

# FULLY FUNDED Master by Research Scholarship

## Institute of Technology Tralee

**Project 2:** Bioconversion of mushroom waste into value-added plant biostimulants

### Description

The **Plant Biostimulant Group** at IT Tralee is a vibrant growing group that has an extensive network of national and international collaborators in both academia and industry. The use of plant biostimulants to enhance crop productivity and stress tolerance represents a **novel and challenging approach in agriculture** in a predicted context of global warming leading to reduced crop productivity in a world with a growing population.

- You will explore the versatility of enzymes for the separation of potential bioactive components from mushroom waste.
- You will carry out the compositional and structural characterization of the separated components using advanced analytical techniques (SEC, HP-SEC, HPAE-PAD, NMR, LC-MS, gel electrophoresis).
- You will assess the performance of the generated by-products to enhance tomato productivity and salt stress tolerance.
- You will evaluate phenotypical, biochemical and molecular markers to obtain structure/activity relationships and explore the mode of action of the biopolymers.

### Fellowship

- The master's program offers fully-funded competitive fellowships to outstanding candidates;
- The fellowships cover full tuition fees, a monthly living allowance (€ 700) for a maximum period of 18 months, and a mobility allowance.

### Eligibility

- You must have an Honours Degree in Biochemistry, Biology, Biotechnology or equivalent (NFQ 8).
- You will be a highly motivated individual with a willingness to learn, good teamwork and an ability to work on your own initiative.
- Through the program, the student will acquire the following skills:
  - ✓ Practical experience in both laboratory work and carrying out plant trials along with a basic knowledge of statistical analysis.
  - ✓ Basic knowledge in the following subject areas: enzymology, biochemistry, analytical chemistry and plant science.
  - ✓ Basic skills and knowledge needed to carry out advanced and interdisciplinary research projects.
  - ✓ The ability to work effectively on complex research projects in a multidisciplinary environment.

## How to apply

Application forms are available on the following link:

<http://www.ittralee.ie/en/InformationAbout/Research/Scholarships/>

Please e-mail your completed application form to [research@ittralee.ie](mailto:research@ittralee.ie)

The closing date for the receipt of applications is **6th June 2018**.

## Key Dates

Deadline	Date
Applicant deadline	6th June 2018
Interviews	Starting 11th June 2018
Result announcement	July 2018
Scholarship start date	01 September 2018

Please note that the timings provided here are indicative and may be subject to change.

For further information, please contact **Dr. Maha Attjioui** [Maha.Attjioui@staff.ittralee.ie](mailto:Maha.Attjioui@staff.ittralee.ie)