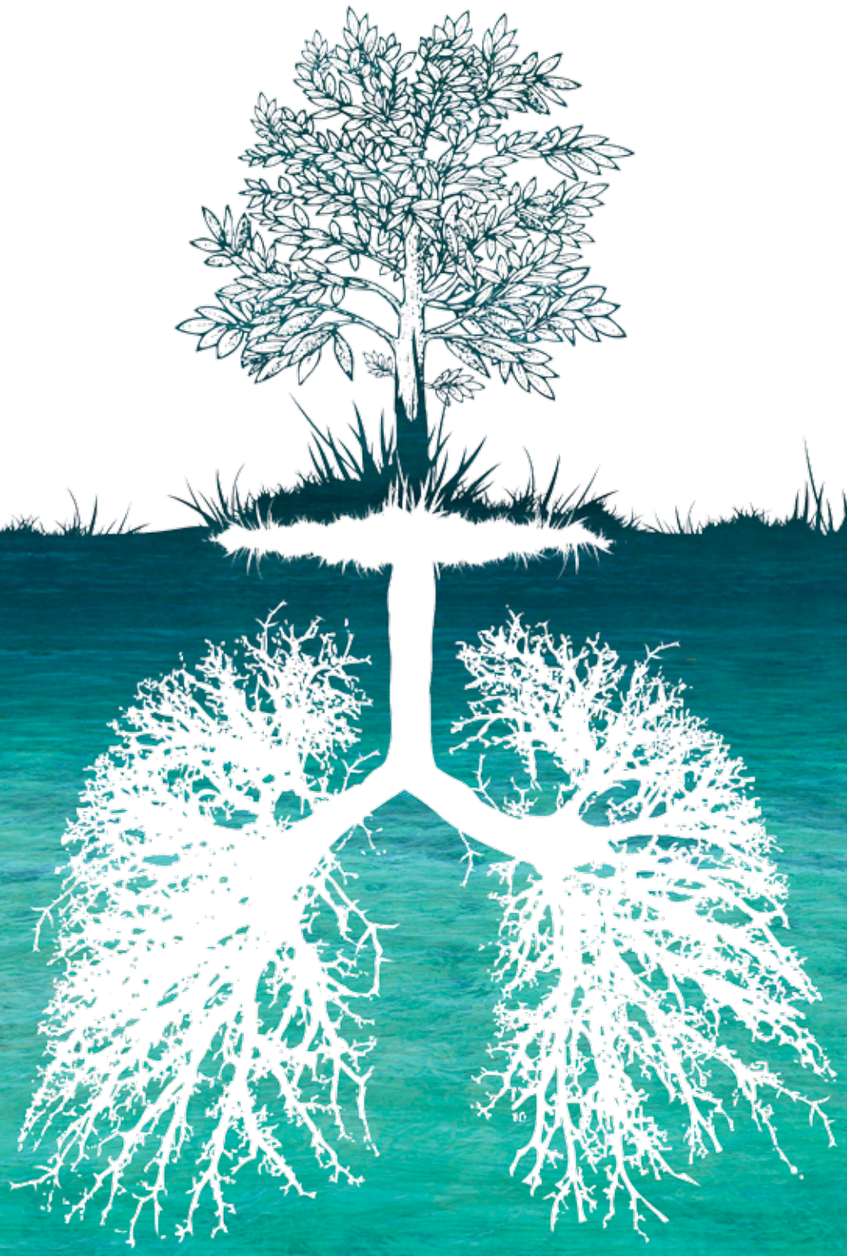
arc

australian respiratory council

prevention and cure of respiratory illness

2011 Annual Report No. 98

Celebrating 100 years in 2013



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 organistaion 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.

ARC welcomes feedback. Please send any feedback or complaints to arc@thearc.org.au or write to Executive Officer, Australian Respiratory Council, GPO Box 102 Sydney, NSW 2001.

ARC confirms its commitment to full adherence to the ACFID Code of Conduct.

Complaints relating to a breach of the ACFID Code can be made to the ACFID Code of Conduct Committee www.acfid.asn.au

ACFID

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.

International Union Against Tuberculosis and Lung Disease
Health solutions for the poor

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.

President's Report

David Macintosh AM

The Australian Respiratory Council has clearly defined its direction and purpose and this is evidenced by the work done by our great organisation.

The Australian Respiratory Council has a distinguished history as an advocate and champion for public health initiatives in Australia since its inception in 1910. Initially this role was established through a focus on Tuberculosis control, but later expanded to reflect changing health priorities impacting on the Australian community: tobacco in the 1960's, hypertension and diabetes in the late 1970's to early 1980s and more recently to Tuberculosis and respiratory conditions affecting marginal communities. Most recently, the Australian Respiratory Council has demonstrated a heightened sensitivity to the respiratory health needs of the Pacific region.

Throughout the last century, the Australian Respiratory Council established a role and profile as an organisation that successfully engaged civil society, clinicians, researchers, government and industry and brought focus to and investment in its mission. And so it continues this century.

Investing in the Future: Research in Tuberculosis and Respiratory Health

Having invested over $2million in research over the last decade, the Australian Respiratory Council continues its commitment to research activity in tuberculosis and respiratory disease. In 2011, Professor Coppel and Dr Paul Crellin from Monash University were awarded the Harry Windsor Research Grant for their research project titled, *Identification of inhibitors of Pim A*, new target for tuberculosis therapy. This team, recognising Mycobacterium tuberculosis as the most devastating bacteria in human history, is investigating the potential for discovering a new class of antibiotics which targets myco-bacterium specific processes in the making of myco-bacteria cell walls.

The Ann Woolcock Fellow 2010 – 2014, Jodie Simpson returned from six months maternity leave to continue her work on her Research Project in January 2011. The project title is, *Characterisation and Treatment of Innate Immune Dysfunction in Older People with Obstructive Airway Disease.* Dr Simpson is based at the National Health and Medical Research Centre for Respiratory and Sleep Medicine, Hunter Medical Research Institute John Hunter Hospital, Newcastle.

The Australian Respiratory Council is delighted to be supporting these research activities and detailed reports on each of these projects follow within the Annual Report.

Addressing issues at hand: Australian Respiratory Council's Project Work in the Asia Pacific Region

Australian Respiratory Council's project work in 2011 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). The Australian Respiratory Council's practice of supporting projects which educate, enable and empower, remains fundamental to project activity.

Building Health System Research Capacity - Vietnam

In 2011 the Australian Respiratory Council supported the implementation of the MECOR (Methods in Clinical and Operational Research) program in Hanoi, Vietnam. This is a staged education program which aims to increase TB program work force capacity by developing the research skills of local medical officers. Almost 30,000 people die every year (one death every 18 minutes) from TB in Vietnam. There are approximately 175,000 new cases of TB per year, or 201 cases per 100,000 population (Australia 6 cases per 100,000 population). Vietnam ranks 12th among the 22 countries which added together account for 80% of the global TB burden.

A team led by Professor Guy Marks from the Woolcock Institute of Medical Research, conducted the first of five programs in January 2011. Professor Marks collaborated with colleagues from the American Thoracic Society, the Thoracic Society of Australia and New Zealand, the Ministry of Health - Vietnam, the National Lung Hospital - Vietnam and the Vietnam Society for Tuberculosis and Lung Diseases to deliver this project. Twenty five participants completed the short course with the students rating themselves as having substantially improved their research skills, at the end of the workshop. A comprehensive report on this activity is included in this report and this project has gone on to expand in 2012 (see page 18).

Combating TB in Cambodia

Cambodia has a population of only 14 million, yet has approximately 72,000 new cases of TB annually with an estimated incidence rate of 495 cases per 100,000 population (Australia, with a population of 21 million has approximately 1,300 cases annually). It is estimated that approximately 13,000 Cambodians die annually from the disease.

2011 marks the third year of the Australian Respiratory Council's support for the Cambodian Anti Tuberculosis Association's (CATA) very successful TB Program. We are pleased to have the Thoracic Society of Australia and New Zealand (TSANZ) and Eli Lilly Pty Ltd partner with us to co-fund this project in 2011. This project aims to reduce the incidence of TB in marginalised groups, specifically factory workers and the elderly. The Cambodian Ministry of Health has identified factory workers and elderly people as being particular groups where TB transmission occurs in Cambodia.

The major challenge for all health promotion and disease prevention projects in developing countries is in achieving sustainability. Much good work is initiated, but due to local poverty and the dependence on external funding, even projects as highly developed as this risk being shelved due to failure to secure ongoing sponsorship. The Australian Respiratory Council has been working with CATA towards securing ongoing funding. To this end, CATA participated in the national Cambodian application for Global funds. This was unsuccessful in 2010, but was re-submitted in 2011 and is hopeful. The results for this won't be forthcoming until late 2012. Ensuring Cambodian Project Funding in 2012 is a priority for the Australian Respiratory Council and we welcome the ongoing support of interested partners. The Australian Respiratory Council and TSANZ are again co-funding CATA in 2012.

Technical Support for TB Programs in the Asia Pacific - collaboration with the World Health Organisation (WHO), the Centre for Disease Control (CDC) and Secretariat of the Pacific Community

The annual conference of the Pacific Island TB Controllers Association (PITCA) planned for November 2011 was postponed till May 2012. In 2012, PITCA will be combined with the biennial Pacific Stop TB meeting, bringing CDC, WHO and SPC together as collaborators for this first time event which will engage all 22 Pacific countries and territories. The Australian Respiratory Council has been invited to again host a workshop for nurses and plans to feature training in the implementation of TB and Diabetes Educational Resources. The planned conference will be held in Palau.

The Pacific Island TB Nurses Network has continued throughout 2011 with the Australian Respiratory Council supporting CDC and the US National Tuberculosis Controllers Association (NTCA), to provide technical support to TB nurses and related workers within the Northern Pacific Region. This takes place in the form of monthly Regional Case Management Teleconferences. These teleconferences play an important role in supporting TB nurses within their home Island states with coordinated practical solutions to TB issues as they arise.

In addition to training courses, the Australian Respiratory Council hosted visits by TB program managers and nurses from the Netherlands and East Timor, to facilitate learning in regard to the Australian approach to TB control and information sharing on programmatic approaches in TB detection and containment. Further details on these visits are included on page 12.

At the third Conference of the Union Asia Pacific Region (Union-APR), Hong Kong, July 2011, the Australian Respiratory Council, in its role as the Australian Constituent Member, convened the inaugural meeting of APR TB and Lung Health Nurses Network. The meeting agreed to: pursue the development of a regional nurses network; approach the Singapore office of the IUATLD for web access to facilitate regional networking and to co-ordinate the first nursing symposium at the next regional conference titled, Nurses in Action. It is envisaged that the development of the network will provide the opportunity to identify the needs of nurses and strengthen their contribution to the Union- APR and TB control and Lung Health Programs within the region. The meeting was recognised by the Union-APR Council as a key achievement in workforce development for the region.

Key Messages for TB and Diabetes

An educational resource designed for use in Pacific TB programs and addressing Diabetes management, has been developed for use in Pacific Island countries. This is a world first and will be officially launched in Palau in May 2012.

The Australian Respiratory Council nurse consultant team, has undertaken the development of this resource in collaboration with the US Centers for Disease Control and Prevention, the Secretariat of the Pacific Community and the National TB Programs of Micronesia and the Marshall Islands. The purpose of the tools (a flip chart and patient education booklet) is to support improved management of patients with co-morbid TB and Diabetes. Diabetes is a risk factor for progression to TB disease once someone has been infected with TB. Diabetes rates are increasing throughout the world. Current estimates in the US and Australia indicate that it affects approx 5% of population, however estimates in the Pacific suggests rates are as high as 40% of population in some countries/territories. An extended report on this work is included on page 19 of the Australian Respiratory Council's Annual Report.

