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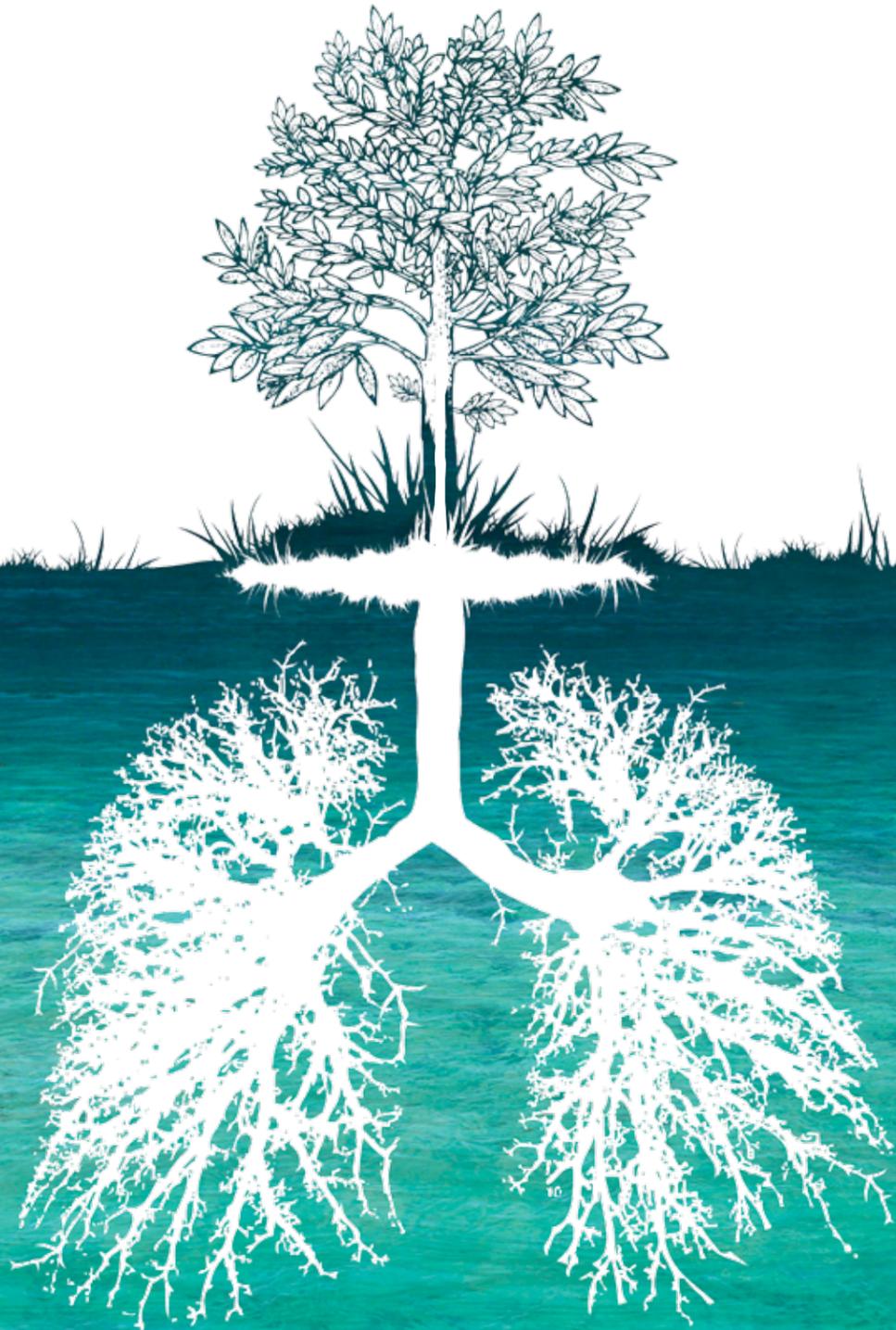
australian respiratory council  
prevention and cure of respiratory illness

*Celebrating 100 years in 2013*

**2010 Annual Report**

No. 97

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

ARC confirms that in the pursuit of its mission and vision it has no tobacco exposure in regard to direct stocks or managed funds exposures held within its Investment Portfolio.



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.

[www.thearc.org.au](http://www.thearc.org.au)

## President's Report

David Macintosh *BBS (UTS), FCA*



**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.**

As I look back over the last decade as President of the Australian Respiratory Council (ARC) and reflect on the activities undertaken and changes encountered, I see a robust and dynamic organisation making a tremendous contribution to respiratory health in Australia and our Region.

Over the last ten years, ARC has contributed approximately \$1.2 million to projects, developing a collaborative approach with partners, teaming technical skills with local know how and empowering those at the forefront of research and program delivery to progress their work. Partnerships have been developed with the World Health Organisation (WHO), the Secretariat of the Pacific Community (SPC), the U.S Centres for Disease Control and Prevention (CDC), the Menzies School of Health Research, the Aboriginal Health and Medical Research Council (AHMRC) and the Aboriginal Health Council of Western Australia (AHCWA). The Eskitis Institute, Griffith University invited ARC to partner in a collaboration to discover new drugs for the treatment of tropical diseases, including tuberculosis. A corporate partnership with Eli Lilly is increasing ARC's profile, collaborating on the Parliamentary launch of World TB Day and projects. The 2010 World TB Day Parliamentary launch featured the US Ambassador and the then Senator Bob McMullen (the Senator for International Aid) as well as representatives from Eli Lilly and ARC who spoke to the burden of TB in our Region, the benefit of TB control in the region for Australia and

the need to maintain strong TB services within Australia and the Region. ARC has found a niche with Tuberculosis (TB) and this partnership with Eli Lilly will continue to develop. Eli Lilly have introduced workplace giving, with ARC as a recognised charity.

Over the last 10 years ARC has provided \$1.7million in funding and \$550,000 on Ann Woolcock research scholarships and fellowships. In 2010, Dr Peter Bye from the Department of Respiratory and Sleep Medicine, Royal Prince Alfred Hospital was awarded the Harry Windsor Research Grant to support his project titled, "Novel Interventions for the diverse population of Australians with Bronchiectasis". This research will examine a new low-cost therapy with excellent potential to treat bronchiectasis: a strong, sterile, salt-water solution that is inhaled as a mist via a nebuliser.

The first recipient of the Fellowship, Dr Ingrid Laing concluded her four year research project investigating genetic influences and lower respiratory tract infections in children in Papua New Guinea in 2009. Dr Jodie Simpson from the Department of Respiratory and Sleep Medicine, University of Newcastle, commenced her Fellowship in January 2010. Jodie is investigating the character and treatment of the immune system in older people with obstructive airways disease.

Detailed reports on each of these research projects follow within the Annual Report.

### ARC's International and Australian Project Work

In 2010, ARC strengthened its engagement in the Asia Pacific region and Australia, targeting tuberculosis and other preventable respiratory disease. ARC's project work continues to aspire to sustainable solutions through partnerships with our many collaborators including national health agencies, state Indigenous groups and country based non government organisations (NGOs). ARC's practice of supporting projects which have educating, enabling and empowering at their core, remains fundamental to project activity. In 2010 ARC continued to support initiatives that national health agencies, NGOs or communities identified as important mechanisms for effecting positive change in respiratory health.

#### The Asia Pacific Region

##### Ongoing support to combat TB in Cambodia

2010 marked the second year of ARC's support for the Cambodian Anti Tuberculosis Association's (CATA) Program which is working to reduce the incidence of TB in factory workers and the elderly. Recognised as being among the 22 high burden countries for TB in



the world CATA has partnered with the Cambodian National TB Control Program to stem the high transmission rates for TB identified in some of the more marginalised groups. Dr Mom Ky the Program's Executive Director explains that "older people in the community are often the last to seek health care if ill, whilst also bearing primary responsibility for the care of small children who's parents are at work". To counter the risk to the elderly and to the very young CATA initiated a campaign to educate the community on TB, targeting the elderly through a system of community volunteer health workers. The outcome has been impressive, in 2010, 42 village health support volunteers were trained from 21 villages around Phnom Penh, 3096 households received TB information from the volunteers and 32 TB cases were detected and treated.



The second component of CATA's program is TB Awareness training in factories, an innovative approach in which CATA is piloting a strategy of awareness raising and clinic health worker trainings to reduce the burden of TB within the large population of factory workers in Phnom Penh. In 2010 CATA implemented the TB Control Project in 17 factories, 21,097 factory workers were covered by the project. Factory owners pledged to support the campaign with paid sick leave and the factory health centre staff were trained and supported by both the Ministry of Health and the CATA Project workers. The program utilises ARC Training materials to address issues of community involvement and stigma related to TB and has produced advocacy materials including T-shirts and brochures which have been widely distributed through the awareness campaigns. A monitoring visit in 2010 highlighted the impressive results CATA is achieving under often extenuating circumstances.

The Thoracic Society of Australia and New Zealand (TSANZ) has recently agreed to assist the funding of this wonderful project expanding its collaboration with our organization in projects of regional significance and merit.

### Identifying strategies to build community involvement in TB in Kiribati

In 2010 the AusAID funded National TB Program in Kiribati through its implementing agency the Secretariat of the Pacific Communities (SPC) sought technical support from ARC to



evaluate the effectiveness of the Community Component of the Kiribati Quality TB Epidemic Control Project (QTBEPC). The Project had recently commenced its second three year phase. The Community Component Review was tasked with assessing the overall success of the current and first phase strategies in mobilising community involvement in TB prevention, detection and compliance. Its aim was to provide recommendations for activities and strategies to incorporate into the current phase and beyond, to improve project engagement with communities and civil society and to support community empowerment and involvement in TB control.

The Review took place over 10 days in Tarawa the capital of Kiribati in August and the Review Report tabled 22 recommendations which were fully endorsed by the Ministry of Health and SPC. The report has subsequently been utilised as the basis for a major submission to the TB Reach Grants to expand the community component of the National TB Program.



### Expanding ARC's Training Program and Technical Support in the Pacific – through collaboration with the World Health Organisation (WHO) and the Centre for Disease Control (CDC)

In 2010 ARC was approached by the Fiji National TB Program (NTP) to provide expertise to develop and implement medical, nursing and community training programs in Fiji. Professor Guy Marks was engaged to undertake the medical consultancy and Kerrie Shaw provided the nursing review in consultation with Amanda Christensen and Pam Banner. Prior to this in May, ARC had successfully developed and delivered its first TB Contact Tracing Nursing Workshop in Fiji, at the Fifth Pacific Stop -TB meeting.

Once more for the fifth consecutive year, ARC developed and delivered a 2 day TB workshop in Hawaii for Pacific Island TB Nurses and related workers. This ongoing collaboration with the CDC in Atlanta USA attracted thirty-one participants from seven countries to the course. The theme of this year's workshop, If You Can't Measure It, You Can't Manage It, highlighted program management, monitoring and evaluation.

In response to the nurses request for more community information on TB and Stigma, ARC worked alongside the Pacific Island TB Controller's Association (PITCA) nurses to develop two posters concerning TB Stigma. They were distributed at the 2010 PITCA Conference and are available for general use on the ARC website.

The Pacific Island TB Nurses Network have continued throughout 2010 with ARC supporting CDC and the National Tuberculosis Controllers Association (NTCA), USA, to provide technical support to TB nurses and related workers within the Northern Pacific Region through monthly Regional Case Management Teleconferences. These teleconferences play an important role in supporting TB nurses on their home Island states with coordinated practical solutions to TB issues as they arise. In addition, ARC has been successful this year in achieving Continuing Nursing Education (CNE) points recognition for the health worker participants, contributing towards their annual quota of points required for continuing registration.

#### Australia



#### Using Talking Posters to educate families on child respiratory health in remote Aboriginal communities in the Northern Territory

In the Northern Territory, respiratory illness is the most frequent reason for hospitalisation of young children under 5 years of age and the most preventable cause of death of Aboriginal infants

(five times that of non-Aboriginal infants). To help address this, ARC has supported the Menzies School of Health Research to develop a series of talking posters on cough, smoking and hygiene targeting five Indigenous languages in Central Australia. Each poster has a button that plays audio in a specific indigenous language and a button in English.

These resources have already received overwhelming positive community feedback. In addition three separate flipcharts on Pneumonia, Bronchiolitis and Bronchiectasis have been produced for use by health workers to help explain these complex diagnoses to their patients and families. The resources are helping to fill an identified gap in culturally appropriate respiratory education materials so badly needed in remote Aboriginal communities.

#### Working to reduce smoking in Aboriginal communities in NSW and WA – the completion of two Major Projects



In 2010 the two major Aboriginal Tobacco Cessation Research Projects, the Aboriginal Health and Medical Research Council of NSW, BREATHE Project and the Aboriginal Health Council of Western Australia (AHCWA) Beyond the Big Smoke Project (BtBS) have drawn to a close. ARC made a significant financial commitment to these projects and is delighted to report that both projects with their strong research component

as well as program implementation activities have achieved what they set out to do plus much more. Already they have been able to influence activities, funding and policy decisions that will lead to a long term reduction in tobacco usage among Aboriginal people, contributing to closing the gap. Both Projects have received ongoing funding from government departments to expand their excellent work.

