

Mouthpiece



President's Address

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My esteemed predecessor, Maureen Swanney, gave me one word of warning concerning the Presidency of the ANZSRS – “beware the Presidents Address”. Maureen felt she was always penning a President's Address for the next edition of Mouthpiece, and as I prepare for my second such report, already I know exactly what she was talking about! I shall attempt to update you on the activities of the Executive, many of which have important consequences to all ANZSRS members.

Relative Value Study

Correspondence with Professor Iven Young of the TSANZ Relative Value Working Party has indicated the TSANZ were officially notified the joint TSANZ-ANZSRS submission (with our re-calculation of background practice costs) had been received and placed on the agenda for the next Medicare review meeting, but this meeting had been indefinitely postponed. It is now thought that the Relative Value Study is essentially “dead” with the present government. However as the political climate may easily change, the ANZSRS RVS Working Party merely remains in hibernation, but will reconvene if necessary.

Future ASM's

Thank you to all and sundry who provided important feedback on the issue of the future of our Annual Scientific Meeting. A special mention to the Australasian Sleep Association

who also provided important feedback. I am pleased to announce that there was overwhelming support for the ANZSRS to maintain its current association with the TSANZ with respect to holding ASM's. We anticipate continuing our healthy relationship with the TSANZ in 2002 in Cairns, and beyond. We are working with the TSANZ to ensure that both Scientific Meetings can continue to co-exist for the benefit of all.

2002 ASM

A reminder that the 2002 Annual Scientific Meeting is to be held from March 22-24 in Cairns. Peter Rogers (NSW) is chairing the Local Organising Committee. Remember the success of this meeting depends on input from all our members. I remind you, the closing date for abstracts is December 10, 2001.

2001 ANZSRS/TSANZ NZ Branch Meeting

I have just returned from this meeting and must congratulate the organisers for arranging a first class program. (A summary of this meeting is on page 10). It was a delight to meet with many of the New Zealand members on their home turf. It was also pleasing to see quite a few Australian's make the journey across the Tasman. The Christchurch weather, like the locals, was very friendly & the view of the snow capped Alps on my return flight was superb!

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MARCH 2002
ASM
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ANZSRS Webpage

The Society website (www.ANZSRS.org.au), has recently been updated to reflect changes in the Executive & Regional Board Members. Jeff Preto has been hard at work attempting to come up with a vibrant new look to the website and his efforts are certainly appreciated. We hope to add to the webpage in the near future and promote it not only to all members, but to anyone interested in the Society and it's activities.

Annual Fees

Have you paid this year's fee yet? If not, please endeavor to do so soon. This will make Mike & Geoff's job so much easier.

ANZSRS Education Grants

This was an initiative of the previous Executive and one we plan on continuing for some time. Please consider these grants carefully. Details of the application process can be found in this edition (Page 14).

CRFS

I urge all members who have not yet done so to consider sitting (or re-sitting) the CRFS exam. This is an important Society credential and I urge you not only to sit the exam, but also advertise the fact you have achieved the CRFS. I have noticed some members now proudly list the CRFS on their business cards – a practice I shall shortly be following. A special mention to Stephen West, the CRFS coordinator, for attaining his certification. And no, Stephen did not set his own exam!, but one set by Sean Homan & David Schembri of Adelaide, and came through with flying colours. After putting in the work to set up the CRFS process, it is especially gratifying to see Stephen gain his own certification. Well done.

Thankyou to all members who have provided valuable input thus far – I hope it continues.

Until next time.

Brenton Eckert. CRFS
President.

Job Exchange

Job Exchange was one of the many ideas that cropped up during the recent Christchurch Meeting. Several people expressed a level of interest in the Job Exchange concept, be it within the same region, interstate, between Australia and New Zealand, or even further afield. As someone who has observed the benefits of a job exchange to both the individual(s) and the laboratory concerned, I would like our Society to take a more active role in assisting such exchanges between ANZSRS members. I have also observed first-hand some of the problems that may confront any potential exchange – both in the planning stage, and after the exchange has commenced.

The combination of this experience and my current role as President of the ANZSRS, probably sees me as the individual best suited to assist any potential job exchange between members. If any members are interested in discussing the pros and cons of a job exchange, or wish to leave their names and details with me for a "Job Exchange Registry", please do so. I do however remind you that the most important aspect of the Job Exchange will be the support of supervisors – I ask anyone interested in a job swap, to discuss with their immediate supervisor before deciding whether to proceed any further.

