

## History of anatomy at Newcastle

Anatomy has been taught at Newcastle since 1834. Like many other Universities now, anatomy teaching at Newcastle is no longer delivery by an Anatomy Department. Our Anatomy Department was abolished in 1989 and an Anatomy Teaching Centre was established instead. This was a teaching only facility and research was carried out by anatomy academics who were deployed in a variety of research schools. Currently the circle is now complete and the anatomy facility and the majority of our anatomists now reside, teach and research within the School of Medical Sciences Education Development.

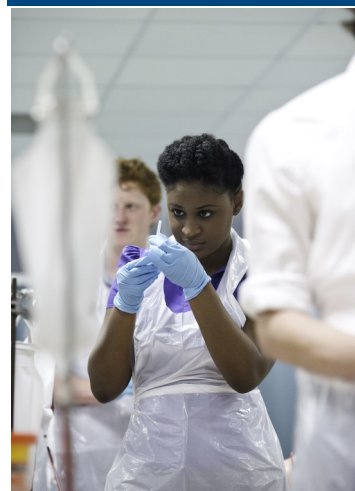
## Anatomy at Newcastle today: teaching and pedagogic research

The School is renowned for curriculum innovation, staff development, teaching and research. We are located at the centre of the Medical Faculty and our 100+ staff includes experienced clinicians working in the region's hospitals, GP practices and NHS trusts. Our facilities are unrivalled in the region and we manage the body bequeathal programme for the northern region. Bequests of bodies after death to Newcastle University are used either to teach anatomy to medical, dental and biomedical students and other health care professionals at Newcastle University or for surgical training, education or research at Newcastle Surgical Training Unit at Freeman Hospital. This unit serves as a major teaching resource for surgical training, education and professional development and was the first surgical training centre in the UK licensed to use cadavers for surgical training under the Human Tissue Act (2004). The School also supplies cadavers for the Phase 1 Medical course delivered at Durham University Queen's Campus as well as temporal bones for the regional temporal bone laboratories.

## Teaching

Anatomy is taught at undergraduate level to medical students on our 5 and 4 year MBBS programmes and to undergraduate students enrolled in Dental Sciences, Speech and Language Sciences and Biomedical Science degrees. We also teach anatomy (non-cadaveric) at our NUMed campus in Johor, Malaysia where we deliver the Newcastle MBBS course; students are awarded the Newcastle University MBBS degree which is GMC recognised. At postgraduate level we deliver a Module in Surgical Anatomy for intercalating medical students enrolled on the Newcastle University Medical Sciences Masters in Research programme and we teach anatomy to students studying for a Masters in Clinical Science. We also host, design and deliver a range of surgical CPD courses and we teach anatomy to FRCR radiological trainees, students of sports science, physiotherapy, Pilates, sports massage and beauty therapy.

Anatomy teaching takes place in our Anatomy and Clinical Skills Centre, a modernised, fully equipped clinical skills, surgical skills and gross anatomy facility. Our students are taught anatomy and clinical skills by staff who are experts in their fields and are actively involved in regional innovation work. We have an extensive collection of learning resources including prosected material, potted specimens, articulated and disarticulated bones and anatomical models. Less traditional anatomy teaching and learning resources include: 3-D modelling activities, body painting to study surface anatomy, Virtual Human Dissector™ to study cross-sectional anatomy and portable ultrasound to teach living anatomy. Our Clinical Skills Centre is set up with hospital beds and a Scotia Medical Observation and Training (SMOT) System Three. We have a range of manikins, models and simulators including 3G SimMan (3G). We also have a Continual Professional Development (CPD) Laboratory for postgraduate surgical and clinical skills courses.



## Pedagogic research

As a school we are increasing our portfolio of research into pedagogy in medical education. We have an active and supportive research community with the School playing host to regular School research seminars with external speakers and a monthly Research Interest Group which brings together staff, PhD students and NHS researchers to discuss ideas and form networks. We have a small but dedicated team of anatomy teaching staff whose particular focus is on the pedagogy of anatomy teaching and learning. Current areas of interest are: anatomy learning by students, spatial awareness and its influence on anatomy learning, use of simulation in clinical training, the use of ultrasound in the undergraduate medical curriculum and the relationship between anatomy and art. Details of our research interests can be found in the short staff profiles which follow.



