

## School of Medicine, Pharmacy and Health



Undergraduate Medical education is delivered in the North East through a partnership between Durham and Newcastle Universities, together with a region-wide NHS infrastructure of acute hospitals, general practices and public health units, serving a large patient population of 3.5 million.

Through this exciting partnership, the 5-year medical programme is delivered in two phases. Phase I of the programme (2 years), is offered by both universities, while Phase II (3 years) provides clinical experience in a wide range of NHS hospital and community settings across the region, under the management of Newcastle University.

Phase I Medicine at Durham University is located at the Queen's Campus, Stockton-on-Tees; and is part of the School of Medicine and Health in the Faculty of Social Sciences and Health. The modern purpose-built campus, with an attractive waterside location is also an integral part of Durham University. Durham University is collegiate, with students becoming members of either John Snow or George Stephenson college.

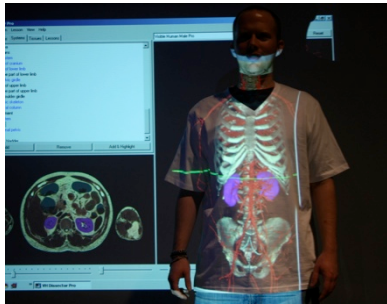
The School of Medicine and Health in collaboration with the Wolfson Research Institute, engages in community-based research which focuses on medicine, health and the wellbeing of people and places with particular emphasis upon these in the north east of England.

**Anatomy** is taught as part of an intergrated spiral curriculum. Students are taught using a case based approach. The anatomy programme utilises a number of teaching methods including for example lectures, practical classes, intergrated clinical skills and surface anatomy teaching, tutor-supported self-directed learning, computer assisted learning, and more.

### Anatomical research

Anatomical research at Durham University is mostly pedagogic and thus is carried out at **The Centre for Medical Education Research**. The Centre is comprised of a multidisciplinary group of research and teaching staff located across both the Durham city campus and the Queens campus, Stockton. Anatomical research is therefore conducted by anatomists, clinicians, psychologists and educationalists, all working towards improvement of the teaching and learning experience. Medical Education Research is concerned with the education and training of the clinical team to enhance performance and professionalism, for the benefit of

patients and society. Research into anatomy pedagogy is just one part of the centre's broad spectrum of work.



The research activity of the Centre falls under a number of themes, and has a variety of funding sources, with partners and collaborators in higher education and the NHS. Please follow the links in the sidebar to the left to find out more. Members of the Centre also contribute teaching to the MBBS curriculum delivered at Queens Campus and to the MSc Medical Education programme.



### **The Arts within anatomy education**

Durham University is a leader in the use of art-based approaches to teach anatomy, for both the purposes of medical education and public engagement. Departmental expertise is particularly strong surrounding the use of body painting as tool for teaching surface anatomy and as a mechanism for increasing student comfort and engagement in the peer examination process. Other wearable anatomies such as the dermatome jeans and incisions gown have been developed in collaboration with the University of Ulster's textiles department.

**Professor John McLachlan** is Associate Dean for Undergraduate Medicine. John has been involved in teaching human anatomy and embryology since 1983; in 1994 he published an embryology text book which was shortlisted for the BUPA Prize for Medical Writing, but sadly, failed to win when it came up against that classic page turner "Surgery of the Anus". At Peninsula Medical School, he was part of the decision process which led to the teaching of anatomy without cadavers. Describing this as 'contentious' would be an understatement. The reasoning was that the average doctor experiences anatomy through living anatomy and medical imaging, and this therefore was how it should be taught in undergraduate settings. This approach led to the development of a number of innovative approaches to anatomy teaching, including the use of portable ultrasound, an extensive programme of peer examination, use of 'life models' (later more accurately described as 'clinical skills partners'), body painting and image projection. On moving to Durham, the anatomy staff probably feared that he would bin the cadaver programme; instead he worked with them on integrating cadaveric anatomy with the new methods he had introduced at Peninsula. He and his team have published extensively on a variety of pedagogical approaches to anatomy, including peer examination, clinical skills partners, body painting, and assessment of anatomy knowledge, and has offered guidance to a number of other medical schools on how to approach anatomy teaching for clinical relevance. He has also been involved in several arts and humanities projects, including 'Flex and Ply', with Professor Karen Fleming, funded by the Wellcome Trust, which resulted in the production of a number of anatomy art objects which have attracted world wide coverage and been presented at venues ranging from Science Museums to cat walk fashion shows.



