

2-YEAR SPECIALISED FOUNDATION PROGRAMMES AT IMPERIAL COLLEGE MEDICAL SCHOOL & PARTNER TRUSTS (IMP)

1. INTRODUCTION

Imperial College London, Imperial College Healthcare and partners have an international reputation for translating scientific breakthroughs to clinical practice. They host a critical mass of international leaders in clinical medicine, healthcare policy, academia and technology and innovation which is unparalleled in the UK. Imperial has strengths in clinical trials, drug discovery, public health, bioinformatics, artificial intelligence (AI), bioengineering, and 'omic' approaches. Imperial is an NIHR Biomedical Research Centre (BRC) and was the UK's first ever Academic Health Sciences Centre (AHSC). Imperial takes pride in offering the highest quality of academic training for its AFP trainees.

The Imperial Specialised Foundation Programme (SFT) is led by Dr. Channa Jayasena (c.jayasena@imperial.ac.uk) with the support of the Imperial Clinical -Academic Training Office (CATO). Within the SFT we offer a wide selection of academic programmes (AF) covering several major specialities and within these there are possibilities for lab based or clinical research. Imperial Specialised Foundation Trainees have access to a state-of-the-art educational programme alongside Academic Clinical Fellows, Research Fellows and Clinical Lecturers. This provides the ideal environment to enable interested trainees to undertake further research training and plan a future a clinical academic career. Our academic trainees routinely succeed in publishing and presenting the work they have undertaken in their academic placement.

Successful applicants are recruited to a specific 4-month academic F2 post within a generic 2-year foundation programme with 5 other clinical placements, balanced to enable acquisition of foundation competences. Applicants should note that clinical placements are subject to change dependent on service need and provisional until confirmed by the employing Trust.

2. DETAILS OF TRAINING PROGRAMMES

A spread sheet summarising all of the available programmes is available to download from <http://www.stfs.kss.hee.nhs.uk/tfs-academic-foundation-programme-recruitment>.

Programme Reference	Programme Theme	Based at
2223/IMP/01	Academic Paediatrics	St Mary's Hospital
2223/IMP/02	Academic Paediatrics	St Mary's Hospital
2223/IMP/03	Academic Paediatrics	St Mary's Hospital
2223/IMP/04	Academic Medicine	Hammersmith Hospital
2223/IMP/05	Academic Medicine	Hammersmith Hospital
2223/IMP/06	Academic Medicine	Hammersmith Hospital
2223/IMP/07	Academic Medicine	Hammersmith Hospital
2223/IMP/08	Academic Medicine	Hammersmith Hospital
2223/IMP/09	Academic Medicine	Hammersmith Hospital
2223/IMP/10	Academic Primary Care	Charing Cross Hospital

2223/IMP/11	Academic Primary Care	Charing Cross Hospital
2223/IMP/12	Academic Primary Care	Charing Cross Hospital
2223/IMP/13	Academic: Cardiology, Respiratory & Cardiothoracics	National Heart & Lung Institute / Hammersmith Hospital / Royal Brompton
2223/IMP/14	Academic: Cardiology, Respiratory & Cardiothoracics	National Heart & Lung Institute / Hammersmith Hospital / Royal Brompton
2223/IMP/15	Academic: Cardiology, Respiratory & Cardiothoracics	National Heart & Lung Institute / Hammersmith Hospital / Royal Brompton
2223/IMP/16	Academic Obstetrics & gynaecology	Queen Charlotte's Hospital
2223/IMP/17	Academic Obstetrics & gynaecology	Queen Charlotte's Hospital
2223/IMP/18	Academic Obstetrics & gynaecology	Queen Charlotte's Hospital
2223/IMP/19	Academic Anaesthetics & Critical Care	Chelsea & Westminster Hospital
2223/IMP/20	Academic Anaesthetics & Critical Care	Chelsea & Westminster Hospital
2223/IMP/21	Academic Anaesthetics & Critical Care	Chelsea & Westminster Hospital
2223/IMP/22	Academic Vascular Surgery	Charing Cross Hospital
2223/IMP/23	Academic Vascular Surgery	Charing Cross Hospital
2223/IMP/24	Academic Vascular Surgery	Charing Cross Hospital
2223/IMP/25	Academic Surgery & Innovation	St Mary's Hospital
2223/IMP/26	Academic Surgery & Innovation	St Mary's Hospital
2223/IMP/27	Academic Surgery & Innovation	St Mary's Hospital
2223/IMP/28	Academic Clinical Trials & Translational Medicine	Hammersmith Hospital
2223/IMP/29	Academic Clinical Trials & Translational Medicine	Hammersmith Hospital
2223/IMP/30	Academic Clinical Trials & Translational Medicine	Hammersmith Hospital

North West Thames offers 30 jobs in the academic programme. In all cases the F1 year will be a standard F1 programme in order to ensure candidates can establish core clinical medical skills as described in the Foundation curriculum. However, doctors will have the opportunity to attend academic F1 early evening teaching sessions and will be encouraged to involve themselves in formal teaching commitments. All academic F1s are 'buddied' up with the F2 who is following the same programme as them for support and mentoring. We also arrange an evening meeting in January where academic F1s will meet their academic leads and start to plan their F2 academic placement in detail.

