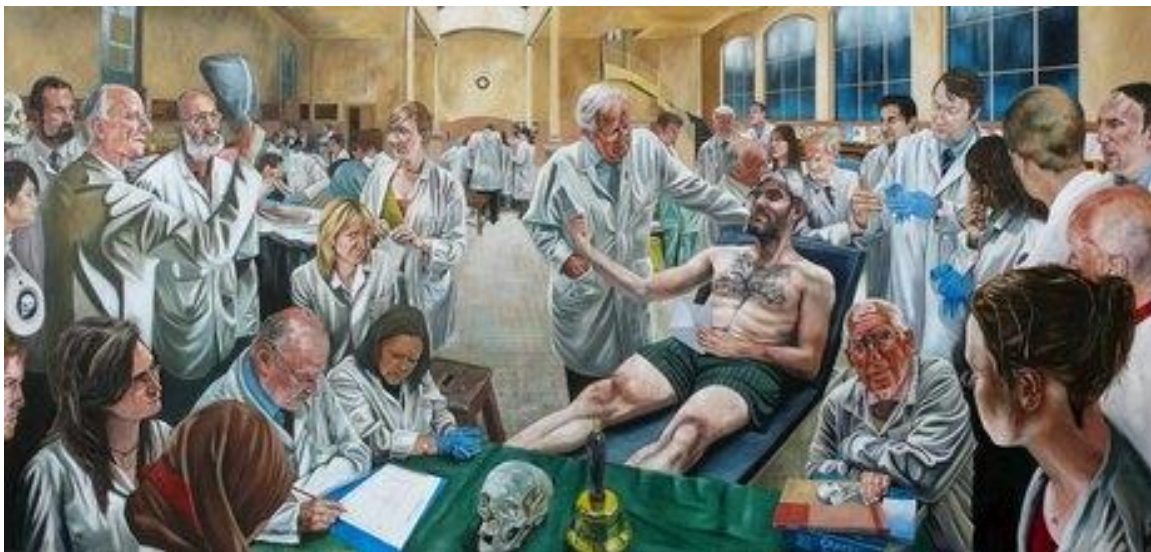


### **General History of the Anatomy Department and Current Teaching:**

Founded in 1784, the Royal College of Surgeons in Ireland (RCSI), like its sister colleges in Edinburgh, London and Glasgow, provides surgical training and governs the practice of surgery in Ireland. It is unique, however, in that it also has undergraduate and graduate entry medical schools, the largest in Ireland, as well as schools of physiotherapy and pharmacy. The Department of Anatomy was established in 1789 and its 6<sup>th</sup> Professor, Abraham Colles, revolutionized the teaching of anatomy by approaching it topographically, seeking 'to describe the relative position of the parts, and to point out the subservience of anatomical knowledge to surgical practice'. In our three campuses in Dublin, Bahrain (2004) and Kuala Lumpur (2011), we follow his advice and have broadened it from surgical to clinical practice. Our staff has medical, surgical, nursing, science and engineering backgrounds and teach in lecture, practical and on-line formats. Anatomy Room teaching involves both cadaveric dissection and radiological anatomy and is delivered by Lecturers, Graduate Student Demonstrators and Surgeon Prosectors, eight retired surgeons who provide a wealth of clinical experience. Our course is summarised in Stanley Monkhouse's textbook *Clinical Anatomy* and is complemented by on-line histology and a *Dissection Guide* both created in house - the guide is also used in the Society's Anatomy Training Programme.



*The Anatomy Lesson of the Irish College of Surgeons* by Robert Jackson, 2009

**Research in the Anatomy Department at RCSI:** Anatomy Staff at RCSI carry out research in a wide variety of areas including tissue engineering of bone and cartilage, regenerative medicine, stem cell biology, drug delivery, gene therapy and angiogenesis. We have collaborations with the Trinity Centre for Bioengineering (TCBE) at Trinity College Dublin (TCD) and the Regenerative Medicine Institute (REMEDI) at the National University of Ireland in Galway (NUIG) amongst other national and international partners. Our group is truly multidisciplinary with physical, material and life scientists, engineers, clinicians and veterinary surgeons all working together. The main strands of research within the group are: Tissue Engineering and Regenerative Medicine, Osteoporosis and Bone Mechanics and Cardiovascular Disease Modification.

