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2018
ANNUAL REPORT
NO. 105

arc
australian respiratory council
prevention and cure of respiratory illness

Our Patrons

His Excellency General The Honourable David Hurley AC DSC (Ret'd) Governor of New South Wales and Mrs Linda Hurley

The Australian Respiratory Council (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.

The ARC welcomes feedback. Please send any feedback or complaints to arc@thearc.org.au or write to the Executive Director, Australian Respiratory Council, PO Box 942 Broadway, NSW 2007.

The 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 MEMBER

The 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.

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

The Australian Respiratory Council (ARC) is a Heritage Member of the International Union Against Tuberculosis and Lung Disease (The Union). The mission of The Union is to bring innovation, expertise, solutions and support to address health challenges in low and middle income populations.

REGISTERED CHARITY
acnc.gov.au/charityregister

The Registered Charity Tick is a way for registered charities to easily show the public that they are registered with the Australian Charities and Not-for-profits Commission (ACNC), and it will also help members of the public find information about the charity on the Charity Register. The ACNC encourages members of the public to use the information on the Charity Register to make informed giving decisions.

australian respiratory council
prevention and cure of respiratory illness

Our Vision

A global community with universal and high quality management of respiratory diseases.

Our Mission

The Australian Repiratory Council (ARC) is a Charitable, Non-Government Organisation that continues to build expertise and sustainable capacity in respiratory health by:

- Fostering innovative research to promote respiratory health
- Improving lung health in communities with an emphasis on disadvantaged groups and Indigenous people
- Actively seeking sustainable solutions through partnerships with like organisations such as the Australian Lung Health Alliance, the World Health Organisation, the Stop TB Partnership and the US Centers for Diseases Control and Prevention
- Bringing focus to and investment in TB and respiratory health
- Respecting relationships with and the contributions of stakeholders and staff.

Organisational Values

The values that ARC strives to reflect and embody include the following:

- Accountability to stakeholders
- Ethical and sustainable practice
- Credibility and professionalism
- Consultative and participatory practices
- Leadership in respiratory health
- Maintaining a development based focus
- Contributing to intellectual and professional development
- Implementing evidence based practices and activities that are community led, innovative, efficient, caring, compassionate and respectful.

PRESIDENT'S REPORT

As President, I am pleased to report on the activities and outcomes of the Australian Respiratory Council (ARC) in 2018. My report will highlight the work undertaken by our organisation, our project partners and funding recipients over the past 12 months.

Finances

In 2018, the Finance Team, led by, Chris Turner supported by Peter Gianoutsos, Robyn Johnson and the staff of the ARC worked hard to reduce operational costs to enable ARC to continue to support vital research and project funding.

In summary, for the financial year ending 31st December 2018, the organisations Net Assets were $4,666,413 (compared to $5,033,838 in 2017). This year, ARC had an operational loss of $74,844 (against an operational loss of $381,471 in 2017), and an asset revaluation loss of $292,581 (compared to a gain of $981,891 in 2017). The organisation recorded a loss of $367,425 (compared to a profit of $600,420 in 2017).

Further information on ARC's financial statements are detailed on pages 34 to 52 of the annual report.

Research funding and activities

I am pleased to advise that ARC continues to fund research activities. This year, funding of $100,000 was awarded under the Harry Windsor Research Grant Scheme and $10,000 was awarded to the Australasian Clinical Tuberculosis Research Network (ACTnet) to support TB related research activities.

The grants awarded under the Harry Windsor Research Scheme were awarded to Dr Paul King from Monash Medical Centre, Monash University, Victoria and Professor Cynthia Whitchurch from the University of Technology, Sydney. Dr King and his team focused on chronic obstructive pulmonary disease (COPD) and the new treatments for people affected by COPD. Professor Whitchurch and team through their research will undertake a project exploring how the death of some bacterial cells may contribute to the ability of other bacteria to establish respiratory infections.

I am pleased to report that ARC continues to provide funding support for ACTnet. The group, led by Associate Professor Greg Fox and Associate Professor Justin Denholm is a collaborative research partnership with members from across Australia and New Zealand working together to reduce the burden of TB in both countries. ACTnet is currently implementing four studies focusing on TB epidemiology and control in Australia.

Detailed reports on the research projects and activities funded by ARC in 2018 are included in the annual report on pages 14 to 19.

Project activities

Building health system capacity in Vietnam and Cambodia - In 2018, ARC funded for the eighth year the Methods in Clinical and Operational Research (MECOR) Program. The MECOR Program lead by Professor Guy Marks was held in Vietnam in March, 2018. This project involves a partnership approach between the Ministry of Health and National TB Programs in each country, the Woolcock Institute, the American Thoracic Society, Vietnam Lung Association against Tuberculosis and Lung Diseases and the Vietnam National Lung Hospital.

Education and training of nurses at the Pacific Island TB Controllers Association Conference - Work continues by ARC's Nurse Consultant Group in the provision of training, technical support and clinical mentoring for nurses and community workers within the Pacific Island Countries and Territories. The ARC Nurse Consultants Group continue to work in collaboration with the US Center for Disease Control and Prevention (CDC) and program staff from the respective countries and territories to build capacity and skill levels for the nurses and community workers. This year Kerrie Shaw and Amanda Christensen travelled to Saipan, in the Commonwealth of the Northern Mariana Islands to deliver training.

Supporting the World Health Organization (WHO) in project activities in Papua New Guinea (PNG) – In 2017, ARC contributed funding for the study on the economic evaluation of TB patient costs in PNG, work on the study continued in 2018. Co-funding for the project has been provided by the WHO PNG Country Office, WHO Western Pacific Regional Office, CDC and the Australian Department of Foreign Affairs and Trade. The financial costs to patients of TB diagnosis and care are thought to be a significant impediment to further improving TB control in PNG. This study will evaluate the costs and make recommendations on policies and interventions to minimise barriers for accessing and adhering to TB treatment and care, and mitigate the economic impact of TB for patients and their families.

Education Framework for Australian TB Nurses – ARC's Nurse Consultant Group continues to lead the work associated with developing an education framework for Australian TB Nurses. Developing a specialist course for Nurses that builds skills and knowledge is an important strategy contributing to the elimination of TB in Australia.

Reports on the project activities ARC has funded and are engaged in are included on pages 25 to 27 of this report.

Partnership activities

Building on existing partnerships - At the core of the values of the ARC is the approach to working in partnership with other agencies. In 2018, ARC continued to work with The International Union Against TB and Lung Disease (The Union), the WHO and the CDC to fund and deliver projects, provide training and technical support for health care workers, promote respiratory health and global TB elimination. A summary of the work and partnership activities of ARC are provided within the annual report.

United Nations Association of Australia (UNAA) - This year, the UNAA, Professor Guy Marks and ARC worked together to provide advice to the Australian Government on Australia's commitment to and engagement in the United Nations High Level Meeting on TB that was held in September 2018. The representation to the government highlighted that Australia had an important role to; demonstrate regional leadership and support; promote and commit to the need for financing to achieve the desired outcomes for TB elimination within the region; support and defend the elements of the political declaration to End TB and in advocacy and promotion of access to affordable high quality medicines for the treatment of both TB and non-communicable diseases.

The UN meeting provided an unprecedented opportunity

to place TB on the global health agenda with the aim of accelerating the implementation of the End TB Strategy and the elimination of TB.

The Union - In 2018, Amanda Christensen, ARC's Executive Director continued in her voluntary position of Programme Secretary for the Nursing and Allied Professionals Sub-Section (NAPS) of The Union. In this role, Amanda has been working with The Union to coordinate the scientific programme of the annual scientific meetings for the World Lung Conference, supported the NAPS working groups and represented issues relating to Nurses and Allied Professionals with The Union.

Amanda Christensen representing ARC continues to support the work of The Union within the region as a member of The Union Asia Pacific Region (APR) Executive Committee, performing the role Treasurer for The Union APR.

Building new partnerships

In 2018 ARC received project funding from the Bowlers Club of NSW Ltd to support homeless and vulnerable people with TB. Providing support for accommodation, an allowance for food, the necessities of daily living and transport for homeless and vulnerable people is an important strategy to promote treatment completion and reducing the individual and public risks associated with TB. The ARC looks forward to working with our new partner on this pilot project and hopes to extend future activities to provide much needed and valuable support for vulnerable people with TB across Australia.

Acknowledgement and thanks

I would like to extend my personal thanks to ARC's Directors who continue to dedicate their time and expertise in a voluntary capacity to the organisation. The contribution of each Director to the activities and working groups of ARC is greatly appreciated.

PRESIDENT'S REPORT

Thank you to the staff of ARC, Amanda Christensen, Judy Begnell and Kate Reynolds for your continued contribution, commitment and enthusiasm to the work of our organisation over the past year.

On behalf of Professor Iven Young, Chair of ARC's Research Committee, I would like to acknowledge the contribution of the Research Committee. Thank you for your support and time in assisting ARC to achieve our research goals. In particular, I would like to acknowledge the contribution to the Committee from Professor Judy Black AO. Professor Black resigned from the committee in November, 2018 after serving as a member of the Committee for a decade. My thanks and those of the Directors and staff are extended to Professor Black.

I would also like to acknowledge again this year the ongoing contribution that the Nurse Consultants Group has made to the work ARC supports and undertakes within the region. The expertise and ongoing commitment demonstrated by Pam Banner, Kerrie Shaw and Amanda Christensen to ARC, our partners and projects is greatly appreciated.

After seventeen years with Macquarie Bank Investment Services (MBIS), ARC changed investments advisors this year. On behalf of ARC's Board of Directors and staff I would like to extend our sincere thanks and gratitude to Heath McLaren from MBIS for his advice and support over the years.

My thanks and those of the Board are extended to ARC's new Investment Advisors, David Knowles and Daniel Meech from Koda Capital for their financial guidance in 2018 and to David Conroy and Patryk August, from Conroy Audit & Advisory for their expertise and assistance in meeting our annual auditing responsibilities.

Finally, I extend my sincere thanks and gratitude to ARC's donors without whom we would not be able to continue our work. The loyalty and generosity of our donors, many of whom have been supporting our work for many years is greatly valued by everyone involved with our organisation. The funds raised through our fundraising activities are allocated to funding research activities and the delivery of projects both within Australia and the Asia Pacific Region. I hope through this report, our publications and website we can share with you how your donations contribute to respiratory health and the work of ARC.

The year ahead

In 2019, through the Harry Windsor Research Grant Scheme ARC will support three research projects in the coming year. The first grant has been awarded to Professor Warwick Britton AO from the Centenary Institute. Professor Britton and team will be undertaking a project on "Protecting the lungs against TB by pulmonary delivery of a novel TB vaccine".

The second grant has been awarded to Associate Professor Justin Denholm from the Victorian Tuberculosis Program and University of Melbourne. Associate Professor Denholm and team are undertaking a project "Evaluating the impact of latent TB infection treatment strategies in Australia".

The third grant has been awarded to Dr Chris Degeling from the Australian Centre for Health Engagement Evidence and Values, University of Wollongong. Dr Degeling and team will be undertaking a project on "TB elimination: A qualitative investigation of the perspectives of South Asian migrant communities in the Illawarra". I wish each of the groups' success in their work.

Funding support will also continue for ACTnet to pursue their innovative high-quality research activities that contribute to the goal of global elimination of TB within Australia.

Some of the project work ARC will be undertaking and/or supporting this year includes continued funding for the development of a specialised education curriculum for Australian TB Nurses and training nurses and outreach workers working within the TB Programs of the Northern Pacific.

My sincere thanks to the many people that will be involved with ARC in 2019.