The F2 year will be based either at Imperial College Healthcare NHS Trust (Hammersmith, Charing Cross and St Mary's Hospitals), Northwick Park Hospital, or Chelsea and Westminster Hospital, in partnership with Imperial College London. Academic placements

are grouped into the Academic Departments of Medicine, Metabolic Medicine, Surgery, Vascular Surgery, Paediatrics, Obstetrics & Gynaecology, Primary Care, and Anaesthesia. Imperial CATO offers a masterclass programme of teaching for all Clinical Academic Trainees, covering topics such as statistics, big data, genomics, and career sessions offering advice regarding ACF applications.

Common features of the AF2 programmes include:

- A named academic educational supervisor/mentor for the whole year. Trainees will be encouraged to meet with their academic supervisor well in advance of commencing their F2 year. At the start of their academic placement, they will agree a personal academic development plan which would include exposure to research techniques, literature analysis, career advice on planning a career in research, grant funding etc.
- Attendance at research meetings within the academic department to which they are attached.
- At least termly whole day academic foundation programme teach-ins covering all areas of academic medicine, research and leadership.
- Core lecture programme (example, changes each year)
 - “my academic career” – talks from leading Clinician Scientists working at Imperial
 - Research Governance
 - Leadership workshop
 - Research Ethics
 - Translational Medicine
 - How to present scientific research
 - Guidance for a career as an academic clinician
 - Critical appraisal workshop
- Trainees will be encouraged to write a review article under the guidance of their academic mentor based on an area related to their academic attachment, aimed for publication. During this they will learn critical literature analysis techniques.
- They will hopefully generate enough data from the 4 months laboratory or clinical research to contribute to a scientific paper. Clearly 4 months is not sufficient time to finish a project, but the time and work undertaken should have contributed significantly. Trainees are encouraged to submit their work for presentation at national and international symposia.
- They will have the opportunity to present their academic work at the Imperial CATO Research Symposium in the June, to other AFPs, as well as more senior clinical academic trainees and academic leaders.

Individuals will be working within routine busy clinical units and are expected to develop the same formal clinical F2 competencies as F2 doctors in non-academic programmes within 8 months instead of the standard 12. They will have named clinical supervisors in each placement who will ensure they address clinical skills in addition to the academic activity. All clinical placements have well established appraisal systems and on-going educational support.

3. PLACEMENTS

Programmes 1-3 - Academic Paediatrics - based at Hammersmith & St Mary's Hospitals

Reference: 2223/IMP/01

Reference: 2223/IMP/02

Reference: 2223/IMP/03

Individual Placement Descriptor (IPD) for the four-month academic placement
Separate IPDs for clinical placements are available on foundation school website
Type of programme

This is a research post in Paediatrics based at St Mary's Hospital.

<i>Employing trust:</i>	<i>Academic placement based at:</i>
Imperial College Healthcare NHS Trust	St Mary's Hospital

Brief outline of department

Academic Paediatrics at Imperial hosts diverse expertise in many specialist areas including infectious diseases, global health, allergy, emergency and intensive care, respiratory medicine, neonatology and child public health. The wider paediatric department also has a growing interest in health services research and evaluation of new models of care.

To help trainees to find specific projects and supervisors within their Academic Foundation Programme in Paediatrics we have three main themes where we suggest trainees base their time, although we are happy to discuss alternative proposals if there is a strong rationale for working in one of our other areas. The programme is led by Dr Aubrey Cunnington (Paediatric Infectious Disease) and Dr Dougal Hargreaves (Population Health) who can link you up with colleagues as needed.

Paediatric Infectious Disease combines basic, translational and clinical research aimed at understanding susceptibility and severity in childhood infectious diseases and improving methods of diagnosis, prevention and treatment (<http://www.imperial.ac.uk/infectious-disease/research/paediatrics/>). A particular area of strength is in "Platform Science" – the application of omics technologies and bioinformatics to healthcare problems. Different groups within the Section vary in focus on host, microbes and their interactions. The Section leads major international Consortium projects (<http://www.euclids-project.eu/>; <http://www.perform2020.eu/>) and has strong global connections in The Gambia, Ghana and South Africa. We have a proven track record of nurturing aspiring clinician scientists at every career stage from AFP and ACF through to clinical lecturers and beyond, leading to a high rate of success in obtaining independent PhD funding and research fellowships.

Paediatric Allergy, Respiratory & Sleep Medicine. St Mary's hosts a busy academic Paediatric Allergy team, headed by Professor Adnan Custovic. Current programmes include primary prevention of allergic disease using dietary and non-dietary approaches, investigation of the mechanisms of anaphylaxis, immunotherapy of allergic disease, temperature-controlled laminar airflow trials, and analysis of birth cohort data to define allergic disease phenotypes and their environmental and

genetic determinants. There is also an active paediatric sleep medicine research programme, focussed on the development and validation of new approaches to the diagnosis of sleep-disordered breathing. Paediatric Respiratory Medicine, based National Heart and Lung Institute, combines diverse expertise spanning basic mechanism through to clinical trials in asthma, bronchiectasis, cystic fibrosis and primary ciliary dyskinesia.

