

## PhD Project Advertisement

**Project title:** Cricket Power: Protein for the Future

Project No: FBS2022-19-Chatzifragkou-rs

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### Project description:

Edible insects have recently received much attention in the food industry due to their high protein, mineral and vitamin content. Edible insect proteins usually meet the WHO essential amino acid content requirements and are, on average, more digestible than plant-based proteins. However, their inclusion in food products still remains a challenge; insect proteins form complex systems and interact with other components within food matrices. Moreover, consumer acceptance is one of the biggest challenges for insect-based foods, driven by food neophobia and disgust.



We aim to tackle the challenge of insect-based foods and bridge the knowledge gap between insect protein functionality and consumer acceptance, through an exciting CASE studentship, in partnership with New Foods Ltd and the University of Surrey. New Foods Ltd, trading as HOP® in the UK, is a science-based business, retailing insect food products and places the long-term health, wellbeing and environmental sustainability as the key-drivers for innovation and business activity (Fig. 1). The project will investigate key nutritional and functional properties of edible insects (crickets), which will inform protein-rich model food systems and products that will be evaluated through sensory and consumer acceptability studies.

*Fig 1. Nutritional Information on crickets (Asset of HOP®)*

### **Training opportunities:**

You will receive world class training from the University of Reading, University of Surrey and HOP<sup>®</sup>. At the University of Reading, you will gain access to the Food Processing Centre, the Chemical Analysis Facility (CAF), the Sensory Science Centre and the Flavour Centre, where you will be trained in protein chemistry and structure, flavour chemistry, sensory and consumer methodologies. At the University of Surrey, you will be trained in in vitro digestion analyses, mineral analysis and bioavailability using cell line models. Our unique collaboration with HOP<sup>®</sup> will allow you during your placement to gain valuable insights on short and long-term real-world impacts of your research to the business, by fully experiencing and playing a strong part in the journey of HOP<sup>®</sup>, a start-up company.

### **Student profile:**

This project would be suitable for students with at least a BSc honours degree at upper second class level (or equivalent) in Food Science, Food Technology, Chemistry, Nutrition or a closely related subject.

### **Funding particulars:**

This is a BBSRC DTP funded CASE studentship.

For up to date information on funding eligibility, studentship rates and part time registration, please visit the [FoodBioSystems website](#).