Emeritus Professor J Paul Seale AM
MB BS, PhD, FRACP
President

PRESIDENTS AND LIFE GOVERNORS

The National Association for the Prevention and Cure of Consumption

Year	President
1913 - 1917	Sir Phillip Sydney Jones
1918 - 1922	Dr Frederick Sobieski Vladimir Zlotkowski
1922 - 1928	Hon. George Frederick Earp MLC
1929 - 1930	Thomas Ernest Rofe

Anti-Tuberculosis Association of NSW (from 1931)

Year	President
1931 - 1934	Thomas Ernest Rofe
1935 - 1941	William Grazebrook Layton CBE
1941 - 1942	Phillip Lazarus JP
1942 - 1944	Sir Ernest Thomas Fisk
1944 - 1953	Zade Lazarus
1954 - 1955	Hon. Justice Edward Parnell Kinsella CBE
1955 - 1959	Ebenezer Richard Bagery-Parker
1959 - 1960	Harold Bruce Gibson
1960 - 1967	Hon. Justice Edward Parnell Kinsella CBE
1967 - 1972	Professor Noel Desmond Martin AM

Community Health and Anti - Tuberculosis Association (from 1973)

Year	President
1973 - 1994	Professor Noel Desmond Martin AM
1995 - 1999	Professor Ann J Woolcock AO
1999 - 2000	Dr Gregory Joseph Stewart
2000 - 2001	David Hugh Macintosh AM

Community Health and Tuberculosis Australia (from 2001)

Year	President
2001 - 2006	David Hugh Macintosh AM

Australian Respiratory Council (from 2006)

Year	President
2006 - 2013	David Hugh Macintosh AM
2013 - Present	Emeritus Professor J Paul Seale AM

Year	Life Governors
1932	Honourable George Frederick Earp MLC, CBE (C)
1934	Sir John Sulman
1934	Sir Kelso King and Lady King
1966	Sir Harry Wyatt Wunderly
1996	Dr Keith Wellington Hills Harris AM
2003	Professor Noel Desmond Martin AM
2003	Clinical Professor Iven Young AM
2003	Emeritus Professor Ian W Webster AO
2007	Emeritus Professor Charles Baldwin Kerr AM
2007	Emeritus Professor J Paul Seale AM
2009	David Hugh Macintosh AM
2011	Amanda Christensen
2011	Professor Gavin Frost
2012	Robert Horsell OAM
2012	Clinical Associate Professor Peter Gianoutsos

GOVERNANCE

BOARD OF DIRECTORS

AMANDA CHRISTENSEN
Dip Nursing

NSW TB Program Manager 1997- 2013; various positions in public health for over twenty years including; clinical nurse consultant in public health Corrections Health Service and tuberculosis control for the NSW Ministry of Health. Appointed to the Board in 2001. Elected as a Life Governor in 2011. Employed as the ARC Executive Director from April 2008 to May 2009 and April 2013 – Present. Elected as Treasurer for The Union Asia Pacific Region 2016 to 2020. Elected as Programme Secretary of The Union Nursing and Allied Professional Group 2017 - Present.

ASSOCIATE PROFESSOR GREG FOX
PhD MIPH FRACP MB BS BSc(Med) GAICD

NHMRC Career Development Fellow and Associate Professor in Respiratory Medicine at Sydney University and Royal Prince Alfred Hospital, Sydney. Area Director of Tuberculosis Services, Sydney Local Health District. Greg is a Research Leader for the Woolcock Institute of Medical Research, and jointly leads the Woolcock's Vietnam research team. Greg heads several NHMRC funded clinical trials and translational research studies relating to tuberculosis, lung disease and antimicrobial resistance. Greg's research aims to develop new approaches to TB control in high prevalence settings. Appointed to the Board of ARC in 2017.

CLINICAL ASSOCIATE PROFESSOR PETER GIANOUTSOS
MB, ChB (Univ of Otago), FRACP, FCCP

Appointed Emeritus Consultant Physician RPAH, 1 January 2014; Senior Consultant Thoracic Physician (VMO) Dept of Thoracic Medicine RPAH 1971-2013; 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 2000-2003. Appointed to the Board of ARC in 2006. Vice President 2008 - Present. Elected Life Governor of ARC in 2012.

ROBYN JOHNSON
GAICD

Robyn Johnson is the Chief Executive Officer of Meetings & Events Australia a not for profit organisation representing 600 members in the events sector. Meetings and Events Australia offers professional development and educational programs, accreditation and recognition. It provides a forum for members to discuss current issues to improve the delivery of events.

Prior to this role Robyn was the Managing Director of an event management company that organised international and national conferences for the association, government and corporate sectors.

Robyn is a graduate of the Australian Institute of Company Directors and has a solid background in developing and implementing business strategies for organisations. Appointed to the Board of ARC in 2012.

DAVID MACINTOSH AM
BBS (UTS), FCA

Member of the Order of Australia 2011, awarded National Medal for Service 2014, Chairman, The Macintosh Foundation, Macintosh Chair of Paediatric Respiratory Medicine - Endowed Chair 29 November 2005 in perpetuity; Founder since 2013 and Benefactor since 2007, Royal Alexandra Hospital for Children - The Children's Hospital at Westmead; Governor, Woolcock Institute of Medical Research 2000-2011; Director, The Australian Lung Foundation 1994-2013; Governor, St Vincent's Hospital, Curran Foundation; Benefactor, Melanoma Institute of Australia; Deputy Chairman, Ainsworth Charitable Foundation 2016 – Present; Executive Chairman, Manager Director and Independent Director of ASX listed Public Companies and Private Companies over 28 years; 35 years of Senior Management and Director level in the Transport and Construction Industries in Australia and Europe;. Actively involved in the Surf Life Saving movement for over 50 years; Life Member, Long Reef Surf Life Saving Club Inc.; Life Member – Collaroy Surf Life Saving Club Inc.; Life Member - City Tattersalls Club; Vice President – United Nations Australia Association 2017 (NSW) – Present; Appointed Australia's United Nations Goodwill Ambassador – Life Under Water SDG-14 and The Pacific, 2018 – Present; Appointed to the Board of ARC in 1997; President of ARC 2000-2013;. Vice President of ARC 2013 - Present; Elected Life Governor of ARC in 2010.

IAN W. RAMSAY

LL.B (Syd.)

Solicitor, Supreme Court of NSW; General Manager and Board Director, Workcover Authority of 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 of ARC in November 2008 - November 2011. Chair, of Centenary Celebration Committee. Reappointed to the Board of ARC in February 2012.

EMERITUS PROFESSOR J PAUL SEALE AM

MB BS, PhD, FRACP

Member of the Order of Australia, 2014. Professor of Clinical Pharmacology, University of Sydney 1992- 2014; Pro-Dean, Faculty of Medicine, University of Sydney 1997-2003; Consultant Physician, Royal Prince Alfred Hospital 1980-2013; Deputy Director, Woolcock Institute of Medical Research; Member 2003-2012, former 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; former Chair TB Committee, Sydney South West Area Health Service; former Member of NSW Health TB Advisory Committee; Appointed to the Board of ARC in 1997; Vice-President 2003 - 2012. President 2013 - Present; Elected Life Governor of ARC in 2007.

KERRIE SHAW

Registered Nurse

TB Coordinator South Eastern Sydney Local Health District (Northern Sector) 2013 - Present; Executive Officer Australian Respiratory Council 2009-2013; Manager Department of Respiratory Medicine, TB Coordinator, TB and Respiratory Clinical Nurse Consultant 1998-2009; Asthma Coordinator and TB Clinical Nurse Specialist South Eastern Sydney and Illawarra Area Health Service (Southern Sector) 1992-1998; Chair and Program Secretary, Nurses and Allied Health Subsection International Union Against TB and Lung Disease 2009-2013; Appointed to the National Asthma Expert Advisory Group 2006; Appointed to the Board Asthma Educators Association (NSW) 1992 and Board Australian Asthma and Respiratory Educators Association 2006, Life Member 2011; Appointed to Board of ARC in 2013.

CHRISTOPHER TURNER

B.Comm Dip.FS Assoc. Fin. FPA

'Turner Wealth Management' Commonwealth Financial Planning Pathways (Commonwealth Bank of Australia) May 2016 - Current, Senior Financial Planner Relationship Manager Clients; CBA Oct 2010 – May 2016, Commonwealth Financial Planning (Commonwealth Bank of Australia) Financial Planner (Inner and Mid West) May 2007 – Oct 2010; Business Analyst / Project Manager (CMLA) (Commonwealth Bank of Australia) January 2004 – May 2007; Manager Operations/Projects, Resource Planning (Commonwealth Bank of Australia) September 2002 – January 2004; Service Consultant / Resource Analyst (Commonwealth Bank of Australia) August 1999 – September 2002; Senior Sales & Marketing Manager Sarran Pty Limited 1994 – 1995; B. Comm Newcastle University 1990 – 1993. Appointed to Board of ARC in 2017.

CLINICAL PROFESSOR IVEN YOUNG AM

BSc (Med), MB BS, PhD FRACP

Senior Physician, Department of Respiratory and Sleep Medicine, Royal Prince Alfred Hospital (RPAH) 2012 - present; Visiting Medical Officer, RPAH 1979-1985; Senior Staff Specialist in Respiratory Medicine, RPAH 1985-2012; Post Doctoral Fellow, University of California, San Diego 1976-1978; Research Fellow, University of Sydney 1974-1976; Respiratory Physician (FRACP)1975-Present; Member, Thoracic Society of Australia and New Zealand; Senior Examiner, Australian Medical Council 1997-Present; elected to the Adult Medicine Division, Royal Australasian College of Physicians 2000-2001; Chairman, Division of Medicine, RPAH 2001-2009; Chair, Physician Training Council, HETI 2010- Present. Board Member, Woolcock Institute of Medical Research 1998 – 2017 when appointed a distinguished alumnus. Appointed to the Board of ARC in 1998. Elected Life Governor of ARC in 2003. Chair of ARC Research Committee. Awarded the Society Medal of the Thoracic Society of Australia and New Zealand at the Perth Annual Scientific Meeting, April 2016. Appointed a Member of the Order of Australia on 13 June 2016 "For significant service to respiratory and sleep medicine."

GOVERNANCE

RESEARCH COMMITTEE

Clinical Professor Iven Young AM (Chair)
Chair, Physicians Training Council.

Professor Carol Armour
Executive Director, Woolcock Institute of Medical Research
Professor of Pharmacology & Associate Dean (Career Development & Research), Sydney University.

Associate Professor Justin Denholm
Medical Director, Victorian Tuberculosis Program, Melbourne Health; and Principal Research Fellow, Department of Microbiology and Immunology, University of Melbourne.

Associate Professor Greg Fox
NHMRC Career Development Fellow and Associate Professor in Respiratory Medicine at Sydney University.

Professor Peter Gibson
Senior staff specialist & Director of Ambulatory Care & Sleep Medicine at the John Hunter Hospital, Conjoint Professor of Medicine in Faculty of Health, Newcastle University, Co-Director of the VIVA Programme, Hunter Medical Research Institute. President of Thoracic Society of Australia and New Zealand (TSANZ).

Emeritus Professor J Paul Seale AM
ARC President (ex officio).

IN RECOGNITION OF SERVICES TO ARC'S RESEARCH COMMITTEE

Professor Judith Black AO
Research Adviser Health & Medical, Sydney University,
Woolcock Institute of Medical Research.

Professor Judy Black AO has been an active member of the ARC Research Committee for many years and we have been particularly grateful for her insights and expertise in assessing grant applications in basic respiratory science and all our applications. Judy is a world figure in basic respiratory pharmacology, and we have been most fortunate in having her services for so long a period.

Judy gave her expert time in a thorough and good-humoured manner, despite being asked to provide these assessments close to Christmas each year. On behalf of ARC's Board of Directors we wish Professor Black all the best for for her future endeavours.

Clinical Professor Iven Young AM,
Chair of ARC's Research Committee

SUPPORTERS OF ARC

BREATH OF LIFE

A Bequest to ARC provides a way to continue a lifetime of generous giving

"We can change the world and make it a better place. It is in your hands to make a difference." *– Nelson Mandela*

One of the most important ways that ARC's loyal donors are helping ARC's work is by including a bequest to ARC in their Will. Bequests left to ARC are made from people from all walks of life, not just the wealthy. Even a modest gift can be life-changing for someone in need. When you choose to leave a gift in your Will, it benefits the whole community.

Your Will allows you to express support for your fundamental values and have an impact on the health and well being of future generations – not only by the inheritance you leave to your family and friends but also the gift you can leave for the well-being of the community through ARC. After you have made provision for your family and friends in your Will, you may like to consider the Australian Respiratory Council (ARC) as a worthy recipient.

Such a gift to ARC would ensure that your name would always be remembered. By informing us of your intended bequest, ARC will be able to acknowledge you as a member of The Breath of Life group. The Breath of Life is a group of special people who have told us that they plan to leave at least part of their estate to ARC. Through the Breath of Life group ARC can recognise the generosity and honour the contribution of its members. There is no obligation to becoming a member of The Breath of Life other than letting us know that you intend leaving a bequest in your Will.

