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ASMR NEWSLETTER JULY 1997

President's Report

POLITICAL ISSUES.

1. Federal Budget Outcome.

As many of you are aware, the outcome for Federal Government peer-reviewed funding mechanisms (NHMRC and ARC) was a small increase in this budget round, again within a framework of overall fiscal restraint. Briefly NHMRC received an additional $10million over seven years to fund fifteen new post-doctoral fellowships aimed at bringing young researchers working overseas back home to Australia. ARC funds overall also increased by 7%.

However, as outlined in my last report, these small increases are within an overall climate of decline in research funding, with the effects of policy decisions taken in the '96 budget now being felt in the labs and offices around the country. Added to this, the forward projections for the NHMRC and ARC schemes show that current funding levels have not been written into the base funding for these organisations and are set to decline. For example NHMRC research funding is projected to decline by 25% over the next three years. The CRC component of the research budget is also declining, $10million over two years. Add to that, the Government's unwillingness to accept arguments for supplementation of grants for enterprise bargained salary adjustments, the pressure on the research system is near breaking point. Our discussions with the Federal Minister for Health immediately post-budget indicate that the Department is aware of the pressure and of the concerns of the research community. The message we are getting from Government is that new money must be linked to strong outcome arguments and that's simply to maintain

current levels.

ASMR's position is as follows.

> (i) Quality health and medical research projects are going unfunded in this country.
> (ii) Governments cannot back away from their obligations to maintain an effective research base.
> (iii)Peer review mechanisms are a crucial component of any funding mix and a direct and effective way of ensuring funds get to where they should be:- in the hands of the best researchers.
> (iv) current (1997/98) levels of peer-reviewed support for health and medical research are inadequate. Maintenance of the status quo is insufficient to provide stability in the health and medical research sector.

Based on all available polling data, the view that health and medical research is underresourced and that Governments are primarily responsible for providing these resources reflect the views of the voting public. It is simply untenable that health and medical research can survive, let alone prosper, in an environment of short term uncertainty. It is simply untenable that that the research capacity of this country can be competently managed for the future in an environment where its resource base is constantly under threat. The research community certainly should rigourously justify what it does with public funds. This is well understood and has been done spectacularly in the past. It is beyond dispute that investment in Health R&D has provided and continues to provide positive benefit to Australia! There is a clear need to settle the argument about how much Governments should spend on Health and Medical Research so we can all focus on the main game:- Quality Research for Quality Health Outcomes.

So what will ASMR do? We, together with our affiliates, will come to a consensus position on an adequate funding position for Government-funded peer-reviewed Health and Medical Research. This will be formalised at an ASMR affiliates/stakeholders meeting later in the year. The success of such a plan is dependent on the quality of the input we receive from our stakeholders and the will of our own community to make a strong contribution and provide strong support in the formulation of this position. So, let's have it. Let ASMR know your views. We need considered and constructive views in writing.

This approach occurs within the context of ASMR's long term efforts to raise awareness of the importance of research in the Community and to actively seek the assistance of all stakeholders in our research. In that respect ASMR welcomes our most recent Associate Members, the Community Health and Anti-Tuberculosis Association and the Australian Cystic Fibrosis Association. We look forward to developing strong and mutually beneficial relationships with you.

2. NSW Cancer Council.

The dispute between the research community and the NSW Cancer Council has been successfully resolved. You may recall ASMR passed resolutions at our last Board meeting to:

> (i) not endorse the actions of the NSW Cancer Council until such time as the issues raised in by ASMR with respect to the Baume report are adequately addressed.

(ii) Work to improve the representation of active cancer researhers on the Board.

A redrafted NSW Cancer Council Act has passed with bipartisan support through the NSW State Parliament. This Act ensures Health and Medical research representation on the board of the Council and includes a nominee from ASMR, a nominee from our affiliate organisation, the Clinical Oncological Society of Australia (COSA) and three nominees from the university sector. An interim research committee has been appointed to ensure the current grant round can progress unimpeded. ASMR has a seat on this committee. The structure and composition of the research committee after this current grant round is a matter for the new board. ASMR will shortly be calling for nominations to the Cancer Council Board and I ask all interested members to seriously consider suitable nominees. To those members who withdrew their support from the NSW Cancer Council grant review process, ASMR thanks you for your support and recommends that you reinstate your reviewer status.

3. Other Political Issues.

Our recent annual post-budget visit to Canberra allowed us to raise several issues with key people on behalf of the Society and our affiliates. Meetings were held with the Minister for Health, Dr Wooldridge, the Office of the Minister for Employment, Education, Training and Youth Affairs, Senator Vanstone, The shadow Minister for Health Mr Michael Lee, the office of the Democrats spokesperson on Health, Senator Meg Lees, Senator Brian Harradine, the Chief Scientist Dr John Stocker and Mr Andrew Podger, Department of Health and Community Services. In addition to the budget outcomes and forward projections issues, the issue of ASMR's opposition to potential political intervention in the research process was raised with particular reference to reproductive biology. Productive discussions were also held on the issue of the need for greater transparency in the process of funds distribution, particularly with respect to infrastructure components of peer-reviewed grants. The issue of hospital-based health and medical research was also raised within the context of the need to find adequate mechanisms to ensure a strong research ethic within hospital settings.

PUBLIC AFFAIRS.