Brenton Eckert

Have you paid your ANZSRS
membership yet?

Have you received a receipt yet?

If not, contact Geoff Foote

(07) 55980227 or

tapas@austarnet.com.au

From The *editor*

Greetings to Everyone,

We have a very busy issue of Mouthpiece this time. It's full of articles, conference reviews, some quiz questions, webbies of interest. Make sure you visit pages 14 and 15 for your scholarship applications.

I do have some apologies to make regarding the last issue. Firstly to Robert Tagliaferri, our WA board member, he was not included in the list on the back page, sorry !. Secondly to Mike Brown, our Secretary. I accidentally typed his postcode incorrectly, so if he has not received any of your correspondence, it could be my fault.

We also discovered that some members had not received their issue of Mouthpiece because of incorrect addresses. If you have had a change of address or email, please contact either myself, Mike Brown or your local Board Member. We like to keep the records current.

Finally I would like to thank everyone for their contributions. I think I've found the secret formula for getting articles (and you'll have to email me for the recipe!!).

Enjoy this issue.

Best Regards

Cecilia

ANZSRS ASM—CALL FOR ABSTRACTS

Original abstracts are requested for oral and poster presentations. Abstracts should relate to technical, clinical and research aspects of respiratory science. Oral presentations will be 15 minutes plus a 5 minute question time. Posters will be displayed for the duration of meeting with formal and informal attended poster sessions. All abstracts should be submitted on an official ANZSRS abstract form. Further abstract information is on the ANZSRS website (www.ANZSRS.org.au) Abstracts must be received by December 10, 2001 and should be sent to:
Peter Rogers
Respiratory Function/Sleep Unit
Repatriation General Hospital
1 Hospital Rd
Concord, NSW. 2139.
Ph 02 97676356 Fax 02 97677605
E-mail: Peter.Rogers@cs.nsw.gov.au

ANZSRS ASM—TRAVEL GRANT

The ANZSRS has established a scheme to assist members on low incomes to travel and (preferably) present their work at the Annual scientific meeting. The Executive of ANZSRS will set the amount of funding available and this may vary from year to year. Eligibility criteria do apply and applicants will be assessed by the ANZSRS Executive. For further details, including application forms, please access the ANZSRS website (<http://www.ANZSRS.org.au>) or contact:
Mike Brown
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Herston Rd
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Telephone: 07 36367633
E-mail: Mike_Brown@health.qld.gov.au

Closing Date for Travel Grant Applications –
December 10 2001.

Genetics of Airway Diseases

Ian Yang, Janet Shaw, Kwun Fong, Paul Zimmerman

Division of Thoracic Medicine, The Prince Charles Hospital, Brisbane, Australia

Airway diseases

Together, the obstructive airway diseases (chronic obstructive pulmonary disease (COPD) and asthma account for 88% of the burden of chronic respiratory disease in Australia. Given their substantial health impact, it is vitally important to better understand pathogenesis and risk factors, and develop successful treatment for obstructive airway diseases. Greater knowledge of the molecular influences on the lung, a genetically determined biological organ for gas exchange and host defence will help achieve this.

DNA and genes

Virtually all cells in the body contain genetic material, stored in chromosomes in the nucleus as **DNA** (deoxyribonucleic acid). The DNA molecule has a double-stranded helical structure made up of a sequence of building blocks called nucleotides. The human genome is the entire genetic blueprint of nucleotides that codes for the individual proteins that make up the body.



A **gene** is a segment of DNA that codes for one specific protein. An individual inherits two copies of each gene, one from each parent. Each copy of a particular gene is called an allele. The usual or normal DNA sequence of the gene is referred to as “wildtype”. A variant allele, or **polymorphism**, is a DNA sequence variation that is present in > 1% of the population.

Variation in the normal DNA sequence may be of great importance, since variation in a gene may critically alter the structure, function or rate of synthesis of its protein. Genetic variation has the potential to explain many of the differences between individuals. The sequence of the human genome was published in February 2001. Its full impact has yet to be realised but will undoubtedly have major implications for understanding human diseases.

