

Mouthpiece



President's Address

Inside this issue:

ANZSRS Survey	11
EMAIL List	10
Executive Update	2
From The Editor	2
Jobspot	5
Letter to the Editor	3
Profilers	9
Publication Rates of Abstracts	6
Scientific Writing	8
Survey	11
Websites of Interest	5

Yah!! Spring is here and before we know it, the new millennium. Our next Annual Scientific Meeting in Melbourne 2000 is also approaching and I am pleased to report that most of the organising has already taken place thanks to the Victorian organising committee. Our invited guest speaker is Associate Professor Robert Jensen who is a fellow scientist from Salt Lake City.

This is our third edition of Mouthpiece for 1999 and I wish to thank Belinda for her continued dedication in the role as Editor. Please support her by contributing to Mouthpiece, the success of which is up to all members.

Congratulations to all members who have recently passed the CRFS examination and we encourage those of you who have not yet attempted this credential to do so, especially the senior members of the Society. I have noticed a few members are adding CRFS after their name on their correspondence. This is a good way of promoting the credential and is to be encouraged. I wish to thank and congratulate Stephen West for his dedication and ongoing contribution to the Society with CRFS examinations. Stephen does a superb job and is always willing to assist members with information. I applaud Stephen's generous offer to members to visit his laboratory for practical experience in areas of respiratory testing not carried out in their institution prior to sitting the CRFS examination.

We have had a very poor response to the request for information to construct an ANZSRS register. At the AGM, the general consensus was that it was a good idea. Please take a few minutes to fill out the form and return it to Kevin Gain. This register will be useful for networking within the Society and would be helpful to all members seeking information and advice from members with particular expertise. Not all members are aware of the special talents and expertise that exist within this society.

The executive is preparing a handbook for our use and for future executive committees. This document is an attempt to streamline society business. We have found that some issues are confusing to members and therefore open to criticism. By having the process in writing Society matters will be more efficient. This document will be handed on to the next executive and will no doubt be updated and improved with each new Executive Committee term over the years.

Kind regards and best wishes to all.

*Maureen Swanney, CRFS
President*

From The

editor

No doubt members will have noticed the altered format of Mouthpiece. We are aiming for a more professional publication, and I hope you will agree this is a step towards that goal. Alterations to the style and format will continue, as the newsletter is refined with each edition.

Thank you to those who have contributed to this edition – both published and unpublished submissions. I greatly appreciate the time that is spent writing the articles. Fortunately, the standard of writing is generally very high, so for me, this is as much an educational opportunity as an editorial role.

This edition will see the final publication of the Email List, at least for the immediate future. We seem to have captured most, if not all of those with an email address. Should you acquire, or change an email address in the future, please forward this on to Kevin Gain to ensure records are updated.

Executive Update

The Executive met at the end of July in Christchurch. It was our pleasure to admit a number of new members into the Society. The new members are:

Dr Geoffrey Tyler, Newcastle, NSW (Ordinary)
Ms Tania Adamson, ARMC, Melbourne, VIC (Associate)
Ms Jacqueline Tonks, Queensland Pulmonary Diagnostics, Brisbane, QLD (Associate)
Ms Marzi DeGaris, Melbourne Pathology, Melbourne, VIC (Associate)

Science and Technology (NZ) Ltd, Dunedin, NZ (Sustaining)
Medic Corporation, Lower Hutt, NZ (Sustaining)
Edward Keller, Waterloo, NSW (Sustaining).

Welcome to all these new members and we hope that you will find membership of the Society beneficial.

It is encouraging to see our Suppliers applying to join the Society and hope to see a lot more applications for Sus-

Mouthpiece is an accessible medium whereby members can keep informed of issues relating to the society and the society's members. I encourage members to use this medium to their advantage by submitting any relevant information.

Suggestions and comments are always welcome.

Belinda Breust, CRFS
Editor

Congratulations to Jeff Pretto who recently celebrated his 40th Birthday!

taining Membership. This is an excellent way of fostering interaction between ourselves and the Companies who support us.