Our major annual public awareness campaign "Medical Research Week" continues to grow in size and impact in all states. Thank you to all those members who put considerable effort into making the events happen for 1997 These people are a small and committed group of active researchers working on behalf of all of us in times when such commitment could be seen in some quarters as not directly relevant to their research output. The success of Medical Research Week is all yours. ASMR plans to more closely coordinate Medical Research Week on a national basis with a view towards providing greater and more-widely-distributed resources towards our Public Affairs efforts. We are hopeful that this will allow the organisation to attract major sponsorship which can be effectively utilised to further promote Australian health and medical research. Plans are underway for a National Lecture Tour by Prof. Peter Doherty, Nobel Laureate, who has generously agreed to speak in every state capital next year during Medical Research Week. This tour will provide an opportunity for the general public to hear first hand about research from our most recent high profile figure.

ELECTIONS TO THE BOARD OF DIRECTORS.

This time in the Society's history is, in my view, one of the defining moments in terms of the role that ASMR will play in representing the views and aspirations of Health and Medical researchers in the future. A process of reform, put in place several years ago, has broadened the sphere of influence of ASMR and its stakeholder base to the point where the Society is now recognised as an important voice in issues relating to research policy. This process is far from complete and will require dedicated, imaginative and determined active researchers to realise ASMR's full potential, particularly in the area of public affairs and research policy. With the change in age-limit for Directors to 45 in the year of nomination, age is no longer as great an impediment as has been perceived by some in the past. This year in particular has shown why a strong ASMR is essential for the health of medical research. I urge all those eligible and motivated to consider nominating for election. Director's terms are now two years so your term will give you time to get things done.

Thanks to those who have provided input and advice on all the issues faced by ASMR since the last newsletter.

Kieran Scott Ph.D.

President.

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Why scientists should communicate

In the May issue of Microbiology Australia, John Finlay-Jones outlined some of the challenges facing scientists in the media. He used the recent rash of food-borne pathogens to illustrate the difficulties of gaining accurate coverage for complex issues. The media can be tricky, but favourable media coverage encourages a range of positive outcomes: create jobs, improve public health, increase funding for research programs, change policy, and satisfy public curiosity. And as most of the funding for research in Australia is provided from the public purse, scientists have a duty of accountability to explain how public funds are being spent and what the benefits are. The future for groups, which depend on public funding and do not have community support, is bleak. Microbiologists make a major contribution to the wealth and health of society, but is this contribution properly recognised? Do people understand what microbiologists do? The industries they sustain? Do they accept the need for continuing funding of microbiological research?

Julian Cribb, former science writer for The Australian newspaper, claimed that scientists had let Australia down because they have not told the people what they are doing: "Scientists have been so wrapped up in their work and their discoveries, they have forgotten to explain them to the society that pays their miserable wages. They have omitted to put their work in language that ordinary people can understand. They have failed to explain its relevance to our daily lives - our health, wealth and well being as a nation - and how to put it into practice in our industries." He was a great advocate of using the media as a tool in building support, a proposition that scientists sometimes find difficult. Scientists and journalists tend to eye each other suspiciously from great distances. But some scientists have learned to use the media with great skill (and profit). To help those

just starting out, here are five tips for basic survival:

1. Get your message straight.

Work out the two or three main points you want to get across, phrase them in simple non-technical language, and stick to these points. There is no time or space for complicated explanations.

2. Talk about the implications of your work, rather than the clever science.

People want to know how they are going to be affected by your work. Is it going to mean cheaper bread? Will it expose some dangerous food-handling practices? Will it create a new export industry?

3. Learn about the world of the journalist.

They live by ferocious deadlines, and are always in a hurry. They work in a highly competitive industry, and few understand even basic scientific facts. But they do try to get things right - the onus is on you to explain your work in clear and simple terms.

4. Prepare a single sheet of paper with the important details.

This should set out the basic details of the story, spell everyoneís names correctly, and have your phone contact points. And consult your collaborators and colleagues to make sure everyone agrees on the wording - it can head off territorial arguments before they start.

5. Understand the importance of pictures.

Good pictures can make all the difference. A compelling photo can gain a story prominent newspaper coverage; and the rule is that without interesting pictures, there is no television story. Show enthusiasm for your story; don't wear sunglasses on TV (you'll look like a crook); be available to journalists; always look at the reporter on TV and NEVER look down the camera lens; and be conscious of reporters' deadlines.

There is a lot scientists can learn in making the media work to their advantage. Unless they learn to use the media to explain their work to the public, they cannot hope that the public will support them. Lack of public support translates rapidly into loss of public funding, and the sidelining of what should be one of the driving forces of Australian life.

Toss Gascoigne
Executive Director of FASTS
and Vice-president of Australian Science Communicators

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Interview with Suzanne Cory

Professor Suzanne Cory has just celebrated her first year of office as the Director of the Walter and Eliza Hall Institute. In an interview with Rob Ramsay she discusses some of the issues facing the WEHI and how her role has changed since taking the helm from Professor Gus Nossal.

Q. Five years ago would you have thought that you would be in this office as WEHI Director?

A. Not at all. I had a very satisfying career as a researcher and was happy doing science.

Q. Surely you would have expected that a call to such a position would come your way sometime, and not unlikely from the search committee at WEHI?

