




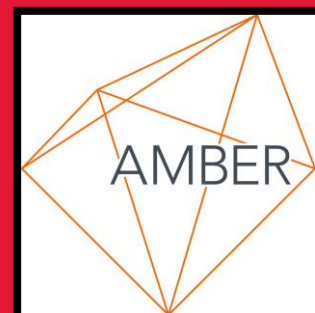
**RCSI**

**Research Lecturer  
RCSI Strategic Academic  
Recruitment (StAR) Programme**

**Advanced Materials, Bioengineering  
and Regenerative Medicine**

**CLOSING DATE: August 25th, 2019**

**TERGO**   
**TISSUE ENGINEERING RESEARCH GROUP**



RCSI's Strategic Academic Recruitment (StAR) Programme is an ambitious initiative to accelerate the delivery of innovative, impactful research in the health sciences. Under the StAR Programme, RCSI prioritises the nurturing of research talent through the commitment of a wealth of resources, all focused on a collegial academic and teaching environment that encourages each RCSI researcher to develop and grow. To coincide with the refunding to 2025 of [AMBER](#), the internationally-leading SFI and industry funded Advanced Materials and BioEngineering Research Centre, RCSI is seeking an ambitious, visionary researcher to embark with us on the latest exciting phase in our research mission in Advanced Materials, Bioengineering and Regenerative Medicine.

## 1. Job Description

**Post Title** – Research Lecturer – Advanced Materials, Bioengineering and Regenerative Medicine

**Reports to** – Head of Department or nominee

**Location** – Tissue Engineering Research Group and AMBER Centre, Royal College of Surgeons in Ireland (RCSI), Dublin

**Salary and package** - The salary for this position is €67,979 until the post is tenured as permanent academic lectureships (3-5 years). In addition, RCSI will make an investment of up to €150,000 in your research, including a 4 year PhD studentship and significant career development investment in the form of mentoring and protected research time. The position provides an opportunity to participate in a team based at the Tissue Engineering Research Group and internationally recognized AMBER Centre which is focused on developing advanced next generation materials and medical devices in partnership with industry.

**Term of office:** Tenure track appointment up to 5 years (pending performance review). The applicant will receive a yearly progress review, and at the end of year 3, a major review will be undertaken to determine whether the position will be converted to a permanent post. The review will be overseen by a committee that is external to the Research Lecturer's academic department.

### 1.1. Tissue Engineering Research Group & AMBER Centre, RCSI

The RCSI Tissue Engineering Research Group (TERG; 2017 Irish Research Laboratory of the Year) is a large multidisciplinary group with over 15 Principal Investigators, 20 postdoctoral researchers and almost 30 PhD students. Headquartered in the Department of Anatomy & Regenerative Medicine (with a satellite lab in RCSI Bahrain) in partnership with the School of Pharmacy, Molecular & Cellular Therapeutics Department, Department of Chemistry, Dept. of Medicine in RCSI Dublin, the [Trinity Centre for Biomedical Engineering](#) in Trinity College Dublin and the School of Medicine at NUI Galway, the TERG has close ties with clinical collaborators based in Beaumont Hospital, Temple Street Children's Hospital, Our Lady's Children's Hospital Crumlin, Cappagh Orthopaedic Hospital, Dublin Dental Hospital and the Sports Surgery Clinic in Santry. In addition, TERG is part of the Advanced Materials and

BioEngineering Research ([AMBER](http://ambercentre.ie/)) Centre, an internationally-leading research centre focused on developing next generation materials and medical devices in partnership with over 30 industry partners. The re-funding of AMBER to 2025 with €40M through Science Foundation Ireland's (SFI) Research Centres Programme has just been announced and AMBER has a mandate to grow to become a €120m Centre by 2025 with co-funding from industry and other sources. More information on the Centre can be found here: <http://ambercentre.ie/>

**Our research** is focused on the development of cell, gene, nanotechnology and biomaterial-based technologies for the regeneration of bone, cartilage, skin, cardiovascular, respiratory, neural and other tissues. Significant research is focused on the development of biomaterial-based and drug delivery systems and increasingly we are also using biomaterial scaffolds as advanced 3D pathophysiology systems *in vitro* for drug development and understanding disease states e.g. cancer and infection. We place a major focus on the commercialisation of technologies and building successful industry partnerships with a view to clinical translation. A high potential start-up from our group, SurgaColl Technologies has raised significant investment - successfully translating two technologies for bone and cartilage repair from the lab to the clinic. Significant ongoing industry partnership projects with AMBER focus on, for example, developing a new product to facilitate the repair of large nerve defects in the body (with Integra LifeSciences) and 3D printed technologies for musculoskeletal repair (with Johnson & Johnson).

