JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/Conference Title: 5th International Fission Yeast Conference

Travel Dates: 31st October – 5th November 2009

Location: Tokyo, Japan

Group Member(s): Lynda Groocock

Aims: To present a poster describing my PhD research entitled 'Cell cycle regulation of microtubule organiser Mto2'. Additional objectives were to attend talks describing current discoveries in the fission yeast field.

OUTCOME (not less than 300 words):-

The Fifth International Fission Yeast meeting was held at the National Olympics Memorial Youth Centre, Tokyo, Japan. This is a bi-annual meeting covering all aspects of the fission yeast scientific field. Due to the large range of topics that were discussed, the meeting was spread over five days. Each day consisted of morning, afternoon and evening sessions. These sessions were dedicated to a specific research topic, and talks were predominantly given by group leaders. After dinner there were poster sessions and workshops. Unlike the talks during the day which often described either a review of the most prominent aspects of their research or advancement of technological methodology, the workshops gave post-doctoral researchers the opportunity to discuss their own work or expand on the details of talks given by their PI. I found the workshops interesting, particularly 'Morphology and Microtubule', as it was more of the 'nitty-gritty' science that I could relate to on a day-to-day basis.

During the conference I was given the opportunity to present a poster describing my PhD research in the Sawin Lab. Part of my poster described the use of SILAC (Stable Isotope Labelling of Amino acids in Culture) to map mitotic phosphorylation sites of my protein. SILAC is a method recently developed for *S. pombe* in the Sawin lab and was the topic of Kens' talk. Consequently, I had a large amount of interest in these data. I enjoyed the chance to talk about my poster presentation with a number of PIs, whose work indirectly relates to my own, including e.g. Iain Hagan, Phong Tran and Fred Chang. They had some insightful comments that have since helped in the interpretation of many of my results. I was particularly encouraged by a number of students that came to speak to me who were not involved in the cytoskeleton field; this promoted me to speak to other researchers at the subsequent poster sessions to whom that I would not have normally approached.

There were a number of themes of research presented at this meeting. The most prominent of which was the role of molecular gradients in establishing and regulating a number of cellular processes. Work presented by Nobel Prize laureate Paul Nurse, Anne Paoletti, and Sophie Martin, all describe the way in which the cell uses gradients of Pom1 at the cell tips to regulate entry into mitosis in response to cell size. Anne Paoletti also related this to the localisation of Mid1 at the cell cortex which functions to control the position of the cortical actin ring to the site of cell division. Another interesting talk was given by Dannel McCollum, who showed that gradients of Etd1 at the cell tip are also used to establish the correct timing for activation of cell septation.

One of the leading topics at the Fourth International Fission Yeast meeting (Copenhagen, 2007) was the generation of a publically available gene deletion set. Consequently, there was much discussion in Tokyo on the emerging applications of this tool in recent research. Li Lin Du presented a phenotypic profile of the

deletion set in response to altered growth conditions and DNA damaging agents to screen for new genes involved in DNA repair pathways. Jackie Hayles presented work describing a screen which had used a cell morphology assay of the genome deletion set to identify new genes required for cell cycle progression.

The meeting was not without controversy. In an area of particular relevance to my field, consecutive talks were given that described evidence to support one of the two models of cortical actin ring formation – leading cable model was presented by Issei Mabuchi and the search capture and release model was presented by Jian-Qui Wu. Both researchers presented very fine arguments, perhaps by the Sixth IFYM further work on this process will make the picture more clearer.

Individual talks that I found interesting included the presentation by Julie Cooper who described a novel ALT-independent mechanism of telomere maintenance in the absence of telomerase.

Unfortunately, as the site of the conference was a youth activity centre there were no bars; therefore following conclusion of the days sessions at around 9pm, those wanting to relax were required to find local restaurants and bars which were mostly too small to fit large groups. However, as I was the only student from my lab in attendance and one of only two from Edinburgh, I found it easy to integrate and socialise with other small groups. This was an ideal environment for me to informally discuss data and network with other scientists without the pressure of large groups and the presence of PIs. The evening social gatherings also allowed me to probe a number of researchers about potential post-doctoral opportunities in the area of cell cycle and DNA repair. As a result of meeting at this conference I am following up with a number group leaders about exciting research positions to start shortly after completing my studies at the University of Edinburgh.

I would like to thank the Jamie Rennie Bequest for their financial support. This meeting has been a great success and has proved to be a pivotal event in both my PhD research and the initiation of my post-doctoral studies.