# Society of Crystallographers in Australia and New Zealand
# SCANZ

**Newsletters**

## No 51, March 02

**The SCANZ homepage is located at http://www.sca.asn.au**

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## FROM THE PRESIDENT

Another few months have passed, and normally you might think that there would be little to report in such a short time, certainly little of interest to the SCANZ community, but that is certainly not the case.

We are now well past the election that was looming when I last wrote, and have new Ministers for Education, Science & Training (Dr Brendan Nelson) and Science (Mr Peter McGauran), and a new department - DEST. I suspect all are aware of Dr Nelson's announcement on funding for research priorities. This rather dramatic change in research focus will result in 33% of ARC funding in 2003 ($170 million) being awarded to four priority research areas. Of these, two would seem to be of enormous relevance to crystallographers: Nano-materials & Bio-materials (which encompasses areas of materials science), and Photon Science & Technology (which specifically includes materials characterisation by synchrotron and other X-ray sources). Although the timing was poor for ARC Discovery-Projects grants, Linkage-Infrastructure proposals have a later deadline.

Last December I attended the Single Crystal Diffraction Workshop held at Lucas Heights. This is one of seven such workshops held so far to define instrumentation for the Replacement Reactor (details at http://www.ansto.gov.au/ansto/neut/workshop.html).

Although I am not an experimentalist, I have a strong interest in the sorts of results that are obtainable from high-resolution neutron diffraction experiments on single crystals, and found the workshop thoroughly worthwhile. It is clear that much effort is going into planning for instrumentation that best matches the needs of the Australian community, and it was also evident that the users' needs are not always complementary to one another.

Progress is being made towards the Australian synchrotron project at Monash University. SCANZ members who wish to be kept informed about progress should be aware that there is an e-mail newsletter available. To subscribe, send an e-mail with SUBSCRIBE Synchrotron in the Subject line to synchrotron@mpv.vic.gov.au.

Syd Hall is providing details elsewhere in this *Newsletter* of plans being made for crystallography conferences in Broome in August of 2003. I urge you all to mark your diaries well in advance, and plan to attend what promises to be a feast of crystallography in an exotic venue. And don't forget the IUCr Congress and General Assembly in Geneva in August this year. Funding is available for SCANZ student members to attend - see elsewhere in the *Newsletter*.

Finally, I should mention my holiday reading. I picked up a copy of "Rosalind Franklin & DNA" (Anne Sayre, WW Norton & Co, NY, 1975) and became quite engrossed in it. I had always heard stories about Rosalind Franklin's contribution to solving the structure of DNA and her omission from the Nobel Prize. The truth is far more revealing, and Anne Sayre's subtitle to her book - A vivid view of what it is like to be a gifted woman in an especially male profession - says it all really. Following that, I had to read James Watson's now famous book "The Double Helix". To those of you who have not read these, I would very strongly recommend them to you. Between them they provide some remarkable insight into the personalities behind the discovery and how the structure was eventually derived.

*Mark Spackman*

## CRYSTAL FRAGMENTS

• Trevor Hambley (School of Chemistry, U. Syd.) has been promoted to Professor.

• Syd Hall has been appointed to head the School of Biomedical and Chemical Sciences in the Faculty of Life and Physical Sciences at UWA. The new School brings together the Departments of Biochemistry and Molecular Biology, Chemistry, Microbiology, and Physiology as well as the Crystallography Centre.

• Matthew Wilce (UWA) has been promoted to Assoc. Professor and is now the Director of the Crystallography Centre.

## SUBSCRIPTIONS

The Treasurer wishes to remind members that annual membership dues for 2002 are to be paid by December 31, 2002. A statement was included in the previous issue of the *Newsletter*. The amount payable is $25 for a full member and $7 for a student member, with these discounted to $20 and $5 respectively if payment is made by April 1, 2002.

