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| Job Description |  |
| Senior Research Technician | Grade: 7  |
| UCL Department: UCL Queen Square Institute of NeurologyResearch Department: Clinical and Experimental Epilepsy | UCL Queen Square Institute of Neurology, Queen Square House |

#### Reports to: Professor Dimitri Kullmann

**LONDON’S GLOBAL UNIVERSITY**

**Director- Prof. Mike Hanna**

**HoD- Prof. M.C. Walker**

**PI-Prof. D.M. Kullmann**

**Senior Research Technician**

#### Context

The UCL Queen Square Institute of Neurology (ION) in Queen Square was established in 1950, merged with UCL in 1997, and is a key component of the Faculty of Brain Sciences (FBS), School of Life and Medical Sciences (SLMS), at UCL. The Institute has [eight academic research Departments](https://www.ucl.ac.uk/drupal/site_ion/research/research-departments) (<https://www.ucl.ac.uk/ion/research/research-departments> ), which encompass clinical and basic research within each theme. In parallel, there are currently [six Divisions](http://www.ucl.ac.uk/ion/divisions) representing clinical professional affiliations.

***The mission is to translate neuroscience discovery research into treatments for patients with neurological diseases.***

In addition, a number of important research centres are based at the ION, affiliated with one of our academic research departments: <https://www.ucl.ac.uk/ion/research/research-centres>

The UCL Queen Square Institute of Neurology has a significant postgraduate [teaching and training portfolio](http://www.ucl.ac.uk/ion/education), with nearly 500 graduate students at Queen Square. The Institute employs just over 730 staff, and hosts just under 300 honorary & visiting staff, occupies some 12,000 sqm of laboratory, lecture room and office space, and has a current annual turnover of approximately £78m.

The Institute is closely associated in its work with the National Hospital for Neurology & Neurosurgery (NHNN), University College London Hospitals' NHS Foundation Trust, and in combination they form a national and international centre at Queen Square for teaching, training and research in neurology and allied clinical and basic neurosciences. The Institute also has active collaborative research programmes with other centres of excellence and works in close partnership with them: <http://www.ucl.ac.uk/ion/about/related>

**Research Excellence**

A large proportion of the Institute's funding is obtained from the Higher Education Funding Council for England. The most recent research assessment exercise, REF2014, showed that the IoN, as part of the FBS, is the first rated UK institution for neuroscience research output.

The Institute currently holds over 578 active research projects, totalling £248m, for research from the principal medical charities concerned with neurological diseases, and from government agencies such as the Medical Research Council. Generous support for research is also provided through grant awards from the Brain Research Trust and we also receive significant philanthropic support.

UCL Neuroscience is currently rated second in the world by ISI Essential Science Indicators, and four of the top twelve most highly cited authors working worldwide in neuroscience and behaviour are based at the ION. In the calendar year 2016, Institute staff published1428 papers, 40 book chapters and 5 books (data from UCL Discovery). 55 papers were published in the top 50 of all scientific journals (ranked by ISI impact factors), including Nature, Science, Lancet, BMJ and New England Journal of Medicine. RAND report shows that UCL has the highest share of highly cited publications in Neurology in England: <http://www.rand.org/pubs/research_reports/RR1363.html>

There are 9 Fellows of the Royal Society and one Nobel Prize winner at Queen Square.

In December 2016, it was announced that UCL had been selected as the headquarters of the new UK Dementia Research Institute (UK DRI), to be led by Professor Bart De Strooper. The UK DRI is a joint £250 million investment from the Medical Research Council, Alzheimer’s Society and Alzheimer’s Research UK. The headquarters of the DRI is at University College London, with additional research centres at the University of Cambridge, Cardiff University, Edinburgh University, Imperial College London and King’s College London. You can read more about the DRI at [www.ukdri.ac.uk](http://www.ukdri.ac.uk/)

The DRI is embedded within the UCL Queen Square Institute of Neurology (ION), as an autonomous academic research department.