A. Perhaps, but I didn't see such a step as essential to the fulfillment of my career. Of course we all knew that Gus would retire and WEHI would need a new director, but you ask yourself is this what you want to do with your life? On the other hand, to be shaken up every 10 years or so is a good thing. And I have never been one for walking away from a challenge. So I was very proud to accept the directorship but would have been equally happy if someone else had been made director who I thought would do a good job.

Q. It is very difficult to talk of new directorship for the Hall without thinking of Gus Nossal and his style of leadership. How do you compare in terms of leadership style?

A. Well let me first let me say that Gus is still very much an intrinsic part of our scientific community, and will continue to make major contributions at the national and international level. Gus is a true Renaissance Man. I could never try to be Gus - he has his own style, and I have mine. But we share many of the same ideals and attitudes. For instance, our love of, and belief in, basic science. A passion for its beauty, its importance. An insistence on excellence. We also both believe in the importance of maintaining state-of-the-art technology in order to remain competitive on the international stage.

My style of leadership is still evolving. I like to consult widely and contemplate decisions for quite a long time before I act or move in a new direction. I like to draw on the wisdom of my faculty, but ultimately I make the final decisions.

Q. Was there a sense of isolation from the mainstream Institute life after you became the leader?

A. I have had wonderful co-operation from my colleagues since I moved to be Director and I still feel that strong connection. But it is true that life here is very busy and it is easy to become a little isolated from every day Institute life - it will be important to maintain connectivity.

Q. What has been the best and worst part of being director?

A. The worst part is easy. It's not having enough time to think about my own science. Maybe next year it might get better but I guess there will never be enough time. I suppose there is never enough time to do all you would like to do with your life. As for the best part, I suppose it has been the challenge of the position, having the chance to influence, being able to network on a broader scale.

Q. Has the networking been what you expected?

A. It has been very stimulating - I really have appreciated having had my horizons broadened.

Q. What do you see as the major scientific challenges of the future?

A. The Human Genome Project is rapidly revealing all our genes. The challenge that remains, though, is to determine the function of each of those genes, how they interact to program life, how faulty alleles determine disease susceptibility. We need to turn the explosion of new knowledge about cancer into rational new treatments. Perhaps the greatest challenge will be to determine how the brain works and the molecular basis for neurological disorders.

Q. Your appointment has been seen as an important milestone for women scientists. Do you see yourself as a role model for younger women in science?

A. Before answering that question, let me point out that other women have gone before me. For instance, Fiona Stanley, is the Director of the Institute for Child Health Research in Western Australia, Adrienne Clarke has her Special Centre for Plant Cell Biology and has been Chairman of the CSIRO Board. So I am by no means the first such role model. However, it is very important that there are more and I have certainly been besieged by girls' schools to give talks.

Q. Talking about role models, who would you say were the most important influences in your career?

A. I had some wonderful teachers at high school and at Uni. I would not have thought of research as a career option, for example, had I not been invited to do a masters degree in the Biochemistry Department by Michael Byrt - I can still vividly remember the place and time I was asked. Jerry Adams has been a very important influence, ever since Cambridge. And at Cambridge there was of course Fred Sanger, such a wonderful gentle man, so down to earth, always so interested in new techniques, always at the bench.

Q. How do you see the growing pressure for research into public health issues at the expense of basic research?

A. Public health research is certainly important. But it should be subjected to the same rigorous peer review as basic research. And it should not be funded at the expense of basic research, which is where the medicine of the future will come from.

Q. You have just passed the big test, the NHMRC institute review. How did you find this most daunting responsibility when you were so new to the job?

A. I was made director in June and the review was in August so it was very much baptism by fire. I had to prepare much of the background material in Paris where I was on a mini-sabbatical. Being so far away was helpful in some ways - I could look at the Institute more easily from an outside perspective. We were reviewed by a perceptive committee and I was delighted by the outcome and felt supported in my plans.

Q. Has the structure of the Institute changed at all and how would you sum up this first year as WEHI director?

A. Our principal research emphasis remains unchanged - the lymphomyeloid system and its diseases, such as leukemia and lymphoma, and autoimmune disorders, particularly diabetes. We shall continue our work on malaria and leishmaniasis. In early development, we are concentrating on the nervous system and the heart. The biggest change will be a greatly increased commitment to the genetics of disease susceptibility. In the past we were organised as 8 Units, and the heads of four of these retired - Gus Nossal, Jacques Miller, Don Metcalf and Tom Mandel. We have re-formed the previous Units into 5 Divisions and created two new groups: Development & Neurobiology, and Genetics & Bioinformatics. We participate in three CRCs: Cellular Growth Factors; Vaccine Technology and the new one, Genetics of Common Human Diseases.

For me this last year has been intensely hard work with a long list of challenges, but I feel that things are moving well. I have come to appreciate even more the talents of our faculty and support staff. And I am delighted to have Nick Nicola as the Institute's Assistant Director. With a successful review behind us we have made a great start for a new era.

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Medical Research Week - A model for the future?