#### TB Resources

Resources developed for use in Australia in 2010 to support TB management include pamphlets about TB and TB screening for use in rural and remote indigenous communities and a tool to assist health workers undertake Tuberculin Skin Test readings.



#### Birthday Celebrations

It is important and significant to congratulate the Thoracic Society of Australia and New Zealand (TSANZ) and Australian Lung Foundation (ALF) on their respective 50th and 21st anniversary's this year. Both these outstanding organizations in our field of respiratory medicine share a unique bond and we wish them every success as we all seek to improve people's lives.

Of course our own 100 year celebration will be in 2013.

#### Finances

The consequences of the 2008 global financial crisis (GFC) have continued to challenge ARC's financial performance. Most significantly the impact has been felt in the "value of assets", resulting in the decreased value of property and investment stock (showing a loss of \$354,658) which have not yet fully recovered from the 2008 set back. These have been challenging circumstances for a self funding charity organisation, which does not receive financial support from government. Despite this, the operating loss in 2009 of \$355,058 was reduced to \$55,586 in 2010. Again, this has been achieved by reducing operating costs, constraining project expenditure and focusing on strategic management of the investment portfolio. The diligence and commitment of the Finance committee and staff have been fundamental to achieving this result. ARC has embraced a partnership approach in order to maintain project activity, strengthening relationships with Australian and International partners. These partnerships ensure that ARC continues to have an impact despite challenging economic circumstances.

Fundraising activities too, have a significant role to play in ARC's response to the GFC. A bequest program was implemented in 2009 and has gained much support over the last 12 months. Workplace giving and acquisition appeals have also contributed to ARC's capacity. These programs will continue to be expanded in 2011 in order to enable the pursuit of ARC's mission.

#### Acknowledgements and Thanks

The dedication, expertise and enthusiasm of the Directors is one of ARC's great strengths. Their individual contributions are deeply appreciated, and I offer my personal thanks to them: Paul Seale and Peter Gianoutsos as Vice-Presidents; Robert Horsell as Finance Director; Iven Young as Chair of the Research Committee; Amanda Christensen, Chair of ARC's Project Advisory Group and Ian Ramsay Chair of ARC's Centenary Celebrations Committee.

ARC's dedicated staff have worked tirelessly throughout the year, developing, implementing and supporting all activities of the Council. A big thank you to Kerrie Shaw, Judy Begnell and Helen Smith for their dedication and support.

I would like to pay tribute to Audrey Tonkin, a committed and enthusiastic volunteer. Audrey's continued support and

assistance in ARC's day to day activities is much valued in our organisation.

Special thanks also are extended to Pam Banner and Amanda Christensen whose sustained efforts have enabled ARC to expand its contribution in the Pacific through health worker education and training.

Thank you to the members of the Research Committee, Projects Advisory Group and Centenary Celebrations Committee who have given their valuable time to support and guide ARC on its mission.

Again a sincere thank you to ARC's donors without whose commitment and generosity through bequests and regular giving, this work in respiratory health would not continue. We hope that our Newsletters and Supporter's Briefings have gone some way to demonstrating the impact that your contribution is making and gratitude with which it is received.

The year ahead promises to be another productive and exciting year for ARC. Our Research program continues to support important investigations being undertaken by Australian medical researchers in Tuberculosis and COPD. ARC's involvement in Cambodia continues with a focus on building capacity in local agencies which target marginalised groups. Embracing partnership, the Japanese Anti Tuberculosis Association (JATA) the Thoracic Society of Australia and New Zealand (TSANZ) and Eli Lilly Pty Ltd have joined ARC to co-fund the Cambodian Anti Tuberculosis Association (CATA) in their ongoing programs. ARC will continue to give support to the TB programs in the Pacific Nations through PITCA and the Pacific Nurses Forum. Two new projects will be supported in 2011; the MECOR Program in Vietnam, which aims to train local doctors in research skills, will be facilitated by the Woolcock Institute of Medical Research; and the Be our Ally Beat Smoking Study (BOABS), run by the Kimberley Aboriginal Medical Services Council, will send two Aboriginal research officers on a cultural exchange to New Zealand to share and learn about indigenous specific tobacco cessation techniques from their Maori counterparts. Educational resources for use in Australian and Pacific TB will be further developed in 2011.

I look forward to another successful and productive year ahead for ARC.

Thank you all for your contribution.

David Macintosh

President

## Governance

### Board of Directors



#### AMANDA CHRISTENSEN

*Dip Nursing*

NSW TB Program Manager 1997-; various positions in public health for twenty years including tuberculosis control for thirteen years. Appointed to the Board in 2001. Employed as the ARC Executive Director from April 2008 to May 2009. Chair of Projects Advisory Group



#### CLINICAL ASSOCIATE PROFESSOR PETER GIANOUTSOS

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

Senior Consultant Thoracic Physician (VMO) Dept of Thoracic Medicine RPAH 1971-; Member TSANZ, ATS, ACCP, BTS, ALF, MLS(NSW); Chairman RPA Medical Board 1989-1991; Member of Medical Board of NSW 1978-1982; Chairman UMPS Medical Experts Panel 2002-2007. 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, 2005-2008; Chairman, Cricket NSW 1997-2008; Director, Bradman Foundation 1999-2005. Appointed to the Board in 1999; Chair of Finance Committee.



#### PROFESSOR MICHAEL LEVY

*MBBS, MPH, FAFPHM*

Director, Corrections Health Program, ACT Health, Canberra. Conjoint appointments with the Australian National University, University of Sydney and Monash University; Medical Officer Global Tuberculosis Program, World Health Organization Geneva 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 2001-2008. Resigned from the Board February 2010



#### DAVID MACINTOSH

*BBS (UTS), FCA*

Chairman, The Macintosh Foundation, Macintosh Chair of Paediatric Respiratory Medicine - Endowed Chair 29 November 2005 in perpetuity; Benefactor since 2007, The Children's Hospital at Westmead; Member of Board of Governors and Chairman of the Finance Committee, Woolcock Institute of Medical Research; Director, The Australian Lung Foundation; Managing Director, Paynter Dixon Construction Group 2001-Present; Director of numerous private companies; thirty years of senior management and director level in the transport and construction

industries in Australia and Europe; Chairman, Payce Consolidated Limited 1992-2010, Director, Payce Consolidated 1990-2010; actively involved in the Surf Life Saving movement for over forty five years, Life Member, Long Reef Surf Life Saving Club Inc.; Distinguished Service Member and Chairman of the Expenditure Review Committee, Collaroy Surf Life Saving Club Inc.; Distinguished Service Member, Sydney Northern Beaches Surf Life Saving; Appointed to the Board in 1997, President. Elected Life Governor of ARC in 2010



#### IAN W. RAMSAY

*LL.,B*

Solicitor, Supreme Court of NSW; Member, Law Society of NSW; General Manager and Board Director, WorkCover NSW (1988-1997); Chairman, Dust Disease Board of NSW (1988-1997); Member, National Occupational Health and Safety Commission (1988-1997); Chairman, Sporting Injuries Committee (1988-1997); Member, Joint Coal Board Health and Safety Trust (1993-1997). Appointed to the Board in November 2008. Chair of Centenary Celebration Committee.



#### PROFESSOR J PAUL SEALE

*MBBS, PhD, FRACP*

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; former 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



#### CLINICAL PROFESSOR IVEN YOUNG

*BSc(Med), MBBS, PhD, FRACP*

Senior Physician, Department of Respiratory and Sleep Medicine, Royal Prince Alfred Hospital (RPAH) 1991-2009; 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; Member, European Respiratory 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 2001-2009; Chair, Physicians Training Council, CETI, 2010-. Appointed to the Board in 1998. Elected Life Governor of ARC in 2003. Chair of Research Committee.

### Projects Advisory Group

#### Amanda Christensen (Chair)

NSW TB Manager,  
NSW Health

#### Dr Vicki Krause

Director, Centres for Disease Control,  
Northern Territory Health Services

#### 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 of Medicine

#### Sheila Simpson RN

TB Nurse, Liverpool Health Service

#### Dr Justin Waring

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

#### Roger Williams

Chief Operating Officer  
NSW Aboriginal Health & Medical Research Council

### 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 Judith Black

Professor Pharmacology, School of Medical Services, University of Sydney

#### Professor Peter Gibson

Staff Specialist, Respiratory Medicine Unit John Hunter Hospital

#### David Macintosh

ARC President (ex officio)

#### Clinical Professor Iven Young (Chair)

Senior Physician, Department of Respiratory and Sleep Medicine,  
Royal Prince Alfred Hospital

## Supporters Of ARC



### Breath Of Life

The Board of Directors is pleased to advise that as a token of ARC's appreciation for her generosity we are honouring Violet Elizabeth Wilson and naming her an inaugural member of the *Breath of Life*, our special benefactors' club.

In 2010, Violet left the Australian Respiratory Council (ARC) a bequest of \$81,700 in her Will. On receiving Violet's bequest, we found ourselves saying,

#### We wish we could have thanked her...

Unfortunately Violet did not make ARC aware that this was her intention and we were unable to do this in person. Perhaps our thanks to Violet can be to tell others what we plan to do with her generous bequest.

Violet's bequest will be used to fund the Harry Windsor Research Grants Scheme for 2011. These annual grants are awarded nationally to support research in tuberculosis, respiratory diseases due to other infections, or respiratory diseases related to tobacco use. Within these categories, projects examining community issues or the health of disadvantaged groups are particularly encouraged. The proposals can relate to clinical research, public health research or basic scientific research.

This in turn allows for future project commitment in the following areas –

- Development of more TB educational materials.
- Production of TB and Diabetes flipcharts
- Development of respiratory health awareness and promotional tools
- Funding of training for indigenous health workers

These projects could not receive our support without Violet's wonderful bequest. Violet might not know any of the people she has helped but they will be forever grateful to her.

### Breath Of Life Honour Roll

Established for just twelve months the Breath of Life is steadily growing. This wonderful group of supporters have all made the decision to include the Australian Respiratory Council in their Will. We greatly appreciate having the opportunity to thank the Breath of Life members in person.

Members of the Breath of Life are all invited to attend Supporters Briefings and other special events.

Ms Jean McIver Caldwell

Mr Jeffrey Walker

Mr Kenneth Jervis Carrick

Mrs Violet Wilson

Mr J W de B Persse

Anonymous (4)

### Partners and Friends

#### Parliamentary Launch World TB Day, 17th March 2010

ARC in partnership with Eli Lilly Australia hosted an event at Parliament House on the 17th March 2010 to launch World TB Day. The aim of the Parliamentary event was to raise awareness about TB, the growing threat posed by multi-drug resistant tuberculosis and, in particular, the role Australians can and should play in contributing to TB prevention and control within our region. The theme was "What if? What would it be like in Australia if we had not succeeded in reducing the impact of tuberculosis? What would it be like to live in a community where tuberculosis is encountered daily?"

Presentations were undertaken by:

- Stuart Englund - Eli Lilly, who welcomed guests and introduced the launch.
- His Excellency Mr Bleich - Ambassador, Embassy of the United States of America, who highlighted his work in homeless shelters and his awareness of TB and spoke at great length of the work that ARC is doing with the US, via CDC in the region

- The Hon. Bob McMullan - Parliamentary Secretary for International Development Assistance, who highlighted TB as an international and regional issue, spoke to issues in Australia eg MDR-TB in PNG and the impact on Northern Queensland. Spoke to the effectiveness of NGO involvement in public health issues and the significant contribution that ARC has made over time to TB control in the region.

- Kerrie Shaw – ARC, who highlighted the nature of TB, data from Australia and the Western Pacific, ARC TB Projects within the region (Cambodia, FSM, PITCA, Nurse Network Case presentation meetings), plans to expand the training program with CDC and WHO and the "call to action" (work with us to support our neighbours, maintain funding to TB services in Australia, maintain skill base of Australian TB workers by facilitating their participation in regional programs)

ARC compiled a photographic and statistical display re TB in the Western Pacific Region, achievements in TB control in Australia and information about ARC (what we do, what has been achieved). Eli Lilly compiled several poster size images of TB patients from developing nations to highlight the suffering and the impact of MDR-TB.



## Supporters Of ARC (continued)

### PPM-DOTS in Cambodia - improving case detection through private pharmacy referrals

The National TB Control Program (NTP) in Cambodia began implementing the internationally recognised strategy for TB control, DOTS (directly observed treatment, short course), in 1994 and achieved 100% nationwide coverage by 2004. The NTP has consistently maintained a case detection rate (CDR) of around 60% and a treatment success rate of over 90%. From a peak CDR of 68% in 2005, however, rates have fallen. Reasons for this decline are not clear.

In 2005, aiming to improve case detection rates, the NTP initiated a public-private mix partnership (PPM-DOTS) with private pharmacies in the capital city of Phnom Penh and selected provinces. Although about 9% of new cases have been referred through pharmacies, the NTP believes there remains a high initial default rate with around 50% of referred patients not following-up for diagnosis and treatment.

