



Wellcome / Health Research Board  
**ICAT**  
 Irish Clinical Academic Training

# Prospectus



Trinity College Dublin  
 College for Education, Health and Skills  
 The University of Dublin



FORUM OF IRISH POSTGRADUATE  
 MEDICAL TRAINING BODIES





*A unique all Ireland cross-institutional Clinical PhD programme, integrated with the health services and university clinical research centres, which will prepare graduates for exciting and rewarding careers as clinician scientists.*

The Wellcome – Health Research Board Irish Clinical Academic Training (ICAT) Programme is a unique all Ireland cross-institutional, comprehensive national programme for Clinician Scientists based at six major Irish universities and their affiliated hospital groups.

The partner universities include Trinity College Dublin, University College Dublin, National University of Ireland, Galway, Queen’s University Belfast, Royal College of Surgeons in Ireland and University College Cork.

At its core is an integrated programme spanning 6-7 years of seamless, supported and mentored academic and clinical training targeting future academic leaders. We have selected the best supervisors from research-intensive universities with a biomedical focus that collectively demonstrate research excellence. Ireland has a well-developed national infrastructure to support biomedical and translational research, and has invested in multi-university collaborative research activities. The universities agree that funding provided will follow the trainee and their chosen PhD, making this a unified programme focused on building human capital. The programme is managed by Molecular Medicine Ireland, created by the universities to promote collaborative research and education.

## What is Clinical & Translational Research?

Translational research applies ideas, insights and discoveries generated through basic scientific inquiry to the treatment or prevention of human disease. Clinical research is research conducted with human subjects, or on material of human origin. It encompasses studies and trials that increase knowledge about how well a diagnostic test, treatment or medical device works in particular patient populations and ensure compliance with safety and other regulatory requirements.

A minimum of forty fellowships will be awarded over a 5-year period commencing in July 2017. The programme is funded by Wellcome, the Health Research Board, the Health Service Executive - National Doctors Training and Planning in the Republic of Ireland (RoI) and the Northern Ireland (NI) Health and Social Care Research & Development Division and the partner higher education institutions.



## Features of the ICAT programme

The ICAT programme arises from the collaboration of established structures for clinical specialty and academic training in Ireland, which provides a strong platform for integrated clinician scientist training.

1

The post-graduate training bodies across the island of Ireland, structured around basic specialist training (BST) and higher specialist training (HST) coordinated through the Irish Forum for Postgraduate Medical Training and the Northern Ireland Medical and Dental Training Agency.

2

The Health Service Executive – National Doctors Training & Planning (RoI) and Health and Social Care PHA, Research and Development (NI) that work with the training bodies to provide accredited training positions.

3

The six participating Universities, with strong established international reputations, to oversee research and academic training.

In establishing these links and collaborations, the ICAT programme shifts the paradigm for academic, clinician scientist training from a parallel “out of programme” approach, to one that is truly integrated across the training experiences of the participating individual. Clinical and academic mentoring will be put in place to span the entire duration of specialist medical and post-graduate academic training. Trainees will complete this programme with both PhD and CCST (RoI) / CCT (NI).

Moreover, training emphasis will shift, with the programme leading the ICAT Fellow from how to begin a research career as a PhD candidate, followed by successful completion of the PhD, to establishing independence, through novel thought and independent research funding. Peer-interaction, collaboration and knowledge transfer from our affiliated panel of international advisors lie at the core of the programme and how it achieves these complete training goals.



## ICAT Research Projects

Research projects in this structured PhD programme will focus on the strengths of our participating institutions and will be in the general area of:

- genetics, genomics and molecular biology
- infectious disease and the immune system
- cell and developmental biology/  
regenerative medicine
- physiology and non-communicable disease
- cancer/oncology
- neuroscience and mental health
- bioengineering/medical devices
- epidemiology/population health research

Please refer to [www.ICATprogramme.org](http://www.ICATprogramme.org) for a list of supervisors, together with details of their research interests, and description of indicative projects.

### Candidates embarking on this programme will be offered the following:

- Choice of research opportunities with internationally renowned investigators
- An innovative national structured curriculum with taught modules in both discipline-specific and transferable skills
- Annual Scientific Meetings
- An annual salary based on level of training; laboratory expenses; travel allowance and PhD fees



## ICAT Programme Structure

### Year 1

Clinical (70%)  
Academic (30%)

During the first year, fellows will be appointed as Clinical Lecturers or equivalent within their chosen university. They will also carry out normal clinical duties within their chosen specialty at the grade of specialist registrar within the university affiliated hospital. This year is fully accredited for clinical training. Fellows will be provided with a clinical mentor from the relevant postgraduate training body, and an academic mentor assigned from the ICAT Programme.