This year the Victorian branch undertook a new initiative for Medical Research Week. As with other States, Victoria has predominantly tailored Medical Research Week to the needs of the local scientific community, whilst at the same time disseminating information to the public via public lectures at Central and Regional centres. Although such an approach fulfilled the Society's charter of raising public awareness, there always seemed to be a sense of preaching to the converted. It is hardly an achievement to have medical researchers and the fraction of the community that already seeks out information about science and health agreeing with us that Medical Research is good thing. We have recognised that we must have greater access and exposure to a wider cross-section of the general public in order to achieve a more successful Medical Research Week. We also recognised that public exposure was essential for us to secure sponsorship for the event. As a result we departed from our traditional approach of Medical Research Week. We decided that an EXPO of medical research would be a good thing to try, but for such an EXPO to succeed we needed the appropriate venue. Our coup was to obtain space in Melbourne Central. With foot traffic of 70,000 visitors a day we were assured of an audience and it was left to the imagination of exhibitors to have the correct bait to attract the public.

Concomitant with this raised public profile, we needed to have a unifying image to present to the public in terms of signage and professional ideals. Of course these come at a price and we were fortunate that as a direct response to the EXPO proposal, AMRAD offered to sponsor the week - a decision they clearly did not regret! Having a major sponsor made all the difference to way the organising committee approached the event because we could afford to do the job in the

professional manners we had always aspired to.

A total of 21 Departments and Institutes took part in the EXPO, which was divided into themes of cancer research, brain research, infectious diseases, diabetes and the heart. These central themes allowed for the development of an "Institute without walls format", but clearly permitted institutes to do an appropriate amount of flag flying. We were happily surprised to see how professional the presentations/exhibits of the Institutes and departments are becoming. There was no sense of "lets get out a few of our old conference posters and tack them on the wall" attitude. Everyone involved went to a lot of effort to make their displays interesting and "public friendly". We had giant 3D displays of the brain, colon, and breasts, an exercise bike wired into monitoring equipment and plenty of literature designed for the public. Melbourne Central's Events organisation was delighted by the amount public interest our EXPO generated and has invited us back for next year. We had endorsement from the Lord Mayor of Melbourne and the services of the Town Crier to announce events during the opening.

In concert with the week's activities, we were able to co-ordinate the Press in an attempt to get the maximum benefits of Media releases and exposure for recipients of the Awards presented in the week. Institutes and Departments provided our public relation consultants, the PR Exchange, with significant noteworthy news for dissemination to the Press. This ensured that each day we had "hits" in major National papers. As an adjunct to the Press we produced a "Medical Research News" bulletin for the public which was available at the EXPO and at all events during the week. Finally, we received substantial support from Dr Gail Jennings at 3LO who advertised the activities of the week throughout May, conducted a science short story "who done it" prize which was announced during her outside broadcast conducted at Melbourne Central during the EXPO. This outside broadcast provided a unique opportunity to secure radio interviews with scientists over the duration of her three-hour program. The radio booth also drew in the crowds and allowed the message of medical researchers to be heard by the public attending the EXPO.

The Future

We envisage that this EXPO, Press theme will be adopted nationally in 1998 and be planned to coincide with the Lecture tour by Professor Peter Doherty. We expect that similar venues will become available in other states and the prospects of national advertising and profiling of Medical Research Week will strengthen the support we receive from the general public.

On reflection the whole event was a lot of fun even though the organising committee worked very hard to make sure things went according to plan. Finally, we would like to thank the participating staff from the institutes which supported the EXPO, the Medical Research Week Committee, Mike Pickford from Australian Science Network and Gabrielle Sheehan from the PR Exchange. Lastly, to our sponsors and supporters of Medical Research Week we hope that a National Week will be as successful as that seen in Victoria.

Rob Ramsay and Matthew Gillespie

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The Australian Proteome Analysis Facility

Introduction

The word Proteome means the Protein products of the Genome. Proteome research is a new field which is starting to have a major impact in the post-genome era. It is based on new technologies for the differential display and mass screening of proteins and their post-translational modifications in whole organisms, as well as in their tissues or organelles. Thus proteomics (or functional genomics) is essentially a new word for an old concept - the analysis of proteins. The novelty is that it is now possible to conduct parallel studies on many proteins. Australian researchers have taken a leading position in this emerging field having coined the word (Wilkins et al, 1995), invented some of the core technology (Wilkins et al, 1996, Gooley and Williams, 1996) and published among the first applications (Cordwell et al, 1995, Ji et al, 1994).

It is important that the output of the gene be studied as well as the gene. This is because of: lack of direct correspondence between mRNA levels and those of proteins (Anderson and Seilhamer, 1997) post translational modifications, eg N or C terminal truncation, phosphorylation, glycosylation protein turnover resulting from effects of feedback mechanisms and complex pathways. None of these effects can be determined from DNA sequence alone and so proteomics complements and extends genomics.

We see proteome analysis as a set of related technologies which can lead rapidly to new discovery. The first and very important element of the technology is proper sample preparation and/or prefractionation. This is followed by 2D gel

electrophoresis as a central display process that presents samples in a format suitable for comparison on an analytical scale and identification on a preparative scale. The 2D gel is also a convenient way of indexing the proteins through databases eg. Swiss2DPAGE (http://expasy.hcuge.ch/ch2d/ch2d-top.html). Proteins are selected on the basis of the researchers interest. This may be as broad as characterising all the proteins in a complex sample, or as narrow as studying a few proteins identified by differential display or specific tags such as antibody binding or enzyme activity. Once proteins are selected they can be identified by one of several strategies. PVDF-blotted proteins can be microsequenced by Edman degradation for 3-4 cycles to create an N-terminal sequence tag. Percentage amino acid composition can then be determined on the same tagged PVDF spots by acid hydrolysis, automatic derivatisation and chromatography. Alternatively proteins can be identified by proteolytic digestion. Resulting peptide masses are determined by electrospray or MALDI-TOF mass spectrometry and this data can be added to that mentioned above. The combination of species, pI, size, N-terminal tag, amino acid composition and peptide mass gives a very powerful set of attributes for identification of proteins in the protein and DNA databases.