Population Health and Health Services Research for Children and Young people. Prof Sonia Saxena, Prof Mitch Blair and Dr Dougal Hargreaves in the School of Public Health lead major local and national collaborations to study and improve the health of children and young people (for example, through the NIHR Applied Research Collaboration NW London and the NIHR School of Public Health). Our team has experience of working with a range of routinely-collected datasets to identify novel patterns and associations, and evaluate the impact of individual or service-level interventions to improve outcomes. We also have close links to the Connecting Care for Children team at St Mary's Hospital (led by Dr Bob Klaber and Dr Mando Watson) and many other local partners. In neonatology, primarily at Chelsea and Westminster campus, additional work with large datasets of routinely collected clinical data is being used to transform understanding of the determinants of outcomes for preterm infants across the life-course and to embed pragmatic clinical trials alongside routine delivery of care.

Additional areas of research interest include neonatal hypoxic ischaemic encephalopathy, intensive care interventions, emergency care triage and risk stratification, adolescent health, medical education and paediatric surgery.

Structure of academic project/what expected

The AF2 year will consist of 4 months Acute Medicine and 4 months ICU at Hammersmith Hospital and 4 months Academic Paediatrics based at St Mary's Hospital, Imperial College Healthcare NHS Trust. The AF2 will have the opportunity to be part of a highly dynamic and supportive team of doctors and other health professionals working together in academic, service improvement and educational aspects of paediatrics and child health.

If desired, the Academic F2 can be allocated to a Specialist Registrar level mentor during their academic paediatrics placement.

There is access to a wide range of teaching and other learning opportunities within the department, and each doctor will be strongly encouraged to make the most of these in order to support their personal learning plan. A weekly teaching timetable detailing all opportunities will be sent to each doctor. There will also be the opportunity to develop important transferrable skills in the writing of ethics and grant applications, performing statistical analysis, and writing and revising manuscripts. Other learning opportunities, such as development of educational research skills or understanding quality improvement methodologies will be offered in accordance with the needs of the trainee and the project undertaken.

It is envisaged that doctors in this Academic Paediatrics placement will be successful in achieving journal publications and published abstracts, as well as presenting their

work in regional and national meetings. The post will be an outstanding introduction to academic paediatrics and child health, and high performance in the post will undoubtedly strengthen any potential application for run-through paediatric training at ST1 level.

Clinical commitments during academic placement

There are no fixed clinical commitments and no on call duties during the Academic Paediatrics placement.

Departmental academic teaching programme (if applicable)

There are many opportunities here and the post-holder will be introduced to these when they start.

Academic Lead:

Dr Aubrey Cunningham a.cunnington@imperial.ac.uk , Consultant & Reader in Paediatric Infectious Disease

Dr. Dougal Hargreaves d.hargreaves@imperial.ac.uk, Consultant & Senior Clinical Lecturer in Child Public Health

Programmes 4-9 - Academic Medicine – based at Hammersmith Hospital

Reference: 2223/IMP/04

Reference: 2223/IMP/05

Reference: 2223/IMP/06

Reference: 2223/IMP/07

Reference: 2223/IMP/08

Reference: 2223/IMP/09

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

Type of programme

This a research post where the AF2 will have the opportunity to spend four months doing cutting-edge research within a research group anywhere with the very large Department of Medicine at Imperial College.

Employing trust:

Imperial College Healthcare NHS Trust

Academic placement based at:

Hammersmith Hospital

Brief outline of department

The AF2 can choose to be attached to any one of a number of world-class research units within the Faculty of Medicine at Imperial College – explore the website

at <https://www.imperial.ac.uk/medicine/research-and-impact/> to understand the breadth and quality of opportunities available.

The Faculty comprises 7 world class Departments – Brain Sciences, Immunology & Inflammation, MRC Lab of Medical Sciences (LMS), Metabolism, Digestion & Reproduction, National Heart & Lung Institute (NHLI), School of Public Health, And Surgery & Cancer.

The Academic F2 can be attached to groups within any of these and undertake basic laboratory research, more clinical research and projects involving a mix and including innovative imaging and computing. Depending on the AF2's interests there are also possibilities for attachments in more diverse laboratories - e.g. Department of Bioengineering. We aim to facilitate the AF2 in finding the project and department that suits them and will allow them the greatest opportunity to achieve outstanding academic outputs. Many of our previous AF2s have produced first author papers and / or presentations by the end of their programme.

The F2 year will consist of 4 months of Acute Medicine and 4 months of Renal medicine based at Hammersmith Hospital, and 4 months of Academic Medicine at any of the Imperial sites. Dr. Rohini Sharma oversees the Academic Medicine placements but the Academic F2 will be supervised during their academic placement by the relevant academic lead for the research project undertaken.

Dr. Rohini Sharma will help trainees find the right supervisor early on in their F1 year to facilitate planning and familiarity with the group and ensure that they get the most out of their 4-month placement by being fully prepared. Each trainee will identify an academic supervisor within their chosen research group who will meet with them regularly, set the academic learning objectives at the beginning of the placement and review progress at the end of the placement.