Focus Australia - Building Capacity in Indigenous Health Workers through Cultural Exchange

The Be our Ally Beat Smoking Study (BOABS) project was awarded a project grant to support a cultural exchange between indigenous workers in New Zealand and the Kimberly region of Western Australia. The project is designed to increase the skills of local employees to implement anti-tobacco programmes in indigenous communities. The exchange was planned for October 2011, but a request was received to hold exchange over to February 2012. A project report will be submitted to the Australian Respiratory Council at conclusion of the exchange.

Advocacy and Awareness Raising - TB Control and Respiratory Health

Towards a World Free of Tuberculosis - World TB Day 24th March 2011

In February 2011, the Australian Respiratory Council were invited to film a brief (9 minute) DVD organised and sponsored by Eli Lilly Pty Ltd to promote World TB Day. This DVD was then distributed to Parliamentarians, with a media release to the press on the 22nd March 2011, uploaded to YouTube and linked to the Australian Respiratory Council website homepage. The role of the DVD was to highlight the impact of TB disease which, although mostly defeated in Australia, is an

enormous burden in our immediate region. It contained brief comments from selected Parliamentarians and non-government organisations, including the Australian Respiratory Council. Subsequent to the release of the DVD, a motion was passed in the Federal Senate in support of World TB Day on 24 March 2011.

Advocating for Respiratory Research - Australian Society of Medical Research (ASMR)

The Australian Respiratory Council was delighted to support the printing and distribution costs of the report, Returns on NHMRC Funded Research and Development. In 2011, the ASMR commissioned Deloitte Access Economics to prepare a report on the economic benefits to Australian society from the National Health and Medical Research Council's (NHMRC) contribution to health and medical research. This study focused on specific diseases, namely cardiovascular disease, cancer, sudden infant death syndrome, asthma and muscular dystrophy, which collectively form about 43% of the burden of disease in Australia. The benefits derived from NHMRC research and development between 2000 and 2010, were calculated by estimating the wellbeing gains for specific diseases, gains to the health system (easing pressure on expenditure), productivity gains and commercial returns. The report estimates projected net benefits to 2050.

The report was launched by Minister Mark Butler in Parliament House on Monday 31 October, 2011.

Progressing an Alliance of Lung Health Organisations to Champion Respiratory Health in Australia

For some years now, non government, national, respiratory organisations in Australia have been looking for a structured mechanism around which to pursue mutual collaboration in the quest for respiratory health. This collaboration has been a success and in 2011, the Presidents of National Respiratory NGOs forum, progressed the notion of a structured collaborative mechanism through the establishment of a CEO working party. The CEOs from the participating agencies met on 11th November 2011 and forged a commitment to meet at least twice yearly, to communicate regularly on issues of common interest and to work together on collaborative projects. Outcomes and recommendations of this meeting were considered by the Presidents of National Respiratory NGOs forum in March 2012.

Participating organisations include: the TSANZ, the National Asthma Council, Cystic Fibrosis Australia, the Australian Lung Foundation, Asthma Australia and the Australian Respiratory Council.

Increasing Australia's engagement in Region - Bid to host the 5th Union Asia Pacific Region Biennial Conference in Sydney – 2015

The Union Asia Pacific Region Conference is held under the auspices of the Asia Pacific Region of the International Union Against Tuberculosis and Lung Disease. It is a biennial event which rotates to different countries and attracts between 500 and 1,100 delegates. In December 2011, the Australian Respiratory Council Board of Directors determined to submit a bid to host the 5th Union Asia Pacific. Bid outcomes will be decided at the World Conference on Lung Health, in Kuala Lumpur, Malaysia 2012.

In Australia, there are few meetings where researchers, clinicians, public health activists and the workforce come together to focus, network, develop and progress initiatives in TB and Lung disease in marginalised groups. Furthermore, by raising the profile of the Australian Respiratory Council, hosting the conference provides an opportunity for the organisation to increase its leverage nationally and internationally, thereby increasing its potential to further its mission. This is especially significant as the Australian Respiratory Council considers its role as championing the Pacific. The New South Wales Government have committed significant funds to support attendance through travel grants

Strengthening Partnership with the International Union Against Tuberculosis and Lung Disease (IUATLD)

Professor Don Enarson, Senior Scientific Advisor to IUATLD was invited to meet with the Australian Respiratory Council Directors and members of the NSW TB Advisory Committee (TBAC) in 2011. The purpose of the meeting was to discuss the role of these organisations within the Asia Pacific Region and to explore opportunities for collaboration. The meeting recognised that respiratory disease represents 13% of the burden of disease in developed and developing economies/ countries and that opportunities exist to work in partnership. The organisations agreed that capacity building provides opportunities to promote best practice. This can be achieved through the development of increased technical skills and operational research. The Australian Respiratory Council will look to further developing these partnerships in 2012.

Finances

As a self funding charity organisation, largely reliant on its investment portfolio, the Australian Respiratory Council has continued to be challenged by volatile financial markets in the wake of the 2008 global financial crisis (GFC). Again, the most significant impact on the Australian Respiratory Council's financial performance has been felt in the "value of assets" and has resulted in the decreased value of investment stock (showing a loss of $381,739 for 2011 compared to $354,658 in 2010). Despite this loss in asset value, strategic management of the investment portfolio has resulted in the investments delivering increased distributions ($248,899 in 2011, up from $219,517 in 2010) and refund of franking credits ($56,877 in 2011, up from $27,543 in 2010).

The operating loss in 2011 was $123,110 against a projected loss of $276,503. 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 team, lead by, Bob Horsell and supported by Peter Gianoutsos, Ian Ramsay and the Australian Respiratory Council staff have been fundamental to achieving this result. The Australian Respiratory Council continues to embrace partnerships in order to maintain project activity and strengthen relationships with Australian and international partners. These partnerships ensure that the Australian Respiratory Council continues to have an impact despite challenging economic circumstances.

Fundraising activities too, have a significant role to play in the Australian Respiratory Council's response to the economic challenges. The bequest program was implemented in 2009 and commitment to it has continued to grow over the last 24 months. Expanded workplace giving and targeted acquisition appeals will also contribute to the deficit. In 2012, the Australian Respiratory Council will investigate other avenues for program activity funding to ensure the longer term viability of pursing its mission in respiratory health.

Acknowledgements and thanks

The contribution of the Australian Respiratory Council's Directors is deeply appreciated, their dedication, expertise and enthusiasm remains one of the Australian Respiratory Council's great strengths and I again 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 the Australian Respiratory Council's Project Advisory Group and Ian Ramsay Chair of the Australian Respiratory Council's Centenary Celebrations Committee. Ian is currently recovering from a recent illness and we wish him well and look forward to his speedy recovery

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 the Australian Respiratory Council on its mission. Special thanks also are extended to Pam Banner and Amanda Christensen whose sustained efforts enable the Australian Respiratory Council to maintain its contribution to health worker education and training in the Pacific.

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

Gratitude is also extended to the dedicated staff of the Australian Respiratory Council. Kerrie Shaw, Judy Begnell and Helen Smith have continued to develop, implement and support all activities of the Council. We said good-bye to Helen during 2011 following her acceptance of a full time position with NSW Family Planning where she will be again utilising her significant background in international projects. We wish Helen well in her future endeavors and will look to employing a new Program Development Manager in 2012. Kerrie Shaw performed both the role of Executive Officer and Program Development Manager which has been a huge task and appreciated by myself, all Directors and her colleagues.

Audrey Tonkin, who despite injury and hospitalisation in 2011, has yet again demonstrated commitment and enthusiasm through a volunteer capacity to the Australian Respiratory Council. Audrey's support, assistance in day to day activities and good cheer is much valued by our organisation.

Our thanks are extended to Heath McLaren and his team at Macquarie Bank for their financial guidance in negotiating the volatile financial markets in 2011. Thanks also to David Conroy and Roy Chong for their expertise and assistance in meeting our annual auditing responsibilities.

Life Governors

Congratulations to Amanda Christensen and Gavin Frost who were elected as ARC Life Governors at the Annual General Meeting, 27 April 2011. Gavin was unable to join the meeting for the announcement as he now resides in Perth, but I had the pleasure of speaking with him and he was delighted to receive the honour. Gavin served on the ARC Board for 25 years. His significant achievement during his Directorship was a public health and education screening program which targeted the workforce in the Sydney metropolitan area. ARC partnered with Sydney Hospital to fund this program between1978 to 1992. I had great pleasure in presenting Amanda with her Life Governor Certificate at the Annual General Meeting. Amanda is currently an ARC Director and has been serving in this role for 11 years now. Amanda has been responsible for re-engaging ARC in tuberculosis education and training in the Pacific and developing ARC's close relationships with the US Centre for Disease Control and Prevention, the US National Tuberculosis Controllers Association's and the Pacific Island Health Officers Association. Full citations on our new Life Governors are available on page 8.

Bob Horsell OAM

Bob was awarded a Medal of the Order of Australia on 26 January 2012 which is a tremendous honour and a credit to his commitment to the community and the Australian Respiratory Council is very proud of his achievement.

Moving Forward in 2012

The year ahead promises to be another productive and exciting year for the Australian Respiratory Council. Our research program continues to support important investigations being undertaken by Australian medical researchers in tuberculosis and airway disease. The Australian Respiratory Council's involvement in Vietnam will continue with the expansion of the MECOR project to include clinicians from Cambodia. The collaboration to support the Cambodian Anti Tuberculosis Association (CATA) interventions in factories and communities will bring the Japanese Anti Tuberculosis Association (JATA) the Thoracic Society of Australia and New Zealand (TSANZ) and the Australian Respiratory Council together again in 2012. The focus this year will be on achieving Global Funding for this project. the Australian Respiratory Council will continue to give support to the TB programs in Pacific Island Countries and Territories through PITCA, Pacific STOP TB meeting and the Pacific Nurses Forum. Two new projects will be supported in 2012; the Bangladesh project which will investigate risk factors Mutli-Drug Resistant TB in communities in Bangladesh; 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. The TB and Diabetes Flipchart will be launched in Palau in May 2012 and we will work with our international partners to globally launch this much anticipated resource.

We look forward to working with our collaborators, old and new in what looks set to be another successful year for the Australian Respiratory Council.

Thank you all for your contribution.

David Macintosh AM
President

Governance

Board of Directors

AMANDA CHRISTENSEN

Dip Nursing

NSW TB Program Manager 1997-; various positions in public health for twenty one years including tuberculosis control for fourteen years. Appointed to the Board in 2001. Worked as the ARC Executive Director from April 2008 to May 2009.

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 Expert Panel 2002 – 2007; Member of Board of Directors UMP 2000-2002. Appointed to the Board in 2006; Vice- President.

ROBERT HORSELL OAM

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.

