# Report for an Award received from the James Rennie Bequest

Submitted to Michele Bain

by

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# Conference Title

The *Neurospora* 2002 meeting at Asilomar, USA.

# Conference Dates

March 14th 2002 to March 17th 2002.

# Location

Asilomar, California, USA.

# Group Members

Alex Zelter.

# Aims

To meet and talk with other people working, as I do, with *Neurospora*, and to present my work in the form of a poster to other people working in the same field.

# Outcome

The *Neurospora* meeting at Asilomar was a great success. I had the opportunity to meet and talk with many of the people who's articles I have been reading over the last three years. As the number of participants was quite small (about 100 people) I was able to talk to and get to know many of the people there.

The first session of the meeting was focused on the current status of the *Neurospora* genome sequencing and analysis e®ort. We learned that the full sequence will be finished and available this summer, and that manual annotation of the sequence currency available is already progressing. I was able to talk to the people at the Whitehead Institute who are leading the current sequencing e®ort and question them on both the nature of the database being compiled (written in perl, a programming language which I use myself) and the ways in which this database might be used to discover $Ca^{2+}$ signalling proteins present in

*Neurospora*. As a result of these discussions my supervisor (Dr. Nick Read) and I will now be responsible for blast searching the *Neurospora* genome database and analysing the $Ca^{2+}$ signalling proteins present. As a consequence of this, I should be an author on the paper on the *Neurospora* genome to be published in Nature or Science later this year.

The second session was devoted to signalling and development. We were told about various aspects of the circadian clock in *Neurospora*, how this clock could be altered by light treatments and how several light insensitive mutants had been found and analysed. The mechanisms by which the proteins encoded by the genes discovered were also discussed. In a separate talk we were told about the role of G-proteins as receptors. This lecture was a very good revision of basic signalling in eukaryotic cells and particularly interesting as all the experimental data was based upon *Neurospora*.

The third session concentrated on gene regulation and gene silencing. The diverse and powerful tools that *Neurospora* has available to silence genes, and the circumstances under which these tools are employed became apparent in the next few lectures.

The fourth session was entitled organelle biogenesis and metabolic regulation and included a lecture by Holger Prokish, currently working in Germany, who developed one of the mutants, *T3* which contains an inducible calcineurin antisense cassette, that I am currently working with. I had some interesting conversations with Dr. Prokish and it was a pleasure to meet the person who created a mutant that I have spent so much time working with.

The fifth and final session of this meeting was perhaps the most interesting to me. It's subject was cell biology and morphogenesis and included a very interesting lecture by Prof. Gri±ths, who has been focused on the role of $Ca^{2+}$ in hyphal branching and morphogenesis very recently and has published articles on the very strains that I am currently working with. His lab has taken a di®erent approach to tackling the problem of analysing intracellular $Ca^{2+}$ transients than our lab. Prof. Gri±ths's lab has used patch clamping in combination with $Ca^{2+}$-sensitive fluorescent dyes and confocal microscopy where as our lab has taken an aequorin-based approach to the problem. Prof. Gri±ths presented some interesting data on several morphological mutants his lab is currently studying and I also had the chance to meet and talk with him in privet. The final lecture was given by Barry Bowman and talked about the vacuolar ATPase and its workings. This is the first time I have had the actual physical workings of a protein ion pump explained to me and proved a most interesting lecture. Poster sessions were each evening and provided an informal atmosphere with scientific focal points to meet and talk with all the participants of the meeting. There was plenty of interest in the work that I presented at these sessions and thankfully I still had time to look at all the other posters and talk to the people who were most interesting to me.

I am extremely happy to have had the opportunity to attend this meeting, which was the first meeting I have attended where every other participant worked on the same organism as I do. The meeting provided me with a great chance to meet, talk to and make friends with other people working in my field as well as giving me several new ideas relating to my own work. I am very grateful indeed to the James Rennie Bequest for providing me with partial funding for this meeting and cannot express strongly enough how important and useful both for my research and my future scientific career this meeting was for me. Thank you.