Post translational modifications can be studied by a variety of techniques, many of which are suitable for use on a spot derived from a 2D gel blot. We have recently performed Edman tagging, sugar profiling and amino acid analysis all on a single spot derived from one blot. Both post separation analysis and post translational modification analysis require bioinformatics to search databases to identify proteins. The dominant system in bioinformatics is ExPASy, used around the world by researchers but currently very slow to access from Australia as it is based in Switzerland. Currently APAF is implementing the mirroring of ExPASy to speed up analysis. The server will eventually be used as a mirror site for ExPASy in the Asia-Pacific in conjunction with ANGIS.

The areas of 2D electrophoresis, blotting and excision of spots from gels and blots are currently labour intensive and require much redesign to enable automation. We see the future of rapid proteome analysis being tied to automation, and APAF will soon have its first robotic workstation for gel and blot cutting. Finally, the area of education is important in this new technology and APAF runs courses to train Australian researchers in 2D gel electrophoresis and glycobiology. Several APAF staff are currently completing a book titled ìProteome Research: New Frontiers in Functional Genomicsî in collaboration with the Geneva Group headed by Professor Hochstrasser. This book is to be published by Springer in July/August 97 and provides an overview of proteome technology and hence contributes to APAFís role in educating national researchers about proteome.

The Mission of APAF

The mission of APAF is to create a centre of excellence in proteome research to enable national researchers to have a competitive edge in this emerging technology. There is a need to develop a broad skill base for proteome technology within the research community, as this will position Australia to play a leading role internationally. APAF must function to facilitate and stimulate research breakthroughs across a range of fields of importance to Australia by providing national access to proteome technology. To this end APAF will actively promote the facility and encourage its effective use in fostering interdisciplinary research and better linkages between academic and research institutions and industry in relation to proteome technology.

The Genesis of a Major National Research Facility

In late 1995 it was announced that the APAF proposal was successfully funded under the Major National Research Facilities program. The $7M funding (plus an additional $1M from Macquarie University) was provided for the physical aspects of the facility only, ie buildings and equipment. We were left with the issue of funding both staff and consumables. A strategy was developed to allow renewal of the facility as new instruments became available. This will be a major challenge as the pace of change in this emerging technology is such that investment in equipment in 1997 is unlikely to remain state of the art beyond 3 years at most. In our proposal we envisaged that this would be done by partnering with industry in research and development of the next generation of Proteome technology. A generic GIRD grant ($1.8M government and $4M industry) has been funded in May 97 for three years, allowing this goal to be pursued.

The operation of APAF is under the guidance of a board which provides high level input into all aspects of initiating and running of APAF. We expect the board to make a major contribution to planning APAF industry links and international activities. The board is made up of Mr Phil Isaacs, Chairperson, Managing Director of Beckman Instruments (Australia) Pty Ltd, Mr Clive Davenport, Director of GBC Scientific Equipment Pty Ltd, Prof. Carrick Martin, Deputy Vice Chancellor (Admin), Macquarie University, Ms Louise Herron, Partner, Minter Ellison Lawyers, Sydney, Professor Peter Drysdale, Executive Director Australia-Japan Research Centre, ANU, Professor Joe Sambrook, Research Director, Peter McCallum Cancer Institute, Melbourne, Professor Denis Hochstrasser, Head of Clinical Chemistry, University Hospital, Geneva, Switzerland, and Professor Keith Williams, APAF Director, Macquarie University.

A Scientific Access committee has been formed and is comprised of experts drawn from the Australian research community with a broad national representation. This committee will evaluate and prioritise proposals for proteome projects to be undertaken at the facility. It will also act as an advisory committee for scientific issues relating to APAF. It is our intention to make access to APAF as wide as possible.

Current Operation

In July 1996 a pilot facility was set up in temporary accommodation with core equipment to undertake a series of demonstration projects and provide protein analysis services to the scientific community. In order to effectively demonstrate the application of proteome technology to the Australian research community a number of demonstration projects were initiated. These are proteome characterisation of Human Tears with the CRC for Eye Research Technology, Dictyostelium discoideum with Macquarie University, Chinese Hamster Ovary with the CRC for Biopharmaceuticals and Whey Proteins with the CRC for Tissue Growth and Repair. Initial international programs have been commenced on both E. coli with Geneva University Hospital, and Wool with the Wool Research Organisation of New Zealand. Construction of a new building has commenced on the Macquarie Campus and will comprise of a suite of labs and offices of about 800 sq m. Expected completion date is late 1997 and at this time APAF will become fully operational. APAF will also function as a (test facility for new proteome instrumentation.

The pilot projects are scheduled to be completed by September 97. One of the CRC

projects is currently being expanded, and a pilot project is about to commence with a major multinational. Projects may be executed by highly trained staff at APAF, or in some cases by researchers visiting APAF to conduct their project at the facility. Thus many researchers around the country have a role to play in ensuring the success of APAF.