During this year, trainees will have the opportunity to experience the academic environment through dedicated, protected research time. They will take core research training modules, chosen from resources including the MMI Clinician Scientist Curriculum covering skills such as clinical and scientific research design, individual research techniques and biostatistics, scientific writing and the concepts of research funding, grant writing and the pathway to independence. Information on modules will be available through the Molecular Medicine Ireland portal and each of the affiliated universities.

Fellows may also choose from a wide range of additional modules offered by any of the partnered university institutions.

Through ongoing advice and mentoring from the local institutional programme directors, fellows will be supported to make their final choice of supervisor. At the end of this year, the fellow will be expected to have chosen their supervisor and with his or her assistance, submit a well-written, thoroughly planned research proposal, outlining their three year PhD fellowship. Submitted research proposals will each undergo review prior to funding release for years 2-4 of the ICAT programme.



## ICAT Programme Structure

### Year 2-4

**Joint Clinical (10%)  
Academic (90%)**

From years 2 – 4, fellows will be fully immersed in their research activity and will pursue a PhD under the guidance of their chosen supervisor. An additional but minimal clinical training component will be incorporated into these three years, and, with prospective approval of the relevant training body, part of the three years of the PhD will be accredited towards clinical training. Clinical training will not disrupt research activity and academic training during this time.

Fellows will retain the title of Clinical Lecturer or equivalent during this time and will undertake additional training modules focused on their chosen research area.

Fellows will also be expected during this period to present their research findings locally, nationally and internationally and will be expected to publish in peer-reviewed international journals

### Year 5-7

**Joint Clinical (80%)  
Academic (20%)**

Fellows will return to clinical training positions in hospitals aligned with HST under the guidance of their clinical and academic mentors. Fellows must complete clinical training requirements during this time to be CCST (RoI) or CCT (NI) eligible. Critically, they will also be expected to continue their participation in research and will have 20% of their time protected to do so. Early in this stage the PhD will be written up and fellows will take their viva voce examination.

Additional training on research funding, establishing independence and the career path to a successful academic career will be given during these years. The fellow will also be expected to continue publishing the research findings from their PhD and work towards post-doctoral fellowships and sub-specialty training in the next stage of their career.

Guidance and mentorship will be offered throughout this stage of the programme in order to ensure the greatest success of all fellows in their career paths.



## ICAT Training

During year one fellows will have 10-12 weeks for dedicated research education, consisting of the following:

- Induction Week (July): presentations from the programme directors, meet current trainees and PhD alumni, visit research institutes, social events.
- Monthly cohort meetings (during term) with presentations of research plans
- Monthly meetings with clinical and academic mentors
- Core education modules
- Annual Scientific Meeting / Retreat: presentations of mini-projects (and PhD research in subsequent years as the programme progresses). Interaction with Scientific Advisory Board Members and keynote presentations from leading academic clinicians.
- During the PhD (years 2-4), fellows will complete two modules per year. These will be delivered by e-learning or as hands-on workshops, selected to align with student requirements at the different stages of their PhD projects
- Fellows will participate in annual reviews of clinical training and competencies as required by the relevant postgraduate training body as well as structured reviews of their research progress as required by their host University

## Supervisors

ICAT has a panel of more than 150 supervisors from across all participating universities working within clinical and biomedical research institutions and centers. More information on individual supervisors is available, searchable by postgraduate area, university and other key words. Please go to [www.ICATprogramme.org](http://www.ICATprogramme.org) to explore further.



## ICAT Partner Universities



### University College Dublin (UCD)

University College Dublin (UCD) is the largest university in Ireland with a strategy for 2015- 2020 focused on international engagement and excellence in research. The UCD School of Medicine has developed a rich research culture, organised into 8 Institutional Academic Centres and a further 7 research groups that define our research strengths in areas including Systems Biology, Infectious Diseases, Maternal, Fetal

and Perinatal Health, Diabetes Complications and Translational Oncology, supported by significant research infrastructure including the UCD Clinical Research Centres and the Conway Institute of Biomolecular and Biomedical Research.

The School of Medicine produces more than 1,000 publications annually with a total of 183 PhD and 127 MD degrees awarded in the past 5 years.



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

### Trinity College Dublin (TCD)

Trinity College Dublin (TCD) is the highest ranking Irish University. Its strategy prioritises life sciences; particularly immunology/infection, neuroscience, aging and cancer – and the translational/clinical interfaces of these areas.

