



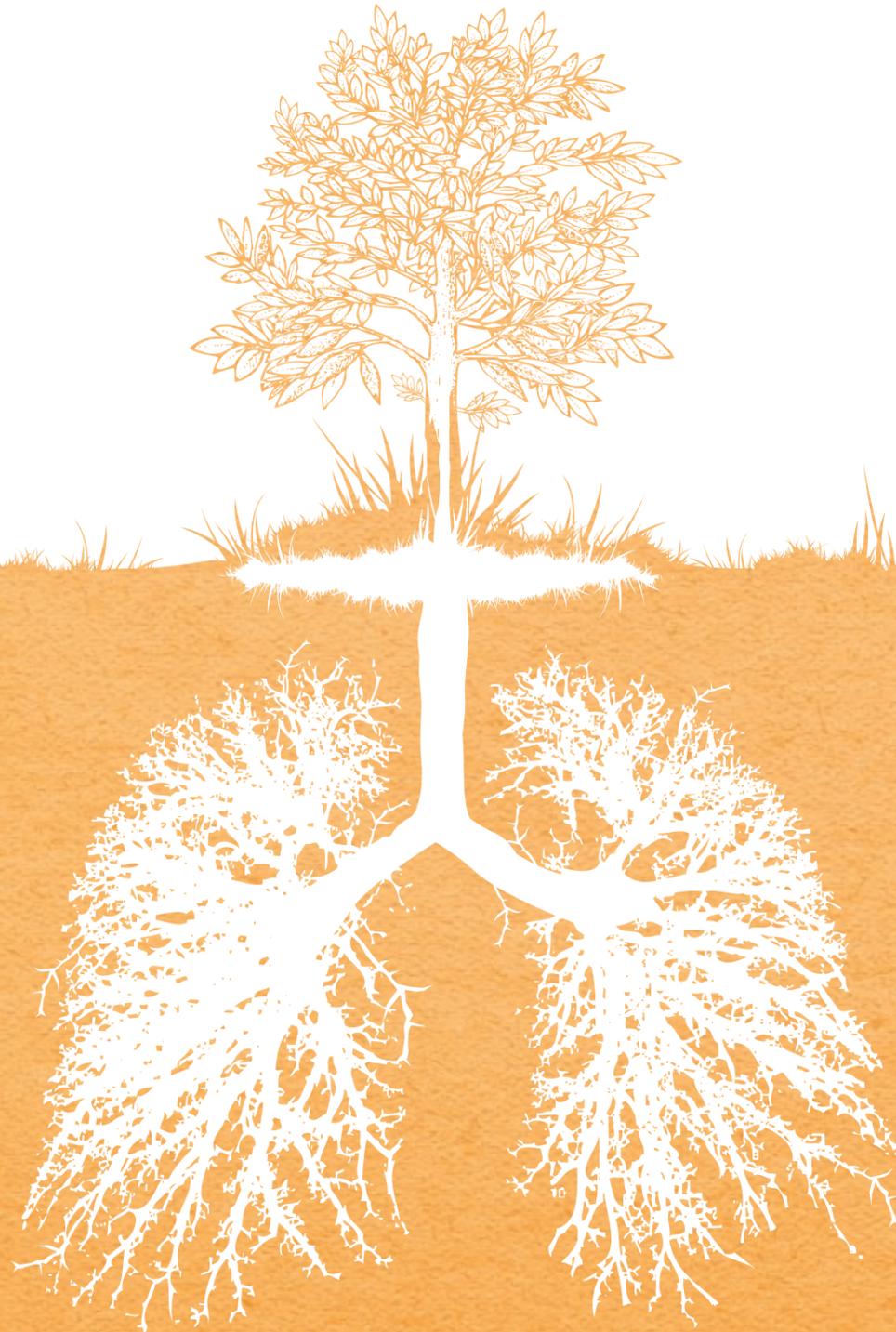
australian respiratory council
prevention and cure of respiratory illness



2007 Annual Report

No. 94

australian respiratory council
prevention and cure of respiratory illness



Our Mission

to develop and support innovative and effective approaches to research and development in lung health and to improve lung health in communities, with emphasis on disadvantaged groups.

Our Patrons

Her Excellency Professor Marie Bashir AC, CVO
Governor of New South Wales.

Sir Nicholas Shehadie AC OBE.

Our Vision

- Continue to build expertise in respiratory health
- Foster innovation in respiratory health research
- Deliver and measure positive impacts to communities and research
- Enhance ARC's role in the country as a unique non-government organisation in the area of lung health
- Advocate to improve respiratory health, particularly in relation to TB and smoking at state, national and international levels

President's Report

David Macintosh



The Australian Respiratory Council has clearly defined its direction and purpose and this is evidenced by the amazing work done by our great organisation. A summary of that work follows.

Research

ARC's Harry Windsor Grants Scheme continues to provide Australia-wide research funding. This year grants were awarded to Steven Bozinovski, The University of Melbourne, for the project *Cigarette smoke chemically modifies and inactivates lung innate immunity mediated by the bacterial recognition receptor, TLR4* and Dr Siobhain Brennan, The University of Western Australia for the project *Investigating markers of oxidative stress in young children with cystic fibrosis: a driving mechanism of pulmonary inflammation?* Detailed reports outlining the progress appear elsewhere in this report.

Dr Ingrid Laing continued as ARC's Ann Woolcock Fellow during the year. Ingrid is currently in her third year of a four year fellowship. Her work with children continues in Papua New Guinea – a comprehensive update appears elsewhere in this report. Ingrid is a keen ambassador and promotes ARC and its activities at every opportunity.



Projects and Partnerships

ARC continues to work in partnership in both Australia and overseas to deliver high quality programs in lung health with a particular focus on the control and prevention of TB.

Our community program has strengthened over the year and compliments our commitment to nurse training, a position which reflects ARC's belief in a holistic approach to improving health.

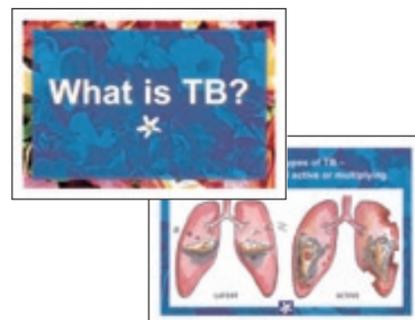
A Community Approach

ARC's nurse training project in Kiribati in 2006 highlighted the need for culturally appropriate strategies for awareness raising at the community level to support the Island's ongoing TB control and prevention work. In 2007, at the request of the Secretariat of the Pacific Community (SPC), the organisation coordinating the AusAID funded Kiribati TB Control Program, ARC implemented the delivery of a communication and drama training program for the Community DOTS Workers (CDWs). Theatre group, Wan Smol Bag, from Vanuatu, delivered training and developed the confidence and capacity of the CDWs during a 12 day Kiribati based workshop that culminated in the development of a play addressing stigma and compliance amongst young people as well as the production of a video for ongoing use. The play has been performed in various "Councils" around Kiribati and the video has been distributed to all the outer Islands.

There are plans for further work in community health in 2008 as well as an ongoing commitment to support SPC in the region (the Kiribati Drama Project is explained further in our Annual Report).



The communication and drama skills of the CDWs are complemented by their use of the Pacific adapted 'What is TB?' flipchart. In addition to its use in Kiribati, the flipchart has been distributed and is well regarded among nurses and community educators in the Northern Pacific. We are in the process of translating this popular resource into various languages and at the same time, are developing an accompanying pamphlet and poster.



A Health Centre Approach

As part of the Pacific Regional Tuberculosis Control Project of the Secretariat of the Pacific Community (SPC), ARC has provided technical support for the laboratory service supporting the National Tuberculosis Program (NTP) in Samoa since 2001. The last visit, October 2006 was to provide culturally and technically appropriate training in TB diagnosis to laboratory technicians at the TTM Hospital. In addition, an on-site evaluation of the laboratory service was conducted. The training course proved successful with the keenness and interest of all students being reflected in their excellent results. The average result for the written test was 94% and for the microscopy test 98%.



November 2006 saw the commencement of a successful collaboration with the Centres for Disease Control and Prevention (CDC) at the Pacific Island TB Controllers Association (PITCA) meeting held in Honolulu, Hawaii where we delivered a two day workshop for nurses from the North Pacific. In 2007 in Pohnpei, Federated States of Micronesia we again conducted a two day workshop for nurses from the North Pacific. This annual workshop is part of a broader collaboration between ARC, CDC and SPC, a collaboration which has strengthened during 2007 with ARC committing to develop a training package for TB nurses and associated health workers for both the north and the south Pacific. The training package will be delivered over the next 2 years.



Tackling smoking rates among Aboriginal communities in NSW and WA

In 2007, ARC awarded two grants to Aboriginal organisations determined to reduce smoking rates in their communities. In NSW, the Aboriginal Health and Medical Research Council (AH&MRC) was awarded \$490,200 to implement a project that will trial the impact of employing and supporting specialist Tobacco Control Workers within Aboriginal Community Controlled Health Services (ACCHSs) to implement innovative, community based approaches to reduce smoking rates and smoking related disease in Aboriginal communities. This project will be implemented over two years in partnership with 12 ACCHSs, the NSW Department of Health, the National Heart Foundation, the Sax Institute and the Cancer Council of NSW. The project launch event in August highlighted the critical need for such an intervention and also the enthusiasm in the community for appropriate and innovative tobacco control strategies.

