



NEW ZEALAND WINE
PURE DISCOVERY

Fully funded PhD position on the applications of nanotechnology for wine growing

The topic: The application of nanotechnology in agriculture is currently receiving substantial attention worldwide. The most common idea is to exploit the novel properties that materials develop at the nano scale (generally < 100 nm) to design agrochemicals with superior properties to the products currently used. There is a consensus that potential applications and benefits are immense. The proposed project will aim at establishing the missing foundations that will promote the responsible and sustainable development of nanotechnology in the wine growing sector. Objective 1 will aim at carefully reviewing the literature to identify and critically discuss nano-enabled solutions that are relevant for grapes. Objective 2 will be to identify the most pressing needs regarding pest control, nutrition and sustainability, and analyse how they could be addressed by nanotechnology. Objective 3 will be to investigate the environmental fate and potential impact of a series of nano-enabled agrochemicals on target and non-target organisms through systematic laboratory investigations.

The ideal candidate will have:

- A strong background in Agronomy and/or Environmental Sciences (a specialisation in Wine Science and/or Chemistry will be an advantage), and research skills (including research methods, writing, presentation, statistics).
- Interpersonal skills and enthusiasm to carry out research in a multidisciplinary context.
- Experience with laboratory work involving hazardous chemicals.
- A good level in spoken and written English.

The University and the team:

The University of Auckland is the largest and highest-ranked university in New Zealand (85th worldwide in the 2018/19 QS World University Rankings) and offers an ideal environment to study and carry out research. Melanie Kah (supervisor of the PhD candidate) has a strong expertise in the applications and implications of nanotechnology in agriculture. More information is available [here](#). The project team is interdisciplinary and includes other members from the University of Auckland and from other organisations across NZ.

Starting date: October 2019

How to apply: Please send a single pdf file including your CV (2 pages max. including the contact details of two referees), a description of your motivations and research interests (1 page max.), your University transcripts (topics and grades), and if available, copies of research papers and/or MSc thesis. Email to melanie.kah@auckland.ac.nz.

Applications will be evaluated as they are received until the position is filled. Further information is available upon request.