



Opportunity for postgraduate study in science education research

Dr Shane Bergin (Assistant Professor in Science Education, UCD School of Education) and Systems Biology Ireland, UCD invite expressions of interest from applicants to undertake a research project to evaluate a science education programme, the Amgen Biotech Experience (ABE) Ireland. ABE Ireland and Dr Bergin are seeking an individual to join the application to the IRC Enterprise Partnership Research programme in 2021.

Funding application

The joint application to the Irish Research Council (IRC) [Enterprise Partnership Scheme](#) (Postgraduate) comprises three parties: an enterprise partner (ABE Ireland), a higher education institution partner (UCD School of Education) and an applicant, who leads on the application.

The application can be for either a two-year Master's in research or a four-year PhD research project. The researcher's work will be supervised by Dr Bergin and enterprise mentors who will form a Master's or Doctoral panel. The stipend will be €16,000 per annum. The IRC call is expected to open in October 2021 and close in November 2021. The scholarship is due to start in September 2022.

Research focus

The applicant, Dr Bergin, and enterprise mentors will develop the research question for the application. The aim for the scholarship will be to evaluate the [ABE Ireland](#) programme or aspect(s) of the programme. ABE Ireland is the programme to empower teachers to deliver cutting edge biotechnology labs in their schools. It runs training workshops for teachers and offers loans of professional grade equipment and samples to run labs as practical classes in schools. ABE Ireland is one of 21 international sites and has been in existence in Ireland since 2014. The US [ABE programme](#) has previously been evaluated by independent research organisation WestEd in 2017 who [found that](#) students who experienced ABE labs in school experienced significant and substantial gains in biotechnology learning, as well as increased confidence and interest in studying science and biotechnology.

These are the research themes that ABE Ireland and the UCD School of Education would be interested in supporting an applicant in pursuing, with illustrative examples of potential research topics:

1. Implementation in schools
 - a. Understanding impacts on students who have taken part in the ABE Ireland initiative. These might include impacts on:
 - i. Learning.
 - ii. Student perceptions of science, the science community, and their relationship with both.
 - b. Understanding impacts on teachers of engaging with ABE Ireland. These impacts might include:



- i. Professional development around content knowledge, laboratory skills and pedagogical content knowledge.
 - ii. Teachers' perceptions of science, science education, and their place in these communities.
 - iii. Teachers sense of being part of a community as an ABE Ireland teacher.
 - c. Understanding impacts of engaging with ABE Ireland on schools
 - i. Does inclusion of ABE Ireland in schools programme affect schools' engagement with Junior and Senior Cycle curricula or whole-school planning in science subjects?
 - ii. Do schools see opportunities for ABE Ireland to develop?
2. Reach and depth of the programme.
 - a. Assessment of reach to DEIS schools.
 - i. Availability and accessibility of programme and programme resources.
 - b. Differentiation
 - i. Support offered to teachers to differentiate material.
 - ii. Dissemination of useful differentiated material to community
 - c. International engagement
 - d. Partnerships

About the applicant

Applicants must have a first class or upper second-class degree and have graduated by June 2022, or have a Master's degree. Applicants may not have applied unsuccessfully to an IRC scheme on more than one occasion or to currently hold or have previously held an IRC Postgraduate Scholarship.

Applicants should have an interest in or experience of education and educational programmes, ideally in science.

If you are interested in being the applicant please send your suggested research question(s) and a description of the research project; your motivation for applying (100 words maximum); and a copy of your CV to Sile.Lane@ucd.ie by Tuesday June 1st 2021.

For an informal conversation, please contact Shane.Bergin@ucd.ie or Sile.Lane@ucd.ie