ARC is also happy to be co-financing with the Western Australian Health Promotion Foundation, 'Healthway', the Aboriginal Health Council of Western Australia's (AHCWA) "Beyond the Big Smoke: a clear vision for Aboriginal tobacco control in Western Australia" project. ARC has committed \$200,000 over two years to this important project that will implement a range of strategies to positively impact on smoking behaviour amongst staff and user populations of ACCHSs. The project recognises that targeting tobacco control has important implications for determinants of improved health outcomes for West Australia's Indigenous population and the participation of all of the state's 19 ACCHSs throughout the project period should contribute to significant project impact. External evaluation will measure the project's effect.

The team and Directors of ARC are excited to be supporting these important projects and wish the team at AH&MRC and AHCWA all the best of luck with their implementation.

Finances

Positioning the ARC to complete the work detailed in my report has been an expensive endeavour with a loss for the 18 months ended 31 December 2007 of \$176,860.

Net assets at 31 December 2007 were \$8.2m however, the deterioration of world financial markets since that date, have had a negative impact on our financial position. Hopefully this is a short term adjustment and our yield from investment will continue to provide the necessary funding for our work.

Despite having long term donors fundraising has not been an area of growth for us. In the latter half of 2007 it was decided to obtain external expertise in regard to formulating a Strategic Development Plan for Fundraising. The outcomes of the plan will be implemented in 2008. We have also updated our fundraising database management program which will allow us to communicate with our donors in a more meaningful way than previously. With these initiatives we look forward to a more positive outcome in 2008.

The Board

I would like to personally and on behalf of ARC thank each of our Directors for their contribution to our organisation. The time and effort by Directors has significantly reduced the costs that would otherwise have been incurred in a commercial environment and their passion and commitment is infectious.

Robert Horsell our Finance Director has provided invaluable support with the accounting, finance and business functions.

Michael Levy and Amanda Christensen with their hands-on approach to projects, advice, direction and in depth knowledge has been of real benefit.

Iven Young with the important allocation of research grants and fellowships has dealt with this sometimes difficult task in a professional and assiduous manner.

Peter Gianoutsos has provided wise counsel and governance.

Paul Seale who joined the ARC with me in 1997 has been a tremendous support to me and the organisation and was awarded Life Governor of ARC on the 24 November 2006. A well deserved honour.

Charles Kerr was also awarded Life Governor with 16 years as a director of ARC and his contribution to ARC and respiratory medicine is well recognised.

Staff

2007 saw the appointment of a new Program Development Manager on a job share arrangement to replace Kylie Munro who resigned from ARC in 2006. Renee Martin joined ARC in July and Helen Smith in August 2007. Both bring to ARC an enormous depth of experience in community based development, health promotion, project design and project management.

During 2007 Audrey Tonkin offered her services as a volunteer. Audrey has been of great assistance in the area of fundraising and also in conducting a thorough clean up of ARC's archives. Audrey's commitment to ARC is very much appreciated.

Judy Begnell continued in her role as Administration Manager overseeing the day to day organising of ARC's administration and finance. Judy has been a great strength for the organisation with her dedication and commitment.

Acknowledgements and thanks

A special thanks is extended to Amanda Christensen and Pam Banner who with Jo Griffin have become a great team working on behalf of ARC in conducting and designing nurse training for PITCA. Their diligence and hard work is extremely appreciated not only by ARC but by all of those involved in PITCA.

A sincere thank you to ARC's donors who have continued their long time commitment to ARC by giving generously during the year. Many of these loyal donors have been with ARC for over 50 years.

David Macintosh
President

New Life Governors

Australian Respiratory Council election of Life Governors

Charles Baldwin Kerr AM

Charles Baldwin Kerr is Emeritus Professor of Preventive and Social Medicine, University of Sydney.



He was educated at the University of St Andrews, Scotland, the University of Sydney and Oxford and holds a Bachelor of Medicine and a Bachelor of Surgery, and a Doctor of Philosophy. He is a fellow of the Royal Australian College of Physicians and a Fellow of the Faculty of Public Health Medicine. He is a member of the Human Genetics Association of Australasia, the Australian Public Health Association, the Australian Faculty of Public Health Physicians and the Doctors Reform Society.

Emeritus Professor Kerr was made a Member of the Order of Australia in 2004 for service to medicine in the fields of public health and human genetics, and to education.

Professor Kerr was a director of the Anti-Tuberculosis Association of NSW (and later Community Health and Anti-Tuberculosis Association) for 26 years between 1972 and 1998. He made a special contribution as chair of the planning and development committee until 1988. This committee instigated and managed the mobile Health

Information and Screening Service that began in association with Sydney Hospital.

In his long and distinguished career at the University of Sydney, Professor Kerr trained a large cohort of medical graduates who were made aware of the consideration of public health issues in their practice of medicine. He carried this public health perspective through all his professional endeavours, including his directorship of what is now, the Australian Respiratory Council.

John Paul Seale

John Paul Seale is Professor of Clinical Pharmacology at the University of Sydney. He was educated at the University of Sydney and the University of London.



He holds a Bachelor of Medicine, a Bachelor of Surgery and a Doctor of Philosophy in Clinical Pharmacology.

Upon graduating from the Faculty of Medicine in the University of Sydney, Paul Seale undertook his residency at Sydney Hospital and later a registrar post at Royal Prince Alfred Hospital. After completing his postgraduate training, obtaining a membership and later Fellowship of the Royal Australian College of Physicians, Paul travelled to London to pursue his doctorate in Clinical Pharmacology. Returning to Australia in 1979 he was appointed Senior Lecturer in the Department of Pharmacology, held an advisory position with the pharmaceutical company Boehringer Ingelheim and was made a

Consultant Physician in the Department of Respiratory Medicine at Royal Prince Alfred Hospital.

Professor Seale has made an outstanding contribution to the advancement of respiratory health in Australia and overseas. He is past President of the Thoracic Society of Australia and New Zealand, past Council Member, Australian Lung Foundation, Council Member, Asian Pacific Society of Respirology, Congress President, 5th APSR Congress, Sydney 1998, Past Associate Editor, Respirology.

As well as Professor of Clinical Pharmacology at the University of Sydney, he is an Honorary Consultant Physician Respiratory Medicine, Royal Prince Alfred Hospital and Research

Leader, Clinical Trials Unit and Deputy Director, Woolcock Institute of Medical Research.

Professor Seale has published widely and is a much-in-demand figure to lecture to both national and international respiratory meetings. He continues to perform research particularly in the area of determining the efficiency, risks and benefit ratios of new drug treatment in asthma.

Professor Seale was elected to the board of Australian Respiratory Council in 1997 and continues to make a significant contribution to the mission and objectives of the Australian Respiratory Council. He has been a Vice-President since 2001.

Delivering positive TB messages through Drama and Music

Despite its idyllic location, relaxed island lifestyle and sea breezes, the small nation island of Kiribati has the highest incidence of TB in the Western Pacific.



TB spreads rapidly in densely populated areas and overcrowded homes. With 36,000 people or one third of the Kiribati population residing on the tiny capital Tarawa it is not surprising that housing is at a premium, forcing many people to live communally in Maneabas or meeting halls.

"We arrived at a large well-lit maneaba, where many people were living inside around the outer area, so that the main big area was empty or left for people to sleep in at night. It was a strange feeling to go into what seemed to be many people's houses. (They had stoves and possessions in small sections for each family group around the edge of the maneaba.) You could see how easily sicknesses could spread where people live in such close proximity"

Jo Dorras Wan Smol Bag Founder

Along with overcrowding, another "friend" of TB is ignorance and stigma, preventing people from seeking treatment and increasing the burden of the disease. The Kiribati TB Control Project Community DOTS Workers (CDWs) are tasked with visiting TB Patients at home once a day to observe them taking their medication, a procedure known as Directly Observed Treatment Short-course (DOTS). They describe one of the hardest parts of their job as "searching for the patients in order to give them their drugs" as it is believed that "the patient is ashamed to be seen by people when taking the pills and so the patient hides himself from us". The result is the occurrence of new TB cases. In late 2007 Dr Taketaiu Beriki, the Chief TB Doctor of Tarawa Hospital reported an alarming incidence of 2-3 new positive cases identified per day.

To help stop the spread of TB through ignorance, ARC funded and supported the Communication and Drama Training for CDWS and related NGOs. The theatre group Wan Smol Bag was recruited from Vanuatu to lead a 2 week workshop which culminated in the performance and filming of a 30 minute musical play about TB in the I- Kiribati language.

The approach has already proven successful with both the community and the TB Control Project lauding its value in connecting with people to raise awareness and in reaching those via DVD on the remote outer islands where services are limited.

"At about 19.45 Yaxley told me that there were 79 children, under 15 in the audience, 60 women and 32 men. The actors were nearly all there and we decided to start. Amazingly, the actors/ participants had arranged all sorts of extra props, like oars for a boat and various uniforms and clothes I had not even considered.

They started. And they kept going. People laughed a lot and a few mistakes were made, but the audience really seemed to follow the play and got quite upset about certain things and of course laughed uproariously at others. But they watched and shouted at the kids to be quiet. By the end there were about 250 people in the audience".

Jo Dorras Wan Smol Bag Founder and Play director

"From the point of view of CDWs it was a success and it had built into them a lot of confidence as a group and as individuals in the conduct of their daily work".

