the database.

One of the most successful parts of the collaboration has been the close working relationship that Tim and John have built up with the study facilitators, such as Sarah Inglis and Matt Fidler, as well as other key members of our staff. Sarah and the team have regularly offered thoughts and suggestions for improvements to how Prospect works and these ideas will be incorporated into the system over the coming months. One such outcome has been a vastly improved design of the case report form for our Forsteo study, including ‘administration’ sections which ensure our Research Nurses remember to perform everything they need to at each visit.

Tim and John are also working with our Research Lead for Bone Densitometry, Margaret Paggiosi, engineering a process for transferring scan data across onto Prospect.

Between them, Tim and John have notched up a combined total of more than thirty years as data and database managers, working in a variety of roles in the health service, academia and industry. They are incredibly enthusiastic about the work they do, and this can be seen in the way they apply themselves to any new task or idea. They have recently turned their attention to the redesign of the questionnaire as part of the BioBank study with Nicky Peel and are discussing a number of new ideas with the Biomedical Research Unit staff.

Unfortunately, other priorities mean that John is focusing his efforts on other projects within CTRU. But Tim has been joined by Saleema Rex, who has already contributed significantly to the migration of the TRIO scan data across into Prospect. Tim and Saleema are looking forward to continuing this successful collaboration in to the future.

Visit the Bone BRU website at http://www.sth.nhs.uk/research-innovation/bone-bru
Goodbyes

Diane Swift

After 9 years of service in orthopaedic research, we have bid a fond farewell to Research Sister Diane Swift, and wish her well in her new role as a nurse practitioner.

Diane qualified as a Registered General Nurse in 1990, working on a mixed trauma/elective orthopaedic ward for 12 years before completing a part-time BA(Hons) in Health and Society at Sheffield Hallam University. She then joined the Clinical Trials Unit, employed as an Orthopaedic Research Sister and working alongside investigators, including Mr Mark Wilkinson, one of the founding researchers of the Biomedical Research Unit for Musculoskeletal Disease.

Diane has been invaluable over the years in assisting with study set-up, administering patient recruitment and performing a number of clinical activities. Her specialist orthopaedic training allowed her to clinically review orthopaedic patients as well as digitising and reviewing X-rays.

Outside of work, Diane is known for her monumental fund-raising efforts, in particular for Walk the Walk, a charity organisation which raises money for Breast Cancer research by holding walking marathons around several major cities.

To sponsor Diane, click the picture, or go to http://www.walkthewalkfundraising.org/diane_swift_2

Stacy Young

Having been instrumental in setting up our Research Governance section, Stacy has now taken the opportunity to continue building her skills with the Sheffield Institute for Translational Neuroscience.

Stacy has been with the Biomedical Research Unit for Musculoskeletal Disease since the early days, joining during the transition period to a Biomedical Research Unit and helping to shape our procedures and infrastructure. Working with Jemima Clarke, Stacy’s main responsibilities were in helping the researchers to set up their study protocols in accordance with UK clinical trials regulations, Research Governance framework and ICH-GCP guidelines.

She also assisted in the running of a number of external studies. Stacy was the local coordinator for the SCOOP study, which is an evaluation of the effectiveness of screening patients at a high risk of osteoporosis. She was the UK Project Manager for ICUROS, a multinational data collections study analysing the cost of osteoporotic fractures.

Stacy was a valuable member of the team here, and always fully involved in the social aspects of work. Although Stacy has recently made the move out of Sheffield to Glossop, we hope to still see her around and wish her every success in this new venture.