With support from the Australian Respiratory Council, University of Sydney researchers from the Faculty of Pharmacy, Dr Bandana Saini and Carolyn Bell, have been studying provider-related factors which may contribute further insight into initial default rates. In January 2011, six focus group discussions were held in Phnom Penh with fifty-four pharmacy owners linked to the referral program. Participants discussed issues relating to the implementation of the program in their pharmacies and the daily experience of referring TB symptomatic patients. This collaborative research is ongoing.

### Eskitis Institute for Cell and Molecular Therapies Griffith University, Queensland

Dr Stuart Newman, Business Development Manager for the Eskitis Institute, Griffith University has invited ARC to partner in a collaboration to discover new drugs for the treatment of tropical diseases, including tuberculosis.

Dr Newman is in the process of preparing a funding submission for the establishment of the Co-operative Research Centre for Tropical Disease Therapeutics (Attachment 11) and initially contacted the Australian Respiratory Council (ARC) seeking assistance to locate Australian Researchers investigating Tuberculosis. The Eskitis Institute's Drug Discovery Research Program is targeting tuberculosis, vivax malaria and dengue fever. The proposal would be submitted to the Commonwealth initiative known as the, Co-operative Research Centres program, Round 14, 2011.

Dr Newman has invited ARC to partner in the collaboration to provide an outlet for dissemination, public communication and advocacy to the Drug Discovery Research Program.

The Institute works towards the development of new strategies to prevent and treat disease with an emphasis on multi-disciplinary research and collaboration within the Institute and with national and international partners. Its approach is through the study of "infectious diseases and the mechanisms of the body's innate immune system, focusing on the area of cellular differentiation in cells including mammalian genetics and functional genomics". The Institute utilises its "Nature Bank" a repository of some 40,000 biota to search for new compounds with drug potential. The knowledge gained from this research is being used to find ways to boost the body's existing immune response combating infection and disease and "will ultimately benefit the world's poorest people".

Potential organisations that will use the outcomes of research to fulfil their aims related to developing new, effective and low cost medicine to fight tropical diseases, identified in the submission include: Bill and Melinda Gates Foundation, Australian Army Malaria Institute, Medicine for Malaria Venture, Drugs for Neglected Diseases Initiative, the Global Alliance for TB Drug Development, AusAID, Queensland Health and Northern Territory Health



## 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, community issues or the health of disadvantaged groups.

### Ann Woolcock Fellowship

**2004 - 2008**

The genetic influences on causal pathways of acute lower respiratory tract infections (ALRIs) in highly susceptible infants in PNG

Dr Ingrid Laing  
*Telethon Institute for Child Health Research, Perth*

**2010 - 2014**

Characterisation and treatment of innate immune dysfunction in older people with obstructive airway disease

Dr Jodie Simpson  
*University of Newcastle*



### 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.

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](http://www.thearc.org.au)

### 2010 Recipient

**2010**

Hypertonic saline for people with bronchiectasis Assoc Professor Peter Bye et al  
*Royal Prince Alfred Hospital, Sydney*

## Dr Jodie Simpson

Australian Respiratory Council Ann Woolcock Research Fellow 2010 - 2014



My Ann Woolcock fellowship began in January 2010, and I have taken a period of 26 weeks maternity leave from July-December 2010 returning to work in January 2011. This report will detail my progress during 2010.

### Research

#### Airways disease in older Australians

Two studies were performed investigating mechanisms of airway disease in older Australians, and I have completed the data analysis that was undertaken for these first two studies. The first study characterised clinical symptoms and airway inflammation and the second study investigated the innate immune response to microbial stimuli in older Australians with airway disease. I am currently preparing the primary manuscript for submission, which I aim to complete by March 2011. This study is investigating the clinical and inflammatory differences between people with fixed airflow obstruction and 2 control groups of older healthy controls and younger healthy controls. There are at least 2 more manuscripts for completion from this project which I aim to prepare and submit during 2011.

I have now recruited and randomized 30 people for the clinical trial of macrolide therapy in older patients with airways disease. Study treatment will be completed later in 2011, with analysis to follow in late 2011/early 2012.

#### Triggers and Treatment of Non-eosinophilic asthma

This is a two phase study. The aim of phase 1 is to examine cough and reflux as a possible trigger of neutrophilic asthma. The second phase will explore the effect of inhaled corticosteroid treatment on inflammatory subtype in asthma by reducing patients' anti-inflammatory treatment according to asthma guidelines. Phase 1 patient data will be complete by February 2011 with sample assessment and data analysis to follow later this year. Phase 2 has already completed 12 participants and preliminary analysis is complete. A review of analysis will be undertaken to determine if this phase should continue.

### Research Training

#### Student Supervision

2007-2011: Ms Ama-Tawiah Essilsie is her PhD investigating an animal model of asthma and the role of Haemophilus Influenzae infection on inflammatory phenotype.

2007-2011: Ms Hayley See is investigating the in vitro response of bronchial epithelial cells and the activation of lymphocytes from COPD patients by infection with rhinovirus, respiratory syncytial virus and Haemophilus influenza.

2008-2011 Mr Heng Zhong will commence his PhD in October 2008 studying the in vitro response of bronchial epithelial cell and neutrophils to infection with rhinovirus: a comparison of patients with COPD, healthy smokers and healthy non-smokers  
2009-2011 Mr Lakshitha Gunawardhana, is studying the epigenetic regulation of airway inflammation in non-eosinophilic asthma

#### Research Output

1. Baines KJ, **Simpson JL**, Bowden NA, Scott RJ, Gibson PG. Differential gene expression and cytokine production from neutrophils in asthma phenotypes. *Eur Resp J* 2010 35:522-531.
2. Wood LG, **Simpson JL**, Hansbro P, Gibson PG. Potentially pathogenic bacteria cultured from the sputum of stable asthmatics are associated with increased 8-isoprostane and airway neutrophilia. *Free Rad Research*. 2010;44: 146-154.
3. Baines KJ, **Simpson JL**, Wood LG, Scott RJ, Gibson PG. Transcriptional phenotypes of asthma defined by gene expression profiling of induced sputum samples. *J Allergy Clin Immunol*. 2011 Jan;127(1):153-160.e9.
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5. Wood LG, **Simpson JL**, Wark PA, Powell H, Gibson PG. Characterization of innate immune signalling receptors in virus-induced acute asthma. *Clin Exp Allergy*. 2010 Dec 3. doi: 10.1111/j.1365-2222.2010.03669.x. Epub ahead of print
6. McDonald VM, **Simpson JL**, Higgins I, Gibson PG. Multidimensional assessment of older people with asthma and COPD: clinical management and health status. *Age Ageing*. 2011 Jan;40(1):42-9. Epub 2010 Nov 17.

#### Other Achievements

I was a co-author on a successful NHMRC application in 2010 with Dr Simon Phipps from the University of Queensland which will investigate the role of the innate immune system in asthma subtypes, specifically looking at inflammasome activation in neutrophilic airways disease.

## Dr Ingrid Laing

Australian Respiratory Council Ann Woolcock Research Fellowship 2005-2009



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

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

Acute lower respiratory infections (ALRI) are the leading cause of death in children under 5 years of age, excluding neonatal causes (those occurring in the first 4 weeks of life)<sup>1</sup>. 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 rates of childhood ALRI mortality in the world<sup>2</sup>, with an average incidence of 4.3 episodes in the first 18 months of life, with approximately one third of those being moderate or severe<sup>3</sup>. This fellowship project comprised a systematic investigation of the contribution of genetic factors to the development of immune responses and susceptibility to pneumonia in this population.

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 have completed a randomised controlled trial of the 7-valent pneumococcal-CRM197 conjugate vaccine (PCV - Prevnar®) in a population of infants from PNG (NPCV study). Vaccination with PCV that began at birth (Neonatal group - 0, 1 and 2 months) or soon after birth (Infant group - 1, 2 and 3 months) was compared with no PCV (Control group). It should be noted that infants from all three groups received the 23-valent pneumococcal polysaccharide vaccine at nine months of age. The children were followed to 18 months of age to determine the number and severity of each episode of ALRI as well as their development of bacterial carriage and innate and adaptive immunity.

Recruitment of 318 infants was completed in September 2007 and the 18 months of follow-up finished in March 2009. Measurements of antibody levels to each of the seven vaccine antigens at birth, 2, 3 and 4 months of age are complete. Assays to determine T cell responses in cord blood and at 3 months have been completed<sup>4</sup> and the results from samples collected at 9 months are now also available. Follow-up was completed in 253 children with 441 ALRI episodes recorded of which 192 were moderate or severe and 8 children died. There were no striking differences in the total number of ALRIs between vaccination groups. However, infants in the neonatal or infant vaccination groups were on average older when they had their first moderate or severe ALRI compared with infants who did not receive PCV. The immune and vaccine response components of the study will further elucidate the mechanisms by which PCV may have helped to protect the study children from moderate or severe ALRIs.

### Research Training and Site Visits

The ARC Ann Woolcock Research Fellowship began in March 2005. The travel component of the fellowship funded 3 visits to Goroka, PNG. These were for the purposes of attending both the 2005 PNG Medical Symposium and the PNG Institute of Medical Research 40th Anniversary Colloquium, meeting with the local NPCV study team members and completing DNA extractions on blood samples collected from study children. These visits provided training on the clinical, social and environmental aetiology of lower respiratory infections in a developing country, allowed me to meet with local and international researchers studying the genetic susceptibility of other infectious diseases common in PNG (malaria and lymphatic filariasis) and helped me to establish and maintain the collaborative ties necessary for the success of this fellowship project. Thanks to the assistance of researchers at the PNGIMR and a UWA small grant, my visits to the PNG IMR also produced 283 DNA samples from the 318 study children for genotyping. This was the maximum number of DNA samples that would be available for the project, as a number of infants and their families had withdrawn from the study prior to the 3-month follow-up visit, which included the first blood sample collection.

The ARC also funded attendance at the 2005 European Respiratory Society Annual Congress in Copenhagen where I attended two postgraduate workshops on respiratory infections; the 5th International Symposium on Pneumococci and Pneumococcal Diseases in Alice Springs; a workshop on Consultation with Indigenous Communities in Perth; the 2007 American Thoracic Society International Conference in San Francisco; and partially funded 3 months of training with Prof. Fernando Martinez and his research team at the Arizona Respiratory Center. These training opportunities supported my work on the fellowship project - providing insight into the burden of ALRI in developed countries and further developing my skills in the statistical analysis of longitudinal data, multiple genetic variations/haplotypes and causal pathways.

Since completion of my ARC Ann Woolcock Research Fellowship, I have been awarded the Peter Phelan Paediatric Travel Grant by the Thoracic Society of Australia and New Zealand to present my fellowship results at the 2009 PNG Medical Symposium and the 2009 European Respiratory Society Annual Congress. Presentation in PNG was to inform the community that had supported my project, including community health workers, researchers and PNG Health Department representatives, of the results of my study. My

presentation was given at the main body of the symposium rather than in a concurrent session or the more specialised Biological Sciences Meeting and concluded that human genetic factors are likely to play a significant role in a child's susceptibility to ALRI in PNG. Presentation at the European Respiratory Society meeting was to gain critical review of my fellowship project results from experts in respiratory disease research. This travel award also partially funded another short visit with Prof. Fernando Martinez in order to discuss the ongoing analysis of my fellowship results. I have also recently presented my fellowship results at the 2010 Thoracic Society of Australia and New Zealand Annual Scientific Meeting. Two abstracts were selected by the Respiratory Infectious Diseases special interest group, for presentation in a poster discussion session and one for an oral presentation. The poster entitled "Adaptive immune gene polymorphisms are associated with earlier and increased incidence of ALRI in children from Papua New Guinea (PNG)" was selected as the best poster presentation for the special interest group.

### Results

Genotyping of 36 gene sequence variations known to be involved in the development of innate or adaptive immune responses was completed on the 283 DNA samples. As most children had had at least one ALRI, the first phase of statistical analysis assessed the potential contribution of each genetic variation to the age at which they had their first ALRI. Where some evidence of a relationship between a gene and the age of first ALRI was identified, the total number of ALRIs over the follow-up period was also investigated.

Somewhat surprisingly, in the first 66 subjects genotyped, 3 genetic variations involved in the adaptive immune response were not identified and in the whole cohort, another 8 genetic variations involved in innate immune responses were not found or were extremely rare. A previous study in PNG found that another 5 innate immune gene variants were also absent/very rare. Previous investigation of some of these innate immune gene variations in other studies suggest that the gene sequence found in people from PNG may initiate lower immune responses to infections

than if the gene variants were present<sup>5</sup>. You might think that having a vigorous immune response would help to protect PNG children from infections and it has been shown that some gene variants that initiate a stronger immune response, are likely to protect people from severe malaria<sup>6</sup>. However, other studies have suggested that gene variants that initiate a stronger innate immune response are associated with sepsis and death from bacterial infection<sup>7</sup>. Therefore it is possible that people from PNG have a particular pattern of immune gene variants that helps to protect them from more severe respiratory infections.

