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| Job Description |  |

**LONDON’S GLOBAL UNIVERSITY**

**Department of Chemistry**

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| **Research Fellow in Organic Chemistry & Radiochemistry** |  |
| Department: ChemistryGrade: 7Location: UCL Bloomsbury Campus  |  |

#### Reports to: Dr Kerstin Sander

#### Context

**The Chemistry Department**

The Chemistry Department at University College London is the oldest in England, and today is one of the best in the UK, being ranked 2nd in the UK for the world-class impact of its research in REF(2014). We are located in Bloomsbury, at the heart of London, and offer an exciting and vibrant environment in which to study in one of the UK's top universities. The Department of Chemistry at UCL is committed to supporting excellence in both research and teaching. The department offers undergraduate BSc and MSci programmes in Chemistry and currently teaches 400 undergraduates registered in Chemistry as well as students who select Chemistry on the Natural Sciences programme and first year Chemistry for life scientists.

The Chemistry Department has over 50 members of academic staff carrying out world-leading research. We specialise in the areas of organic synthesis, chemical biology, computational chemistry, nanotechnology, inorganic and materials chemistry, physical chemistry and chemical physics. The department has an annual research income of around £15 million, derived from many sources including the Research Councils (EPSRC, BBSRC, MRC, and NERC), European Commission and a wide range of charities and industrial partners in the UK, Europe and the USA.

Details about our research can be found on the departmental website <http://www.ucl.ac.uk/chemistry>.

#### Main purpose of the job

Bacteria and other disease-causing organisms that can no longer be controlled or killed with medicines are called multidrug-resistant organisms (MDROs). MDROs pose a major problem to the healthcare system as they can cause severe infections and affect the weakest, in particular young children, the elderly or people with health conditions such as chronic lung, heart, and kidney disease. In Europe, MDROs cause approximately 670,000 infections per year. 33,000 patients do not survive the infection due to the lack of treatment options.

The aim of this project is to develop a much-needed new strategy for the treatment of MDROs, in particular by modifying existing drugs in a way that is envisaged to broaden their efficacy and clinical applicability.

The successful candidate will work under the supervision of Dr Kerstin Sander at the UCL Centre for Radiopharmaceutical Chemistry (<https://www.ucl.ac.uk/research-imaging/ucl-department-imaging/centre-radiopharmaceutical-chemistry>), and in close collaboration with colleagues in Germany and Sweden, with whom we have formed a consortium. The objective of the work carried out at UCL is to characterize the pharmacokinetic properties of the new treatment strategy using *in vivo* imaging. To achieve this goal, the core duties of the postholder will be to synthesise drug-like small molecules and to radiolabel them with fluorine-18.

#### Duties and responsibilities:

**Main duties:**

* To synthesise small, drug-like molecules
* To characterize new compounds using analytical techniques such as nuclear magenetic resonance spectroscopy, mass spectrometry and high performance liquid chromatography
* To carry out radiolabeling with fluoride-18
* To handle radiolabeled compounds
* To carry out radiotracer binding studies
* To help with *in vivo* imaging studies (preclinical)
* To help with routine management of a controlled radiation area
* To ensure that equipment is safe and maintained in working order
* To record, analyse and write up the results of experiments
* To liaise with collaborators in Germany and Sweden

**Academic duties:**

* To contribute to the drafting and submitting of manuscripts to peer reviewed journals
* To prepare progress reports on research for funding bodies as required
* To contribute to the preparation and drafting of research bids and proposals
* To contribute to the overall activities of the research team and department as required
* To undertake a limited amount of teaching in relation to subject area
* To contribute to the induction and direction of other research staff and students as requested

