# PGR Studentship Information Template 2021 entry

* Please complete the template with as much information as possible.
* \*fields are essential.
* If you have information that does not have a label, please create a new row in the table for it.

|  |  |
| --- | --- |
| **\*Title of studentship** | LONG-ACTING MICRONEEDLE DELIVERY SYSTEMS |
| **Value / what is covered?**  |  |
| **Awarding body** |  |
| **Number of studentships** |  |
| **\*Summary descriptive text / Example of research project**  | A key trend in the pharmaceutical industry is currently long-acting drug delivery. Here, instead of taking tablets daily, a patient receives an injection or implant that contains weeks or months of medication. However, conventional long-acting systems are invasive, requiring skilled healthcare workers and carrying the risk of infection and problematic disposal. A potential alternative strategy for long-acting drug delivery is based on microneedle arrays. Microneedles are minimally-invasive devices that painlessly, and without drawing blood, penetrate the skin’s *stratum corneum* barrier. This allows delivery of a range of substances that would otherwise not be able to move into or across the skin. Microneedles have found great use in intradermal delivery of vaccines. This project seeks to combine high-dose implantable/long acting drug delivery systems with microneedle technology. The novel microneedle systems to be developed here will take these complex therapeutics out of the formal healthcare setting and place them in the hands of patients, who will be able to self-apply the microneedle systems. In this project, the student will design and characterise long-acting microneedle systems using a range of innovative techniques. The benefits to patients of the technology developed during this studentship will be profound. The student will work at the cutting edge of developments in a leading research Group, thus greatly enhancing their employability. |
| **\*Supervisor(s)** |  Professor Ryan Donnelly and Dr Eneko Larraňeta |
| **\*Eligibility / residence Status** | UK/EU/International |
| **Country** | Northern Ireland |
| **\*Start date and duration**  | 1 October 2021 |
| **\*Faculty** | MHLS |
| **\*Research centre / School** | Pharmacy |
| **Subject area** | Long-acting drug delivery |
| **Candidate requirements / Key skills required for the post**  | Applicants should have a 1st or 2.1 honours degree (or equivalent) in a relevant subject. Relevant subjects include Pharmacy, Molecular Biology, Pharmaceutical Sciences, Biochemistry, Biological/Biomedical Sciences, Chemistry, Engineering, or a closely related discipline. Students who have a 2.2 honours degree and a Master’s degree may also be considered, but the School reserves the right to shortlist for interview only those applicants who have demonstrated high academic attainment to date |
| **\*Deadline for applications** |  |
| **\*How to apply / contacts** | Postgraduate Research applicants for Pharmacy who are interested in applying for a fully funded DFE studentship must have applied to Queen’s, via the Direct Applications Portal, and submitted all required supporting documents by the closing date, which will be announced later in the Academic year.<https://dap.qub.ac.uk/portal/user/u_login.php>  |
| **Relevant links / more information**  | <http://www.qub.ac.uk/schools/SchoolofPharmacy/Research/PostgraduatePositions/><http://www.qub.ac.uk/schools/SchoolofPharmacy/Research/>[https://pure.qub.ac.uk/portal/en/persons/ryan-donnelly(7f46a524-c3a4-46a9-b347-834f0a3640f2).html](https://pure.qub.ac.uk/portal/en/persons/ryan-donnelly%287f46a524-c3a4-46a9-b347-834f0a3640f2%29.html)<https://pure.qub.ac.uk/en/persons/eneko-larra%25C3%25B1eta> |
| **Keywords for search filters** | Microneedles, long-acting drug delivery |
| **Training provided through the research project** | This interdisciplinary project will provide training in a range of analytical methods, design, manufacture and assessment of novel delivery systems and biological models for assessment of the potential clinical efficacy of formulations. Furthermore, student training will take place within a highly active international research culture. In addition to laboratory based-skills, the student will also undergo training in research methodology and statistics and will have opportunities to develop both verbal and written communication skills. The student will publish their research in journal articles and present at both national and international conferences. The student will also have the opportunity to actively participate in a range of outreach activities in the community and gain teaching experience on our undergraduate and postgraduate courses. |
| **Expected impact activities** | Enhanced patient care and quality of life, economic development for the pharmaceutical and medical devices industry. The student’s CV will be enhanced through training with a leading international Group |