

LAURA NEILL

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EDUCATION

PhD University of Nottingham 2004-2008

BA (Hons) Degree Oxford University 2000-2003
Pure & Applied Biology, Class 2 (i)

Tudor Grange Comprehensive School, Solihull
1994-1999

3 A Levels (1999) in Chemistry (A), Physics (B) & Biology (A); 9 GCSE level (1997)

RESEARCH EXPERIENCE

Postdoctoral Research Scientist, 2008-2011
Department of Plant Sciences, University of Oxford

Senior post-doctoral scientist investigating genes regulating differentiation, development and photosynthesis in flower development.

- Cloning and functional characterisation of novel genes regulating flower development
- Analysis of gene and protein expression during development in mutant and wild-type plants
- Identification and assessment of novel protein function through biochemical methods

Achievements:

- Fulfilment of research objectives within grant timelines
- Publishing of scientific papers in peer-reviewed journals to support the research programme
- Regular attendance and presenting of results at national and international meetings to publicise and promote the research

PhD University of Nottingham 2004-2008

Utilising molecular and biochemical techniques to investigate the role of pectin esterase iso-enzymes, active in cell wall-degradation, during tomato fruit ripening and softening.

- Characterisation of wild-type, mutant and transgenic plants, to assess gene function
- Identification and patenting of a gene involved in tomato fruit-softening
- Gaining expertise in a broad range of molecular and biochemical techniques
- A SERC CASE award in collaboration with ZENECA Plant Science
- Awarded Mabel Pannel Postgraduate Scholarship (1989) for outstanding progress in research

Key Research Skills

- Gene cloning and characterisation e.g. generation of gene libraries, screening, and sequencing of genes
- Analysis of gene expression e.g. microarray generation and analysis, southern northern blots *in situ* hybridisation
- Use of bioinformatics packages to assist in identification of putative gene function for novel genes e.g. transcription factors
- Assessment of protein function using biochemical methods e.g. hybrid systems, enzyme assays
- Generation and analysis of transgenic plants e.g. via ELISA, western blot

AWARDS

- NERC PhD Studentship Award (3yr Funding Grant).
- Nuffield Foundation Undergraduate Studentship Award (£5000).

TEACHING EXPERIENCE

- Delivering practical and tutorial sessions for courses in Molecular Biology and Developmental Biology at Oxford University (2008-2011) and Nottingham University (2004-2008) for groups of up to 30 students, 1-3 h at a time, requiring prior-assessment of curriculum, development of suitable resources in collaboration with other presenters, organisation and delivery of sessions and course work marking
- Demonstrating at Open University Summer School (Level 2 course, Plant Physiology, 2008) – assisting with the delivery of this pre-designed practical course, helping students to run their experiments and analyse the results
- Training junior lab members in practical techniques to ensure competence and personal safety (Oxford University, 2008-2011)

ADDITIONAL RELEVANT EXPERIENCE

Assistant Information Officer, ICI Agrochemicals 1998-1999

- Working as part of a team to provide a scientific and commercial information service to more than 200 scientists at an international research centre
- Assisting in the training of scientists in the use of information retrieval tools

Laboratory Assistant, British Gas plc 1994-1995

- Temporary gap year position, assisting with chemical sample analysis from research pipeline

RELEVANT SKILLS & COURSES

- Teaching Skills (Level 1) - introduction to teaching and lecturing methods (2 day course; Oxford University, 2009); Supervising DPhil students (Oxford University, 2010)
- UK GRAD School (Nottingham, 2007) – a 4 day residential course developing communication, team working, leadership, commercial awareness and problem solving skills through experiential activities with other post-graduate researchers
- Microsoft Office: daily use of Microsoft Word (thesis and publications), PowerPoint (conference presentations), Excel (data analysis); FrontPage (lab web design)

PROFESSIONAL MEMBERSHIP OF SOCIETIES

- International Society Plant Molecular Biology (from 2004)
- Biochemical Society (from 2004)

REFEREES

Prof David Thomas,
Dept. Plant Sciences, Oxford University,
South Parks Rd, Oxford. OX1 6AY

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david.thomas@plants.ox.ac.uk

Prof John Townsend,
Nottingham University,
Sutton Bonington Campus,
Loughborough, LE12 5RD

Tel. 01509 443675
john.townsend@notts.ac.uk

APPENDIX

PUBLICATIONS

Neill LN, Matthews S, Thomas J. 2011 *Greenfinger*, a novel transcriptional regulator of flower development. *Plant Cell*, 20:934-939

Neill LN, Matthews S, Thomas J. 2010 Mutations affecting flower development. *In SEB Symposium 62: Control of Plant Development: Genes & Signals* Eds. James G. and Freer, D., The Company of Biologists Ltd., Cambridge

Neill LN, Thomas JA. 2010 Molecular analysis of *greenfinger* *J Exp Bot* 55 Suppl pp.13

Neill LN, Thomas J. 2009 Tansley review # 96: Molecular genetics of flower development. *New Phytologist* 139:533-553

Randall R, Neill LN, Matthews S, Thomas J. 2011 *Swirl*, a mutation disrupting flower differentiation. *J Exp Bot* 57 Suppl pp. 27

Randall R, Neill LN, Matthews S, Thomas J. 2010 *Swirl*, a mutation disrupting flower differentiation. *Plant Cell* 20:920-928

Thomas J, Neill LN, Matthews S. 2010. Control of differentiation in flower development. *Proc Royal Soc London Ser B* 450:63-67

Thomas J, Neill LN. 2010 *Greenfinger* gene action in flower development. *J Cell Biochem Suppl* 31A pp.446

Dray B, Townsend J, Neill LN., Zeneca Ltd. 2011 DNA, DNA constructs, cells and plants derived therefrom. US6659121

Dray B, Townsend J, Neill LN., Imperial Chemical Industries, UK 2008 Cloning of pectinesterase cDNA of tomato for altering ripening properties of fruits. WO200313212

Graham, P, Neill L, Richards F, Townsend J. 2007 Use of antisense RNA technology to study pectin degradation in tomato fruit. *New Zealand J Hort Crop Sci* 30:119-124

Neill LN, Clive CR, Dray B, Graham P, Townsend J. 2009 Molecular characterisation of cDNA clones representing pectin esterase isoenzymes from tomato. *Plant Molecular Biology* 25: 313-318

Neill LN. 2008 Organisation and expression of pectin esterase isoenzymes in tomato. *PhD thesis, Nottingham University*

CONFERENCE PAPERS

Mutations affecting flower development. SEB Cell Symposium 2009, University of Durham, 24th - 26th August 2009 (INVITED).

Molecular characterisation of cDNA clones representing pectin esterase isoenzymes from tomato. Association of Applied Biologists, Royal Botanic Gardens of Edinburgh, 20th Oct 2008.