There is access to wide range of teaching and other learning opportunities within the department, and each doctor will be strongly encouraged to make the most of these to support their personal learning plan. There will also be the opportunity to develop important transferrable skills in the writing of ethics and grant applications, performing statistical analysis, and writing and revising manuscripts. Other learning opportunities, such as development of educational research skills or understanding quality improvement methodologies will be offered in accordance with the needs of the trainee and the project undertaken.

It is envisaged that doctors in this Academic Medicine placement will be successful in achieving journal publications and published abstracts, as well as presenting their work in regional and national meetings. The post will be an outstanding introduction to academic medicine, and high performance in the post will undoubtedly strengthen any potential application for CMT / ACF posts.

Clinical commitments during academic placement

There are no fixed clinical commitments and no-on call duties during the Academic Medicine placement.

Departmental academic teaching programme (if applicable)

Academic Foundation doctors will be expected to attend the weekly Department of Medicine Staff round, and any departmental seminars that they wish to attend. There will be different expectations of attendance at seminars within each research group and the academic supervisor will advise the trainees. They are also expected to attend their home Trust F2 weekly teaching session.

Academic Lead:

Dr. Rohini Sharma
Consultant and Clinical Senior Lecturer in Oncology
r.sharma@imperial.ac.uk

Programmes 10-12 - Academic Primary Care – based at St Mary’s and Charing Cross Hospitals

Reference: 2223/IMP/10

Reference: 2223/IMP/11

Reference: 2223/IMP/12

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

<i>Type of programme</i>	
This is a 4-month research and clinical placement in Academic Primary Care.	
<i>Employing trust:</i>	<i>Academic placement based at:</i>
Imperial College Healthcare NHS Trust	Charing Cross Hospital

<i>Brief outline of department</i>
<p>Primary care is a major arm of health service delivery in the UK. This is a role strengthened by the new GP contract and more recent changes that place general practitioners at the forefront of commissioning health services. Academic Primary Care has a vital research role in providing evidence for interventions and a critique on practice, and in equipping undergraduates with skills and knowledge of relevance both to the specialty and to their development as doctors more generally. The academic department at Imperial has strong roots in epidemiological approaches to primary care, and a programme of undergraduate teaching which stretches across the whole curriculum.</p> <p>The department also organises the Imperial College Master of Public Health (MPH) programme; and hosts the WHO Centre for Public Health Education & Training. These links give opportunities for working on international public health topics. There is also an opportunity to work in other departments and units of the Imperial College School of Public Health, such as the Department of Epidemiology & Biostatistics and the Clinical Trials Unit.</p> <p>See http://www1.imperial.ac.uk/publichealth/ for further information.</p>
<i>Structure of academic project/what expected</i>
<p>The AF2 year will include four months of A&E at St Mary’s Hospital, four months in either O&G at St Mary’s or Gastroenterology at Charing Cross, and four months in Academic Primary Care. The academic placement is generally located in the Department of Primary Care & Public Health at Charing Cross Hospital or in one of the other departments or units in the Imperial College School of Public Health.</p> <p>The AF2 will have active roles in teaching and research within the department: two days a week will be reserved for clinical general practice in a teaching Practice attached to the department. They will be allocated an academic and clinical supervisor at the outset of the attachment who will ensure the aims of the</p>

attachment are met and to assist your preparation for Foundation Programme assessments.

The AF2's week is split between 2 days in a local general practice, and 3 days based in the department at Charing Cross Hospital campus.

The academic lead for the programme is Dr Nina Dutta who is supported in this role by other academics in the department. Research projects generally involve either a systematic literature review or an analysis of a data set. Previous F2 doctors have benefited from their experiences; and have presented their work at scientific meetings and published their findings in peer-reviewed journals.

Please see this website for more details of the programme and experiences of recent Academic F2s in Primary

Care: <http://www1.imperial.ac.uk/publichealth/departments/pcph/f2/>

Clinical commitments during academic placement

There is a clinical commitment of 2 days a week in an accredited GP teaching practice. The details of the weekly timetable are negotiated between the academic department and GP surgery, but depend largely on the practice's clinic times and needs, with Wednesdays generally set aside as a fixed day for academic activities such as departmental meetings and talks.

Departmental academic teaching programme (if applicable)

Weekly departmental meetings and seminars as well as weekly Trust F2 teaching.

Academic Lead:

Dr Nina Dutta
Primary Care Faculty Development Lead
n.dutta@imperial.ac.uk

Programmes 13-15 - Academic: Cardiology, Respiratory & Cardiothoracics –based at National Heart & Lung Institute (NHLI)

Reference: 2223/IMP/13

Reference: 2223/IMP/14

Reference: 2223/IMP/15

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

Type of programme

This is a 4-month research post based at one of the NHLI campuses across NW London.

<i>Employing trust:</i>	<i>Academic placement based at:</i>
Imperial College Healthcare NHS Trust	NHLI (7 sites across NW London): Royal Brompton, St Mary's, Charing Cross and Hammersmith Hospitals and South Kensington campus

Brief outline of department:

The National Heart and Lung Institute hosts diverse and world-leading expertise (with >130 Principal Investigators) in many specialist areas of cardiology, vascular and respiratory medicine (<https://www.imperial.ac.uk/nhli>). It provides an ideal environment in which academic trainees can flourish (<https://www.imperial.ac.uk/nhli/about-us/strategic-plan-2024/>).