The genotyping results did find 9 innate immune and 19 adaptive immune genetic variants in the study children. The results of the preliminary statistical analyses showed that variants in 3 innate immune genes and 5 adaptive immune genes had evidence of association with an earlier age of first ALRI and 3 of those were associated with an increased total number of ALRIs. Vaccination group did not affect these results. This is the first immunogenetic analysis of a prospective study of childhood ALRI completed in a population from a developing country. These results show that particular genetic factors, in addition to environmental and socio-economic factors, may play a role in the high incidence of ALRI in Papua New Guinea. Furthermore, almost without exception the polymorphisms that show evidence of contributing to increased ALRI susceptibility are more prevalent in African-American and Sub-Saharan African populations than in either Caucasian and PNG populations. This suggests that these polymorphisms may also contribute to the high rates of ALRI found in populations of African origin. The next phase of the statistical analyses will investigate the contribution of these polymorphisms to measures of innate and adaptive immunity in study children at 3 and 9mths of age. Although the genetic analyses have been completed, final data analysis and publication is awaiting morbidity database curation and completion of bacterial carriage, vaccine response and immune development analyses for the 18 months of follow-up, which have experienced significant delays (primarily due to the necessarily large number of assays) and are nearing completion.

In addition to the genetic analysis completed for this fellowship, I

have recently completed an investigation of the role of respiratory viruses in the aetiology of ALRI in the NPCV study children, in collaboration with the NPCV study investigators and colleagues at Pathwest Laboratory Medicine. Nasal swab samples from 135 episodes of ALRI and 274 routine visits were analysed by multiplex PCR for the presence of rhinoviruses, respiratory syncytial virus A & B, adenoviruses (Groups B, C, D, E), influenza A-C, parainfluenza virus types 1-4, coronaviruses (229E, HKU1, NL63, OC43), human metapneumovirus, enterovirus, bocavirus, and polyomavirus. Two samples collected during routine visits were matched to each ALRI sample on the basis of age, gender, vaccine group, season of birth and date of collection. Several viruses were more often present in children when sick with an ALRI than in the matched control samples and a large number and variety of rhinoviruses were found in these samples. Interactions between the viruses detected and the bacteria cultured from these samples will be investigated in the future.

Work will continue on the results obtained from this project. However, my Australian Respiratory Council Ann Woolcock Research Fellowship finished last year. I would like to say what an honour it was to be the first recipient of this fellowship and what a pleasure it has been to work with members of the ARC staff, Research Committee and Board over the last 5 years, particularly Bruce Ramage, David Macintosh, Judy Begnell and more recently Amanda Christensen and Kerrie Shaw.

### Achievements During The Tenure Of The Australian Respiratory Council Ann Woolcock Research Fellowship

#### Invited presentations

Australian Respiratory Council launch, Sydney, NSW, March 2006  
*Prevention*

Arizona Respiratory Center, Tucson, Arizona, USA, 14<sup>th</sup> June 2007  
*Are children in developing countries more genetically susceptible to ALRI's than children in developed countries?*

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

Australian Respiratory Council, Sydney, NSW, 10<sup>th</sup> December 2008  
*The contribution of immune gene variations to the age of first pneumonia in children from the highlands of Papua New Guinea*

Japanese Respiratory Society, Tokyo, Japan, 12<sup>th</sup> June 2009  
*TLR8 up-regulation during acute asthma in children, identified by microarray and confirmed by qRT-PCR, is associated with TLR8 genotypes*

Arizona Respiratory Center, Tucson, Arizona, USA, 29<sup>th</sup> October 2009  
*Pneumonia amongst Papua New Guinean Infants*

#### Publications

ARC acknowledged as a source of support.

#### Book chapter:

**Laing IA** and PN Le Souef, Association Studies in Asthma, in *Genetics of Asthma and COPD* Ed. Dirkje Postma and Scott T Weiss, 2007, Informa Healthcare USA, Inc.

#### Peer reviewed journal articles:

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.

- 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.
- 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 Perth Infant Asthma Follow-up (PIAF) Cohort. *Clin Exp Allergy* 2009; 39:62-71. (editorial comment *Clin Exp Allergy* 2009; 39:8-11).
- Hales B, Martin AC, Pearce LJ, Rueter K, Zhang G, Khoo SK, Hayden CM, Bizzintino J, McMinn P, Geelhoed GC, Goldblatt J, Lee W-M, **Laing IA**, LeSouëf PN, Thomas WR. Anti-bacterial IgE in the antibody responses of house dust mite allergic children convalescent from asthma exacerbation. *Clinical and Experimental Allergy* 2009; 39:1170-8.
- Subrata LS, Bizzintino J, Mamessier E, Bosco A, McKenna KL, Wikström ME, Goldblatt J, Sly PD, Hales BJ, Thomas WR, **Laing IA**, Le Souëf PN, Holt PG. Interactions between innate antiviral and atopic immunoinflammatory pathways precipitate and sustain asthma exacerbations in children. *The J Immunol* 2009; 183:2793-800.

#### Publications on work that preceded support from the ARC include:

- Martin AC, **Laing IA**, Khoo SK, Zhang G, Rueter K, Teoh L, Taheri S, Hayden CM, Geelhoed GC, Goldblatt J and Peter N Le Souef. Acute asthma in children: relationship between CD14 and CC16 genotype, plasma levels and severity. *American Journal of Respiratory and Critical Care Medicine* 2006; 173:617-22.
- Hales BJ, Martin AC, Pearce LJ, **Laing IA**, Hayden CM, Goldblatt J, Le Souëf PN and WR Thomas. IgE and IgG anti-house dust mite specificities in allergic disease. *Journal of Allergy and Clinical Immunology* 2006; 118:361-7.
- Wiertsema SP, Khoo SK, Baynam G, Veenhoven RH, **Laing IA**, Zielhuis GA, Rijkers GT, Goldblatt J, LeSouëf PN and EAM Sanders. Association of the CD14 promoter polymorphism with otitis media and pneumococcal vaccine responses. *Clinical and Vaccine Immunology* 2006; 13:892-7
- Zhang G, Hayden CM, Khoo SK, **Laing IA**, Turner S, Landau L, Goldblatt J and Le Souëf PN. Association of haplotypes of  $\beta$ 2-adrenoceptor polymorphisms with lung function and airway responsiveness in a paediatric cohort. *Pediatric Pulmonology* 2006; 41:1233-41.
- Wiertsema SP, Baynam G, Khoo SK, Veenhoven RH, van Heerbeek N, Zhang B, **Laing IA**, Rijkers GT, Goldblatt J, Sanders EAM, LeSouef PN, Association of genetic variants in IL-4, IL-4RA and IL-13 with the anti-pneumococcal antibody response. *Vaccine* 2007; 25:306-13.
- 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.
- 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.
- Martin AC, Zhang G, Rueter K, Khoo S-K, Bizzintino J, Hayden CM,



## Professor Peter Bye

Australian Respiratory Council Harry Windsor 2010 Recipient, Royal Prince Alfred Hospital

### Novel interventions for the diverse population of Australians with bronchiectasis

Geelhoed GC, Goldblatt J, Laing IA, Le Souëf PN.  $\beta$ 2-adrenoceptor polymorphisms predict response to  $\beta$ 2-agonists in children with acute asthma *J Asthma* 2008; 45:383-8.

9. Ali M, Zhang G, Thomas WR, McLean CJ, Bizzintino JA, Laing IA, Martin AC, Goldblatt J, Le Souëf PN, Hayden CM. Investigations into the role of ST2 in acute asthma in children. *Tissue Antigens* 2009; 73:206-12.
10. Bizzintino JA, Khoo S-K, Zhang G, Martin AC, Rueter K, Geelhoed GC, Goldblatt J, Laing IA, Le Souëf PN and Hayden CM. Leukotriene pathway polymorphisms are associated with altered cysteinyl leukotriene production in children with acute asthma. *Prostaglandins, Leukot Essent Fatty Acids* 2009; 81:9-15.
11. Candelaria PV, Backer V, Khoo S-K, Bizzintino JA, Hayden CM, Baynam G, Laing IA, Zhang G, Porsbjerg C, Goldblatt J, LeSouëf PN. The Importance of Environment on Respiratory Genotype/Phenotype Relationships in the Inuit. *Allergy* – accepted 11th June 2009

#### 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)

##### Sing Ching Lee

BMedSci (Feb – Nov 2008)  
recipient of the Jean Rogerson Undergraduate Studentship, awarded 1st Class Honours.

#### Prizes and grants

- |      |   |
|------|---|
| 2005 | UWA Research Grants Scheme “Genetic influences on early bacterial colonisation and infection in infants from PNG with high rates of pneumonia”; \$21 633; Ingrid Laing. |
| 2007 | Certificate of high commendation, Qantas New Investigator Award, Telethon Institute for Child Health Research   |
| 2007 | UWA supplementary travel grant for new academic staff   |
| 2007 | Friends of the Telethon Institute for Child Health Research Travel Grant  |
| 2007 | Best presentation (joint winner), Respiratory Molecular Genetics Special Interest Group, TSANZ Annual Scientific Meeting  |
| 2008 | NH&MRC Equipment Grant; “Applied Biosystems 7900HT Fast Real-Time PCR System with 384-well, 96-well and micro-fluidic array adapter and automation unit for plate       |

loading”; \$100 000; Jenefer Blackwell, Ursula Kees, Wayne Thomas, Susan Prescott, Peter Richmond, Prue Hart, Peter Dallas, Sarra Jamieson, David Burgner, Anita van den Biggelaar, Selma Wiertsema and Ingrid Laing.

#### 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
3. Thoracic Society of Australia and New Zealand WA Branch Executive Committee  
October 2008 – present

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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. 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.
3. 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.
4. van den Biggelaar AHJ, Richmond PC, Pomat WS, Phuanukoonnon S, Nadal-Sims MA, Devitt CJ, Siba PM, Lehmann D, Holt PG. Neonatal pneumococcal conjugate vaccine immunization primes T cells for preferential Th2 cytokine expression: A randomised controlled trial in Papua New Guinea. *Vaccine* 2009; 27:1340-7.
5. Kormann MSD, Depner M, Hartl D, Klopp N, Illig T, Adamski J, Vogelberg C, Weiland SK, von Mutius E, Kabesh M. Toll-like receptor heterodimer variants protect from childhood asthma. *J Allergy Clin Immunol* 2008; 122: 86-92.
6. Mockenhaupt FP, Cramer JP, Hamann L, Stegemann MS, Eckert J, Oh NR, Otchwemah RN, Dietz E, Ehrhardt S, Schroder NWJ, Bienzele U, Schumann RR. Toll-like receptor (TLR) polymorphisms in African children: Common TLR-4 variants predispose to severe malaria. *PNAS* 2006; 103: 177-82.
7. Wurfel MM, Gordon AC, Holden TD, Radella F, Strout J, Kijikawa O, Ruzinski JT, Rona G, Black RA, Stratton S, Jarvik GP, Hajjar AM, Nickerson DA, Reider M, Sevransky J, Maloney JP, Moss M, Martin G, Shanholtz C, Garcia JGN, Gao L, Brower R, Barnes KC, Walley KR, Russell JA, Martin TR. Toll-like receptor 1 polymorphisms affect innate immune responses and outcomes in sepsis. *Am J Respir Crit Care Med* 2008; 178:710-20.

Bronchiectasis is a chronic lung disease in which damage to the airways impairs mucus clearance. Patients have chronic respiratory symptoms, which limit their ability to perform daily activities, resulting in poor quality of life. They also have frequent admissions to hospital for intravenous antibiotic therapy during exacerbations of their chronic lung infection. Bronchiectasis is very prevalent in Indigenous people, who also have a greater risk of hospitalisation due to the disease.

The funding received in 2010 from The Australian Respiratory Council, under the Harry Windsor Grants Scheme, has been used to establish a number of research projects in the assessment and treatment for people with non-cystic fibrosis bronchiectasis, including patients from both Indigenous and non-Indigenous backgrounds.

#### Bronchiectasis database and sputum isolate bank

We have established a database and sputum isolate bank for patients with non-cystic fibrosis bronchiectasis. To date, 48 people are enrolled and have provided data. This database includes information about:

- the different causes of bronchiectasis, including childhood infection, infection with the fungus aspergillus, and a reduction in immune function (immunoglobulins)
- a score and report of a chest CT scan
- relevant blood tests, such as a measure of immunoglobulins and serum IgE and precipitins of the fungus aspergillus
- records of lung function
- results of sputum microbiology culture and sensitivities
- data from an initial and yearly follow-up questionnaires, including frequent symptoms, number of respiratory exacerbations, medication usage, physiotherapy and exercise.

This information will enable the physician and researchers to determine the relative occurrence of the known causes of bronchiectasis. It will also allow us to record what percentage of patients have bronchiectasis of uncertain cause. In addition it should provide some information about morbidity and mortality in this condition. It is hoped that markers of disease severity and disease progression can be identified. Current treatment practice can also be analysed, e.g. percentage of patients performing regular physiotherapy.

