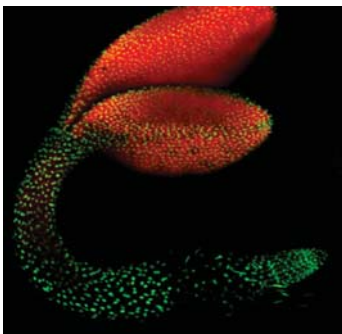


Part IB Plant & Microbial Sciences Practicals

Laboratory and field-based research are both essential for our further understanding of the function of plants and micro-organisms. The practicals provide a thoroughly integrated understanding, quite different from Part IA courses, by:

- Providing experience of the major techniques used in plant and microbial science research
- Developing skills in the design, interpretation and writing up of experiments
- Addressing theoretical problems through experimentation
- Increasing awareness of the social and industrial implications of plant and microbial science research
- Developing the ability to present and communicate scientific issues



Light microscope images of a GFP-expressing plant

In the Plant Physiology practicals you investigate the impact of Rubisco antisense transformants on the growth, photosynthesis and nutrient uptake in another key model plant, tobacco (*Nicotiana tabacum*).



State of the art Teaching Laboratory

The Whole Plant theme considers the diversity of plants and their morphology within the setting of the Botanic Garden. It also includes a field trip to Hayley Wood to consider conservation strategies.

The Molecular Techniques theme is designed to enable you to appreciate the core tools used to understand gene expression and familiarise yourself with one of the model plants, *Arabidopsis thaliana*, in an investigating spanning Michaelmas and Lent terms.



Plant infected with a GFP-tagged virus.

The Microbial Pathology practicals introduce key concepts in plant pathology and microbiology including: handling and detection of oomycete, bacterial and viral pathogens; analysis of the effects of pathogens on the host plant, and advanced diagnostic methods. These practicals form a research project spanning several weeks.



Cambridge University Botanic Garden