COPD

Cigarette smoking is the major risk factor for the development of COPD. Nevertheless, variability in susceptibility suggests that there are other factors that act in addition to cigarette smoke. Genetic risk factors have emerged as being important in COPD pathogenesis. The first and best known genetic risk factor described still is **α_1 -antitrypsin** (α_1 -AT) deficiency. α_1 -AT is a protective protein that inhibits the excessive activity of proteases, particularly neutrophil elastase, which has the capacity to destroy the elastic tissue of the lung. Severe α_1 -AT deficiency, caused by genetic mutations in the α_1 -AT gene, results in an imbalance in favour of proteases, leading to early onset emphysema in smokers.



Other candidate genes are now being studied, especially those that mediate inflammation and

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oxidative stress in the airways. One example is **tumour necrosis factor** (TNF)- α , a potent proinflammatory cytokine that acts as a neutrophil chemoattractant. A polymorphism in the TNF- α gene has been found to increase the rate of gene expression, as demonstrated by increased TNF- α levels *in vitro*. This TNF- α gene polymorphism was associated with an increased risk of developing COPD and greater mortality in COPD patients. Another candidate gene is **microsomal epoxide hydrolase**, an enzyme that metabolises highly reactive chemical constituents in cigarette smoke and thereby reduces oxidative stress. Polymorphisms in this gene reduce its protective ability and worsen the rate of FEV₁ decline in COPD .



Asthma

The strong genetic component in asthma has been well described in studies of families and twins, and studies using chromosomal markers. Associations have recently been reported for specific polymorphisms with specific characteristics (phenotypes), lung function and clinical outcomes in asthmatics.

The leukotrienes are potent bronchoconstrictors released by inflammatory cells such as mast cells and eosinophils. **Leukotriene C₄ synthase** (LTC₄S) is the major enzyme that synthesises leukotrienes. The LTC₄S gene contains a polymorphism that is associated with over-production of leukotrienes. This polymorphism has been implicated in aspirin-intolerant asthma, a clinical subgroup who are sensitive to the

pharmacological inhibition of cyclo-oxygenase by aspirin, which results in excessive activity in the leukotriene pathway.

Interleukin-4 (IL-4) is a pro-inflammatory cytokine that switches immunoglobulin synthesis by B cells to IgE, which is critically involved in the atopic immune response. A polymorphism in the IL-4 gene with excessive pro-inflammatory effects increased the risk of life-threatening asthma, and a polymorphism in the IL-4 receptor gene was associated with reduced FEV₁ in a cohort of asthmatics.

β_2 -agonists exert their bronchodilator action via the **β_2 -adrenoceptor** (β_2 AR) found on bronchial smooth muscle. Polymorphisms within the coding region of the β_2 AR gene alter its receptor function. Specific β_2 AR polymorphisms have been associated with bronchial hyperresponsiveness and bronchodilator reversibility in some studies, while other studies have observed differences in peak expiratory flow rates and asthma exacerbations in some asthmatics using regular inhaled β_2 -agonists. The clinical importance of these findings remains to be determined.

Conclusions and implications

Associating the characteristics of airway diseases with genetic polymorphisms is improving our understanding of the pathogenesis of COPD and asthma, by providing insights into the genetic influences on injury and inflammation in the airways. However, to be useful clinically, data

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from molecular epidemiology observations should be replicated in different populations and subgroups of patients, to ensure their general applicability. Hence, large cohorts with detailed characterisation of airway function are required, to determine which genes are important. Also, subjects in clinical therapy trials may be able to be stratified by genotype to ascertain which genetic variants predict response to therapy (pharmacogenomics). New information from genetic research will help to identify molecular targets for pharmaceuticals in contemporary drug discovery programmes. The science of genetics is highly relevant to clinical practice and research in airway diseases.



N.B: For a copy of the comprehensive reference sheet that was attached to this article please contact Ian Young at Prince Charles Hospital, Brisbane or email him at Ian_Young@health.qld.gov.au

Websites of Interest

The Gas Exchange Lung Model from the John Hopkins University School of Medicine. An excellent page to show the effects on respiratory indicators when you make changes in respiratory determinants including tidal vol. Dead space, resp rate, FIO₂ altitude, oxygen uptake, RER, Hb, cardiac output, shunt fraction, O₂ diffusion capacity, degree of V/Q mismatch.
<http://omie.med.jhmi.edu/LungModel4.2/index.html>

Body Mass Index and other health related topics. This is an American website - a bit corny but give it a go.
www.ehc.com/healthcontent.asp?page=/usp/index

The Human Genome Project, see what you're made of at:
http://www.ornl.gov/TechResources/Human_Genome

COPD: International COPD guidelines:
<http://www.goldcopd.com>

SensorMedics + Jaeger = Viasys: Formation of a New Company

In view of the recent changes to SensorMedics and Jaeger, Mouthpiece invited Mike Green to give an overview of the situation.

