



JOB DESCRIPTION

Job Title:	Postdoctoral Research Assistant
Department / Unit:	Biological Sciences (Gene Medicine Laboratory for Rare Diseases – Malerba Research Group)
Job type	Research – Professional Services
Grade:	RHUL 7
Accountable to:	Dr Alberto Malerba and Dr Marta Guerra Rebollo
Accountable for:	
Purpose of the Post	
<p>Work on a project funded by the US Department of Defence, to generate new polymer-coated adeno-associated viral vectors for gene replacement in Duchenne muscular dystrophy (DMD). This will include high technology lab activities in chemistry of polymers (synthesis and analysis), physicochemical characterization of the nanovectors, molecular biology, cell biology, immunohistology, western blotting, gene transfer, AAV production, in vivo experimentation, gene therapy, muscle biology.</p>	
Key Tasks	
Polymer synthesis and analysis.	
Work with nanovectors characterization techniques.	
Work with viral vectors for gene therapy and local and systemic in vivo treatments.	
Independently design, execute, interpret and write up experimental research programmes.	
Use initiative and innovation in the development of research objectives and new lines of investigation.	
Monitoring RCI-related deliverables and milestone achievements.	
Contribution to the production of RCI-related research reports and their publication.	
Work to deadlines under time pressures.	
Work independently. Planning own day-to-day research activity with limited supervision by the PI.	
Deputise at RCI-related meetings, which may involve travel to the other Institute in Spain or UK for limited periods.	

Assist with writing, proof-reading and editing publications, grant applications and other documents when required.
Conduct and produce risk assessments, and contribute to legal HSE compliance, safety culture and systems in our laboratory.
Assist colleagues with selecting and ordering equipment and reagents.
Assist with the routine functioning, servicing and repair of equipment.
Assist with routine lab management, RCI consumable budget control & house-keeping activities.
Supervise UG, PGT and PGR students conducting project work when necessary.
Other Duties
<p>The duties listed are not exhaustive and may be varied from time to time as dictated by the changing needs of the Institutes involved. The post holder will be expected to undertake other duties as appropriate and as requested by their manager.</p> <p>The post holder will actively follow Institutional policies including Equal Opportunities policies. The post holder will also observe Fire and Health and Safety Regulations.</p>
Internal and external relationships
<p>The following list is not exhaustive, but the post holder will be required to liaise with:</p> <ul style="list-style-type: none"> Members of the research group Other staff members of the department/school Colleagues in other universities/other research facilities Visitors, collaborators and suppliers to the department/school

PERSON SPECIFICATION

Details on the qualifications, experience, skills, knowledge and abilities that are needed to fulfil this role are set out below.

Job Title: Postdoctoral Research Assistant in Gene Therapy for Duchenne Muscular Dystrophy **Department:** Biological Sciences

	Essential	Desirable	Tested by Application Form/Interview/Test
Knowledge, Education, Qualifications and Training			
Educated to first degree level or equivalent	x		Application form
PhD awarded or PhD thesis submitted - it is expected that the appointee will have their PhD awarded within 4 months of the start date	x		Application form
Skills and Abilities			
Polymer synthesis based on PBAEs and/or zwitterionic polymers.		x	Application and interview
Knowledge of polymer analytical techniques such as ¹ H-NMR, gel permeation chromatography, and mass spectroscopy.		x	Application and interview
Knowledge of physicochemical characterization techniques such as Z-potential, PAGE, TEM and asymmetrical flow field flow fractionation (AF ₄).		x	Application and interview
Quantitative and semiquantitative PCR		x	Application and interview
Western blot, immunohistology		x	Application and interview
AAV virus & vector production		x	Application and interview
Independent design, execution, interpretation and writing up of experimental research programmes.	x		Application and interview
Initiative and innovation in the development of research objectives and new lines of investigation.	x		Application and interview
Monitoring RCI-related deliverables and milestone achievements.	x		Application and interview
Contribution to the production of RCI-related research reports and their publication.	x		Application and interview
Working to deadlines under time pressures if required.	x		Application and interview
Experience			
Polymer chemistry and characterization		x	Application and Interview
Duchenne & other muscular dystrophies		x	Application and Interview

Adeno-associated virus gene therapy vectors		x	Application and Interview
Antisense & nucleic acid modulator drug development		x	Application and Interview
Previous work in the field of gene therapy		x	Application and Interview
A Home office licence holder with experience of animal experimental procedures		x	Application and Interview
Other requirements			
Good interpersonal skills	x		Interview
Ability to work under pressure	x		Interview
Supervisory experience		x	Interview
Motivation / achievement drive	x		Interview
Exploratory, analytical & innovative thinking	x		Interview
Safety conscious	x		Interview
Demonstrable commitment to equality, diversity, and inclusion	x		Interview
Occasional need for additional hours	x		Interview
Willing to travel abroad on business	x		Interview