There have only been two entries received for the Logo competition as this is written. Both have come in at the last minute. The Executive has decided to extend the deadline to November 1st. This will allow time for consideration at the next Executive Meeting and to prepare entries for presentation to the AGM in Melbourne. To those who have taken the time to submit an entry, thank you and well done. We still want to hear from all the other latent graphic artists in the Society. The more entries we get, the better will be the decision.

Kevin Gain, PhD
Secretary

Letter to the Editor

9th July, 1999

Ms Belinda Breust

Editor, Mouthpiece

(Australian and New Zealand Society of
Respiratory Science, Inc.)



Thank you for giving members the opportunity to contribute to the discussion, "Pulmonary function testing and barrier filters: Do we really need them?" (Mouthpiece, July, 1999).

Although I agree that one can argue both for (ie. Sean Homan) and against (ie. Mike Brown) the use of filters, we have a duty of care to ensure that the safest possible environment is provided for all our patients and staff. It seems to me that filters can help provide this. Rather than enter into a lengthy debate, let me briefly highlight the main points in favour of filters, in addition to those already mentioned:

- 1) Cross-infection via lung function testing equipment is only possible after the equipment is first contaminated. The best filters reduce the risk of contamination alone by 99.7% at 750 L/min¹. For cross-infection to occur the micro-organisms have to pass through two filters. Thus one would expect filters to reduce the risk of cross-infection by greater than 99.99%. I interpret this as a significant reduction in risk. Flow sensors are now located closer to the mouth than they once were, thus contamination is more likely nowadays, especially since such sensors are principally used for forced manoeuvres. How do we deal with these risks? Do we clean, disinfect and thoroughly dry the circuit sensor before each patient (i.e. universal precautions)? Or do we have several clean flow sensors and circuits on hand? This is far from clear and is one of the main reasons why I be-

"Flow sensors are now located closer to the mouth than they once were, thus contamination is more likely..."

lieve that filters should be used.

- 2) Filters offer an inexpensive method for minimising the risk of cross-infection. We have shown that the use of filters is the most cost-effective method², compared with the TSANZ guidelines³. This is true, even if the equipment is cleaned and disinfected periodically such as weekly. Thus, I disagree with the argument that cost savings have not been clearly demonstrated. Obviously, if the protocol one uses in their laboratory does not include cleaning all exposed surfaces, including the flow sensor, between patients, then cost of cleaning and disinfection will be reduced. However, how effective will such a regimen be?
- 3) Filters protect the whole instrument, whereas cleaning and disinfecting usually only protects proximal parts of the circuit and then only intermittently unless you clean everything between each patient. We have also found that filters can preserve calibration, presumably by protecting the flow sensor from the deposition of exhaled droplets etc.
- 4) The life span of equipment may be extended because of the reduced handling and exposure to damaging chemicals.

I am aware that there is little direct evidence in the literature of cross-infection via lung function testing equipment. However, there is evidence that patients can contaminate the equipment^{4,5} indicating that cross-infection could occur. Most laboratories test many hundreds, if not thousands of patients per year, some, albeit usually a small percentage, are potentially infectious or have a compromised immune system, and therefore pose a threat or are at particular risk themselves. The point is that **we cannot identify** these patients. Therefore, to provide the safest possible environment for our patients and staff, it seems logical that we should use a barrier filter to protect patients, staff and equipment.

Letter to the Editor (cont...)

Also, when considering cross-infection during lung function testing, one has to remember that there is no data in the literature on the effectiveness of the TSANZ guidelines (and, I assume, all the variants of it that are actually used) at reducing the risk. It might well prove to be less protective than using an effective filter together with periodic cleaning and disinfection. We simply do not know whether our patients are infectious or at increased risk; therefore, I agree that we must apply a **universal approach** to infection control³, that is, clean and disinfect or use a filter between patients.

We must remember that lung function tests often require patients to perform maximal inspiratory and expiratory breathing manoeuvres and to rebreathe via complex breathing circuits and sensors that are difficult to effectively clean and disinfect between patients. During these tests, patients often generate flows in excess of 12 L/min that can easily mobilise saliva and airways mucus and create aerosols by entrainment of fluid lining the mucous membranes that can be deposited into lung function

equipment.

