



Job Description

Research Fellow

Ref No: 1878628

Department: Great Ormond Street Institute of Child Health

Location: Zayed Centre for Research into Rare Disease in Children, London (UK)

Grade: 7, points 29-32

Salary (inclusive of London allowance):
£36,770 - £39,843 per annum

Hours of Work: 36.5 per week

Duration: Until 31/08/2023 in the first instance.

Reports to: Dr Alessia Cavazza

The UCL Great Ormond Street Institute of Child Health (GOS ICH)

The mission of the UCL GOS Institute of Child Health is to improve the health and well-being of children, and the adults they will become, through world-class research, education and public engagement. The UCL GOS ICH, together with its clinical partner Great Ormond Street Hospital for Children, forms the largest concentration of children's health research outside North America. In 2013 GOS ICH developed a new academic strategy which focuses on five scientific programmes:

Developmental Biology and Cancer
(<http://www.ucl.ac.uk/ich/research/developmental-biology-cancer>)

Developmental Neurosciences
(<http://www.ucl.ac.uk/ich/research/developmental-neurosciences>)

Genetics and Genomic Medicine
(<http://www.ucl.ac.uk/ich/research/genetics-genomic-medicine>)

Infection, Immunity and Inflammation
(<http://www.ucl.ac.uk/ich/research/infection-immunity-inflammation>)

Population, Policy and Practice
(<http://www.ucl.ac.uk/ich/research/population-policy-practice>)

GOS ICH's activities include active engagement with children and families, to ensure that our work is relevant and appropriate to their needs. GOS ICH generates the funding for our research by setting out our proposals in high quality applications to public, charitable and industrial funding bodies and disseminates the results of our research by publication in the medical and scientific literature, to clinicians, policy makers and the wider public.

The Institute offers world-class education and training across a wide range of teaching and life learning programmes which address the needs of students and professional groups who are interested in and undertaking work relevant to child health.

GOS ICH holds an Athena SWAN Charter Gold Award in recognition of its commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

The Institute Director is Professor Rosalind Smyth. Further information on GOS ICH can be found at <http://www.ucl.ac.uk/ich>.

The UCL GOS Institute of Child Health is part of the Faculty of Population Health Sciences and the

School of Life and Medical Sciences. For more information please visit the following websites for the School (<http://www.ucl.ac.uk/slms>), and the Faculty (<http://www.ucl.ac.uk/populationhealth-sciences>)

Main purpose of the job

We are seeking a talented and highly motivated Research Fellow to join the research group of Dr Alessia Cavazza at the Great Ormond Street Institute of Child Health at UCL, within the Section of Molecular and Cellular Immunology (<https://www.ucl.ac.uk/child-health/research/infection-immunity-inflammation/molecular-and-cellular-immunology>).

Our research is focused on developing effective and safe genome editing and gene therapy strategies for the treatment of blood disorders and investigating the molecular mechanisms underlying hematopoietic stem cells and hematopoietic diseases (Rai R. et al., Nature Communications 2020; Rai R et al., Human Gene Therapy 2020; Rivers E. et al., Elife 2020; Schott J. et al., Molecular Therapy Methods and Clin Dev 2019). There are a number of on-going gene and cell therapy projects within the unit and significant experience of translation of pre-clinical work to clinical trial.

We are looking for candidates with experience in gene editing or gene and cell therapy, stem cell biology and molecular biology to take forward research into different areas of interest:

- Development of gene editing technologies and optimization of delivery methods;
- Dissecting hematopoietic stem and progenitor cell biology for translational applications;
- Understanding of basic mechanisms of inherited human immunodeficiency or related conditions.

Duties and responsibilities:

- To undertake translational research and development of new therapies in areas relevant to the laboratory projects
- To design, develop, and undertake gene editing procedures using reagents including CRISPR/Cas and other nucleases
- To isolate, culture and differentiate human hematopoietic stem and progenitor cells
- To arrange and/or undertake human/murine chimeric modelling to assess stem cell function and engraftment
- To perform functional studies by using different techniques including immunostaining, western blotting, flow cytometry, proliferation assays, etc.
- To supervise junior staff and students
- To liaise with collaborating UK and international groups and to present work to these groups and attend meetings as required
- To record, analyse and write up the experiments
- To contribute to the overall, normal activities of the research teams and the department as required, including laboratory duties and attendance of department meetings and seminars
- To contribute to the drafting and submission of meeting abstracts, posters and research manuscripts
- As duties and responsibilities change, the job description will be reviewed and amended in consultation with the post holder

Person specification

Criteria	Essential or Desirable
Qualifications, experience and knowledge	
PhD in a relevant discipline	Essential
Personal Animal Licence	Desirable
Laboratory work in molecular biology	Essential
Experience in culture and manipulation of cell lines	Essential
Experience in culture and manipulation of stem cells	Desirable
Prior knowledge and experience in techniques of flow cytometry, western blotting, cloning, PCR, ddPCR	Essential
Experience in gene therapy/gene editing, including viral production and cell transduction	Essential
Experience in murine adoptive cell transplantation studies	Desirable
Previous experience in supervising junior staff (PhD students, research assistants, students)	Desirable
Skills and abilities	
Ability to analyse and write up data and keep accurate records	Essential
Ability to work independently and effectively without constant supervision	Essential
Follow relevant scientific literature to ensure use of optimal methods and understand emerging practices across the field	Essential
Personal attributes	
Effective spoken and written English and good communication and interpersonal skills	Essential
Excellent organizational skills	Essential
Excellent teamworker	Essential

Apply

To apply for this position visit:

ucl.ac.uk/jobs