Trainees will spend their four-month academic block on a placement in a research group in Respiratory, Cardiology or Cardiothoracic Surgery. They will be supported by senior academics in exploring the spectrum of opportunities available at NHLI – which include both wet and dry lab work - and be able to choose the speciality and research project which most appeals to them. A small number of exemplar PIs are described below; there are many more and trainees will be encouraged to explore all that NHLI has to offer.

Professors Miriam Moffatt and Bill Cookson lead the Asmarley Centre for Genomic Medicine where state of the art genomic technology and expertise is used to study lung diseases including large-scale studies of asthma, atopic dermatitis, psoriasis, lung and pleural cancer, and sequence-based studies of the lung microbiome.

Dr Jenni Quint, based at Royal Brompton Hospital campus, leads a clinical epidemiology research group whose work centres on understanding the relationship between respiratory and cardiovascular disease as well as maximising the quality, linkage and usage of routinely collected healthcare data for clinical and research purposes.

Dr Mo Shamji leads a research group in Immunomodulation and Tolerance and conducts research into respiratory allergies. His particular focus is on the role of disease-modifying treatments (such as allergen immunotherapy and novel biologics and immunomodulators), how they affect immunologic responses, and induction of immune tolerance.

Professor Ajit Lalvani is Director of the NIHR Health Protection Research Unit in Respiratory Infections. He carries out translational research into severe respiratory infections: TB, pandemic influenza and COVID-19. This has including development of the IGRA diagnostic test for TB and insights into the action of TB, malaria and flu vaccines.

Dr Matthew Shun-Shin and Dr Graham Cole's group lead the UK UNITY collaborative that are working to develop artificial intelligence methods for echocardiography. Trainees joining this group will gain software programming skills and experience in machine learning and clinical cardiac imaging.

Dr Rasha Al-Lamee and Professor Darrel Francis lead the coronary artery physiology research theme, which studies all aspects of ischaemic heart disease (from acute to chronic, and from intracoronary pressures and flows to indices of ischaemia) and ultimately matches findings to patients' symptoms. They lead the ORBITA-2 multicentre RCT of coronary stenting for angina including studies of patient-facing symptom tracking methodologies and blinded physiological testing before and after intervention.

Dr Zach Whinnett, Professor Prapa Kanagaratnam and Professor Nick Peters lead the electrophysiology and devices clinical research, including running the HOPE-HF, C19-ACS, and other multi-centre randomised controlled trials. Their work studies new approaches using electrical stimuli to improve heart function outcomes (both short-term and longer-term) and the origin and mechanism of atrial fibrillation.

Prof Sian Harding and Prof Prakash Punjabi lead research into myocardial regeneration as a therapeutic and research tool. Clinically related initiatives include pharmacological release of bone marrow stem cell subsets and increased homing to the heart from external shockwave stimulation. In development are the use of large engineered heart tissue constructs from human pluripotent stem cell derived cardiomyocytes, as well as exosome delivery of regenerative factors.

Brief outline of department:

Trainees will spend their four-month academic block in the AF2 year within a research department at one of the NHLI sites. Trainees will be under the overall supervision of Dr Johanna Feary (Academic Clinical Lead for AFP; Genomic and Environmental Medicine section) and Prof Darrel Francis (Cardiology; section head of Cardiovascular Trials and Epidemiology), Prof Seb Johnston (Respiratory; section head of Airways Disease and Director of the Asthma UK Centre in Allergic Mechanisms of Asthma) or Prof Prakash Punjabi (Cardiothoracic Surgery; Cardiac Function section), depending on the trainee's preference of research area. Supervision will be in the form of weekly meetings with day-to-day support from the wider team.

During the placement, there will also be the opportunity to develop invaluable and transferable research skills such as writing conference abstracts and ethics and grant applications, contributing to manuscripts, and performing statistical analyses.

It is envisaged that doctors in this Academic NHLI placement will be successful in achieving journal publications and published abstracts, as well as presenting their work in regional and national meetings. NHLI has a proven track record of nurturing aspiring clinical scientists and the post will be an outstanding introduction to academia in cardiorespiratory medicine/surgery. High performance in the post will undoubtedly strengthen any application for further clinical training posts and research fellowships.

Clinical commitments during academic placement

There are no clinical commitments and no on call duties during this placement.

Departmental academic teaching programme (if applicable)

There are many learning opportunities; these will be discussed at the start of the post.

Academic Lead:

Dr Johanna Feary
Senior Clinical Fellow (NHLI)
Consultant Respiratory Physician (Royal Brompton & Harefield Trust)
j.feary@imperial.ac.uk

Programme 16-18 – Academic Obstetrics & Gynaecology – based at Queen Charlotte’s Hospital

Reference: 2223/IMP/16

Reference: 2223/IMP/17

Reference: 2223/IMP/18

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

Type of programme

This is a 4-month research placement in Obstetrics & Gynaecology

Employing trust:

The North West London Hospitals NHS Trust

Academic placement based at:

Queen Charlotte’s Hospital

Brief outline of department

Academic Clinical Obstetrics and Gynaecology at Imperial is closely linked to Imperial Academic Health Sciences Centre and NIHR Biomedical Research Centre, and the Institute of Reproductive & Developmental Biology (IRDB), one of the largest stand-alone research facilities in O&G in Europe.