**Professional duties:**

* The job description reflects the present requirements of the post, and as duties and responsibilities change/develop, the job description will be reviewed and be subject to amendment in consultation with the postholder.
* The postholder will carry out any other duties as are within the scope, spirit and purpose of the job as requested by the line manager.
* The postholder will actively follow UCL policies including Equal Opportunities and be expected to give consideration within their role as to how they can actively advance equality of opportunity and good relations between people who share a relevant protected characteristic and people who do not share it.
* The postholder will maintain an awareness and observation of Fire and Health & Safety Regulations.
* To be aware of and act upon:
	+ Disciplinary procedure and disciplinary rules
	+ Grievance procedure
	+ Section 7 and 8 of the Health and Safety at Work Act

# Person Specification

| **Criteria** | **Essential or Desirable** | **Assessment method****(Application/Interview)** |
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| **Qualifications, experience and knowledge** |  |  |
| PhD (or about to be awarded a PhD) in organic chemistry or radiochemistry | Essential | Application |
| Expert knowledge in organic/medicinal chemistry | Essential | Application/Interview |
| Experience in synthesis of drug-like small molecules | Essential | Application/Interview |
| Experience in working in a controlled radiation area | Desirable | Application/Interview |
| Knowledge of nuclear imaging techniques | Desirable | Application/Interview |
| Experience in handling short-lived radionuclides, in particular fluorine-18 | Desirable | Application/Interview |
| Experience in animal handling | Desirable | Application/Interview |
| **Skills and abilities** |  |  |
| IT proficiency at advanced user level (Spreadsheet, Word Processing, Database, Email, Web based applications) | Essential | Application |
| Experience with advanced excel applications, such as conditional formatting, use of macros etc. | Desirable | Application/Interview |
| Ability to analyse and write up data | Essential | Application |
| Ability to present complex information effectively to a range of audiences | Essential | Application/Interview |
| Effective written and verbal communication skills in English | Essential | Application/Interview |
| **Personal attributes** |  |  |
| Commitment to high quality research | Essential | Application/Interview |
| Ability to work collaboratively and as part of a team | Essential | Application/Interview |
| Self-motivated and able to act on own initiative | Essential | Application/Interview |

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**General Information**

**Terms & Conditions of Employment**

The post is funded by the Medical Research Council and is available immediately and for up to 22 months depending on pay scale. The post is a UCL grade 7 post, the salary for which ranges from £40,524 - £48,763 per annum (including London Allowance of £4,500 p.a.). Starting salary is usually £40,524 pa.

Please note, appointment at Grade 7 is dependent upon having been awarded a PhD; if this is not the case, initial appointment will be at Research Assistant Grade 6B (salary £36,832 - £38,466 per annum, including London Allowance of £4,500) with payment at Grade 7 being backdated to the date of final submission of the PhD thesis.

Progression through the salary scale is incremental. Cost of living pay awards are negotiated nationally and are normally effective from 1st August each year. UCL’s non-clinical pay and grading structure is at <http://www.ucl.ac.uk/hr/salary_scales/final_grades.php>.

UCL’s terms & conditions for research, teaching and professional services staff are at:

<https://www.ucl.ac.uk/human-resources/conditions-service-research-teaching-and-professional-services-staff>

The full range of benefits is at <http://www.ucl.ac.uk/hr/benefits/employee_benefits.php>

**General information for Overseas Applicants**

<https://www.ucl.ac.uk/human-resources/working-ucl/employment-contract-administration-team/immigration>

<https://www.ucl.ac.uk/human-resources/working-ucl/relocating-uk-guide>

**Equal Opportunities**

[www.ucl.ac.uk/hr/docs/equal\_opportunity.pdf](http://www.ucl.ac.uk/hr/docs/equal_opportunity.pdf)

The Department has been awarded a Silver Athena Swan Award and we support the Athena beliefs that:

* The advancement of science, engineering and technology (SET) is fundamental to quality of life across the globe.
* It is vitally important that women are adequately represented in what has traditionally been, and is still, a male-dominated area.
* Science cannot reach its full potential unless it can benefit from the talents of the whole population, and until women and men can benefit equally from the opportunities it affords.

Further information on Athena Swan is at <http://www.athenaswan.org.uk/>

# Apply

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| To apply for this position visit:ucl.ac.uk/jobsSearch under Ref no: |