

Postdoctoral and PhD Vacancies in Food Structure Design – New Zealand

Fonterra Cooperative Group, the world's largest dairy exporter, and the New Zealand Government have formed a Primary Growth Partnership (PGP) to invest in Research and Development in the dairy sector. One of the major streams of work will be in Food Structure Design with funding confirmed for a seven year period. This work will focus on the links between food manufacturing processes, food structure, food physical and chemical properties and sensory perception for a range of dairy foods including cheeses, cultured foods, creams and beverages.

We are commencing recruitment for the initial portfolio of projects and currently looking for a total of four postdoctoral researchers and six PhD students. The successful candidates will be part of a multidisciplinary, multi-university team developing our capability and scientific excellence in food structure design for dairy materials. Massey University, Auckland University, Canterbury University and the University of Queensland (Australia) will be involved in the initial portfolio of projects. Each project will have at least one university supervisor plus a supervisor from the Fonterra Research Centre in Palmerston North, the world's largest dairy research centre with more than 350 staff.

The overall programme of research in Food Structure Design will be coordinated by the Fonterra Chair in Food Materials Science, Professor Peter Munro, at the Riddet Institute, Massey University, Palmerston North. The Riddet Institute is the primary external research provider to the PGP Programme, and is the national Centre of Research Excellence in food and nutrition with government and industry funding that currently supports about 15 research fellows/postdoctoral fellows and 50 PhD students. The postdoctoral researchers and PhD students in Food Structure Design will be expected to interact with other members of the team including attendance at an annual Food Structure Design symposium. This annual symposium will be attended by an International expert panel in Food Structure Design who evaluate the overall programme of research and offer additional ideas on each project. Members of the expert panel are Professor Erich Windhab, ETH Zurich, Professor Allen Foegeding, North Carolina State University, Associate-Professor Jason Stokes, University of Queensland and Associate-Professor Matt Golding, Massey University.

We are currently developing a training course in key elements of the R&D process in conjunction with the Riddet Institute that will be available for all PhD and postdoctoral members of the programme.

We are keen to attract candidates who have a pragmatic approach to research, who wish to work in a challenging team environment and who would like to know that their research results will be relevant and will be used commercially in due course. This is a valuable opportunity to work with a number of the leading thinkers in the field.

PhD funding for the programme will cover university enrolment fees and project costs plus a generous tax-free student stipend. Postdoctoral salaries will depend on prior experience with an indicative minimum of NZ\$64,000 per year.

The initial vacancies along with the specific skills needed and the email address of the university Chief Supervisor are listed below. For technical details of specific projects that you may be interested in please email the supervisor for a detailed project description that will include details on how to apply for that vacancy.

Project 1 - Model Systems for Alternate Make Cheese

Postdoctoral Fellow – 2 years – Chemical/Process engineer – Process Scale-up

PhD – Chemical or food engineer, food technologist – Cheese rheology

Chief Supervisor – p.a.munro@massey.ac.nz

Project 2 – Coalescence Mechanisms in Dairy Emulsions

Postdoctoral Fellow – 3 years - Food Scientist/Chemist/Physical Chemist with experience in colloid chemistry

Chief Supervisor – m.golding@massey.ac.nz

Project 3 – Design of Cheese Filler Particles

PhD - Food Scientist/Chemist/Physical Chemist

Chief Supervisor – m.golding@massey.ac.nz

Project 4 – Colloidal Interactions in Cheese

PhD – Food Scientist/Chemist/Physical Chemist

Chief Supervisor – m.golding@massey.ac.nz

Project 5 – Emulsifier-free Process Cheese

PhD – Food Scientist/Chemist/Physical Chemist

Chief Supervisor – m.golding@massey.ac.nz

Project 6 – Structure/Material Property Relationships in Cheese

PhD – Chemist, Chemical/Mechanical Engineer, Materials Scientist, Food Scientist

Chief Supervisor – b.james@auckland.ac.nz

Project 7 – Particle Growth and Stability - Aggregation dynamics and interaction forces

Postdoctoral Fellow – 3 years – Chemist/Physicist

Chief Supervisor – m.williams@massey.ac.nz

Project 8 – Enhanced Protein Functionality

PhD – chemist/biochemist

Chief Supervisor – Juliet.gerrard@canterbury.ac.nz