There is academic expertise in a range of clinical areas linked to Obstetrics and Gynaecology.

Gynecological oncology (Dr Mara Kyrgiou and Dr Sadaf Maghami)
Effect of treatment of cancer on reproductive performance (Dr Mara Kyrgiou)
Miscarriage and early pregnancy (Prof Tom Bourne, Prof Lesley Regan, Prof Phillip Bennett).
Ovarian Function and Polycystic Ovary Syndrome (Prof Steven Franks)
Cardiovascular adaptation, placentation, fetal growth and pre-eclampsia (Dr Christoph Lees)
Prematurity and Parturition (Prof Phillip Bennett, Dr Vasso Terzidou, Dr David

Macintyre)

In addition, there are more basic science oriented programs including:

Stem Cell Biology (Dr Veronique Azura, Dr Wei Cui)

G-protein and Tyrosine Kinase Coupled Receptor Biology (Dr Aylin Hanyaloglu, Dr Nick Dibb)

Systems Medicine, Microbiome and Metabolome (Dr David MacIntyre, Prof Phillip Bennett)

Recent major new initiatives include the role of the microbiome in reproductive health, and integration of large-scale biological data such as transcriptomics, genomics, metabolomics and miRNomics with clinical at metadata. We became both a Global Alliance Against Stillbirth and Prematurity (GAPPS) Research Centre and a 'Tommys' National Miscarriage Research Centre in 2016.

Recent O&G research success include criteria for miscarriage diagnosis, (NEJM 2013, BMJ 2015 Bourne), improved surveillance for IUGR (Lancet 2015 Lees), a paradigm shift in understanding miscarriage (Nat Med 2013 Brosens, Regan), miRNA markers to predict preterm birth (2015 Terzidou Bennett), a link between vaginal microbiome, preterm birth and cervical cerclage (Sci Trans Med 2016, MacIntyre Bennett), all leading to international changes to practice.

Structure of academic project/what expected

The AF2 year will contain a 4 month research block in Academic Obstetrics and Gynaecology based at Queen Charlottes Hospital and the Institute of Reproductive & Developmental Biology, Hammersmith Campus, Imperial College Healthcare NHS Trust. Trainees will be under the overall supervision of Professor Phillip Bennett, Director of IRDB. The AF2 will have the opportunity to be part of a highly dynamic and supportive team of doctors and other health professionals working together in academic, service improvement and educational aspects of Obstetrics and Gynaecology.

The Academic F2 may select a project from any of the areas of research activity listed above. Depending upon the nature of the project there will be close 'clinic-side' or 'bench-side' supervision from an appropriate clinical research fellow or scientist together with weekly meetings with the Principal Investigator. If desired, the Academic F2 can be allocated to an Academic Clinical Lecturer, Fellow, or Specialist Registrar mentor during their academic placement.

There is access to a wide range of teaching and other learning opportunities within the department. There will also be the opportunity to develop important transferrable skills in the writing of ethics and grant applications, performing statistical analysis, and writing and revising manuscripts. Doctors in this academic placement should be successful in achieving journal publications and published abstracts, and present work in regional and national meetings. The post will be an outstanding introduction and stepping stone into academic Obstetrics and Gynaecology,

Clinical commitments during academic placement

There are no fixed clinical commitments and no on call duties during the placement.

Departmental academic teaching programme (if applicable)

The department has a comprehensive program of teaching and seminars which the post holder will be encouraged to take part in.

Academic Lead:

Dr. Aylin Hanyaloglu
Senior Lecturer
a.hanyaloglu@imperial.ac.uk

Programmes 19-21 - Academic Critical Care and Anaesthetics – based at Charing Cross/St Mary’s/Hammersmith or Chelsea and Westminster Hospitals

Reference: 2223/IMP/19

Reference: 2223/IMP/20

Reference: 2223/IMP/21

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

<i>Type of programme</i>	
This is a 4-month research placement in Academic Critical Care and Anaesthetics.	
<i>Employing trust:</i>	<i>Academic placement based at:</i>
Chelsea and Westminster Hospital NHS Foundation Trust	Charing Cross, St Mary’s, Hammersmith or Chelsea and Westminster Hospital
<i>Brief outline of department</i>	
<p>The Division of Anaesthesia, Pain Medicine and Intensive Care is an academic division sitting within the Faculty of Medicine of Imperial College London. Academic activities occur at both Imperial College Healthcare NHS Trust and Chelsea and Westminster Hospital NHS Foundation Trust. Across the two Trusts there is a wide spectrum of Critical care and Anaesthetic activity, for example trauma, burns, neuro-critical care, and cardiac and obstetric anaesthesia. As such a wide range of projects are offered.</p> <p>The Division is led by Professor Masao Takata and is the home to many well-respected academics from the fields of Critical Care, Anaesthesia and Pain. The research activities of the Division cover a variety of subjects from biological profiling of critically ill patients using cutting edge techniques such as metabolic or transcriptomic profiling to machine learning in healthcare and improving the understanding of inflammation.</p>	
Website: https://www.imperial.ac.uk/department-surgery-cancer/research/apmic/	
<i>Structure of academic project/what expected</i>	
<p>The AF2 year will include four months of Emergency Medicine at Chelsea & Westminster Hospital, four months in Intensive Care at the Royal Marsden Hospital and four months of academic activity at one of the associated hospitals, depending on the project. The academic placement can cover projects in anaesthesia, critical care, outreach, post-operative recovery and pain relief research, based on the AF2’s skills and preferences. The posts are well suited for those wishing to gain a basic grounding in peri-operative medical research and have been highly valued by previous AF2s. Work done by previous AF2s on this program has been presented internationally and published.</p>	
Education is a key objective for the academic department with medical student	