Finally, would **you** be willing to inhale rapidly from a pneumotachograph placed very close to the mouth after a patient (? infectious) had performed several forced expiratory manoeuvres through it? I would after if it was thoroughly cleaned and disinfected OR immediately if the patient and myself used a filter.

Yours sincerely,
David P Johns, PhD
Head Scientist

- 1) Kendrick AH et al. Assessment of Spiroguard and Vitaograph bacterial filters for use with lung function equipment. Proceedings of the 1998 Annual Meeting of the American Thoracic Society, Chicago, Illinois, USA.
- 2) Side EA et al. A cost-analysis of two approaches to infection control in a lung function laboratory. Aust and NZ Journal of Med 1999; 29:9-14.
- 3) Crocket AJ and Grimmond T. Guidelines for infection control in a respiratory function laboratory – A position paper of the Thoracic Society of Australia and New Zealand. Thoracic Society News. 1993; 4: (1):6-7.

Extended Deadline!



First prize is **A\$300** with 2 runner-up prizes of **A\$100** each.

Please note that the deadline for submissions in the LOGO competition has been extended to November 1, 1999.

Please send entries to: Kevin Gain (Secretary ANZSRS),
Dept. of Respiratory Medicine, Wellington Hospital,
Private Bag 7902, Wellington South, NZ
email: Kevin.Gain@wnhealth.co.nz

Job spot

Hospital Scientist- Permanent Position Westmead Hospital Respiratory Function Laboratory



Westmead Hospital is one of Sydney's major teaching and referral hospitals. The Respiratory Function Laboratory is a busy, service-orientated facility providing an extensive range of lung function tests to hospital inpatients and outpatients, and privately referred patients. The laboratory is accredited, has a reputation for excellence and plays an active role in professional training.

The main role of the successful applicant will be the performance of routine respiratory function tests. Self-motivation, flexibility, judgement and problem-solving ability are the key requirements.

DUTIES: Calibration and preparation of equipment/materials used to perform respiratory function testing. Performance of respiratory function tests. Education of patients with respiratory disease. Quality Assurance activities. Participation in teaching programs and research projects.

QUALIFICATIONS:

Essential: Science degree or equivalent with a major in physiology. Basic computing skills.

Desirable: Effective communication and interpersonal skills, familiarity with Microsoft software, experience with procedures used to measure respiratory function, Certified Respiratory Function Scientist.

HOURS: 0800-1700 Monday to Friday (9-day fortnight)

SALARY & CONDITIONS: In accordance with the Public Hospitals Employees (State) Award

ENQUIRIES: Mr Stephen West pH: 02 9845 6044

APPLICATION: Employee Relations Department, Westmead Hospital, Westmead 2145

Websites of Interest

American Association for Respiratory Care (AARC) Clinical Practice Guidelines

- ◇ Spirometry, 1996 Update Reprinted from Respir Care 1996; 41(7):629-636.
http://www.rcjournal.com/online_resources/cpgs/spirupdatecpg.html
- ◇ Static Lung Volumes Reprinted from Respir Care 1994; 39(8): 830-836.
http://www.rcjournal.com/online_resources/cpgs/slvcpag.html
- ◇ Body Plethysmography Reprinted from Respir Care 1994;39(12):1184-1190.
http://www.rcjournal.com/online_resources/cpgs/bplthcpag.html
- ◇ Single-Breath Carbon Monoxide Diffusing Capacity Reprinted Respir Care 1993;38:511-515.
http://www.rcjournal.com/online_resources/cpgs/scmdccpg.html
- ◇ Bronchial Provocation Reprinted from Respir Care 1992;37:902-906. http://www.rcjournal.com/online_resources/cpgs/brprocpag.html
- ◇ Pulse Oximetry Reprinted from Respir Care 1991;36:1406-1409). http://www.rcjournal.com/online_resources/cpgs/pulsecpag.html
- ◇ Oxygen Therapy in the Home or Extended Care Facility Reprinted from Respir Care 1992;37:918-922. http://www.rcjournal.com/online_resources/cpgs/othefcpag.html
- ◇ Exercise Testing for Evaluation of Hypoxemia and/or Desaturation Reprinted from Respir Care 1992;37:907-912). http://www.rcjournal.com/online_resources/cpgs/etehdcpag.html
- ◇ Transcutaneous Blood Gas Monitoring for Neonatal & Pediatric Patients Reprinted from Respir Care 1994;39(12):1176-1179. http://www.rcjournal.com/online_resources/cpgs/tbgmcpag.html
- ◇ Assessing Response to Bronchodilator Therapy at Point of Care Reprinted from Respir Care 1995;40(12):1300-

PUBLICATION RATES OF ABSTRACTS PRESENTED AT ANZSRS ANNUAL SCIENTIFIC MEETINGS.