As well as performing full scale proteome projects APAF also performs fee for service work in all areas of Proteome Technology. These include two dimensional gel electrophoresis (analytical or preparative), blotting to PVDF, in-gel digestion to generate peptides, Edman sequencing - N and C terminal, amino acid analysis, mass spectrometry, database searches, monosaccharide analysis, oligosaccharide profiling, sites of glycosylation and detection of phosphorylated amino acids. All the necessary equipment is ëin houseí and this allows timely completion of such work. Currently APAF is running 5 N-terminal and 1 C terminal protein sequencers, two AminoMate systems for amino acid analysis, an additional AminoMate system for phosphorylated amino acid detection and a triple quadrupole mass spectrometer for mass analysis. Several other mass spectrometers are being evaluated for purchase at the present time. To date seven small companies, five CRCs, six CSIRO Divisions, fifteen universities and eight hospitals have made use of the APAF facilities.

Conclusion

APAF is setting up structures around which the vitality of the facility can be maintained, while at the same time supporting efficient execution of national proteome projects. There is much planning to be done and we welcome input from all stake holders in the scientific and business community (keith.williams@mq.edu.au or bwalsh@rna.bio.mq.edu.au). A web site has been set up to give up to date information about APAF, including its mission, details of methods and technology, as well as contacts for various staff (http://www.bio.mq.edu.au/APAF/welcome.html).

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National SCIENTFIC CONFERENCE, 1997

November 23-26th - Adelaide Convention Centre

In keeping with its role of fostering the advancement of medical research in Australia the ASMR has developed an exciting scientific program for the 36th National Scientific Conference to be held at the Adelaide Convention Centre in the heart of the city. Reasonably priced accommodation will be available including budget (single room from $65 per room per night) 2-bedroom apartments which can accommodate four people, and 5-star hotel accommodation at $170 per room, single, double or twin-share.

A selection of the Orations and plenary presentations are highlighted below.

Professor Grant R. Sutherland: The Genetics of Intellectual Disability.

Grant Sutherland graduated in Science from Melbourne University in 1966 and obtained his Ph.D. from Edinburgh University. Since 1967 he has worked in hospital-based diagnostic genetics laboratories where his research interests have included the genetics of intellectual handicap and epilepsy, fragile sites on human chromosomes and the human genome project. He is President of the Human Genome Organisation and a past-President of the Human Genetics Society of Australasia. He is a Fellow of the Royal Society of the Australian Academy of Science and an Honorary Fellow of the Royal College of Pathologists of Australasia. His present position is Director of the Department of Cytogenetics and Molecular Genetics at the Womenís and Childrenís Hospital, Adelaide.

Professor Kathryn Horwitz:

Kathryn Horwitz obtained her Ph.D. in 1975 from the University of Texas, South Western Medical School. She is a distinguished scientist who is regarded as a world leader in the study of the progesterone receptor and progestin and antiprogestin action in breast cancer. Her research has elucidated the structure, function and regulation of progesterone receptors in breast cancers. She has published more than 125 papers in the field of breast cancer research and has received numerous awards including a Merit Award from the National Institutes of Health, USA and the University of Helsinki Medal (1993). Her work has also been recognised by recent awards from the American Association for Cancer Research and the U.S. Endocrine Society. Professor Horwitz is currently Professor of the Departments of Medicine and Pathology and the Molecular Biology Program at University of Colorado Health Sciences Center, Denver, Colorado and Director of the Hormones and Cancer Program.

Dr Keith Godfrey: Foetal Programming and Adult Disease.

Keith Godfrey received his Medical Degree with Honours from Southampton University in 1983 and became a Member of The Royal College of Physicians in 1986. In 1990 he began work with the MRC Environmental Epidemiology Unit at Southampton University, where he pursued his research interests in the relationship between nutritional status in the foetus and adult disease. He was appointed to the position of Clinical Senior Lecturer in the Faculty of Medicine, Health and Biological Sciences, Southampton University in 1995. His current appointments are as Senior Clinical Scientist, MRC Environmental Epidemiology Unit, Southampton University and Honorary Consultant, Southampton University Hospitals NHS Trust.

Dr Scott S. Campbell: Light Exposure and Biological Rhythms.

Scott Campbell received his PhD in experimental Psychology from the University of Florida in 1981, under the supervision of Dr Wilse Webb. He completed post-doctoral fellowships at Harvard Medical School, the Max-Planck Institute for Psychiatry in Munich and the University of California, San Diego prior to receiving a research faculty appointment at UCSD in 1986. In 1990 he joined the faculty of Cornell University Medical College, where he is currently Associate Professor of Psychology in Psychiatry and Director of the Laboratory of Human Chronobiology. In 1996, he was also named Director of the Institute for Circadian Physiology, a non-profit research institute with laboratories in Cambridge, Massachussets and White Plains, New York.

A further Plenary session will be given by Professor John Chandler, University of Adelaide, Adelaide.

Important Dates:

Registration package: July 1997

Abstract submissions: 22 August 1997

Early registration: 10 October 1997

Accommodation: 10 October 1997

Student Travel Awards are available for Members.

