

## ESR 3 Project Information Sheet

<b>Project Title</b>	<i>Transport and synthesis with chemically fuelled molecular motors</i>
<b>Reference number</b>	BIOMOLMACS_ESR_3
<b>Host Institution/Company</b>	University of Manchester
<b>Supervisor(s)</b>	Prof. David Leigh
<b>Research Group</b>	Leigh Research Group
<b>Department/School</b>	Department of Chemistry
<b>Duration</b>	36-months full-time employment contract provided and ESR enrolled on 3-year PhD research programme.  <b>ESR may be required to self-fund after the initial 36 months for successful completion of the PhD program at the University of Manchester.</b>
<b>Funding information</b>	Funding agency: H2020-MSCA-ITN-2019 (Proposal no:859416)
<b>Early Stage Researcher Salary and Allowances</b>	£34,773 to £47,823 per annum (dependent on family circumstances)  This calculation is to give you an idea about the level of funding. The actual salaries can be found on the official job application link below.
<b>Pre-application closing date</b>	28 <sup>th</sup> of February 2020
<b>Official application closing date</b>	15 <sup>th</sup> of March 2020
<b>Start date</b>	1 <sup>st</sup> of April 2020 or as soon as possible there after.
<b>Official job application link*</b>	<a href="https://www.jobs.ac.uk">https://www.jobs.ac.uk</a>  <a href="https://www.jobs.manchester.ac.uk/">https://www.jobs.manchester.ac.uk/</a>

*\*The pre-application form should be submitted to [biomolmacs@gmail.com](mailto:biomolmacs@gmail.com) by latest 28<sup>th</sup> of February 2020. Following the initial eligibility assessment, the applicants will be requested to submit their applications using the links provided specific to each institution/company.*

## Post Summary

### Brief description of the project:

Leigh group has a long experience on the organic synthesis of molecular motors and this project will be focusing on pumping of cargo from bulk solution with a polytriazolium molecular motor, transmembrane transport of cargo with a molecular pump, and transporting cargo between phases with a polymer bound fluorescence pump. ESR will be studying chemically fuelled molecular motors and their transport properties.

Further information on the research interests of Prof. David Leigh can be found on their website. <http://www.catenane.net>

### Standard duties and responsibilities of the ESR

For the 36 months of employment contract the ESR will be required to work exclusively on the MSCA ITN programme (BIOMOLMACS). In all cases, all duties and responsibilities will be clearly outlined in the researchers Personal Career Development Plan, as determined in the early stages of the project between the ESR and their supervisory committee.

## Person Specification

### Qualifications

#### *Essential*

- First class or 2.1 UK equivalent undergraduate degree and Masters degree in Chemistry covering the areas of synthetic organic chemistry, coordination chemistry and/or supramolecular chemistry
- Applicants **must not hold** a PhD degree and must have less than 4 years research experience.

### Knowledge and Experience

#### *Essential*

- Research project carried out in at least one of the above disciplines.
- A demonstrated knowledge of at least three of the following: pharmaceutical formulation development, drug delivery, cell culture/molecular biology, nanotechnology, polymerisation techniques.

#### *Desirable*

Work placement undertaken in an industry related to the above disciplines

### Skills and Competencies

#### **Essential**

- Have excellent oral and written communication skills.
- Ability to work independently and as part of a team.
- Not have resided or carried out main activity in the UK for more than 12 months in the last 3 years immediately prior to the reference recruitment date.
- Excellent knowledge of the English language (spoken and written) that meets the requirements of the Department of Chemistry's English Language criteria for postgraduate courses. A minimum IELTS score of 6.5 overall, or TOEFL (IBT) 90 overall; and each component of the tests should meet the minimum requirement of IELTS 5.5 or TOEFL (IBT) 22.
- Evidence of interest, aptitude and research experience in the above disciplines.

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### Further information

For any informal queries, please contact Prof. David Leigh by email at

[david.leigh@manchester.ac.uk](mailto:david.leigh@manchester.ac.uk)

For queries relating to the application and admission process please contact

Dr Gokhan Yilmaz at [biomolmacs@gmail.com](mailto:biomolmacs@gmail.com)

Website: [www.biomolmacs.com](http://www.biomolmacs.com)

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