Dr. Takeieta B Kienene, Director Kiribati TB Control project

"Drama is building as the way forward, not just in Kiribati but in the Region".

Dr Janet O'Connor Secretariat of the Pacific Community (SPC)

Investing in the future through research



Ann Woolcock Fellowship

This award was established in 2004 and is named in honour of the late Professor Ann Woolcock AO, former head of the Institute of Respiratory Medicine at the University of Sydney and Royal Prince Alfred Hospital. Professor Woolcock was a strong supporter of trainee scientists and physicians.

This is a 4 year full time postdoctoral fellowship in biomedical, clinical or

public health research anywhere in Australia and is valued at approximately \$100,000 per year. The Fellowship aims to encourage people of outstanding ability to develop research as a significant component of their career.

The Fellowship will support research relating to tuberculosis, respiratory diseases due to other infections, or respiratory diseases related to tobacco

use. Research which also addresses community issues or the health of disadvantaged groups would be particularly welcome.

ARC's first Ann Woolcock Research Fellow, Dr Ingrid Laing from the Telethon Institute for Child Health Research in Perth, is looking at the genetic influences on causal pathways of acute lower respiratory tract infections (ALRIs) in highly susceptible infants in PNG.



Harry Windsor Research Grants Scheme

These grants are named in honour of the late Dr Harry Windsor, a leading Australian heart surgeon who played a key role in ARC for many years.

Dr Windsor performed the first heart transplant operation in Australia and was a prominent cardiothoracic surgeon at Sydney's St Vincent's Hospital.

He was actively involved with ARC and its Board from 1955 until his death in 1987.

These awards are being offered nationally to support research in:

- Tuberculosis
- Respiratory diseases related to other infections
- Smoking-related respiratory diseases

Research which also address community issues or the health of disadvantaged groups are particularly encouraged.

Several grants of approximately \$50,000 are offered each year. Grants are available for projects submitted to the National Health and Medical Research Council (NHMRC) which are considered fundable but which do not reach the cut-off mark for funding in any one year. An information sheet and grant conditions can be found and downloaded from ARC's website: www.thearc.org.au

2006 & 2007 Recipients

- 2006** A new non-toxic approach to controlling bacterial infection
Robert Capon,
*Centre for Molecular Biodiversity,
University of Queensland*
- 2006** Role of phosphorylation in regulating nuclear trafficking during infection of respiratory syncytial virus matrix protein
David Jans,
*Dept Biochemistry & Molecular Biology,
Monash University*
- 2006** Nutritional intervention to improve tuberculosis treatment outcome in Timika, Indonesia: the NUTTS study
Paul Kelly et al,
*Menzies School of Health Research,
Darwin*
- 2007** Cigarette smoke exposure chemically modifies and inactivates lung innate immunity mediated by the bacterial recognition receptor, TLR4
Steven Bozinovski,
*Dept of Pharmacology,
University of Melbourne*
- 2007** Investigating markers of oxidative stress in young children with cystic fibrosis: a driving mechanism of pulmonary inflammation?
Siobhain Brennan,
*Telethon Institute for Child Health Research,
Perth*

Dr Ingrid Laing

Australian Respiratory Council Ann Woolcock Research Fellow,
Telethon Institute for Child Health Research, Perth



Genetic influences on causal pathways of acute lower respiratory tract infections (ALRIs) in highly susceptible infants.

Acute lower respiratory infections/pneumonia (ALRIs) cause approximately two million deaths and at least 11-20 million hospitalisations in children under 5 years of age each year in developing countries^{1,2}. Infants from the highlands of Papua New Guinea (PNG) experience early onset of dense upper respiratory tract bacterial carriage leading to one of the highest childhood mortality rates due to ALRI's in the world (accounting for 35% of all deaths in children under 5 years of age and 50% of deaths in children under 1 year of age)³. Each child has a mean incidence of 4.3 episodes of ALRI (WHO diagnostic criteria) in their first 18 months of life, with approximately one third of those being moderate or severe⁴.

The PNG Institute of Medical Research, the Telethon Institute for Child Health Research and the School of Paediatrics and Child Health, University of Western Australia are conducting a comprehensive study of the impact of neonatal vaccination on the development of innate and adaptive immunity and ALRI in this population. Approximately 300 infants have been recruited before birth to participate in a randomised controlled trial of the 7-valent pneumococcal conjugate vaccine, Prevnar® (PCV). Infants receive PCV at either 0, 1 & 2 or 1, 2 & 3 months of age or not at all. Study children are followed-up for 18 months and comprehensive assessments of nasal bacterial carriage, immune development, PCV vaccine responses and morbidity are completed. All infants participating in the trial receive the diphtheria, *Haemophilus influenzae*, hepatitis B, Bacillus Calmette-Guérin (BCG), polio (OPV), measles and 23-valent pneumococcal polysaccharide (PPV) vaccinations. This fellowship project comprises a systematic investigation of the contribution of genetic factors to the development of immune responses and susceptibility to pneumonia in this population.

Recruitment of 323 infants for the NPCV study was completed in November and to date, 42 have dropped out and five infants have died. Data collected on the incidence of acute respiratory infection has shown that there have been 428 episodes and 199 of these were moderate or severe. However, only 145 have completed the 18 months of follow-up. Antibody levels at 4 months of age, to each of the seven vaccine antigens, will be completed on the first 102 children by the end of 2007. Assays to determine T cell responses at 3 months of age have begun. As the three-month follow-up will be completed by the end of the year, it is expected that these will soon be completed and presented at the 6th International Symposium on Pneumococci and Pneumococcal Diseases next year.

Genotyping of several immune gene polymorphisms on the first 66 DNA samples extracted from infants participating in the NPCV study has been completed. These results have proved very promising (figures 1-4). They confirm that PNG children have significantly different frequencies of immune gene alleles compared to either a Caucasian population from Australia or one used in the HapMap project (www.hapmap.org).

Some of the genetic variants reportedly associated with respiratory infections in Caucasian children are more common in infants from PNG. Furthermore, the common alleles presented in the figures above, are not always the ancestral alleles. Ancestral alleles are those inherited from our human ancestors and may be alleles we have in common with other species including the great apes, our closest relatives. It has been suggested that the differences in immunogenetic allele frequency may be due to the isolation of the population and lack of deviation from the ancestral alleles. However, the results above suggest that some of the alleles have been the subject of natural selection as in some cases the more common alleles are not ancestral and the frequency of these alleles is higher in PNG infants than in Caucasian populations. It is possible that the putative selective advantage of having these non-ancestral alleles may now incur a detrimental susceptibility since the introduction of new pathogens to this population.



Figure 1: CD14 -159C and CC16 38A allele frequencies in PNG infants compared to an Australian Caucasian population

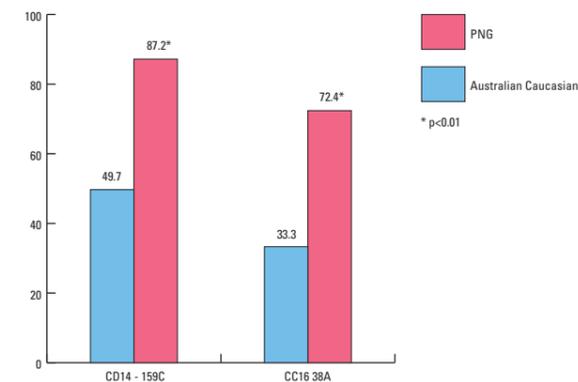
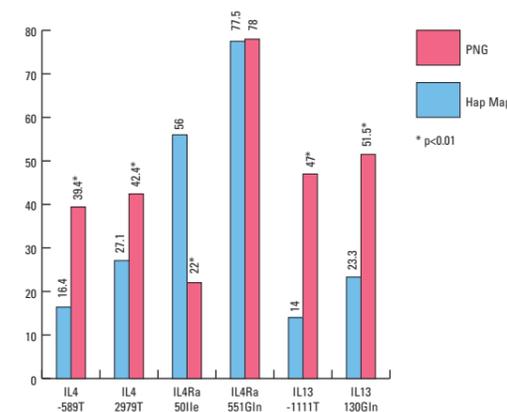


Figure 3: Th2 genes -allele frequencies in PNG infants compared to HapMap Caucasians



Research training

Attendance at The Thoracic Society of Australia and New Zealand Annual Scientific Meeting (Auckland) and the American Thoracic Society International Conference (San Francisco) allowed presentation of the projects preliminary results, promotion of the ARC, research training and development and maintenance of collaborative links with colleagues undertaking respiratory research.

This year I worked for 3 months with Professor Fernando Martinez at the Arizona Respiratory Center, as a visiting scholar. I gained considerable insight into the immune mechanisms likely to contribute to respiratory infection susceptibility in children and further developed my research and statistical analysis skills.

