

**Research Assistant or Postdoctoral Research Associate in nanoparticle-mediated drug delivery**

**Reference:** 0834-23.

**Grade 7**: £32,332 to £34,980 per annum, depending on experience.

**Grade 8:** £37,099 to £44,263 per annum, depending on experience.

**Contract Type:** Fixed term (10 months)

**Basis:** Full Time

**Job description**

**Job Purpose:**

The researcher will contribute to develop and lead research activities focused on developing and exploring the application of novel nanoparticle-mediated drug delivery systems targeting cellular organelles.

The research programme is led by Dr Lissette Sanchez-Aranguren. The post-holder will be provided with support, guidance and mentoring in a research project aimed to bringing together concepts from synthetic biology and the biosciences for the development and characterisation of nanoparticle-based formulations as novel drug delivery systems targeting cellular organelles (e.g. mitochondria) while elucidating their potential to modulate biological scenarios.

The researcher will regularly meet and liaise with colleagues to ensure appropriate input, data sharing, and effective dissemination of results. As such, he/she will be expected to draft and submit high-quality papers, technical reports and contribute to grant funding applications to sustain continuous research group funding. The research associate will also be expected to engage and participate in project meetings and other relevant activities organised by Dr Lissette Sanchez-Aranguren’s lab.

In addition the researcher is expected to exploit external links with regional, UK and international bodies (such as government agencies, schools, colleges, professional bodies, business and industry) as appropriate to biosciences and nanoparticles’ discipline under the School and/or University strategy by actively participating in research conferences, research days and public engagement.

***Main Duties and Responsibilities***

**Research**

* To design, prepare and characterise biodegradable nanoparticles (liposomes is essential, PLGA nanoparticles is desirable) using laser and light-based characterisation methods.
* To analyse polymers and liposome-based nanomaterials using thermoanalytical techniques.
* To set-up human cell lines cell culture techniques and analyse nanoparticles internalisation using confocal microscopy and 3D imaging skills.
* To develop research objectives, projects and proposals for personal/joint research programmes consistent with the priorities and strategy of the lab, with the assistance of a mentor if required.
* To write up and publish the outcomes of research in good quality publications.
* To present papers, posters, reports at seminars, conferences etc.
* To collaborate in research initiatives with colleagues in and beyond the School as appropriate.
* To identify sources of funding, develop and submit funding applications, securing external research funding.
* Where appropriate to School/University strategy and subject discipline, to participate in and develop external networks.
* To supervise and manage research projects
* To supervise PhD and other postgraduate students to completion.
* To coach junior colleagues in research.

**Teaching**

* To undertake a limited amount of teaching with students at a range of levels, achieving good student feedback through critical reflective practice,
* To contribute to the assessment of student knowledge and the supervision of student projects.
* To assist in the development of student research skills.

**External engagement**

* To represent the interests of the subject and School via activities to raise the regional, national and international profile, particularly with the professions, schools and businesses.
* To forge relationships with the professional bodies and other bodies representing relevant professional interests.

**Citizenship**

* To carry out specific (School) roles and functions as may be reasonably required e.g. Head of Department, Programme Director, Personal Tutor, Admissions Tutor).
* To demonstrate the University’s leadership values through own actions and behaviour.
* To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

**Additional responsibilities**

* Engage in continuous personal and professional development in line with the demands of the role, including undertaking relevant training and development activities to develop themselves and support the development of others.
* Ensure and promote the personal health, safety and wellbeing of staff and students.
* Carry out duties in a way which promotes fairness in all matters and which engenders trust.
* Promote equality of opportunity and support diversity and inclusion as well as working to support the University’s environmental sustainability agenda and practices.

**Person specification**

|  | **Essential** | **Method of assessment** |
| --- | --- | --- |
| **Education and qualifications** | **Grade 7:**  A good first degree in Pharmacy or a related field.  **Grade 8:**  A PhD in Pharmaceutical Sciences (PhD near to completion is acceptable). | Application form |
| **Experience** | Experience in design and preparation of functionalised nanoparticles (experience in nanoparticle formulation, particularly liposomes is essential).  Experience in biodegradable polymer nanofabrication and characterisation in terms of particle size analysis and charge as well as drug loading (both laser and light-based) is essential.  Experience in HPLC detection of drug loading is essential.  Experience in working with human cell lines, cell maintenance and culturing is essential.  Experience in using fluorescence-based imaging techniques (experience in confocal microscopy is essential, 3D imaging skills).  Experience of initiating and conducting research up to doctoral level  Experience of writing up/contributing to the write up of reserch for high qualty publications.  Experience of producing papers, posters, reports presenting at seminars, conferences etc.  Experience of positive collaboration within and outside of candidate’s immediate research team.  Supervising other personnel particularly Masters, other PhD students | Application form and interview |
| **Aptitude and skills** | Ability to present data in both a clear and concise manner that is visually appealing.  Ability to prepare written communications to a high standard  Ability to publish in high quality publications.  Ability to harness IT as a research and teaching tool  A willingness to undertake further training as appropriate and to adopt new procedures as and when required. | Application form and interview |

|  | **Desirable** | **Method of assessment** |
| --- | --- | --- |
| **Education and qualifications** | A fellowship or associated fellowship of the higher education academy. | Application form |
| **Experience** | Experience in integrating physics-based concepts for pharmaceutical applications.  Knowledge of graphic and data analysis software.  Experience in NMR techniques is desirable.  Experience in using thermoanalytical techniques for materials characterisation.    Experience in teaching and project supervision. | Application form and interview |

**How to apply**

You can apply for this role online via our website <https://www2.aston.ac.uk/staff-public/hr/jobs>.

