



JOB DESCRIPTION

Job Title:	Postdoctoral Research Associate in Planetary Science
Department / Unit:	Earth Sciences
Job type	Professional Services
Grade:	RHUL 7
Accountable to:	Dr. Queenie Chan
Accountable for:	NA
Purpose of the Post	
<p>The post holder will join the UKRI-supported STFC project '<i>Understanding the origin and diversity of water-soluble carboxylic acids in pristine meteorites,</i>' led by Dr Queenie Chan and Prof. Mark Sephton, which aims to understand the formational pathways of life essential water-soluble organic compounds – carboxylic acids – in meteorites. The successful applicant will lead on characterising the structural diversity of the biologically relevant, water-soluble carboxylic acids, and establishing their synthetic origin, formation mechanisms, and role in the origin of life on Earth. The successful candidate will be based in the Royal Holloway University of London, Egham, and collaborate closely with organic geochemistry groups in Imperial College London.</p>	
Key Tasks	
<ul style="list-style-type: none"> • To characterise the structural diversity of the biologically relevant water-soluble organic molecules, and establish their synthetic origin, formation mechanisms, and role in the origin of life on Earth. • To design, develop and refine experimental protocols and apparatus in order to obtain reliable data. • To work closely with other members of the Astromaterials Research Laboratory at the Centre for Dynamic Earth and the Solar System (CeDESS), including at partner institutions. • To be responsible for setting up and running literature searches, under the direction of the PI and research team. To line manage a researcher. • To liaise with research team. • To prepare protocols and reports. • Best evidence factors will be mapped onto theory. <ul style="list-style-type: none"> ◆ Studies will need to be identified using a systematic search, coding and extraction methodology. • To maintain a permanent record of search and data details, to analyse and archive data generated from searches and write up the results. <ul style="list-style-type: none"> ◆ Data will need to be analysed to generate results. ◆ The results will need to be interpreted in the context of the relevant literature. 	

- To contribute to the preparation and submission of project proposal and applications, in consultation with supervisor, to facilitate the research, such as to acquire meteorite samples.
- To contribute to writing, submission and revision of manuscripts to be published in appropriate peer-reviewed journals, collaborating with others as necessary.
 - ◆ Results and interpretation will be documented in papers that will be prepared for submission to scientific journals for peer-review and publication.
- To contribute to the preparation and presentation of findings of research activity to colleagues (national consortium) and at scientific meetings.
 - ◆ Present regular progress reports on research to members of the research group or to external audiences, including the wider project consortium, to disseminate and publicise research findings.
 - ◆ Prepare, in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
 - ◆ Prepare and present findings of research activity to colleagues for review purposes.
- To contribute to the overall activities of the research team and the department as appropriate.
- To liaise on a regular basis with colleagues and students and build contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration. To contribute to RHUL's public engagement programme by establishing links with local community groups, industries etc.
- To join external networks to share information and ideas.
- To contribute to the departmental research community through in-person presence on Egham campus, attendance at research seminars, lab meetings, contribution to hosting of research visitors, and mentorship of other researchers.
- To contribute to the induction and direction of other research staff and students if so requested by the Principal Investigator.
 - ◆ New staff and students that may join the team in the future will need to be introduced to practicalities of using specific equipment and software for the study.
- To carry out any other duties as are within the scope, spirit and purpose of the job as requested by the Principal Investigator.
- Duties and responsibilities may be amended by the Principal Investigator as necessary, in consultation with the post-holder.
- Any other duties as required by the line manager or Head of Department that are commensurate with the grade.
- To undergo continued personal professional development.

Other Duties

The duties listed are not exhaustive and may be varied from time to time as dictated by the changing needs of the University. The post holder will be expected to undertake other duties as appropriate and as requested by their manager.

The post holder may be required to work at any of the locations at which the business of Royal Holloway is conducted.

Internal and external relationships

The following list is not exhaustive but the post holder will be required to liaise with:

Students,
other members of staff within the school/department and University,
academics in other institutions and,
where relevant, industrial or professional contacts

**ROYAL HOLLOWAY
University of London**

PERSON SPECIFICATION FORM

Job Title: PDRA

	Essential	Desirable
Knowledge, Education, Qualifications and Training		
PhD in Chemistry, Earth Sciences or related subject	X	
Demonstrable comprehensive knowledge in the subject area of organic chemistry, planetary science, and meteoritics.		X
Skills and/or Abilities		
Excellent research skills, including wet chemistry analysis, measuring and interpreting data generated by mass spectroscopy techniques	X	
Training in other quantitative research methods		X
Ability to present complex oral information effectively to a range of audiences	X	
Excellent written communication skills	X	
Excellent attention to detail, including meeting deadlines		X

Experience		
Experience of wet chemistry laboratory techniques required for the extraction of targeted organic molecules and their derivatisation.	X	
Experience of collecting data using analytical equipment (e.g. HPLC, GC and MS).	X	
Experience of synthetic pathway design and working in vivo.	X	
Experience of meteorite handling and the corresponding contamination control.		X
Previous experience of working in a clean laboratory.		X
Experience presenting and communicating scientific results to a scientific audience.	X	
Experience of interdisciplinary working.	X	
Experience of taking part in cross-institutional collaborations.		X
Experience of working with other researchers in a leadership role (e.g. mentorship of undergraduate students)		X
A strong record of publications relevant to the post commensurate with career stage.	X	