Information on membership and student travel awards is available from The Australian Society for Medical Research 145 Macquarie Street, Sydney NSW 2000

Phone 02 9256 5450 Fax 02 9231 3120.

ASMR Conference Secretariat, P0 Box 153, Nairne SA 5252

Phone/Fax: 08 8388 6164, Email Dr D. Leavesley (dleaves@medicine.adelaide.edu.au)

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Next Generation of Australian Scientists Society (NGASS)

We would like to take this opportunity to introduce ourselves. We are a group of young scientists who have recently established a society called the Next Generation of Australian Scientists Society (NGASS) and a web site entitled 'Australia's Next Wave'. This web site is the vehicle by which our society hopes to communicate ideas between young Australian scientists and assist science students in deciding their study and career options. We aim to achieve this by providing current and topical information, career profiles of young Australian scientists, advice on job hunting and links to relevant job and scientific sites. We have an interactive forum where all Australian scientists, students and interested parties can contribute their views and opinions for discussion. Through our web site we hope that Australia's next generation of scientists will realise their full potential and create a brighter future for Australia. Membership is free and open to everybody, so please check out our web site at http://www.chem.usyd.edu.au/public/australias-next-wave/

Darryl McConnell & Greg Metha (Editors of Australia's Next Wave)

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Committee reports

Research Careers

Judy Halliday

Work on a discussion paper on the conduct of medical research by hospital/medical scientists working in government pathology laboratories is continuing (ASMR Newsletter May 1997). This group of medical researchers is often overlooked when we think of biomedical research in Australia. The challenges that they face are quite different from those faced by biomedical researchers in academic and research institutions. It is hoped that a discussion paper will highlight some of these challenges and will also help to expose the avenues for increased collaborations between the different groups of biomedical researchers. Submissions should be sent to Dr Peter O'Loughlin, Division of Clinical Biochemistry, IMVS, Box 14 Rundle Post Office, Adelaide 5000 (Fax 08 8222 3538).

The analysis of the ìBrain Drainî questionnaire is progressing and we hope to present some of the data in the next newsletter. After analysis of the data we will post a redesigned questionnaire on the ASMR Web page. Over the next few years we hope to collect a significant body of data that can be used to highlight the strengths and weaknesses of aspects of the career paths for biomedical researchers in Australia.

Finance Report

Matthew Gillespie

For the second year in succession the society is at status quo, with no substantial alteration in profit or loss. Although it is gratifying that the society does not run at a loss during a financial year, our inability to deliver a surplus is equally frustrating. Presently, the societies' directors and administrative secretary have achieved remarkable success to keep the society financial on a shoe-string. Changes in our "supporter's" category of membership have resulted in a decreased income, while our decision to subsidise director's airfares to the NSC board meetings will result in increased expenditure. These changes in income and expenditure have been absorbed into our operating costs.

Earlier this year the society recommissioned the ASMR Research Fund after a self-imposed freeze on its operation for the past two years to satisfy the Taxation Office. Donations to the Research Fund are tax deductible and I encourage the support of this fund which will be used to support fellowships, student studies and student travel allowances in a scheme similar to that offered by the Ramaciotti Foundation.

Finally, the society has appointed Mike Pickford of the Australian Scientific Network to help promote the society to potential corporate sponsors and charitable trusts. The forthcoming Professor Peter Doherty Lecture Tour and an expanded Medical Research Week EXPO should ensure marketable events to attract sponsorship. The public recognition and corporate sponsorship are both essential for this society to continue with its charter for public education. I hope that within the next three months we will have secured funding for these key initiatives in 1998.

Public Relations and Communications

Rob Ramsay, Rick Pearson, John Mamo and Matt Gillespie

Matt and I have been pushing to get medical research week on to a national footing. This is likely to have a major PR effect as we can highlight activities of the society through the events held during the MRW. Australian Scientific Network ran the Melbourne event without fault, bringing AMRAD to provide major sponsorship. As a direct response of AMRAD's contribution to support MRW and the success of MRW in Victoria, several companies have indicated an interest in sponsoring activities of MRW at a national level. However, we were frustrated by the slow response from some other states to provide an event that AMRAD would support. Western Australia, Queensland and Victoria had AMRAD support and the lack of suitable events in the other states made us look amateurish to the AMRAD organisation who were so keen to offer sponsorship. If you have an interest in transposing the MRW format used in Victoria (see article in this newsletter), please contact us.

Work behind the scenes has had a very positive effect on the attitude of non-members from major research Institutes in Melbourne. I am hoping that more members will join as a result of the activities of MRW and the personal lobbying.

Membership

Dr. Bruce Lyons, Convenor, Membership Subcommittee.

The current membership levels are at an all time high, with an increase of around ninety financial members since the last newsletter report. This suggests that our financial members have been making a sterling effort to recruit new members. Please sustain this effort in the future! The latest statistics are:

1090 financial members (This is a record)
825 email addresses
874 electoral addresses
35 affiliate members

Some members have expressed concerns over the fact that they are already represented through affiliate societies. Why then should they remain as ordinary financial members? There are a number of very good reasons why their continued membership is important, both to them and the society as a whole. Full financial membership gives them DIRECT input into the running of their society, via their state's Directors, or by voting at the AGM. Furthermore, it gives them the opportunity to stand for election to the Board of Directors themselves, or to vote for candidates of their choice. The affiliate membership is primarily designed to give our society credibility in representing medical research across the broadest front possible, in our interactions with government and other organisations. For the society's financial well being, our financial members are absolutely vital.