Figure 2: Innate immune genes -allele frequencies in PNG infants compared to HapMap Caucasians

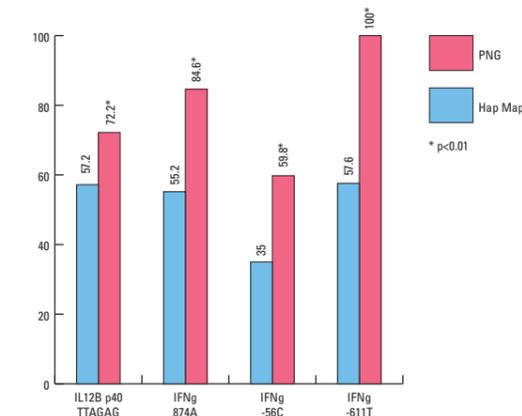
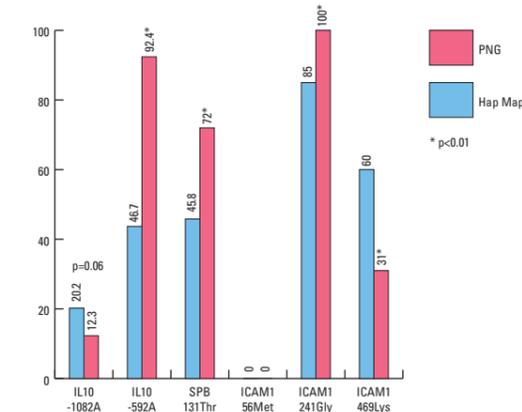


Figure 4: Genes associated with ALRI -allele frequencies in PNG infants compared to HapMap Caucasians



Invited presentations

Arizona Respiratory Center, Tucson, Arizona, USA, 14th June 2007

Are children in developing countries more genetically susceptible to ALRI's than children in developed countries?

18th Australasian Society of Clinical Immunology & Allergy Annual Scientific Meeting/Australasian & South East Asian Tissue Typing Association 31st Annual Scientific Meeting, Fremantle, WA, 16th November 2007 *Genetics of asthma and allergy – are we getting anywhere?*

The ARC and the Ann Woolcock Research Fellowship have been promoted and acknowledged in 5 presentations. This year this work was particularly highlighted in the Telethon Institute for Child Health Research Annual Report.

Publications

Two journal articles have been accepted (1,2) and a manuscript submitted (3) for publication, acknowledging the ARC as a source of support.

1. Tulic MK, Hurrelbrink RJ, Prêle CM, **Laing IA**, Upham JW, Le Souef PN, Sly PD, Holt PG. TLR4 polymorphisms mediate impaired responses to respiratory syncytial virus and lipopolysaccharide. *Journal of Immunology* 2007; 179:132-40.
2. Hales BJ, **Laing IA**, Hazell LA, Pearce LJ, Mills KL, Chua KY, Thornton RB, Richmond P, Musk AW, James AL, LeSouef PN, Thomas WR. Distinctive immunoglobulin E anti-house dust allergen-binding specificities in a tropical Australian Aboriginal community. *Clinical and Experimental Allergy* 2007; 37:1357-63.
3. **Laing IA**, de Klerk NH, Turner SW, Judge PK, Hayden CM, Landau LI, Goldblatt J, Le Souëf PN. Cross-sectional and longitudinal association of the secretoglobin 1A1 gene A38G polymorphism with asthma phenotype in the PIAF Cohort – submitted to *Genes and Immunity*

Publications that preceded support from the ARC include:

1. Baynam G, Khoo SK, Rowe J, Zhang G, **Laing I**, Hayden C, Kusel M, de Klerk N, Sly P, Goldblatt J, Holt P, Le Souef P. Parental smoking impairs vaccine responses in children with atopic genotypes *Journal of Allergy and Clinical Immunology* 2007; 119:366-74.
2. Zhang G, Hayden CM, Khoo SK, Candelaria PV, **Laing IA**, Turner S, Franklin P, Stick S, Landau L, Goldblatt J, Le Souëf PN. Beta2-Adrenoceptor polymorphisms and asthma phenotypes: interactions with passive smoking. *European Respiratory Journal* 2007; 30:48-55.

Student supervision

Chris Chan

Summer student (November 2006 – January 2007), recipient of a Human Genetics Society of Australasia Summer Vacation Scholarship

Offered an Asthma Foundation of WA Summer Scholarship

Offered a Faculty of Medicine and Dentistry Summer Scholarship

Joelene Bizzintino

PhD student (Feb 2007 – present), recipient of an Australian Postgraduate Award

Ashraf Sharafi

Higher degree by research preliminary project (Feb – July 2007)

Prizes and grants

1. Certificate of high commendation, Qantas New Investigator Award, Telethon Institute for Child Health Research
2. UWA supplementary travel grant for new academic staff
3. Friends of the Telethon Institute for Child Health Research Travel Grant
4. Best presentation (joint winner), Respiratory Molecular Genetics Special Interest Group, TSANZ Annual Scientific Meeting

Invitations to serve on committees

1. Epigenetics 2007 – Australian Scientific Conference Organising Committee June 2006 – November 2007
2. Asthma Foundation of Western Australia Research Committee October 2007 - present

This fellowship has allowed me considerable opportunities to develop my independent research career in the field of genetic susceptibility to complex respiratory diseases in children and I look forward to the next year of work with the ARC.

References

1. Rudan I, Tomaskovic L, Boschi-Pinto C, Campbell H. Global estimate of the incidence of clinical pneumonia among children under five years of age. *Bull World Health Organ* 2004; 82:895-903.
2. Williams BG, Gouws E, Boschi-Pinto C, Bryce J, Dye C. Estimates of world-wide distribution of child deaths from acute respiratory infections. *Lancet Infect Dis* 2002; 2:25-32.
3. Coakley K, Lehmann D, Smith D. The Asaro valley surveillance unit of the Papua New Guinea Institute for Medical Research: methodology, demography and mortality report. Garoka: Papua New Guinea Institute for Medical Research, 1993.
4. Smith TA, Lehmann D, Coakley C, Spooner V, Alpers MP. Relationships between growth and acute lower-respiratory infections in children aged less than 5 y in a highland population of Papua New Guinea. *Am J Clin Nutr* 1991; 53:963-70.

Steven Bozinovski & Ross Vlahos

Department of Pharmacology, The University of Melbourne, Victoria

Cigarette smoke chemically modifies and inactivates lung innate immunity mediated by the bacterial recognition receptor, TLR4.

Background

Cigarette smoking is a major risk factor for cancer, heart disease and emphysema. These conditions are associated with active or passive long term exposure and extensive public awareness campaigns have educated individuals on such risks. A less known fact about active or passive smoking is that it leaves people susceptible to chest infections caused by bacteria that normally do not enter the lower parts of the lung. It is known that smoking physically damages the lungs and this process allows airborne pathogens to infect the lungs more effectively. Infants, children and those with an existing lung conditions like asthma or emphysema are also particularly susceptible to infection. The Australian Respiratory Council has provided research funding for us to explore how cigarette smoke exposure is interfering with the lungs defence system at the molecular level. We envisage that a greater understanding of these molecular events will lead to better therapeutic strategies to treat these debilitating conditions.

Study Results

We have now shown that even short term smoke exposure inactivates alveolar macrophages, a critical cell that is responsible for detecting and removing lung pathogens. Alveolar macrophages normally clear airborne bacteria that enter the lungs by physically ingesting and destroying bacteria with potent enzymes and chemicals known as proteases and superoxides. We have used fluorescently labelled bacteria to investigate how smoke exposure interferes with alveolar macrophage function and have also explored new therapies to restore normal function. Alveolar macrophages potently ingest bacteria, whereas prior cigarette smoke exposure markedly reduced bacterial ingestion. Hence, these results demonstrate that even short exposures to cigarette smoke can potentially lead to unrestricted bacterial growth in the lungs of susceptible individuals by inactivating alveolar macrophages. Since cigarettes contain large amounts of chemicals known as oxidative free radicals, we used Reduced Glutathione, which

is a powerful anti-oxidant that neutralises such damaging chemicals. Reduced Glutathione is normally present in healthy cells, however is likely to be depleted in stressed environments. We therefore introduced Reduced Glutathione to smoke-exposed macrophages, and by doing so, restored normal ingestion of the bacteria. These results implicate cigarette smoke derived free radicals in immune-compromised cells. We have now generated extensive data that confirms the diverse consequences associated with cigarette smoke exposure. Alveolar macrophages also clear bacteria by secreting chemicals known as cytokines that attract other circulating white blood cells to the site of infection. We have measured two important cytokines called TNF and IL-6 that increase in response to the presence of bacterial products. Importantly, the release of TNF and IL-6 were also suppressed by a short burst of smoke exposure in a manner that was restored by treatment with Reduced Glutathione. We also found that activation of the key transcription factors NF B and AP-1 responsible for regulating cytokine/chemokine expression were suppressed by prior cigarette smoke exposure in a manner that was restored by reduced glutathione.

At the molecular level, bacteria are recognised by surface bound proteins known as receptors, which trigger a cascade of events that coordinate production of chemicals and clearance by ingestion as described above. TLR4 is an essential receptor responsible for recognising gram-negative bacteria, which controls the initial immune response. Engagement of this receptor activates complex molecular events that lead to activation of NF B and AP-1 transcription factors. This very important research will now continue with NHMRC support and we will continue to use cutting edge technology to further investigate these molecular events, which will provide new insights into how the lungs respond to bacterial infections and identify what goes wrong during cigarette smoke exposure.

Siobhain Brennan & Anthony J. Kettle

Telethon Institute for Child Health Research, Perth, WA

Investigating markers of oxidative stress in young children with cystic fibrosis: a driving mechanism of pulmonary inflammation?