**Dr Gabrielle Finn** is Lecturer in Anatomy within Phase 1 Medicine. She is co-strand leader for the Thoughts, Senses and Movement module and assessment lead within anatomy. Gabrielle completed her PhD in Medical Education (Durham University) in 2010. Her doctoral studies explored innovative pedagogic teaching within anatomy education, a topic she continues to investigate. Her current anatomical research

centres round the use of ultrasound within undergraduate teaching and the impact of contextual learning within the preclinical, anatomical environment. She is a Fellow of the Higher Education Academy and of the Centre for Excellence in Teaching and Learning. Gabrielle became a councillor for the Anatomical Society in 2009 and contributes to the society's education, website and meetings committees, as well as overseeing the society's advertising, public relations and outreach strategies. Gabrielle is Executive Secretary for the Centre for Medical Education Research at Durham University.

Gabrielle has published within both the quantitative and qualitative paradigms and is an active peer reviewer for several international education journals as well as Associate Editor for the journal *Anatomical Sciences Education*. She has received awards for excellence in teaching and the Choice Critic Award for peer review and was recently awarded an international travel fellowship from the Association for the Study of Medical Education to research identity formation at the Mayo Clinic, USA. Her other research foci are professionalism, personality and professional identity formation. In collaboration with colleagues from Durham University and the Anatomical Society Gabrielle also explores self-assessment, learning styles and personality in relation to performance in anatomy assessments. Gabrielle edited an anatomy text, '30-second Anatomy', which she also co-authored along with colleagues at the Anatomical Society and Durham University.

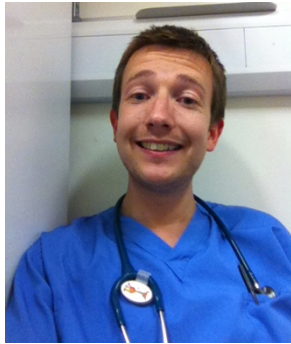
**Mrs Pam White** has been an Anatomy Teaching Fellow at Durham University for three years. Pam is co-strand leader for the Thoughts, Senses and Movement module. She is a Fellow of the Higher Education Academy, a member of the Anatomical Society and of the Centre Medical Education Research. In addition to her anatomy and clinical skills teaching, Pam is diversity and equality lead for the department as well as champion for widening access. Pam's research interests are based within anatomy pedagogy. She is particularly interested in using art-based approaches such as body painting and clay modelling within the educational environment. Pam is currently researching anatomy assessment and the use of the clinical vignette, and is exploring integration of anatomy teaching and clinical skills within undergraduate medicine. Pam is a recent recipient of the Excellence in Teaching and Learning award from Durham University.



**Dr December Ikah** combines anatomy and clinical skills teaching with overseeing students' academic writing skills in the Students' Selected Component strand. Dr Ikah's current research is in the application of clinical information to assessment in anatomy with the view of aligning assessment with broader curricular goals. Dr Ikah's medical training was in University of Port Harcourt, Nigeria, following which he practiced general medicine along with a Lectureship in Human Anatomy at Niger Delta University, Nigeria. He was later awarded state funding to pursue a PhD in Liverpool University on nanomaterials uptake and neurotoxicity using a variety of microscopic methods. He has published outputs in book chapters and journal and has been speaker in national and international conferences.



As a fellow of the Higher Education Academy, Dr Ikah has applied himself to bringing his experience as clinician, cell biologist and a teacher to bear on students' learning experience. In his role as teaching fellow at the Durham University Medical School, December takes the lead in neuroanatomy teaching. His research work in developing test items with clinical stem underlies current efforts to improve assessment practice in Durham University medical program. He also coordinates prosection and the development of cadaveric materials for regional and international postgraduate courses run in collaboration with the South Tees Hospital Trust.



**Dr Michael Griksaitis** is a paediatric intensive care speciality registrar at Southampton University Hospital, and Honorary Clinical Fellow at Durham University. His specialist interest is in the care of children with heart disease, both structural and functional on the intensive care unit. He is involved with undergraduate and postgraduate teaching of all levels, with his medical education research focussing on the teaching modalities used to teach cardiovascular anatomy, namely echocardiography. This research has been published and presented on an international level. He is actively involved in teaching thoracic anatomy using imaging tools along with cadaveric teaching tools. He is co-author of the newly released textbook 'Essential Revision Guide to Paediatric Cardiology' and is an active research in both medical education and critical care.