Trinity attracts 25% of Science Foundation Ireland research funding and its Medical School accounts for more than 20% of TCD's research income and 40% of its top rank publications. Trinity is a partner to some of the largest and most progressive hospitals in Ireland with co-localisation of clinical and research facilities.

St. James's Hospital, the largest in the state, contains on its campus, the Trinity Translations Medicine Institute (TTMI); the Centre for Advance Medical Imaging (CAMI) with its 3T magnet; the Mercer's Institute for Research in Aging (MISA); a national cancer treatment and research centre, and the Wellcome Trust/HRB Clinical Research Facility. The National Children's Hospital, a €700M development, is about to commence on the St. James's campus and will contain a paediatric research building.

Life Sciences research at TCD is supported by three complementary Institutes: The Trinity Biosciences Institute, the Trinity Translational Medicine Institute and the Trinity College Institute of Neuroscience.

These Institutes have interactive programmes of basic and applied research in which clinician scientists and basic scientists work closely together. More recently, TCD and UC San Francisco (UCSF), two leaders in brain science, obtained a €177M philanthropic grant to create the Global Brain Health Institute to train a new generation of health leaders in aging and dementia.





## ICAT Partner Universities



### National University of Ireland Galway (NUIG)

National University of Ireland Galway (NUIG) focuses on research themes including medical devices, regenerative medicine, cancer biology, neuroscience and population health science with a strong emphasis on translation through early phase clinical trials and technology transfer.

These strategies are supported by €300m of infrastructural investment since 2011, including the Biosciences Research Building, Lambe Institute for Translational Medicine and HRB Clinical Research Facility, housing the Centre for Chromosome Biology, SFI Centre for Research in Medical Devices (CURAM), the National Centre for Biomedical Engineering Science (NCBES), Regenerative Medicine institute (REMEDI), the Network of Excellence for Functional Biomaterials and the Centre for Pain Research.

NUI Galway's central strategy champions translational research through collaboration between medicine, science and engineering in partnership with industry.

This paradigm is exemplified through the CURAM programme for the development of medical devices, biomaterials and novel therapeutic systems which is based at NUI Galway.

Individual researchers and research programmes at NUI, Galway have achieved independent funding, greater than €135 million in 2015/16 through the Wellcome Trust, EU Horizon 2020, Science Foundation Ireland, National Institutes for Health and Industry Development Authority. NUI, Galway also has a strong track record in training clinician scientists through previous programmes such as the NSAFP and MMI programmes for clinical PhD training.



### Royal College of Surgeons in Ireland (RCSI)

Royal College of Surgeons in Ireland (RCSI) has a strategic emphasis on clinical and translational research in the fields of cancer, respiratory, cardiovascular, infectious and neurological diseases together with regenerative medicine and population health.

Our programme will support addressing the Trust's articulated challenges including those associated with ageing and chronic diseases, understanding the brain and maximizing the health benefits of genetics and genomics. RCSI has been the lead institute for developments including the Programme for Human Genomics and is the lead organization in a National Biophotonics and Imaging Platform.

We have world-class core facilities in proteomics, genomics, bioinformatics, a Centre for Systems Medicine and a Clinical Research Centre based in specialist facilities on the campus of Beaumont Hospital. The College is rapidly expanding research under the Strategic Academic Recruitment (StAR) programme, that includes major new infrastructural developments at both the St Stephen's Green and Beaumont Hospital campuses.



## ICAT Partner Universities



**UCC**

Coláiste na hOllscoile Corcaigh, Éire  
University College Cork, Ireland

### University College Cork (UCC)

University College Cork (UCC), the Irish Times University of the Year 2016, was founded in 1845; it provides over 120 degree and professional programs, has over 20 thousand full time enrolled students, a most recent 5 year total research income of €401 million and is ranked in the top 2% of Universities worldwide based on the quality of its research

output and peer esteem. The College of Medicine and Health is one of its 4 constituent colleges; in 2015 the College had 230 PhD students and a research income of €22.6 million. Its five-year strategic plan prioritizes research on the Microbiome (APC Institute), on Perinatal Health (INFANT centre), Simulated Research and Learning (ASSERT Centre), Cancer (Cork Cancer Research Centre) and Epidemiology & Public Health, with a particular focus on Academic Clinical Trials. This Clinical Trial focus builds on the recent investment in clinical research infrastructure in Ireland

by The Wellcome Trust and the Health Research Board supporting Clinical Research Facilities in Dublin, Cork and Galway. Linking these in an overarching structure is the HRB Clinical Research Coordination, Ireland (CRCI) with the goal of enhancing Ireland's capacity for conducting innovative high quality clinical research for the benefit of people's health and the economy. Critical to the long term success of this endeavor is the ability to provide rigorous training in bedside translational research in general and in Clinical Trials in particular, as will be facilitated by this application.