**Teaching excellence**

The UCL Queen Square Institute of Neurology has a significant postgraduate teaching and training portfolio, with over 500 graduate students (over 250 PhD students) at Queen Square, and taught MSc/MRes courses in: Advanced Neuroimaging; Brain and Mind Sciences (an innovative two year, two centre programme); Clinical Neuroscience; Clinical Neurology; Neuromuscular Disease; Stroke Medicine, Dementia and Translational Neurology. A new distance-learning Diploma in Clinical Neurology was launched in Autumn 2011. Excellent graduate students of the highest quality are recruited to both ION and UCL-wide PhD programmes, including the LWENC 4-year PhD p[rogramme and the Wellcome 4-year PhD in Neuroscience, which are supported through Research Council, charity and industry funded studentships. Institute staff contribute to undergraduate teaching of Clinical Neurology for the UCL Medical School, host an Elective programme for final year medical students and participate in the organisation of several CPD courses: <http://www.ucl.ac.uk/ion/education>

**Equality & Diversity**

The Institute prides itself for operating in an all-inclusive environment. Teamwork is highly valued, individual strengths are recognised and celebrated, and there is a commitment to advancing the careers of everyone, regardless of gender or role. We aim to provide a family friendly environment where both women and men feel able to take the time they need for family. The Athena SWAN Charter recognises commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia. ION is delighted to have received an Athena Swan Silver Award in October 2015. Mentoring is a crucial part of supporting career progression. While UCL has an online mentoring scheme called u-mentor, we have added a specific mentoring scheme for female academics at the ION. Currently we have 27 mentors who have been trained by an external mentoring expert.

At the Institute we uphold the UCL-wide “Dignity At Work” policy, which, together with support available, protects staff and students from unacceptable behaviour. As an Institute we have pledged to Zero Tolerance: <https://www.ucl.ac.uk/ion/working-institute/dignity-work>

**Environmental sustainability**

The Institute is committed to operating within an environmentally sustainable environment, through the implementation of the UCL Sustainability policy at Departmental level. For more information, please visit our webpage at: <http://www.ucl.ac.uk/ion/green-awareness/>

**For more information on our initiatives:** <https://www.ucl.ac.uk/ion/working-institute>

**The Research Department**

#### The work will be based in the Experimental Epilepsy Group which sits within the Department of Clinical and Experimental Epilepsy at the UCL Institute of Neurology. Research within the Group spans across fundamental mechanisms of vesicle fusion and synaptic transmission, ion channel biology, experimental models of epilepsy, the function of neural circuits, and neurological diseases modelled in rodents and flies.

#### There are 6 Principal Investigators: DM Kullmann, MC Walker, DA Rusakov, J Jepson, K Volynski, JE Rothman.

#### Main purpose of the job

#### The successful candidate will join a multidisciplinary collaboration led by Professors DM Kullmann, MC Walker (both at the UCL Institute of Neurology) and S Schorge (UCL School of Pharmacy) that aims to bring gene therapy for refractory epilepsy to a clinical trial.

The post is funded by a grant from the Medical Research Council to support clinical translation of gene therapy to treat refractory focal epilepsy.

Initiation of the clinical trial is conditional on a satisfactory outcome of a preclinical study to assess biodistribution, dosage and off-target effects of the treatment, for submission to the Medicines and Healthcare products Regulatory Agency (MHRA). The clinical trial will require special handling of viral vector aliquots, and will generate tissue samples that will require further analysis.

#### Duties and responsibilities:

* **Main duties**
* Perform injections of viral vectors in rodent brain
* Measure the spread of viral vectors, transduction efficacy, cell-type specificity, and off-target effects
* Process tissue for PCR, RNA-FISH and immunohistochemistry.
* Provide assistance with DNA cloning (restriction digests, gel extraction of DNA, ligation and transformation), mini- and maxi-preps
* Liaise with contract research organizations and in-house pathology researchers
* Coordinate handling, storage, and dispensing aliquots of clinical grade viral vectors for administration in a clinical trial
* Coordinate processing tissue obtained in the clinical trial
* **Management**
* Support an application to embark on a clinical trial
* Deliver and collect tissue and viral vector samples
* Manage and maintain immaculate written and electronic data files, together with data tracking file, ready for auditing
* Manage service call outs and monitor working condition of laboratory equipment, ordering and maintenance of laboratory consumables
* **Administrative**
* Maintain the update of electronic spreadsheet of SOP, Risk Assessments, clinical and experimental samples and reagents stored in liquid nitrogen, freezers -80 and -20 C and fridges
* Maintain meticulous written and electronic records of all samples, experimental procedures and data; ensure that such records are accessible by key members of the team at all times
* Ensure that agreed deadlines are met and quality standards maintained
* Order and maintain stocks of reagents and apparatus to ensure timelines and budgets
* Liaise with commercial suppliers and service technicians for upkeep and maintenance of reagents, apparatus and equipment
* Take 2-4 weekly stock check of antibodies and reagents available for all the work
* Maintain a safe, tidy and functional workplace at all times and troubleshoot specialist equipment
* Co-ordinate with the clinical and support staff for sample collection from patients
* Attend and contribute to regular project meetings, helping to ensure that the laboratory work will deliver the project milestones
* Comply with all relevant health, safety and quality standards to ensure that legislative and regulatory body requirements are met and observe strict confidentiality
* **Professional and Quality Assurance**
* Maintain continuing professional development, including participation in staff development and review procedures in accordance with UCL guidelines, including annual formal appraisal.
* Ensuring the highest standard of record keeping, maintaining accurate, complete, and up to date records.
* Ensuring confidentiality is maintained as applicable.
* Attending and contributing to Departmental, Institutional and other meetings as appropriate.
* Acting at all times in accordance with the highest professional standards, and ensuring that these are maintained in the delivery of all aspects of research.
* Adhering at all times to the policies, rules and regulations of the Department, Institute and UCL.
* The post holder will actively follow UCL policies including Equal Opportunities and Information Governance policies.
* The post holder has a responsibility to carry out their duties in a resource efficient way and actively support UCL’s Sustainability Strategy, policies and objectives within the remit of their role.
* The post holder will maintain an awareness and observation of Fire and Health & Safety Regulations.
* **General**
* As duties and responsibilities change, the job description will be reviewed and amended in consultation with the post holder.
* The post holder will carry out any other duties as are within the scope, spirit and purpose of the job as requested by the line manager.