DAVID MACINTOSH AM

BBS (UTS), FCA

Member of the Order of Australia 2011, 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 2000-2011; Director, The Australian Lung Foundation; Managing Director, Paynter Dixon Construction Group 2001- Present; Director of numerous private companies; thirty one years of senior management and director level in the transport and construction industries in Australia and Europe; Chairman, actively involved in the Surf Life Saving movement for over forty six years 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. 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. Member of NSW Health TB Advisory Committee, 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

Life Governors

1932	Hon George Frederick Earp, MLC	2003	Clinical Professor Iven Young
1934	Sir John Sulman	2003	Professor Ian W Webster
1934	Sir Nelson King	2006	Emeritus Professor Charles Baldwin Kerr
1934	Lady King	2007	Professor J Paul Seale
1966	Sir Harry Wyatt Wunderly	2009	Mr David Hugh Macintosh AM
1996	Dr Keith Wellington Hills Harris	2011	Ms Amanda Christensen
2003	Professor Noel Desmond Martin	2011	Dr Gavin Frost

David Macintosh AM recognised for Service to the Community

On 13th June 2011 David was appointed as a Member of the Order Of Australia for service to the community through philanthropic contributions to health care and medical research organisations, surf lifesaving, and business.

The outline of positions held listed in David's biography is testament to his generosity and passion in all efforts in his charity work, surf lifesaving and business endeavours. ARC is proud to see David's work recognised through this prestigious appointment.

David's citation includes a wide range of achievements from the establishment of The Macintosh Foundation, representation on numerous boards and committees, fundraising and direct donations.

Please see http://www.gg.gov.au/res/file/2011/honours/qb11/Media.pdf for the full citation.

Governance (continued)

Election of Life Governors

Congratulations to Ms Amanda Christensen who was elected as a Life Governor at the Annual General Meeting held 27th April 2011.

Ms Amanda Christensen

Dip Nursing
NSW TB Program Manager, NSW Health Department

Amanda Christensen is the TB Program Manager, appointed to the position at New South Wales Health Department in 1997. Prior to this, Amanda held various positions in public health as a Clinical Nurse Consultant in a variety of settings including Corrections Health, Sexual Health and Family Planning. As TB Program Manager, NSW Health, Amanda was appointed to the Australian National Tuberculosis Advisory Committee in 1997.

Amanda obtained her Diploma of Nursing in 1983 and undertook further studies to achieve qualifications in Sexual Health and Family Planning. She was appointed to the Board of the Australian Respiratory Council (ARC) in 2001 and has been instrumental in developing the role of tuberculosis (TB) nurses and related workers in the Western Pacific Region. These contributions include: the facilitation of TB nurse training in Kiribati in 2005; the commencement of annual training workshops for nurses and related workers in the US Affiliated Pacific Islands (USAPIs) in 2006; the initiation of monthly case conference meetings for TB program teams in USAPIs and negotiated the first TB Nurses Workshop held at the Pacific Stop TB meeting in Fiji, 2010.

In 2008, Amanda led a team of ARC consultants in developing a training manual for TB Nurses in the Pacific.

In addition to this, Amanda has represented ARC at the annual meetings of the International Union of Tuberculosis and Lung Disease (IUATLD) and biennial meetings of the IUATLD – Asia Pacific Region.

In 2008 Amanda was appointed Executive Director of ARC for a period of twelve months and became Chair of ARC's Project Committee in 2009. A position which she currently still holds.

Congratulations to Professor Gavin Frost who was elected as a Life Governor at the Annual General Meeting Held 27th April 2011.

Professor Gavin Frost

MB BS MPH FRACMA FAFPHM FHKCCM (Hon)
Acting Dean of Medicine, Sydney

Professor Frost is the Executive Dean of the School of Medicine at the Notre Dame School of Medicine, Fremantle and acting Dean of the School of Medicine, Sydney. Prior to this, he was an Associate Professor and Domain Head in Population and Public Health in the new Notre Dame University School of Medicine Sydney. Before his appointment to the Sydney campus he was General Manager (Business Development) with Aus Health International in NSW, developing overseas health projects including innovative community participation and community development models. Prior to this he was the Chief Medical Officer with MBF Australia, the nation's largest private health insurance company for seven years.

Professor Frost is a medical graduate of Sydney University and the Sydney Hospital Clinical School, and holds a Masters degree in Public Health. He is a Fellow of the Royal Australasian College of Medical Administrators, was its' Censor-in-Chief from 1999 until 2005 and was President of the College. He is also a Fellow of the Faculty of Public Health Medicine of the Royal Australasian College of Physicians. He was recently presented with an honorary fellowship of the Hong Kong College of Community Medicine for his work in developing administrative medicine training in Hong Kong.

In 1997-98 he was the CEO of Royal North Shore Hospital, a 750 bed teaching hospital of Sydney University.

For two and a half years prior to that he was the Senior Medical Advisor in the AIDS and Communicable Diseases branch of the Australian Commonwealth Department of Health. Before this secondment, he was the Deputy Chief Health Officer in the NSW Health Department for four years, acting as Chief Health Officer for part of that time. He has also served as senior medical advisor in the office of the NSW Minister of Health, and as Director of Community Medicine at Sydney Hospital.

He has done locums with the Royal Flying Doctor Service in Broken Hill and in remote centres in Australia.

In his Government roles, he has made numerous visits to China, and to Indonesia. He has undertaken consultancies in Papua New Guinea, Romania, Qatar, Bahrain, United Arab Emirates, Uzbekistan, Libya and the Indian Ocean Territories of Cocos (Keeling) Islands, and Christmas Island.

Professor Frost was appointed to the Board of the Australian Respiratory Council (ARC) in 1980 and served as a Director until 2005. During this time, he was Director of Preventive Medicine and Director of the Health Information and Screening Service at Sydney Hospital. The ARC, in conjunction with the Sydney Hospital's Health Information and Screening Service maintained a health screening programme targeting the workforce in and around the Sydney metropolitan area. The partnership commenced in 1978, continuing until 1992 and focused on detection of certain disorders requiring treatment, eg high blood pressure, elevated cholesterol and bowel cancer.

Supporters Of ARC

Benefactors

The Breath of Life

About ARC's Bequest Program

We would like to acknowledge the patience of all our supporters during the implementation period of the program, who have returned the initial survey and completed a follow up survey – we hope you enjoyed the "cuppa".

We are very pleased with the response from our very loyal supporters over the last two years to our Bequest Program.

These supporters have made a commitment to leave a bequest to ARC in their will. They are acknowledging that they wish to continue to support the projects and research aimed at fulfilling the vision of a community free of respiratory illness.

The generous spirit of our donors is given a loud voice when bequests are expressed in their will. While many may think leaving a bequest is reserved for a select few, the truth is that every bequest to ARC, no matter how small or large makes a mark that will last. A bequest may take on a number of forms, including: a specific dollar amount, a specific asset, or a percentage of the estate.

Please call us for a copy of our "Your Security, Your Future" booklet if you are considering leaving a bequest to ARC.

Breath Of Life Honour Roll

Established for just 2 years the Breath of Life Club and Honour Roll is steadily growing. The Breath of Life is our way of thanking all generous benefactors who have notified ARC they have made the decision to leave ARC a bequest ARC appreciates having the opportunity to thank the Breath of Life members in person.

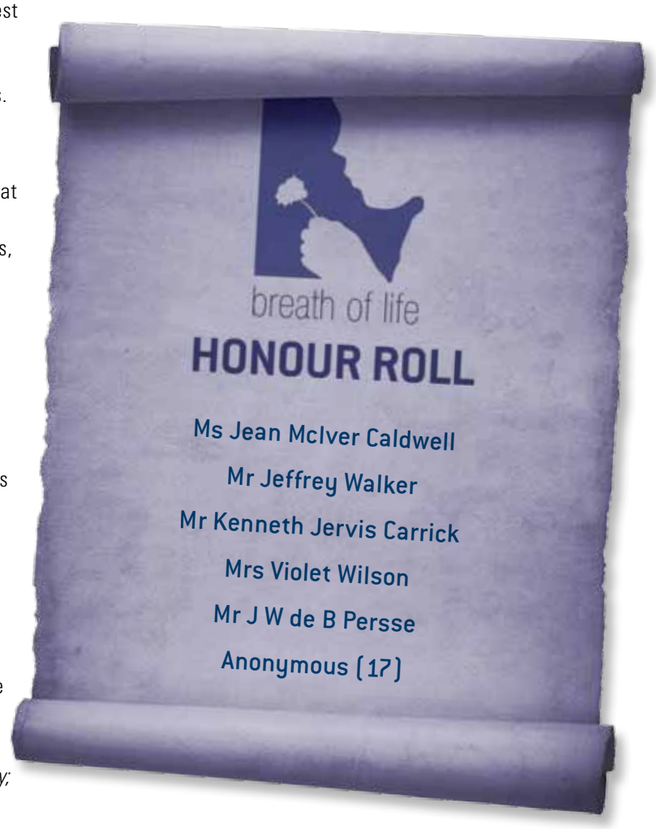
However ARC also acknowledges that many of our Breath of Life members whilst happy to advise us of their decision wish to remain publically anonymous.

One benefactor Jonathan not only agreed to become a member of the Breath of Life but shared the following:

"The recent terrible floods have shown how generous we can be in helping others. This generosity of spirit is an essential part of humanity; we all benefit.

Australia has many charities that bring help in all kinds of ways to people in need. I believe, we can assist these charities with our regular donations and though a bequest in our wills. That is why I have named the Australian Respiratory Council as one of the beneficiaries of my will. I want it to help people with respiratory illnesses for years to come."

We invite you to join Jonathan as a member of the **Breath of Life** – those in the future with respiratory illnesses such as TB will be forever grateful.



*"You don't have to be rich to **leave a bequest**. The reality is, **most of us** will be able to be more **charitable** at our deaths than we can be now."*

Supporters Of ARC (continued)

Partners and Friends

World TB Day 24th March 2011

In February 2011, ARC were invited to film a brief (9 minute) DVD organised and sponsored by Eli Lilly for the purpose of promoting World TB Day. This DVD was distributed to Parliamentarians, with a media release to the press on the 22nd March 2011 and uploaded to YouTube. Subsequently this was linked to the ARC website homepage with an animation to highlight World TB Day and key messages.

The role of the DVD was to highlight the impact of TB disease which, although mostly defeated in Australia, is an enormous burden in our immediate region.

The DVD contains brief comments from selected Parliamentarians and non-government organisations.

The Speakers included:

Dr Dean Gouws – Medical Director, Eli Lilly Highlighted the increase in MDR-TB and stressed that in developing countries it is essential to have proper supervision as treatment for TB is six months and for MDR-TB is 18 months.

Hon. Richard Marles MP - on Australian Government initiatives and commitment to the Global Fund;

Peter Dutton, Shadow Minister for Health and Ageing who confirmed bipartisan support for Global Fund initiatives

Senator Cory Bernardi – Senator for SA – who gave an outline of his personal experience with TB having been diagnosed with TB in 1995 when he was 26

Professor Iven Young, ARC - outlined that a third of the world's population is affected by TB with 2 million within our Region. The major reason is that surveillance is not good in developing countries and hence treatment regimes are not good. He also stresses the need to do more.

Ms Kerrie Shaw, Executive Director ARC Highlights that if we do not assist our neighbours and the Region to combat TB it could have an impact on Australia.