## Report from the AsCA Council

The AsCA council met in Bangalore, India on 19 November 2001 in association with AsCA'01, the Fourth Meeting of the Asian Crystallographic Association. Chris Howard (AsCA councillor) and Mitchell Guss represented Australia. John White, the second AsCA councillor, was not able to be present. Syd Hall and Jenny Martin were also present to lead Australia's bid to host the next AsCA meeting.

A number of important issues were raised at the meeting that directly and indirectly affect Australia and our participation in AsCA.

1. Following encouragement from the IUCr to increase the number of crystallographic meetings in the Asian region, (in addition to the normal AsCA meetings held every three years), it was proposed that AsCA meetings also be held in conjunction with meetings of SCANZ and the Crystallographic Society of Japan. This would provide AsCA members with the opportunity to meet twice every three years. Subsequent discussion broadened the original proposal to include other national crystallographic meetings where appropriate. Most importantly, the council endorsed a specific proposal for a joint AsCA/SCANZ sponsored meeting to be held in Broome, Western Australia in August 2003.

2. It was agreed to endorse a proposal to elect AsCA office bearers at AsCA Council meetings held in conjunction with AsCA scientific meetings rather than at Congresses of the IUCr as at present. The current arrangement was put in place before any AsCA scientific meetings had been held. It was noted that minor changes to the constitution might be required to effect this process.

3. The President proposed that Professor Yu Wang (Taiwan) be nominated for the Presidency at the next Council meeting. There was also a discussion for the need to have continuity in the Executive. This could be achieved by having the Vice President automatically assume the Presidency after their 3-year term and that the position of Past President be added to the Executive. Subsequent discussion of these proposals drew attention to the long periods on the Executive the 3-year terms of office would imply.

4. It was proposed that the full AsCA meeting, AsCA'04, be held in Hong Kong. Following questions from the Hong Kong delegate, it was agreed that the meeting could be held any time in the second half of the calendar year 2004. The Hong Kong delegates were asked to submit a specific proposal with dates and a venue to the next Council meeting. A final decision on the timing and venue of AsCA'04 will be made in Geneva in August.

*Mitchell Guss*

*Chris Howard*

## CRYSTAL-23

An Organising Committee has been formed for the three meetings: AsCA'03/Crystal-23 (Aug 10-13), the Structural Biology Workshop (Aug 14-15) and the Sagamore conference (Aug 14-19). The members are Syd Hall (Chair), Mitchell Guss, Trevor Hambley, Brian O'Connor, Mark Spackman, Brian Skelton, Allan White and Matthew Wilce.

The Committee met on January 29 to decide on the main organisational details of the meetings and on their budgets. The registration fees for each meeting has been set but will not be posted on the conference website (www.crystal.uwa.edu.au/CrystalsDownUnder/) until May 1 to allow for adjustments if professional conference organisers are employed for some tasks. In keeping with the past traditions and practices at these meetings, the costs of the social events, coffees and lunches will be covered by the registration and sponsorship income. Posters and handouts are being prepared for distribution at conferences this year, and in particular for the Geneva IUCr Congress.

The abstract submissions deadline, scholarship applications deadline and late registration fee date has been fixed as March 15, 2003. This will also be the day that The Cable Beach Club releases half of the accommodation reserved for the meetings. Setting a common deadline is intended

to encourage participants to book their accommodation and travel well in advance. Because the lecture venue has a maximum capacity of 300, the Committee decided that it might limit registrations to this meeting if necessary. This is yet another reason for SCANZ members to book early and avoid any disappointment.

The Programme Committee for the AsCA'03/Crystal-23 meeting will be Mitchell Guss (U. Sydney, Chair), Ted Baker (U. Auckland), Jenny Martin (U. Q'land), Yukio Noda (Tohoku U.), Brian O'Connor (Curtin), Yuji Ohashi (Tokyo Inst. Tech.), Mark Spackman (UNE), M. Vijayan (Indian Inst. Science), Yu Wang (Nat. Taiwan U.), Allan White (UWA) and Ian Williams (Hong Kong U.).