A bequest can be of any size and can be given as cash, property or shares. All gifts large or small are important and greatly appreciated. All gifts make a difference.

Whatever amount you bequeath to the Australian Respiratory Council, be assured that it will be an enduring tribute to your generosity and concern for the welfare of your fellow man. Your bequest ensures the personal link and "journey' you have had with ARC over many years continues into the future.

Your Bequest will allow ARC to continue to offer the quality of service you have come to expect from us - reducing the incidence and impact of tuberculosis and respiratory disease in Australia and the Asia Pacific Region.

If you would like to consider leaving a Bequest to ARC, please contact us for a copy of our Bequest booklet, "Your Security, Your Future".

It Starts With A Cough

It Could End With You

Each year globally, there are 9.6 million people diagnosed with TB, 1.5 million deaths from the disease and 3.5 million people who do not get the care and treatment needed to cure the disease. Among this group are children, women, the very poor, those infected with HIV/AIDS, indigenous people and the elderly. TB remains a global health issue

In Australia, we are fortunate to have seen the rates of TB decrease. This is not the case in many of the countries within the Asia Pacific Region. We cannot become complacent as TB does not stop at the border of any one country. To decrease the global burden of TB and safeguard Australia we need to address TB issues offshore.

The Australian Respiratory Council (ARC) was founded before WW1 as the National Association for the Prevention and Cure of Consumption and has a long and proud place in the history of public health. While our name may have changed over the years our involvement in promoting respiratory health and eliminating TB remains our focus.

ARC funds research that contributes to the understanding of TB and lung health; projects that promote diagnostic, treatment and public health services in TB and respiratory health; training to build healthcare workers skills and capacity, and develop tools and resources for professional and community education.

Together we can make a difference.

IMAGINE
A COMMUNITY FREE OF RESPIRATORY DISEASE

Leaving a gift in your Will is a valuable way to assist ARC to continue the fight against TB. No matter how small or large the gift it will help make a significant difference to those suffering with respiratory disease.

For more information on how to donate or leave a gift in your Will please contact Amanda Christensen:

P 02 9223 3166
W www.thearc.org.au E arc@thearc.org.au

arc
australian respiratory council
prevention and cure of respiratory illness

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 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 supports 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

2005 - 2009

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, WA

2010 - 2014

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

Dr Jodie Simpson
University of Newcastle, NSW

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 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

2018 Recipients

2018

Influenza A virus (IAV) infection reduces the formation of phagocytic extracellular traps, which contribute to pathogenesis of exacerbations of COPD.
Professor Paul King, Monash University. Victoria

Understanding the immunopathology of Pseudomonas aeruginosa.
Professor Cynthia Whitchurch, University of Technology Sydney, NSW

ADJUNCT ASSOCIATE PROFESSOR PAUL KING

Monash Medical Centre/Monash University, Victoria

Influenza A virus (IAV) infection induces the formation of phagocytic extracellular traps, which contribute to the pathogenesis of exacerbations of COPD.

Aims

To demonstrate that IAV infection induces phagocyte extracellular trap formation in an animal model of COPD and provide proof-of-concept evidence that DNase is a viable anti-inflammatory treatment option.

The funding provided by the Australian Respiratory Council for this project was $49 815. We have used this money to employ an experienced research assistant (RA) who has previously worked in Professor Gary Anderson's lab at the University of Melbourne. This RA is working on the current project at 0.4 FTE and started doing this work in May of 2018. She is highly experienced in inflammatory lung disease using in vivo models, but was new to the area of extracellular traps and confocal microscopy. She has trained up in this area and has now developed a high level of expertise. The budget will cover her salary until September 2019 and the relevant consumable costs. By the later part of the year we are confident that we will have enough data for a high-quality study to submit to a journal.

Progress to Date

The RA initially started doing some in vitro work to optimise techniques of staining and the use of the confocal microscope. After developing expertise using in vitro samples she has been applying this skill to the study of in vivo IAV infection in both control and smoke exposed mouse models.

We have found that IAV infection does induce very strong fluorescence in the lung and this has required a large number of experiments to optimise the staining of the lung tissue to obtain interpretable results. We have found that IAV infection markedly upregulates extracellular trap expression by phagocytic traps both by neutrophils (NETs) and macrophages (METs). We have also made a novel finding that the extracellular traps affect the lung tissue, a finding that we have been investigating by other modalities including electron microscopy.

We have investigated the effect of DNase 1 on the expression of extracellular traps and have found that it significantly dismantles the expression of NETs and METs. In addition, it has significant anti-inflammatory effects including markedly reducing the inflammatory cell infiltrate.

Expected Outcomes

We will aim to complete this project by September 2019. We have made several novel findings so far in this study and as such we think that this work will result in a high-quality publication. We would aim to submit this work to a journal by the end of the year. This work is likely to provide a foundation for successful large national/international grant applications. Most importantly it may provide a rationale for a new therapeutic approach to manage patients with COPD and IAV infection.

Figure 1 *shows the effect of IAV on NET (Panel A) and MET (Panel B) expression and the addition of DNase on this process*

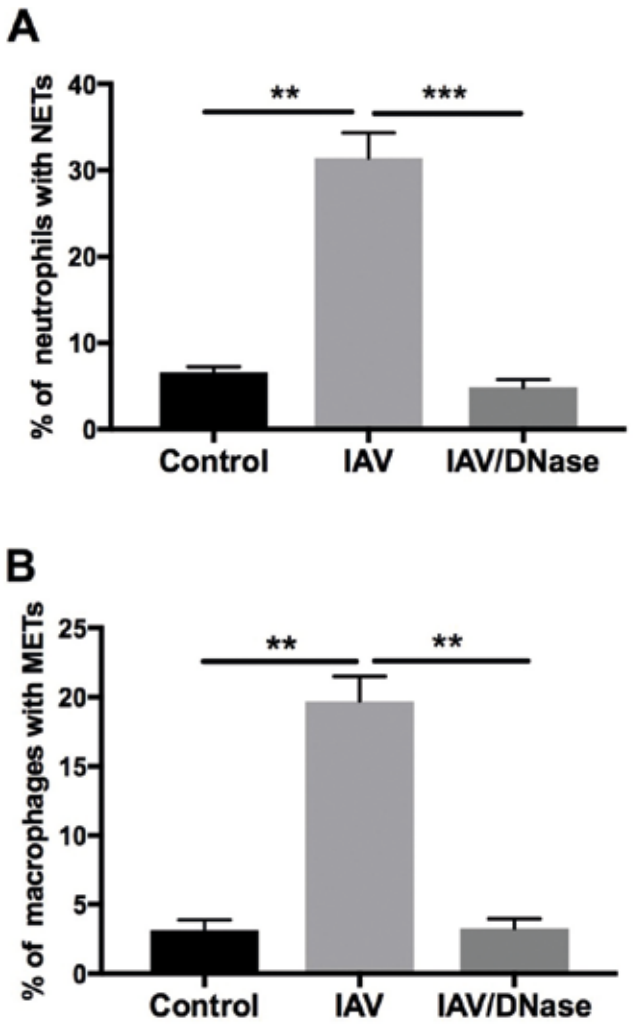
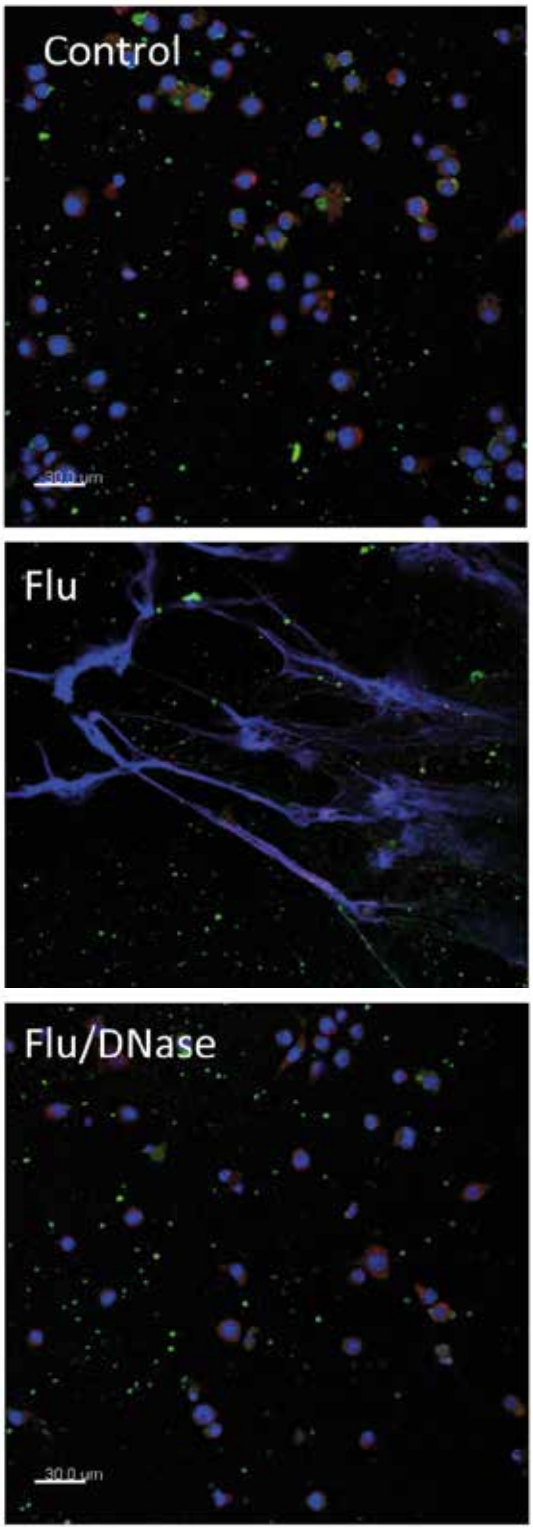


Figure 2 *shows the expression of METs after infection with IAV and addition of DNase.*



PROFESSOR CYNTHIA WHITCHURCH

University of Technology Sydney

Understanding the immunopathology of *Pseudomonas aeruginosa* lung infections

Background

Many gaps remain in our understanding of bacterial pathogenesis at the molecular and cellular levels. Understanding the mechanisms of bacterial pathogenesis is critical for discovering and innovating methods to prevent infection, modulate immunopathology, and improve patient outcomes.

Pseudomonas aeruginosa is an important opportunistic bacterial pathogen that causes acute and chronic infections of multiple host tissues and implanted medical devices and is a common cause of airway infections, including of patients with CF and non-CF bronchiectasis, ventilator acquired pneumonia, and chronic rhinosinusitis. It is a member of the multi-drug resistant "ESKAPE" super-bugs and has recently been identified by the World Health Organisation (WHO) as 2nd on the "critical" priority list of pathogens requiring urgent development of new antibiotics. It is made the more dangerous due to its inherent resistance to antibiotics and its propensity to exist in matrix encased aggregates termed "biofilms".

We have recently reported that *P. aeruginosa* undergoes a process we have termed "Explosive Cell Lysis" that results in the release of cellular content, including extracellular DNA, proteins and membrane vesicles, into the extracellular environment. We have identified that this process is mediated by the activity of the Lys endolysin enzyme that degrades the bacterial cell wall and that Lys-mediated explosive cell lysis is required for biofilm development *in vitro*.

We hypothesised that explosive cell lysis contributes to virulence and immunopathogenic processes during infection by releasing immunostimulatory molecules and virulence factors. The Harry Windsor Grant has enabled us to investigate whether explosive cell lysis contributes to *P. aeruginosa* virulence and immunopathology in murine models of lung infection.

Progress to Date

We first generated an in-frame deletion mutant of the *lys* gene in *P. aeruginosa* strain PAO1 (ATCC 15692) that is well characterised in our murine models of lung infection. Strains lacking the *lys* gene do not undergo explosive cell lysis and therefore enable us to examine the contribution of explosive cell lysis to lung infection processes. Having validated the set of strains to be used in this study, we then assessed the contribution of explosive cell lysis in two murine models of lung infection.

The first lung infection model involved encapsulating the bacteria in agar beads prior to introducing them to the lung in order to mimic the conditions encountered by the bacteria when established as biofilms in chronic pneumonia infections. The results of this pilot study are extremely promising with a higher burden of bacteria observed in mice infected with the wildtype *P. aeruginosa* strain (PAO1) than in those infected with the *lys* mutant (PAO1Δ*lys*). Interestingly we did not see an increase or difference in the type or number of immune cells recruited to the lung in these experiments, although there were slight differences in the cytokines that recruit these immune cells.

