

Post Specification

Post Title:	PhD Studentship
Post Status:	Full-time studentship
Research Group / Department / School:	Plant Molecular Mechanisms Group, Discipline of Botany, School of Natural Sciences, Trinity College Dublin, the University of Dublin
Location:	Botany Building, Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland
Reports to:	Dr. Ailbhe Brazel
Terms & Conditions:	4 year position including annual €25,000, tax-free stipend and student fees. Expected start date: 1 st September 2026
Hours of Work:	Full-time
Closing Date:	Until filled (first review: May 29 th 2026)

Post Summary

Climate change is increasing the risk of flooding in many parts of the world and causing major crop losses due to oxygen deprivation (hypoxia). Flooding reduces oxygen availability for plants and the resulting acute hypoxia stress can lead to plant death. The molecular mechanisms that control how plants respond to, and recover from, acute hypoxia stress are not completely understood. Notably, hypoxia is also an important developmental signal in plant stem cell niches.

We are seeking a candidate to study molecular mechanisms involved in how plants sense and respond to environmental signals. We are particularly interested in using hypoxia as a model to study stress and developmental responses. The project will use well established plant models including *Arabidopsis thaliana* and *Hordeum vulgare* (barley). The candidate will use a combination of transcriptional, epigenetic, biochemical, genetic and physiological approaches to identify novel molecular mechanisms involved in plant stress and development.

Standard Duties and Responsibilities of the Post

The selected candidate will participate in experimental design and perform lab-based experiments used plant models including *Arabidopsis thaliana* and *Hordeum vulgare*. The selected candidate will participate in the optimisation and implementation of a number of

techniques including transcriptional, epigenetic, biochemical, genetic and physiological approaches. The results of these experiments will be analysed and interpreted by the selected candidate using a combination of statistical and bioinformatic approaches. The selected candidate will be expected to continuously develop their knowledge in the area of plant molecular mechanisms through independent literature searches. The selected candidate will also participate in the drafting of manuscripts for publication, present their results at international conferences and contribute to the training of other researchers.

Funding Information

Funding is available to support a 4-year position including annual €25,000, tax-free stipend and student fees.

Person Specification

Qualifications

A B.Sc. or M.Sc. degree, or equivalent, in plant sciences, genetics, botany, environmental sciences, molecular biology or another relevant discipline.

Knowledge & Experience

Essential

- Demonstratable lab-based experience with molecular techniques, preferably using transcriptional, biochemical and/or epigenetic approaches
- Demonstrable experience in statistical analyses
- Demonstrable experience in experimental design
- Demonstrable experience in managing and delivering outputs for projects, or equivalent, within deadlines
- Meet the Trinity College Dublin postgraduate entry requirements

Desirable

- Demonstrable experience in plant stress, plant development, epigenetics and/or plant model species
- Demonstrable experience in bioinformatic analysis, preferably with transcriptomic or epigenomic data sets

Skills & Competencies

- Demonstrable ability to work both independently and as part of a team
- Demonstrable creative and critical thinking
- Highly self-motivated
- Willing to engage with a diverse team and contribute to shared goals
- Excellent written and oral communication skills in English

Application Procedure

Applicants should submit a full Curriculum Vitae to include the names and contact details of 2 referees (including email addresses), and a max 2-page personal statement detailing why you are interested in the project, to:

Dr. Ailbhe Brazel

ajbrazel@tcd.ie

Further Information for Applicants

URL Link to Plant Molecular Mechanisms Group	<i>Currently under construction</i>
URL Link to Botany at TCD	https://www.tcd.ie/botany/
URL Link to Area	www.tcd.ie
URL Link to Human Resources	https://www.tcd.ie/hr/

Trinity College Dublin, the University of Dublin

Trinity is Ireland's leading university and is ranked 108th in the world (QS World University Rankings 2020). Founded in 1592, the University is steeped in history with a reputation for excellence in education, research and innovation.

Located on an iconic campus in the heart of Dublin's city centre, Trinity has 18,000 undergraduate and postgraduate students across our three faculties – Arts, Humanities, and Social Sciences; Engineering, Mathematics and Science; and Health Sciences.

Trinity is ranked as the 17th most international university in the world (Times Higher Education Rankings 2020) and has students and staff from over 120 countries.

