REPORT TO THE JAMES RENNIE BEQUEST COMMITTEE

Immunophilins: Cellular Functions And Immunosuppressive Drug Targets, February 24 – 29, 2000, Keystone, Colorado

Jacqueline Dornan, June 2000

In November 1999 I was very pleased to hear that I had been awarded £350 towards my travel expenses to attend the above meeting. I was able to secure additional funding from two other sources, The British Society for Immunology (£400) and Keystone Symposia, (up to $1000), covering registration and accommodation expenses.

The meeting was fairly small with 32 invited speakers and approximately 70 additional participants. Attendees covered the entire spectrum of scientific experience, from established leaders in the field of Immunophilin biology to post-graduate students early in their careers. Due to the fairly small number of participants, this meeting provided an excellent opportunity to informally meet and talk with the majority of the "big names" in the field and also with members of their research groups.

The conference began on the evening of 24 February, 2000, with The Keynote Address: Prolyl Isomerases and Isomer Specific Functions: Their Past and Their Future, given by Professor Gunter Fischer, a pioneer in the field of Immunophilin biology. Professor Fischer reviewed the progress made in understanding this class of enzyme since their discovery in 1984 and also described the roles they play in a number of important processes including protein folding, receptor recognition and protein transport. Professor Fischer illustrated the dynamic and diverse nature of the field by drawing the meetings attention to the huge rise in the number of peer reviewed publications in the field since the early 1990's, originating from laboratories covering a number of disciplines.

The remainder of the Conference adhered to the following format, presentations from invited speakers in the morning, a poster session in the afternoon and more presentations in the evening.

The meeting continued on 25 February with "Cyclophilin and FKBP functions" as the main topic. This was particularly topical, as the functions of many immunophilins are not yet known; any additional information is therefore very welcome. This area of research is also complimentary to the to the one in which I am involved, elucidating the structure of a number of these proteins. Of particular relevance was a presentation on "The Role of TPR proteins in Hsp 90 Function" by Richard Gaber (Department of Biochemistry, Northwestern University) and "The Biological

Function of Mammalian FKBP12" by Weinian Shou, (Department of Paediatrics, Indiana University School of Medicine).

The meeting continued on 26 February with Parvulin and Calcineurin Functions as the main topic. This was also very relevant to my project, as I have attempted to crystallise a member of the parvulin family of proteins, as part of an ongoing collaboration between the labs of Professor Tropschug (University of Freiburg, Germany) and my supervisor, Professor Malcolm Walkinshaw.

On 27 February, the topics to be covered included Structures of Prolyl Isomerases with Ligands and Targets. This provided interesting insights into the work being carried out in a number of other labs primarily interested in solving the structures of immunophilin proteins. The presentations on the "Structures of Free and Complexed FKBP's and "Structural and Biochemical Studies of HIV-1 CA/Cyclophilin Interaction", by Jon Clardy (Cornell) and Wesley Sundquist (University of Utah) respectively were of particular interest. I presented a poster in this session, describing the results of some of the work I have been involved in as part of my PhD project. The poster presented to the wider scientific community the first reported X-ray structure of a two-domain immunophilin (Cyclophilin 40). There was a great deal of interest both in the structure and in the experiments planned to further characterise the interactions with partner proteins, particularly Hsp 90. This poster session in particular was a very valuable opportunity for me to meet top scientists in the field on a one to one basis, helping me place the results I have obtained in a wider context. A number of people were also very interested in hearing about work in progress in the lab. This informal meeting was an ideal format to present such data, and a number of helpful discussions took place throughout the poster session, providing encouragement to continue.

On 28 February, 2000, the topics were "Therapeutic uses and Biological Functions of Immunophilins" and "TOR Functions". This session was also of a very high standard, providing some very interesting insights into possible therapeutic uses of these proteins as well as introducing the TOR proteins, an area with which I was not at all familiar.

The conference was also a very valuable opportunity for me to meet up with a number of groups with which the lab is actively collaborating, including those from Western Australia, Germany, France and even Glasgow. It provided an excellent forum for me to present my work in a friendly and informal environment, to a very knowledgeable audience. I feel that this experience has helped me gain confidence in my ability to present my work to others in the field, and has allowed me to make contact with some of the most active groups in the field.

I would like to thank the Committee of The James Rennie Bequest for their financial support, that allowed me to attend this meeting.