The Current [RCSI-based TERG PIs](#) include:

- [Prof Fergal O'Brien](#), Head of TERG and Deputy Director of AMBER, is the recipient of 3 ERC awards; he is a global-leader in natural polymer based regenerative scaffolds and is pioneering the development of functionalized, gene-activated scaffolds for tissue repair.
- Prof Sally Ann Cryan, Research Lead in Pharmacy & Head of the Drug Delivery & Pharmacoengineering Team within TERG that develops specialised drug delivery platforms and devices using advanced materials & manufacturing processes with a focus on applications in respiratory and regenerative medicine.
- Prof Steve Kerrigan, Associate Professor of Pharmacology, is Head of the Cardiovascular Infection Research Group within TERG and the Irish Centre of Vascular Biology
- Dr Marco Monopoli, Lecturer in the Department of Chemistry, (Former StAR lecturer), is establishing a multi-disciplinary cluster focused on the mechanisms of interaction between nanomaterials and living systems
- Dr Cathal Kearney, ERC-Stating Grant recipient and Senior Lecturer in the Department of Anatomy & Regenerative Medicine leads a research program focused on the coordination of biological processes by delivering therapeutics at specific time-points for the treatment of diabetic wounds
- Dr Annie Curtis, Lecturer in Molecular & Cellular Therapeutics Department, SFI-CDA and IRC-Laureate Recipient (Former StAR lecturer), leads a research program focused on the impact of the molecular clock on inflammation and the development of chronic disease
- Dr Ciara Murphy, StAR Research Lecturer in the Department of Anatomy & Regenerative Medicine and Marie Curie Sklodowska Fellow leads a research program on novel injectable biomaterials and cell-matrix



interactions in metabolic bone disease.

- Dr Helena Kelly, Senior Lecturer in Pharmaceutics, leads a research program focused on hydrogel-based delivery systems within the Drug Delivery Research Group in the School of Pharmacy
- Dr Oran Kennedy, Lecturer in Department of Anatomy & Regenerative Medicine, (Former StAR lecturer), Marie Curie Sklodowska Fellow and SFI-CDA recipient, is an expert in the biomechanical and mechanobiological properties of musculoskeletal tissues
- Dr Caroline Curtin, Lecturer in Department of Anatomy & Regenerative Medicine, brings expertise in the development of gene-activated scaffolds for tissue repair and is developing 3D models for applications in cancer research
- Dr Cian O'Leary, Lecturer in Pharmaceutics, whose research focuses on the development of collagen-based biomaterials for applications in *in vitro* modelling, tympanic membrane and respiratory tissue regeneration
- Dr Killian Hurley, Clinical Senior Lecturer in Medicine, is a physician and scientist whose research focuses on developing personalised models of genetic and chronic lung diseases for drug screening and regenerative medicine using patient-derived induced pluripotent stem cells.

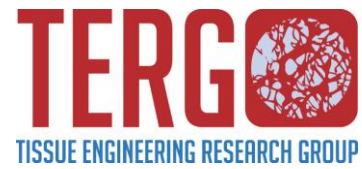
The PI team is complemented by eminent research active clinicians in the field of orthopedics (Profs John O'Byrne and Cathal Moran with interests on novel strategies for joint repair), dentistry and respiratory medicine (Dr Killian Hurley with interests in novel strategies for treating respiratory disease including stem cells). Outside of RCSI, Trinity Centre for Bioengineering PIs include Prof Danny Kelly (3 time ERC recipient) who leads a large program focused on 3D printing and musculoskeletal tissue engineering and Prof. Conor Buckley, bringing expertise in novel biomaterial for cartilage, disk and nerve repair while Prof Garry Duffy from the School of Medicine at NUI Galway brings expertise in designing smart living biomaterial implants to treat chronic diseases such as Diabetes. Head of the TERG satellite lab in RCSI Bahrain, Dr Michael Keogh brings knowledge in the development angiogenic biomolecule loaded scaffolds and neuronal protection in tissue engineered constructs.

To find out more about TERG research see: <http://www.rcsi.ie/tissueengineering>. To find out more about RCSI research please review: <https://www.rcsi.com/dublin/research-and-innovation/research>

## 2. Objective

As part of the ambitious growth and expansion plans for the Centre, we are seeking an innovative Research Lecturer to join TERG, complementing the existing strengths at AMBER and RCSI. The College has set a strategic objective to support up-and-coming research leaders to establish world- leading research teams and contribute to the continued development of teaching and world- class research programmes at RCSI.

We are interested in candidates working in any field relevant to the TERG/AMBER remit as described above. Research excellence and leadership potential is the primary focus of the recruitment. However, we would particularly welcome applications from individuals working in the following areas:



- Advanced biomaterials for tissue repair
- Stem cell biology including iPS cell research
- Biomaterials-based disease modelling
- Gene therapy
- 3D printing/Additive Manufacturing
- Materials Chemistry
- Drug/Biomolecule Delivery
- Nanotechnology
- Material-based immunomodulation
- Advanced Medical Devices
- Minimally-invasive delivery systems
- Mechanobiology

The successful candidate must hold a PhD, MD or equivalent in a relevant discipline such as Tissue Engineering, Regenerative Medicine, Biomedical Sciences, Pharmaceuticals, Biomaterial Development, Additive Manufacturing or related subjects. Candidates must already have demonstrated scientific excellence with clear evidence of independent research leadership evident by high impact factor publications, fellowships and awards received.