Numerous research studies are presented each year as part of the ANZSRS conference agenda, but it seems very few of these ever reach publication. 121 abstracts were presented during 1991 to 1998, as either oral or poster presentations at ANZSRS Annual Scientific Meetings. According to my recent Medline search based on first and last author, just under 25% of these presentations were subsequently published in some format ie. original article, letter etc. Is a "conversion rate" from abstract to publication of 25% acceptable?

Publication rates of abstracts initially presented at major Spine Specialty Society meetings in the United States revealed an overall publication rate of 43.5%. A similar review of ophthalmology abstracts revealed a publication rate of 51%. A Medline search of abstracts presented at the 1994 TSANZ Annual Scientific Meeting revealed that approximately 50% of oral presentations and 40% of poster presentations were subsequently published. (1994 appeared to be a good year as 38% of ANZSRS abstracts presented at that meeting were subsequently published). In light of these comparative statistics, should we, as a society, be aiming for a higher publication rate? Perhaps the question we could pose is "why don't more of our abstracts reach publication?" As one of the prime offenders (1 out of 10!), perhaps I can offer my "excuses". Regardless of the content, relevance or scientific merit of any ANZSRS presentation, there is an enormous feeling of finality or closure upon completing the presentation. In my case, the lead-up to each ASM is a mad rush to complete the collection of data, analyse results and write the abstract. This is followed by more chaos (generally about 2 weeks prior to the ASM) to prepare the slides or poster. Upon getting to



the ASM and completing the presentation, there is a great sense of relief and a tendency to forget about it completely. I have followed this pathway many times despite a solemn vow to proceed that step further to publication. I promised Professor Ann Woolcock I would write up at least one of my presentations, ("Diurnal Variation in Airway Calibre"), after hearing her make reference to our work at the 1996 American Thoracic Society Conference. Sadly, I have only my guilty conscience to show for this promise.

Another possible excuse for not proceeding to publication is the feeling that the *type* of presentation is not worthy of publication. For example, I felt that my 1991 "Evaluation of the Quinton Q-Plex Cardio-Pulmonary Exercise System" was of benefit only to ANZSRS members considering purchasing an exercise system. As such, there was little value in submitting the data for publication. Many other authors have presented similar abstracts over the years - "Evaluation of...", "Assessment of..." or "Comparison between...", and few of these have been published - perhaps they felt the same way I did. However, this type of presentation is not mutually exclusive with publication. Recent examples include, "Assessment of the Airwatch lung function monitoring system"³, "Evaluation of the use of concentrators for domiciliary oxygen supply for less than 8 hours per day"⁴, "Evaluation of a new ambulatory spirometer for measuring forced expiratory volume in one second and peak expiratory flow rate"⁵.

One other abstract I had made a conscious decision not to write up was the 1997 presentation "Linear extrapolation of the dose-response curve in asthma challenge". I honestly believed this study lacked originality and was of limited scientific

Should we, as a society, be aiming for a higher publication rate? Perhaps the question we could pose is, "why don't more of our abstracts reach publication?"

PUBLICATION RATES OF ABSTRACTS PRESENTED AT ANZSRS ANNUAL SCIENTIFIC MEETINGS

merit. Imagine my surprise, some 18 months after this ASM, when a publication entitled "Methacholine PC20 Extrapolation" appeared in letter format in Chest. What I had considered of little value had been submitted and published by other authors well after we had presented our initial findings. This is not my first such experience. I wonder how many other members have seen similar work published by other authors some time after their initial ANZSRS presentation?



and dedication of the author.

Since researching this article and realising the extent of my deficiencies, another 3 papers originating from this laboratory, have been written and submitted for publication. Alas, my promise to Professor Woolcock remains unfulfilled, but I'm thinking about it!