**Prof. T. Clive Lee** is a medical graduate of TCD where he took an intercalated science degree. After internship, he was an Anatomy Demonstrator in TCD, gaining his MSc, and a surgical trainee in Dublin, obtaining his FRCSI and FRCSEd, before being appointed lecturer in anatomy in the RCSI in 1989 and subsequently its 29<sup>th</sup> Professor of Anatomy in 2002. His research in bone biomechanics, for which he has been awarded a PhD (1995), MD (1997) and ScD (2010), began the Department's collaboration with engineers in TCD where he is currently Visiting Professor of Biomechanics and Tissue Engineering (2003) and Chair of the Executive Committee of the TCBE. He was a Fulbright Scholar in the Orthopaedic Biomechanics Laboratory at Harvard (1995-96) and was appointed Professor of Anatomy in the Royal Hibernian Academy of Arts in 2007. Recent research includes collaboration between anatomists from RCSI, engineers from TCD and artists from the RHA to produce a *Surface Anatomy Guide* in 3D, which is used by medical students in Dublin, Bahrain and Malaysia and surgical trainees in Ireland and in the nine countries of the College of Surgeons of East, Central and Southern Africa.



**Prof. Fergal O'Brien** currently heads one of the largest regenerative medicine research groups in Ireland. He is a graduate in mechanical engineering from TCD. His PhD research was in the area of bone mechanobiology (awarded from TCD in 2001). He subsequently carried out postdoctoral research in orthopaedic tissue engineering at MIT in collaboration with Harvard Medical School before his appointment, in 2003, as a Lecturer in Anatomy in RCSI. He was promoted to Senior Lecturer (2006) and Associate Professor (2007). In addition he holds an adjunct appointment as Associate Professor in Bioengineering in TCD and is a PI and Executive Committee member of the TCBE. His research focuses on bone mechanobiology and osteoporosis and the development of novel scaffolds for tissue engineering. He has a specific interest in the application of stem cell biology and gene therapy to these scaffolds and the biomechanical factors which control stem cell differentiation. Recent studies have focused on comparing the bone healing responses of stem-cell seeded and cell free collagen-based scaffolds (*Biomaterials*, 2010) and the development of non-viral scaffold-based gene delivery systems for bone repair (*Advanced Materials*, 2012).

In 2011, **Dr. Tom Farrell** a Senior Lecturer in Anatomy RCSI was among five third level teachers who were recognized as exemplifying excellence in teaching at the annual National Academy for the Integration of Research, Teaching and Learning (NAIRTL) awards. Tom is also currently pursuing research in techniques of regional anesthesia and anti-coagulation in post-operative patients.

**Dr. Alice McGarvey** is a Senior Lecturer in Anatomy at RCSI. She held the role of Vice Dean for Student Affairs from 2006-10. In June 2010, Alice was appointed as Vice Dean for Student Career Development. This role involves developing post-graduate career opportunities for students studying in RCSI both in Ireland and internationally. Her research interests include investigating the effects of NSAIDs on the morphology and kinetics of the intestinal mucosa, efficacy of intramuscular injections and the impact of cultural diversity on the experience of students in a Western third level institution.

**Dr. Jane Holland** is a Lecturer in Anatomy and one of 2011's recipients of the President's Teaching Award within RCSI (student-nominated). Her main interests are in e-learning and assessment, providing a number of in-house workshops in this area, and she is also currently completing a PhD examining the role of bone turnover in osteoarthritis. Recent work from her PhD was published in the *Journal of Anatomy*.

**Dr. Garry Duffy** joined the Anatomy Department as Lecturer in July 2008 from the Regenerative Medicine Institute at NUI Galway where he completed his PhD in stem cell biology. He is also a PI in Cardiovascular Regeneration at the TCBE and a Fulbright Scholar in 2006 to the Georgia Institute of Technology. His current research focuses on adult stem cell and gene therapies for cardiovascular disease, particularly heart failure and novel methods of delivery. His research is funded by Enterprise Ireland, the Irish Heart Foundation and the Health Research Board. Recent publications include an in-vitro model of osteocyte networks and repair which was published in *Bone* in 2011.