(including BSc) and postgraduate training. The AF2 would be expected to contribute to education in all areas of anaesthesia and pain management.

Clinical commitments during academic placement

There is no fixed clinical commitment during the academic placement. However, there is the opportunity to develop clinical skills if desired.

Departmental academic teaching programme (if applicable)

There are weekly academic meetings as well as weekly Trust F2 teaching. The AF2 would also be welcome to attend clinical departmental teaching whist on the academic placement.

Academic Lead:

Dr. David Antcliffe
Clinical Senior Lecturer in Critical Care Medicine
d.antcliffe@imperial.ac.uk

Programme 22-24 - Academic Vascular Surgery – based at Charing Cross Hospital

Reference: 2223/IMP/22

Reference: 2223/IMP/23

Reference: 2223/IMP/24

Individual Placement Descriptor (IPD) for the four-month academic placement

Separate IPDs for clinical placements are available on foundation school website

Type of programme

This is a research post in Vascular Surgery at Charing Cross Hospital.

Employing trust:

Imperial College Healthcare NHS Trust

Academic placement based at:

Charing Cross Hospital

Brief outline of department

The research methods employed within the group include clinical projects, including clinical trials, molecular and cellular biology, material science, ultrasound and contrast enhanced ultrasound imaging, health economics, biostatistics, systematic reviews, metabonomics and fluid dynamics.

For more information, please visit the Academic Section of Vascular Surgery website:

http://www.imperial.ac.uk/AP/faces/pages/read/Home.jsp?person=a.h.davies&_adf.ctrl-state=usx90ksw9_3&_afRedirect=2815034464756649

Structure of academic project/what expected

The AF2 year will be based at Charing Cross hospital and will consist of four months of Vascular Surgery and four months of A&E at St Mary's, and four months Academic Vascular Surgery at Charing Cross. The Academic Surgery placement will be based in the Academic Section of Vascular Surgery at Charing Cross under the supervision of Professor Alun Davies.

During the four months the AF2 will have the opportunity to be part of a dynamic and productive research team investigating carotid atherosclerosis, chronic venous insufficiency and varicose veins. The combination of clinical pathology and research techniques will be tailored to accommodate the interests of the AF2 as far as possible, selecting from a number of research projects which are running in parallel.

Supervision from Professor Davies will take the form of weekly meetings, with day to day support coming from a team of clinical research fellows, one of whom will be the lead research fellow on the assigned project.

There is access to a number of surgical clinics for the undertaking of clinical research projects and for postgraduate exam preparation as required. There is the opportunity to develop important transferrable skills in the writing of ethics and grant applications, performing statistical analysis, and writing and revising manuscripts.

The previous Academic F2s who have completed this placement have been successful in achieving first name author publications, including journal publications, book chapters, letters, and published abstracts, as well as presenting their work in national meetings and winning local and national prizes. Furthermore, they have been supported in applying for core training and academic training jobs and have been successful in securing posts in their chosen specialties.

Clinical commitments during academic placement

There are no fixed clinical commitments and no on call duties during the Academic Surgery placement.

Departmental academic teaching programme (if applicable)

In addition to the Foundation Programme teaching, there are weekly research meetings. Courses will be offered in accordance with the needs of the trainee and the project undertaken. Many of the clinical research fellows teach relevant skills such as statistical analysis, critical appraisal and how to prepare a manuscript at a regional level.

Academic Lead:

