JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/Conference Title: The 2nd International Fission Yeast Conference.....

Travel Dates: March 25th – March 30th 2002.....

Location: Kyoto, Japan .....

Group Member(s): Jessica Worthington .....

Aims: To broaden my knowledge of current *S. pombe* research and therefore help me to finish my PhD successfully and choose the next step in my career carefully.....

OUTCOME (not less than 300 words):-

The 2nd International Fission Yeast Meeting, Kyoto, Japan, was a great success, both personally and for the fission yeast community as a whole.

In the last year, with the complete sequencing of the *S. pombe* genome and the Nobel Prize for Medicine and Physiology awarded to Paul Nurse, the pioneer of fission yeast research, *S. pombe* has become one of the most popular model organisms in Cell Cycle research and on a much wider scale in many areas of biological research. The meeting in Kyoto demonstrated just how varied and abundant *S. pombe* research has become.

Several hundred scientists attended the six-day conference. There were several key speakers, including Sir Paul Nurse, Tim Hunt and Tony Hunter who began the conference by talking about the vast body of *S. pombe* research to date and the key discoveries that have made *S. pombe* an invaluable tool in molecular research. The following eleven sessions, with over 100 oral presentations, covering a wide variety of experimental areas, were useful both technically and intellectually.

Some areas of research stood out: The cell cycle and checkpoint control has always been a key area in *S. pombe* research. New work on Cdc2-related control was still a well-covered area including Bela Novak, who made an interesting attempt at modelling the cell cycle electronically and Sergio Moreno, who looked at the translational control of Rum1. Another hot topic involved looking at the responses of the cell to DNA damage and the internal mechanisms of repair and recombination of DNA, for example Nick Rhind spoke on the role of Rad32 and Rad50 in recombination and the intra-S phase DNA damage checkpoint. Kinetochore structure and function was another particularly popular topic, there was a huge amount of interest in this area and new discoveries are being made at an incredible speed: Groups reported on the identification of numerous novel components of the kinetochore, for example Robin Allshire's and Mitsuhiro Yanagida's group.

The importance of understanding DNA replication (my particular field of interest) and the protein factors involved in coordinating the process has recently been highlighted by the new test for early diagnosis of colon cancer, which involves a simple screen for MCM (Mini Chromosome Maintenance) proteins. A substantial amount of the understanding of the mechanisms of DNA replication initiation and elongation has come as a result of *S. pombe* research. In this conference for example, Hisao Masukata (Osaka University, Japan) presented evidence on the molecular organisation of MCMs at replication origins using CHIP assays. There were also talks, which analysed the overall structure of replication forks and replication origins. Tom Kelly for example, looked at origin sequences and how ORC (Origin Recognition Complex) binds to these sites. Stuart MacNeill, my own supervisor, gave a talk on the architecture of polymerase ∂ and the mechanisms of binding of Pol3 to Cdc1 via two C terminal zinc finger motifs.

Presenting my poster was also very beneficial. It was very good experience of defending my work on an international scale, and also highlighted the fact that the work I do is significant! I am currently carrying out some preliminary experiments in collaboration with Tony Carr (University of Sussex) as a result of a discussion about my poster at the conference.