Ms Maree Nutt - RESULTS International (Australia) - outlined the need for continued contribution to the Global Fund. The Fund is responsible for saving 3,500 TB sufferers each day. If Australia is serious about making a difference the government needs to commit 500 million towards the Global Fund

The aim of the DVD was to let Australian Federal Parliamentarians know that:

- TB is a serious disease and takes a long time to treat
- TB is still causing significant suffering and death
- TB, while still causing some problems in Australia, is causing suffering and death in our region
- Australia is in a position, and is taking measures, to help
- Good things are being done globally and locally
- TB is curable

Subsequent to the release of the DVD, the following motion was passed in the Federal Senate in support of World TB Day on 24 March 2011

World TB Day is celebrated on March 24 each year

TB Infection Prevention & Control Education in the Papua New Guinea (PNG) Highlands

Margaret Evans and Beverly Hall

Margaret Evans, Clinical Nurse Consultant (Infection Prevention & Control) at the Royal Hospital for Women, Randwick and Beverly Hall, Registered Nurse and Midwife with a background in public health, research and international projects have for many years been volunteering their time and expertise to the PNG Highlands Foundation. Margaret and Beverly arrange an annual site visit and maintain email contact with the hospital in the interim. The aim of their work is to have a sustainable infection control program at Goroka Base Hospital. There is much to be done.

According to AusAID, PNG faces some serious health challenges. Babies, children and mothers continue to die in large numbers from preventable causes. Nearly seven percent of children do not live past their fifth birthday and the life expectancy for men in PNG is only 53 years, for females it's 54 years. Water and sanitation systems are inadequate. There is a lack of basic supplies eg latex gloves. The geography of the country is complex. Small groups of people live scattered in hard-to-reach, remote villages. Tribal rivalry and aggression remains a major problem even today.

Australia and PNG are working together to address this challenge through a health schedule to the Partnership for Development. Through the partnership, Australia and PNG have agreed to increase the percentage of babies delivered under the supervision of skilled staff, immunise more children and reduce malaria and tuberculosis.

In 2011, Margaret initiated a meeting with Amanda Christensen, NSW Ministry of Health and ARC Executive Officer, Kerrie Shaw to acquire educational resources and information on TB practices that may benefit the work they are undertaking.

Margaret and Beverly have developed a Check List tool for local health workers to assist improve adherence to basic infection prevention and control practices.

ARC looks forward to supporting these activities in TB infection control in PNG.

Pharmacy-initiated referral of TB symptomatic patients in Cambodia

Private sector pharmacies are ubiquitous in Phnom Penh, the capital city of Cambodia. They are easily accessible by everyone and they provide access to medicines for all socio-economic groups. Research shows that pharmacies are often the first point of contact with the health system for many Cambodians seeking treatment.

Seeking information, not necessarily treatment, is a relatively new experience for Cambodians visiting pharmacies. Since 2005, as part of their PPM-DOTS program, the Cambodian National Tuberculosis Program (NTP) has been working with a network of registered private sector pharmacies to improve community awareness of tuberculosis (TB) and to increase case detection rates. Pharmacy owners have been trained by the NTP to recognise TB symptomatic patients in their pharmacies, to assess them against referral criteria, and to counsel these patients to attend a conveniently located public sector health clinic for further assessment and possible diagnostic testing. About 500 pharmacies in Phnom Penh provide this service. Pharmacy owners are not remunerated for this service by either patients or government and they are prevented by law from stocking or selling anti-TB medications.

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 associated with pharmacy-initiated referral of TB symptomatic patients. Data collected from six focus group discussions held in Phnom Penh in January 2011 have been analysed and results disseminated through various Reports and a peer-reviewed paper.

In a Report prepared for the Cambodian National Tuberculosis Program, researchers showed that pharmacy owners were committed to the referral program: they were willing to undertake training to increase their knowledge, to motivate customers to seek further help, and to provide referral services in an efficient and professional manner. Data showed that patient counselling, a new experience for both patient and provider, was at times both challenging and stressful. Owners recommended that government media campaigns to raise TB awareness could reinforce messages provided through pharmacies. The altruism shown by pharmacy owners towards their fellow Cambodians, combined with a good understanding of the public health concepts underpinning their role, were major themes to emerge from the data. This alignment of personal/professional goals with NTP goals may see the long-term commitment of pharmacy owners to the Referral Program.

Researchers plan to survey pharmacy owners in both urban and rural areas of Cambodia in 2012.

Supporters Of ARC (continued)

Partners and Friends

Sharing Experience with TB Collaborators from Around the Globe

During 2011 the Australian Respiratory Council assisted the following visiting health workers.

Sr Carolina Maria Correia

Salesian Sister, Ambulatory Maria Auxiliadora, Venilale - Bacucau, East Timor

The Salesian Sisters have been undertaking missionary works in the mountainous area of Venilale(pop 15,000) since 1988. The eight sisters run an orphanage, a high school and a medical clinic. The medical clinic provides much needed health care to the orphans, students and residents of Venilale and the surrounding villages.

Sr Carolina visited Australia to attend a Conference in Melbourne in May 2011. She took the opportunity to participate in work experiences in a number of institutions in Melbourne, Adelaide and Sydney. Whilst in Sydney ARC's Executive Officer, Kerrie Shaw undertook to organise workplace visits for her. Kerrie also made copies of ARC's current resources available to Sr Carolina.

East Timor battles with high rates of mother and child mortality, malnutrition, communicable diseases including TB and HIV/AIDS, poor mental health, reproductive health and oral health. Other challenges faced are high poverty and illiteracy rates, limited human resources, minimal infrastructure and poor governance and accountability.

Sr Carolina provides:; daily consultation/treatment, health education & promotion in the community, hygiene & health care sessions, baby boxes to new mothers, natural family planning information and special services to patients eg writing letters to hospital and paying transport costs. The clinic undertakes TB consultations, examination of sputum, provides additional food supplies to patients as incentives to take their medicines. The Clinic has about 15 village health workers called "Motivators" who assist the TB patient for 2 months during the intensive phase of treatment.

A big thank you is extended to Betina Altivilla, Asthma Educator and the staff at Sydney Childrens Hospital- Asthma Clinic at Randwick who hosted Sr Carolina during her visit. A big thank you to Dr Matthew Sullivan and staff at the Infectious Disease Clinic, Westmead Hospital for also hosting a visit. To Pam Banner a special thanks for facilitating Sr Carolina's participation in the Infectious Diseases Clinic.

Caetano Gusmao

Regional TB Supervisor, MoH, NTP, East Timor

Caetano was in Australia as a part of his Australian Leadership Award (ALA) Fellowship, to learn about TB management in Australia.

Whilst here Caetano, spent time with Kerrie Shaw, ARC's Executive Officer to discuss issues related to the National TB Program(NTP) in East Timor in particular limited capacity to organise the implementation of theTB program at national and district levels and limited community awareness of TB at village level.

Timor has a population of 1.1 million, with each district having a population of around 50,000. The TB burden is 378 per 100,000 with 1.6% of new cases detected hand 14.5% of previously detected cases having MD-RTB. Doctors (200) are trained in Cuba on a rotational basis of every 2 years, until 2017. The NTP have an agreement in place with South Australian Pathology Clinic to provide laboratory assistance.

The NTP structure includes a Program Manager, TB Supervisors (5), Hospitals (5), District Co-Ordinators (13), District Laboratory Technicians (13), Subdistricts (65) -Community Health Clinics, Nurses(65) and laboratory technicians(65) and Outreach Village Centre which can use community volunteers.

The discussions suggested possible areas where ARC may be able to collaborate with East Timor NTP in the future eg a talking cough poster, TB Contact Tracing and community awareness education. A copy of ARC's current resources was also provided to Caetano. These included the TB Training Modules, flipcharts, posters in tetum (local language) and pamphlets.

Oda van de Waarsenburg

Dutch TB Nurse

Dutch TB Nurse, Oda van de Waarsenburg, visited Australia in September 2011 and approached ARC to facilitate her placement in Australian TB Services during her stay.

Oda was recommended by Maruschka Sebek, Senior Nurse Consultant Surveillance, Country Office The Netherlands and a Director on the Board of The Union, Paris. Oda's visit creates opportunities for future ongoing exchange between TB services in the Netherlands and Australia who similarly share a low burden of TB disease.

Oda spent two weeks in both Sydney and Brisbane. Whilst in Sydney, she visited ARC as well as TB Services at Redfern Community Health Centre, the Royal Prince Alfred Hospital and St George Hospital. Oda was able to accompany nurses on home visits, sit in on clinics and participate in staff discussions. Useful exchanges toook place in regard to policy, practice and tools utilised by TB programs in Netherlands and Australia. Similarly, whilst in Brisbane, Queensland TB Services facilitated Oda's participation in clinics, site visits and staff education. At the end of her stay, Oda compiled a presentation summarising her observations regarding the similarities and differences between TB Programs in Netherlands, Queensland and New South Wales.

Many thanks to Flora Van Der Heide, Bridget Hales, Phin Wong, Nikki Bergant, Leoni White, Terry O'Brien, Carmel Cochrane and other staff onsite who went out of their way to make Oda welcome and share experiences in TB care. Many thanks to Oda for taking the initiative to engage with TB services in Australia.

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**

Harry Windsor Research Grants

2011 Recipient

2011 Identification of inhibitors of PimA, a new target for tuberculosis therapy
Professor Ross Coppel, Dr Paul Crellin et al
Monash University, Melbourne

Professor Ross Coppel, Dr Paul Crellin et al

Australian Respiratory Council Harry Windsor 2011 Recipients, Monash University

Development of Inhibitors of PimA, a Validated Target for New Tuberculosis Drugs

Chief Investigator: R Coppel[1],

Investigators: P Crellin[1], M Scanlon[2], D Chalmers[2], J Simpson[2]. [1]Department of Microbiology, Monash University (Clayton Campus) and [2]Monash Institute of Pharmaceutical Sciences (Parkville Campus).

Year: 2011

Tuberculosis remains one of the most important diseases to afflict humanity. Mycobacteria are the causative agents of TB and also cause a range of other human and animal infections. Drug resistance is now common in these bacteria and there is an urgent need for new classes of antibiotics targeting novel processes specific to mycobacteria. In this project we are using fragmentbased drug discovery to develop inhibitors of PimA, an essential enzyme of mycobacterial cell wall biosynthesis. Previously, we identified low molecular weight compounds that bind PimA. The aim of this Harry Windsor research grant was **to further develop these compounds towards our ultimate goal of producing highly specific inhibitors with anti-mycobacterial activities.**

Specifically, we aimed to:

1) Characterise the binding of these fragments to PimA.
2) Identify additional, more potent fragments.
3) Demonstrate *in vivo* activity of compounds in a range of mycobacteria.

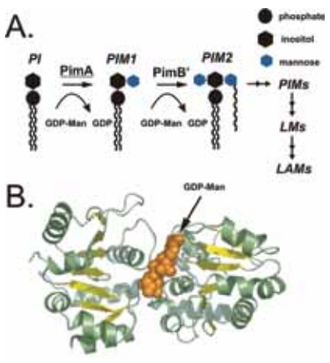


Fig 1. A, the PIM/LAM pathways; B, 3D structure of PimA:GDP-Man

Phosphatidylinositol mannosides (PIM), lipomannans (LM) and lipoarabinomannans (LAM) are abundant glycolipids of the mycobacterial cell wall. They are essential for the growth of mycobacteria and also play key roles in survival of mycobacteria in the host, particularly within host macrophages. The early steps of the biosynthetic pathways for these glycolipids are shown in Fig 1A. The first mannose addition to phosphatidylinositol, (PI), is performed by the enzyme PimA, which transfers mannose from GDP-Man to form PIM1. This intermediate is further processed by PimB' and a series of other glycosyltransferases to produce mature PIMs, LMs and LAMs. Thus, all of these downstream products are dependent on the PimAcatalysed reaction early in the pathway. PimA is absent in human cells, suggesting that a high degree of selective toxicity may be attainable by inhibiting the mycobacterial enzyme. The 3D structure of PimA has been solved to high resolution (Fig 1B) and binding sites for the GDP-Man donor and PI acceptor have been identified. While the published structure is that of the *Mycobacterium smegmatis* enzyme, we have shown the *M. tuberculosis* protein to be highly similar, making the *M. smegmatis* enzyme an excellent target for fragment-based drug design.