### **Professor Philip Bradley, Head of School of Medical Education**

Professor Philip Bradley was first appointed as a lecturer in the (then) department of Anatomy at Newcastle University in 1979. His research interests at the time were centred on quantitative studies of the morphological changes at synapses that accompanied learning. He was Director of the University Biological Electron Microscopy Unit and facilitated the development of ultra-structural studies within the University. In 2008 he was appointed Director of Medical Studies at Newcastle and in 2011 moved to Malaysia to become the founding Academic Dean of the Newcastle branch campus which was established there. At NUMed he has had to develop anatomy teaching without the use of cadavers (there is no legislative framework for the donation or use of cadavers in Malaysia) and has taken the opportunity to focus teaching onto the relationships between structure and function and on surface anatomy and imaging. Philip has been a member of the Anatomical Society for many years and was a council member until 2011.



### **Dr Debra Patten, Director of Anatomy and Clinical Skills**

As Director of Anatomy and Clinical Skills Debra has lead responsibility for developing the teaching strategy for anatomy and clinical skills. She is the HTA Designated Individual and supervises the regulated activities of anatomical examination at Newcastle University and its three satellite sites in the North-East at Durham University Queen's Campus at Stockton, James Cook University Hospital Middlesbrough and the Newcastle Surgical Training Centre at Freeman Hospital in Newcastle upon Tyne. Debs is a graduate of the University of Sheffield (Anatomy and Cell Biology) and gained her PhD in Neuropharmacology at the University of Durham. She holds a Postgraduate Certificate in Academic Practice from the University of Southampton and has been teaching anatomy for almost fourteen years and her expertise in the field has been recognised by both the Higher Education Academy and the CETL4HealthNE. Her current research is in medical education, particularly related to innovations in anatomy teaching, learning and assessment; she is particularly interested in the effect of spatial awareness on an individual's ability to learn and understand anatomy. She has led the introduction of ultrasound into undergraduate anatomy teaching and is module leader for our Masters' module in Surgical Anatomy.



### **Professor Stephen McHanwell, Professor of Anatomical Sciences**

Professor Stephen McHanwell was first appointed as a lecturer in the Department of Anatomy at Newcastle University in 1983 and was promoted to a personal chair in 2007. He is a National Teaching Fellow of the Higher Education Academy. During his time in Newcastle his roles have included Degree Programme Director of the B Med Sci Intercalated Degree Programme, Director of Stages 1 and 2 of the BDS Programme and Director of Academic Teaching for the BDS Programme, Head of Neurobiology and Chair of University Academic Audit Committee. His teaching is mainly to undergraduate and postgraduate dental students, undergraduate and postgraduate Speech and Language Sciences students and students on the Diploma of Dental Hygiene and Therapy. He is co-author (with Martin Atkinson) of a textbook of anatomy and physiology for speech students and is in the course of preparing a 2<sup>nd</sup> edition.

Prior to coming to Newcastle he had been an MRC French Exchange Fellow in the laboratory of Prof Nicole LeDouarin and on coming to Newcastle his research interests were focussed

upon neural crest. His current research is focussed in two areas, one in laryngeal biology and the other in education. His interests in laryngeal biology are on clinical anatomy, development and innervation of larynx (in the latter case returning to a facet of work begun while a PhD student in Bristol) and are carried out in collaboration with colleagues in Complutense University, Madrid. His education interests focus on student learning in anatomy, curriculum theory and development and the reward and recognition of teaching excellence in higher education. He has just completed a project as Co-Principal Investigator on an HEA-Funded Inter-Institutional Benchmarking Project: Reward and Recognition for Teaching in HE (with the universities of Tasmania, Wollongong and Leicester). He is a member of the Centre for Learning and Teaching in the School of Education. He has been a member of Anatomical Society since 1987 and has served on Council, Committee of Management and was Education Officer for nine years. He is one of the co-authors of the Anatomical Society Core Syllabus that was published in 2007. Currently he is President of the Trans European Pedagogic Research Group in Anatomy where he is leading the development of a cross-European project on anatomy pedagogy.