Brenton Eckert

Senior Respiratory Scientist

So, having detailed my experiences regarding lack of publication, what is my advice to those contemplating "write-up"? The first step is to recognise your limitations, then motivate yourself to do something about it. (Developing and maintaining this motivation is a lot easier if you have departmental support.) In most situations, everyone will agree that writing an article for publication is a wonderful idea. However in reality, it may end up with a low priority behind the routine clinical workload. If possible, provision for some quality time dedicated to writing the article should be set aside soon after the initial abstract presentation. Regular meetings with supervisors and co-authors help to ensure the process continues. Finally it is important to learn how to write a scientific paper for publication. The accompanying article from Alan Crockett provides an excellent start. Remember too, that within our society, there are members such as Alan, David Johns and Sandy Anderson (all with excellent abstract to publication rates) who are a valuable resource, and I'm certain would only be too happy to assist any budding author.

"The first step is to recognise your limitations, then motivate yourself to do something about it."

1. Wang JC, Yoo S, Delamarter. The publication rates of presentations at major Spine Specialty Society meetings. *Spine* 1999; 24(5):425-7.
2. Scherer RW, Dickersin K, Langenberg P. Full publication of results initially presented in abstracts. A meta-analysis. *JAMA* 1994; 272(2): 152-62.
3. Martin RJ, Pak J, Kunselman SJ, Cherniak RM. Assessment of airway lung function monitoring system. *J Allergy Clin Immunol* 1999; 103(3): 535-6.
4. Jackson M, Shneerson J. An evaluation of the use of concentrators for domiciliary oxygen supply for less than 8 hours per day. *Respir Med* 1998; 92(2): 250-5.
5. Johns DP, Abramson M, Bowes G. Evaluation of a new ambulatory spirometer for measuring forced expiratory flow in one second and peak expiratory flow rate. *Am Rev Respir Dis* 1993; 147(5): 1245-50.
6. Jokic R, Davis EE, Cockcroft DW. Methacholine PC20 Extrapolation. *Chest* 1998; 114(6): 1796-7.

In summary, whilst there are excellent resources available to aid in scientific writing, excuses abound, and the rate limiting step will invariably be the motivation

WRITING SCIENTIFIC PAPERS

One of the key issues that was discussed by a group of respiratory technologists and scientists over morning tea, more than 20 years ago, was the need to communicate what we did in our day to day working life. This is one of the reasons for the foundation of ANZSRS or ASRT, as our Society was originally known. Dr David Johns also produced an excellent forum (Volume) for the publishing of our work. Sadly, one of the major problems in the life of this journal was the lack of written papers submitted by the membership of our Society.

A number of steps precede the publication of a scientific paper. First comes an idea, which is researched in the library to determine what other investigators have found. Second, one's own research is conducted and written up in a format selected to match the characteristics of the research and the requirements of the journal chosen for initial submission. Third, the written paper is reviewed by the journal to ensure accuracy, justify publication, and establish the value of the research and its contribution to current knowledge. Fourth, the manuscript is revised in order to correct, clarify, and include suggestions of the reviewers. Finally, the journal disseminates the information to an interested readership. A careful approach to each of these steps enhances the likelihood of publication; but, more important, it provides a basis for critical analysis of the research.

A great deal of biomedical literature has been poorly written for a variety of reasons. Maybe it is because we never really "write it as it really happened". We are constrained to produce a paper that fits to the IMRAD (**I**ntroduction, **M**ethods, **R**esults and **D**iscussion). So my "first" piece of advice is not to concentrate too much on emulating the papers that have been published in the past. Read them critically. Do you understand what the author has written? Which papers are easier to read than others, and why?

My "second" piece of advice is to get hold of some of the more recent texts on writing biomedical research papers. In particular Mimi Zeiger, "Essentials of Writing Biomedical Research Papers"¹ is an excellent tool containing a wealth of information that will help you to get things going.

In the Introduction of your paper, Zeiger recommends that



you use a "funnel approach". That is start broadly and then narrow. The opening sentence should be broad statement of what is known. This is followed by a more specific statement about what is unknown, then this is followed by your research question. Finally, your introduction is concluded by some statement, not detail, about your experimental approach. If you have applied for a research grant to fund your work then all this material will have been included in you proposal.