Fragment-based drug design (FBDD) is a relatively new technology for identifying ligands that bind protein targets. Initially, a set of low molecular weights with low affinity are identified which are then merged and elaborated to produce larger, high affinity compounds. In work leading up to the current project, we had already identified ~50 low affinity "hits" using saturation transfer difference (STD) NMR screening. Further characterisation and development of these initial hits was the overall aim of this project.

Outline of research over the last 12 months

Aim 1 – To characterise PimA binding

i) Surface plasmon resonance (SPR) studies.

SPR is a sensitive technique to detect protein binding by low molecular weight fragments. Monash Institute of Pharmaceutical Sciences (MIPS) has recently established a facility that is dedicated to the monitoring of fragments and related lead-compounds binding to target proteins, which houses a BIAcore T200 surface plasmon resonance (SPR) spectrometer and a iTC200 isothermal titration calorimeter. We have used SPR to characterise the potency and ligand efficiency of fragment binding to *M. smegmatis* PimA. Results for one of our binding fragments are shown in Fig 2.

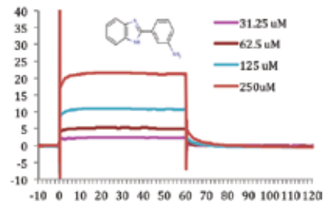


Fig 2. Biacore studies on a binding fragment

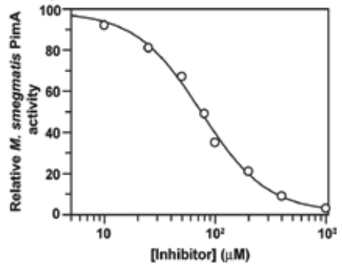


Fig 3. Details of the PimA-coupled assay

ii) Development of an *in vitro* assay.

We have successfully developed a coupled spectrometric assay to measure inhibitor potency. This method has precedent for screening glycosyl transferase activity and has provided us with the ability to rapidly test and characterise fragments for their inhibitory activity. The assay relies on three enzymes PimA, pyruvate kinase (PK) and lactic dehydrogenase (LDH) where the production of GDP by PimA is directly proportional to the reduction in NADH concentration (Fig 3). This decrease in NADH concentration is monitored at 340 nm and is used to obtain the reaction rate. Compounds that bind with appropriate ligand efficiency are first be analysed by calculating IC_{50} values against both PimA enzymes (ie. the *M. smegmatis* and *M. tuberculosis* proteins). Compounds that inhibit both enzymes are characterized more extensively to determine both their K_i and the mechanism of enzyme inhibition.

This assay has been used to monitor the ability of fragments to inhibit the activity of PimA from both *M. smegmatis* and *M. tuberculosis*. Some of the results of this assay are summarised in Table 1. These data demonstrate that the fragments inhibit both enzymes with similar potency. Importantly, are data suggest that these fragments can be developed into high potency inhibitors.

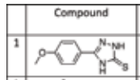
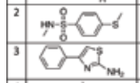
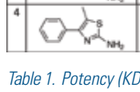
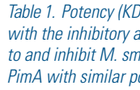
	Compound	K_D (*M. smeg*) from SPR (μM)	IC_{50} (*M. smeg*) (μM)	IC_{50} (*M. tb*) (μM)	Ligand efficiency (kcal HAC^{-1})
1		100	74	65	0.39
2		290	257	226	0.38
3		425	470	441	0.38
4		220	190	268	0.37

Table 1. Potency (KD) of binding to M. smegmatis PimA by SPR is consistent with the inhibitory activity (IC50) measured in the assay. Fragments that bind to and inhibit M. smegmatis PimA also bind to and inhibit M. tuberculosis PimA with similar potency.

Aim 2 – Identification of new PimA binders

To identify new PimA binding fragments, we have continued to screen our fragment library by STD-NMR. We have completed screening of about half of the compounds in our library (~600 fragments). STD-NMR is based on the fact that magnetization can be transferred from a larger molecule to its bound ligand, and it is very efficient at detecting ligand binding if the K_D is in the μM range or larger. STD-NMR is an ideal first-pass screen as it very rarely shows false negatives.

This additional screening has identified new hits. To confirm binding and rank the fragments, SPR data will be acquired using the methods described above. This work is ongoing and we aim to screen the entire library of ~1200 compounds against PimA.

Aim 3 – Assessment of *in vivo* activities against mycobacteria.

We have tested the most promising fragments to their capacity to inhibit mycobacteria. Sensitivity assays have been performed using the agar diffusion method in which paper discs containing known concentrations of test compounds are placed on agar plates spread with a bacterial lawn. Following incubation, the area of the zone of inhibition surrounding the disc reveals the level of sensitivity to the compound. This standard, highly-reproducible and rapid approach assesses many compounds simultaneously. These assays are still in progress, but preliminary results suggest that the fragments do not inhibit *M. smegmatis*. This is not surprising given the low affinity of the fragments and the intrinsic resistance of *M. smegmatis* to many antibiotics, and we do not expect to see significant inhibition until higher affinity compounds are developed later in the research programme. We are currently assessing activities against *M. avium* and M. bovis BCG, two slow-growing species that may be more susceptible.

Members of the Research Team (from L to R): Mark Mulcair, Martin Williams, David Chalmers, Martin Scanlon, Jamie Simpson and Steve Headey.

To derive quantitative data for the more promising compounds, we will follow-up with minimum inhibitory concentration (M.I.C.) assays in which serial dilutions of the compounds are tested for their ability to inhibit growth of bacterial cultures. All of these experiments can be performed in the Department of Microbiology at Monash University under PC2 containment for *M. avium*, *M. marinum*, *M. ulcerans* and *M. smegmatis* and under PC3 containment for *M. tuberculosis*.

Research Outcomes

This funding has been invaluable, and has allowed us to:

1) develop methods to characterise PimA binding by our previously-identified fragments.
2) develop a robust enzyme assay to assess PimA inhibition by fragments.
3) identify additional compounds by further STD-NMR screening.
4) commence *in vivo* activity assays for mycobacteria.

This grant has allowed us to progress the project and compile new preliminary data, which we have incorporated into a new Project Grant application to the National Health and Medical Research Council for funding in 2013.

Dr Jodie Simpson

Australian Respiratory Council Ann Woolcock Research Fellow 2010 - 2014

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

During my Anne Woolcock Research Fellowship I have been conducting 2 important studies that will explore the role of the innate immune system in older people with obstructive airways disease (asthma and/or COPD).

Obstructive airways diseases in the older age group are increasingly common, and the distinction between different diseases can be blurred. In clinical practice distinguishing asthma from COPD in the over 55 age group is problematic because of overlap of many of the features of both diseases. This overlap may result from altered pathophysiology in the elderly, where the underlying inflammatory reaction in the airways becomes similar in the different conditions as people age.

Ageing is associated with a range of immune system changes. There are well-described changes in both innate and adaptive immunity with ageing. Important inflammatory cells called neutrophils, exhibit decreased capacity to perform some of their vital functions with ageing, which may lead to persistence of infection. Neutrophil responses are typically associated with activation of the innate immune system. The development of age related airway neutrophilia implicates a role for the innate immune response being responsible for this effect

During my fellowship I will investigate obstructive airways disease the elderly and establish how alterations in the innate immune response in older people with airways disease can potentiate the effects of ageing and compare these results with older and younger healthy controls. I will also examine the effect of a new treatment to determine its ability to reduce airway neutrophils in older people with COPD.

1. Characterisation of immune dysfunction in older people with obstructive airways disease

The obstructive airway diseases COPD and asthma are now major health issues for Australia's ageing population. COPD is a disease of global significance that is a major contributor to mortality and morbidity in older people. The airflow obstruction that characterises COPD is progressive and incompletely reversed by current therapy. This underscores the need to better understand disease mechanisms which would facilitate the search for new treatment modalities in COPD. Airway inflammation is a key element of COPD, and typically involves neutrophilic infiltration of the airways. Neutrophilic bronchitis in COPD is persistent, and remains after the removal of stimuli such as tobacco smoke. The role of airway inflammation in obstructive airway disease of older people is poorly understood. It is likely to be important but also different to younger people because of life-long exposures to particulates such as cigarette smoke or other immune stimuli such as infections

Persistent neutrophilic bronchitis is also a feature of other chronic airway diseases; bronchiectasis, allergic bronchopulmonary aspergillosis, and the neutrophilic subtype of asthma. This suggests there may be a common mechanism contributing to persistent airway neutrophilia in these diseases. We have previously described a self-perpetuating neutrophil activation cycle (NAC) in neutrophilic asthma and hypothesised its existence and the involvement of an important immune system receptor (toll like receptor 2) in other obstructive airway diseases characterised by neutrophilic inflammation. This cycle is activated by toll like receptor 2 stimulation and persists via positive feedback interactions between important neutrophil proteins (CXCL-8, NE, and MMP-9) all of which levels are significantly elevated in the airways of patients with neutrophilic asthma.

Other factors known to influence airway neutrophilia are ageing, smoking, airflow obstruction, infection and corticosteroid use, and these factors are also associated with neutrophilic airway diseases.9 However, it is unclear to what extent factors such as age and past smoking impact on the persistent neutrophilic bronchitis and NAC in COPD . We have investigated these issues by assessing components of the NAC, and controlling for the effects of age, smoking and airway obstruction in patients with COPD. We have recruited 118 adults and collected induced sputum for bacterial culture and measurement of key inflammatory proteins and genes.

The NAC was enhanced with age, smoking and most significantly in those with COPD. TLR2 gene expression was significantly elevated in those with COPD and was a significant independent predictor of neutrophils in sputum after correcting for age, smoking and airflow obstruction. TLR2 activation led to increased gene expression for TLR2 and the induction of the components of the NAC. The results of this study have been submitted for review with Clinical Experimental Allergy.

Patient Christine Lewis participating in Characterisation of immune dysfunction in older people with obstructive airways disease study

2. Treatment of immune dysfunction in older people with obstructive airways disease

While effective treatments are well established to treat some types of inflammation in asthma and COPD, there are no treatments targeting neutrophilic inflammation. The anti-inflammatory effects of macrolide antibiotics are well-established. Macrolide antibiotics such as azithromycin have separate and distinct antibiotic and anti-inflammatory actions. There is extensive in vitro evidence of anti-inflammatory activity of macrolides, and some evidence that they may be efficacious in the treatment of neutrophil mediated airway diseases.

We have conducted a randomised placebo controlled trial of azithromycin therapy for 12 weeks will be undertaken to determine the ability of macrolide treatment in reducing the NAC components as well as bacterial load. We have screened 77 participants and randomized 30 people for the clinical trial of azithromycin therapy in older patients with airways disease. Study treatment was completed late in 2011. Analysis has commenced in March and will be ongoing over the next few months. I aim to submit an abstract of this data to ATS and TSANZ at the end of 2012.

PhD Scholar Juan Juan Fu assessing lung function

Research Training

Student Supervision

2007-2012: Ms Ama-Tawiah Essilsie is her PhD investigating an animal model of asthma and the role of Haemophilus Influenzae infection on inflammatory phenotype. She submitted the final version of her thesis in February 2012

2007-2012: 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.