The sputum isolate bank will generate new data on changes in dominant organism(s), loss/gain of species, and temporal changes in sputa. This is important in establishing the role of individual species in the disease and outcome following treatment. We will also assess whether the use of antibiotics is associated with emergence of resistance or acquisition of resistant strains of bacteria. These are all important safety issues. The sputum isolate bank will also provide an invaluable resource for future collaborative research projects.

#### Study of the effect of azithromycin and hypertonic saline in bronchiectasis

We have established a multi-centre study, to be conducted in both urban and rural New South Wales and Queensland, including patients from both Indigenous and non-Indigenous backgrounds. We are collaborating with the Aboriginal Health and Medical Research Council. We have been able to use the progress made with the funding received in 2010 from The Australian Respiratory Council to show the feasibility of this larger project to the National Health and Medical Research Council, who have provided further funding to undertake this multi-centre long-term project. We have received ethical approval to conduct the study, and aim to commence recruitment and data collection very soon.

Azithromycin and hypertonic saline have recently been shown to be highly effective for people with bronchiectasis due to cystic fibrosis. Oral azithromycin has multiple modes of action, including modulation of bacterial virulence factors, inhibition of biofilm formation by bacteria and anti-inflammatory effects. Nebulised hypertonic saline speeds mucus clearance, inhibits the defence mechanisms of common bacteria and improves lung function and quality of life.

The aim of the research is to determine the clinical efficacy and safety of oral azithromycin and nebulised hypertonic saline in 130 Australians with bronchiectasis over a six-month period. Both interventions will be tested simultaneously using a randomised, factorial trial, in which participants with bronchiectasis are randomly allocated to active or placebo treatment groups for the two interventions:

- 7% saline, 4mL, nebulised twice daily for six months, or placebo (0.9% saline);
- Azithromycin tablets, 250mg, oral, daily for six months, or placebo (40mg lactose).

The primary outcome for each intervention is quality of life. Secondary outcomes include lung function, time to exacerbation, sputum bacterial density and diversity, dyspnoea, days on antibiotics, days in hospital, and exercise capacity. Participants will also be invited to contribute to the bronchiectasis database and sputum isolate bank.

This project has excellent potential to establish two new, inexpensive therapies for bronchiectasis (azithromycin and hypertonic saline) – a common, chronic, debilitating disease for which new therapies are rarely investigated because commercial entities lack involvement. The therapies would be immediately available clinically. The medications are very likely to improve quality of life, reduce use of health-care resources, and increase participation by improving exercise capacity. The results will have clinical implications for all people with bronchiectasis, including those in Indigenous communities.

## Project Feedback

In 2007, ARC awarded two grants to Aboriginal organisations determined to reduce smoking rates in their communities. In 2010 the projects are at differing stages of completion with the finalisation of data analysis, production of training materials and the writing and submission of findings.



In NSW, the Aboriginal Health and Medical Research Council (AH&MRC) BREATHE Project was awarded by ARC

\$490,200 to implement a project to trial the impact of employing and supporting

specialist Tobacco Control Workers within Aboriginal Community Controlled Health Services (ACCHS) in order to implement innovative, community based approaches to reduce smoking rates and smoking related disease in Aboriginal communities. The Cancer Council of NSW and the Heart Foundation were also partners in this project.

The research project name BREATHE stands for Building Research Evidence to address Aboriginal Tobacco Habits Effectively. This indeed is what has happened. To achieve this, BREATHE worked with 12 Aboriginal Community Controlled Health Services (ACCHS) to implement a 12 month intervention period where financial and practical support was provided to the six intervention site ACCHS



The BREATHE Team with Tom Calma, the national coordinator for tackling Indigenous smoking

to support the activities of a local tobacco control worker. These roles continue after the completion of the intervention period.

Post-intervention data collection has occurred at both control and intervention ACCHS sites between June and November 2010, and included a repeat of baseline assessments. At each ACCHS site, data collection has included: an exit survey of ACCHS clients; a structured assessment of ACCHS tobacco control capacity; a local environmental scan; a staff focus group; and a staff survey.

Although final write ups and feedback are not yet completed the BREATHE project through lessons already learnt has

been able to contribute to informing Aboriginal tobacco control policy and practice both nationally and in NSW and Nationally through:

- The AH&MRC preparing a submission based on BREATHE project experiences for the Preventative Health Taskforce with the BREATHE project being referred to in the tobacco control part of their final report
- BREATHE project team members participating on the national Tobacco Technical Reference Group and the Campaign Reference Group to advise the Commonwealth Department of Health Ageing regarding implementation of the Tackling Smoking component of the COAG Closing the Gap in Indigenous Health National Partnership
- The AH&MRC receiving significant funding from NSW Health for the years 2010-2013 to develop and implement a large scale Aboriginal tobacco control program in NSW, to build on BREATHE project activities. This program has been named A-TRAC (Aboriginal Tobacco Resistance and Control) and areas of tobacco control activity include: Supporting ACCHS; developing accredited training packages through the Aboriginal Health College; social marketing; research and evaluation; policy development and coordination.



The Aboriginal Health Council of Western Australia's (ACHWA) "Beyond the Big Smoke: a clear vision for Aboriginal tobacco control in Western Australia" project was co-financed by ARC with the Western Australian Health Promotion Foundation, 'Healthway'. The project implemented a range of strategies designed to have a positive impact on smoking behaviour amongst staff and user populations of Aboriginal Community Controlled Health Services (ACCHS). These strategies included:

- Collaboration between ACCHS and other organisations to improve capacity to respond to tobacco control issues in Aboriginal populations.
- Identification of smoking behaviour amongst staff and user populations of ACCHS.
- Promotion of tobacco control through increased use of brief interventions and enhanced awareness of smoking impacts amongst the ACCHS populations.

- The encouragement of ACCHS to actively support and promote tobacco control policies and strategies.
- Consolidation and co-ordination of recent tobacco control initiatives targeting Aboriginal populations.

As a joint activity between the Kimberly Aboriginal Medical Services Council (KAMSC) in Broome and AHCWA in Perth the project has been able to provide a state wide Tobacco Control program to Aboriginal communities throughout Western Australia.

The successes can be seen in the three distinct target groups:

### The organizational level

In both regions the work with the boards and CEO's of the ACCHS to review and implement smoking policy was generally well received and many have become smoke free services.

### The Staff level

There has been a reduction in the number of staff who smoke. There has also been an increase in the confidence of staff to raise the issue of tobacco use with fellow staff and clients. The development of further training will strengthen this.

### The Aboriginal community level

There has been an increase in the awareness of the dangers of tobacco use and the benefits of quitting. People have easier access to support services in relation to smoking cessation

Through the project the ACCHS have been able to contribute to the recent debate on effective strategies to address tobacco use and its impact on Aboriginal health. The work of the Beyond the Big Smoke project has contributed to the Council of Australian Governments (COAGs) initiatives to narrow the gap in Aboriginal health.

Three training modules on tobacco cessation were developed during the project; these have been institutionalized into the AHCWA training and development program for existing and new staff.

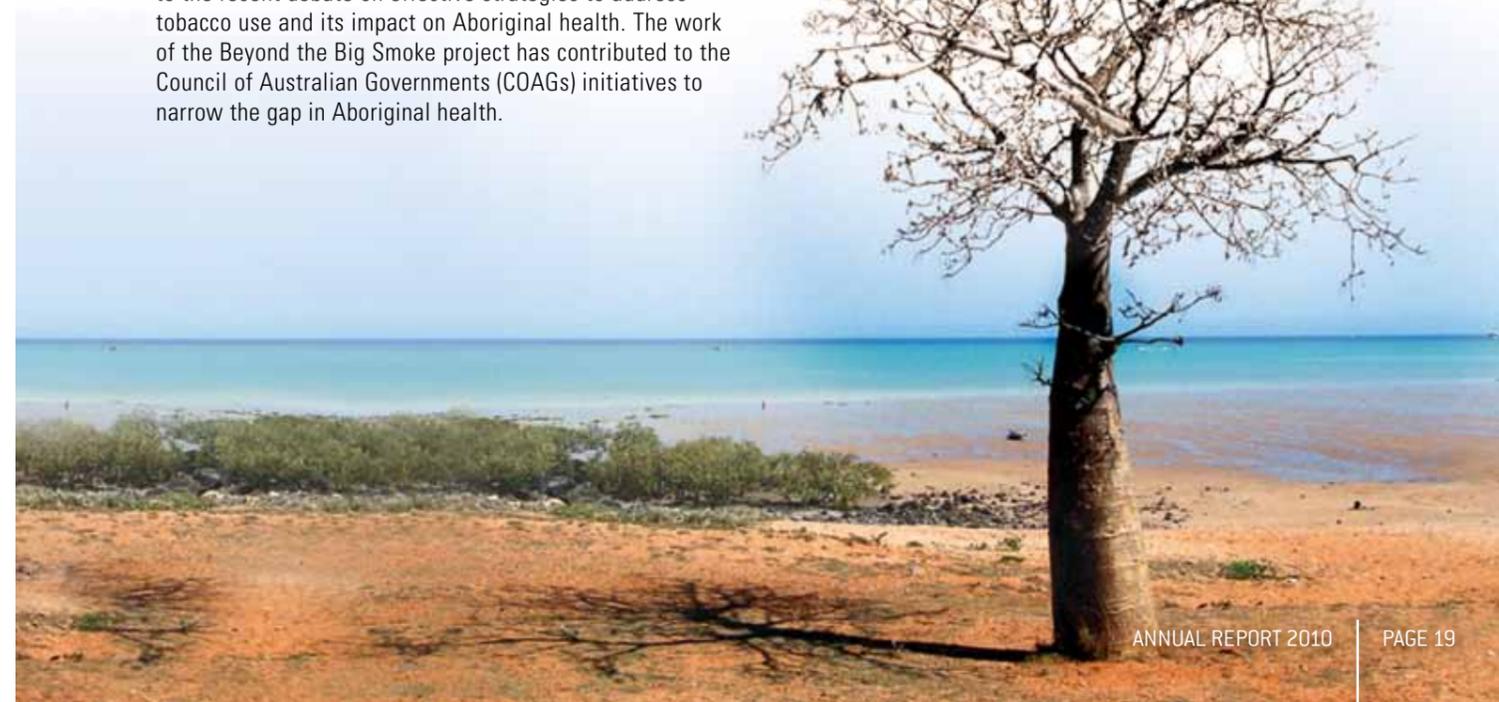
The project is fortunate to have had 2 dynamic Tobacco Control Officers Mena Lewis and Christine Ivan working out of Broome and Perth respectively. Together they have broken new ground for Aboriginal Tobacco Cessation programs to take hold in WA.



Mena Lewis



Christine Ivan

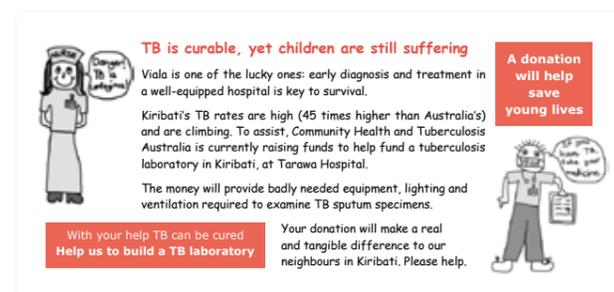


## Project Feedback (continued)

### Opening of the Tuberculosis Control Centre in Kiribati - August 7, 2010

#### 2009

ARC (formerly CHATA) conducted an appeal for funds towards the building of a TB Laboratory in Tarawa. The funds of \$30,000 raised in this appeal were directed towards providing equipment for the new Lab.



The TBCC, located at the Tugaru Central Hospital in South Tarawa is a purpose built complex that combines an outpatient TB clinic and a modern TB laboratory, all under one roof. The building is funded by AusAID through its bilateral funding scheme with the Kiribati government. The new laboratory includes TB culture facilities which have been specially designed by international expert partners in full compliance with international laboratory standards. The TBCC provides a

central base for the Kiribati National TB control programme and represents the strong commitment and support from government and partners to supporting high quality TB control services in Kiribati.



The contribution to TB control provided by the TBCC will enable the Ministry of Health and Medical Services to provide not only efficient TB services, but also a timely and coordinated national response to TB in the country.

The plan to expand TB culture services to neighbouring Pacific island countries will strengthen Kiribati's contribution to the Pacific regional response to TB control.



