**Supervisor names: Dr Maria Dermiki, Dr Paul Sullivan**

**Project title: Healthy Oats: Closing the Circle: Optimising Parameters for Oat Growth, Bioactive Extraction, and Processing to Produce Sustainable Fortified Food-For-Health Products.**

**Application deadline:** The closing date for receipt of applications is **5pm, (GMT) Friday 20th September**

**Starting date: October 2024**

**Funding details**

The HOPE Project is funded by the Government of Ireland through the Department of Agriculture, Food and the Marine (DAFM).

Funding for this Project includes:

• A student stipend (usually tax-exempt) valued at €25,000 per annum (subject to annual adjustments)

• Annual waivers of postgraduate tuition fee

• Support for travel, training, consumables and dissemination expenses.

**Project description**

Globally, consumers have an increased interest in sustainable plant-based foods to promote health. Oats provide numerous documented health and nutritional benefits through their unique soluble fibres (beta-glucan) and antioxidants (avenanthramides). HOPE intends to be the first project to close the circle in the oat food chain, from Farm to Health. The project will optimise growing conditions to maximise Beta-glucan and bioactive production; create new value streams by valorising oat milling waste to produce B- glucan, vanillin, and antioxidants, etc. HOPE intends to develop an oat-based functional food platform with evidence-based research targeting key health issues for example, sarcopenia, iron deficiency in women, ‘hidden hunger’, obesity, diabetes etc., using consumer-led concept generation to identify the best target products to address the selected target nutrient deficiencies, to ensure the successful inclusion of these products in consumers’ dietary routine.

HOPE will explore the functionality of oats in selected target products and monitor changes in sensory and nutritional quality and safety. The Phd student working on this project will address the following the research objectives :

* Identify oat-based food-for-health products that exist in the Irish Market
* Determine the size of the market opportunity with targeted demographic analysis.
* Prepare an NPD platform plan.
* Identify the sensory properties that affect acceptance of NPD Food-for-Health products by different population groups.
* Characterise shelf life (sensory, microbiological and physicochemical stability) of developed oat-based products.

**Selection Criteria**

Essential

* BSc Honours (NFQ Level 8) degree in Food Science/Human Nutrition or a related discipline, including but not limited to: Sensory and Consumer Science, Product Development, with a minimum of second class honours (2:1) or equivalent.
* For English language requirement please check here <https://www.itsligo.ie/international/homepage-it-sligo-international/english-language-requirements/>
* Good communication and interpersonal skills.
* Excellent oral and written communication skills
* Analysis of physicochemical and microbiological properties of food.
* Knowledge of statistics, design of experiments and design of questionnaires
* Ability to set up and run sensory evaluation tests

Desirable

* MSc degree in Science/Human Nutrition or a related discipline.
* Ability to critically evaluate scientific methodology and data.
* Ability to work independently and as a member of a team.
* Interest in cross-disciplinary research in Food Science and Human Nutrition.

**Project Duration:** 48 months (PhD)

**Location:** ATU Sligo – Sligo, Ireland.

**Applications:** Application Form / Terms of Conditions can be obtained on the website: <https://www.atu.ie/TU-RISE>

Only selected applicants will be called for an online interview (shortlisting will apply).