Viasys (Australia) was formed on July 1st, 2001 as a sister company to Anaesthetic Supplies Pty Ltd, with both companies being 100% wholly owned by Cecil E Mayo Pty Ltd (CEM). CEM is a 100% wholly owned Australian company formed in 1926, which has continued to expand and grow since its inception.

As you may already know, Viasys Healthcare is an international company based in the US and is responsible for a broad range of products, including Jaeger and SensorMedics. Further information can be viewed on their website (www.viasyshealthcare.com).

Whilst both the ownership and the management of Viasys (Australia) remains totally separate to Viasys Healthcare, Viasys (Australia) is the exclusive distributor for many products in their group including SensorMedics, Bird and Bear, MDE, and now Jaeger.

In May this year, the former Jaeger distributor relinquished the Jaeger agency and we were offered the distribution by Jaeger. While this was unexpected at the time, the people behind Viasys (Australia) and CEM are committed to ensuring the success of this venture and most importantly that our customers continue to enjoy the high standard of quality and service for this new addition to our product offering.

Cecil E Mayo has the existing structure to service

all the above products with established service centres in Sydney, Brisbane, Melbourne and representation in Perth. While the success of the PASK for SensorMedics Vmax is not a Jaeger product, we will be examining our Jaeger customers specific requirements and looking at developing products to meet their individual needs. This may include service kits, preventative maintenance kits and other similar products.

Viasys (Australia) is committed to ongoing training in all aspects of equipment repair and maintenance: we are currently focussing on Jaeger products. All service centres will be responsible for the full range of Vmax products, Jaeger products, sleep systems, ventilators and the many other products Viasys (Australia) offers. Additional to the fully trained service engineers in each service centre, we have a dedicated National Service Manager for Diagnostic Products, who will continue to develop this role by designing specific packages and programmes to meet our customer needs.

We have the company structure, the people and the desire to make Viasys (Australia) the company you will turn to for your products and your needs, now and in the future. If you require further information, or have any questions, please do not hesitate in contacting us via your local representation or our customer service number on 1300 360 226.

Michael Green
Product Manager
Diagnostic Division
Viasys (Australia)
mgreen@viasys.com.au

ACCREDITATION OF RESPIRATORY FUNCTION ASSESSMENT SERVICES

Stephen West, Clinical Measurements Dept, Westmead Hospital, NSW

Accreditation involves exposing laboratory practice to external scrutiny in the interest of quality improvement. The laboratory can compare all aspects of its operation to benchmarks so that any shortcomings can be identified and recommendations obtained for improvement. The Thoracic Society of Australia and New Zealand (TSANZ) administers the accreditation of Respiratory Function laboratories. Currently voluntary, accreditation will become mandatory for all institutions involved in thoracic physician training programs from 2005.

Summary of the steps leading to Accreditation

- 1) Initial contact for any laboratory considering accreditation begins with the laboratory obtaining an introduction to the process, administrative details, *detailed* accreditation guidelines and application forms from the TSANZ Executive Officer. These documents comprise the 'Accreditation Package'. There is no charge for this.
- 2) Completed application forms are returned to the TSANZ Executive Officer with an initial payment of \$250. An assessment panel of three accreditors with previous experience in laboratory accreditation is appointed to review the application. Normally, the assessment panel will consist of one scientist and two physicians.
- 3) The accreditors' comments are returned to the applicant laboratory. If *major* deficiencies in the application were identified the laboratory is invited to respond to these comments and alter practice before re-submitting the application.
- 4) A written response by the laboratory to the accreditors' comments is sent to the TSANZ Executive Officer for review by the assessment panel. If the response is satisfactory and no major deficiencies in the application were identified, the accreditors will plan a site visit at a mutually convenient time. Once the decision is made to proceed to a site visit it is highly likely that

Accreditation will be achieved. A charge of \$1250 is levied to cover the costs of this visit. If the response to the accreditors' comments is not satisfactory, a letter is sent to the laboratory listing the reasons for the decision.