The age statistics of our financial members show that the ASMR is still a relatively "young" society, in keeping with it's original brief, however it is important to note that around one third of our members are in the 46+ age group. One interesting statistic is the under representation in the 31 to 35 year age group, suggesting we are losing some members quite early in their careers, perhaps soon after they lose their student status. Are all these people overseas, or are they too busy finding their second post-doc position? Either way, it is important for them to be bought back into the fold. We need their youthful enthusiasm before the pressures of grant writing turn them into broken wrecks like the rest of us! So, special brownie points for those financial members recruiting members in this age group!

New ASMR Members

NSW

Dr Linda Adams
Dr W Bret Church
Dr P Delhanty
Miss Leonora Dias
Ms Susan Field
Dr Melinda Fitzgerald
Mr Ross Grant
Mrs Kim Guven
Ms Angela Hales
Dr Qirong Huang
Mr Brett Human
Ms Helen Hwang
Ms Jackie Janosi
Dr Wendy Jessup
Ms Ranjna Kapoor
Ms Robyn Monk
Ms Oraporn Muenpol

Miss Nisha Nanda
Ms Sarah Newlands
Mr Craig Nourse
Ms Ann Parkinson
Dr Greg Peters
Dr Marie Ranson
Mr Adrian Reid
Dr Lina Safro
Dr Christopher Semsarian
Ms Yuko Mary Tazawa
Miss Behnaz Vafa
Dr Ron Weinberger

Victoria
Dr Glen Begley
Dr David Bowtell
Dr Lynn Corcoran
Dr Bronwyn Kingwell
Dr He Li
Debbie Mantzaris
Miss Nupur Nag
Ms Corie Shrimpton
Prof Ban Hock Toh
Ms Tamara Waddell
Dr Zhiyong Yang
Dr L Zhao
Dr Xiang Zhu

Queensland
Mr Mark Bailey
Mr Neil Box
Dr Evelyn Brandt
Ms Sharon Clark
Mrs Joanne Coomer
Miss Fiona Coulson
Mr Dan Dwyer
Ms Yunjiang Feng
Ms Angela Finch
Miss Sharon Goodenough
Mr Jonathan Harris
Dr Julie Jonsson
Dr Lindsay Jordan
Ms Sonya Kaiser
Dr Donald Kakuda
Mr Sergei Kozlov
Dr Linda Levitt
Dr Sally Martin
Miss Julie Michael
Mr Les Miranda
Mrs Jennifer Nitz
Mrs Elizabeth Payne
Miss Allison Pettit
Miss Shirley Smith
Miss Ylva Strandberg

Mr Nigel Waterhouse
Dr Michael West
Mrs Melinda White
Dr Carol Wicking
Ms Katie Volter

South Australia
Ms Rebecca Anderson
Miss Kate Davies
Ms Petra Neufing
Dr Kerry Anne Rye

Western Australia
Dr Jonathan Hodgson
Dr Evan Ingley
Ms Janelle Staton

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Johnson & Johnson Research Pty. Ltd.
Pfizer Pty. Ltd.
Roche Products Pty.Ltd.
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Australasian Society for Blood Transfusion
Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists
Australasian Society of Clinical Immunology & Allergy

Australian & New Zealand Society of Nephrology
Australian and New Zealand Bone and Mineral Society
Australian and New Zealand Society for Cell Biology
Australian Association of Neurologists
Australian Diabetes Society
Australian Physiological and Pharmacological Society
Australian Rheumatology Association
Australian Society for Biochemistry and Molecular Biology
Australian Society for Immunology
Australian Society for Psychiatric Research
Australian Society for Reproductive Biology
Australian Society for the Study of Obesity
Cardiac Society of Australia and New Zealand
Clinical Oncological Society of Australia
Endocrine Society of Australia
Fertility Society of Australia
Gastroenterological Society of Australia
Haematology Society of Australia
High Blood Pressure Research Council of Australia
Human Genetics Society of Australasia
Paediatric Research Society of Australia
Perinatal Society of Australia
The Australian Neurosiences Society
Thoracic Society of Australia and New Zealand
Transplantation Society of Australia and New Zealand

Associate Members

Arthritis Foundation of Australia
Muscular Dystrophy Association of South Australia
National Multiple Sclerosis Society of Australia
Australian Kidney Foundation
National Heart Foundation of Australia
Community Health and Anti-Tuberculosis Association
Australian Cystic Fibrosis Association

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Congratulations to Queen's Birthday Award Recipients

Officer of the Order of Australia (AO)

Professor Richard SMALLWOOD For service to medicine, particularly in the field of gastro-enterology, to research through the NHMRC, and to education. Professor Smallwood is an ASMR member; in addition the society wishes to congatulate the following awardees:

Members of the Order of Australia (AM)

Dr Susan BEAL For service to medicine, particularly in the fields of paediatrics and sudden infant death syndrome research.

Dr Leslie Koadlow For service to medicine, particularly as a rheumatologist specialising in musculoskeletal diseases and rehabilitation, and to the Arthritis Foundation of Victoria.

Professor Darcy O'GORMAN HUGHES For service to medicine, particularly in the fields of paediatric oncology and haematology.

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