

# International Reflections on Cambridge

Debbie Lin

Cambridge University was founded in 1209 and has become internationally acclaimed for both academic excellence and topnotch research. Today, even those who associate Cambridge only with gowned figures philosophizing amidst cobblestoned gardens will learn about the DNA double helix, which is courtesy of Watson & Crick at Cambridge's Cavendish Laboratory; and of electrons, one of J.J. Thompson's many discoveries during his lengthy Cambridge career.

But it would sell Cambridge science short to limit its influence to its labs' discoveries. Cambridge has educated and encouraged great minds, which have then impacted science elsewhere. Professor Roger Tsien (University of California), the recipient of the 2008 Nobel Prize for Chemistry for his co-discovery of Green Fluorescent Protein, is one such mind. The University's international collabora-



tions also contribute formidable brainpower to complex questions, as seen in the Cambridge-MIT Institute. The University's strength in disciplines as disparate as genetics and astrophysics reflects its motto "hinc lucem et pocula sacra" (From here, light and sacred draughts) and it still endeavors to share such sacred draughts of knowledge with the rest of the world. ■

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## Cambridge - An 800 Year Old Fire Setter?

Jenny Molloy

During the course of researching and putting together contributions to this magazine, a plethora of ways in which Cambridge science is worthy of praise have emerged. From Nobel Laureates (pg. 8) to our undergraduate writers; all have tried to capture and convey the wide ranging impact of the University. We asked several academics to sum up what Cambridge science means to them, in an attempt to distill what makes it so special (pg. 6). Professor Ross Anderson (Professor of Security Engineering at the Computer Laboratory) made a suggestion that we felt could not go unexplained—"Cambridge is incomparably brilliant at destruction".

An unusual comment, one may think, but there is more. He went on to draw comparisons to the attempts of the US National Parks to eradicate forest fires in the 20<sup>th</sup> Century [1]. They realized that their efforts were damaging the ecosystem because Sequoia (redwood trees) actually require fire to reproduce [1]. Anderson's idea is that great universities have the same effect on human culture; and this 'creative destruction' changes our view of the world and our place within it.

There have been many pivotal points in modern thinking that Cambridge scholars have participated in. During the



17<sup>th</sup> century, Newton went on to render much of previous physics obsolete (pg. 12). He also provided a new, mechanistic view of the universe that was later extended to the biological world by Charles Darwin and his mechanism of evolution by natural selection (pg. 27). Along with the later discovery of DNA's structure by Cambridge researchers Watson & Crick (pg. 13), this eventually led to genome sequencing (pg. 13), genetic engineering (pg. 41), and other practical applications such as predicting pathogen evolution (pg. 32). All of these advances fundamentally changed the way in which we view the biological world, our origins and place within it (pg. 26), and our control over it.

Cambridge has been the destroyer of countless erroneous views and false scientific explanations, and this is where its greatest achievement lies. Much of scientific advancement is dependent on public opinion (pg. 42) and we hope this magazine will inspire you to explore the issues Cambridge has tackled over the past eight centuries. The last word should rightfully fall to Professor Anderson: "We've been setting cultural forest fires for the last 800 years, and I hope we'll be setting them for the next 800 too." The Triple Helix wholeheartedly agrees. ■

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*Professor Anderson will be publishing a full article on this topic on his website [<http://www.cl.cam.ac.uk/~rja14/>] in early 2009.*

### References:

[1] Parsons, DJ. Restoring Fire to Giant Sequoia Groves: What Have We Learned in

25 Years? In: Brown JK et al, editors. Proceedings: Symposium on Fire in Wilderness and Park Management: DIANE Publishing; 1996