

## Third Laureate Fundamental Research

**Project Title:** Characterising crop genomes  
**Researcher:** Prof. David Edwards  
**Country:** Australia  
**Field:** Agriculture & Natural Resources  
**Scientific Affiliation:** University of Queensland, Australia



### Abstract:

DNA sequencing technology has revolutionised medical research and crop improvement. I have established a unique capability in analysis of the latest DNA sequence data and applied this to sequence the genomes of wheat, canola and chickpea. Each of these crops is important for global food security. Building on this research, I have characterised genome structure and diversity in these crops and associate genome variation with heritable agronomic traits. Understanding the impact of domestication and breeding on genome variation will accelerate crop improvement through the development of new genomic breeding approaches.

### Biography:

David Edwards gained an Honours degree in agriculture from the University of Nottingham and PhD from the Department of Plant Sciences, University of Cambridge. He has held positions within academia (University of Adelaide, Australia; University of Cambridge, UK; and McGill University, Canada), government (Long Ashton Research Centre, UK, Department of Primary Industries, Victoria, Australia) and industry (ICI seeds, UK). David moved to The University of Queensland, Australia in 2007 as an Associate Professor and was promoted to Professor in 2012. He is a Principal Research Fellow and supports bioinformatics for the Australian Centre for Plant Functional Genomics. His research interests include applied agricultural biotechnology, the structure and expression of plant genomes, the discovery and application of molecular genetic markers and applied bioinformatics, with a focus on crop plants.