Our second model of lung infection involved adding the bacteria directly to the lungs without an embedding agent. This method allows more direct contact between the bacteria and the host and better mimics the conditions encountered during the acute infection phase. In this pilot experiment, we again observed that mice infected with the wildtype strain (PAO1) had a higher bacterial load than those infected by the *lys* mutant (PAO1Δ*lys*). Mice infected with PAO1 also saw a higher bacterial burden systemically, indicated by higher numbers of bacteria recovered from the liver and spleen. Interestingly, those mice infected with PAO1Δ*lys* had a higher lung recruitment of polymorphonucleocytes (PMNs), the main immune cell responsible for bacterial clearance. Whether this is because the *lys* mutant is less effective at killing PMNs or there was a disruption in the recruitment of these cells in mice infected with the wildtype strain has yet to be determined. We analysed the cytokine response in the infected mice, including of murine KC which is a cytokine produced in order to recruit PMNs. However, there was no difference between the groups, which leads us to

believe that the *lys* mutant may not be as able to kill or resist killing by PMNs, however, this needs further investigation.

We are currently performing additional experiments to further explore these exciting initial observations that indicate that Lys-mediated explosive cell lysis is an important contributor to *P. aeruginosa* virulence and immunopathology. We expect to demonstrate that this is a critical mechanism that allows *P. aeruginosa* to induce inflammatory damage to host cells and tissues during acute infections and thereby enables the establishment of chronic respiratory infections. A detailed understanding of these fascinating new aspects of bacterial pathogenicity is warranted as it will provide significant advances in our understanding of bacterial pathogenesis and will be the foundation of future strategies to treat respiratory infections and associated immunopathology.

Chief Investigator Professor Cynthia Whitchurch (Right) and Associated Investigator Dr. James Lazenby (Left)

PROFESSOR MICHAEL BERK

Deakin University, Victoria

Can we reduce tobacco smoking using N-acetylcysteine as a cessation treatment?

Update from a 2017 Harry Windsor Research Grant recipient.

The Research team consisted of the following persons; Professor Michael Berk, Associate Professor Seetal Dodd, Associate Professor Olivia Dean, Dr Chiara Bortolasci Professor Ron Borland, Ms Lauren Arancini and Mr Robert Zazula.

The aim of this project is to investigate the efficacy of NAC (1.8g/day) for smoking cessation in a randomised, placebo-controlled trial of current smokers (N=60) who wish to quit smoking. The primary outcome measure will be 26 weeks of continuous abstinence from tobacco smoking after the end of treatment (EoT), confirmed by biological measures. Secondary outcome measures include point prevalence abstinence, time to relapse and cigarette consumption. Safety, tolerability and subgroup analyses will also be conducted.

A certificate of approval was provided by the Barwon Health Human Research Ethics Committee on the 19th of June 2017. This approval was then noted by the Deakin University Human Research Ethics Committee on the 23rd of June 2017. Further approvals include a Clinical Trial Notification (CTN) which was validated on the 27th of June 2017 (CT-2017-CTN-00640-1). Ethical approval has also been granted by the Cancer Council Victoria's Human Research Ethics Committee on the 5th of December 2017 as we collaborate with them for their QuitCoach Program.

Since the launch of the trial in November 2017 we have recruited 67 participants and we continue to recruit towards our target of 120. When the trial was initially launched, out recruitment target was 60 participants, but due to expanding international collaborations, we have welcomed several foreign psychiatrists who are taking part in research placements with us. This has allowed us to increase the recruitment target to 120 which will result in greater power for our data analyses. Our primary trial coordinator, Lauren Arancini, continues to run the trial as her primary dataset for her PhD. We have had many international visitors assist with the trial. This includes Mr Robson Zazula (August 2018 to August 2019), Dr Alejandra Gomez Alzate (September to November 2018), Dr Liliana Ferreira (October to December 2018), and Dr Carla Ferreira (October to December 2018). We will have further visitors working on the trial with us in the new year.

Due to the increase in recruitment target, we have also acquired a new batch of NAC and placebo from Bioadvantex in Canada. The expiry has been extended on all existing medications by 12 months which has been confirmed by efficacy testing from Bioadvantex. We have also purchased and received a second smokerlyzer and recalibration kit to accommodate more participants and active staff members. We have purchased more iPads for data collection for this same reason.

Our advertising continues to be successful through all channels, with many individuals approaching us as interested. We are confident that we will reach out recruitment target in 2019. The study is meeting all of the milestones that we outlined and we are grateful for the ongoing support of the Australian Respiratory Council's Harry Windsor Research Grant.

RESEARCH GRANT FEEDBACK

AUSTRALASIAN CLINICAL TUBERCULOSIS NETWORK (ACTnet)

Associate Professor Greg Fox

Associate Professor Justin Denholm

We would like thank the Australian Respiratory Council and the board for all their support this year. This support has enabled The Australasian Clinical Tuberculosis research network (ACTnet) to develop collaborative research partnerships focused upon reducing the burden of TB in Australia and New Zealand. The following is a brief summary of our ongoing activities in 2018-19:

Our network is continually expanding, through engagement with research stakeholders in all States and Territories of Australia, as well as in New Zealand.

We are currently implementing four ACTnet endorsed studies focusing upon TB epidemiology and control in Australia. Progress includes:

- Successful implementation of the "Evaluating the 'cascade of care' for off-shore migrant screening for latent tuberculosis infection (LTBI): a platform for evidence-based approaches to TB elimination in Australia" (CIs A/Prof Justin Denholm and A/Prof Greg Fox) study in all states except ACT, with data collection either underway or completed in NSW, VIC and NT
- "Tuberculosis risk in Australia: An epidemiological assessment of tuberculosis risk factors and the prevalence of tuberculosis among high risk groups" (CI Dr Kerri Viney) has been implemented in ACT and ethics approval is underway in QLD and NSW
- Preparations near completion for a clinical trial "The effect of weekly rifapentine and isoniazid (3HP), compared to 4 months of daily rifampicin (4RIF) upon adherence with treatment for latent TB infection" (CI A/Prof Greg Fox)
- Data has been collected for the retrospective cohort study evaluating MDR-TB treatment outcomes in NSW "Characterising the treatment and prevention of drug resistant Tuberculosis in NSW" (Dr V Chang)

In June, ACTnet presented at the TBCRE meeting, in which several new studies were proposed from other States and Territories, for implementation in the coming year.

The ACTnet Steering Committee has met twice this year, with another meeting scheduled in the upcoming weeks.

We have also commenced work on a new national TB research agenda, informed by NTAC's research priorities.

New Quarterly Webinars to communicate relevant new research findings to clinicians and researchers will commence in 2019, in partnership with the Australian TB Forum.

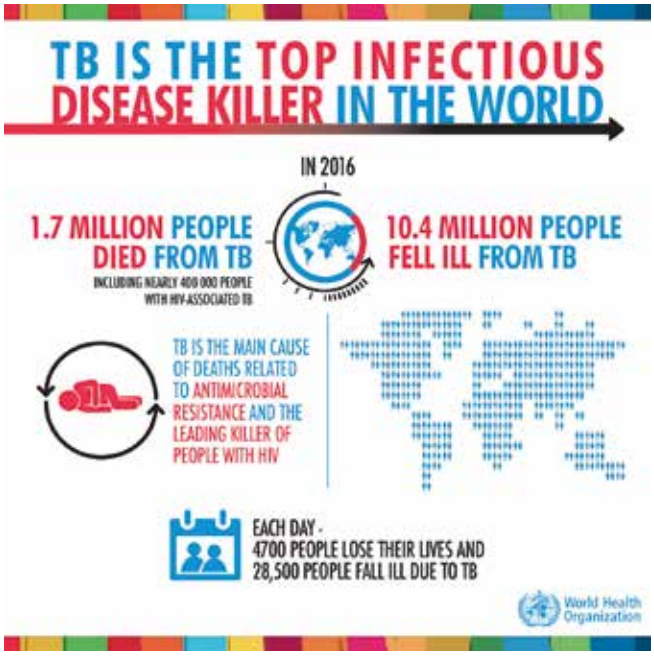
We look forward to continuing our relationship with the Australian Respiratory Council and growing our membership and reach as a network.

actnet
australasian clinical tuberculosis network

ADVOCACY

WORLD TB DAY 2018

Each year we commemorate World TB Day on March 24 to raise public awareness about the devastating health, social and economic impact of tuberculosis (TB) and urge acceleration of efforts to end the global TB epidemic.



This year, we commemorated the 136th anniversary of Dr Robert Koch's announcement in 1882 of his discovery of the TB bacillus, the cause of TB. His ground breaking research opened the way toward diagnosing and curing this disease.

Despite significant progress over the last decades, TB continues to be the top infectious killer worldwide, claiming over 4,500 lives a day. The emergence of drug-resistant TB poses a major health threat and could put at risk the gains made in efforts to End TB!

The World TB Day campaign in 2018 focused on building commitment to end TB. The campaign called for Heads of State and Ministers of Health, parliamentarians and community leaders, people affected with TB, civil society advocates, health workers, doctors and nurses, NGOs and other partners to join together to End TB.

The theme - Wanted: Leaders for a TB-free world. You can make history. In 2018, the United Nations held a General Assembly High Level Meeting on TB. The meeting followed a very successful Ministerial Conference on Ending TB held in Moscow on 16-17 November 2017 which resulted in high-level commitments to accelerate the response to End TB as expressed in the Moscow Declaration to End TB.

United Nations High Level Meeting on TB (UNHLM) September 2018

On the 26th September, 2018 the UN General Assembly hosted the first high-level meeting on TB. The theme of the meeting was "United to end tuberculosis: an urgent global response to a global epidemic". The purpose of the meeting was to provide a platform for global leaders to reaffirm their commitment to accelerate efforts towards ending the TB epidemic by 2035.

The meeting was preceded by the publication of the WHO 2018 Global Tuberculosis Report. The report showed that despite progress in reducing mortality and incidence, TB remains a leading cause of death worldwide. In 2017, 1.7 million people died of the disease and there were approximately 10.4 million new cases identified. These data show that we are not on track to meet the End TB Strategy targets set by WHO in 2014: a 95% reduction in tuberculosis deaths and 90% decrease in new cases between 2015 and 2035.

The WHO 2018 Global Tuberculosis Report indicated that current funding for tackling TB is insufficient: of the estimated USD $10.4 billion needed by countries to fund TB related interventions in 2018, only $6.9 billion in funding was available. It was expected that the UNHLM would address the gap in the funding by stimulating a stronger commitment from funders and governments to invest more resources in efforts to control TB.

The political declaration arising from the meeting articulated two quantifiable short-term objectives; the commitment to provide diagnosis and treatment with the aim of successfully treating 40 million people with TB from 2018 to 2022, including 3.5 million children; and the provision of preventive treatment for 30 million people by 2022.

The absence of clear targets to define improvements in TB prevention, care and treatment at country and regional levels fails to give any indication of what measures will be considered and what milestones a country should meet to ensure its contribution to the achievement of the Sustainable Development Goal of ending the TB epidemic by 2035.

ADVOCACY

A number of agencies and countries expressed the opinion that the UNHLM on TB afforded a unique opportunity to put TB at centre stage on the global health agenda. The meeting was seen as a unique chance to gain a strong political support to strengthen measures to eliminate TB in the coming years and define targets and responsibilities. The reality is that, the declaration will remain a statement if it's not translated to achievable and measurable actions. Three critical components—funding, action, and accountability—will be pivotal to the success of the initiatives of the UNHLM on TB.

Investing in TB is said to be one of the smartest investments among the Sustainable Development Goal (SDG) targets, with a return on investment of $43 per USD spent. The UN Declaration calls for mobilisation of US$13 billion per year for implementation and an additional $2 billion per year for research into new tools.

National governments need to commit resources and contribute their fair share towards research funding based on income and capacity. Rapid action by countries, donors, and stakeholders is required for scaling up TB care and prevention as well as fast-tracking research into the development of new diagnostics, drugs, and vaccines.

An estimated 4 million people are currently being left behind, they are not receiving a diagnosis, care or treatment needed to cure TB. These so-called missing people with TB need to be found and put on effective treatment.