### **Dr Gavin Clowry, Senior Lecturer, Neuroscience**

Gavin Clowry is active in both anatomy related research and teaching. He currently teaches upper limb anatomy to both medical students and post-graduates, with an emphasis on incorporating clinical relevance into the course. He also delivers practical classes in neuroanatomy to biomedical science, physiology, psychology and post-graduate students. He supervises and conducts research into the development, plasticity and repair of the nervous system. Current projects include a study of the molecular neuroanatomy of the developing human cerebral cortex, which has involved past and present Anatomical Society sponsored post-graduate students Bui Kar Ip and Lauren Harkin, treatment of stroke with stem cells in an animal model, and visualisation of peripheral nerves in vivo with fluorescent markers to guide reparative surgery.



### **Professor Geoff Hammond, Teaching Fellow**

Geoff was appointed as Professor of Medical Education Development (2005), and although has now semi-retired, he continues to make a valuable contribution to our School. He was Head of School of Medical Education Development (2002-2012) as well as Director of CETL4HealthNE, a regional consortium involving the Universities of Durham, Northumbria, Sunderland and Tees-side and NHS partner organisations (North Tees and Hartlepool NHS Foundation Trust and Northumbria Healthcare NHS Foundation Trust) with Newcastle University as the lead partner.

Geoff's vision and strategic approach has endowed the medical MBBS degree with its cutting edge approach to Learning Technology which underpins our students' and staffs' experience of medical education. He was director of numerous HEFCE and DfEE projects and educationally innovative activities which attracted large sums of funding. He was also awarded funding to lead a UK-US collaboration of e Doctoring, developing shared interest based resource to support multidisciplinary clinical education. He was nominated for National Teaching Fellowship in 2004.



### **Dr. Joanna Matthan, Senior Demonstrator**

Originally from Finland, Joanna qualified as a doctor from the University of Newcastle in 2010 and has completed her Foundation Training in Newcastle's busy central hospitals. Primarily her role involves lecturing in head and neck anatomy, demonstrating anatomy and teaching clinical skills to undergraduate level medical students. She has a strong interest in head and neck as well as abdominal and pelvic anatomy - and the etymological origins of anatomical terms.



### **Dr Iain Keenan, Teaching Fellow**

Iain is a teaching fellow based in Anatomy and Clinical Skills and he delivers gross anatomy, histology and embryology teaching to MBBS students. Iain is currently working towards accredited teaching qualifications that will result in fellowship of the Higher Education Academy and will begin work towards the MEd at Newcastle University in 2013/14. He is a graduate of the University of York where he gained his BSc (Hons) Biology and his PhD. Iain has broad knowledge and experience in anatomical and biological sciences having undertaken research concerning the molecular regulation of development and cancer between beginning his doctorate in 2000 and leaving the field in August 2012 to take up his current teaching fellow position here at Newcastle University.

Iain is currently developing a research theme entitled "*The future of anatomy: A student partner approach for evidence-based evaluation and implementation of artistic teaching and learning techniques*" that will form part of the School of Medical Sciences Education Development pedagogic research programme. Iain's project is currently the subject of a funding bid for a teaching development grant and Iain recently won a clinical teaching award for the presentation of his proposal.



**Brian Thompson, Technical Manager**

Brian knows our Anatomy and Clinical Skills facility inside and out. He manages the technical support and makes sure all equipment is in the right place at the right time. He is also responsible for the prosection of human cadavers and for training colleagues and students in dissection techniques.; in 2013 he was awarded the Marjorie England Dissection Prize by the Institute of Anatomical Sciences (IAS). He is an HTA PD and he manages our Body Bequeathal Programme and its associated database. He is responsible for the health and safety of everyone who uses our facility. Brian and his team recently organised the 2012 Spring Meeting of the IAS which was hosted at Newcastle University.



**Lynsey French, Technician**

Lynsey provides technical support to the Anatomy and Clinical Skills team. She assists in the management of the Body Bequeathal programme, prepares prosections and ensures that anatomy and clinical skills classes are set up for staff and students. Lynsey is Membership Secretary of the IAS.



**Jessica Wragg, Technician**

Jessica also provides technical support to the Anatomy and Clinical Skills team. This involves setting out equipment and anatomical models for use in demonstrations of clinical techniques and anatomy classes for various professionals and medical students.