# Person specification

| Criteria | Essential or Desirable |
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| **Qualifications, experience and knowledge** |  |
| Honours degree (minimum 2:1) in Neuroscience or a related discipline. | E |
| Higher Degree in Neuroscience | D |
| Personal Licence to work with rodents from the UK Home Office | D |
| **Skills and abilities** |  |
| Experience of working with viral vectors, immunohistochemistry or in-situ hybridization | D |
| Experience of working with rodents | D |
| IT proficiency at advanced user level (Spreadsheet, Word Processing, Database, Email, Web based applications). | E |
| Excellent oral and written communication skills | E |
| Strong problem solving abilities | E |
| **Personal attributes** |  |
| Good inter-personal skills with an ability to work co-operatively in a multidisciplinary setting. | E |
| Resourceful and able to act on own initiative | E |
| Interested in research and a commitment to supporting high quality research | E |

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# Apply

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| To apply for this position visit:ucl.ac.uk/jobsIf you have any queries regarding the application process, please contact Oksana Shapoval, HR Officer, UCL Queen Square Institute of Neurology, 23 Queen Square, London, WC1N 3BG (email: ion.hradmin@ucl.ac.uk). The post is available immediately and funded by a grant from the Medical Research Council for 24 months initially. Posts will be offered subject to satisfactory references and successful completion of a 9-month probationary period.**Salary**The post is graded as Grade 7, the salary for which ranges from £35,328 to £42,701pa (including London Allowance). Progression through the salary scale is incremental. Cost of living pay awards are negotiated nationally and are normally effective from 1st August each year.**Probation**Appointments are subject to receipt of satisfactory references and a probationary period of 9 months.**Hours of work**Full time 36.5 hours per week and times of work are as determined by the Head of Department.**Annual leave**Annual leave is 27 working days for a full time member of staff + 6 UCL closure days in addition to 8 Bank Holidays.**Pension**Appointments are superannuable under the Universities Superannuation Scheme (USS) or, subject to eligibility requirements, the National Health Service Pension Scheme (NHSPS). Further information about USS and the benefits can be found at [www.uss.co.uk](http://www.uss.co.uk). **Other benefits**UCL is a dynamic, global university based in one of the most exciting capital cities in the world. Not only does working at UCL offer the opportunity to work with some of the greatest intellects in the world, it also offers competitive terms, conditions and benefits to its staff. In the 2013 UCL staff survey, 83% of staff would recommend UCL as a good place to work and 86% are proud to work for UCL.As part of the UCL community you can access free lunch hour lectures, exhibitions and museums and collections. On campus UCL has the Bloomsbury theatre hosting a range of performances and a series of bars, cafes and other facilities, which UCL staff can use.In addition to 41 days annual leave (inclusive of public holidays and closure days) and generous pension schemes, UCL provides a number of other staff benefits which are linked from the page below:* <https://www.ucl.ac.uk/human-resources/pay-benefits/staff-benefits>

UCL benefits and policies apply equally, whatever the sexual orientation and/or gender identity of employees. Benefits and policies relating to employees partners, includes both different sex and same sex partners. |