It is essential that an independent monitoring and accountability mechanism is set up hold world leaders, national governments, and stakeholders accountable to the commitments made as part of the UNHLM on TB.

In the lead up to the UNHLM on TB, the United Nations Association of Australia (UNAA) worked with Professor Guy Marks and ARC to facilitate discussions and meetings between Professor Marks and the Australian delegation attending the UNHLM.

The following points were raised with the UNAA and promoted with the Australian delegation as the role Australia could take to support TB elimination within the region:

- To demonstrate leadership and support by establishing a mechanism for collaboration, development of accountable targets, implementation plans and outcomes, monitoring and reporting of progress towards TB elimination
- To promote and commit to the need for financing to achieve the desired outcomes for TB elimination within the region and to encourage countries to make the required financial commitments within their own countries
- To support and defend the elements of the political declaration to End TB
- In advocacy and promotion of access to affordable high quality medicines for the treatment of both TB and non-communicable diseases. This includes the request for drug companies to make the current drugs available more affordable for middle and low income countries and promote access for these countries to generic lower cost medicines for the treatment of TB and non-communicable diseases.

Senator the Hon Marise Payne, Minister for Foreign Affairs attended the UNHLM representing Australia. The presentation from Senator Payne outlined Australia's support for the declaration and a call to implement monitoring and evaluation of the commitments within the declaration.

PROJECT FEEDBACK

PROFESSOR GUY MARKS

Training doctors and public health professionals in research methods for lung health

The Australian Respiratory Council (ARC) continues to support Professor Guy Marks and his team by contributing funds towards the annual Methods in Epidemiological, Clinical and Operational Research (MECOR) course. In 2018 the course was held in Da Nang province, Vietnam. The MECOR training was conducted successfully with 44 students across three levels of the course. They were supported by 4 experienced international faculty and 12 Vietnamese faculty and teaching assistants who had previously graduated from MECOR level 3 and were experienced in implementing lung health research in Vietnam.

The course is an intensive one week residential activity with the following objectives:-

Level 1: The objective of the training is to strengthen capacity and leadership in Methods in Epidemiological, Clinical and Operations Research (MECOR) related to respiratory conditions.

The course content includes subjects on epidemiology, research design, research methods, biostatistics, and research protocol development. MECOR level 1 students are divided into small groups to develop a research protocol based upon agreed research questions with close support from faculty and teaching assistants.

Level 2: The objective of the training is; to extend the knowledge of research design, implementation and analysis, develop skills in critical appraisal of scientific evidence and assist participants to individually develop a research protocol for implementation.

The course content includes subjects on advance epidemiology, research design, research methods and biostatistics at an advanced level. The Level 2 students were required to develop their own research protocol.

The Level 2 course is available to graduates from the previous MECOR level 1. All Level 2 students must be prepared to commit to designing, conducting, analysing and writing up for publication a research study over a three year period with the support of a mentor.

Level 3: The level 3 course is designed for those students who have data ready for analysis and writing up. Students work in small groups on exercises and, over the course of the week will develop and present a research protocol. There is a high faculty to

student ratio to provide guidance throughout this process.

Students are coached in data analysis and writing manuscripts. Students are encourage to work closely with their mentors after course to finalise their manuscripts to submit to relevant peer journals.

On the last day of the training, participating students presented their research proposals to the faculty and other students in a formal presentation session.

After the one week intensive training course, all students;

- Have learnt to develop a testable research question
- Understand the various study design options for finding the answers to these questions
- Have developed a research proposal, some of the proposals are ready to implement.

After completion of the course, participating students will continue to consolidate and implement the research proposal with their mentors. The students have access to the Vietnamese faculty at the National Lung Hospital (NLH) who have joined the course and mentor some of the students.

Students who wish to be continuously supported and improve their knowledge, skills and experience have joined an online Journal Club, which is led by Professor Guy Marks, or otherwise chose to be in touch with their mentor to get support individually.

During the course, it has been clearly recognised there is a need to have an e-learning platform for students to better prepare prior to coming to the course.

MECOR is very appreciative of the continued support provided by its partners. The NTP provides experienced staff as teachers or mentors and has shared experiences on good practice in conducting clinical and operational research in their hospitals/ program.

At the welcome reception the coordinator of the course provided a short presentation to acknowledge the financial support ARC provides towards the conducting the course. In addition all training materials, presentations, banners and certificates contain ARC's logo as recognition of this support.

PROJECT FEEDBACK

WORLD HEALTH ORGANISATION

Progress Report on Economic Evaluation of Patient costs associated with Tuberculosis diagnosed and care in Papua New Guinea

Background

Papua New Guinea is considered a high burden TB country by the World Health Organization (WHO) and is one of 30 high burden TB countries globally . The WHO also classifies Papua New Guinea as a high MDR-TB and TB-HIV country due to the burden of these two conditions. The latest available estimates from WHO indicate that the TB incidence rate in Papua New Guinea in 2017 was 432 cases per 100,000 population and the TB mortality rate was 53 cases per 100,000 population[1]. The prevalence of drug resistant TB (rifampicin resistance (RR) and multi-drug resistance (MDR) combined) is estimated at 3% of all new cases and 26% of previously treated cases. It is estimated that there are 960 cases of RR and MDR-TB among all notified pulmonary TB in 2017 in the country.[1]

The implementation of TB services by the National TB Programme in Papua New Guinea is aligned with strategies developed and promoted by WHO's Global TB Programme and the Western Pacific Region Office of WHO. The WHO recently released the End TB Strategy, the global TB strategy. The End TB Strategy (aligned to the Sustainable Development Goals) outlines the ambitious target of ending the TB epidemic worldwide by 2035[2]. There are three main indicators by which to measure progress towards this goal: 1) decreased incidence (by 90% compared to 2015), 2) decreased mortality (by 95% compared to 2015) and 3) a target of zero "catastrophic costs" for TB patients[3].

The "catastrophic costs" indicator is new and as such it requires urgent assessment to establish baseline data and estimate the contribution of costs to the TB patient and to TB control overall, thereby enabling Governments to address demand-side cost barriers, which may be mitigated through a range of interventions including improving financial access to care, extending patient-centred care delivery models that reduce time needed for care-seeking, and social protection interventions to mitigate loss of earnings due to care-seeking. The cost of accessing and then remaining in TB care can be substantial, for TB patients and their families[3]. These costs can include direct medical costs (such as paying to see a doctor), direct non-medical costs (such as transportation to get to the local hospital, accommodation if an overnight stay is needed, etc.) and indirect costs such as time spent away from work, or carer time.

The financial costs to patients of a TB diagnosis and subsequent care are thought to be a significant impediment to further improving TB control[4] . Previous studies have documented that TB patients often incur large costs related to their illness, as well as seeking and receiving health care, including a diagnosis of TB[4,5]. A systematic review, which assessed the results of 49 studies on TB patient costs, concluded that these costs ranged from $55 to $8198 USD (unweighted average of $847 USD)[4]. Income loss comprised the greatest proportion of all costs at 60% (range 16-94%), with another 20% (range 0-62%) due to direct medical costs and the remaining 20% (range 0-84%) due to direct non-medical costs[4]. Half of the costs were incurred prior to the commencement of TB treatment[4]. The total costs amounted to 58% (range 5-306%) of annual individual income and 39% (range 4-148%) of annual household income[4]. Costs were higher for patients with lower incomes and also for people with multi-drug resistant TB[4].

There have been no studies conducted on the economic impact of TB on patients in Papua New Guinea. Therefore, this study is intended to conduct a baseline assessment of the economic burden of TB on TB patients and their families in Papua New Guinea, using a nationally representative sample.

Study goal and objectives

The study aims to undertake an economic evaluation of TB patient costs in Papua New Guinea. The specific objectives of the study include:

1. Determine the direct and indirect costs due to TB diagnosis and care (including during the health seeking period in the lead up to a TB diagnosis);
2. Estimate the proportion of households experiencing catastrophic costs due to TB;
3. Assess if catastrophic costs are associated with poor TB treatment outcomes;
4. Provide recommendations on policies and interventions to minimise barriers for accessing and adhering to TB treatment and care, and mitigate the economic impact of TB for patients and their families; and
5. Plan future research to further examine the determinants of cost barriers among TB patients and/ or to assess the effectiveness of policies and interventions to mitigate these costs[4].

Activities

The protocol of the study and tool were drafted, finalized and discussed with the stakeholders and is approved by Medical Research Advisory Committee (MRAC), Papua New Guinea and by the WHO Western Pacific Regional Office-Ethics Review Committee (WPRO-ERC) and approved by the Australian Respiratory Council. Funding support is provided by the Australian Respiratory Council, the US Centre for Disease Control (CDC) and the WHO. Technical support is provided by WHO and CDC, US.

In total, 40 TB Basic Management Units (BMUs) around the country have been selected. All BMUs identified data collectors/ interviewers and all of them have been trained on data collection tools. The provincial disease control and TB officers from selected BMUs from all 4 regions (Southern, Highlands, Momase and New Guinea Island) have been trained from April to July 2018. In total, 54 interviewers have been trained on the interview process.

In total, 1,000 TB patients will be enrolled in the study. The data collectors are required to interview 25 TB patients from their BMUs who are currently on TB treatment during the time of the interview. Most of the BMUs have completed the interview questionnaires and are awaiting quality check and retrieval into the NTP. Twenty-eight (28) or 70% of selected sites have so far completed the survey and have sent in their data to the NTP.

Data quality checks are done by NTP upon receiving filled questionnaires from BMUs. After completion of data quality check the data is entered into a software program that was developed for the survey on EPI INFO.

Supportive supervision visits from NTP in collaboration with WHO were conducted to Momase and New Guinea Island region and to BMUs located in the National Capital District, Port Moresby.

Next steps

- Data collection and data entry is expected to be completed by end of March 2019
- Supervisory visits to remaining 7 provinces
- Routine data cleaning and verification during data entry
- Data analysis workshop is planned at the end of April 2019
- Report writing and finalization in May-June 2019
- Multi-sectorial dissemination workshop at the end of June 2019 with high level participation from the Government of PNG and WHO.

We would like to thank the Australian Respiratory Council for providing financial support to conduct the TB patient cost survey in PNG.

1. World Health Organization. Global tuberculosis report 2018. Geneva, Switzerland: World Health Organization, 2018

2. World Health Organization. The End TB Strategy. Geneva, Switzerland: World Health Organization 2015.

3. Tanimura T, Jaramillo E, Weil D, Raviglione M, Lönnroth K. Financial burden for tuberculosis patients in low-and middle-income countries: a systematic review. European Respiratory Journal 2014; 43(6): 1763-75.

4. Lönnroth K, Glaziou P, Weil D, Floyd K, Uplekar M, Raviglione M. Beyond UHC: monitoring health and social protection coverage in the context of tuberculosis care and prevention. PLoS Med 2014; 11(9): e1001693.

5. Barter D, Agboola S, Murray M, Barnighausen T. Tuberculosis and poverty: the contribution of patient costs in sub-Saharan Africa- a systematic review. BMC Public Health 2012; 12(980): 1-34.

1. Training workshop for data collectors from Momase region

2. On-site training of data collectors in Tokorara TB clinic (BMU) and Badili clinic

3. TB patient selection

PROJECT FEEDBACK

AUSTRALIAN RESPIRATORY COUNCIL NURSE CONSULTANTS GROUP

Development of a Post Graduate Education Pathway for Australian TB Nurses

TB continues to be a global health emergency, there are 10 million new cases each year, 1.8 million deaths associated with the disease, it is estimated that one third of world's population is infected with TB. Within Australia, TB Program efforts are directed towards elimination. To achieve this ambitious target a skilled and knowledgeable health care workforce utilising new tools and innovative strategies is essential. Nurses comprise the largest proportion of the global TB Program workforce. Building knowledge and skills for nurses is essential for elimination of TB.

ARC's Nurse Consultant Group (Pam Banner, Amanda Christensen and Kerrie Shaw) supported by a National Reference Group of TB Nursing experts has undertaken an educational needs analysis for the development and implementation of an education pathway for Australian TB Nurses. The University of Western Sydney School of Nursing & Midwifery has been selected as the academic partner to work with ARC to develop and deliver the specialist course for Australian TB Nurses. The course will provide participants with the knowledge and skills required to deliver evidenced based clinical and public health nursing care to people with TB. TB care is complex and requires nurses to draw from a broad spectrum of knowledge which includes the social determinants of health, complex individualised case management and cohort review. Participation in specialist education enables the development of knowledge and skills required to work effectively within the Australian TB Program and contribute to enhanced global TB control.

