Job description

Research – Associate - Plant Molecular Physiologist (Rice Research Newton Fund: Exploiting a Cyanobacterial CO₂ Concentrating Mechanism to Increase Photosynthesis and Yield in Rice)

Ref: A2446-S

<table>
<thead>
<tr>
<th>Job Title: Research Associate - Plant Molecular Physiologist (Rice Research Newton Fund: Exploiting a Cyanobacterial CO₂ Concentrating Mechanism to Increase Photosynthesis and Yield in Rice)</th>
<th>Present Grade: 6</th>
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<tr>
<td>Department/College: Lancaster Environment Centre</td>
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<td>Directly responsible to: Dr Elizabete Carmo-Silva</td>
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<td>Supervisory responsibility for: n/a</td>
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Other contacts

Internal:
Prof Martin Parry, Dr Mike Page. Other post-doctoral researchers, postgraduate and undergraduate students, technical and academic staff, central administration.

External:
Project partners at the Chinese Academy of Sciences (CAS), Shanghai, China. Stakeholders as necessary (e.g. Newton Fund, BBSRC).

Major Duties:

- Contribute to the design of experiments that address the project objectives.
- Carry out Golden Gate molecular cloning to generate plant expression plasmids, each containing multiple expression cassettes (this may include CRISPR/Cas9 constructs).
- Carry out the transient transformation of rice protoplasts in order to test the plasmids created.
- Assay the efficacy of each plasmid through various screening methods (includes confocal microscopy, quantitative RT-PCR, SDS-PAGE + Western blot, electron microscopy).
- Work with collaborating PDRAs at CAS, Shanghai for a period of 4-6 weeks around February 2019, in order to carry out protein biochemistry on stably transformed lines generated at CAS.
- Liaise with project partners at CAS, Shanghai – Skype conference calls.
- Plan and manage own research activities and priorities as set with line manager.
- Contribute to resolve practical and theoretical problems concerning methodology and analysis that arise whilst conducting research.
- Present research at internal and external meetings.
- Contribute to the preparation of publications in high impact journals.
- Contribute to writing project reports for the funder and stakeholders.
- Any other duties as may be reasonable required by the line manager.