**Dr Marina Sawdon** is a whole body physiologist with a Ph.D. from Durham University. Marina also contribute to anatomy research within the department. She is the strand leader for the Cardiovascular, Respiratory & Renal Medicine strand on the Phase 1 Medicine course and contributes to anatomy research. She has held positions as an Honorary Physiology Lecturer within the Department of Academic Emergency Medicine/ Faculty of Pre-Hospital Care Research Unit at James Cook University Hospital, Middlesbrough, and was co-physiology editor for the Anaesthesia and Intensive Care Medicine Journal, in which she has several publications. She is currently an Associate Editor for BMC medical Education. Marina's research background is, historically, in the physiological responses to trauma but more recently has moved over into the field of medical education. She has conducted studies looking at the effect of teaching undergraduate cardiac anatomy using cadavers and ultrasound echocardiography, and self-assessment of anatomy exam performance. Recent studies include the use of simulation in undergraduate medical education, and measuring professionalism in health care professionals and undergraduate medical students.

**Dr. Meenakshi Swamy** is a medically qualified anatomy Lecturer with a postgraduate degree in Anatomy. Her medical qualification enables her to contribute clinical knowledge and input both to the teaching and the assessment of the Anatomy programme. She is involved in developing resources for anatomy teaching. During her postgraduate studies in anatomy, her research has been in gross anatomy and she has had publications in peer reviewed journals. Her current research is in medical education with particular interest in exploring the role of ultrasound in anatomy teaching and her work has been recently published. She has been involved in researching the impact of clinical vignettes on student performance in anatomy spotter assessment. She also assists in the integration of clinical skills teaching with the Anatomy programme and is involved in research using simulators for teaching undergraduate medical students in Phase 1 Medicine.



**A selection of publications related to anatomy pedagogy from members of our research group:**

- Collett, T, McLachlan, JC, Kirvell, D & Nakorn, A (2008). The role of living models in anatomy teaching: experiences from a UK medical school. *Medical Teacher* 31(3): e09-e96
- Donnelly JL, Patten D, White P and Finn GM Virtual Human Dissector as a learning tool for studying cross-sectional anatomy. *Medical Teacher* (2009). 31(6):553-555.
- Finn GM and McLachlan JC. A qualitative study of students' perceptions of body painting. *Anatomical Sciences Education* (2010) 3:33-38.
- Finn GM, Patten D and McLachlan JC. The Impact of wearing scrubs on contextual learning. *Medical Teacher* (2010) 32: 381–384.
- Finn GM, Sawdon M and Griksaitis M. The additive effect of teaching undergraduate cardiac anatomy using cadavers and ultrasound echocardiography. *European Journal of Anatomy*. (2012) 16 (3): 199-205.
- Finn GM, White P, Abdelbagi I. The impact of colour on retention of knowledge: A body-painting study within undergraduate medicine. *Anatomical Sciences Education*. (2011). 4(6): 311-317.
- Finn GM. Twelve tips for running a successful body painting teaching session. *Medical Teacher* (2010) 32: 1-4.
- Griksaitis M, Sawdon M, Finn GM. Ultrasound and cadaveric prosections as methods for teaching cardiac anatomy: A comparative study. *Anatomical Sciences Education*. (2012) 5:20-26.
- McLachlan, JC & Patten, D (2006). Anatomy teaching: ghosts of the past, present and future. *Med Educ* 40(3): 243-253.
- McLachlan, JC & Regan de Bere, S (2004). How do we teach anatomy without cadavers? *Clinical Teacher* 1: 49-52.
- McLachlan, JC (2004). New path for teaching anatomy: living anatomy and medical imaging vs. dissection. *Anat Rec B New Anat* 281(1): 4-5.
- McLachlan, JC, Bligh, J Bradley, P & Searle, J (2004). Teaching anatomy without cadavers. *Medical Education* 38(4): 418-424.
- Rees, CE, Bradley, P, Collett, T & McLachlan, JC (2005). 'Over my dead body?': the influence of demographics on students' willingness to participate in peer physical examination. *Medical Teacher* 27(7): 599-605.
- Swamy, M, Bloomfield, TC, Thomas, RH, Singh, H & Searle, RF (2013). Role of SimMan in teaching clinical skills to preclinical medical students. *BMC Medical Education* 13: 20.
- Swamy, M. & Searle, R. F. (2012). Anatomy teaching with portable ultrasound to medical students. *BMC Medical Education* 12: 99.