Applications should be submitted by 23:59pm on the advertised closing date.

All applicants must complete an application form, along with your CV.

Any CV sent direct to the Recruitment Team and Recruiting Manager and/or applications missing CV will not be accepted.

If you require a manual application form then please contact the Recruitment Team via [jobs@aston.ac.uk](mailto:jobs@aston.ac.uk).



**Contact information**

**Enquiries about the vacancy:**

Name: Dr Lissette Sanchez-Aranguren

Job Title: Lecturer

Email: sanchel2@aston.ac.uk

**Enquiries about the application process, shortlisting or interviews:**

Recruitment Team via [jobs@aston.ac.uk](mailto:jobs@aston.ac.uk) or 0121 204 4500.

**Additional information**

Visit our website <https://www2.aston.ac.uk/staff-public/hr> for full details of our salary scales and benefits Aston University staff enjoy

**Salary scales**: <https://www2.aston.ac.uk/staff-public/hr/payroll-and-pensions/salary-scales/index>

**Benefits:** <https://www2.aston.ac.uk/staff-public/hr/Benefits-and-Rewards/index>

**Working in Birmingham:** <https://www2.aston.ac.uk/birmingham>

**Employment of Ex-Offenders:** Under the Rehabilitation of Offenders Act 1974, a person with a criminal record is not required to disclose any spent convictions unless the positions they applying for is listed an exception under the act.

**Eligibility to work in the UK**:

**New immigration system from 1 January 2021**

A new immigration system has been introduced for people arriving in the UK from EEA countries with effect from 1 January 2021. In addition to those who have always required a visa, EU citizens who were not resident in the UK before 31 December 2021 will need to get a visa in advance.

You can find more information [here](https://www.gov.uk/browse/visas-immigration/work-visas.)

Candidates should check their eligibility to enter or remain in the UK in advance of making any job application via the [UKVI website](https://www.gov.uk/browse/visas-immigration/work-visas.). Before applying you should ensure that you meet the requirements, including meeting the English Language requirements. If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful.

If you require a visa to work in the UK the most common types of visa are:

* Skilled Worker Visa <https://www.gov.uk/skilled-worker-visa>
* Global Talent Visa

If you are a leader or potential leader in one of the following fields you may be eligible to apply for a Global Talent Visa:

* Academia or Research
* Arts and Culture
* Digital Technology

Please click the following link for further information and to check your eligibility for this visa. <https://www.gov.uk/global-talent>’

**Equal Opportunities:** Aston University promotes equality and diversity in all aspects of its work. We aim to ensure, through our admissions policies for students, and our staff recruitment and selection processes that we encourage applications from all groups represented in the wider community at a local, national and international level.

The University will endeavour not to discriminate unfairly or illegally, directly or indirectly, against student or potential students, staff or potential staff. This commitment applies to all functions of the University and to any stage of an individual’s career.

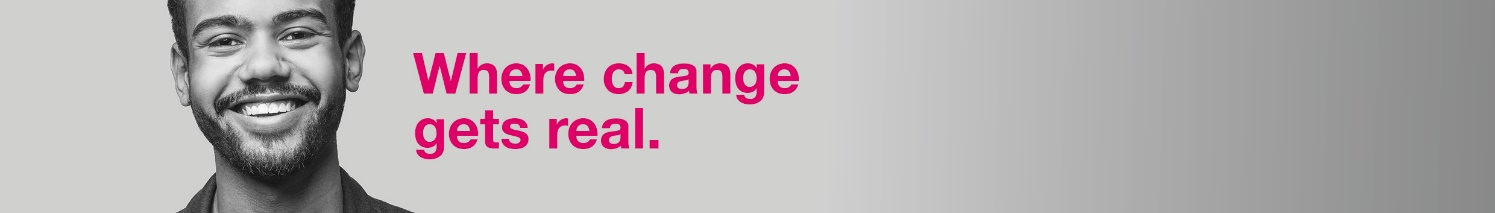
An Equal Opportunities Monitoring Form is included within the application form. Data you provide on the Equal Opportunities Monitoring Form will be included in a general database, for statistical monitoring purposes, enabling the University to monitor the effectiveness of its Policy, Codes of Practice and Guidelines on Equal Opportunities in Employment. Individuals will not be identified by name.

**Data Protection:** Your personal data will be processed in compliance with the Data Protection Act 2018 and the General Data Protection Regulation ((EU) 2016/679) (“GDPR”).  The University’s Data Protection Policy and Privacy Notices, including the Job Applicant Privacy Notice can be found at <https://www2.aston.ac.uk/data-protection>. Your application will only be used to inform the selection process, unless you are successful, in which case it will form the basis of your personal record with the University which will be stored in manual and/or electronic files. Information in statistical form on present and former employees is given to appropriate outside bodies.

Full details of our terms and conditions of service and associated policies and procedures are available online at <https://www2.aston.ac.uk/staff-public/hr/policies>

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