Development of on-pack visual indicators of eating quality and freshness for beef and lamb products

DESCRIPTION OF PROJECT

This project will be to develop two on-pack visual indicators. One that will ensure the consumer will cook and eat high value meat cuts at the optimum time, and another that will monitor the shelf life and freshness of packaged meat products. Research activities will focus on the: (i) identification of analytes that indicate the optimal eating time, (ii) design and synthesis of indicator compounds, (iii) development of prototype solutions for the integration of indicator compounds into existing product packs.

INDUSTRY PARTNER

This project will be conducted in collaboration with the Meat & Livestock Australia (MLA). MLA is a producer-owned, not-for-profit organisation that delivers research, development and marketing services to Australia's red meat industry. Meat & Livestock Australia Ltd (MLA) strives to be the recognised leader in delivering world-class research, development and marketing outcomes that benefit Australian cattle, sheep and goat producers.


SCHOLARSHIP & PROFESSIONAL DEVELOPMENT

Scholarship: Equivalent to the RTP Stipend (previously known as Australian Postgraduate Award) 2016 rate A$26,288 pa full time pro-rata. Applications from exceptional candidates may be granted additional support for international tuition fees.

International students will have their compulsory overseas student health cover (OSHC) paid for (individual student only).

Professional Development: The candidate may be provided with an industry internship opportunity (3 – 6 months), industry training programs, and professional development workshops during the course of their PhD program.

Integral to your PhD, you will:
- Undertake training in both advanced technical and other topics through Monash and Agriculture Victoria.
- Work with an experienced team focusing on innovation and sustainability for the agricultural sector
- Spend some of your time at the MLA North Sydney office as part of the project
SUPERVISORS (if determined)

- Dr Kellie Tuck (School of Chemistry)
- Dr Joanne Tanner (Department of Chemical Engineering)

INDUSTRY MENTORS:

Michael Lee and other senior scientists from Meat & Livestock Australia.

ELIGIBILITY and APPLICATION INFORMATION

Applicants will be considered provided that they fulfil the criteria for PhD admission at Monash University and demonstrate excellent research capability. Details of the relevant requirements are available at https://www.monash.edu/graduate-research/future-students/apply

The research team is looking for a highly qualified graduate with a background in Chemistry or Chemical Engineering. An Honours or Masters degree with H1 or equivalent is essential.

Essential criteria:

- Excellent written and verbal communication skills
- Ability to work independently as well as in a team
- Ability to plan, organise, manage multiple tasks and meet deadlines
- Evidence of data analysis and interpretation skills is essential
- Candidates will be required to meet Monash entry requirements which include English-language skills.

Desirable candidate attributes:

- Analytical chemistry and laboratory skills to conduct experiments and develop methods for identification of analytes
- Knowledge of organic chemistry, organic synthesis, cellulose films, or cellulose composites
- Experience in the use and interpretation of NMR, MS and IR spectroscopy
- Research or marketing experience in the food manufacturing/packaging/handling industry

The successful scholarship holder must be enrolled full-time and on-campus. Shortlisted candidates will be interviewed, over Skype if necessary. The interviews will be conducted in English.

Note: applicants who already hold a PhD will not be considered.

Please complete this EXPRESSION OF INTEREST form to be considered for this project.

You will be required to submit the following:

- A cover letter that includes a brief statement of the applicant's suitability
- A curriculum vitae, including a list of any published works
- A full statement of academic record, supported by scanned copies of relevant certified documentation
- Contact details of two academic referees
- Evidence of English-language proficiency (international applicants only)

Please note: In accordance with which Regulation 24 of the Monash University (Vice-Chancellor) Regulations, intellectual property created by a student from a collaborative research activity must be
assigned to the University. Depending upon the agreement between the University and its GRIP industry partner/s, this may mean that the intellectual property arising from the project is owned by or licensed to those industry partner/s.

**FACULTIES INVOLVED**

Science, Engineering

**CONTACT DETAILS & ADDITIONAL INFO**

FoodDairy.GRIP@monash.edu