

St George's School of Health and Medical Sciences

City St George's, University of London

Cardiovascular & Genomics Research Institute

Post-doctoral Research Associate in Thrombosis Research

Ref: 115-25-R

JOB DESCRIPTION

Post Title	Post-doctoral Research Associate	
Grade	CSG 5B	
Contract type	Fixed term 3 years	
Responsible to	Lecturer in Cardiovascular Sciences	
Accountable to	Lecturer in Cardiovascular Sciences (City St George's) and Professor in Haemostasis in the Department of Immunology and Inflammation (Imperial College London)	
Responsible for	Generation, analysis and presentation of data for British Heart Foundation funded project; Supervision of undergraduate and graduate students.	
Liaises with	Members of research group and wider City St George's community and externally with collaborators at Imperial College and University of Birmingham.	

Overall purpose of job

In the UK, venous thromboembolism (VTE), including deep vein thrombosis (DVT) and pulmonary embolism, affects 60-100,000 people/year and is the third most common cause of cardiovascular death. Adjunctive therapies (particularly for higher risk patients) that can synergise with anticoagulants to further diminish VTE risk without modifying bleeding are highly attractive. Using microfluidic models of DVT, we showed that platelet GPIb α binding to endothelial VWF strings causes intraplatelet Ca²⁺ fluxes and $\alpha_{IIb}\beta_3$ activation (termed platelet 'priming') that enable subsequent neutrophil recruitment via SLC44A2.(Mereweather et al 2025) Under venous flow, this interaction drives the formation of highly pro-thrombotic neutrophil extracellular traps that promote DVT. *SLC44A2* is a susceptibility locus for VTE due









to a prevalent SNP (rs2288904;maf 0.22) encoding a R154Q substitution that disrupts $\alpha_{IIb}\beta_3$ binding and therefore protects against VTE. (Germain et al 2015; Constantinescu-Bercu et al 2020; Mereweather et al 2025) The aim of this project funded by the British Heart Foundation is investigate how VWF-platelet 'priming' enables neutrophil binding under venous flow, and the benefit of targeting this platelet/neutrophil interaction in DVT. This project will use a combination of *in vitro, ex vivov* and *in vivo* models of venous thrombosis with real-time fluorescent imaging, immunohistochemistry as well as more traditional laboratory techniques (e.g. cell culture, mammalian and insect cell transfections, protein expression and purification, molecular biology techniques - ELISA, Western blotting, DNA preparation and mutagenesis, PCR).

1. Main Duties and Responsibilities

We are looking for a researcher with an understanding of thrombosis and haemostasis. Experience with flow assays, real-time imaging (fluorescent widefield/confocal microscopy) and analysis of thrombus composition would be advantageous. Experience in cell culture, protein expression and purification is strongly recommended. *In vivo* experience is desirable with a willingness to be involved in *in vivo* research.

The research associate will be expected to present data at conferences, write up the work for publication and contribute to any future grant applications. Interaction with other members of the research group and across the Cardiovascular Research Institute is encouraged. Similarly, it is expected that the research associate will be willing to work with and travel to collaborators within City St George's and at Imperial College and University of Birmingham.

Teaching: Post-doctoral researchers may be asked to help with some teaching but it is not an expectation of the role.

Professional development: The post-holder will be encouraged to take opportunities for continuing personal and professional development. The University has a focus on supporting and developing careers and opportunities will be made available to develop each researcher in the context of their own requirements. Post-doctoral researchers have their own group that meets monthly to discuss issues of specific interest.

Collaboration and Advice: All researchers across the School of Health and Medical Sciences are encouraged to collaborate with others in the University and to seek appropriate national and international collaborations.

Public Engagement in Science: City St. George's, University of London is keen to support scientists interested in this area to develop through internal programmes and to take part in such activities as Spotlight on Science. Engaging patients and the public in the design of research as well as all other aspects is strongly supported.

2. Nature and Scope of Job

The Cardiovascular and Genomics Research Institute consists of four Sections: Experimental Cardiology, Clinical Cardiology (including Vascular Surgery), Genomics and Vascular Biology. The post will be in the Vascular Biology Research Section, which has a strong tradition in ion channel research, but the incumbent will be encouraged to interact with researchers in the other sections. The CGRI has a wealth of experience in several disciplines. There are underpinning data, tissue, DNA and RNA datasets in Sudden Death and Genetic Heart Disease (NIHR BRC Biobank) and Lymphovascular Disease (MRC/BHF Programme Grant) as well as access to large population datasets such as 100,000 Genomes and UK Biobank. A major grant award body is the British Heart Foundation with whom we aim to develop a more









substantial relationship. Cellular and models for mechanistic and disease-based research are also available providing potential synergies across all Sections. Expertise in other areas of cellular signalling and molecular mechanisms of disease exists across the St George's School of Health & Medical Sciences including the introduction of a Zebrafish research facility.