Project to support Homeless and Vulnerable people with TB

In 2018 ARC received project funding from the Bowlers Club of NSW Ltd to support homeless and vulnerable people with TB. Homeless people often have a poor general health status, coexistent substance and mental health issues, limited financial resources and support networks in the community. Given their vulnerable health status it is not uncommon for homeless people to become sick with TB.

The initial management of the homeless with TB is through admission to hospital. Difficulties arise when the person is to be discharged from hospital to continue treatment in the community. Treatment for TB is for a minimum of six months and can extend up to two years for people with drug resistant TB. Discharging people to live in unstable settings is extremely problematic with many people defaulting from treatment and becoming lost to follow up for a number of reasons. This poses a threat to the individual for reactivation of disease, development of drug resistant TB or death, and for the community this scenario can lead to ongoing transmission of TB. Providing ongoing care within this context is extremely challenging and difficult for both the individual and health care workers.

Providing support for accommodation, an allowance for food, the necessities of daily living and transport for homeless and vulnerable people is an important strategy to promote treatment completion and reducing the individual and public health risks associated with TB. ARC looks forward to working with our new partner The Bowlers Club of NSW Ltd on this pilot project and hope to extend future activities to provide much needed and valuable support for vulnerable people with TB across Australia.

Sputum Toolkit for the United States Affiliated Pacific Islands (USAPI)

ARC has been involved in designing, developing and delivering training at the nurse and related health worker workshops at the Pacific Island TB Controller Association (PITCA) conferences convened by the US Centers for Disease Control and Prevention (CDC) for over a decade. During these conferences issues relating to sputum quality for diagnosis and management of people with TB has been highlighted as an ongoing issue. Data analysed and presented by the CDC indicated that only a small percentage of the sputum specimens submitted by the USAPI's to the Diagnostic Reference Laboratory met the criteria of a quality specimen.

The ability to diagnose TB, ensure that the correct drugs are used and to evaluate and monitor patients' progress to cure relates directly to the ability to collect good quality sputum specimens. Issues relating to staff training, specimen collection, storage and transport challenges, patient education, turnaround times for results and communication between laboratory and TB Program staff were identified as factors that contribute to specimen quality.

The ARC Nurse Consultants Group is working with the Pacific Island TB Nurses to identify local solutions to address the challenges and barriers associated with specimen collection. ARC is developing a comprehensive toolkit that will address policy and practice guidelines, provide training and educational resources for nurses, community health workers and patients and operational research to measure and evaluate the outcomes for improving sputum quality.

PROJECT FEEDBACK

Training and Support for Nurses and Outreach Workers

This year, the ARC Nurse Consultants Group was invited by the CDC to facilitate and deliver training for nurses and outreach workers from the TB Programs of the Northern Pacific at the Pacific Island TB Controllers Association (PITCA) Conference. The conference was held from the 10th to the 13th September in Saipan in the Commonwealth of the Northern Marianas Islands (CNMI). Amanda Christensen and Kerrie Shaw attended the meeting representing ARC.

The ARC Nurse Consultants Group has been involved in providing specialist training, technical assistance, clinical support and the development of educational resources for nurses working within the Northern Pacific for the past twelve years. ARC contributes to building the capacity, skills and knowledge of nurses through the annual PITCA training activity and the monthly Pacific Island TB Nurses Network meetings. Building the capacity and skill levels for the nurses within these programs is important in the fight to eliminate TB.

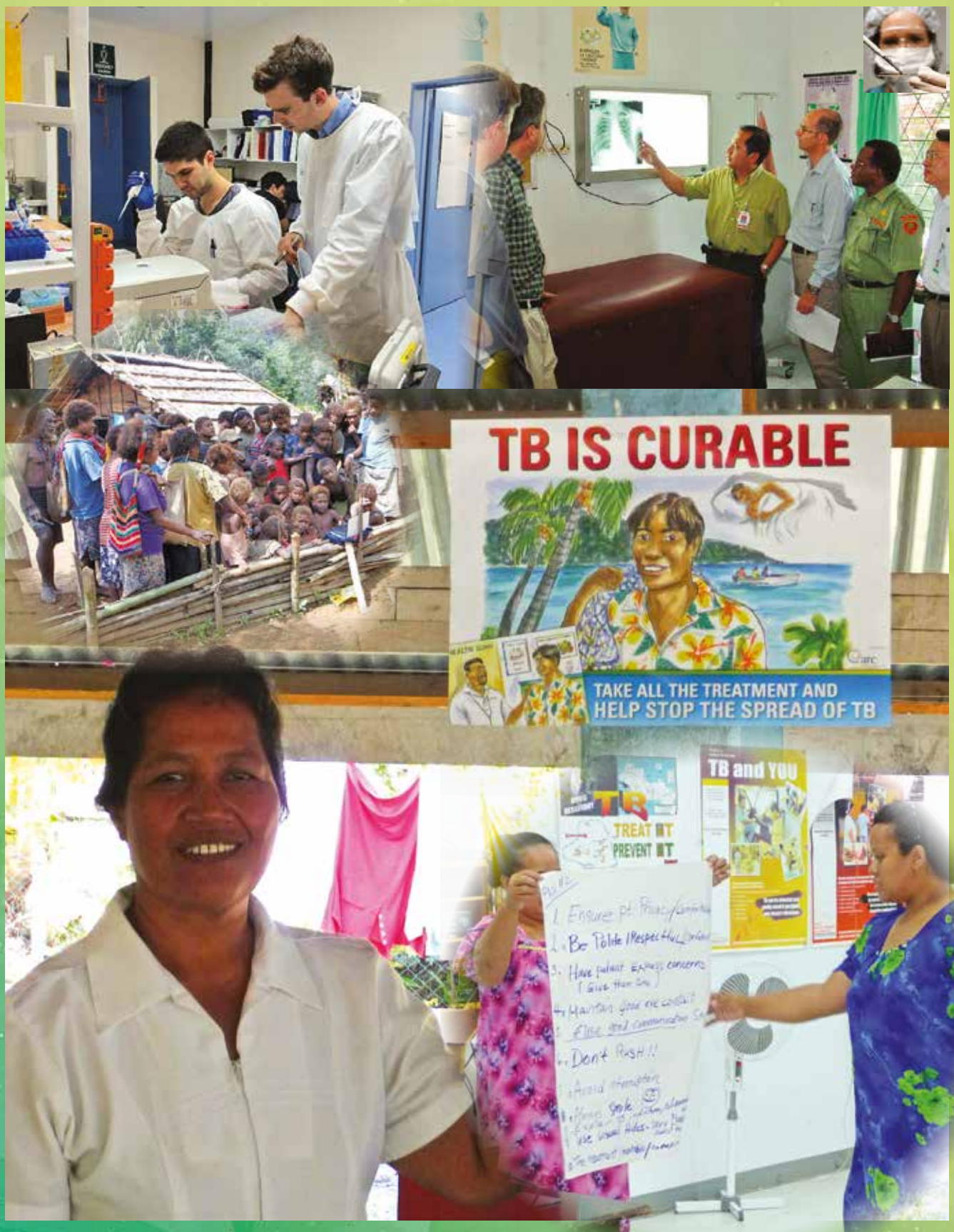
This year, the PITCA program for the nurses and outreach workers focused on contact investigation; case based learning for the nursing care of complex TB cases and people with TB and mental health issues; the impact of stigma on care and treatment for people with TB and action plans to improve sputum quality.

We were fortunate to have twenty participants representing a range of countries attending the training activity. A notable highlight of working in the pacific is the enthusiasm and willingness that the participants have for attending training activities, learning new skills and sharing their experiences and knowledge. Patty Aldan from CNMI and Bryan Lee Santos from Guam presented a local perspective on the nursing management of complex TB cases. Lorraine Beketaut from Palau presented on management of patients with TB & mental health issues. Foster Waguk from the Federated States of Micronesia presented on the impact of stigma in the diagnosis, care and management of people with TB in Micronesia. Sharing local experiences and identifying pacific solutions is greatly valued by the meeting participants.

Foster Waguk from the Federated States of Micronesia presenting at PITCA 2018 on the impact of stigma for people affected by TB

PITCA 2018 Nurses and Outreach Workers participants

HISTORY OF FUNDING FOR RESEARCH AND PROJECT ACTIVITIES 1999–2018



SCHOLARSHIPS, FELLOWSHIPS

A HISTORY

ARC Ann Woolcock Fellowship Awards (2005 - 2014)

Date	Recipient	Subject	Award
2010-2014	Jodie Simpson *Newcastle University, NSW*	Characterisation and treatment of innate immune dysfunction in older people with obstructive airway disease	$258,763
2005-2009	Ingrid Laing *Telethon Institute for Child Research, Perth,WA*	Genetic Influences on causal pathways of ALRIs in highly susceptible infants	$285,000

ARC Ann Woolcock Biomedical and Postgraduate Research Scholarship Awards (2002 - 2004)

Date	Recipient	Subject	Award
2003-2004	Corrina Parker *Australian National University, Canberra, ACT*	Detection, isolation and characterisation of novel anti-effective agents from cultured micro-fungi	$40,143
2003-2004	Kylie Turner *University of Sydney, NSW*	Investigation of the structure of cryptococcal phospholipases	$40,143
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
2002-2003	Shoma Dutt *Westmead Hospital, Sydney, NSW*	Biliary lipids in liver disease and interstitial phospholipid metabolism in children with cystic fibrosis	$41,793
2002-2003	Rita Machaalani *University of Sydney, NSW*	Neurone receptor systems in sudden infant death and piglets exposed to hypercapnic-hypoxia	$29,214
2002- 2003	Anup Desai *University of Sydney, NSW*	The contribution of obstructive sleep apnoea to driver fatigue in transport drivers	$55,793

ARC Harry Windsor Biomedical and Postgraduate Research Scholarship Awards (1999 - 2001)

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

RESEARCH GRANTS

A HISTORY

ARC Harry Windsor Medical Research Grants (2000 - Present)

Date	Recipient	Subject	Award
2018	Professor Paul King *Monash Medical Centre and Monash University*	Influenza A virus (IAV) infection induces the formation of phagocytic extracellular traps, which contribute to the pathogenesis of exacerbations of COPD	$50,000
2018	Professor Cynthia Whitchurch	Understanding the immunology of Pseudomonas aeruginosa lung infection.	$50,000
2017	Professor Michael Berk *Deakin University, Victoria*	Can we reduce tobacco smoking using N-acetylcysteine as a cessation treatment	$50,000
2017	Dr Greg Fox *University of Sydney*	New digital strategies to enhance tuberculosis treatment adherence in Vietnam	$50,000
2016	Dr Graeme Zosky *University of Tasmania*	Iron laden particulate matter enhances bacterial growth in the lung	$50,000
2016	Laureate Professor Paul Foster *University of Newcastle, NSW*	Understanding the role of the newly discovered 2D4 T helper(TH) - 22 cell subset in models of respiratory infection and inflammation	$50,000
2016	Professor Ian Yang *University of Queensland*	Using the lung microbiome to predict responses to continuous antibiotics in COPD	$50,000
2015	Brian Oliver, *The Woolcock Institute and The University Of Technology, NSW*	Understanding the aetiology of small airway fibrosis in COPD	$50,000
2015	Harin Karunajeewa *The Walter and Eliza Institute, VIC*	Getting the dose right in Tuberculosis: Pharmacokinetics to improve outcomes in Tuberculosis	$50,000
2014	Daniel Chambers *The Prince Charles Hospital, Qld* *Lung Transplant Service, Qld*	Disease tolerance and transplant tolerance – two sides of the same coin?	$50,000
2013	Brian Oliver *University of Sydney, NSW*	Why do fibroblasts from people with COPD produce extracellular matrix proteins in response to ciagraette smoke?	$50,000
2012	Bernadette Saunders *Centenary Institute, Sydney, NSW*	Microparticles and microRNA as biomarkers of TB disease	$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
2010	Peter Bye *Royal Prince Alfred Hospital, Sydney, NSW*	Novel interventions for the diverse population of Australia with bronchiectasis	$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
2008	Jenny Alison *University of Sydney, NSW*	Optimising mucus clearance with exercise in cystic fibrosis	$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
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