2008-2012 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

2009-2012 Mr Lakshitha Gunawardhana, is studying the epigenetic regulation of airway inflammation in non-eosinophilic asthma

Research Output

1. Wang F, He XY, Baines KJ, Gunawardhana LP, **Simpson JL**, Li F, Gibson PG. Different inflammatory phenotypes in adults and children with acute asthma. Eur Respir J. 2011 Jan 13. [Epub ahead of print]

2. Wood LG, **Simpson JL**, Wark PA, Powell H, Gibson PG. Characterization of innate immune signalling receptors in virus-induced acute asthma. Clin Exp Allergy. 2011 May;41(5):640-8

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Project Feedback

MECOR Vietnam

ARC awarded a project grant to Dr Guy Marks, Woolcock Institute for Medical Research for a collaborative program to conduct the first ATS-MECOR course in Vietnam with the primary objective to develop capacity in future leaders in respiratory public health in Vietnam.

Project Background

The American Thoracic Society's(ATS)) program, Methods in Epidemiological, Clinical and Operations Research (MECOR) Program began in 1994 in Latin America. The primary aim of the Program is capacity building for research, based on the concept that individuals with skills in clinical research are needed to describe the burden of disease in their country, then develop, design and carry out studies that evaluate interventions that are likely to be effective in their settings. As part of this aim, there is also mentoring of local faculty and students to become future faculty in the program, which helps to further increase and sustain research capacity in host countries.

MECOR Vietnam has been developed as a collaboration between the Woolcock Institute for Medical Research, Vietnam, the University of Sydney, the Thoracic Society of Australia and New Zealand, the Australian Respiratory Council and the Vietnamese Association against Tuberculosis and Lung Disease. As with other country models, MECOR Vietnam has begun by offering Level 1, Introduction to Clinical Research Methods, in the initial year. In 2012, based on the evaluations, MECOR Vietnam will offer Level 1 and also offer Level 2, Advanced Clinical Research Methods. By 2013, t is hoped that Level 3 will be offered in addition to Levels 1 and 2.

MECOR Vietnam Course Objectives

The MECOR Vietnam program utilised the overarching ATS MECOR program objectives. The course was designed to enable health care professionals:

- To be able to use data from the literature to improve clinical practice;
- To develop the skills needed to study local, national, or international problems, and to develop and evaluate interventions; and
- To use data to inform public policy and improve clinical practice, and academic programs.

MECOR Vietnam Course Competencies

Level 1 was designed for a variety of health care professionals involved in developing medical research. Participants learned the fundamentals of posing a testable research question, the various study design options for generating and testing hypotheses, and basic analytic skills. The participants were presented an overview of statistics that will enable them to collaborate effectively with statistical consultants and co-investigators. Specifically, participant competencies for Level 1 included: Epidemiology, Research design, Research methods, Statistics and Protocol.

MECOR Vietnam Course Competencies	
Day 1	Study design, Statistics, Searching the medical literature, Considering a research question
Day 2	Study design, Statistics (descriptive statistics), Measures of association and testing, Developing a research question
Day 3	Sources of errors, Population selection, Questionnaires, Statistics (confidence intervals), Protocol development
Day 4	Statistics (testing a hypothesis), Respiratory disease outcomes, Protocol development
Day 5	Statistics review, Funding, Research ethics, Protocol development
Day 6	Presentation of completed research protocols

Participants:

Students. The applicants were ranked according to five criteria: evidence of English proficiency, the relevance of their current position to lung health, evidence of interest in research, the capacity of their organization to support research, and the overall quality of the applicant. The majority had additional training in tuberculosis and/or had specialty training in pulmonary diseases. Twenty five participants were selected.

Excellent geographic representation was achieved with students from both the north and the south of Vietnam. Most were from Hanoi and Ho Chi Minh City but some were from other cities including Da Nang and Can Tho.

Faculty. The faculty included 3 Vietnamese faculty members, 4 faculty members from Australia including Dr Guy Marks who was the Vietnam Course Director and 2 faculty members from the American Thoracic Society including Dr Sonia Buirst who is the ATS MECOR Program Director.

Summary of Presentations:

A unique aspect of the MECOR program is the actual development of research protocols during the one-week course. The agenda is designed to allow time for students to work in small groups with other individuals having similar research interests to develop such protocols. In other MECOR programs, these "small group" activities have led to lasting research collaborations. During the MECOR Vietnam 2011 course, students worked in small groups to develop their initial research prtocols with faculty advisors. The study questions that formed the basis of student protocols are as follows.

1. Is prevalence of acute and chronic respiratory diseases increased in garbage collectors compared to municipal gardeners in Hanoi?
2. Is passive smoking the major risk factor for lung cancer in Southern Vietnamese Women and are these below the risk factors for lung cancer in Southern Vietnamese Women?
3. What factors influence the outcome of MDR TB treatment in programmatic management of multi-drug resistance tuberculosis (PMDT)?
4. Is the prevalence of latent TB infection of ENT HCWs higher than HCWs in GP department in public hospitals in Hanoi 2012?
5. Is the CAT score correlated with health status measured by SGRQ score in Vietnamese COPD patients?

Evaluation:

A written post-course evaluation by student participants was conducted. Students were asked to provide anonymous input on a standardised questionnaire. Review of this information indicated that, on average, students felt that their skills had improved substantially as a result of the course in the following areas: Understanding differences between study designs, Identifying a research question and Understanding statistics.

Pamphlet - What is TB?

In 2011 ARC added to its development of resources with updated "What is TB?" pamphlets for use in rural and remote Indigenous communities and the Pacific.

Project Feedback (continued)

TB & Diabetes Educational resources for the Pacific

Over the past few years the Australian Respiratory Council (ARC), the US Centers for Disease Control and Prevention (CDC), the Secretariat of the Pacific Community (SPC) and the National TB Programs of the Federated State of Micronesia (FSM) and the Republic of Marshall Islands(RMI) have collaborated to develop TB & Diabetes educational resources.

Below is a copy of the abstract describing the development of the resources as presented by ARC at the 42nd World Conference on TB, Lung Health and HIV, held in Lille, France 2011.

Project Background

The rate of Diabetes in the Pacific region is high. The region tops international obesity and diabetes charts.

Pacific TB notification rates range between 0-326 cases per 100,000 population. The Western Pacific region has 21% of the global TB burden.

Up to fifty percent of the TB caseload in the Pacific has co-morbid diabetes.

People with diabetes have a greater risk for developing TB following exposure to the bacterium and for death during TB treatment.

TB nurses and DOT workers have a unique opportunity to impact on Diabetes self management during the delivery of TB DOT(Directly Observed Therapy) they have direct access to patients for at least 26 weeks.

Methodology

A literature review was undertaken to identify key TB and Diabetes messages for incorporation into a 26 week educational period.

Input was sought from Pacific TB and Diabetes programs and Chronic Disease Coalition regarding format and content of the educational resource.

Consideration was given to

- **Pacific context** (culture and images)
- **Stigma**
- **Literacy** levels (staff and patients)
- **Tools** currently in use and **valued**

The resources were piloted in Federated States of Micronesia, RMI and Hawaii.

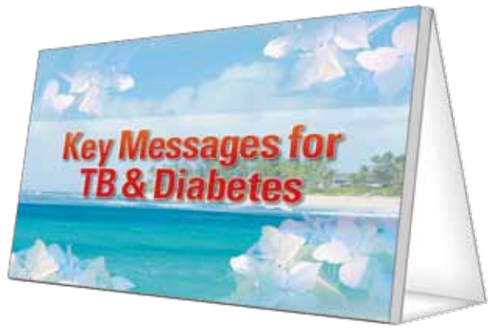
Following the pilot, recommendations were incorporated into the resource.

Results

A pictorial flipchart and patient information booklet containing patient and health worker information were developed.

The content is structured to support the development of the patient/health worker relationship.

Educational topics were organised according to standard TB and Diabetes management plans to support patient care monitoring and adherence to TB and Diabetes Control activities.



Conclusion

A structured tool for the combined delivery of TB and Diabetes education has been developed for use in the 22 Pacific Island Countries.

Future activities include the development of a training package to aid implementation of these resources and a study to measure their impact on health outcomes.

The Flipchart will be officially launched in Palau in May 2012 at the Pacific Island TB Controllers Association Conference.

Scholarships, Fellowships - 10 year history

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

Date	Recipient	Subject	Award
1999-2001	George Latouche *University of Sydney, NSW*	Phopholipases as potential virulence factors of Cryptococcus neoformans variety Gattii	$55, 089
1999-2001	Rosemary Santangelo *Westmead Hospital, Sydney, NSW*	Phospholipases of Cryptococcus neoformans	$63,498
1999-2001	Anna Hansen *University of Sydney, NSW*	The role of cytokines in the immunity and pathology of malaria	$56,703
2000-2001	Rita Machaalani *University of Sydney, NSW*	Neurone receptor systems in sudden infant death and piglets exposed to hypercapnic-hypoxia	$37,454
2000-2001	Shoma Dutt *Westmead Hospital, Sydney, NSW*	Biliary lipids in liver disease and interstitial phospholipid metabolism in children with cystic fibrosis	$40,311
2001	Anup Desai *University of Sydney, NSW*	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 *University of Sydney, NSW*	The contribution of obstructive sleep apnoea to driver fatigue in transport drivers	$55,793
2002-2003	Rita Machaalani *University of Sydney, NSW*	Neurone receptor systems in sudden infant death and piglets exposed to hypercapnic-hypoxia	$29,214
2002-2003	Shoma Dutt *Westmead Hospital, Sydney, NSW*	Biliary lipids in liver disease and interstitial phospholipid metabolism in children with cystic fibrosis	$41,793
2002- 2004	Zoe Barker-Whittle (McKeough) *Royal Prince Alfred Hospital, Sydney, NSW*	Evaluation of lung volume reduction surgery in patients with chronic airflow limitation	$59,214
2003-2004	Kylie Turner *University of Sydney, NSW*	Investigation of the structure of cryptococcal phospholipases	$40,143
2003-2004	Corrina Parker *Australian National University, Canberra, ACT*	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 *Telethon Institute for Child Research, Perth,WA*	Genetic Influences on causal pathways of ALRIs in highly susceptible infants	$285,000
2010-2014	Jodie Simpson *Newcastle University, NSW*	Characterisation and treatment of innate immune dysfunction in older people with obstructive airway disease	$95,250