Queen's University  
Belfast

### Queen's University Belfast (QUB)

Queen's University Belfast (QUB) is a member of the Russell Group of leading UK research-intensive universities providing high quality education underpinned by world-class research.

QUB has invested in co-locating researchers to fully integrate basic science with translational and clinical research across several faculties on a single Health Sciences Campus. This has enabled a critical mass of clinical and scientific investigators working in a cross-school, multidisciplinary manner. Our four priority disease areas are respiratory, ophthalmology, diabetic vascular complications and cancer which have been chosen because they represent global and nationally-relevant health challenges and reflect our existing research strengths. The clinical academic research

infrastructure has been significantly enhanced in the last 5 years by important investments e.g. the establishment of the Wellcome Trust-Wolfson Northern Ireland Clinical Research Facility (NICRF) in 2013 based at the Belfast City Hospital (adjacent to QUB medical school) and the Wellcome Trust-Wolfson Centre for Experimental Medicine at QUB opened in 2015. The clinical academic training programme is fully supported by both the Northern Ireland postgraduate deanery (NIMDTA) and the Belfast HSC Trust.



## ICAT Intake procedures

Candidates will be eligible for enrollment at various points between basic and higher specialist training. Due to differences in training structures across specialities, a key reference point is eligibility for CCST (RoI) or CCT (NI). **At the completion of their PhD, ICAT fellows should normally have 2 to 3 years of specialist training (with the exception of ICGP trainees) remaining before becoming CCST/CCT eligible.**

### Eligibility criteria include:

#### *Qualifications*

1. MB BS, MB BCH or equivalent medical qualification
2. Successful completion of relevant College/Faculty Membership exam or part thereof (e.g. MRCP (UK) or MRCPi (RoI) or equivalent relevant postgraduate certifications necessary for participation in the relevant specialist training programme.

#### *Medical registration:*

1. (a) Eligible for full or limited registration with the IMC or GMC at time of application with the necessary license to practise  
or  
(b) Full or limited registration at time of appointment with the Irish Medical Council - for fellows intending to work in the Republic of Ireland- or with the General Medical Council -for fellows intending to work in Northern Ireland, with the necessary licence to practise
2. Documented evidence from the relevant training body (e.g. GMC, IMC, RCPI or equivalent) of achievement of appropriate competencies for stage of training by time of appointment in line with relevant national regulatory requirements (including satisfactory outcome at ARCP (NI))
3. Eligibility to work in the Republic of Ireland or United Kingdom at time of application
4. Satisfactory completion of relevant Vetting/Barring Scheme
5. Hold a current medical indemnity policy that is valid in the jurisdiction where training will occur
6. (a) Either hold a National Training Number in a GMC approved UK Specialty Training Programme at ST3 level or above (ST1 or above for General Practice trainees)(NI)  
or  
(b) Be eligible to apply or already be appointed to a recognised Higher Specialist Training Scheme or approved 'run through' Specialist Training Programme in the Republic of Ireland overseen by an approved training body (RoI)
7. Hold a current fitness-to-practise certificate, registration with license to practise (or equivalent) from the relevant regulatory authority



## ICAT Intake procedures

Competitive recruitment will be undertaken through submission of a completed application form and checklist, a detailed C.V., and two academic references by the closing date.

The panel will select outstanding national and international candidates.  
Selection criteria will include:-

1. Academic endeavor, evidenced by undergraduate achievements and awards and / or research electives, including peer-reviewed publications and / or conference presentations
2. Demonstrated suitability to undertake post-graduate PhD research: intellectual capability, problem-solving skills, creativity and motivation and pursuit of excellence
3. A personal statement outlining a clear vision for career progression within their specialty both during and after completion of the ICAT Programme, including a clear strategy to translate research to a clinical setting and an understanding of the requirements for progression to a senior academic clinical appointment
4. Demonstrated understanding of the basic principles of audit, quality improvement, clinical risk management and evidence-based practice. Understanding of research basic research principles, methodology & ethics, with potential to contribute to research commensurate with level of appointment.
5. Alignment of the candidates interests with the postgraduate specialty and the participating universities' areas of research excellence
6. Evidence of contributing to both undergraduate and postgraduate teaching & learning

Candidates will be selected on merit, irrespective of gender, age, full/part time or country of origin, as long as they are eligible (at application) or on (at appointment) a recognized training path. Successful candidates will be notified in early spring of each year.

