

JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/Conference Title: NIBB 4th International Practical Course

Travel Dates: June 28th – July 4th 2009

Location: Okazaki, Japan

Group Member(s):

Aims: To learn basic techniques in the use of *Physcomitrella* as a model organism of plant development

OUTCOME (not less than 300 words):-

Physcomitrella is a member of the moss family which has recently been sequenced and, as a lower plant, provides an ideal system to investigate the evolution of different gene families.

NIBB has long been involved in the use of *Physcomitrella* and has run three previous courses on the use of *Physcomitrella patens*. The course and associated workshops are designed to teach researchers how to use the moss for their own experimental systems focussing on both basic and advanced laboratory techniques with workshops covering recent progress achieved using the moss.

The course was limited to 20 participants ranging from PhD students with little experience of working with *Physcomitrella* (including myself) to Group Leaders with several years' experience in the field. Approximately half the participants were from various labs in Japan, with the other half coming from across Europe, the Middle and the Far East.

The lab techniques started basic techniques including cultivation and observation of developmental processes at the cellular level. The sessions then went on to cover DNA extraction, moss transformation and various forms of imaging. The participants were all given plenty of opportunity to practice the different techniques. For me, it was terrific to be able to carry out transformations and within a few days to observe colonies of moss regenerating.

In addition to the practical workshops there was a series of lectures and seminars. The lectures covered recent developments in next generation sequencing and genetic techniques as well as bioinformatics and techniques for bio-imaging. In addition several of the senior researchers on the course gave seminars on their current work. This all lead to ample opportunities to talk, both formally and informally, to many experts in the field and to learn from their experience how to work with *Physcomitrella*.

Although the course programme went on into the evenings on most days there were also some opportunities to explore Japanese culture. The group, joined by our hosts, explored different restaurants each evening culminating in our final dinner at a very traditional Japanese restaurant where we ate seated on the floor and took part in a Japanese Tea ceremony. In addition, our one afternoon free was spend exploring the city of Okazaki, with a tour of the Miso factory and a walking tour around the Castle and other city sights organized by our hosts.

In all, the course was a fantastic opportunity to learn about the use of *Physcomitrella* and recent advances in the techniques together with the chance to network with experts in the field. I have already put into use some of what I learned during the week and have forged links with several researchers which will, hopefully be of use to both me and the Institute for Molecular Plant Sciences in the coming years. This, plus the brief taste of Japanese Culture made for an unforgettable week.