BACKGROUND

Oxidative stress results from activation of the innate immune defences, especially by microbial insult. Oxidative stress in CF will enhance pulmonary inflammation and cripple anti-protease defences in an already pro-inflammatory milieu, increasing the likelihood of structural lung damage, predisposing to early acquisition of infections and facilitating the conversion of *Pseudomonas aeruginosa* (PA) to the more intractable mucoid form. Evidence of exaggerated oxidation is present in infants with CF despite the absence of chronic lung inflammation or infection. Recent studies also indicate that neutrophils from patients with CF are defective in chlorination of ingested bacteria. How this impacts on bacterial killing has yet to be established. The factors that initiate oxidative stress in such young children are not clear, nor is it certain whether the protective anti-oxidant defences are functionally mature. The kinetics of postnatal maturation of anti-oxidant defences have not been studied in CF and evidence of oxidative stress in early life may reflect a lack of functional defences. The clinical consequences of such an imbalance in early life are unknown. Recent pilot studies report that inhalations of the anti-oxidant glutathione (GSH) are associated with improved lung function in older children and young adults. The usefulness of such a therapy would be optimal if implemented at the time of when oxidative stress begins. Therefore a full understanding of the functional maturation of antioxidant defences and of the development of oxidative stress in these preschool children from birth is essential.

The AIMS of this grant were to determine the role of oxidative stress in driving pulmonary disease by measuring biomarkers of reactive oxygen species and antioxidants in the lungs of young children with cystic fibrosis (CF) and relate these to pulmonary inflammation, infection and clinical outcomes. The following HYPOTHESES were tested:

- (1) Oxidative stress, that exceeds the anti-oxidant defence capability, is present in the lungs of children with CF from birth.
- (2) Inherent individual differences in neutrophil activity, oxidant production and anti-oxidant defences increase the susceptibility to lung damage and chronic infection.

RESULTS TO DATE

Hypothesis 1.
OXIDATIVE STRESS exceeds the anti-oxidant defence capability and is present in the lungs of children with CF from birth.

Using bronchoalveolar lavage fluid from young children with CF, we can identify the presence of neutrophils in the airways, which is associated with early and intermittent infection.

Neutrophils store the oxidative enzyme myeloperoxidase (MPO) in internal granules and release it upon activation. MPO is found in elevated levels in BAL from children with CF, even in very young children, and is associated with the number of neutrophils present in the BAL fluid ($r=0.68$, $p<0.000$).

MPO is involved in the production of hypochlorous acid (HOCl), which can act inactivates enzymes and modifies proteins by oxidation and chlorination. A by-product of this reaction is chlorotyrosine which we have also measured in BAL fluid of children with CF. Measurement of chlorotyrosine confirms that oxidative stress is present and is unhindered by the anti-oxidant defences thus directly contributing to tissue damage.

Given our close clinical links to the Respiratory Medicine Department of Princess Margaret Hospital, and given our extensive data base of biochemical and clinical data on our longitudinal cohort, we are in a unique position to investigate whether these factors are impacting on clinical outcomes. One of the major clinical features of CF lung disease is the development of bronchiectasis, which is the widening of the airways. This results in impaired gas exchange, decreased mucocilliary clearance and in the long term, loss of structural peripheral tissue. Since 2005, our early disease prevention program has been collecting data on the presence of bronchiectasis in young children with CF, and with funding provided this year by the ARC, we have been able to identify a significant correlation between extent of bronchiectasis (determined by a clinical score) and both MPO ($r=0.4$ $p=0.0016$) and chlorotyrosine levels in BAL (by score; $r=0.4$, $p=0.0008$).

Hypothesis 2.

Inherent individual differences in neutrophil activity, oxidant production and anti-oxidant defences increase the susceptibility to lung damage and chronic infection.

To address this hypothesis, we have begun investigations into individual differences in cellular oxidative activity. To this end we have collected blood samples from 17 children with CF, and to date 3 non-CF healthy controls. We have tested resting and stimulated oxidative burst internally in cells using a flow cytometry kit and we anticipate being able to collect a further 10 non-CF healthy controls for a complete comparison before the end of January 2008. We have validated the assay in CF and look forward to presenting data from comparison with healthy controls in 2008.

Using funds from this grant, we have also measured levels of the key anti-oxidant glutathione (GSH) (in reduced and oxides forms) in 29 CF subjects. Reduced glutathione inversely correlated with number of neutrophils ($p=0.019$), levels of MPO ($p=0.03$) and chlorotyrosine in the BAL fluid ($p=0.012$), suggesting that neutrophil derived ROS are a major source of anti-oxidant depletion in CF. We also detected of glutathione sulfonamide, a specific oxidation product of the reaction of HOCl with glutathione, in BAL. Its levels were strongly correlated with those of oxidized glutathione ($r=0.78$ $p<0.001$). This finding reinforces our proposal that the major oxidant in the airways of children with CF is HOCl.

Future Studies

We have used the opportunity this ARC funding has provided to further enhance our understanding of the contributions of neutrophils to oxidative stress mechanisms in very young children with cystic fibrosis. Further grant applications have been structured around preliminary data collected from this grant. We hope to continue to collect samples for measuring GSH, MPO and chlorotyrosine in our cohort so we can demonstrate cross sectional relationships and longitudinal patterns that may provide further insight into the development of lung disease in young children with CF. In addition, we have developed collaborations within ICHR to investigate genetic polymorphisms in the redox balance pathways, as we believe this may provide some information regarding the heterogeneity of disease severity in CF.

Presentations & Publications arising from this work.

Submitted to TSANZ 2008: BRONCHIECTASIS IN PRESCHOOL CHILDREN WITH CF IS ASSOCIATED WITH MEASURES OF OXIDATIVE STRESS.

Siobhain Brennan¹, Anthony J Kettle², Luke Garratt¹, Eline Thomson², Refus Turner², Irada Khalilova², Conor Murray³, Stephen Stick^{1, 3}, and Peter D. Sly. 1, 3

Paediatric Society of New Zealand 2007: Oxidative Stress and Cystic Fibrosis

Anthony J Kettle, Siobhain Brennan¹, Luke Garratt¹, Eline Thomson², Refus Turner², Irada Khalilova², Conor Murray³, Stephen Stick^{1, 3}, and Peter D. Sly. 1, 3

Two publications are in preparation regarding this work and we anticipate submission of those manuscripts by March 2008.

Board of Directors



AMANDA CHRISTENSEN

Dip Nursing

NSW TB Program Manager 1997-; various positions in public health for seventeen years including tuberculosis control for twelve years. Appointed to the Board in 2001.



CLINICAL ASSOCIATE PROFESSOR PETER GIANOUTSOS

MB, ChB (Univ of Otago), FRACP, FCCP

Senior Consultant Thoracic Physician (VMO) Dept of Thoracic Medicine RPAH 1971-;

Member Thoracic Society Australia New Zealand, American Thoracic Society, American College of Chest Physicians & Governor for Australia, British Thoracic Society, Australian Lung Foundation, Medico – Legal Society(NSW); Chairman RPA Medical Board 1989-1991; Member of Medical Board of NSW 1978-1982; Chairman UMPS Medical Experts Panel 2002-. Member of Board of Directors UMP 2000-2002. Appointed to the Board in 2006.



ROBERT HORSELL

CPA

Partner, R E Horsell & Co Public Accountants 1978-; Director, Cricket Australia 1997-2004, 2005-; Chairman, Cricket NSW 1997-;

Director, Bradman Foundation 1999-2005. Appointed to the Board in 1999; Chair of Finance Committee.



ASSOCIATE PROFESSOR MICHAEL LEVY

MBBS, MPH, FAFPHM

Director, Centre for Health Research in Criminal Justice, Justice Health 2004-;

Clinical Director, Population Health, NSW Corrections Health Service 1998-2004; conjoint appointment with the School of Public Health, University of Sydney; World Health Organisation 1995-1997; Convenor of the First National Tuberculosis Conference (Public Health Association of Australia), 1994. Short-term Consultant for Tuberculosis Control in Kiribati, Burma, Papua New Guinea, China and the Philippines. Appointed to the Board in 1998; Vice-President.



DAVID MACINTOSH

BBS (UTS), FCA

Chairman, Payce Consolidated Limited 1992-; Director, Payce Consolidated 1990-; Managing Director, Paynter Dixon Construction Group

2001-; Director of numerous private companies; twenty seven years of senior management and director level in the transport and construction industries in Australia and Europe; Member of Board of Governors, Woolcock Institute of Medical Research; Director, The Australian Lung Foundation; Chairman, The Macintosh

Foundation, Macintosh Chair of Paediatric Respiratory Medicine at the University of Sydney, held by Professor Peter Van Asperen, Head of the Dept of Respiratory Medicine at the Children's Hospital, Westmead - Endowed Chair 29 November 2005 in perpetuity; actively involved in the Surf Life Saving movement for forty three years; Life Member and Vice-President, Long Reef Surf Life Saving Club Inc.; Member and Chairman of the Expenditure Review Committee, Collaroy Surf Life Saving Club Inc. Appointed to the Board in 1997; President.



PROFESSOR J PAUL SEALE

MBBS, PhD, FRACP, FRCP

Professor of Clinical Pharmacology, University of Sydney 1992-; Pro-Dean, Faculty of Medicine, University of Sydney 1997-2003;

Consultant Physician, Royal Prince Alfred Hospital 1980-; Deputy Director, Woolcock Institute of Medical Research; Member, Australasian Society for Clinical and Experimental Pharmacologists and Toxicologists; Past President, Thoracic Society of Australia and New Zealand; former Congress President, Asia Pacific Society of Respirology; Chairman, NSW Therapeutics Advisory Group; Chair, TB Committee, Sydney South West Area Health Service. Appointed to the Board in 1997; Vice-President. Elected Life Governor of ARC in 2007.

