

## FoodBioSystems DTP - PhD Project Advertisement

**Project Title:**

FBS2021-02-Chatzifragkou: Edible insects: Systematic investigation of insect-based foods for human nutrition and consumer acceptance

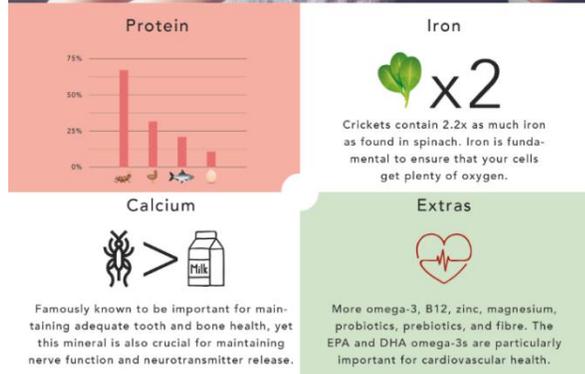
**Lead Supervisor:** Dr Afroditi Chatzifragkou, University of Reading, Department of Food and Nutritional Sciences

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 Dr Stella Lignou (University of Reading)  
 Dr Geoffrey Knott (HOP®)

**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®. 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® 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®, a start-up company.

**Student profile:** This project would be suitable for students with a degree in Food Science, Food Technology, Chemistry, Nutrition or a closely related subject.

### **Funding Note**

This is a BBSRC DTP funded CASE studentship. The project is part of the FoodBioSystems BBSRC Doctoral Training Partnership (DTP), it will be funded subject to a competition to identify the strongest applicants.

The studentship is open to UK and international students (including EU countries) however due to funding rules, no more than 30% of the projects can be allocated to international students.

The funding will include a tax free stipend (minimum £15, 285 per year), support for tuition fees at the standard UK rate (currently £4,407 per year) and a contribution towards research costs. **Please note** that the host universities have not yet confirmed the level of fees charged to international students funded by the DTP. Fee levels may vary across the institutions. This information will be shared on the FoodBioSystems DTP website as soon as it becomes available.

### **To apply**

Please go to [FoodBioSystems DTP website](#) for information on how to apply for this studentship. The closing date for applications will be 8 February 2021.