Person Specification

Criteria	Description	Essential/ Desirable	How it is to be tested
Qualifications	BSc and PhD in an appropriate field to address the job requirements and proposed programme of research	E	PQ/AF
Experience	A proven record of generating high quality data in mechanisms of thrombus formation with experience of Cell Culture and transfection	E	AF, INT , ST, SS1
	Experience in antibody purification or protein expression and purification	E	AF, INT, ST, SS2
	Experience with molecular biology techniques (ELISA, Western blot, and PCR) immunohistochemistry,	D	AF, INT, ST, SS3
Knowledge/ Skills	Knowledge of thrombosis and haemostasis	E	INT, ST SS4
	Computational modelling of membrane proteins	D	ST
	Working knowledge of Microsoft Office packages, email and intranet systems	E	AF, INT,
Personal Attributes	Proven ability to work independently, present data and write manuscripts	E	AF,INT, SS5 AF,INT,
	Good oral and written communication and interpersonal skills.	E	AF,INT, SS6
	Ability to work in a team and support different team projects	E	

Key:









PQ=Prerequisite Qualification, AF=Application Form, CV=Curriculum Vitae, SS=Selection/Supporting Statements, ST=Selection Test/Presentation, INT=Interview

Note: Elements marked SS (Supporting Statements) in the Person Specification will be highlighted in Step 6 (Supporting Statements) on the online application form. Applicants' answers to Step 6 are an essential part of the selection process. Applicants should write individual supporting statements to demonstrate how their qualifications, experience, skills and training fit each of the elements highlighted in this section.

<u>Applicants should address other elements of the Person Specification in Step 7 (Additional Information)</u>. Shortlisting will be based on applicants' responses to Step 6 **and** Step 7. Therefore applicants should complete both sections as fully as possible on the online application form.

Date

16 April 2025









About City St George's, University of London

City St George's, University of London is the University of business, practice and the professions.

City St George's attracts around 27,000 students from more than 150 countries.

Our academic range is broadly-based with world-leading strengths in business; law; health and medical sciences; mathematics; computer science; engineering; social sciences; and the arts including journalism, dance and music.

In August 2024, City, University of London merged with St George's, University of London creating a powerful multi-faculty institution. The combined university is now one of the largest suppliers of the health workforce in the capital, as well as one of the largest higher education destinations for London students.

City St George's campuses are spread across London in Clerkenwell, Moorgate and Tooting, where we share a clinical environment with a major London teaching hospital.

Our students are at the heart of everything that we do, and we are committed to supporting them to go out and get good jobs.

Our research is impactful, engaged and at the frontier of practice. In the last <u>REF</u> (2021) 86 per cent of City research was rated as world leading 4* (40%) and internationally excellent 3* (46%). St George's was ranked joint 8th in the country for research impact with 100% of impact cases judged as 'world-leading' or 'internationally excellent. As City St George's we will seize the opportunity to carry out interdisciplinary research which will have positive impact on the world around us.

Over 175,000 former students in over 170 countries are members of the City St George's Alumni Network.

City St George's is led by Professor Sir Anthony Finkelstein.









St George's School of Health and Medical Sciences currently offers a range of employee benefits:

Salary:	£39,355 pa, (pro-rated for part-time staff). The salary range for Grade 5B is £39,355 – £41,671 and appointment is usually made at the minimum point.
Hours:	35 hours per week which can be done flexibly in various ways or part time/job share can also be considered. Staff are expected to work the hours necessary to meet the requirements of the role and this will be dependent on the service area.
Annual leave:	30 days per annum. Plus eight UK public holidays and four days when City St George's, University of London is closed (usually between Christmas and New Year). Part time staff receive a pro rata entitlement.
Pension:	Membership of competitive pension schemes with generous employer contribution and a range of extra benefits.
	Superannuation Arrangements of the University of London (SAUL)
	London Pension Fund Authority (LPFA)
	Universities Superannuation Scheme (USS)
	National Health Services Pension Scheme (NHSPS) (existing members only)
Flexible working	Flexible working, including part-time or reduced hours of work, opportunities to work from home for many posts, compressed hours and local flexibility in agreeing start and finish times of work.
Travel	City St George's, University of London offers an interest free season ticket loan and participates in the <u>Cycle to Work</u> <u>Scheme</u> .
Gift Aid	If you would like to make a tax-free donation to a charity of your choice, this can be arranged through our Payroll.
Sports and Leisure Facilities	Rob Lowe Sports Centre, situated on the St George's Healthcare NHS Trust site offers exercise facilities that can be utilised by City St George's, University of London staff.
	Within walking distance from St George's is Tooting Leisure Centre. Facilities include a swimming pool, gym and various exercise classes. The Centre offers staff an all-inclusive corporate membership. For more information please contact <u>Tooting Leisure Centre</u> .









Shops and facilities There are a number of shops and facilities situated on site including ATMs, student bar and shop, Pret a Manger, M&S Simply Food store, library and multi-faith room.

Informal enquiries

Informal enquiries may be made to Dr Isabelle Salles-Crawley via email: isalles@sgul.ac.uk

Making an application

All applicants are encouraged to apply online at <u>http://jobs.sgul.ac.uk</u> as our system is user friendly and the online application form is simple to complete. Please note that CVs only will not be accepted.

For any accessibility issues please contact hrhelp@sgul.ac.uk

Closing date: Thursday 15 May 2025

Interview date will be on TBC. As shortlisted candidates will be notified by email, it is imperative that you provide an email address that is accessed frequently.

Please quote reference **115-25-R**

We are delighted that you are interested in working at St George's School of Health and Medical Sciences. You will be notified of the outcome of your application by email. We aim to respond to all candidates within 5 weeks of the closing date of the vacancy.