RESEARCH GRANTS

Date	Recipient	Subject	Award
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
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
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	Robert Capon *University of Queensland*	A new non-toxic approach to controlling bacterial infection	$49,000
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
2005	Kwung Fong & Annalese Semmler *Prince Charles Hospital*	Novel methylated genes in lung cancer	$52,250
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
2004	Paul Kelly, Nick Anstey, Graeme Maguire et al *Menzies School of Health Research, Darwin, NT*	Pulmonary Function in Tuberculosis patients in Timika District, Papua Province, Indonesia	$43,267
2002 -2003	James Triccas & Warwick Britton *Centenary Institute of Cancer Medicine & Cell Biology, Sydney, NSW*	New strategies to vaccinate against Mycobacterium tuberculosis	$112,588
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	Evangelia Daviskas, Sandra Anderson & Iven Young *Royal Prince Alfred Hospital*	Effect of mannitol on the clearance of mucus in patients with COPD	$38,593
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
2001	Terence Amis and John Wheatley *Westmead Hospital*	The role of snoring and obstructive sleep apnoea in the pathogenesis of hypertension	$45,665
2001	James Wiley and Tania Sorrell *University of Sydney, NSW*	The monocyte-macrophage P2x7 receptor and susceptibility to tuberculosis	$45,000
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
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	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 Gibson *John Hunter Hospital*	Quality of Life in Chronic Cough	$25,500

PROJECTS

A HISTORY

ARC Project Awards (1999 - Present)

Date	Recipient/Project	Award
2018	The Safe Working Practices Laboratory Handbook - a Global Resource	$13,500
2018	Pacific Island TB Network Sputum Quality project	$10,000
2017	Marshall Islands Funding A1c kits for the screening activity on Ebeye Island	$5,264
2017	Papua New Guinea Economic evaluation of patient costs associated with tuberculosis and care in Papua New Guinea.	$25,000
2015-2018	Australia Establishing a framework for nursing education in Australia	$60,016
2013-2016	Solomon Islands Improving TB control in remote area of Solomon Islands	$64,744
2012	Bangladesh Bangladesh MDR-TB Project, an investigation into risk factors for MDR-TB in communities in Bangladesh	$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
2011-2018	Vietnam MECOR Course - Level 1, Level 2 and Level 3 workshops	$90,000
2010	Secretariat of Pacific Community Evaluation of the effectiveness of the Community Component of the Kiribati Quality TB Epidemic Control Project	$4,800
2010	Menzies School of Health Research Development of educational resources, 3 Talking posters and 3 flipcharts on pneumonia, bronchiolitis and bronchiectasis	$35,000
2009	Federated States of Micronesia Capacity Building for TB nurses and related health workers in the Federated States of Micronesia (FSM) A partnership with Eli Lilly	$31,424
2009-2012	Cambodian Anti-Tuberculosis Association Cambodia: TB control in elderly and vulnerable groups and in factories	$110,637
2008-2009	Secretariat of Pacific Community TB Drama Video Production in Kiribati	$35,000
2008-2009	Federated States of Micronesia (Chuuk) Support of a tutor and education materials for children for MDRTB	$5,537
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
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
2007-2008	Secretariat of Pacific Community Enhancing Community involvement in TB control through Theatre in Kiribati	$40, 926
2006-2018	PITCA - Pacific Island TB Controllers Association Training of nurses and related workers in the Northern Pacific	$142,391
2006	Nurse training in Kiribati	$41,699

PROJECTS

Date	Recipient/Project	Award
2006	Building of TB Laboratory at Tunguru Hospital Kiribati	$30,000
2005	Maningrida Lung Health Community Awareness Raising Pilot Project Funding (James N Kirby Foundation $12,000)	$20,000
2002 - 2005	TB laboratory Training Tonga, Samoa, Kiribati and the Cook Islands	$189,231
2001	Distribution of books: Clinical Tuberculosis and Tobacco or Health: A Global Threat through Teaching Aids at Low Cost.	$2,000
2000	Sponsored Professor Don Enarson, Scientific Director of IUATLD, to be guest speaker at the NSW Health Department TB Nurses Conference	$3,000
2000	Participation in the WHO, "First Stop TB Meeting in the Pacific Islands" in Noumea	$4,000
1999	Provided funding for the translation of "Tobacco or health: A Global Threat" through Teaching Aids at Low Cost	$3,000
1999	Visit to Port Moresby and Lae to evaluate the DOTS TB Programme	$4,000
1999	Funded purchase of course textbooks for Epidemiology Workshop in Port Moresby	$1,000

2018 FINANCIALS AND ACFID SUMMARY FINANCIALS

DIRECTORS' REPORT

Your Directors present their report on the Company for the financial year ended 31 December 2018.

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:

Name and Qualifications Experience and Special Responsibilities

Amanda Julie Christensen
Dip Nursing
Appointed to the Board on 22 January 2001
Interests in contracts: Nil

Clinical Associate Professor Peter Gianoutsos
MB CHB (Univ of Otago), FRACP FCCP
Appointed to the Board on 15 May 2006. Vice President
Interest in contracts: Nil

Christopher Turner
B.Comm Dip FS Assoc Fin FPA
Appointed to the Board 22nd May 2017. Finance Director
Interest in contracts: Nil

Robyn Johnson
GAICD
Appointed to the Board on 5 November 2012
Interest in contracts: Nil

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

Ian W Ramsay
LL.B (Syd.)
Board member 2008 - February 2012
Reappointed to the Board 5 November 2012
Interest in contracts: Nil

Emeritus Professor John Paul Seale AM
MB BS PhD FRACP
Appointed to the Board 19 June 1997. President
Interest in contracts: Nil

Kerrie Shaw
Registered Nurse
Appointed to the Board 4 February 2013
Interest in contracts: Nil

Professor Iven Young AM
BSc(Med), MB BS PhD FRACP
Appointed to the Board 6 August 1998
Interest in contracts: Nil

Associate Professor Gregory Fox
BSc(Med) MB BS (Hons) FRACP PhD MIPH GAICD
Appointed to the Board 22 May 2017
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	4	4
Peter Gianoutsos	4	2
Gregory Fox	4	4
Robyn Johnson	4	4
David Hugh Macintosh	4	3
Ian Ramsay	4	3
John Paul Seale	4	4
Kerrie Shaw	4	3
Christopher Turner	4	4
Iven Hunter Young	4	4

DIRECTORS' REPORT

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 approaches 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 Constitution states that each member is required to contribute a maximum of $1.00 towards meeting any outstanding obligations of the Company. At 31 December 2018 the collective liability of members was $39 (2017:$42)

AUDITORS' INDEPENDENCE DECLARATION UNDER SECTION 307C OF THE CORPORATION 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:

Amanda Christensen
Executive Director
Sydney, 29th March 2019

Christopher Turner
Director
Sydney, 29th March 2019

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 2018 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.

CONROY AUDIT AND ADVISORY

D R Conroy FCA
Principal
Auditor No: 2251
Sydney, 29th March 2019

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
For the Year Ended 31 December 2018

	Note	2018 $	2017 $
Revenue	2	557,799	376,178
Depreciation and amortisation expense	3	(4,401)	(4,856)
Research grants, fellowships and scholarships		(99,812)	(108,152)
Project funding		(36,066)	(53,233)
Investment expense		(16,620)	(12,456)
Consultancy fees - Project		-	(10,915)
Employee benefits expense		(273,109)	(257,904)
Other expenses		(202,635)	(310,133)
Loss before income tax		(74,844)	(381,471)
Income tax expense	1	-	-
Loss for the year		(74,844)	(381,471)
Other comprehensive income after tax:			
Net gain on revaluation of investment property		-	1,061,000
Net gain /(Loss) on revaluation of financial assets		(292,581)	(79,109)
Other comprehensive income for the year net of tax		(292,581)	981,891
Total comprehensive income for the year		(367,425)	600,420

STATEMENT OF FINANCIAL POSITION
As At 31 December 2018

	Note	2018 $	2017 $
ASSETS			
Current Assets			
Cash and cash equivalents	5	159,443	382,645
Trade and other receivables	6	67,514	7,244
Other current assets	7	8,008	4,301
Total Current Assets		**234,965**	**394,190**
Non-Current Assets			
Financial assets	8	1,566,580	1,756,021
Property, plant and equipment	9	48,028	49,385
Investment property	10	3,000,000	3,000,000
Total Non-Current Assets		**4,614,608**	**4,805,406**
TOTAL ASSETS		**4,849,573**	**5,199,596**
LIABILITIES			
Current Liabilities			
Trade and other payables	11	123,372	123,903
Employee Entitlements	12	59,788	41,855
Total Current Liabilities		**183,160**	**165,758**
TOTAL LIABILITIES		**183,160**	**165,758**
NET ASSETS		**4,666,413**	**5,033,838**
EQUITY			
Reserves	13	4,174,972	4,467,553
Retained earnings		491,441	566,285
TOTAL EQUITY		**4,666,413**	**5,033,838**

STATEMENT OF CHANGES IN EQUITY
For The Year Ended 31 December 2018

	Capital Profits Reserves $	Asset Revaluation Reserves $	Retained Earnings/ (Accumulated Losses) $	Total $
Balance at 1 January 2017	2,411,980	1,179,938	859,623	4,451,541
Loss attributable to members	-	-	(381,471)	(381,471)
Total comprehensive income for the year	-	963,768	-	963,768
Transfers on sale of assets	-	(88,133)	88,133	-
Balance at 31 December 2017	**2,411,980**	**2,055,573**	**566,285**	**5,033,838**
Loss attributable to members	-	-	(74,844)	(74,844)
Total comprehensive income for the year	-	(292,581)	-	(292,581)
Balance at 31 December 2018	**2,411,980**	**1,762,992**	**491,441**	**4,666,413**

STATEMENT OF CASH FLOWS
For The Year Ended 31 December 2018

	Note	2018 $	2017 $
Cash Flows From Operating Activities			
Receipts from customers		478,533	239,078
Payments to suppliers and employees		(800,841)	(638,218)
Interest received		1,183	1,305
Distributions received		99,337	151,316
Net cash provided by (used in) operating activities	17	**(221,788)**	**(246,519)**
Cash Flows From Investing Activities			
Proceeds from sale of available-for-sale investments		1,676,275	639,391
Payment for property, plant and equipment		(3,044)	(690)
Payment for available-for-sale investments		(1,674,645)	(253,491)
Net cash provided by (used in) investing activities		**(1,414)**	**385,210**
Net Increase/(Decrease) in cash held		(223,202)	138,691
Cash at beginning of financial year		382,645	243,954
Cash at end of financial year	17	**159,443**	**382,645**

NOTES TO AND FORMING PART OF THE ACCOUNTS
For The Year Ended 31 December 2018

Note 1 - Statement of Significant Accounting Policies

Basis of Preparation

Australian Respiratory Council applies Australian Accounting Standards – Reduced Disclosure Requirements as set out in AASB 1053: Application of Tiers of Australian Accounting Standards.

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 (AASB) and the Australian Charities and Not-for-profits Commission Act 2012. The company is a not-for-profit entity for financial reporting purposes under Australian Accounting Standards.

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 stated otherwise.

The financial statements, except for the cash flow information, have been prepared on an accrual basis and are based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and financial liabilities.

The amounts presented in the financial statements have been rounded to the nearest dollar.

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.

Dividend revenue is recognised when the right to receive a dividend has been established. 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.

Donations and bequests are recognised as revenue 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 and are therefore carried at cost less accumulated depreciation and any accumulated impairment losses. In the event the carrying amount of plant and equipment is greater than its estimated recoverable amount, the carrying amount is written down immediately to its estimated recoverable amount and impairment losses are recognised either in profit or loss or as a revaluation decrease if the impairment losses relate to a revalued asset. A formal assessment of recoverable amount is made when impairment indicators are present.

Plant and equipment that have been contributed at no cost, or for nominal cost, are valued and recognised at the fair value of the asset at the date it is acquired.

Depreciation

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 or losses are included in the statement of comprehensive income. When revalued assets are sold, amounts included in the revaluation surplus 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 asset's carrying value. Any excess of the asset's carrying value over it's 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.