## Scholarships, Fellowships - 10 year history

### ARC Harry Windsor Biomedical and Postgraduate Research Scholarship Awards (ceased 2002)

Date	Recipient	Subject	Award
1999-2001	George Latouche <i>University of Sydney, NSW</i>	Phospholipases as potential virulence factors of <i>Cryptococcus neoformans</i> variety <i>Gattii</i>	\$55,089
1999-2001	Rosemary Santangelo <i>Westmead Hospital, Sydney, NSW</i>	Phospholipases of <i>Cryptococcus neoformans</i>	\$63,498
1999-2001	Anna Hansen <i>University of Sydney, NSW</i>	The role of cytokines in the immunity and pathology of malaria	\$56,703
2000-2001	Rita Machaalani <i>University of Sydney, NSW</i>	Neurone receptor systems in sudden infant death and piglets exposed to hypercapnic-hypoxia	\$37,454
2000-2001	Shoma Dutt <i>Westmead Hospital, Sydney, NSW</i>	Biliary lipids in liver disease and interstitial phospholipid metabolism in children with cystic fibrosis	\$40,311
2001	Anup Desai <i>University of Sydney, NSW</i>	Interaction of mild obstructive sleep apnoea, sleep deprivation and circadian factors in cognitive function	\$27,793

### ARC Ann Woolcock Biomedical and Postgraduate Research Scholarship Awards – commenced 2002

Date	Recipient	Subject	Award
2002- 2003	Anup Desai <i>University of Sydney, NSW</i>	The contribution of obstructive sleep apnoea to driver fatigue in transport drivers	\$55,793
2002-2003	Rita Machaalani <i>University of Sydney, NSW</i>	Neurone receptor systems in sudden infant death and piglets exposed to hypercapnic-hypoxia	\$29,214
2002-2003	Shoma Dutt <i>Westmead Hospital, Sydney, NSW</i>	Biliary lipids in liver disease and interstitial phospholipid metabolism in children with cystic fibrosis	\$41,793
2002- 2004	Zoe Barker-Whittle (McKeough) <i>Royal Prince Alfred Hospital, Sydney, NSW</i>	Evaluation of lung volume reduction surgery in patients with chronic airflow limitation	\$59,214
2003-2004	Kylie Turner <i>University of Sydney, NSW</i>	Investigation of the structure of cryptococcal phospholipases	\$40,143
2003-2004	Corrina Parker <i>Australian National University, Canberra, ACT</i>	Detection, isolation and characterisation of novel anti-effective agents from cultured micro-fungi	\$40,143

### ARC Ann Woolcock Fellowship Awards – commenced 2005

Date	Recipient	Subject	Award
2005-2009	Ingrid Laing <i>Telethon Institute for Child Research, Perth, WA</i>	Genetic Influences on causal pathways of ALRIs in highly susceptible infants	\$285,000

## Projects - 10 year history

### ARC Project Awards

Date	Recipient/Project	Award
1999	Funded purchase of course textbooks for Epidemiology Workshop in Port Moresby	\$1,000
1999	Visit to Port Moresby & Lae to evaluate the DOTS TB Programme	\$4,000
1999	Provided funding for the translation of "Tobacco or health: A Global Threat" through Teaching Aids at Low Cost	\$3,000
2000	Participation in the WHO, "First Stop TB Meeting in the Pacific Islands" in Noumea	\$4,000
2000	Sponsored Professor Don Enarson, Scientific Director of IUATLD, to be guest speaker at the NSW Health Department TB Nurses Conference	\$3,000
2001	Distribution of books: Clinical Tuberculosis and Tobacco or Health: A Global Threat through Teaching Aids at Low Cost.	\$2,000
2002 - 2006	TB laboratory Training Tonga, Samoa, Kiribati and the Cook Islands	\$189,231
2005	Maningrida Lung Health Community Awareness Raising Pilot Project Funding (James N Kirby Foundation \$12,000)	\$20,000
2006	Building of TB Laboratory at Tunguru Hospital Kiribati	\$30,000
2006	TB Nurse Training in Kiribati	\$41,699
2006-2010	PITCA Training of nurses and related workers in the Northern Pacific Funding	\$87,303
2007-2008	Secretariat of Pacific Community Enhancing Community involvement in TB control through Theatre in Kiribati	\$40,926
2007-2009	Aboriginal Health and Medical Research Council (AH&MRC) BREATHE: Project. This project aims to reduce smoking-related disease and morbidity for Aboriginal people in NSW communities	\$490,200
2007-2009	Aboriginal Health Council of Western Australia (AHCWA) Beyond the Big Smoke: a clear vision for Aboriginal tobacco control in Western Australia	\$200,000
2008-2009	Secretariat of Pacific Community TB Drama Video Production in Kiribati	\$35,000
2009	Cambodian Anti-Tuberculosis Association Cambodia: TB control in elderly and vulnerable groups and in factories	\$27,826
2009	Federated States of Micronesia Capacity Building for TB nurses and related health workers in the Federated States of Micronesia (FSM) – Partnership Eli Lilly	\$31,424
2010	Menzies School of Health Research Development of educational resources, 3 Talking posters and 3 flipcharts on pneumonia, bronchiolitis and bronchiectasis	\$35,000
2010	Secretariat of Pacific Community Evaluation of the effectiveness of the Community Component of the Kiribati Quality TB Epidemic Control Project	\$4,800

## Research Grants - 10 year history

### ARC Harry Windsor Medical Research Grants over last 10 years

Date	Recipient	Subject	Award
1999	Ronald Grunstein <i>Royal Prince Alfred Hospital</i>	Sleep Apnoea and Cytokines	\$22,000
1999	Karen Waters <i>University of Sydney, NSW</i>	Potential neurotoxicity of repetitive hypercapnic hypoxia during early treatment	\$10,000
1999	Evangelica Daviskas <i>Royal Prince Alfred Hospital</i>	Effects of beta2-adrenergic agonists on mucociliary clearance in persons with asthma	\$5,000
1999	Peter Bye, Stefan Eberl and Jenny Alison <i>University of Sydney, NSW</i>	Pharmacological and Physical Therapies to enhance mucociliary clearance in chronic lung disease and mucus hypersecretion	\$39,000
1999	Bernadette Saunders and Helen Briscoe <i>Apoptosis in the control of Mycobacterial infection</i>	Centenary Institute of Cancer Medicine & Cell Biology	\$38,000
1999	Graeme Maguire, Norma Benger and Bart Currie <i>Menzies School of Health Research</i>	Chronic Lung Disease in Aboriginal Australians: factors in aetiology and treatment	\$69,136
1999	Guy Marks <i>Institute of Respiratory Medicine</i>	Does BCG vaccination in infancy prevent allergy	\$5,000
2000	Peter Gibson <i>John Hunter Hospital</i>	Quality of Life in Chronic Cough	\$25,500
2000	Warwick Britton and James Triccas <i>Centenary Institute of Cancer Medicine &amp; Cell Biology</i>	Interleukin-18 as an adjuvant for DNA Immunisation against Tuberculosis	\$26,500
2000	Peter Bye, Iven Young, Jenny Alison and Marney Isedale <i>Royal Prince Alfred Hospital</i>	Evaluation of lung volume reduction surgery in patients with chronic airflow limitation	\$38,000
2000-2001	John Wiggers, Afaf Girgis, Robyn Considine, Jenny Bowman <i>University of Newcastle</i>	Preventing infant exposure to tobacco smoke: evaluation of an early childhood intervention	\$53,006
2001	James Wiley and Tania Sorrell <i>University of Sydney, NSW</i>	The monocyte-macrophage P2x7 receptor and susceptibility to tuberculosis	\$45,000
2001	Terence Amis and John Wheatley <i>Westmead Hospital</i>	The role of snoring and obstructive sleep apnoea in the pathogenesis of hypertension	\$45,665
2001	Amanda Baker and Vaughan Carr <i>University of Newcastle</i>	Randomised controlled trial of a smoking cessation intervention among people with a mental illness	\$63,370
2002	Evangelica Daviskas, Sandra Anderson & Iven Young <i>Royal Prince Alfred Hospital</i>	Effect of mannitol on the clearance of mucus in patients with COPD	\$38,593
2002	Amanda Leach, Heidi Smith-Vaughan, Marius Puruntammeri, Ross Baillie & Peter Morris <i>Menzies School of Health Research</i>	Improved hygiene measures for reduced infection in Australian Aboriginal Children: a randomised controlled trial	\$48,424
2002 -2003	James Triccas & Warwick Britton <i>Centenary Institute of Cancer Medicine &amp; Cell Biology, Sydney, NSW</i>	New strategies to vaccinate against Mycobacterium tuberculosis	\$112,588

## Research Grants - 10 year history (continued)

## ▶ 2010 Financials

### ARC Harry Windsor Medical Research Grants over last 10 years

Date	Recipient	Subject	Award
2003	Jennifer Alison, Peter Bye, Campbell Thompson <i>Royal Prince Alfred Hospital, Sydney, NSW</i>	Evaluation of individual components of pulmonary rehabilitation in subjects with COPD	\$47,880
2004	Paul Kelly, Nick Anstey, Graeme Maguire et al <i>Menzies School of Health Research, Darwin, NT</i>	Pulmonary Function in Tuberculosis patients in Mimika District, Papua Province , Indonesia	\$43,267
2004	Warwick Britton, Guy Marks and Bernadette Saunders <i>Centenary Institute of Cancer Medicine &amp; Cell Biology , Sydney, NSW</i>	Evaluation of genetic and environment risk factors for progression to active tuberculosis in the Liverpool cohort	\$44,701
2005	Kwung Fong & Annalese Semmler <i>Prince Charles Hospital</i>	Novel methylated genes in lung cancer	\$52,250
2005	Paul Reynolds, Gregory Hodge, Sandra Hodge, Mark Holmes <i>Royal Adelaide Hospital, Adelaide, SA</i>	Infection versus rejection in lung transplant related bronchiolitis obliterans syndrome: can intracellular cytokines help?	\$50,000
2006	Robert Capon <i>University of Queensland</i>	A new non-toxic approach to controlling bacterial infection	\$49,000
2006	David Jans <i>Monash University, Melbourne, VIC</i>	Role of phosphorylation in regulating nuclear trafficking during infection of respiratory syncytial virus matrix protein	\$50,000
2006	Paul Kelly, Graeme Maguire, Peter Morris, Ivan Bastian & Nicholas Anstey <i>Menzies School of Health Research, Darwin, NT</i>	Nutritional intervention to improve tuberculosis treatment outcome in Timika, Indonesia: the NUTTS study	\$50,000
2007	Stephen Bozinovski and Ross Vlahos <i>University of Melbourne, Melbourne, VIC</i>	Cigarette smoke chemically modifies and inactivates lung innate immunity mediated by the bacterial receptor, TLR4	\$50,000
2007	Siobhain Brennan and Anthony J Kettle <i>Telethon Institute for Child Health Research, Perth, WA</i>	Investigating markers of oxidative stress in young children with cystic fibrosis: a driving mechanism of pulmonary investigation	\$50,000
2008	Stephen Stick, Anthony Kicic & Siobhan Brennan <i>University of WA, Perth, WA</i>	A randomised controlled trial of L-arginine or vitamin D to improve outcomes in pulmonary tuberculosis	\$50,000
2008	Jenny Alison <i>University of Sydney, NSW</i>	Optimising mucus clearance with exercise in cystic fibrosis	\$50,000
2009	Sandra Hodge <i>Hanson Institute, Adelaide, SA</i>	Investigation of macrophage function as a therapeutic target in chronic obstructive pulmonary disease/emphysema (COPD)	\$50,000
2010	Peter Bye <i>Royal Prince Alfred Hospital, Sydney, NSW</i>	Novel interventions for the diverse population of Australia with bronchiectasis	\$50,000

## Directors' Report

The Directors present their report together with the financial report of the Australian Respiratory Council for the year ended 31 December 2010 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

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. Vice President

Interest in contracts: Nil

#### Robert Eric Horsell

CPA.

Appointed to the Board on 24 June 1999. Finance Director

Interest in contracts: Nil

#### Professor Michael Herbert Levy

MBBS MPH FAFPHM.

Appointed to the Board on 21 May 1998

Resigned from the Board 23rd February 2010

Interest in contracts: Nil

#### David Hugh Macintosh

BBS, FCA.

Appointed to the Board on 19 June 1997. President

Interest in contracts: Nil

#### Ian William Ramsay

LLB.

Appointed to the Board on 27 November 2008

Interest in contracts: Nil

#### Professor John Paul Seale

MBBS PhD FRACP.

Appointed to be the Board on 19 June 1997. Vice President

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

### Meetings of Directors

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

Name Of Director	Number Held while in Office	Number Attended
Amanda Julie Christensen	5	4
Peter Gianoutsos	5	4
Robert Eric Horsell	5	5
Michael Herbert Levy	1	0
David Hugh Macintosh	5	5
Ian Wallace Ramsay	5	5
John Paul Seale	5	4
Iven Hunter Young	5	2

Directors have been in office since the start of the financial year to the date of this report unless otherwise stated.

### Principal Activities

The principal activity of the company during the financial year was to provide funding and expertise of research and projects aimed at improving lung health.

The company's short term objectives are to:

- i) continue to build expertise in respiratory health.
- ii) foster innovation in respiratory health research.
- iii) deliver and measure positive impacts to communities and research.
- iv) enhance ARC's role in the country as a unique non-government organisation in the area of lung health.
- v) advocate to improve respiratory health, particularly in relation to TB and smoking at state, national and international levels.

The company's long term objectives are to:

- i) develop and support innovative and effective approach to research and development in lung health.
- ii) to improve lung health in communities, with an emphasis on disadvantaged groups.

To achieve these objectives, the company has adopted the following Strategies:

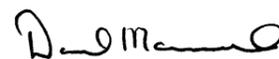
The Board strives to attract sustainable partnerships, undertake fundraising and actively seeks funding so as to achieve these objectives.