FREDERICK SMITH

FCA

Chartered accountant since 1955; previously Partner in large international accounting firm. Extensive experience as Director of public and private companies. Appointed to the Board in 1998. Resigned from the Board in November 2006.



CLINICAL PROFESSOR IVEN YOUNG

BSc (Med), MBBS, PhD FRACP

Head, Department of Respiratory and Sleep Medicine, Royal Prince Alfred Hospital

(RPAH) 1991-; Visiting Medical Officer, RPAH 1979-1985; Senior Staff Specialist in Respiratory Medicine, RPAH 1985-; Post Doctoral Fellow, University of California, San Diego 1976-1978; Research Fellow, University of Sydney 1974-1976; Respiratory Physician 1975-; Member, Thoracic Society of Australia and New Zealand; Member, American Thoracic Society; Senior Examiner, Australian Medical Council 1997-; elected to the Adult Medicine Division, Royal Australasian College of Physicians 2000-2001; Chairman, Division of Medicine, RPAH 2001-. Appointed to the Board in 1998. Elected Life Governor of ARC in 2003.

Projects Committee

Dr Colin Butler

Research Fellow in Epidemiology, National Centre for Epidemiology and Population Health, Canberra

Dr Vicki Krause

Director, Centre for Disease Control, Northern Territory Health Services

Associate Professor Michael Levy (Chair)

Director, Centre for Health Research in Criminal Justice Health

David Macintosh

ARC President (ex officio)

Dr Graeme Maguire

Specialist Physician, Cairns Hospital, Dept of Medicine, Qld Health; Associate Professor of Medicine, James Cook University School of Medicine.

Sheila Simpson RN

TB Nurse, Liverpool Health Service

Professor Richard Taylor

Professor of International Health, School of Population Health (SPH), Faculty of Health Sciences, University of Queensland; Director, Australian Centre for International, Tropical Health (ACITH).

Dr Justin Waring

Consultant Physician, Respiratory and Tuberculosis Medicine, Perth Chest Clinic and Royal Perth Hospital

Research Committee

Professor Carol Armour

Professor of Pharmacy, University of Sydney; Pro Vice Chancellor for Research, Sydney University; Member of National Asthma Expert Advisory Committee.

Professor Peter Gibson

Staff Specialist, Respiratory Medicine Unit John Hunter Hospital

Associate Professor Michael Levy

Director, Centre for Health Research in Criminal Justice; Chair ARC projects committee

David Macintosh

ARC President (ex officio)

Clinical Professor Iven Young (chair)

Head, Department of Respiratory Medicine, Royal Prince Alfred Hospital

Informing, Educating and Communicating about TB

The 'What is TB?' flipchart and poster

WHAT IS TB?

Tuberculosis is a disease that mainly affects lungs and sometimes other parts of the body. It can be cured.

Anyone can get tuberculosis.

You catch tuberculosis from someone who already has the disease.

Signs of Active TB

- Coughing for more than 3 weeks
- Losing weight quickly
- Coughing blood
- Night Sweats

TB bacteria makes us sick by going into our lungs and sometimes other parts of the body.

There are 2 types of TB: Latent or 'sleeping' and active and multiplying.

Active TB spreads by coughing and sneezing.

TB is **NOT** spread by shaking hands or sharing food dishes.

TB is curable...

If you think you have TB tell a health worker.

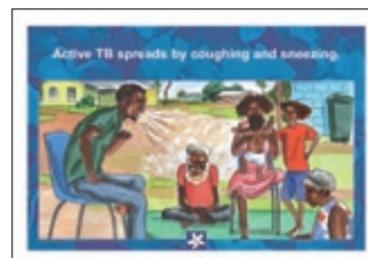
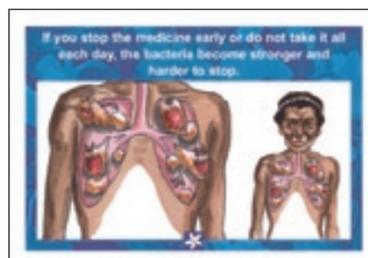
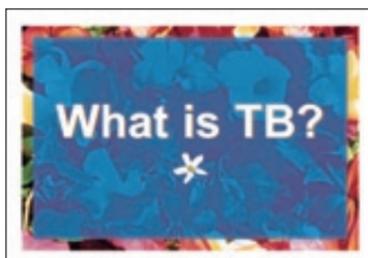
Take the medicine as directed by your doctor or health worker.

WARNING! If you stop the medicine early or do not take it all each day, the bacteria become stronger and harder to stop.

Help Stop TB...

- Stay well
 - Put out cigarettes and alcohol and eat healthy foods.
- Take care not to infect others.
- Take the medicine until the doctor says you are cured.

australian respiratory council www.thorax.org.au



▶ 2007 Financials



Directors' Report

For the 18 month period ended 31 December 2007

The directors present their report together with the financial report of the Australian Respiratory Council for the 18-month period ended 31 December 2007 and the auditor's report thereon.

Directors

The directors at any time during or since the end of the financial period are:

Amanda Julie Christensen
Peter Gianoutsos
Robert Eric Horsell
Michael Herbert Levy
David Hugh Macintosh
John Paul Seale
Fredrick Charles Samuel Smith
Iven Hunter Young

Company particulars

The Australian Respiratory Council, incorporated and domiciled in Australia, is a public company limited by guarantee.

Company Secretary

Bruce Ramage was appointed to the position of company secretary in 2001.

Principal Activity

The principal activity of the company during the financial period was the provision of funds for the prevention and cure of respiratory illness. There was no significant change in the nature of this activity during the financial period.

Review and Results of Operations

The company continued to engage in its principal activity during the financial period. The Loss of the company for the 18-month period ended 31 December 2007 was \$176,860 (12 months to 30 June 2006 profit: \$525,512)

Dividends

No dividends have been paid or declared since the end of the previous year, and no dividends were previously recommended as the Constitution of the company prohibits their payment.

State of Affairs

Apart from its change of name and sale of its building in Rose Bay, no other significant changes in the state of affairs of the company occurred during the financial period.

Events Subsequent to Balance Date

There has not arisen in the interval between the end of the financial period and the date of this report any item, transaction or event of a material and unusual nature likely, in the opinion of the directors of the company to significantly

affect the operations of the company, the results of those operations, or the state of affairs of the company in future financial years.

Likely Developments

The company will continue to pursue its principal activities at a surplus. It is not expected that the results in future years will be adversely affected by the continuation of these operations.

Further disclosure of information regarding likely developments in the operations of the company in future financial years and the expected results of those operations is likely to result in unreasonable prejudice to the company. Accordingly, this information has not been disclosed in this report.

Environmental Regulations

The company's operations are not subject to any significant environmental regulations under Australian Law.

Insurance of Officers

During the financial period, the company has paid premiums in respect of directors' and officers' liability insurance contracts for the 18-month period ended 31 December 2007, and since the financial period, the company has paid or agreed to pay on behalf of the company, premiums in respect of such insurance contracts for the 12-month ended 31 December 2008. Such insurance contracts insure against certain liability (subject to specific exclusions) persons who are or have been directors or executive officers of the company.

The directors have not included details of the nature of liabilities covered or the amount of the premium paid in respect of the directors' and officers' liability insurance contracts, as such disclosure is prohibited under the terms of the contracts.

Particulars of Directors

Amanda Christensen Dip Nursing.

Appointed to the Board on 22 February 2001
Interest in contracts: Nil

Clinical Associate Professor Peter Gianoutsos MB CHB FRACP FACCP.

Appointed to the Board on 15 May 2006
Interest in contracts: Nil

Robert Horsell CPA.

Appointed to the Board on 24 June 1999. Finance Director.
Interest in contracts: Nil

Clinical Associate Professor Michael Levy MBBS MPH FAFPHM.

Appointed to the Board on 21 May 1998. Vice-President.
Interest in contracts: Nil

David Macintosh BBS, FCA.

Appointed to the Board on 19 June 1997. President.
Interest in contracts: Nil

Professor J Paul Seale MBBS PhD FRACP.

Appointed to the Board on 19 June 1997. Vice-President.
Interest in contracts: Nil

Frederick Smith FCA.

Appointed to the Board on 3 September 1998. (Resigned 24 November 2006)
Interest in contracts: Nil

Clinical Associate Professor Iven Young BSc(Med), MBBS, PhD, FRACP.

Appointed to the Board on 6 August 1998.
Interest in contracts: Nil

Directors' Meetings

The number of directors' meetings held during the financial period and the number of meetings attended by each director were:

	Number Attended	Number Held while in Office
Amanda Christensen	6	8
Peter Gianoutsos	4	8
Robert Horsell	7	8
Michael Levy	7	8
David Macintosh	8	8
John Paul Seale	8	8
Frederick Smith	2	2
Iven Young	6	8

Directors' Declaration

The directors of the company declare that:

1. The financial statements and notes, as set out on pages 20 to 29, present fairly the company's financial position as at 31 December 2007 and its performance for the period ended on that date in accordance with Accounting Standards and other mandatory professional reporting requirements;
2. In the directors' opinion, there are reasonable grounds to believe that the company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors.



