

EMILY SEWARD



“ I became interested in plant science when I realised that basic survival strategies, such as moving into shade if too hot, aren't available to sessile plants, which have developed alternatives. Plant sciences is multi-disciplinary with huge scope for significant work to be achieved. I'm particularly interested in Plant Pathology and RNA silencing. ”

First Degree

BA Natural Sciences (Biological)
University of Cambridge
Date due to graduate June 2012

Sainsbury Undergraduate Studentship (2011)

Vacation Internship – Science Communication
(June & September 2011)
BBC radio programme broadcast from London
Supervisor – Dr Chris Smith, Addenbrookes Virology
Mentor – Professor John Gray, University of Cambridge

JIC/TSL Undergraduate Summer Research Programme (2011)

Vacation Research – Cellular communication between plants and pathogens (July & August 2011)
The Sainsbury Laboratory, John Innes Centre, Norwich
Supervisor – Dr Silke Robatzek, Sainsbury Laboratory
Mentor – Dr Julian Hibberd, University of Cambridge

Summary of Vacation Project

At the Sainsbury Laboratory they developed automated image acquisition and processing to record stomatal apertures. In this project we will apply existing computational tools to monitor stomatal apertures untreated and upon elicitation with defined pathogen-associated molecular patterns (PAMPs), plant released damage-associated molecular patterns (DAMPs), and bacterial pathogens in a large set of known Arabidopsis pathogen defense and hormone signaling mutants. This will then be compared with stomatal apertures upon abiotic stresses, e.g. ABA treatment, or re-opening provoked by pathogen effectors. All materials and methods are available in the lab and therefore results of this rather defined project should be obtained within the available period of time.

When working with the BBC radio show 'The Naked Scientists' I will assist the team by researching articles, which would be published online, and gain experience in making science radio programs and podcasts, web development, science writing, video editing and production. This will give me the opportunity to read about & investigate all areas of plant sciences & help raise public awareness by promoting more plant related articles and news items for the program.
