

JOB DESCRIPTION

SPECIFIC JOB TITLE	Analytical Biochemistry Research Assistant
LEVEL/BAND	C
JOB FAMILY	SCIENCE CAPABILITIES
GENERIC ROLE TITLE	Laboratory technician
CONTRACT TYPE	Full time
HOURS	37
REPORTS TO	Senior Research Scientist - Biochemistry
DEPARTMENT	Plant Sciences and the Bioeconomy
LOCATION	Rothamsted Research, Harpenden
DATE	04/02/2023

OVERVIEW OF ROLE/JOB PURPOSE

To support the metabolic profiling part of a BBSRC/UK-RI IPA project entitled: A toolkit for **Breeding Resistance to Cabbage Stem Flea Beetle (BR2CSFB)**.

The work will involve the extraction and quantitative analysis of key plant metabolites that may be involved in plant-insect interaction (e.g. Glucosinolates, sugars, phenolics and cuticular wax). Candidates will be required to have a degree in biochemistry. Experience in analytical biochemistry techniques such as liquid and gas chromatography (HPLC, GC) is essential, and knowledge of mass spectrometry is highly desirable.

This project involves two research institutes (RRes and JIC), seven major plant breeders and the OSR growers' Levy board (AHDB). It aims to investigate the genetic control of resistance to CSFB in *B. napus* and in parallel to develop a mechanistic understanding of crop signalling and response processes during the CSFB interaction. Genetic analyses coupled with metabolite profiling will allow to further elucidate key mechanisms by which Brassica plants identify and defend themselves against beetle attack.

The successful applicant will join the Metabolic Engineering and Lipid Biotechnology group within the Plant Sciences for the Bioeconomy Department at Rothamsted Research. Demonstration of good communication skills and the ability to work both independently and as part of a team is essential.

The role holder is expected to carry out the duties listed below and other duties reasonably required by the line manager or Institute, commensurate with the grade and level of responsibility for this post.

Generic Outputs	Weighting	Description of Outputs	Description of Job Specific
SCIENTIFIC SUPPORT TO PROJECTS/ RESEARCH GROUPS	60%	Sample preparation and analysis; Data curation, extraction and formatting	Quantitative biochemical analyses: <ul style="list-style-type: none"> • Molecular standards preparation • Polar and apolar Metabolites extraction (Typically, sugars, glucosinolates, phenolics and waxes) • Sample chemical derivatisation when required • Samples analysis by HPLC or GC-FID/MS • Data curation, extraction, and formatting • Routine instrument maintenance

FINANCE AND RESOURCE MANAGEMENT	10%	Stock control and ordering within predetermined budgetary constraints	<ul style="list-style-type: none"> • Monitor level of stocks and stores, re-ordering within predetermined budgetary constraints and procedures
WORKING WITH OTHERS	15%	Customer relations and interactions with others	<ul style="list-style-type: none"> • Attend laboratory and project/team meetings when appropriate • Advise and assist colleagues, students and external contacts in the setting up of experiments and/or deployment of particular techniques
LEADERSHIP AND MANAGEMENT OF STAFF AND/OR OF A SCIENTIFIC SERVICE OR	5%	Supervising and developing more junior staff and taking responsibility for quality of work within the workshop/laboratory / work environment	<ul style="list-style-type: none"> • Assist with induction or training of new colleagues • Supervise visiting workers and work experience students • Ensure the safe handling, storage and disposal of hazardous substances and carry out basic risk assessments as required
KNOWLEDGE EXCHANGE, COMMERCIALISATION AND OUTREACH	5%	Promoting the work of the Institute and/or that of the role-holder	<ul style="list-style-type: none"> • Participate in public engagement activities (e.g. open days, schools visits)
CONTINUING PROFESSIONAL DEVELOPMENT	5%	Identification and actioning of learning objectives and the opportunities and resources available to achieve these	<ul style="list-style-type: none"> • Share knowledge in a supportive way with less-experienced individuals • Seek opportunities for self-development in normal day-to-day work as well as through agreed development objectives

PERSON SPECIFICATION AND SHORTLISTING CRITERIA*				
SPECIFIC JOB TITLE	Analytical Biochemistry Research Assistant			
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JOB FAMILY	SCIENCE CAPABILITIES			
CONTRACT TYPE	Full time			
HOURS	37			
REPORTS TO	Senior Research Scientist - Biochemistry			
DEPARTMENT	Plant Sciences and the Bioeconomy			
LOCATION	Rothamsted Research, Harpenden			
EDUCATION/QUALIFICATIONS		Essential	Desirable	How Tested? **
1.	A degree in biochemistry	R		AF /Cert
2.	Postgraduate qualification such as master degree or equivalent experience		R	AF /Cert
3.				
4.				
EXPERIENCE/KNOWLEDGE/SKILLS		Essential	Desirable	How Tested? **
1.	Experience in quantitative analytical biochemistry techniques	R		AF/IV
2.	Experience in metabolite extraction and derivatisation	R		AF/IV
3.	Experience in quantitative molecular standards preparation.	R		AF/IV
4.	Experience in forward and reverse phase HPLC analysis	R		AF/IV
5.	Experience in analysis of polar plant metabolites (E.g. glucosinolates and sugars)	R		AF/IV
6.	Experience in plant phenolics analyses		R	AF/IV
7.	Experience in Gas Chromatography and Mass Spectrometry (GC-MS)	R		AF/IV
8.	Experience in lipid extraction and analysis		R	AF/IV
9.	Basic computing skills (e.g. MS Office)	R		AF/IV

* Minimum requirements of the post and how they will be assessed

** Evidence of criteria will be established from: **AF** (application form), **IV** (interview), **Test** (skills test/prepared question/presentation). **Cert** (certificated checked by interview panel)

BEHAVIOURS/COMPETENCIES			How Tested?*
1.	Drive for Quality: Is motivated and committed to doing their job to the best of their ability		IV
2.	Strategic Thinking: Aligns actions with wider goals and models		IV
3.	Creativity and Innovation: Accepts and adapts to change; makes connections and encourages a creative environment		IV
4.	Developing Self and Others: Identifies learning and development needs		IV
5.	Professional Conduct: Demonstrates honesty and respect		IV
6.	Productive Relationships: Cooperates with and supports colleagues		IV
7.	Effective Communication: Listens and communicates clearly to others		IV
GENUINE OCCUPATIONAL REQUIREMENTS			How Tested?*
		Essential	Desirable
1.			IV
2.			