Research Grants - 10 year history

ARC Harry Windsor Medical Research Grants over last 10 years

Date	Recipient	Subject	Award
1999	Ronald Grunstein *Royal Prince Alfred Hospital*	Sleep Apnoea and Cytokines	$22,000
1999	Karen Waters *University of Sydney, NSW*	Potential neurotoxicity of repetitive hypercapnic hypoxia during early treatment	$10,000
1999	Evangelica Daviskas *Royal Prince Alfred Hospital*	Effects of beta2-adrenceptor agonists on mucociliary clearance in persons with asthma	$5,000
1999	Peter Bye, Stefan Eberl and Jenny Alison *University of Sydney, NSW*	Pharmacological and Physical Therapies to enhance mucociliary clearance in chronic lung disease and mucus hypersecretion	$39,000
1999	Bernadette Saunders and Helen Briscoe *Centenary Institute of Cancer Medicine & Cell Biology*	Apoptosis in the control of Mycobacterial infection	$38,000
1999	Graeme Maguire, Norma Benger and Bart Currie *Menzies School of Health Research*	Chronic Lung Disease in Aboriginal Australians: factors in aetiology and treatment	$69,136
1999	Guy Marks *Institute of Respiratory Medicine*	Does BCG vaccination in infancy prevent allergy	$5,000
2000	Peter Gibson *John Hunter Hospital*	Quality of Life in Chronic Cough	$25,500
2000	Warwick Britton and James Triccas *Centenary Institute of Cancer Medicine & Cell Biology*	Interlukin-18 as an adjuvant for DNA Immunisation against Tuberculosis	$26,500
2000	Peter Bye, Iven Young, Jenny Alison and Marney Isedale *Royal Prince Alfred Hospital*	Evaluation of lung volume reduction surgery in patients with chronic airflow limitation	$38,000
2000-2001	John Wiggers, Afaf Girgis, Robyn Considine, Jenny Bowman *University of Newcastle*	Preventing infant exposure to tobacco smoke: evaluation of an early childhood intervention	$53,006
2001	James Wiley and Tania Sorrell *University of Sydney, NSW*	The monocyte-macrophage P2x7 receptor and susceptibility to tuberculosis	$45,000
2001	Terence Amis and John Wheatley *Westmead Hospital*	The role of snoring and obstructive sleep apnoea in the pathogenesis of hypertension	$45,665
2001	Amanda Baker and Vaughan Carr *University of Newcastle*	Randomised controlled trial of a smoking cessation intervention among people with a mental illness	$63,370
2002	Evangelia Daviskas, Sandra Anderson & Iven Young *Royal Prince Alfred Hospital*	Effect of mannitol on the clearance of mucus in patients with COPD	$38,593
2002	Amanda Leach, Heidi Smith-Vaughan Marius Puruntamerri, Ross Baillie & Peter Morris *Menzies School of Health Research*	Improved hygiene measures for reduced infection in Australian Aboriginal Children: a randomised controlled trial	$48,424
2002 -2003	James Triccas & Warwick Britton *Centenary Institute of Cancer Medicine & Cell Biology, Sydney, NSW*	New strategies to vaccinate against Mycobacterium tuberculosis	$112,588
2003	Jennifer Alison, Peter Bye, Campbell Thompson *Royal Prince Alfred Hospital, Sydney, NSW*	Evaluation of individual components of pulmonary rehabilitation in subjects with COPD	$47,880
2004	Paul Kelly, Nick Anstey, Graeme Maguire et al *Menzies School of Health Research, Darwin, NT*	Pulmonary Function in Tuberculosis patients in Mimika District, Papua Province , Indonesia	$43,267
2004	Warwick Britton, Guy Marks and Bernadette Saunders *Centenary Institute of Cancer Medicine & Cell Biology , Sydney, NSW*	Evaluation of genetic and environment risk factors for progression to active tuberculosis in the Liverpool cohort	$44,701
2005	Kwung Fong & Annalese Semmler *Prince Charles Hospital*	Novel methylated genes in lung cancer	$52,250
2005	Paul Reynolds, Gregory Hodge, Sandra Hodge, Mark Holmes *Royal Adelaide Hospital, Adelaide, SA*	Infection versus rejection in lung transplant related bronchiolitis obliterans syndrome: can intracellular cytokines help?	$50,000
2006	Robert Capon *University of Queensland*	A new non-toxic approach to controlling bacterial infection	$49,000
2006	David Jans *Monash University, Melbourne, VIC*	Role of phosphorylation in regulating nuclear trafficking during infection of respiratory syncitial virus matrix protein	$50,000
2006	Paul Kelly, Graeme Maguire, Peter Morris, Ivan Bastian & Nicholas Anstey *Menzies School of Health Research, Darwin, NT*	Nutritional intervention to improve tuberculosis treatment outcome in Timika, Indonesia: the NUTTS study	$50,000
2007	Stephen Bozinovski and Ross Vlahos *University of Melbourne, Melbourne, VIC*	Cigarette smoke chemically modifies and inactivates lung innate immunity mediated by the bacterial receptor, TLR4	$50,000
2007	Siobhain Brennan and Anthony J Kettle *Telethon Institute for Child Health Research, Perth, WA*	Investigating markers of oxidative stress in young children with cystic fibrosis: a driving mechanism of pulmonary investigation	$50,000
2008	Stephen Stick, Anthony Kicic & Siobhan Brennan *University of WA, Perth, WA*	A randomised controlled trial of L-arginnine or vitamin D to improve outcomes in pulmonary tuberculosis	$50,000
2008	Jenny Alison *University of Sydney, NSW*	Optimising mucus clearance with exercise in cystic fibrosis	$50,000
2009	Sandra Hodge *Hanson Institute, Adelaide, SA*	Investigation of macrophage function as a therapeutic target in chronic obstructive pulmonary disease/emphysema (COPD)	$50,000
2010	Peter Bye *Royal Prince Alfred Hospital, Sydney, NSW*	Novel interventions for the diverse population of Australia with bronchiectasis	$50,000
2010	Peter Bye *Royal Prince Alfred Hospital, Sydney, NSW*	Novel interventions for the diverse population of Australia with bronchiectasis	$50,000
2011	Ross Coppel, Paul Crellin et al *Monash University, Melbourne*	Identification of inhibitors of PimA, a new target for tuberculosis therapy	$50,000

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
2006-2011	PITCA Training of nurses and related workers in the Northern Pacific Funding	$90,265
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
2009-2011	Cambodian Anti-Tuberculosis Association Cambodia: TB control in elderly and vulnerable groups and in factories	$100,637
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
2011	Vietnam MECOR Course - Level 1 and Level 2 workshops	$10,000
2011	Kimberley Aboriginal Medical Services Council(KAMSC) Cultural exchange of Be Our Ally Beat Smoking Study(BOABS) workers to visit Maori Tobacco Control Programs in New Zealand	$10,000

2011 Financials

Directors' Report

Your Directors present their report on the Company for the financial year ended 31 December 2011 and the Auditor's report thereon.

Australian Respiratory Council (A Company Limited By Guarantee) A.B.N. 11 883 368 767

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(Univ of Otago), FRACP FACCP
Appointed to the Board on 15 May 2006. Vice President
Interest in contracts: Nil

Robert Eric Horsell OAM
CPA
Appointed to the Board on 24 June 1999. Finance Director
Interest in contracts: Nil

David Hugh Macintosh AM
BBS(UTS), FCA
Appointed to the Board on 19 June 1997. President
Interest in contracts: Nil

Ian Wallace 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	5
Peter Gianoutsos	5	4
Robert Eric Horsell	5	4
David Hugh Macintosh	5	5
Ian Walllace Ramsay	5	3
John Paul Seale	5	4
Iven Hunter Young	5	3

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:
- i) the Board strives to attract sustainable partnerships
- ii) the Board undertakes fundraising
- iii) the Board actively seeks funding.

The Company is incorporated under the Corporations Act 2001 and is a Company limited by guarantee. If the Company is wound up, the consitution states that each member is required to contribute a maximum of $1.00 towards meeting any outstanding obligations of the Company. At 31 December 2011 the collective liability of members was $34 (2010:$39)

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, 28 March 2012

Robert Horsell
Director
Sydney, 28 March 2012

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 2011 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,
28 March 2012

Statement Of Comprehensive Income

For the year ended 31 December 2011

	Note	2011 $	2010 $
Revenue	2	495,667	573,273
Depreciation and amortisation expense	3	(8,068)	(12,152)
Research grants, fellowships and scholarships		(113,500)	(81,750)
Project funding		(57,172)	(65,494)
Investment expense		(13,693)	(17,981)
Consultancy fees		(9,076)	(8,503)
Employee benefits expense		(201,727)	(229,432)
Other expenses		(215,541)	(213,547)
Loss before income tax		(123,110)	(55,586)
Income Tax expense	1	-	-
Loss for the year	15	(123,110)	(55,586)
Other comprehensive income after tax:			
Net loss on revaluation of investment property		-	(100,000)
Net gain/(loss) on revaluation of financial assets		(381,739)	(254,658)
Other comprehensive income for the year net of tax		(381,739)	(354,658)
Total comprehensive income for the year		(504,849)	(410,244)
Total comprehensive income attributable to members of the entity		(504,849)	(410,244)

Statement of Financial Position

As at 31 December 2011

	Note	2011 $	2010 $
ASSETS			
Current assets			
Cash and cash equivalents	5	1,091,217	1,409,358
Trade and other receivables	6	3,526	66,283
Other current assets	7	8,177	17,581
Total current assets		1,102,920	1,493,222
Non current assets			
Financial assets	8	2,056,894	2,150,748
Property, plant and equipment	9	62,845	70,180
Investment property	10	1,550,000	1,550,000
Total non-current assets		3,669,739	3,770,928
TOTAL ASSETS		**4,772,659**	**5,264,150**
LIABILITIES			
Current liabilities			
Trade and other payables	11	81,350	71,111
Employee entitlements	12	14,750	11,631
Total current liabilities		96,100	82,742
TOTAL LIABILITIES		**96,100**	**82,742**
NET ASSETS		**4,676,559**	**5,181,408**
EQUITY			
Reserves	13	2,044,111	2,425,850
Retained earnings	15	2,632,448	2,755,558
TOTAL EQUITY		**4,676,559**	**5,181,408**

Statement of Changes in Equity

For the year ended 31 December 2011

	Capital Profits Reserves $	Asset Revaluation Reserves $	Retained Earnings/ (Accumulated Losses) $	Total $
Balance at 1 January 2010	2,411,980	313,407	2,866,265	5,591,652
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)	-
Balance at 31 December 2010	**2,411,980**	**13,870**	**2,755,558**	**5,181,408**
Loss attributable to members	-	-	(123,110)	(123,110)
Total comprehensive income for the year	-	(381,739)	-	(381,739)
Transfers on sale of assets	-	-	-	-
Balance at 31 December 2011	**2,411,980**	**(367,869)**	**2,632,448**	**4,676,559**

Statement of Cash Flows

For the year ended 31 December 2011

	Note	2011 $	2010 $
Cash flows from operating activities:			
Receipts from customers		276,198	242,969
Payments to suppliers and employees		(613,034)	(767,615)
Interest received		45,653	45,098
Distributions received		248,899	234,700
Net cash provided by (used in) operating activities	18	**(42,284)**	**(244,848)**
Cash Flows From Investing Activities			
Proceeds from sale of property, plant and equipment and investments		304,839	884,913
Acquisition of property, plant and equipment		(733)	(6,773)
Payment for investments		(579,963)	(300,000)
Net cash provided by (used in) investing activities		**(275,857)**	**578,140**
Net Increase/(Decrease) in Cash Held		(318,141)	333,292
Cash at beginning of financial year		1,409,358	1,076,066
Cash at end of financial year	18	**1,091,217**	**1,409,358**

Notes to and Forming Part of the Accounts

For The Year Ended 31 December 2011

The financial statements are for Australian Respiratory Council as an individual entity, incorporated and domiciled in Australia. The Australian Respiratory Council is a company limited by guarantee.

1. Statement of Significant Accounting Policies

Basis of Preparation
Australian Respiratory Council has elected to early adopt the pronouncements AASB 1053: Application of Tiers of Australian Accounting Standards and AASB 20102: Amendments to Australian Accounting Standards arising from Reduced Disclosure Requirements.

The financial statements are general purpose financial statements that have been prepared in accordance with Australian Accounting Standards - Reduced Disclosure Requirements 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 financial statements containing relevant and reliable information about transactions, events and conditions. Material accounting policies adopted in the preparation of these financial statements are presented below and have been consistently applied unless otherwise stated.