Limited travel options to and from Broome was recognised as the largest organisational risk for the meetings. Every effort will be made to maximise travel options at this period, and to diffuse peak demands on air services at the start and end of the meetings. Discussions are already underway with the Flight Centre travel agency about special discount fares for participants. The possibility of a charter flight from Singapore/KL will also be investigated. This would need to be arranged by Nov/Dec to enable overseas participants to have that choice. Because of the uniqueness of the region participants will encouraged to bring their family and do some sightseeing before or after the meetings. Pre and post meeting safaris into the Kimberley region will help reduce the peak travel congestion around Aug 10 and Aug 16 and enquiries have already been made with tour companies about this.

*Syd Hall*

## REPORTS FROM BANGALORE

### 1

I would like to firstly thank SCANZ for awarding me a Maslen 1987 Scholarship. It presented me with both the opportunity to attend AsCA'01, my first conference as a PhD student, and the opportunity to visit India.

I had no idea what to expect getting off the plane in Bangalore. After all, how does one stereotype India? Trevor, who was initially keen for me to go to the conference in August, expressed concerns mid-October that perhaps the University would no longer be willing to insure me to go to India. A friendly e-mail from Chris Howard and a phone call to the insurance office at the University of Sydney dispelled at least some of these fears.

I was, however, still nervous getting off the plane in Bangalore. I am not certain if my nerves were due to the fact that I was just about to attend my first international conference or because I was acutely aware that I was both the only non-Indian and the only female on the flight. Either way, all my nerves quickly dissipated upon getting off the plane, where I was met by two of Professor Murthy's students who organised my transport to the hotel. It was a friendly service our Indian hosts were to extend the entire length of the conference.

The Tata Institute, where the conference was held, could only be described as an island in the centre of a large city. It had a beautiful serene tree-lined feel to it, in some ways appearing a little like the University of Sydney would if you subtracted the really ugly buildings, for example Chemistry, and added a few acres of bush and some lakes. I was lucky enough to get a tour of some of the laboratories there, and they were at least as well, if not better equipped than ours. They definitely had more computers per student than we do. I was also told that the Institute is considered India's best science facility and that only one in a hundred students who apply get in. The only curious thing I came across during my visit was the unusual custom of taking ones shoes off before entering the lab!

I learnt a lot from the conference, from basic crystallography (Henk Schenk's lecture on Direct Methods) to how much PhD students in India get paid. (About $A300 per month). I was also very impressed with Jenny Martin's talk on the Adrenaline Synthesising Enzyme. Although this was far removed from my own research, it was refreshing and educational to see such a dynamic and interesting lecture. In addition to the lectures, the commercial displays at the conference gave me the opportunity to look at some new molecular mechanics software.

For me the highlight of the conference was being able to meet both students and academics from all over Asia; there were PhD students from Thailand, Vietnam, Japan, China, India, Bangladesh, Singapore and Australia (that I can remember). Our experiences as students are both very similar and very different. It is interesting to see the increasing role Asian countries are playing in both the development of crystallography and other areas of science and technology.

Finally, it was a great honour to attend AsCA'01 and I would like to thank my supervisors Professor Trevor Hambley and Dr David Hibbs for suggesting that I attend the conference as part of my PhD.

*Rosalie Hocking*

*University of Sydney*

### 2

With over 5.2 million inhabitants and each owning a two-stroke moped Bangalore lived up to India's reputation as a 'land of colour, sound, smell and culture'. Bangalore was also the venue for the fourth Asian Crystallographic Association meeting. Set in the beautiful sub-tropical gardens of the Indian Institute of Science, the conference hall hosted symposia on a variety of crystallographic topics from biological/protein work to charge density, aperiodic structures, instrumentation and more.

With many delegates expressing concern about travelling to India following the September 11 terrorism, the postponement of the conference seemed inevitable. Happily, the organising committee were not moved by these concerns and their assurances were enough to sway the largest ever assembly at an AsCA meeting. Notably, there was a large turn out from Australian and New Zealand members. In the biological field there were representatives from Ted Baker's Auckland group, Bostjan Kobe and Jenny Martin's Queensland groups, Mitchell Guss from Sydney and from the west, the Wilce group.

