**UQ Summer or Winter Research Project Description**

Please use this template to create a description of each research project, eligibility requirements and expected deliverables. Project details can then be uploaded to each faculty, school, institute, and centre webpage prior to the launch of the program.

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| **Project title:** | **Epigenetic therapy for stem cell fate choice** |
| **Project duration, hours of engagement & delivery mode** | *5 weeks and applicant will be required on-site for the project. Hours of engagement must be 36 hrs per week* |
| **Description:** | **Background**: Epigenetics refers to heritable changes in gene expression that do not involve changes to the DNA sequence. The role of epigenetic in stem cells fate choice needs further exploration. **Aim:** To investigate the emerging role of certain materials on epigenetic changes of stem cells. **Approach:** This project involves with cell culture and downstream analysis of stem cell differentiation fate choice under certain microenvironment. The epigenetic mark changes will be evaluated using enzyme-linked immunosorbent assay, Immunocytochemistry, and other relevant molecular biology techniques.  |
| **Expected outcomes and deliverables:** | The student may gain skills into experiment design, be involved in specific lab techniques and generate convincing research data. Students will need to produce a report and oral presentation at the end of their project.  |
| **Suitable for:** | This project is open to applications from students with a background in Biological Science and Molecular Biology from 3rd – 4th year students only. |
| **Primary Supervisor:** | Dr Pingping Han  |
| **Further info:** | Please contact Dr Han (p.han@uq.edu.au) if you want more details about the project.  |