PhD Scholarship "Reacting to cold in a changing world- uncovering an alternative vernalisation mechanism in legumes"

Flowering time is important because it is a key trait both for successful plant reproduction and for agronomic productivity and yield. It is controlled by the interplay of environmental signals and internal cues. Even though the temperate legume Medicago truncatula and winter annual Arabidopsis have their flowering promoted by similar cues of winter cold and long day photoperiods, the mechanism is different as for example Medicago lacks the FLC gene which is the key vernalisation target in Arabidopsis. The ultimate aim of this research is to apply it to plant breeding of plant varieties with optimised flowering in a changing climate. This Marsden-funded PhD project based primarily in Auckland, New Zealand, involves the study of vernalisation, the promotion of flowering by extended exposure to cold temperatures, in the model legume Medicago. Genetic and genomic approaches will be used. The main focus will be to use mutants with altered vernalisation responses and analyse them using techniques such as ChIP-Seq, RNA Seq and yeast two hybrid assays. Functional analysis of candidate regulators of vernalisation and flowering time will be carried out.

Students applying for this position will be high achievers and have demonstrable expertise in plant molecular biology and genomics and preferably bioinformatic skills for handling large data sets. The successful PhD candidate must be able to meet the requirements of, and enrol in, the University of Auckland's PhD programme. Suitably qualified domestic or international students are welcome to apply. The successful applicant will be based at the Putterill Flowering Lab<http://www.sbs.auckland.ac.nz/people/j-putterill> with long term experience with flowering time studies in Medicago and Arabidopsis in the School of Biological Sciences, The University of Auckland. This Marsden-funded project also involves collaboration with the epigenetic and flowering specialist Professor Yuehui He and the student will carry out research visits to his lab in China at the Shanghai Center for Plant Stress Biology<http://www.psc.ac.cn/en_research_personal_information.asp?id=391> (PSC), Chinese Academy of Sciences. The University of Auckland<https://www.auckland.ac.nz/en.html> is New Zealand's most highly world ranked and largest with >40,000 students and is in the city centre of Auckland, a vibrant, multicultural city with beaches and wilderness on its doorstep.

The scholarship: This scholarship is Available Now. Tenure is for 36 months with the value of up to $NZ 27,500 stipend per annum plus compulsory domestic fees of up to $NZ 7600 per annum.

To apply: Please apply by contacting Professor Joanna Putterill<mailto:j.putterill@auckland.ac.nz> and include:
* Your CV
* Copies of academic transcripts
* A brief (1 page maximum) statement of research experience
* The names and e-mail contacts of at least two people who can provide professional letters of reference.
* Preferably; IELTS or TOEFL results for those with English as a second language.

The closing date for applications is 11 June 2018.

Joanna J Putterill PhD

Professor
School of Biological Sciences
Room 114-116, CommerceA
+64 9 373 7599 ext 86700
j.putterill@auckland.ac.nz
https://unidirectory.auckland.ac.nz/people/profile/j-putterill
http://scholar.google.co.nz/citations?user=0C-JalKXz8sC&hl=en

Director, Joint Graduate School for Plant and Food Science

Standard Post address:
Prof. Joanna Putterill
School of Biological Sciences
University of Auckland
Private Bag 92019
Auckland 1142
New Zealand

Fedex/Courier Address:
Prof. Joanna Putterill
School of Biological Sciences, The University of Auckland

Loading Dock - Courier Entrance

3A Symonds Street
Auckland 1010
New Zealand