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RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

<b>Title:</b>	Post-Doctoral Position in Parkinson's disease research
<b>Department:</b>	Physiology and Medical Physics, RCSI
<b>Tenure:</b>	Specified Purpose, Full time for up to 2 years
<b>Location:</b>	RCSI, St. Stephens Green Dublin and Centre for Systems Medicine
<b>Reporting to:</b>	<b>Prof Jochen Prehn</b> , Department of Physiology and Medical Physics and Centre for Systems Medicine <b>Dr Orla Watters</b> , Department of Physiology and Medical Physics and Centre for Systems Medicine
<b>Salary:</b>	Dependent on level of experience and based on the most current IUA Researcher's Salary Scales IUA Researcher's Salary Scales.

The **Royal College of Surgeons in Ireland (RCSI)** is a private, self-financing, not-for-profit medical and surgical college headquartered in Dublin (Ireland) with global reach through its overseas medical universities and health care centres in the Middle East, the Far East and Africa. Since its foundation in 1784, it has played a leadership role in Irish surgical and medical education. Currently, it operates the largest Medical School in Ireland and provides undergraduate education in Physiotherapy, Pharmacy, and Nursing. In addition to Surgery, it also provides postgraduate training and education in Radiology, Dentistry, Nursing & Midwifery, Sports and Exercise Medicine, Healthcare Management and Leadership, and has an Institute of Research.

RCSI recognises that excellence in research is critical to the quality of its educational activities, its credibility, and, overall, to its mission to enhance human health. Recently, RCSI has implemented a new research strategy that will build upon its strength in translational biomedical and clinical research to deliver transformational, high impact changes in health care. Targeting both Irish national and EU funding, along with increased collaboration with industry, is a major part of the RCSI research strategy. Forging increased collaboration between RCSI PIs and industry is of critical importance to achieving success in this area. RCSI is also committed to provide its researchers with the supports and developmental opportunities to enable them to continuously grow and support their overall career development.

**Project Title: PD-MitoQUANT – A quantitative approach towards the characterisation of mitochondrial dysfunction in Parkinson's disease**

As part of the EU-funded Innovative Medicines Initiative (IMI) project PD-MitoQUANT consortium, a two-year full-time Post-Doctoral position is now available in the Centre for Systems Medicine (CSM) and the Department of Physiology and Medical Physics, Royal College of Surgeons in Ireland, utilising molecular and cell imaging techniques to investigate the role of mitochondrial dysfunction in Parkinson's disease.



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**Objectives:**

Parkinson's disease (PD) is a progressive neurological condition affecting more than one million people in Europe. The main pathological hallmark of this disease is the presence of  $\alpha$ Syn aggregation in the brain. Mitochondrial dysfunction has been implicated in PD, but detailed understanding of the cause and effect of this dysfunction is lacking. PD-MitoQUANT will extensively investigate and characterise the role of mitochondrial dysfunction in PD, with specific focus on  $\alpha$ Syn toxicity.

This post-doctoral position will contribute to the PD-MitoQUANT project by experimentally evaluating the effect of  $\alpha$ Syn fibrils on mitochondrial and cellular function in *in vitro* models of PD, measuring bioenergetic function, mitochondrial dynamics and morphology, and stress responses. This work will employ molecular and cell biology techniques including primary cell culture, viral transduction, neuronal biochemistry, confocal imaging, image processing and data analysis. The successful candidate will benefit from the multi-disciplinary expertise of the academic and industry partners of PD-MitoQUANT with an aim to thoroughly characterise existing disease models, and identify novel disease biomarkers and innovative therapeutic targets for this condition.

**Specific duties of this post include:**

- Perform molecular biochemical and imaging studies to characterise and explore mitochondrial dysfunction in PD.
- Contribute to successful interdisciplinary research by liaising closely with both experimental and computational researchers within the consortium.
- Keep excellent records, submit research for publication in peer reviewed journals, and contribute to internal and external reporting.
- Present research findings at international scientific conferences and at consortium meetings.
- Assist with teaching activities and supervision of graduate students and technical staff as required.
- Compliance with statutory legislation and implementation of College rules and requirements in furtherance of your own and general staff welfare and safety.
- Undertake programmes of training and development as required.
- The candidate must represent the best interests of the Department and RCSI at all times.

**Person Specification**

**The candidate is expected to have the following qualifications and experience**

- Highly motivated, passionate candidate with the ability to independently plan and conduct research while integrating into an interdisciplinary research environment.
- Must have a Ph.D. (or submitted Ph.D. thesis) in Biochemistry, Molecular Biology, Cell Biology or similar discipline, ideally in the field of neuroscience.
- Research experience in primary cell culture and/or confocal imaging, and demonstrated research accomplishments and experience documented by publications and/or awards.
- Excellent interpersonal skills as well as excellent verbal and written





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communication skills.

- Flexibility to work irregular hours on occasion.
- Have a good knowledge of Health and Safety Legislation and its application in a laboratory environment.
- Attention to detail and thoroughness in work practices.

**Application information:**

**Informal Enquiries to:** Prof. Jochen Prehn [prehn@rcsi.ie](mailto:prehn@rcsi.ie)  
Dr. Orla Watters [orlawatters@rcsi.ie](mailto:orlawatters@rcsi.ie)

**Application:** Please apply with your CV and contact details for references to:  
[prehn@rcsi.ie](mailto:prehn@rcsi.ie)

**Closing date:** Please note that applications will be reviewed as they are received and the role will close for applications upon the appointment of a suitable applicant

**Please Note:**

*This job description may be subject to change to reflect the evolving requirements of the Department and RCSI in developing healthcare leaders who make a difference worldwide.*

*Similar vacancies that arise in the next 6 months may be filled from the pool of applicants that apply for this position.*

*RCSI is proud to be an equal opportunity employer and welcome applications from all suitably qualified persons regardless of their gender, civil status, family status, sexual orientation, religion, age, disability or race.*

*If you have any particular requirements for your interview, please notify the Human Resources Department at your earliest convenience.*