Prof Alun H Davies
Professor of Vascular Surgery
a.h.davies@imperial.ac.uk

Programmes 25-27 - Academic Surgery & Innovation – based at St Mary’s Hospital

Reference: 2223/IMP/25

Reference: 2223/IMP/26

Reference: 2223/IMP/27

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

<i>Type of programme</i>	
This is an Academic surgical research programme based at St Mary’s Hospital.	
<i>Employing trust:</i>	<i>Academic placement based at:</i>
Imperial College Healthcare NHS Trust	St Mary’s Hospital
<i>Brief outline of department</i>	
<p>The Department of Surgery is an internationally leading centre which is highly multi-disciplinary and includes multiple internationally renowned academic and clinical foci including surgical technology development, discovery biochemistry, cancer biology and medicine, reproductive medicine, critical care and pain management.</p> <p>Their goals are to harmonise and develop existing research themes across the Department, and also to capitalise on world leading molecular phenotyping and metabolic profiling research capabilities to create a new healthcare paradigm based on a molecules-to-medicine approach. In particular, we will channel exciting new technology developments into clinical practice with particular emphasis on development of personalised healthcare and patient and patient stratification strategies across all our clinical delivery programmes.</p> <p>The Department has established four research themes with the objective of integrating new technologies into personalised healthcare at the point-of-care to improve patient outcomes. These are:</p> <ul style="list-style-type: none">• Molecular Phenotyping Directed Personalised Healthcare• Population, Behaviour and Health Services Research• Molecular Cell Biology and Immunology• Surgical and Robotic Technologies <p>The department also has a major role in the delivery of teaching in surgery and O&G across all levels of the undergraduate curriculum as well as to postgraduates.</p>	
<i>Structure of academic project/what expected</i>	
This AF2 year is based at St Mary’s hospital and consists of four months General Surgery, four months A&E, and four months in Academic Surgery which will be based in the Division of Surgery at St Mary’s Hospital. The post holder will be responsible to the Head of Division of Surgery, Professor George Hanna, Professor Lord Ara Darzi and Daniel Leff, Senior Lecturer.	

The purpose of this post is to provide a protected period of time and support to achieve competencies in different fields of academia as outlined in the Academic Foundation portfolio. The post is particularly focused on enabling Academic F2 doctors to gain experience in research and build a research profile from which they can apply for ACF posts and apply for research fellowships towards a higher degree.

They will be assisted to develop their teaching and managerial/leadership skills and to contribute to undergraduate teaching. The F2 will have access to clinical and non-clinical academics who can guide them in the development of their academic and research programmes.

F2s will be introduced to the research themes of the department and potential projects from the Division of Surgery that would be suitable for the period of research. They will be free to choose the supervisor and project that most appeals to them provided it is likely to enable the trainee to meet the aims of this programme.

Clinical commitments during academic placement

During the academic surgical placement, the F2 will participate in a low intensity on-call rota at SHO level, but will be free of routine elective clinical work.

Departmental academic teaching programme (if applicable)

There is weekly departmental teaching as well as weekly Trust F2 teaching.

Academic Lead:

Dr Daniel Leff
 Consultant Surgeon
Daniel.Leff@imperial.nhs.uk

Programmes 7-9 - Academic Clinical Trials & Translational Medicine – based at Hammersmith Hospital

Reference: 2223/IMP/28

Reference: 2223/IMP/29

Reference: 2223/IMP/30

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

<i>Type of programme</i>	
This is an Academic surgical research programme based at the NIHR Imperial Clinical Research Facility (NIHR ICRF) at Hammersmith Hospital.	
<i>Employing trust:</i>	<i>Academic placement based at:</i>
Imperial College Healthcare NHS Trust	Hammersmith Hospital
<i>Brief outline of department</i>	

The NIHR Imperial Clinical Research Facility (ICRF) at Hammersmith Hospital is one of 23 NIHR funded Clinical Research Facilities in the UK. It provides a dedicated, well-equipped and professional environment that enables medical staff and scientists to work together to investigate disease, and trial the latest scientific ideas for improving diagnosis and treatment. Its aim is to capitalise on the ground-breaking science conducted daily by Imperial College biologists, chemists, engineers, mathematicians and medical staff as well as external partners, including the pharmaceutical industry and start-up companies. As a result, it has a track record of hosting cutting edge studies investigating new vaccines, gene therapies, small molecule drugs, diets and devices in a wide range of diseases that include cancer, cardiovascular, metabolic medicine, infectious disease and neuroscience. ICRF research is published in high impact scientific journals and has appeared in a wide range of popular science and news programmes. Equally important, the ICRF provides an environment for the next generation of academic healthcare professionals to learn how to bring new science into the clinic

Structure of academic project/what expected

The AF2 year will be based within Imperial College Healthcare for the duration of the year. Rotations are to be confirmed.

4 months at the ICRF is an excellent opportunity for clinicians aspiring to a research career in any speciality to gain experience of clinical research in a leading research organisation. The primary role is to provide medical support for early phase trials within the NIHR ICRF across adult medical and surgical specialities including oncology, haematology, gastroenterology, neurology, psychology, endocrinology/metabolism, infectious diseases & vaccines; including advanced therapies such cell and gene therapies and immunotherapy. The post holder will contribute their recent NHS experience in acute medicine / surgery to multidisciplinary teams led by experienced Principal Investigators providing medical support for patients and healthy volunteers.

Prior experience of research is welcome but not essential as necessary training will be provided. Suitable candidates will be supported to consider how to develop their own research interests and ultimately to apply for the wide range of BRC and other research fellowships / PhD schemes available at Imperial.

The AF2 will also be encouraged to attend teaching sessions associated with the MRES in Clinical Research, when consistent with clinical commitments.

Clinical commitments during academic placement

Clinical care of participants in research studies.

Departmental academic teaching programme (if applicable)

The AF2 will attend MRES Clinical Research teaching (where possible) as well as Trust F2 teaching.

Academic Lead:

Dr David Owen
Clinical Pharmacologist
d.owen@imperial.ac.uk