The meeting did not begin the first day I boarded a kerosene powered, three-wheeled auto-rickshaw and joined the engulfing fumes and noise

of the 5.2 million mopeds, motorbikes, push bikes, pedestrians and semi-trailers that risk all on Bangalore's streets. Under instructions from the Tata Institute, my driver manoeuvred his way through the clogged roads in a process that was best described as eco-location. It seems that most English words can be loosely translated to mean 'shopping' so the route from hotel to conference venue was punctuated by stops at various craft and souvenir shops. With increasing frustration we arrived at our chosen destination only to discover the conference had not yet started.

This process was repeated the next day. On the third attempt, after being re-acquainted with the local vendors, representatives of the Wilce group arrived for the official welcome. The meeting began with much felicitation with past greats of Indian crystallography welcoming each other and the delegates. With the various sessions held concurrently, I spent the majority of my time listening to protein crystal work. The Australian and New Zealand speakers, with the benefit of being on the easier side of the language barrier, spoke exceptionally. A particular highlight was Jenny Martin's plenary lecture and Matthew Wilces 'insights on the rotation stalk of ATP synthase.

The protein sessions were in the largest conference venue, which was filled with the help of prominent IUCr members. It was a particular thrill to meet leaders in the field such as Professors Eleanor and Guy Dodson and Janet Thornton. Janet and Eleanor later hosted an impromptu workshop on data acquisition, refinement and structure validation. From a student's perspective I found this an excellent inclusion to the programme. I think the general feeling in the room was similar with healthy discussion and many taking the opportunity to interrogate Eleanor on aspects of the CCP4 program suite.

I would like to thank the AsCA'01 organising committee for giving me my first opportunity to speak at a major conference. Daunting though it was, I learnt a lot from the experience. Not the least of which was timing. After previously boasting that I could give my talk in under four minutes, the opportunity arose to extend my 15-minute allocated time to 45 minutes (two speakers having succumbed to 'Bangalore belly'). Come the 40-minute mark I think the chair of the session may have rethought that decision. Nevertheless, the experience was invaluable.

I am very grateful to SCANZ for granting me a 'Ted Maslen 1987 Travel Scholarship' to attend AsCA'01. It was a thoroughly entertaining and rewarding experience that I am not likely to forget. Looking forward to Broome AsCA'03.

*Julian Vivian, UWA*

## Call for applications for the 'E.N. (Ted) Maslen 1987 Studentships and Scholarships'

The Council of the Society of Crystallographers in Australia and New Zealand is calling for applications from postgraduate students of crystallography for the 'E.N. (Ted) Maslen 1987 Studentships and Scholarships' to fund attendance at the XIX International Union of Crystallography Congress and General Assembly to be held in Geneva, Switzerland, 6-15 August 2002.

Details of the Congress are available on the Web at the address: http://www.kenes.com/iucr/.

SCANZ student members from both Australia and New Zealand are invited to apply for the Scholarships, which will make a substantial contribution to the international travelling costs. Selections will be based upon merit, geographic distribution and previous and/or future opportunities of the candidates. As the SCANZ Council regards these awards as an important means of introducing young crystallographers to the international scientific community, students awarded Scholarships will be expected to make a presentation of their work at the meeting.

The method of application is straightforward, but a strict deadline will apply.

Method of Application

Postgraduate students applying for a 'Maslen 1987 Scholarship' should forward to the Secretary the following:

•An abstract of the presentation sent, or to be sent, to the Congress Secretariat.

A covering letter from the applicant's supervisor providing a brief reference and verifying that the applicant is a bona fide student at the time of the meeting.

•An indication of what other funding may be available from the applicant's own institution.

•An indication as to whether the applicant has previously received funding from the SCA or SCANZ.

Applications must reach the following address by April 5, 2002:

Dr Brendan Kennedy,

SCANZ Secretary,

School of Chemistry, F11,

University of Sydney,

NSW 2006.

Alternatively, applications may be sent by FAX 02-9351-3329.