



*The original redbrick
university and a member
of the Russell Group*

Faculty of Health and Life Sciences

POSTDOCTORAL RESEARCH ASSOCIATE

**Area: Institute of Systems, Molecular and Integrative Biology,
Department of Biochemistry and Systems Biology**

Job Ref: 051592

Location: University Campus

Grade: 7

Salary: £36,386 - £38,592

Working Hours: full time

**Tenure: The post is expected to start from 01/02/2023 for one year
with possibility of extension. The start date is negotiable**

Online application > Shortlisting > Interview Process > Job Offer



*Outstanding development
opportunities through
our Academy*



*Campus located in
the heart of the vibrant
city of Liverpool with
excellent facilities*





About the Role



Role overview and University context:

Cyanobacteria are photosynthetic bacteria that play a crucial role in the ecology of the planet, and are also promising vehicles for solar-powered biotechnology. The photosynthetic membranes of cyanobacterial (known as thylakoid membranes) are ingeniously accommodated with protein complexes involved in photosynthesis and respiration. The Liu Lab (www.luningliu.org) has recognised strength in studying photosynthetic membrane biogenesis and organisation. The postdoctoral research associate will examine the architectural landscape of thylakoid membranes and protein assemblies using atomic force microscopy, electron microscopy and biochemical approaches, to delineate in molecular detail how individual protein complexes are arranged in the membrane and self-assembled in an elaborate and co-ordinated process to form functional entities. We expect to provide new insight into how cyanobacterial cells are able to target specific proteins to a specific membrane, laying the foundations for methods for "precision engineering" of cyanobacteria for solar-powered biotechnology.

Responsibilities:

The postdoctoral research associate should be experienced in high-resolution AFM imaging of biological samples, such as membranes, proteins, cells. The researcher will perform thylakoid membrane preparation and AFM imaging to decipher the lateral architecture of thylakoid membranes and self-organisation and dynamics of protein assemblies, in collaboration with other postdocs and PhD students. The researcher will also have great opportunities to develop experience and skills on molecular biology, structural biology, cell physiology and synthetic biology.

Duties:

- The role includes culturing of cyanobacterial cells using the established platform in the host lab; thylakoid membrane/protein complex preparation and basic characterisation; high-resolution AFM imaging of thylakoid membranes/proteins and image analysis.
- The day-to-day running of the project under the direction of Prof Luning Liu.
- Plan and deliver high-quality research; prepare and present regular reports on research progress.
- Analyse and interpret data and make a significant input to the scientific directions of the project.
- Contribute to the implementation of the project, ensuring that milestones and deadlines are achieved, and that work is completed on time and within budget.
- Participate in conducting relevant collaborative projects and communicate with collaborators.
- Keep abreast of current developments in the field by conducting literature searches and reviews.
- Provide clear and timely written work, producing reports and publishing in high-profile journals and communicate verbally as required with other members of the University and with collaborators.
- Play an active role in the research group, participating in all group meetings and discussions.
- Attend meetings and conferences as agreed by the project leader, including national and international levels and outreach activities.
- Participate in advising and training other postdocs, PhDs, and students associated to the project.
- Undertake other duties commensurate with the grade as required.



About the Role



In addition to the above, all University of Liverpool staff are required to:

- Adhere to all University policies and procedures, completing all obligatory training and induction modules, including Equality & Diversity and Health & Safety.
- Respect confidentiality: all confidential information should be kept in confidence and not released to unauthorised persons.
- Participate in the University's Professional Development Review scheme and take a proactive approach to own professional development.
- Demonstrate customer service excellence in dealing with all stakeholders.
- Embody and uphold the University's Vision and Values.