**“The TSANZ
administers the
accreditation for
Respiratory Function
Laboratories.”**

5) During the site visit all aspects of the laboratory are reviewed including laboratory ergonomics and signage, the quality of equipment, quality assurance practices and calibration measures, reference values, documentation, archiving, procedures, test interpretation, safety and infection control issues, manuals etc.

6) Following the site visit the accreditors write a detailed evaluation report. Areas of strength and areas of potential improvement are identified. A decision is made as to the competency of the laboratory and whether accreditation standards are met.

7) If the site visit is satisfactory accreditation is granted. A 'Certificate of Accreditation' is issued for a period of five years.

Comments

The process of accreditation requires considerable work in preparation, particularly if the applicant laboratory has not been through the necessary discipline of preparing laboratory manuals. A major benefit of accreditation is to create an impetus for such discipline. One technique to manage the task of preparing laboratory manuals is to provide individual manuals for each respiratory function test the laboratory performs, plus another manual devoted to administrative policies and procedures. Although time consuming, the work required is not intellectually demanding or difficult. The accreditation standards are freely available from the TSANZ office or internet (www.thoracic.org.au) and clearly stated. If these guidelines are faithfully followed laboratories can prepare their manuals and submit their application with confidence of success. The

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Test Your Knowledge

Mention the CRFS exam and most scientists shy away with fear. Stephen West has kindly donated questions of the same calibre as the exam. This is an excellent opportunity to test your knowledge. The answers are not “in the back of the book”, you will need to contact Stephen (see back page) for the score. And of course, enroll for the exam!!

Q2 FRC is usually:

- A) decreased in patients with airway obstruction
- B) higher when measured by plethysmograph than by helium dilution method in patients with emphysema
- C) increased in patients with obesity
- D) higher when measured by helium dilution method than by the nitrogen washout method in patients with airway obstruction.

Q3 The pressure-volume curve of the lung is a graphical representation of lung volume plotted against:

- A) pleural pressure
- B) elastic recoil pressure of the lung
- C) oesophageal pressure
- D) alveolar pressure

Q13 A body plethysmograph is used to measure airway resistance because:

- A) without it we cannot measure airflow
- B) it is not sensitive to changes in volume
- C) alveolar pressure can be determined
- D) it overcomes diffractive interference from lung compliance scatter

Q48 When setting up gas and water absorbers for single breathe TLCO using CO and He analysers, which of the following is the correct order of the absorbers?

- A) silica gel, soda lime
- B) soda lime, silica gel
- C) CaSO₄ (drierite), soda lime
- D) silica gel, CaSO₄ (drierite)

process is very much in the control of the applicant and has been designed so the applicant laboratory does not have to expose itself to external scrutiny until it substantially complies with the standards. Additionally, the application that flows from the initial assessment phase of the process allows the accreditors to develop a picture of the laboratory before having visited it. This design spares the laboratory the inconvenience and expense of having deficiencies pointed out at the site visit that could have been pre-empted and dealt with by correspondence. Note that when the process reaches the site visit stage that the accreditors take care to conduct the site visit in a spirit of friendly consultation.

In the Introduction to the accreditation document it is clearly stated that "the process seeks substantial compliance with the standards. It is recognised that local conditions may preclude absolute compliance with every standard." Similarly careful wording is used throughout the standards to indicate flexibility.

“The process is rigorous but gaining accreditation would have no meaning if it were not.”

The process is rigorous but gaining accreditation would have no meaning if it were not. Obviously the process has to set its standards to be consistent with good international practice. This benchmark exists for all applicants, whether teaching hospital laboratories or not. Two small private laboratories have passed without problems.

Accreditation is educational and does improve quality and raise standards in respiratory function measurement. All who have actively participated in the process have felt benefited by it. For those that set themselves the goal accreditation is relatively easy and self-evident. All that is needed is the desire to make accurate measurements in a safe and efficient manner, time to ensure that laboratory practices are equivalent to the standards set by the TSANZ, and the ability to set these practices down clearly and concisely in a written manual.

