**JOB DESCRIPTION**

<table>
<thead>
<tr>
<th>Job Title:</th>
<th>Post-doctoral research assistant</th>
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<tbody>
<tr>
<td>Department / Unit:</td>
<td>School of Biological Sciences</td>
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<tr>
<td>Job type:</td>
<td>Research</td>
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<td>Grade:</td>
<td>7</td>
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<td>Accountable to:</td>
<td>Project leader. Consortium grant leader.</td>
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<td>Accountable for:</td>
<td>Cellular and molecular phenotyping of chloroplasts of rice lines altered in chloroplast development regulators.</td>
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**Purpose of the Post**

The post is part of a research council consortium grant (BBSRC BB/P003117) aiming at identifying and exploiting global regulators of chloroplast development in rice. The post holder will carry out the cellular and molecular phenotyping of rice lines genetically modified in a number of candidate regulators.

**Key Tasks**

- To obtain developmentally appropriate biological material from carefully dissected rice seedlings of a number of gene-edited or otherwise genetically modified lines, in order to examine consistent stages of leaf development, or to identify alterations of developmental rate if they occur.

- To prepare material for observation by Nomarski or laser confocal scanning microscopy, and carry out quantitative observations and image analysis of cellular and chloroplast parameters.

- To prepare material of transmission electron microscopy and to optimise material preparation for serial block face imaging scanning electron microscopy. To carry out quantitative observations and image analysis of chloroplast parameters.

- To isolate total RNA and DNA, and to perform quantitative reverse transcriptase realtime PCR or genomic realtime PCR, in order to estimate plastid to nuclear genome copy number ratios, and plastid to cytosolic ribosomal ratios.

- To analyse data and prepare presentations for group meetings, consortium meetings and conferences, and for publication. To present those data in scientific gatherings as appropriate.

**Other Duties**
The duties listed are not exhaustive and may be varied from time to time as dictated by the changing needs of the College. The post holder will be expected to undertake other duties as appropriate and as requested by his/her manager.

The post holder may be required to work at any of the locations at which the business of Royal Holloway is conducted.

**Internal and external relationships**

The following list is not exhaustive but the post holder will be required to liaise with:

- The PI of the Royal Holloway grant, Dr. Enrique López-Juez and members of his laboratory.
- The overall PI of the consortium, Prof. Julian Hibberd (Univ. Cambridge) and the other grant holders, Prof. Jane Langdale and Dr. Steve Kelly (Univ. Oxford).
- The head of the Centre of Plant Molecular Sciences, Prof. Paul Fraser, and the head of School of Biological Sciences, Royal Holloway, Prof. Vincent Jansen.