

Dr Cameron Brown
University Research Lecturer
Arthritis Research UK Career Development Fellow
University of Oxford



Cameron Brown undertook his PhD at QUT, Australia, receiving the University's Outstanding Thesis prize for 2008 for his work developing characterisation techniques for cartilage and bone. He then joined the Italy-Québec Joint Laboratory in Nanostructured Materials for Energy, Catalysis and Biomedical Applications at Università di Roma II and INRS, Université du Québec. As a FRSQ Fellow, he led an investigation into spider silk nanomechanics, particularly toughening mechanisms related to protein-water interactions, protein distribution and fibril interactions. In addition to its outstanding mechanical properties, the green chemistry and scalability of spider silk synthesis provide an excellent biomimetic target for the development of biomaterials and high performance fibre-based materials.

In 2010 Dr Brown moved to the University of Oxford to study the structure-function relationships in musculoskeletal tissues. Working at the interface of the physical, biological and clinical sciences, his research interests cover biomechanics, biophotonics and computational analysis on the nanometre to millimetre scales. Findings from fundamental studies are exploited for the bioinspired/biomimetic design of functional materials, and to improve the understanding, detection and treatment of musculoskeletal diseases. Dr Brown is the Oxford lead for the Marie Curie skelGEN Project, the image analysis lead for the 7-Tesla MSK imaging programme, and the engineering lead for the Arthritis Research UK Experimental Osteoarthritis Treatment Centre. In 2013 Dr Brown was awarded a Career Development Fellowship from Arthritis Research UK to develop optical methods for tissue characterisation.