Joint Scientific Meeting of the ANZSRS Inc. & The TSANZ New Zealand Branch Inc, Christchurch School of Medicine and Health Sciences 23-24 Aug 2001

Scientific Program

ANZSRS members from NZ and Australia had the privilege of listening to many high calibre speakers during the 2-day program. It is not often that the legendary Professor John B West (of "The Essentials" red and blue book fame), Professor Kim Prisk (of μ G fame) & many other notable speakers are in Christchurch at the same time. Fortunately the lure of the International Union of Physiological Sciences International Congress held the following week made that possible & these invited speakers extended their visit with valuable presentations at the ANZSRS and TSANZ meeting.

The theme of the meeting was insights into Respiratory Physiology in unusual and stressing environments such as space, Everest region, the Antarctic and the increased pressure of underwater environs.

Thurs 23 August

The program began with the keynote address from Professor John West, University of California, USA.

Have you ever wondered what it would be like to go to work at 8848 m (29,000 ft) above sea level? However, before you start work you must carry your fibreglass lab & equipment on your back (or get local experts to help you) for many days via an extremely challenging route, which terminates near the limit of tolerance for hypoxia. Professor West presented some amazing findings about the body's ventilatory adaptation to hypoxia at altitude during the American Medical Research Expedition to Everest in 1981. He discussed the physiological importance & relationship of an individual's hypoxic response & tolerance to extreme altitude & mechanisms of hyperventilation & the resulting impact on blood gases. Impressively a team climber, at the summit

of Mt Everest, measured his respiratory rate at 70 BPM, PO_2 30mmHg, PCO_2 7 mmHg, an alkalosis which would be extremely disturbing in a patient on the respiratory ward. Paradoxically Himalayan Sherpas have a reduced ventilatory response to hypoxia but a high tolerance to altitude also avoiding the periodic breathing that is seen in Westerners implying that acclimatisation & adaptation are different cellular processes.

The slide show from the top of the world took my breath away!

The 2nd keynote address was by professor Kim Prisk also at the University of California, USA on "Lessons from Microgravity". He described information gained from studying ventilation & perfusion relationships in microgravity (μ G/weightlessness) during a series of space flights. Some interesting effects on cardiac stroke volume & central venous pressure. Ventilation & perfusion become more uniform in the lung. Despite this V_A/Q ratios do not improve & may be paradoxically assisted by gravity. Diffusion capacity increases in μ G. The most expensive way of treating OSA has been discovered in space. Sleep disruption from OSA is abolished in μ G.

Invited speaker Dr Keith Burgess, Respiratory & Sleep Physician from Sydney presented research investigating the relationship with sleep disordered breathing & acute mountain (MT) sickness at 5050 m in the Himalayas. Interestingly central apnoeas increased & obstructive apnoeas decreased proportionately to altitude due to increased central drive, which over activates the upper airway in relation to the diaphragm. Reduced SaO_2 during sleep was found to be an important factor in acute Mt sickness. Central sleep apnoea did not protect against it.

Friday 24 August

Today's program opened with the keynote presentation by Professor Kim Prisk on further insights from μ G. He reported on studies performed to examine alterations of aerosol deposition in the human lung during parabolic flights (not to be undertaken by anyone with a delicate stomach!).

A program of other invited speakers followed this.

Dr Sandy Anderson (Royal Prince Alfred Hospital, Sydney) outlined an approach to objectively assessing potential recruits (who report a history of asthma) for the Armed Services.

Indirect tests for measuring bronchial hyper-responsiveness were discussed with an emphasis on the advantages of the eucapnic voluntary hyperpnoea test recommended to exclude EIA, a major implication for entry to the Armed Services.

Other interesting presentations were as follows

“Animal Physiology: Lessons from the Antarctic” by Assoc. Professor Davison, University of Canterbury. Growth, respiratory systems, metabolic rates, gas exchange in a high oxygen environment at H₂O temperatures $-1.68\text{ C} \dots \dots$ & a very innovative fishy treadmill.

Dr Davis, Director of the Hyperbaric Unit in Christchurch gave some insights into the medical challenges of diving at high partial pressures & the impact on safety; the complex mechanisms of decompression illness & determinants of divers' performance. I think I'll just stick to snorkelling!

On the same topic, Dr Andy Veale from Auckland Physiology discussed medical assessment of intending divers, a risk management approach with informed consent. For recreational divers the risk of

physiological changes occurring at depth in those with a history of asthma was loosely categorised.