The company is incorporated under the Corporations Act 2001 and is a company limited by guarantee. If the company is wound up, the constitution states that each member is required to contribute a maximum of \$1.00 towards meeting any outstanding obligations of the club. At 31 December 2010 the collective liability of members was \$39 (2009:\$46)

### Auditor's Independence Declaration Under section 307C of the Corporations Act 2001

A copy of the Auditor's Independence Declaration follows this Directors Report.

Signed in accordance with a resolution of the Board of Directors:



**David Macintosh**  
Director  
Sydney, 18 April 2011



**Robert Horsell**  
Director  
Sydney, 18 April 2011

### Auditor's Independence Declaration Under section 307C of the Corporations Act 2001 to the Directors of Australian Respiratory Council

I declare that, to the best of my knowledge and belief, during the year ended 31 December 2010 there have been:

- i. no contraventions of the Auditor independence requirements as set out in the Corporations Act 2001 in relation to the audit; and
- ii. no contraventions of any applicable code of professional conduct in relation to the audit.

### BRYAN RUSH & COMPANY Chartered Accountants



**D R Conroy**  
Principal  
Sydney,  
18 April 2011

## Statement Of Comprehensive Income

For the year ended 31 December 2010

	Note	2010 \$	2009 \$
Revenue	2	573,273	573,038
Depreciation and amortisation expense	3	(12,152)	(9,317)
Research grants, fellowships and scholarships		(81,750)	(50,000)
Project funding		(65,494)	(300,140)
Investment expense		(17,981)	(20,871)
Consultancy fees		(8,503)	(41,597)
Employee benefits expense		(229,432)	(221,316)
Other expenses		(213,547)	(284,855)
<b>Loss before income tax</b>		<b>(55,586)</b>	<b>(355,058)</b>
Income Tax expense	1	-	-
<b>Loss for the year</b>	15	<b>(55,586)</b>	<b>(355,058)</b>
<b>Other comprehensive income after tax:</b>			
Net loss on revaluation of investment property		(100,000)	-
Net gain/(loss) on revaluation of financial assets		(254,658)	429,570
<b>Other comprehensive income for the year net of tax</b>		<b>(354,658)</b>	<b>429,570</b>
<b>Total comprehensive income for the year</b>		<b>(410,244)</b>	<b>74,512</b>
<b>Total comprehensive income attributable to members of the entity</b>		<b>(410,244)</b>	<b>74,512</b>

## Statement of Changes in Equity

For the year ended 31 December 2010

	Capital Profits Reserves \$	Asset Revaluation Reserves \$	Retained Earnings/ (Accumulated Losses) \$	Total \$
<b>Balance at 1 January 2009</b>	2,411,980	(1,697,738)	4,802,898	5,517,140
Loss attributable to members	-	-	(355,058)	(355,058)
Total comprehensive income for the year	-	429,570	-	429,570
Transfers on sale of assets	-	1,581,575	(1,581,575)	-
<b>Balance at 31 December 2009</b>	<b>2,411,980</b>	<b>313,407</b>	<b>2,866,265</b>	<b>5,591,652</b>
Loss attributable to members	-	-	(55,586)	(55,586)
Total comprehensive income for the year	-	(354,658)	-	(354,658)
Transfers on sale of assets	-	55,121	(55,121)	-
<b>Balance at 31 December 2010</b>	<b>2,411,980</b>	<b>13,870</b>	<b>2,755,558</b>	<b>5,181,408</b>

The accompanying notes form part of these financial statements

## Statement of Financial Position

As at 31 December 2010

	Note	2010 \$	2009 \$
<b>ASSETS</b>			
Current assets			
Cash and cash equivalents	5	1,403,358	1,076,066
Trade and other receivables	6	66,283	24,411
Other current assets	7	17,581	4,876
Total current assets		1,493,222	1,105,353
Non current assets			
Financial assets	8	2,150,748	2,965,782
Property, plant and equipment	9	70,180	75,559
Investment property	10	1,550,000	1,650,000
Total non-current assets		3,770,928	4,691,341
<b>TOTAL ASSETS</b>		<b>5,264,150</b>	<b>5,796,694</b>
<b>LIABILITIES</b>			
Current liabilities			
Trade and other payables	11	71,111	196,006
Employee entitlements	12	11,631	9,036
Total current liabilities		82,742	205,042
<b>TOTAL LIABILITIES</b>		<b>82,742</b>	<b>205,042</b>
<b>NET ASSETS</b>		<b>5,181,408</b>	<b>5,591,652</b>
<b>EQUITY</b>			
Reserves	13	2,425,850	2,725,387
Retained earnings	15	2,755,558	2,866,265
<b>TOTAL EQUITY</b>		<b>5,181,480</b>	<b>5,591,652</b>

## Statement of Cash Flows

For the year ended 31 December 2010

	Note	2010 \$	2009 \$
<b>Cash flows from operating activities:</b>			
Receipts from customers		242,969	466,282
Payments to suppliers and employees		(767,615)	(625,830)
Interest received		45,098	24,024
Distributions received		234,700	373,594
<b>Net cash provided by (used in) operating activities</b>	18	<b>(244,848)</b>	<b>238,070</b>
<b>Cash flows from investing activities:</b>			
Proceeds from sale of property, plant and equipment and investments		884,913	2,091,261
Acquisition of property, plant and equipment		(6,773)	(4,499)
Payment for investments		(300,000)	(1,598,658)
<b>Net cash provided by (used in) investing activities</b>		<b>578,140</b>	<b>488,104</b>
Net increase/(decrease) in cash held		333,292	726,174
Cash at beginning of financial year		1,076,066	349,892
<b>Cash at end of financial year</b>	<b>18</b>	<b>1,409,358</b>	<b>1,076,066</b>

The accompanying notes form part of these financial statements

# Notes to the Financial Statements

For the year ended 31 December 2010

## 1. Statement of Significant Accounting Policies

### Basis of Preparation

The financial report is a general purpose financial report that has been prepared in accordance with Australian Accounting Standards, Australian Accounting Interpretations, other authoritative pronouncements of the Australian Accounting Standards Board and the Corporations Act 2001.

Australian Accounting Standards set out accounting policies that the AASB has concluded would result in a financial report containing relevant and reliable information about transactions, events and conditions to which they apply. Compliance with Australian Accounting Standards ensures that the financial statements and notes also comply with International Financial Reporting Standards. Material accounting policies adopted in the preparation of this financial report are presented below. They have been consistently applied unless otherwise stated.

Australian Respiratory Council is a Company limited by guarantee, incorporated and domiciled in Australia.

The financial report has been prepared on an accruals basis and is based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and financial liabilities.

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.

### Accounting Policies

#### 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.

#### 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.

### Property, Plant and Equipment

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

#### Plant and Equipment

Plant and equipment are measured on the cost basis less, where applicable, depreciation and impairment losses. The carrying amount of plant and equipment is reviewed annually by the Company to ensure it is not in excess of the recoverable amount from these assets. The recoverable amount is assessed on the basis of the expected net cash flows that will be received from the assets employment and subsequent disposal. The expected net cash flows have been discounted to their present values in determining recoverable amounts.

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

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

Class of Fixed Asset	Depreciation Rate
Plant and Equipment	7.5% - 50%

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains and losses are included in the income statement. When revalued assets are sold, amounts included in the revaluation reserve relating to that asset are transferred to retained earnings.

#### Impairment of Assets

At each reporting date, the Company reviews the carrying values of its tangible assets to determine whether there is any indication that those assets have been impaired. If such an indication exists, the recoverable amount of the asset, being the higher of the asset's fair value less costs to sell and value in use, is compared to the assets carrying value. Any excess of the assets carrying value over its recoverable amount is expensed to the income statement.

#### Employee Benefits

Provision is made for the Company's liability for employee benefits arising from services rendered by employees to balance date. Employee benefits expected to be settled within one year together with benefits arising from wages and salaries, annual leave and sick leave which will be settled after one year, have been measured at the amounts expected to be paid when the liability is settled plus related

on-costs. Other employee benefits payable later than one year have been measured at the present value of the estimated future cash outflows to be made for those benefits.

Contributions are made by the Company to employee superannuation funds and are charged as expenses when incurred.

#### 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 Tax 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 statement of financial position are shown inclusive of GST.

#### Cash and Cash Equivalents

For the purposes of the cash flows statement, cash includes cash on hand and at call deposits with banks or financial institutions, investments in money market instruments maturing within less than two months and net of bank overdrafts.

#### Comparative Figures

Where required by Accounting Standards comparative figures have been adjusted to conform with changes in presentation for the current financial year.

#### Financial Instruments

Recognition and initial measurement

Financial instruments, incorporating financial assets and financial liabilities, are recognised when the entity becomes a party to the contractual provisions of the instrument. Trade date accounting is adopted for financial assets that are delivered within timeframes established by marketplace convention.

Financial instruments are initially measured at cost plus transactions cost where the instrument is not classified as at fair value through profit or loss. Transaction costs related to instruments classified as at fair value through profit or loss are expensed to profit or loss immediately. Financial instruments are classified and measured as set out below.

##### 1. Fair value estimation

The fair value of financial assets and financial liabilities must be estimated for recognition and measurement or for disclosure purposes. The fair value of financial instruments traded in active markets such as trading and available-for-sale securities is based on quoted market prices at the balance sheet date. The quoted market price used for financial assets held by the Company is the current bid price; the appropriate quoted market price for financial liabilities is current ask price.

##### 2. Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and are subsequently measured at amortised cost using the effective interest rate method.

##### 3. Held to maturity investments

Held to maturity investments are non-derivative financial assets with fixed maturities and fixed or determinable payments, and it is the entity's intention to hold these investments to maturity. They are subsequently measured at amortised cost using the effective interest rate method.

##### 4. Available for sale financial assets

Available for sale financial assets are non derivative financial assets that are either designated as such or that are not classified in any of the other categories. They comprise investments in the equity of other entities where there is neither a fixed maturity nor fixed or determinable payments.

##### 5. Financial Liabilities

Non derivative financial liabilities (excluding financial guarantees) are subsequently measured at amortised cost using the effective interest rate method.

#### Critical Accounting Estimates and Judgments

The Directors evaluate estimates and judgements incorporated into the financial report based on historical knowledge and best available current information. Estimates assume a reasonable expectation of future events and are based on current trends and economical data, obtained both externally and within the group.

##### Key Estimates - Impairment

The Company assesses impairment at each reporting date by evaluating conditions specific to the Company that may lead to impairment of assets. Where an impairment trigger exists, the recoverable amount of the assets is determined. Value in use calculations performed in assessing recoverable amounts incorporated a number of key estimates.

##### Key Judgments - Provision for Impairment of Receivables

The Directors believe that the amount included in accounts receivable is recoverable and non provision for impairment has been made at the end of the financial year.

#### Australian Accounting Standards Not Yet Effective

The Company has not yet applied any Australian Accounting Standards or Interpretations that have been issued at balance date, but are not yet operative for the year ended 31st December 2010. (the "Inoperative Standards"). The impact of the Inoperative Standards has been assessed and identified as not being material. The Company only intends to adopt Inoperative Standards at the date which their adoption becomes mandatory.