The successful applicant will be expected to obtain significant independent principal investigator-led research funding, such as a European Research Council Starting Grant. In addition, the applicant is expected to publish in leading high impact journals in their discipline, to supervise PhD students and to participate in undergraduate student teaching and training.

### 2.1. Specifics of the Post

The successful applicant will enter the programme with a 5 year contract and will be linked with a senior academic to provide mentorship. Funding for a PhD student will be provided that may be jointly supervised by their senior academic advisor, along with some funding for consumables (in total, four years of start-up funding). All Research Lecturers will receive considerable evaluation and feedback every year from both their academic advisor and a Research Institute evaluation committee that monitors their progress. At the end of the 3<sup>rd</sup> year, the Research Lecturer will receive a major evaluation, and those that have had outstanding performance with regard to quality publications and success in obtaining research income that will ensure independent investigator status may be made permanent. During the non-tenure phase of their contract, Research Lecturers will also have the opportunity to provide dedicated contact teaching hours in a supportive environment per semester so that they might begin to develop their teaching skills in advance of a permanent position.

Upon appointment, the Research Lecturer and their academic sponsor will devise a 5 year plan for both research and teaching at RCSI. It is generally expected that in year 1 the Research Lecturer will have protected time to establish their research programme at RCSI, with contribution to teaching within their academic department commencing in year 2, as coordinated and approved by their Head of Department. Support for a 4 year PhD studentship and research including costs (consumables and travel) is provided with the Research Lectureship, and a description of the PhD thesis project should be provided in the 5 year plan. The senior academic advisor may, where



appropriate, jointly supervise the PhD student's thesis.

The 5 year plan will address the following points:

- The research questions and why they are significant and complement/differ from current state of the art research and competitors worldwide;
- The research project of the PhD student;
- Plan for winning leading grants;
- The mechanism by which the academic advisor will assist in achieving success;
- Plan for teaching, commencing in year 2, coordinated and approved by the relevant Head of Department.
- Funded places available on the RCSI Postgraduate Diploma in Health Professions Education (HPEC) for those that require it.

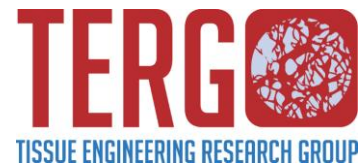
The purpose of the career planning exercise is to agree longer term goals (i.e. 5 years) and will be monitored through RCSI's annual Professional Development Planning (PDP) process.

## 2.2. Profile

We are seeking a candidate with an exceptional track record in research, demonstrated research leadership, a higher degree in a relevant health-related discipline and must come highly recommended by their peers as a candidate of outstanding ability.

## 2.3. Specific Responsibilities include:

- Establishing a research programme complementary to ongoing research themes aligned with TERG/AMBER and the RCSI Research Strategy;
- Participating in the administration and delivery of current teaching programmes, teaching modalities and assessment of undergraduate students;
- Contributing to the development and introduction of new teaching programmes, teaching modalities and modes of assessment;
- Securing funding so as to sustain a research group of postgraduate students and other research staff, with resultant publications in journals of high quality/impact;
- Identifying, promoting and maintaining successful collaborations with academic and industry partners;
- Liaising with colleagues across RCSI international campuses in the facilitation of teaching and research activities;
- Undergoing programmes of training and development as may be required;
- Undertaking overseas assignments as may be required from time to time;



- Performing such other related duties as may be required;
- Representing the best interests of RCSI at all times.

### 2.4. Person Specification:

- Doctoral degree e.g. PhD, MD or equivalent;
- Internationally competitive research record, as evidenced by peer-reviewed publications in journals of high quality/impact, grant support, fellowships and awards received and supervision of postgraduate students;
- Evidence of international reputation through leadership of international societies, editorial boards and conferences would strengthen applications;
- Effective communication style appropriate to audience and situation;
- Strong commitment to own personal and professional development.

### 3. Application Process:

Applications should be submitted via [www.rcsi.ie/star](http://www.rcsi.ie/star) and should include the following:

- Current CV/resume;
- Completion of the online application form including the contact details of a minimum of two referees.

#### 3.1. Interview and presentation

Shortlisted candidates will be invited for a formal panel based interview and presentation at our main campus at RCSI Dublin. Please note the closing date for applications is August 25th, 2019.

Interviews will take place in the month of September 2019

#### 3.2. Informal Enquiries

Informal enquiries are invited in the first instance through Maggie Walshe, Human Resources Department on +353 (1) 4022287 or email [maggiewalshe@rcsi.ie](mailto:maggiewalshe@rcsi.ie) Further information is available from [www.rcsi.ie/star](http://www.rcsi.ie/star)

