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| **\*Title of studentship** |  **AVACTA (All-island Vaccine Research and Training Alliance) Mucosally delivered vaccines containing novel ESKAPE antigens** |
| **Value / what is covered?**  | Fully funded |
| **Awarding body** | Irish Higher Education Authority North-South Programme |
| **Number of studentships** | 2 |
| **\*Summary descriptive text / Example of research project**  | Antimicrobial resistance (AMR) poses a major global risk to human health by causing death, disability, longer hospitalisations, and increased healthcare costs. Vaccines are ideally suited to tackle this problem, improving the lives of people worldwide. The All-island Vaccine Research and Training Alliance (AVACTA) is a hub of excellence aimed to develop effective vaccines against ESKAPE pathogens. Needle-free vaccines offer the possibility to develop new formats that improve both immune response and improve access. Lead vaccine candidates, both protein and nucleic acid-antigen based vaccines developed by partners in the AVATCA programme (QUB, UCD, UCC and TCD) will be formulated into nanoparticles for mucosal delivery, focussing on nasal and inhaled routes.  |
| **\*Supervisor(s)** |  Dr Vicky Kett |
| **\*Eligibility / residence Status** | UK and Ireland |
| **Country** | Northern Ireland |
| **\*Start date and duration**  | September 1st 2022 (36 months) |
| **\*Faculty** | MHLS |
| **\*Research centre / School** | Pharmacy |
| **Subject area** | Mucosal vaccines, 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, 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. Technical experience and knowledge in some of the following would be desirable: pharmaceutical formulation, protein purification.  |
| **\*Deadline for applications** | July 1st 2022 |
| **\*How to apply / contacts** | Postgraduate Research applicants must have applied to Queen’s, via the Direct Applications Portal.<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/> |
| **Keywords for search filters** | Vaccine, nasal, inhaled, nanoparticles, drug delivery, mucosal, pharmaceutical |
| **Training provided through the research project** | Extensive training will be provided in all aspects of the fundamentals of nanoparticle manufacture together with physicochemical methods required to optimise the drying methods for the specific requirements of the antigen, and to characterise vaccine products such as mucoadhesion for nasal delivery, thermal stability and vaccine potency. |
| **Expected impact activities** |  |