# Notes to the Financial Statements

For the year ended 31 December 2010

	2010 \$	2009 \$
<b>2. Revenue</b>		
<b>Operating Activities</b>		
Net profit/(loss) on sale of investments	24,537	20,593
Rental revenue for property investment	42,681	41,347
Interest received	45,098	24,024
Fund distributions and dividends from investments	219,517	331,067
Legacies & donations	97,500	3,000
Member subscriptions	1,818	1,727
Refund of franking credits	27,543	15,183
Appeals	86,399	83,759
Sundry income received	28,180	52,338
<b>Total Revenue</b>	<b>573,273</b>	<b>573,038</b>
<b>3. Profit From Ordinary Activities</b>		
<b>Expenses</b>		
<b>Depreciation of Non-Current Assets:</b>		
Plant and Equipment	12,152	9,317
<b>4. Auditors' Remuneration</b>		
<b>Remuneration of the Auditor of the Company for:</b>		
- Auditing the Financial Report	10,500	10,000
<b>Total</b>	<b>10,500</b>	<b>10,000</b>
<b>5. Cash and Cash Equivalents</b>		
Cash on hand	1,201	1,749
Cash at bank	1,408,157	1,074,317
<b>Total</b>	<b>1,409,358</b>	<b>1,076,066</b>
<b>6. Trade and Other Receivables</b>		
Trade debtors	24,901	5,176
Other debtors	41,382	19,235
<b>Total</b>	<b>66,283</b>	<b>24,411</b>
<b>7. Other Current Assets</b>		
Prepayments	17,581	4,876

	2010 \$	2009 \$
<b>8. Financial Assets</b>		
Non Current		
Listed shares - at fair value	1,151,236	2,135,785
Managed funds - at fair value	999,512	829,997
<b>Total financial assets</b>	<b>2,150,748</b>	<b>2,965,782</b>
<b>9. Property, Plant and Equipment</b>		
Non Current		
Plant & equipment at cost	120,862	114,089
Less: accumulated depreciation and impairment	(50,682)	(38,530)
<b>Total property, plant and equipment</b>	<b>70,180</b>	<b>75,559</b>
<b>Movements in Carrying Amounts</b>		
Movement in the carrying amounts for each class of property, plant and equipment between the beginning and the end of the current financial year:		
	Plant and Equipment \$	Total \$
Balance at the beginning of year	75,559	75,559
Additions	6,773	6,773
Disposals	-	-
Depreciation expense	(12,152)	(12,152)
Carrying amount at the end of year	70,180	70,180
<b>10. Investment Property</b>		
Non Current		
Investment properties - at fair value	1,550,000	1,650,000
<b>Total</b>	<b>1,550,000</b>	<b>1,650,000</b>
<b>11. Trade and Other Payables</b>		
<b>Unsecured Liabilities</b>		
Trade payables	32,616	120,506
Sundry payables and accrued expenses	38,495	75,500
<b>Total</b>	<b>71,111</b>	<b>196,006</b>
<b>12. Provisions</b>		
Provision for annual leave	11,631	9,036
<b>Number of employees</b>		
Number of employees at year end	4	3

	2010 \$	2009 \$
<b>13. Reserves</b>		
Capital profits reserve	2,411,980	2,411,980
Asset revaluation reserve	13,870	313,407
Total	2,425,850	2,725,387
Nature and purpose of reserves		
<b>(a) Capital Profits</b>		
The capital profits reserve is used to accumulate realised capital profits		
Balance at end of year	2,411,980	2,411,980
<b>(b) Asset Revaluation</b>		
The asset revaluation reserve is used to record increments and decrements in the value of non current assets		
Balance at beginning of year	313,407	(1,697,738)
Revaluation increment/(decrement)	(354,658)	429,570
Transfers	55,121	1,581,575
<b>Balance at end of year</b>	<b>13,870</b>	<b>313,407</b>

#### 14. Members' Guarantee

The Company is limited by guarantee. If the Company is wound up, the Constitution states that each member is required to contribute a maximum of \$1 each towards meeting any outstanding obligations of the Company. At 31 December 2010 the number of members was 39 (2009:46).

#### 15. Retained Earnings

Accumulated profit at the beginning of the financial year	2,866,265	4,802,898
Net profit/(loss) attributable to members of the company	(55,586)	(355,058)
Transfers to and from reserves	(55,121)	(1,581,575)
Accumulated profit at the end of the financial year	2,755,558	2,866,265

#### 16. 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 Floating Effective Rate		Floating Interest Rate		Non Interest Bearing		Total	
	2010 %	2009 %	2010 \$	2009 \$	2010 \$	2009 \$	2010 \$	2009 \$
<b>Financial Assets:</b>								
Cash and cash equivalents	3.67	3.20	1,408,158	1,074,317	1,201	1,749	1,409,359	1,076,066
Receivables	-	-	-	-	66,283	24,411	66,283	24,411
Other financial assets	-	-	-	-	2,150,748	2,965,782	2,150,748	2,965,782
<b>Total Financial Asset</b>			<b>1,408,158</b>	<b>1,074,317</b>	<b>2,218,232</b>	<b>2,991,942</b>	<b>3,626,390</b>	<b>4,066,259</b>
<b>Financial Liabilities:</b>								
Payables	-	-	-	-	71,111	196,006	71,111	196,006
<b>Total Financial Liabilities</b>			<b>-</b>	<b>-</b>	<b>71,111</b>	<b>196,006</b>	<b>71,111</b>	<b>196,006</b>

##### (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.

#### 17. Key Management Personnel

Names and positions held of the Company key management personnel in office at any time during the financial year are:

##### Key Management Personnel

###### Non Executive Directors

Amanda Julie Christensen

Peter Gianoutsos

Robert Eric Horsell

Michael Herbert Levy

David Hugh Macintosh

Ian William Ramsay

John Paul Seale

Iven Hunter Young

###### Executive Officer

Kerrie Shaw

Compensation paid, payable or provided to other key management personnel for the year ended totalled \$86,241 (2009:\$100,038). This comprised short term benefits.

## Summary Financial Report

Balance Sheet as at 31 December 2010

	2010 \$	2009 \$
<b>18. Cash Flows Information</b>		
<b>(a) 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:</b>		
<b>Cash and cash equivalents</b>	<b>1,409,358</b>	<b>1,076,066</b>
<b>(b) Reconciliation of Cash Flow from Operations with Profit after Income Tax</b>		
Net income/loss for the period	(55,586)	(355,058)
<b>Cash flows excluded from profit attributable to operating activities</b>		
Non cash flows in profit		
Depreciation	12,152	9,317
Net gain/(loss) on disposal of investments	(24,537)	429,771
<b>Changes in assets and liabilities, net of the effects of purchase and disposal of subsidiaries</b>		
(Increase)/decrease in trade and term receivables	(41,872)	53,348
(Increase)/decrease in prepayments	(12,705)	11,229
Increase/(decrease) in trade payables and accruals	(124,895)	95,446
(Increase)/decrease in provision for employee benefits	2,595	(5,983)
<b>Net cash inflow/(outflow) from operating activities</b>	<b>(244,848)</b>	<b>238,070</b>
<b>Information and declarations to be furnished under the Charitable Fundraising Act 1991, Section 23</b>		
<b>(a) Details of aggregate gross income and total expenses of fundraising appeals</b>		
Gross proceeds from fundraising appeals	86,399	83,798
Less: Total direct costs of fundraising	43,747	73,327
<b>Net surplus from fundraising activities</b>	<b>42,652</b>	<b>10,471</b>
<b>(b) Statement showing how funds received were applied to charitable purposes</b>		
This surplus is used for research grants, fellowships and scholarships.		
<b>(c) Fundraising appeals conducted during the financial period</b>		
Appeals only.		
<b>(d) Comparisons</b>		
Total cost of fundraising/gross income from fundraising	<b>51%</b>	88%
Net surplus from fundraising/gross income from fundraising	<b>49%</b>	12%
Total cost of services/total expenditure	<b>100%</b>	100%
Total cost of services/total income received	<b>51%</b>	88%

	Note	2010 \$	2009 \$
<b>ASSETS</b>			
Current assets			
Cash and cash equivalents	5	1,409,358	1,076,066
Trade and other receivables	6	66,283	24,411
Other current assets	7	17,581	4,876
<b>Total Current Assets</b>		<b>1,493,222</b>	<b>1,105,353</b>
Non-current assets			
Financial assets	8	2,150,748	2,965,782
Property, plant and equipment	9	70,180	75,559
Investment property	10	1,550,000	1,650,000
<b>Total Current Assets</b>		<b>3,770,928</b>	<b>4,691,341</b>
<b>TOTAL ASSETS</b>		<b>5,264,150</b>	<b>5,796,694</b>
<b>LIABILITIES</b>			
Current liabilities			
Trade and other payables	11	71,111	196,006
Employee entitlements	12	11,631	9,036
Total current liabilities		82,742	205,042
<b>TOTAL LIABILITIES</b>		<b>82,742</b>	<b>205,042</b>
<b>NET ASSETS</b>		<b>5,181,408</b>	<b>5,591,652</b>
<b>EQUITY</b>			
Reserves	13	2,425,850	2,725,387
Retained earnings	15	2,755,558	2,866,265
<b>TOTAL EQUITY</b>		<b>5,181,408</b>	<b>5,591,652</b>

## Summary Financial Report

Income Statement for the year ended 31 December 2010

	2010 \$	2009 \$
<b>REVENUE</b>		
Donation and Gifts - Monetary & Non-monetary	86,399	86,798
Bequests & Legacies	97,500	-
Grants		
AusAid	-	-
Other Australian	-	34,260
Other overseas	27,530	7,368
Investment income	359,377	432,214
Other income	2,467	12,398
<b>Total Revenue</b>	<b>573,273</b>	<b>573,038</b>
<b>EXPENDITURE</b>		
<b>International Aid Development</b>		
International programs		
Funds to international projects	61,251	51,327
Program support costs	60,505	70,439
Community education	1,233	8,710
<b>Fundraising Costs</b>		
Public	48,747	73,327
Government, multilateral and private	-	-
Accountability and administration	339,788	399,808
Non-Monetary expenditure	-	-
<b>Total International Aid and Development Programs Expenditure</b>	<b>511,524</b>	<b>603,611</b>
Domestic projects	117,335	324,485
<b>Total Expenditure</b>	<b>628,859</b>	<b>928,096</b>
<b>Excess / (Shortfall) Of Revenue Over Expenditure</b>	<b>(55,586)</b>	<b>(355,058)</b>

## Summary Financial Report

Table of Cash Movements for Designated Purposes for the year ended 31 December 2010

	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	-	97,500	(81,750)	15,750
Australian projects	-	86,399	(35,585)	50,814
International projects	-	27,530	(121,756)	(94,226)
Community education	-	-	(1,233)	(1,233)
Other purposes	1,076,066	1,196,251	(834,064)	1,438,253
<b>Total</b>	<b>1,076,066</b>	<b>1,407,680</b>	<b>(1,074,388)</b>	<b>1,409,358</b>

### Note

In the year ended 31 December 2010, the Board allocated an amount for Australian research grants and fellowships. The shortfall in cash reserves is compensated by cash raised from investment activities.

## Summary Financial Report

Statement of changes in equity for the year ended 31 December 2010

	Capital Profits Reserves \$	Asset Revaluation Reserves \$	Retained Earnings/ (Accumulated Losses) \$	Total \$
<b>Balance at 1 January 2009</b>	2,411,980	(1,679,738)	4,802,898	5,517,140
Excess of revenue over expense	-	-	(355,058)	(355,058)
Total comprehensive income for the year	-	429,570	-	429,570
Transfers on sale of assets	-	(1,581,575)	(1,581,575)	-
<b>Balance at 31 December 2009</b>	<b>2,411,980</b>	<b>313,407</b>	<b>2,866,265</b>	<b>5,591,652</b>
Excess of revenue over expense	-	-	(55,586)	(55,586)
Total comprehensive income for the year	-	(354,658)	-	(354,658)
Transfer on sale assets	-	55,121	(55,121)	-
<b>Balance at 31 December 2010</b>	<b>2,411,980</b>	<b>13,870</b>	<b>2,755,558</b>	<b>5,181,408</b>

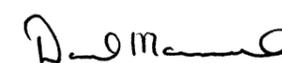
The above disclosures are prepared in accordance with the requirements set out in the ACFID code of conduct.

### Director's Declaration

The Directors of the Company declare that:

- The financial statements and notes are in accordance with the Corporations Act 2001:
  - comply with Accounting Standards and the Corporations Regulations 2001;
  - give a true and fair view of the financial position as at 31 December 2010 and performance for the year ended on that date of the Company;
- 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, 18 April 2011



**Robert Horsell**  
Director  
Sydney, 18 April 2011

## 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 statement of financial position as at 31 December 2010 and the statement of comprehensive income, and the changes in equity and statement of cash flows for the year ended on that date, a summary of significant accounting policies and other explanatory notes and the Directors' declaration.

### Directors' Responsibility for the Financial Report

The Directors of the Company 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 control 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. In Note 1, the Directors also state, in accordance with Accounting Standard AASB 101: 'Presentation of Financial Statements', that compliance with the Australian equivalents to International Financial Reporting Standards (IFRS) ensures that the financial report, comprising the financial statements and notes, complies with IFRS.

### 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 judgment, 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.

### Auditor's Opinion

In our opinion,

- (a) the financial report of Australian Respiratory Council is in accordance with the Corporations Act 2001, including:
- (i) giving a true and fair view of the disclosing entity's financial position as at 31 December 2009 and of its performance for the period ended on that date; and
  - (ii) complying with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Corporations Regulations 2001.
- (b) the financial report also complies with International Financial Reporting Standards as disclosed in Note 1.
- (c) We have also audited the summary financial reports of Australian Respiratory Council which in our opinion are in accordance with the requirements set out in the ACFID code of conduct.

### BRYAN RUSH & COMPANY Chartered Accountants



**D R Conroy**  
Principal

Sydney, 18 April 2011

# Our wish...

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

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.

### 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](mailto:arc@thearc.org.au)

# Workplace Giving

**Workplace Giving is a simple and effective way for employees and employers to regularly donate to Australian Respiratory Council.**

**With workplace giving, all your donations are made from your pre-tax salary. This reduces your salary for taxation purposes but doesn't affect the amount you are giving to Australian Respiratory Council.**

- Pre-tax benefit with no need to collect receipts
- Donations made through a transparent program
  - Simple way to give direct from pay
- Flexibility to start, change, stop at any time
  - Cost effective method of giving
  - Feels good giving your support

Want more information contact ARC  
on 9223 3144 or [arc@thearc.org.au](mailto:arc@thearc.org.au)



**Australian Respiratory Council ABN 11 883 368 767**  
**GPO Box 102 Sydney NSW 2001**  
**Tel 02 9223 3144 Fax 02 9223 3044**  
**Email [arc@thearc.org.au](mailto:arc@thearc.org.au) Website [www.thearc.org.au](http://www.thearc.org.au)**

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