Severe: symptoms & a positive challenge test with 4.5% hypertonic saline (<15 ml saline): unfit to dive

Moderate: no symptoms, but a positive test (<15 ml 4.5% saline): repeat 3 months after treatment of inhaled steroids, then reassess risk

Mild: no symptoms, but a significant fall in FEV₁ after >15 ml 4.5% saline: no treatment but dive at risk.

Two presentations as part of the Christchurch Hospitals clinical meeting

Lung Transplantation, the St Louis experience & hopes for a cure; Professor Stephen Shapiro, Washington University School of Medicine, Missouri USA

Pneumococcal Disease in NZ-where to with immunisation? Assoc professor Stephen Chambers, Infectious Diseases, Christchurch Hospital

The TSANZ Scientific Symposium on asthma was held in the afternoon

Asthma epidemiology: The International Study of Asthma & Allergies in Childhood (ISAAC) Study

Assoc Professor Asher, University of Auckland

Pharmacogenetics of Asthma: the Role of the *B* receptor

Assoc. Professor Robin Taylor, Dunedin School of Medicine/ Dr M Kennedy, Christchurch School of Medicine & Health Sciences

Non-isotonic Challenges & Clinical Asthma

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Dr Sandy Anderson, Royal Prince Alfred Hospital, Sydney

The day finished with a key note lecture from Professor Richard Casaburi, Professor of Medicine, UCLA, California; 21st Century Therapies for COPD.

Discussed were new classes of long acting bronchodilator therapy, benefits of oxygen therapy, pulmonary rehab, studies on the use of testosterone for treatment of muscle dysfunction which limits exercise capacity, lung volume reduction surgery & possible advancements for the future.

On the lighter side of Friday, when in Christchurch do what the Greeks do.....dance on barrels, limbo to your limits, Zorba round the streets. A great casual night at Santorinis.

The Cardiopulmonary Exercise Symposium, Christchurch 25 Aug 2001.

The symposium on Saturday 25 August organised by Maureen Swanney was very well attended by over 40 participants & was a very informative day.

Presented by

Professor Richard Casaburi, Professor of Medicine, UCLA California and

Professor Brian Whipp, St Georges Hospital Medical School, London

The day began with a lecture from Professor Whipp on the physiology of cardiopulmonary responses to exercise.

Professor Casaburi then presented with style and wit a wide variety of topics over the course of the day, which included practicalities of testing, interpretation of data & new advances in treating disease that limits

exercise tolerance.

- Methodology for Cardiopulmonary exercise testing
- Exercise testing in the differential diagnosis of heart and lung disease
- Data display for cardiopulmonary exercise testing
- Case presentations (examples presented by Maureen from the Christchurch laboratory)
- The utility of exercise testing in pulmonary rehab
- Evidence for skeletal muscle dysfunction in patients with COPD
- New strategies for improving exercise tolerance in COPD.

The data display for CPEX was particularly relevant for those performing tests in the lab. Unfortunately some case presentations for interpretation were cut short due to time limitations.

A 3-day comprehensive course on exercise testing & interpretation is offered at the Harbor-ULCA Medical Centre in California twice yearly.

I would like to acknowledge Maureen Swanney for her great organisational skills on the Local Organising Committee for the Scientific Meeting, and in organising the Cardiopulmonary Exercise Symposium. Maureen has promoted the ANZSRS links with the TSANZ enabling ANZSRS NZ members to share the benefits of the 2nd joint annual meeting.

The exercise symposium has been a goal of Maureen's for several years, since she participated in the 3-day course in California. It was a great success with a large & varied attendance & would have taken a lot of time and effort to co-ordinate.

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Sue Filsell, CRFS
 South Island Board Member
 Dunedin, NZ

ANZSRS Business Meeting

An informal business meeting was held in the afternoon, attended by 20 members including 6 from Australia. Members were introduced to the NZ board members Sue Filsell & Caroline Knowles, the ANZSRS executive, President & Treasurer Brenton Eckert & Geoff Foote respectively & the ANZSRS representative on the TSANZ professional standards sub committee, Paul Guy.