David Macintosh

Director

Sydney, 20 March 2008

Income Statement

For the 18 month period ended 31 December 2007

	Note	2007 \$	2006 \$
Revenue	2	1,051,859	1,410,280
Depreciation, amortisation and impairments	3	(12,827)	(8,339)
Research grants, fellowships and scholarships		(199,325)	(209,619)
Investment expenses		(39,425)	(23,239)
Consultancy fees		(73,636)	(99,706)
Employee costs		(330,641)	(216,027)
Other expenses		(572,865)	(327,838)
(Loss)/Profit before income tax		(176,860)	525,512
(Loss)/Profit attributable to members		(176,860)	525,512

The accompanying notes form part of these financial statements

Balance Sheet

As at 31 December 2007

	Note	2007 \$	2006 \$
ASSETS			
Current assets			
Cash and cash equivalents	5	325,620	743,922
Trade and other receivables	6	9,360	2,412,967
Other current assets	7	4,667	20,236
Total current assets		339,647	3,177,125
Non current assets			
Financial assets	8	6,217,752	4,207,697
Property, plant and equipment	9	62,500	11,442
Investment property	10	1,650,000	1,400,000
Total non current assets		7,930,252	5,619,139
TOTAL ASSETS		8,269,899	8,796,264
LIABILITIES			
Current liabilities			
Trade and other payables	11	51,461	128,101
Short term provisions	12	13,486	13,486
Total current liabilities		64,947	141,587
Non current liabilities			
		-	-
TOTAL LIABILITIES		64,947	141,587
NET ASSETS		8,204,952	8,654,677
EQUITY			
Reserves	13	3,316,735	3,589,600
Retained earnings		4,888,217	5,065,077
TOTAL EQUITY		8,204,952	8,654,677

Statement of Changes in Equity

For the 18 month period ended 31 December 2007

	Note	2007 \$	2006 \$
Balance at beginning of the financial year		8,654,677	8,204,900
Loss for the financial period		(176,860)	525,512
(Decrement)/increment in asset revaluation reserve	13	(272,865)	(75,735)
Sub total		(449,725)	449,777
Balance at end of the financial period		8,204,952	8,654,677

The accompanying notes form part of these financial statements

Cash Flow Statement

For the 18 month period ended 31 December 2007

	Note	2007 \$	2006 \$
Cash from operating activities:			
Receipts from customers		258,392	537,325
Payments to suppliers and employees		(1,276,963)	(980,062)
Dividends received		16,160	32,483
Interest paid		35,553	43,640
Distributions received		675,336	195,676
Refund of franking credits		57,057	16,581
Net cash provided by (used in) operating activities	16(i)	(234,465)	(154,357)
Cash flows from investing activities:			
Proceeds from sale of property, plant and equipment and investments		2,412,967	1,208,151
Acquisition of property, plant and equipment		(63,885)	(3,276)
Payment for investments		(2,532,919)	(1,249,285)
Net cash provided by (used in) investing activities		(183,837)	(44,410)
Net increase (decreases) in cash held		(418,302)	(198,767)
Cash at beginning of financial year		743,922	942,689
Cash at end of financial year	16(ii)	325,620	743,922

The accompanying notes form part of these financial statements

Summary of Significant Accounting Policies

For the 18 month period ended 31 December 2007

1. Statement of Significant Accounting Policies

(a) General information

The financial report is a general purpose financial report that has been prepared in accordance with Accounting Standards, Australian Accounting Interpretations and other authoritative pronouncements of the Australian Accounting Standards Board.

The financial report of Australian Respiratory Council complies with all Australian equivalents to International Financial Reporting Standards (AIFRS) in their entirety.

The following is a summary of the material accounting policies adopted by the company in the preparation of the financial report. The accounting policies have been consistently applied, unless otherwise stated.

(b) Basis of Preparation

The financial report has been prepared on an accruals basis and is based on historical costs modified by the revaluation of selected non current assets, financial assets and financial liabilities for which the fair value basis of accounting has been applied.

The financial report is for the 18 months ended 31 December 2007. The comparative is for the year ended 30 June 2006.

(c) Revenue

Revenues are recognised at fair value of the consideration received net of the amount of goods and services tax (GST) payable to the taxation authority. Exchanges of goods or services of the same nature and value without any cash consideration are not recognised as revenues.

Interest revenue is recognised on a proportional basis taking into account the interest rates applicable to the financial assets.

Revenue from investment properties is recognised on an accruals basis in accordance with lease agreements.

Dividend revenue is recognised net of any franking credits. Revenue from dividends is recognised when received.

Income from other sources is recognised when the fee in respect of other products or services provided is receivable.

(d) Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office. In these circumstances the GST is recognised as part of the cost of acquisition of the asset or as part of an item of the expense. Receivables and payables in the balance sheet are shown inclusive of GST.

Cash flows are presented in the cash flow statement on a gross basis, except for the GST component of investing and financing activities, which are disclosed as operating cash flows.

(e) Income Tax

The company is registered as a charity and is not subject to income tax. Continued exemption for income tax is subject to the requirements for non profit organisations.

(f) Property, Plant and Equipment

(i) General Information

Each class of property, plant and equipment is carried at cost or fair value less, where applicable, any accumulated depreciation and impairment losses.

(ii) Plant and equipment

Plant and equipment are measured on the cost basis less depreciation and impairment losses.

(iii) Depreciation

The depreciable amount of all fixed assets including buildings and capitalised leased assets, but excluding freehold land, is depreciated on a diminishing value basis over their useful lives to the company commencing from the time the asset is held ready for use.

(iv) Depreciation rates

The depreciation rates used for each class of depreciable assets are:

Class of Fixed Asset

Plant and Equipment 7.5% - 50%

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. When changes are made, adjustments are reflected prospectively in current and future periods only. Depreciation is expensed.

(g) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits held at call with banks and other short term highly liquid investments with original maturities of three months or less.

(h) Trade and other receivables

Receivables to be settled within 30 days are carried at amounts due. The collectibility of debts is assessed at balance date and specific provision is made for any doubtful accounts.

(i) Investments

Investments are carried in the company's financial statements at fair value.

(j) Recoverable Amount of Assets Valued on Cost Basis

The carrying amounts of assets valued on the cost basis are reviewed to determine whether they are in excess of their recoverable amount at balance date. If the carrying amount of assets exceeds its recoverable amount, the asset is written down to the lower amount. The write down is recognised as an expense in the net profit or loss in the reporting period in which it occurs.

(k) Trade payables

Liabilities are recognised for amounts to be paid in the future for goods or services received. Trade accounts payable are normally settled within 30 days.

(l) Employee Benefits

Provision is made for the company's liability for employee benefits arising from services rendered by employees to balance date. Employee benefits that are expected to be settled within one year have been measured at the amounts expected to be paid when the liability is settled, plus related on costs. Employee benefits payable later than one year have been measured at present value of the estimated future cash outflows to be made for those benefits.

Notes to the Financial Statements

For the 18 month period ended 31 December 2007

	2007 \$	2006 \$
2. Revenue from continuing operations		
Net profit/(loss) on sale of investments	65,544	21,412
Net profit on sale of investment properties	-	788,022
Rental revenue for property investment	38,290	192,096
Interest received	35,553	43,640
Dividends received	16,160	32,483
Fund distributions from investments	675,336	195,676
Legacies & donations	2,100	18,087
Member subscriptions	4,136	2,318
Refund of franking credits	57,057	16,581
Appeals	136,257	94,296
Sundry income received	21,426	5,669
Total Revenue	1,051,859	1,410,280

3. Expenses

Profit includes the following specific expenses:

Depreciation	12,826	8,339
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4. Auditors' Remuneration

Audit Services:

Auditors of the company	11,000	12,180
Other services	4,000	4,477

5. Cash and Cash Equivalents

Cash on hand	870	903
Cash at bank	324,750	743,019
Total	325,620	743,922

6. Trade and Other Receivables

Current

Trade receivables	9,360	-
Other receivables		2,412,967
Total	9,360	2,412,967

	2007 \$	2006 \$
7. Other Assets		
Current		
Prepayments	4,667	20,236
Total	4,667	20,236

8. Financial Assets

Non Current

Listed shares - at fair value	3,331,651	2,130,256
Managed funds - at fair value	2,886,101	2,077,441
Total financial assets	6,217,752	4,207,697

9. Property Plant and Equipment

Plant and equipment

Property, plant and equipment - at cost	143,640	79,756
Property, plant and equipment (accumulated depreciation and impairment)	(81,140)	(68,314)
Total property, plant and equipment	62,500	11,442

Movements in Carrying Amounts

	Plant and Equipment \$	Total \$
Current Year		
Balance at the beginning of year	11,442	11,442
Additions	63,884	63,884
Depreciation expense	(12,826)	(12,826)
Carrying amount at the end of year	62,500	62,500
Prior Year		
Balance at the beginning of year	16,505	16,505
Additions	3,276	3,276
Depreciation expense	(8,339)	(8,339)
Carrying amount at the end of year	11,442	11,442