Monthly BRU Group Meetings

18th July  5th August  12th Sept
17th Oct  14th Nov  12th Dec

Lecture Theatre 1, Medical Education Centre
13.00-16.00

Visit the Bone BRU website at http://www.sth.nhs.uk/research-innovation/bone-bru
NIHR Biomedical Research Unit for Musculoskeletal Disease

Publications

Original article


Gregson CL, Steel SA, O'Rourke KP et al. 'Sink or swim': an evaluation of the clinical characteristics of individuals with high bone mass. Osteoporos Int. 2011 Apr 1. [Epub ahead of print] PMID:21455762


NIHR Biomedical Research Unit for Musculoskeletal Disease

Publications


Review


Meetings

March

The interface between bone and kidney, London
Invited presentation: Osteoporosis: a view of where we were, where we are now, where we might go. Richard Eastell

British Hip Society, Torquay
Poster: The development and validation of the Sheffield Hip Morphology Software (SHIPS) for measurement and morphological parameters of the acetabulum and proximal femur. Shankar Thiagarajah

European Congress on Osteoporosis and Osteoarthritis ECCEO11-IOF, Valencia
Oral: Denosumab reduces the risk of clinical osteoporotic fractures in postmenopausal women, particularly in those with moderate to high fracture risk as assessed with FRAX®. Eugene McCloskey
Lecture: FRAX, 2 years after its launch. Eugene McCloskey

April

Society for Endocrinology BES 2011, Birmingham
Young Endocrinologists’ Symposium: Research in clinical academia. Miguel Debono
Poster: Effect of age and gender on bone turnover markers: relationships with oestradiol and parathyroid hormone. Miguel Debono
Poster: Glucocorticoid receptor antagonism as a decision making tool in patients with adrenal incidentaloma and low-grade excess cortisol secretion: a pilot study. Miguel Debono
Poster: The long-term safety and efficacy of Zoledronic acid in the treatment of osteoporosis: a 3-year, randomized extension to the HORIZON-Pivotal Fracture Trial (PFT). Richard Eastell
We welcome all your news and views, so drop us a line if you have anything you want included in the August newsletter. Deadline for contributions is 15th July.

**Meetings cont.**

Poster: Radius bone loss with ageing assessed by high-resolution peripheral computed tomography differs in men and women. Jennie Walsh

Meet the Expert: Assessing the fracture risk and response to therapy in osteoporosis. Eugene McCloskey

May

**St George’s Undergraduate and Postgraduate Research Association Research Meeting, London**

Oral: Effect of cemented prosthesis geometry on bone remodelling of the proximal femur following total hip arthroplasty: a randomised trial. Raveen Jayasuriya*

*Best oral presentation

3rd Joint Meeting of the ECTS & IBMS, Athens

Oral: The use of bone turnover markers in glucocorticoid induced osteoporosis. Richard Eastell

Oral: The mechanism for ageing of bone mass in older men and women: a high resolution quantitative computed tomography study. Jennie Walsh

Poster: Densitometric vertebral fracture assessment using the algorithm-based qualitative method: baseline fracture predicts incident vertebral fracture at 6-year follow-up. Lynne Ferrar

Poster: The relationship between bone mineral density and bone turnover markers in women at peak bone mass. Fatma Gossiel

Poster: Comparison of lateral decubitus and supine lateral vertebral fracture assessment (VFA) techniques. Margaret Paggiosi

Poster: Hip fracture in older women: association with hip structure by DXA. Lang Yang

Poster: Hip fracture in older women: association with the femoral strength as assessed by finite element analysis of DXA scans. Lang Yang

**ENDO 2011, Boston**

Forum: Risk assessment for osteoporotic fracture. Richard Eastell

Symposium: Bone remodeling assessment and interpretation. Richard Eastell

**Upcoming Meetings**

3rd Joint meeting of the BRS & the BORS
27-29 June, Cambridge
http://www.brsoc.org.uk/brsbors2011/

ASBMR 2011
16-20 September, San Diego
http://www.asbmr.org/Meetings/
AnnualMeeting.aspx

**Recent Funding Awards**

Children’s Hospital Charity £48,000

The development of MRI sequences for the analysis and quantification of bone and bone marrow in children.

Paul Dimitri

Arthritis Research UK £88,343


Lang Yang, Kim Naylor

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