About You



Essential Criteria		Desirable Criteria
Experience		
1.1	Evidence of playing a key role in a leading-edge research project on high-resolution AFM imaging of biological samples such as membranes, proteins, and cells	Experience in biophysical techniques, electron microscopy and spectroscopy
1.2	Experience of working with structural and image analysis	Experience of biological laboratory research in an academic environment
1.3	Experience of publishing scientific papers in high-profile peer-review journals	
Education, Qualifications and Training		
2.1	PhD in Biophysics/Structural Biology (other relevant discipline)	
Skills, General and Special Knowledge		
3.1	Good laboratory practice and skills	
3.2	Excellent skills in scientific writing and a history of delivering oral presentation at national/international meetings	
3.3	Excellent interpersonal and communication skills, both written and verbal	
3.4	Excellent time management and organisational skills	
Personal Attributes and Circumstances		
4.1	Highly motivated with ability to work independently	
4.2	Able to work independently and willing to work in a team environment and contribute to the development and growth of the research team	
4.3	Dependable, reliable and self-motivated	
4.4	Consistent ability to produce high quality/quantity of work	
4.5	Excellent communication and interpersonal skills	
4.6	Excellent attention to detail	



About Us



***"Our vision is to be a connected, global University at the forefront of knowledge leadership."
Vice-Chancellor, Professor Dame Janet Beer***

Established in 1881, we are an internationally renowned Russell Group university recognised for our high-quality teaching and research. We are consistently ranked as one of the best universities both nationally and globally, and the majority of our research is rated world leading or internationally excellent. Find out more [here](#).

Our Areas

When you work at the University of Liverpool you are more than just your job role. You are a crucial part of our mission to improve lives on a local, national and international scale. Click on the relevant link(s) below for more information on the area you will be working in.

[Faculty](#) [Institute of Systems, Molecular and Integrative Biology](#) [Department of Biochemistry and Systems Biology](#) [Liu Lab](#)

Why Work Here

We recognise, appreciate and celebrate the incredible work our staff do every day. As well as generous terms and conditions, we offer a range of enviable benefits and provide support for colleague's wellbeing and development. Discover more [here](#).

Moving from abroad

As a global institute, we welcome applicants from all nationalities, moving from a different country can be challenging and we would like to help as much as we can, we have put together some information on eligibility to work documentation, accommodation, schools, healthcare, life in Liverpool and the UK as well as other practical information. Discover more [here](#).

Our Staff

Whether it be their friendly colleagues, supportive managers or our outstanding facilities, our staff can explain better than anyone what it is like to work for us and why they enjoy their role. See what they have to say [here](#).



How to Apply



The University of Liverpool is committed to being an inclusive employer. We welcome applications from everyone regardless of age, gender, ethnicity, sexual orientation, faith or disability.

Contacting us

Shortlisting and interview arrangements are the responsibility of the recruiting department. Please call 0151 795 4426 or email: luning.liu@liverpool.ac.uk.

Application process

Our e-recruitment system enables you to register for an online account, where you can view, copy and edit your applications. Set up your account [here](#).

Once you submit your application you will receive an automatic email acknowledgment. You can view your application at any time by clicking into the application history section of your account.

Job description

After the closing date this job description will be removed from our website. Should you wish to refer to this information at a later date please ensure you save a copy of this document.

Right to work

We have a legal responsibility to ensure that you have the right to work in the UK before you can start working for us. If you do not have the right to work in the UK already, any offer of employment we make to you will be conditional upon you gaining it. The UKVI have an interactive tool allowing you to immediately see if vacancies are eligible for a Skilled Worker visa. You will need to know the SOC code for the role, our most used SOC codes can be found [here](#), if none of these apply to this role, there are more codes on the eligibility checker. The skilled worker eligibility checker can be found on [GOV.UK](https://www.gov.uk).



How to Apply



Disabilities and alternative formats

If you have any other requirements which will help you access the application or interview process or employment opportunities at the University, or if you require copies documentation in alternative formats, please email: jobs@liverpool.ac.uk or telephone 0151 794 6771.

Outcome of your application

The recruiting department will endeavour to respond to each application. However, if you have not heard within six weeks of the closing date, please take it that your application has not been successful on this occasion.