The Methods section will contain a chronological record of what you did to answer research question. Many Methods Sections end with a statement about the statistical methods used which, after all, is generally what you did last after you have collected all you data.

In the Results section you should document your data in the same chronological sequences as your Method Section. Generally the data is presented starting with the least import to the research question. However, each of the paragraphs should state an important result in the first sentence with the less significant observations and supporting details in the remaining sentences of the paragraph.

"A great deal of biomedical literature has been poorly written for a variety of reasons."

The most essential guideline for the Discussion is to answer your research question in the first sentence of the first paragraph. Clearly, the "answer" is the most important statement in the paper and need to be in the most

prominent position. Supporting evidence then follows this opening statement. The middle of the Discussion covers the most to the least important. Restating the answers and reinforcing the message of your paper generally concludes the Discussion. In some cases this can be virtually identical to the first paragraph. This replication is important because if the answers, to your research questions" were different from the beginning to end of this section we would not know which one to believe.

Writing successful articles is a form of mental exercise that has to be practised to be successful.

Alan J Crockett
Chief Medical Scientist

Profiler

David Johns

This is the 25th year of David's career in respiratory physiology and over these years he has developed an authoritative knowledge and expertise.

1969-1974 Assistant Scientific Officer, Department of Nutrition, Laboratory of the Government Chemist, London, UK.

1974-1978 Medical Physics Technician, Lung Function, Brompton Heart and Chest Hospital, London, UK.

1975 Graduated in Applied Biology and Nutrition (distinction). Southbank Polytechnic, London, UK.

His interest in respiratory physiology developed while working at the Brompton. To quote David, "Professor David Denison was a great teacher" who significantly influenced David and his later approach to teaching. David's achievement at the Brompton was to set up a single breath expired CO₂ test and, in particular, study phases 4 and 5.

1978-1989 Scientist-in-Charge. Respiratory Laboratory and Multi-discipline Exercise Laboratory, Austin Hospital, Heidelberg, Victoria.

In 1978, the Austin Respiratory Laboratory possessed the "Rolls Royce" of wet spirometers, the twin belled Godart Pulmotest which David used for pulmonary function testing and for research projects. Data extraction and calculations were performed with pen, ruler and sliderule. Over time he acquired individual measuring devices and recorders and assembled the systems to record flow-volume curves, assess response to exercise and perform other tests. In 1982 he was delighted when the *Journal of Applied Physiology* published his article on gas viscosity measurement (2).

1981-1989 Board member of the Society.

He has been a member of the Society since 1981 when the Constitution was adopted. As one of two Victorian Board members, he regularly brought together local members and gave them an opportunity to present their work and debate the issues at hand.

1982-1987 Editor of VOLUME.

In six years, David aided by Peter Rochford, produced 21 editions of the Society journal, *VOLUME*. This was an enormous task during which, by his own admission, his knowledge, spelling and grammar improved dramatically. The mailing list included the UK and Canada

David developed an explosive decompression device (EDDE) based on one described by Petusevsky et al. In 1982, EDDE was lent to the Alfred scientists who enthusiastically used it for QC, development and evaluation. One evaluation was published later in *VOLUME*.

In 1984, he and his colleagues used the journal to distribute a questionnaire on the gas transfer test and 25 labora-

tories responded. The results were published in the journal in 1985 and demonstrated large inter-laboratory variability prompting the Society to adopt a position paper on minimum guidelines in 1992.

1989-1993 Senior Scientist, Lung Function Laboratory, Alfred Hospital, Prahran, Victoria.

1993- Head Scientist, Dept. of Respiratory Medicine and Monash University Medical School, Victoria. **Honorary Lecturer**, Dept. of Physiology, Monash University, Clayton, Victoria.

The Alfred Hospital and his later Monash University appointment offered an irresistible opportunity to pursue his growing interests in both research and teaching. He collaborated with Professor Richard Harding in the Department of Physiology, Monash University on the respiratory development of newborn lambs.

1991-1994 Board member of the ANZSRS Society.

