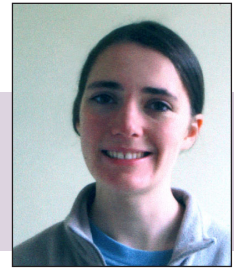


# CAROLINE WOOD



“The plant sciences continually stimulate my curiosity for the natural world, with my particular interests focusing on plant sensory mechanisms. I recognise that plants have a vital role towards combating issues such as climate change/food security and I would like to contribute towards shaping our ability to address these concerns.”

## First Degree

BSc Cell Biology  
Durham University  
Due to Graduate 2013

## Sainsbury Undergraduate Studentship (2011-2012)

Vacation Research – The genetic basis of temperature sensing in *Arabidopsis Thaliana*.  
John Innes Centre  
Supervisor – Dr Philip Wigge  
Mentor - Professor Keith Lindsey

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## Summary of Vacation Project

It has been found that the alternative histone, H2A.Z, is strongly associated with promoters of temperature regulated genes and that suppressing the H2A.Z gene causes a constitutive whole organism warm temperature response. This presents a model of temperature sensing by chromatin remodelling, with a rise in ambient temperature evicting H2A.Z from the promoter region, allowing access of transcription factors. I hope to investigate how chromatin remodelling may regulate transcription of temperature sensitive genes and whether this forms the basis of natural variation in temperature responses in *Arabidopsis*. The reporter genes HSP70 and CBF will be used to try to identify quantitative trait loci responsible for temperature induced responses. Candidate genes will then be investigated through producing over-expression and knockout lines.

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