Branch activities

NZ board members have been exploring options for setting up an e-mail discussion group, a forum which allows group participation in information sharing and discussion where everyone sees what others have to say, all e-mail responses being viewed by the group. It would be a useful form of communication for asking or giving advice such as opinions regarding new instrumentation, accreditation, references for methods etc. Caroline has a contact who may be able to set this up at a minimal cost. There are also various free sites for setting up a group eg Yahoo Groups. As ANZSRS is a relatively small society Brenton suggested the discussion group could be extended to all members as an adjunct to the website. A group moderator would need to maintain user and message control.

The website: Sandy Anderson made a welcome suggestion to include standardised protocols on the ANZSRS web page, for example tests for measuring bronchial hyper-responsiveness, hypoxic flight simulation to name a few. There are obvious benefits for all labs to have them easily accessible in one location.

Feedback from the President & Treasurer:
 The Society which has been granted tax

exemption, is in a healthy position to fund initiatives from the previous executive re **Travel Grants**; consider applying for next **ASM, Cairns, 22 March 2002**. Funds available for presenters, the amount depending on money accessed from other sources.

Education scholarships; applications due Nov 30 2001 for 2002. This includes 50% of fees for the Post Grad Certificate/Diploma in Respiratory Science, Charles Sturt University.

CRFS Credential; next exam will be held 23 Nov 2001, applications closing on 26 Oct.

There were several comments from the membership on the importance of gaining the credential before considering lab accreditation, particularly senior staff.

Paul Guy reinforced this culture with comments on raising the lab profile & how pulmonary function staff view themselves within their own organisation.

TSANZ accreditation; most labs in NZ are working towards achieving this goal.

TSANZ/ANZSRS Physiology Working Group. Dr Ken Whyte from Greenlane Hospital, Auckland has initiated the process of setting up a physiology laboratories working group. It is proposed to be a small group composed of at least one scientist/technician & one physician with aims to develop channels of communication between ANZSRS & TSANZ in NZ, facilitate accreditation & set up a database of labs, staff & equipment. A survey has recently been circulated to all laboratories in NZ.

Australian and New Zealand Society of Respiratory Science



Education Scholarships

- ANZSRS Scholarship for Tertiary Study
 - ANZSRS Research Grant

Scholarships valued at \$2000 or 50% tuition costs, whichever the lesser, will be awarded per year

ANZSRS study grants have been established to support the development of the members of the Society. The grant towards Tertiary study tuition costs was designed to support members completing the Graduate Certificate / Diploma or Masters of Respiratory Science at Charles Sturt University. Other courses will be considered if deemed to be relevant by the Executive. Applicants must be members of the Society for at least 2 years, must be accepted for the course, hold a full time position and have received less than 50% of tuition costs from their employing institution.

The Research Grant is designed to foster the development of academic excellence amongst members who may not have alternative means of support. The grants will be awarded for projects that will lead towards improved application of Respiratory Science to the investigation and understanding of patient conditions. Applicants must have been members of the Society for 5 years and hold the CRFS credential. Any research project must have been approved by the Head of the Department in which it will be completed and by the local Ethics committee, and the requested funds must not include any salary costs. It is expected that any such project will be presented at the next Annual Scientific Meeting of the Society.

Applications must reach the Secretary by 30 November of the year prior to study / award. The outcome of the application will be advised by the end of January following the application.

ANZSRS GRANT APPLICATION FORM

GRANT APPLIED FOR:

Circle one:

Tertiary Study

Research

Amount requested: _____

Name
Year of joining society:
Qualifications held:
When attained CRFS:
Course enrolled for:
Have you previously attempted this course?
Have you previously held an ANZSRS awards? (Please specify, including year)
Where are you employed and for how long?
Level of funding provided by institution:
Amount requested:
Reason for applying:

Attachments:

- Letter confirming course acceptance
- Letter from HOD confirming position, salary and any institutional funding offered
- Detailed research proposal
- Letter confirming HOD research approval
- Letter confirming Ethics committee approval
- CV

I assert that the information provided above is correct and that I will adhere to the conditions of the awards. In the case of a research grant I undertake to report the progress of the research to the next Society Annual Scientific Meeting.

Name

Signature

Date

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CRFS Examination

A reminder, the final CRFS examination for 2001 will be held on *November 23rd*. Best of luck to all candidates preparing for the exam.

For details of the examination and application forms, please contact:

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You are invited to contribute short articles, meeting reports and calendar details etc.

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