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| **\*Title of studentship** | Cold plasma for cancer therapy |
| **Value / what is covered?** | Self-funding |
| **Awarding body** |  |
| **Number of studentships** | 1 |
| **\*Summary descriptive text / Example of research project** | Atmospheric pressure non-thermal (cold) plasma is a simple, fast, effective and low operational cost setup. The high reactivity of reactive oxygen and nitrogen species generated by cold plasma has shown promise in a range of biomedical applications, such as bacterial biofilms, skin infection and wound healing. The current project will explore cold plasma as a novel targeted approach to treat cancer. This interdisciplinary project will correlate different cold plasma parameters, such as plasma generation configurations, gas mixtures, humidity, flow rate, and irradiation time, on its anticancer activity and immune cell activation, using relevant *in vitro* and *in vivo* cancer models.  The project will be supervised by Dr Al-Jamal, a Reader in Cancer Nanomedicine and Drug Delivery, and Professor Gilmore, a world-leading expert in cold plasma and biomedical applications. |
| **\*Supervisor(s)** | Dr Wafa Al-Jamal & Prof. Brendan Gilmore |
| **\*Eligibility / residence Status** | UK/EU/overseas students |
| **Country** | Northern Ireland |
| **\*Start date and duration** | Anytime |
| **\*Faculty** | MHLS |
| **\*Research centre / School** | Pharmacy |
| **Subject area** | Cold plasma, cancer therapy & immunotherapy |
| **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. |
| **\*Deadline for applications** | Applications accepted all year round |
| **\*How to apply / contacts** | Postgraduate Research applicants for Pharmacy who are interested in applying for a Self-funded 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://pure.qub.ac.uk/portal/en/persons/wafa-aljamal](http://pure.qub.ac.uk/portal/en/persons/wafa-aljamal(d931b6ec-d950-47da-bfb2-d2a6fd7a6aa7).html)  <https://pure.qub.ac.uk/en/persons/brendan-gilmore>  <http://www.qub.ac.uk/schools/SchoolofPharmacy/Research/PostgraduatePositions/>  <http://www.qub.ac.uk/schools/SchoolofPharmacy/Research/> |
| **Keywords for search filters** | Cold plasma, targeted cancer therapy, cancer immunotherapy |
| **Training provided through the research project** | This highly interdisciplinary project combines expertise in cold plasma and cancer therapy. It will provide a unique opportunity for excellent students to work in a stimulating multidisciplinary team. The candidate will be investigating the effect of different parameters of cold plasma on its anticancer activity using in vitro and in vivo cancer models. The successful candidate will be a highly motivated, hard-working graduate with excellent communication and organizational skills. |
| **Expected impact activities** | The project is expected to offer an innovative approach to treat cancer. The PhD student will be encouraged to engage in a variety of impact activities, disseminate the research project findings through publications in relevant peer-reviewed journals, present the results of the study at conferences (in-person and/or online), and make them accessible to the general public through broader channels, such as social media and popular science outlets. |