Programme 7 – Imaging – based at St Thomas' Hospital
Reference: 2122/KCL/07

Individual Placement Descriptor (IPD) for the four month academic placement
Separate IPDs for clinical placements are available on foundation school websites

Type of programme

A combined clinical and research training programme ideally suited to individuals with prior undergraduate research experience who are interested in an imaging clinical academic career.

Employing trust:	***Academic placement based at:***
Guy's and St Thomas' NHS Foundation Trust	Division of Imaging Sciences and Biomedical Engineering, King's College London St Thomas's hospital

Brief outline of department

The Division of Imaging Sciences and Biomedical Engineering has a focus on translational with scientists in biomedical engineering, imaging chemistry and biology developing fundamental technologies that are refined and translated into clinical applications by clinical academics. There is a strong focus in cardiovascular disease, cancer and neuroscience and our clinical and research activity occurs at St Thomas' hospital. Within the Division 70% of the academic team are engineers or physical scientists who work closely with clinicians and biologists focusing on disease of worldwide significance. The Division hosts a number of Centres including Wellcome/EPSRC Medical Engineering Centre of Research Excellence and the Imaging theme of our recently renewed NIHR Biomedical Research Centre. Current research strengths relevant to this post include computational modelling (development of models which can give us insights into mechanisms of disease), Image guided interventions (including new methodologies such as MRI guidance) and MRI, PET and ultrasound research (particularly to better the physiology and pathology of disease).

Structure of academic project/what expected

A 4 month full-time attachment based within the Imaging and Biomedical Engineering Division (with state-of-the-art research facilities including dedicated research scanners, laboratories and high performance computing facilities). Projects are agreed between the trainee and educational supervisor at the beginning of the F2 year. Research areas include Cardiovascular imaging (MRI, CT) and biophysical computational modelling, Cancer imaging (PET, MRI combined PET/MRI), bio-statistical and machine learning methodologies and neuroscience (MRI including 7T and PET) including neuro-receptor modelling. The trainee should expect to be involved in a topical project with exposure to state-of-the-art research techniques, and develop some ideas about future PhD training projects. It may be feasible to continue some research during the 4 month clinical rotations that follows the academic placement.

Clinical commitments during academic placement

The academic F2 will be required to be on an out of hours rota at Guy's and St Thomas' NHS Foundation Trust which comprises of 1 in 4 weekend twilight shifts and will not affect the academic

weekday timetable. The F2 is expected to attend the monthly F2 teaching and encouraged to engage with other relevant clinical educational events where applicable.

Departmental academic teaching programme (if applicable)

A weekly seminar programme in Imaging.

Academic Lead

Professor Reza Razavi
Director of Wellcome Trust/EPSRC Centre in Medical Engineering
reza.razavi@kcl.ac.uk