

Postgraduate Scholarship Information Sheet

Scholarship Project Title	VIP Ingredients: Valorising Innovative Plant Ingredients - Naturally Generated Resource Extracts, Delivering Indigenous & Essential Nutrition Through Sustainability
Advert Reference Number	WD_2025_14_SPONS
Supervisor(s)	Dr Anastasia Ktenioudaki (SETU Waterford) Dr Ultan Mc Carthy (SETU Waterford)
Research Group	EIRC - EIRC Sustainable Agriculture and Food research team
Department /School/Faculty	Department of Land sciences
Duration	4 Years/48 Months
Status: Full-time / part-time	Full Time
Funding information	Irish Department of food Agriculture and the Marine
Value of the scholarship per year for four years	Stipend: € 25,000 Fees of €5,750 per annum
Closing date and time	Friday, 12 June at 4pm Irish Time
Interview date	<i>To be confirmed</i>
PhD commencement date	1 of September 2026

Project Key Words: Digital agriculture, computer vision, food

Post summary

The SETU Department of Land Sciences is looking for a PhD student to work on their VIP ingredients project. Funded by the Irish Department of Food, Agriculture and the Marine, VIP Ingredients aims to utilise precision farming, digitally enhanced processing technology, and functionality testing to extract innovative plant-based ingredients from Irish grown fava bean, pea, lupin and oats, for food applications.

The SETU team will be tasked with assessing the feasibility of a variety of vision / digital systems to identify parameters of interest (PoE's) or biological markers across a variety of crops (in-field) for feature extraction potential. These key parameters of interest (PoE's) will form a digital foundation on which to improve processing and increase national food security.

The successful PhD candidate will be part of SETU's team and will work on conducting field and shelf-life mapping using AI-driven image analysis and sensors to support quality-specific decision-making. Main tasks will include:

- Apply digital imaging techniques on data captured from drones and in-field analysis to identify points of interest, determine digital vegetation index, digital plant health and yield, and estimate composition.
- Complete commercial profiling assessing intrinsic and extrinsic factors impacting product/ingredient readiness.

- Digitally map product shelf-life, through a series of product/ingredient or supply route-specific, temporal, and dynamic profile conditions.

The student will part of a wider national team and collaborate with other researchers and students in Teagasc, UCC, UCD and Irish food and agricultural companies. The successful candidate will be expected to fulfil the following tasks:

- Undertake research project and carry out project tasks
- Carry out administrative work associated with a programme of research
- Engage in the wider research and scholarly activities of his/her research group
- Undertake any other duties as assigned by the Principal Investigator
- Publication or high impact peer reviewed publications (Where possible)
- Dissemination of research findings at national and international conferences (where possible)

The PhD will be fully funded for 4 years and the scholarship will cover University fees and a stipend of €25,000 tax free per year.

Person specification

The successful candidate should be enthusiastic, self-motivated and able to manage own workload. She/he should demonstrate problem solving qualities and excellent organisational and administrative skills including an ability to work to deadlines. They should also demonstrate excellent communication skills and an ability to interact well within a larger research team.

Qualifications

Essential

- Honours Degree (minimum 2:1) in the specific area or related area including computer science, engineering, agriculture, food, horticulture, forestry, or environmental sciences.

Desirable

- Strong academic background in digital imaging
- Strong academic background in precision agriculture
- Postgraduate diploma/ MSc in related areas including Artificial Intelligence, precision agriculture, remote sensing

Knowledge & Experience

Essential

- Knowledge in computer science, agricultural engineering, data science, precision agriculture, remote sensing, plant science, or a related discipline.
- Experience in conducting research independently
- Experience with quantitative, analytical, or computational methods
- Experience in communicating research findings and preparing scientific reports
- Evidence of teamwork skills

Desirable

- Experience with image analysis, computer vision, machine learning, or artificial intelligence
- Knowledge of crop science and agricultural or food systems.
- Knowledge of food analysis
- Interest in image analysis, digital agriculture
- Familiarity with statistical analysis and interpretation of experimental data

Skills & Competencies

Essential

- Applicants whose first language is not English must demonstrate on application that they meet SETU's English language requirements and provide all necessary documentation. See Page 7 of the Code of Practice
- In order to be shortlisted for interview, you must meet the SETU English speaking requirements so please provide evidence in your application.
- Computer skills including the use of Microsoft office (Excel, Access, Word, PowerPoint), Zoom / MS Teams / OBS and or similar
- Competence in data handling and management
- Competence in scientific writing, data presentation, and preparation of technical reports, thesis or publications

Desirable

- Ability to manipulate and analyse datasets using programming or scripting
- Experience in statistical or programming-based environments

Further information

For any informal queries, please contact Dr Anastasia Ktenioudaki on email Anastasia.ktenioudaki@setu.ie

Application procedure

Complete the online Application Form from the [SETU website](#) quoting the advert reference number from above.

Please ensure that you upload all supporting documents as part of your submission.

Please note that applications must be submitted by this route.

For queries relating to the application and admission process please contact the Postgraduate Admissions Office via email researchadmissions@setu.ie or telephone +353 (0)51 302883.

University Website: <https://www.setu.ie>

The University will short-list and interview those applicants who provide the most suitable information in terms of experience, qualifications and other requirements relevant to the post.

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