	2007 \$	2006 \$
10. Investment Property		
Investment properties - at fair value	1,650,000	1,400,000
Total	1,650,000	1,400,000
11. Trade and Other Payables		
Current		
Unsecured liabilities		
Trade payables	14,896	-
Sundry payables and accrued expenses	36,565	128,101
Total	51,461	128,101
12. Provisions		
Current		
Employee benefits provision	13,486	13,486
Total provisions	13,486	13,486
Number of employees		
Number of employees at year end	3	3
13. Reserves		
Capital profits reserve	2,411,980	2,411,980
Asset revaluation reserve	904,756	1,177,620
Total	3,316,736	3,589,600
Nature and purpose of reserves		
(a) Capital Profits		
The capital profits reserve is used to accumulate realised capital profits		
Balance at end of year	2,411,980	2,411,980
(b) Asset revaluation		
The asset revaluation reserve is used to record increments and decrements in the value of non current assets		
Balance at beginning of year	1,177,620	1,253,355
(Decrements)/increments on revaluation	(272,864)	(75,735)
Total	904,756	1,177,620

14. Financial Instruments

(a) Interest Rate Risk

The company's exposure to interest rate risk, which is the risk that a financial instruments value will fluctuate as a result of changes in market interest rates and the effective weighted average interest rates on classes of financial assets and financial liabilities, is as follows:

	Weighted Average Effective Interest Rate	Floating Interest Rate	Non interest Bearing	Total
2007				
Financial Assets:				
Cash and cash equivalents	10.92	324,750	870	325,620
Receivables	-	-	9,360	9,360
Other financial assets	-	-	6,217,752	6,217,752
Total Financial Assets		324,750	6,227,982	6,552,732
Financial Liabilities:				
Payables	-	-	51,461	51,461
Total Financial Liabilities			51,461	51,461
2006				
Financial Assets:				
Cash and cash equivalents	5.80	743,019	903	743,922
Receivables	-	-	2,412,467	2,412,467
Other financial assets	-	-	4,207,697	4,207,697
Total Financial Assets		743,019	6,621,067	7,364,086
Financial Liabilities:				
Payables	-	-	128,101	128,101
Total Financial Liabilities			128,101	128,101

(b) Net Fair Values of Financial Assets and Liabilities

The carrying amounts approximate the fair values of financial assets and liabilities.

(c) Credit Risk

The credit risk on financial assets of the company which has been recognised on the Balance Sheet is the carrying amount.

15. Key Management Personnel

(a) Key management personnel comprise the directors and the company secretary.

(b) Names of each person holding the position of director in office at any time during the financial period are:

Key Management Personnel
Amanda Julie Christensen
Peter Gianoutsos
Robert Eric Horsell
Michael Herbert Levy
David Hugh Macintosh
John Paul Seale
Frederick Charles Samuel Smith
Iven Hunter Young

(c) The compensation paid, payable, or otherwise provided the directors of the company during the 18 month period was \$Nil (12 Month period to 30 June 2006:\$Nil).

Compensation paid, payable or provided to other key management personnel for the 18 month period totalled \$152,500 (12 Month period to 30 June 2006:\$100,000). This comprised short term benefits.

	2007 \$	2006 \$
16. Cash Flow Information		
(i) Reconciliation of Cash Flow from Operations with Profit after Income Tax		
Net income/loss for the period	(176,860)	525,512
Cash flows excluded from profit attributable to operating activities		
Non cash flows in profit		
Depreciation	12,826	8,339
Net gain/(loss) on disposal of financial assets	-	(21,412)
Net gain/(loss) on disposal of investments	-	(788,022)
Changes in assets and liabilities, net of the effects of purchase and disposal of subsidiaries		
(Increase)/decrease in trade and term receivables	(9,360)	76,598
(Increase)/decrease in prepayments	15,569	(13,941)
Increase/(decrease) in trade payables and accruals	(76,640)	52,051
Increase/(decrease) in provision for employee benefits	-	6,518
Total	(234,465)	(154,357)
(ii) Reconciliation of cash		
Cash at the end of the financial year as shown in the cash flow statement is reconciled to items in the balance sheet as follows:		
Cash and cash equivalents	325,620	743,922
	325,620	743,922

17. Information and declarations to be furnished under the Charitable Fundraising Act 1991, Section 23

(a) Details of aggregate gross income and total expenses of fundraising appeals

	2007 \$	2006 \$
Gross proceeds from fundraising appeals	136,301	100,095
Total income	136,301	100,095
Less: Total direct costs of fundraising	59,924	20,170
Total expenses	59,924	20,170
Net surplus from fundraising activities	76,377	79,925

(b) Statement showing how funds received were applied to charitable purposes

This surplus is used for research grants, fellowships and scholarships.

(c) Fundraising appeals conducted during the financial period

Appeals only.

(d) Comparisons

	2007 \$	2006 \$
Total cost of fundraising/gross income from fundraising	44%	20%
Net surplus from fundraising/gross income from fundraising	56%	80%
Total cost of services/total expenditure	100%	100%
Total cost of services/total income received	44%	20%

Summary Financial Report

ARC's Income Statement for the 18-month period ended 31 December 2007

	2007 \$	2006 \$
REVENUE		
Donation and Gifts – monetary & non-monetary	136,157	100,383
Legacies and bequests	2,100	12,000
Grants		
AusAid		
other Australian		
other overseas		
Investment Income	887,890	1,081,233
Other Income	25,712	216,664
Total Revenue	1,051,859	1,410,280
EXPENSES		
Overseas Projects		
Funds to overseas projects	92,842	33,414
Other project costs	0	40,062
Domestic projects	363,641	249,006
Community education	2,000	0
Fundraising Costs		
Public	59,924	20,170
Government, multilateral and private	0	0
Administration	710,312	542,116
Total Expenses	1,228,719	884,768
Excess of Revenue over expenses (shortfall)	(176,860)	525,512

Table of Cash Movements for Designated Purposes

For the 18 month period ended 31 December 2007

	Cash Available at the beginning of the financial period (\$)	Cash raised during the financial period (\$)	Cash disbursed during the financial period (\$)	Cash available at the end of the financial period (\$)
Australia Research Grants & Fellowships	0	138,257	(199,325)	(61,068)
Australian Projects	0	0	(161,958)	(161,958)
International Projects	0	0	(92,842)	(92,842)
Community education	0	0	(2,000)	(2,000)
Other Purposes	743,922	3,317,208	(3,417,642)	643,488
Total	743,922	3,455,465	(3,873,767)	325,620

Note

In the 18-month period ended 31 December 2007, the Board allocated an amount for Australian research grants and fellowships. The shortfall in cash reserves is compensated by cash raised from investment activities.

Declaration of Independence

By Stuart Cameron to the directors of Australian Respiratory Council

As lead auditor of Australian Respiratory Council for the period ended 31 December 2007, I declare that, to the best of my knowledge and belief, there have been no contraventions of:

- the auditor independence requirements of the Corporations Act 2001 in relation to the audit; and
- any applicable code of professional conduct in relation to the audit.



Stuart H Cameron

Partner, BDO Kendalls, Chartered Accountants

Sydney, 20 March 2008

Independent Auditor's Report

To the members of Australian Respiratory Council

Report on the Financial Report

We have audited the accompanying financial report of Australian Respiratory Council, which comprises the balance sheet as at 31 December 2007, and the income statement, statement of changes in equity and cash flow statement for the 18 month period ended on that date, a summary of significant accounting policies, other explanatory notes and the directors' declaration.

Directors' Responsibility for the Financial Report

The directors of the disclosing entity are responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Corporations Act 2001. This responsibility includes establishing and maintaining internal controls relevant to the preparation and fair presentation of the financial report that is free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We conducted our audit in accordance with Australian Auditing Standards. These Auditing Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the financial report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

In conducting our audit, we have complied with the independence requirements of the Corporations Act 2001. We confirm that the independence declaration required by the Corporations Act 2001 would be in the same terms if it had been given to the directors at the time that this auditor's report was made.

Auditor's Opinion

In our opinion the financial report of Australian Respiratory Council is in accordance with the Corporations Act 2001, including:

- (a) giving a true and fair view of the disclosing entity's financial position as at 31 December 2007 and of its performance for the period ended on that date; and
- (b) complying with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Corporations Regulations 2001.



Stuart H Cameron

Partner, BDO Kendalls, Chartered Accountants

Sydney, 20 March 2008

Our wish...

Breathing is something that most people take for granted. But did you know that each year some three million babies around the world succumb quietly to the respiratory infections that close down lung function.

- Respiratory disease is one of the largest killers in Australia and diseases such as pneumonia and influenza may threaten any of us.
- TB alone kills two million people around the world year after year.

We wish to help find solutions.

ARC has been working for the prevention and cure of respiratory infections such as tuberculosis since the beginning of last century.

to help find solutions for deadly respiratory illness...
and to help the sick find breath

Please support our efforts and send a donation.

Your contribution, no matter the size, will make a significant contribution to the lives of sufferers of lung disease both here and across the Pacific.

Australian Respiratory Council
GPO Box 102, Sydney NSW 2001

Phone: 02 9223 3144

Fax: 02 9223 3044

Email: arc@thearc.org.au



Australian Respiratory Council (ARC) is a member of the Australian Council for International Development (ACFID) and is a signatory to the ACFID Code of Conduct. The Code requires members to meet high standards of corporate governance, public accountability and financial management.



Australian Respiratory Council (ARC) is a Constituent Member of the International Union Against Tuberculosis and Lung Disease (IUATLD). The Union has as its mission the prevention and control of tuberculosis and lung disease, as well as related health problems, on a world wide basis, with a particular emphasis on low income countries.



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