

Candidate Information

Position:	Research Fellow, SeaSolutions
School/Department:	Chemistry and Chemical Engineering
Reference:	20/108246
Closing Date:	Monday 6 July 2020
Salary:	£33,797 to £40,322 per annum
Anticipated Interview Date:	Week Commencing Monday 27 July 2020
Duration:	6 Months

JOB PURPOSE:

A short-term contact to work on EU research project SeaSolutions that relates to seaweed biomass. Specifically, this post-doctoral position will focus on extractions of bioactives (e.g. polyphenols, carotenoid and PUFA) from seaweeds for novel applications in marine biotechnology.

MAJOR DUTIES:

1. Experience of 'green' separation technologies (e.g. supercritical CO₂, ionic liquids) and their application in the extraction of compounds from terrestrial/marine plants.
2. Knowledge and experience of analytical techniques including NMR, HPLC, GC-MS and column chromatography.
3. Develop and execute new analytical methods/protocols to improve the characterization of compounds from natural biomass.
4. To plan and conduct experiments relevant to the research and development of algal-based commercial products.
5. To correlate mass balance data generated from the algal bioreactor to assess the efficiency of the system.
6. Liaise on a regular basis with project partners and regularly present (oral and written) reports to consortium partners or to external audiences to disseminate and publicise research findings.
7. Carry out routine administrative tasks associated with the research project, e.g. organisation of Industrial partner meetings.
8. Prepare material for publication in national and international journals and presentations at international conferences.

Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-3 months in advance and contribute to research group planning.
2. Plan for the use of research resources, laboratories and workshops where appropriate.
3. Plan own day-to day activity within framework of the agreed research programme.
4. Plan up to 3 months in advance to meet deadlines for journal publications and to prepare posters, presentations and/or papers or conferences.
5. Coordinate and liaise with other members of the research group and Industrial partners over work progress.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any PG/UG students who may be assisting with research.

Internal and External Relationships:

1. Liaise on a regular basis with colleagues and students.
2. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
3. Join external networks to share information and ideas.

ESSENTIAL CRITERIA:

1. BSc (Hons) or equivalent in Chemistry, Biochemistry or related subject.

2. Have or about to obtain PhD in Chemistry, Biochemistry, Biological/Food science, Algal Biology and/or microbiology.
3. At least 3-years recent relevant research experience in a range of analytical techniques relevant to biomass separation and characterization (e.g. NMR, HPLC and GC-MS (FAME)).
4. Demonstrable knowledge of 'green' separation technologies (e.g. supercritical CO₂, ionic liquids).
5. Experience working with Industry and prior experience working on industrial research projects.
6. Strong project planning skills and ability to meet deadlines.
7. Experience of working in a disciplined and effective manner within a team environment.
8. Ability to present scientific arguments and data in a clear, concise and confident manner through reports, journals and oral presentations.
9. Practical problem solving skills and independence of thought.
10. Ability to communicate effectively both verbally and in writing.

DESIRABLE CRITERIA:

1. Knowledge of established/new analytical methods/techniques for characterisation of natural biomass.
2. Experience in supervision of postgraduate and final year undergraduate students.
3. Experience of seaweed/algae physiology.
4. Experience of in vitro digestibility studies using model systems.
5. Experience in proposal writing and research program development.
6. Track record of high quality publications commensurate with career stage.