1995 Certified Respiratory Function Scientist (ANZSRS)

He has continued to promote the Society and the role of the respiratory scientist. Also in 1995, David in collaboration with Professor Rob Pierce, published a spirometry handbook, which has achieved a worldwide distribution of over 50,000 copies.

1998 Doctor of Philosophy: "Novel Method for Measuring Anatomical Dead Space as a Potential Means of Assessing Airway Distensibility." Faculty of Medicine, Monash University, Clayton, Victoria.

Dr Sandra Anderson has been an advocate of professional qualifications since the Society was formed and David finally took her repeated advice and completed his PhD.

As a scientist he can be described as a creative thinker with a very wide interest in and enthusiasm for respiratory physiology and measurement. He is an outstanding member of the Society and it will be interesting to observe his future development.

Judy Roget
ANZSRS Member

1. Johns DP, Pretto JJ, Streeeton JA. Measurement of gas viscosity with a Fleisch pneumotachograph. *J Appl Physiol* 1982; 53(1): 290-293.
2. Petusevsky ML, Lyons LD, Smith AA, Epler GA, Gaensler EA. Calibration of Time Derivatives of Forced Vital Capacity by Explosive Decompression. *Am Rev Respir Dis* 1980; 121: 343-350.
3. Roget JA, Owen CM. The Evaluation of a Computerised Spirometry System. *VOLUME* 1983; 3(3): 4-7.
4. Johns DP, Rochford PD, Imberger H. Questionnaire based study of inter-laboratory variability of the single breath TLCO test: Instrumentation, technique, calculation, quality control and predicted values. *VOLUME* 1985; 5(4): 4-13.
5. Johns DP, Pretto JJ, Rochford PD. Minimum guidelines for the measurement of single breath carbon monoxide transfer factor and alveolar volume. Position Paper adopted by ANZSRS, April 1992.
6. Pierce R, Johns DP. Spirometry: The measurement and interpretation of

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CRFS Examination

The 11th certification examination was held on July 2nd, 1999. Four candidates sat the exam, and of those, three were successful in achieving credential.

Congratulations to;

Sue Filsell, Dunedin NZ

Dr Geoff Tyler, Newcastle NSW

Belinda Breust, Brisbane QLD

Results of the exam held on September 4th will be published in the next edition. There will be another certification examination on the 17th March 2000.

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

Stephen West

Clinical Measurement Dept.

Westmead Hospital

Westmead NSW 2145

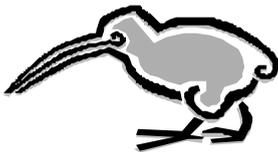
You are invited to contribute short articles, meeting reports and calendar details etc. These should be sent to :

Mail: B. Breust, Respiratory Laboratory Level A3, Princess Alexandra Hospital, Ipswich Rd, Woolloongabba, QLD, 4102.

Ph: 07 3240 2046.

Fax: 07 3240 5899.

Email: breustb@health.qld.gov.au



NZ Regional Meeting

A regional meeting was held at Dunedin Hospital on 30 July 1999. It was attended by 13 scientists/technicians from Dunedin, Christchurch, Wellington and Invercargill and provided a great opportunity to meet resourceful respiratory laboratory staff.

This meeting incorporated a whole day's program, in consideration of the distances travelled by regional members. The program consisted of 1) an opportunity to sit the CRFS examination, which was completed by one technician and 2) 5 interesting and informative presentations;

- Occupational exposure to wood dust: proposed research at University of Otago.
- Community lung function testing: thought provoking issues which could potentially compromise standards.
- 4.5% hypertonic saline challenge-the trouble with sputum: how mucous plugs can unexpectedly alter the dose response curve & reduce the repeatability of the

PD ²⁰.

- Pulse Oximetry: a summary of the results of a survey of health professionals at Christchurch Hospital to assess knowledge & the need for staff training. No chance for meeting attendees to sit back and escape being surveyed.
- Exercise testing in a COPD rehab program. Advantages of an externally paced shuttle test compared to the 6-minute walk.

Time allowed for a social drink at the Robbie before flights departed. Thank you to the NZ members for making a great effort to attend the meeting.

*Sue Filsell, CRFS
South Island Board Member*