

**P021** Investigating the role of Exo1p in meiotic recombination  
**Victoria Cotton<sup>1</sup>, Eva Hoffmann<sup>2</sup>, John Meadows<sup>3</sup>  
and Rhona Borts<sup>1</sup>**

*<sup>1</sup>Department of Genetics, University of Leicester, Adrian Building, University Road, Leicester, LE1 7RH, <sup>2</sup>MRC Genome Damage and Stability Centre, University of Sussex, Falmer, BN1 9RQ, <sup>3</sup>Division of Yeast Genetics, National Institute for Medical Research, The Ridgeway, Mill Hill, London, NW7 1AA*

Exo1p is a member of the highly conserved Rad2p family, and has 5'-3' double-strand DNA exonuclease and flap endonuclease activities. This protein is involved in both mitotic mismatch repair (MMR) and meiotic recombination.

In meiosis, *exo1Δ* strains exhibit reduced levels of crossing over at all intervals studied, and an associated increase in levels of non-disjunction. Deletion of Exo1p also reduces the processing of double-strand breaks, and gene conversion indicating that it may also play a role in resection to leave 3' ssDNA ends ready for invasion.

In order to understand the function of Exo1p in meiosis we have taken advantage of structural and functional information obtained from related proteins. We have constructed and analysed *EXO1* mutants, which are either defective for both nuclease activities, or only one of the activities. By using these mutants to study meiotic recombination, it should be possible to determine if Exo1p is playing a catalytic or structural role, and also which of the catalytic activities, if any, are important for its meiotic function.