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

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 asset's 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 of 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.

Notes to the Financial Statements
For the year ended 31 December 2011

	2011 $	2010 $
2. Revenue		
Operating Activities		
Net profit/(loss) on sale of investments	12,761	24,537
Rental revenue for property investment	28,219	42,681
Interest received	45,653	45,098
Fund distributions from investments	248,899	219,517
Legacies & donations	-	97,500
Member subscriptions	1,163	1,818
Refund of franking credits	56,877	27,543
Appeals	69,524	86,399
Sundry income received	32,571	28,180
Total Revenue	495,667	573,273
3. Profit From Ordinary Activities		
Expenses		
Depreciation of Non-Current Assets:		
Plant and Equipment	8,068	12,152
4. Auditor's Remuneration		
Remuneration of the Auditor of the Company for:		
- Auditing the Financial Report	11,000	10,500
5. Cash and Cash Equivalents		
Cash on hand	2,754	1,201
Cash at bank	1,088,463	1,408,157
Total	1,091,217	1,409,358
6. Trade and Other Receivables		
Trade debtors	3,482	24,901
Other debtors	44	41,382
Total	3,526	66,283
7. Other Current Assets		
Prepayments	8,177	17,581

	2011 $	2010 $
8. Financial Assets		
Non Current		
Listed shares - at fair value	1,068,609	1,151,236
Managed funds - at fair value	988,285	999,512
Total financial assets	**2,056,894**	**2,150,748**
9. Property, Plant and Equipment		
Non Current		
Plant & equipment at cost	121,595	120,862
Less: accumulated depreciation and impairment	(58,750)	(50,682)
Total property, plant and equipment	**62,845**	**70,180**

Movements in Carrying Amounts
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	70,180	70,180
Additions	733	733
Disposals	-	-
Depreciation expense	(8,068)	(8,068)
Adjustment	-	-
Carrying amount at the end of year	62,845	62,845

10. Investment Property		
Non Current		
Investment property - at fair value	1,550,000	1,550,000
Total	**1,550,000**	**1,550,000**
11. Trade and Other Payables		
Unsecured Liabilities		
Trade payables	37,985	32,616
Sundry payables and accrued expenses	43,365	38,495
Total	**81,350**	**71,111**
12. Employee Entitlements		
Provision for annual leave	7,981	11,631
Provision for long service leave	6,769	0
Total	**14,750**	**11,631**
Number of employees		
Number of employees at year end	2	4

	2011 $	2010 $

13. Reserves

Capital profits reserve	2,411,980	2,411,980
Asset revaluation reserve	(367,869)	13,870
Total	2,044,111	2,425,850

Nature and purpose of reserves

(a) Capital Profits

The capital profits reserve is used to accumulate realised capital profits

Balance at end of year	2,411,980	2,411,980

(b) Asset Revaluation

The asset revaluation reserve is used to record increments and decrements in the value of non current assets

Balance at beginning of year	13,870	313,407
Revaluation increment/(decrement)	(381,739)	(354,658)
Transfers	-	55,121
Balance at end of year	**(367,869)**	**13,870**

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 2011 the number of members was 34 (2010:39).

15. Retained Earnings

Accumulated profit at the beginning of the financial year	2,755,558	2,866,265
Net profit/ (Loss) attributable to members of the Company	(123,110)	(55,586)
Transfers to and from reserves	-	(55,121)
Accumulated profit at the end of the financial year	2,632,448	2,755,558

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 Interest Rate		Floating Interest Rate		Non Interest Bearing		Total	
	2011 %	2010 %	2011 $	2010 $	2011 $	2010 $	2011 $	2010 $
Financial Assets:								
Cash and cash equivalents	3.66	3.67	1,088,463	1,408,158	2,754	1,201	1,091,217	1,409,359
Receivables	-	-	-	-	3,526	66,283	3,526	66,283
Other financial assets	-	-	-	-	2,056,894	2,150,748	2,056,894	2,150,748
Total Financial Assets			**1,088,463**	**1,408,158**	**2,063,174**	**2,218,232**	**3,151,637**	**3,626,390**
Financial Liabilities:								
Payables	-	-	-	-	81,350	71,111	81,350	71,111
Total Financial Liabilities			**-**	**-**	**81,350**	**71,111**	**81,350**	**71,111**

(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
David Hugh Macintosh
Ian Wallace 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 $90,608 (2010:$86,241). This comprised short term benefits.

Summary Financial Report

Balance Sheet as at 31 December 2011

	Note	2011 $	2010 $
ASSETS			
Current assets			
Cash and cash equivalents	5	1,091,217	1,409,358
Trade and other receivables	6	3,526	66,283
Other financial assets	7	8,177	17,581
Total Current Assets		**1,102,920**	**1,493,222**
Non-current assets			
Other Financial assets	8	2,056,894	2,150,748
Property, plant and equipment	9	62,845	70,180
Investment property	10	1,550,000	1,550,000
Total Current Assets		**3,669,739**	**3,770,928**
TOTAL ASSETS		**4,772,659**	**5,264,150**
LIABILITIES			
Current liabilities			
Trade and other payables	11	49,893	61,203
Borrowings	11	6,209	4,718
Other Financial liabilities	11	(7,731)	(8,232)
Provisions	12	14,750	11,631
Other	11	32,979	13,422
Total Current Liabilities		**96,100**	**82,742**
TOTAL LIABILITIES		**96,100**	**82,742**
NET ASSETS		**4,676,559**	**5,181,408**
EQUITY			
Reserves	13	2,044,111	2,425,850
Retained earnings	15	2,632,448	2,755,558
TOTAL EQUITY		**4,676,559**	**5,181,408**

At the end of the financial year the Australian Respiratory Council had no balances in the Inventories, Assets held for sale, Non current Trade and other receivables, Intangibles, Current tax liabilities and Non Current Liabilities categories.

The above disclosures are prepared in accordance with the requirements set out in the ACFID Code of Conduct.

	2011 $	2010 $
18. Cash Flows Information		
(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:		
Cash and cash equivalents	**1,091,217**	**1,409,358**
(b) Reconciliation of Cash Flow from Operations with Profit after Income Tax		
Net income/loss for the period	(123,110)	(55,586)
Cash flows excluded from profit attributable to operating activities		
Non cash flows in profit		
Depreciation	8,068	12,152
Net gain/(loss) on disposal of investments	(12,761)	(24,537)
Changes in assets and liabilities, net of the effects of purchase and disposal of subsidiaries		
(Increase)/decrease in trade and term receivables	62,757	(41,872)
(Increase)/decrease in prepayments	9,404	(12,705)
Increase/(decrease) in trade payables and accruals	10,239	(124,895)
(Increase)/decrease in provision for employee benefits	3,119	2,595
Net cash inflow/(outflow) from operating activities	**(42,284)**	**(244,848)**

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

(a) Details of aggregate gross income and total expenses of fundraising appeals		
Gross proceeds from fundraising appeals	69,524	86,399
Less: Total direct costs of fundraising	41,618	43,747
Net surplus from fundraising activities	**27,906**	**42,652**

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

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

(c) Fundraising appeals conducted during the financial period

Appeals only.

(d) Comparisons		
Total cost of fundraising/gross income from fundraising	**60%**	51%
Net surplus from fundraising/gross income from fundraising	**40%**	49%
Total cost of services/total expenditure	**100%**	100%
Total cost of services/total income received	**60%**	51%

The direct costs of fundraising contains an amount of $10,000 which is for the initial development of the Acquisition program to be progressed in 2012

Summary Financial Report
Income Statement for the year ended 31 December 2011

	2011 $	2010 $
REVENUE		
Donation and Gifts		
Monetary	69,524	86,399
Non - monetary	-	-
Bequests and Legacies	-	97,500
Grants		
AusAid	-	-
Other Australian	20,209	-
Other overseas	12,252	27,530
Investment Income	392,408	359,377
Other Income	1,274	2,467
Total Revenue	**495,667**	**573,273**
EXPENDITURE		
International Aid Development		
International programs		
Funds to international projects	45,172	61,251
Program Support Costs	39,951	60,505
Community education	2,721	1,233
Fundraising Costs		
Public	41,618	48,747
Government, multilateral and private	-	-
Accountability and Administration	363,815	339,788
Non- Monetary Expenditure	-	-
Total International Aid and Development Programs Expenditure	**493,277**	**511,524**
Domestic projects	125,500	117,335
Total Expenditure	**618,777**	**628,859**
EXCESS / (SHORTFALL) OF REVENUE OVER EXPENDITURE	**(123,110)**	**(55,586)**

During the financial year the Australian Respiratory Council had no transactions in the Revenue or Expenditure for International Political or Religious Adherence Promotion Programs categories.

The above disclosures are prepared in accordance with the requirements set out in the ACFID Code of Conduct.

Summary Financial Report
ARC's Table of Cash Movements for Designated Purposes for the year ended 31 December 2011

Total For	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	15,750	32,668	(113,500)	(65,082)
Australian Projects	50,814	5,000	(12,000)	43,814
International Projects	-	31,736	(85,124)	(53,388)
Community Education	-	60	(2,721)	(2,661)
Other Purposes	1,342,794	806,125	(980,385)	1,168,534
Total	**1,409,358**	**875,589**	**(1,193,730)**	**1,091,217**

Summary Financial Report
Statement of Changes in Equity For The Year Ended 31 December 2011

	Capital Profits Reserves $	Asset Revaluation Reserves $	Retained Earnings/ (Accumulated Losses) $	Total $
Balance at 1 January 2010	2,411,980	313,407	2,866,265	5,591,652
Excess of revenue over expense	-	-	(55,586)	(55,586)
Total comprehensive income for the year	-	(354,658)	-	(354,658)
Transfers on sale of assets	-	55,121	(55,121)	-
Balance at 31 December 2010	**2,411,980**	**13,870**	**2,755,558**	**5,181,408**
Excess of revenue over expense	-	-	(123,110)	(123,110)
Total comprehensive income for the year	-	(381,739)	-	(381,739)
Transfers on sale of assets	-	-	-	-
Balance at 31 December 2011	**2,411,980**	**(367,869)**	**2,632,448**	**4,676,559**

The above disclosures are prepared in accordance with the requirements set out in the ACFID Code of Conduct.

Directors' Declaration

The Directors of the Company declare that:

1. The financial statements and notes are in accordance with the Corporations Act 2001:

(i) comply with Accounting Standards and the Corporations Regulations 2001; and

(ii) give a true and fair view of the financial position as at 31 December 2011 and performance for the year ended on that date of the Company;

2. In the Directors' opinion there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

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

David Macintosh
Director
Sydney, 28 March 2012

Robert Horsell
Director
Sydney, 28 March 2012

Independent Auditor's Report

To the members of Australian Respiratory Council

Australian Respiratory Council
(A Company Limited by Guarantee)
A.B.N. 11 883 368 767

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 2011 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 - Reduced Disclosure Requirements (including Australian Accounting Interpretations) and the Corporations Act 2001, and for such internal control as the Directors determine is necessary to enable the preparation of the financial report that is free from material misstatement, whether due to fraud or error.

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 Company's financial position as at 31 December 2011 of their performance for the year ended on that date; and
- **ii.** complying with Australian Accounting Standards - Reduced Disclosure Requirements (including Australian Accounting Interpretations) and the Corporations Regulations 2001.

(b) 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 & CO
Chartered Accountants

D R Conroy
Principal

Sydney, 28 March 2012

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