The pursuit of excellence through research and scholarship is at the heart of a Trinity education, and our researchers have an outstanding publication record and strong record of grant success. Trinity has developed 19 broad-based multidisciplinary research themes that cut across disciplines and facilitate world-leading research and collaboration within the University and with colleagues around the world. Trinity is also home to 5 leading flagship research institutes:

- Trinity Biomedical Sciences Institute (TBSI)
- Trinity College Institute of Neuroscience (TCIN)
- Trinity Translational Medical Institute (TTMI)
- Trinity Long Room Hub Arts and Humanities Research Institute (TLRH)
- Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN)

Trinity is the top-ranked European university for producing entrepreneurs for the past five successive years and Europe's only representative in the world's top-50 universities (Pitchbook Universities Report).

Trinity is home to the famous Old Library and to the historic Book of Kells as well as other internationally significant holdings in manuscripts, maps and early printed material. The Trinity Library is a legal deposit library, granting the University the right to claim a copy of

every book published in Ireland and the UK. At present, the Library's holdings span approximately 6.5 million printed items, 400,000 e-books and 150,000 e-journals.

With over 120,000 alumni, Trinity's tradition of independent intellectual inquiry has produced some of the world's finest, most original minds including the writers Oscar Wilde and Samuel Beckett (Nobel laureates), the mathematician William Rowan Hamilton and the physicist Ernest Walton (Nobel laureate), the political thinker Edmund Burke, and the former President of Ireland Mary Robinson. This tradition finds expression today in a campus culture of scholarship, innovation, creativity, entrepreneurship and dedication to societal reform.

Rankings

Trinity College Dublin is the top ranked university in Ireland. Using the QS methodology we are ranked 98th in the world and using the Times Higher Education World University Ranking methodology we are 146th in the World.

- Trinity College Dublin is Ireland's No.1 University (QS World University Ranking 2023, Times Higher Education Rankings 2022)
- Trinity is ranked 98th in the World (QS World University Ranking 2023)
- Trinity is ranked No.1 in Europe for Producing Entrepreneurs for the 7th year in a row Pitchbook 2021-2022

Full details are available at: www.tcd.ie/research/about/rankings.

The Selection Process in Trinity

The Selection Committee (Interview Panel) may include members of the Academic and Administrative community together with External Assessor(s) who are expert in the area. Applications will be acknowledged by email. If you do not receive confirmation of receipt within 1 day of submitting your application online, please contact the named Recruitment Partner on the job specification immediately and prior to the closing date/time.

Given the degree of co-ordination and planning to have a Selection Committee available on the specified date, the University regrets that it may not be in a position to offer alternate selection dates. Where candidates are unavailable, reserves may be drawn from a shortlist. Outcomes of interviews are notified in writing to candidates and are issued no later than 5 working days following the selection day.

In some instances the Selection Committee may avail of telephone or video conferencing. The University's selection methods may consist of any or all of the following: Interviews, Presentations, Psychometric Testing, References and Situational Exercises.

It is the policy of the University to conduct pre-employment medical screening/full pre-employment medicals. Information supplied by candidates in their application (Cover Letter and CV) will be used to shortlist for interview.

Applications from non-EEA citizens are welcomed. However, eligibility is determined by the Department of Business, Enterprise and Innovation and further information on the Highly Skills Eligible Occupations List is set out in Schedule 3 of the Regulations <https://dbei.gov.ie/en/What-We-Do/Workplace-and-Skills/Employment-Permits/Employment-Permit-Eligibility/Highly-Skilled-Eligible-Occupations-List/> and the Ineligible Categories of Employment are set out in Schedule 4 of the Regulations <https://dbei.gov.ie/en/What-We-Do/Workplace-and-Skills/Employment-Permits/Employment-Permit-Eligibility/Ineligible-Categories-of-Employment/> . Non-EEA candidates should note that the onus is on them to secure a visa to travel to Ireland prior to interview. Non-EEA candidates should also be aware that even if successful at interview, an appointment to the post is contingent on the securing of an employment permit.

Equal Opportunities Policy

Trinity is an equal opportunities employer and is committed to employment policies, procedures and practices which do not discriminate on grounds such as gender, civil status, family status, age, disability, race, religious belief, sexual orientation or membership of the travelling community. On that basis we encourage and welcome talented people from all backgrounds to join our staff community. Trinity's Diversity Statement can be viewed in full at <https://www.tcd.ie/diversity-inclusion/diversity-statement>.

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universityvacancies.com

