



The
University
Of
Sheffield.



The
Mellanby
Centre
for Bone Research.

Annual Mellanby Centre Research Day – 5 December 2014

The University's Mellanby Centre for Bone Research held its annual meeting in December and over 100 people attended this. The meeting demonstrated the strength of bone research in Sheffield, from bench to bedside.

The Mellanby Centre for Bone Research was set up within the University of Sheffield 6 years ago and we held the annual research day at the Octagon Centre in December 2014. Richard Eastell is the Director of the Centre and he opened the meeting by explaining the strategic importance of the Centre, especially in the light of the Tooke Report on Medicine and Science. The Centre has been the basis of grant success, including the recently awarded Centre for the Integration of Research into Musculoskeletal Ageing (CIMA). The opening speaker was Dr Aymen Idris, (Human Metabolism, TUOS) and he described how an understanding of the key cellular pathways (mTOR, NFkB) allows targeting of new drugs therapies for cancer and bone. Dr Michaela Kneissel (Novartis, Basel) explained the key role played by sclerostin in regulating bone formation and how antibodies to this molecule are a promising new treatment for bone diseases such as osteoporosis. Dr Geeta Hampson (King's, London) described the inverse relationship between osteoporosis and vascular calcification and potential mechanism for this relationship (such as phosphate metabolism and fibroblast growth factor 23). Professor Peter Adams (Cancer Research UK, Glasgow) explained how cellular senescence has its basis the shortening of telomeres, oxidative stress and activated oncogenes and gave examples of how these principles have been applied to mesenchymal stem cells and the ageing of bone. Dr Claudia Massa (Insigneo, TUOS) spoke about the importance of upper body balance and how women are more stable than men, and this gender difference originates in childhood.

We introduced snap poster presentations for the first time and these were a popular format. They were one minute presentations on why someone could attend the poster. We awarded a prize to Magdalena Adamczyk for the best snap presentation. The best poster presentation was won by Gloria Allocca. The best oral presentation was won by Amy Evans; she described in a logical manner how the obesity was associated with high bone mineral density through changes in fat related hormones such as leptin.



This high resolution image of the tibia shows the typical finding of thicker cortex and more numerous trabeculae found in the bones of people with obesity as compared to normal weight subjects. This work was presented by Dr Amy Evans who won the best oral presentation award at the Annual Mellanby Centre Meeting in December 2014.