NOTES TO THE FINANCIAL STATEMENTS
For The Year Ended 31 December 2018

Goods and Services Tax (GST)
Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Tax Office. In these circumstances the GST is recognised as part of the cost of acquisition of the asset or as part of an item of the expense. Receivables and payables in the statement of financial position are shown inclusive of GST.

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

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

Financial Instruments
Recognition and initial measurement
Financial instruments, incorporating financial assets and financial liabilities, are recognised when the entity becomes a party to the contractual provisions of the instrument. Trade date accounting is adopted for financial assets that are delivered within timeframes established by marketplace convention.
Financial instruments are initially measured at cost plus transactions cost where the instrument is not classified as at fair value through profit or loss. Transaction costs related to instruments classified as at fair value through profit or loss are expensed to profit or loss immediately. Financial instruments are classified and measured as set out below.

1. Fair value estimation
   TThe 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.

New standards and interpretations not yet adopted
AASB Leases
AASB 16 removes the classification of leases as either operating lease or finance leases for the lessee - effectively treating all leases as finance leases. Short-term leases (less than 12 months) and leases of low-value assets (such as personal computers) are exempt from the lease acccounting requirements. There are also changes in accounting over the life of the lease. In particular, companies will recognise a front-loaded pattern of expenses for most leases, even when they pay constant rentals.
AASB 16 is effective for annual reporting periods beginning on or after 1 January 2019, with early adoption permitted where AASB 15 Revenue from Contracts with Customers is adopted at the same time. The Company is assessing the potential impact on its financial statements resulting from the application of AASB 16.

NOTES TO THE FINANCIAL STATEMENTS
For The Year Ended 31 December 2018

	2018 $	2017 $
2. Revenue		
Operating Activities		
Appeals	69,995	81,785
Net profit/(loss) on sale of investments	104,770	(32,483)
Rental revenue for property investment	211,813	119,572
Interest received	1,183	1,305
Fund distributions from investments	69,387	111,341
Legacies & donations	13,200	1,000
Member subscriptions	727	636
Miscellaneous income	5,012	7,514
Refund of franking credits	29,950	39,975
Sundry income	51,762	45,533
Total Revenue	557,799	376,178
3. Profit From Ordinary Activities		
Expenses		
Depreciation of Non-Current Assets:		
Plant and equipment	4,401	4,856
4. Auditor's Remuneration		
Remuneration of the Auditor of the Company for:		
- Auditing the Financial Report	14,100	13,700
5. Cash and Cash Equivalents		
Cash at bank	159,443	382,645
	159,443	382,645
6. Trade and Other Receivables		
Trade debtors	17,001	2,144
Other debtors	50,513	5,100
	67,514	7,244
7. Other Current Assets		
Prepayments	8,008	4,301

NOTES TO THE FINANCIAL STATEMENTS
For The Year Ended 31 December 2018

	2018 $	2017 $
8. Financial Assets		
Non Current		
Listed shares - at fair value	-	1,252,127
Managed funds - at fair value	1,566,580	503,894
Total financial assets	**1,566,580**	**1,756,021**
9. Property, Plant & Equipment		
Non Current		
Plant & equipment at cost	120,424	117,380
Less: accumulated depreciation and impairment	(72,396)	(67,995)
Total property, plant and equipment	**48,028**	**49,385**

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	49,385	49,385
Additions	3,044	3,044
Disposals	-	-
Depreciation expense	(4,401)	(4,401)
Full depreciation for assets under $200	-	-
Carrying amount at the end of year	48,028	48,028

10. Investment Property		
Non Current		
Investment property - at fair value Directors' valuation	3,000,000	3,000,000
Total	**3,000,000**	**3,000,000**

Investment Property Revaluations

At 31 December 2018, the property has been recorded at Directors valuation which is based on an independent registered valuers report from WK Wotton & Partners Mr Wayne Wotton and Mr Brett Allan Davis, Certified Practice Valuer API Member No: 68007 and 68956 repectively dated 22 November 2017.

NOTES TO THE FINANCIAL STATEMENTS
For The Year Ended 31 December 2018

		2018 $	2017 $
11.	**Trade and Other Payables**		
	Unsecured liabilities		
	Trade payables	16,366	46,856
	Sundry payables and accrued expenses	107,006	77,047
	Total	**123,372**	**123,903**
12.	**Employee Entitlements**		
	Provision for annual leave	32,900	29,525
	Provision for long service leave	26,888	12,330
	Total	**59,788**	**41,855**
	Number of employees		
	Number of employees at year end	3	3
13.	**Reserves**		
	Capital profits reserve	2,411,980	2,411,980
	Asset revaluation reserve	1,762,992	2,055,573
	Total	4,174,972	4,467,553
	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	2,055,573	1,179,938
	Revaluation increment/(decrement)	(292,581)	963,768
	Transfers	-	(88,133)
	Balance at end of year	**1,762,992**	**2,055,573**

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 2018 the number of members was 39 (2017:42).

NOTES TO THE FINANCIAL STATEMENTS
For The Year Ended 31 December 2018

15. Financial Risk Management

(a) Interest Rate Risk

The Company's financial instruments consist mainly of deposits with banks, local money market instruments, short-term investments, accounts receivable and payable, and investment available for sale.

The carrying amounts for each category of financial instruments, measured in accordance with AASB 139 as detailed in the accounting policies to these financial statements, are as follows:

	2018 $	2017 $
Financial assets		
Cash and cash equivalents	159,443	382,645
Trade and other receivables	67,514	7,244
Other current assets	8,008	4,301
Financial assets at fair value through profit or loss	1,566,580	1,756,021
Total financial assets	**1,801,545**	**2,150,211**
Financial liabilities at amortised cost:		
– trade and other payables	123,372	123,903
Total financial liabilities	**123,372**	**123,903**

Net Fair Values

(i) For listed available-for-sale financial assets and financial assets at fair value through profit or loss the fair values have been based on closing quoted bid prices at the end of the reporting period.

In determining the fair values of the unlisted available-for-sale financial assets, the Directors have used inputs that are observable either directly (as prices) or indirectly (derived from prices).

(ii) Fair values of held-to-maturity investments are based on quoted market prices at the ending of the reporting period.

16. Key Management Personnel

Any person(s) having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any Director (whether executive or otherwise) of that entity is considered key management personnel.

The totals of remuneration paid to key management personnel (KMP) of the Company during the year are as follows:

	2018 $	2017 $
Key management personnel compensation	157,144	144,676

NOTES TO THE FINANCIAL STATEMENTS
For The Year Ended 31 December 2018

	2018 $	2017 $
17. **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	**159,443**	**382,645**
(b) Reconciliation of Cash Flow from Operations with Profit after Income Tax		
Net income/loss for the period	(74,844)	(381,471)
Cash flows excluded from profit attributable to operating activities		
Non cash flows in profit		
Depreciation	4,401	4,856
Net (gain)/loss on disposal of investments	(104,770)	32,483
Changes in assets and liabilities, net of the effects of purchase and disposal of subsidiaries		
(Increase)/decrease in trade and term receivables	(60,270)	47,870
(Increase)/decrease in prepayments	(3,707)	3,898
Increase/(decrease) in trade payables and accruals	(531)	52,239
Increase/(decrease) in provision for employee benefits	17,933	(6,394)
Net cash inflow/(outflow) from operating activities	**(221,788)**	**(246,519)**

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	83,195	82,793
Less: Total direct costs of fundraising	33,230	20,657
Net surplus from fundraising activities	**49,965**	**62,136**

*The direct cost of fundraising contains an amount of $10,000 which is for the initial development of the Acquisition Program to be progressed in 2019.

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

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

(c) Fundraising appeals conducted during the financial period

Appeals only

(d) Comparisons

Total cost of fundraising/gross income from fundraising	40%	25%
Net surplus from fundraising/gross income from fundraising	60%	75%
Total cost of services/total expenditure	100%	100%
Total cost of services/total income received	40%	25%

SUMMARY FINANCIAL REPORT - INCOME STATEMENT

For the year ended 31 December 2018

	2018 $	2017 $
REVENUE		
Donation and Gifts - Monetary & Non monetary	73,195	81,786
Bequests and Legacies	10,000	1,000
Grants		
Other Australian	39,351	43,928
Other overseas	10,680	733
Investment Income	417,103	239,710
Other Income	7,470	9,021
TOTAL REVENUE	**557,799**	**376,178**
EXPENDITURE		
International Aid and Development		
International programs		
Funds to international projects	29,943	58,610
Program Support Costs	60,466	16,771
Community education	3,833	12,190
Fundraising Costs		
Public	33,230	20,657
Government, multilateral and private	-	-
Accountability and Administration	253,640	316,881
Non - Monetary Expenditure	-	-
Total International Aid and Development Programs Expenditure	**381,112**	**425,109**
Domestic projects	158,054	171,328
Investment Expenditure	53,474	161,212
Other Expenses	40,003	-
TOTAL EXPENDITURE	**632,643**	**757,649**
EXCESS/(SHORTFALL) OF REVENUE OVER EXPENDITURE	(74,844)	(381,471)
Net gain/(loss) on revaluation of financial assets and investment property	(292,581)	981,891
EXCESS/(SHORTFALL) OF REVENUE OVER EXPENDITURE	(367,425)	600,420

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

The above disclosures are prepared in accordance with the requirements set out in the ACFID Code of Conduct. For further information on the Code please refer to the ACFID website "www.acfid.asn.au".

STATEMENT OF CHANGES IN EQUITY
For The Year Ended 31 December 2018

	Capital profits Reserves $	Asset Revaluation Reserves $	Retained Earnings/ (accumulated losses) $	Total $
Balance at 1 January 2017	2,411,980	1,179,938	859,623	4,451,541
Excess of revenue over expense	-	-	(381,471)	(381,471)
Total comprehensive income for the year	-	963,768	-	963,768
Transfers on sale of assets	-	(88,133)	88,133	-
Balance at 31 December 2017	2,411,980	2,055,573	566,285	5,033,838
Excess of revenue over expense	-	-	(74,844)	(74,844)
Total comprehensive income for the year	-	(292,581)	-	(292,581)
Transfers on sale of assets	-	-	-	-
Balance at 31 December 2018	**2,411,980**	**1,762,992**	**491,441**	**4,666,413**

The above disclosures are prepared in accordance with the requirements set out in the ACFID Code of Conduct.
For further information on the Code please refer to the ACFID website "www.acfid.asn.au".

SUMMARY FINANCIAL REPORT - BALANCE SHEET
As At 31 December 2018

	Note	2018 $	2017 $
ASSETS			
Current Assets			
Cash and cash equivalents	5	159,443	382,645
Trade and other receivables	6	67,514	7,244
Other current assets	7	8,008	4,301
Total Current Assets		**234,965**	**394,190**
Non-Current Assets			
Financial assets	8	1,566,580	1,756,021
Property, plant and equipment	9	48,028	49,385
Investment property	10	3,000,000	3,000,000
Total Non-Current Assets		**4,614,608**	**4,805,406**
TOTAL ASSETS		**4,849,573**	**5,199,596**
LIABILITIES			
Current Liabilities			
Trade and other payables	11	123,372	123,903
Borrowings	11	-	-
Provisions	12	59,788	41,855
Total Current Liabilities		**183,160**	**165,758**
TOTAL LIABILITIES		**183,160**	**165,758**
NET ASSETS		**4,666,413**	**5,033,838**
EQUITY			
Reserves	13	4,174,972	4,467,553
Retained earnings		491,441	566,285
TOTAL EQUITY		**4,666,413**	**5,033,838**

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, Intangibiles, 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. For further information on the Code please refer to the ACFID website "www.acfid.asn.au".

DIRECTORS' DECLARATION

The Directors of the registered entity declare that, in the Directors' opinion:

1. The financial statements and notes, as set out on pages [insert page number] to [insert page number], are in accordance with the Australian Charities and Not-for-profits Commission Act 2012 and:
   - **i.** comply with Australian Accounting Standards – Reduced Disclosure Requirements; and
   - **ii.** give a true and fair view of the financial position of the registered entity as at 31 December 2018 and of its performance for the year ended on that date.
2. There are reasonable grounds to believe that the registered entity will be able to pay its debts as and when they become due and payable.

This declaration is signed in accordance with subs 60.15(2) of the Australian Charities and Not-for-profits Commission Regulation 2013.

Amanda Christensen
Executive Director
Sydney, 29th March 2019

Christopher Turner
Director
Sydney, 29th March 2019

INDEPENDENT AUDITOR REPORT

To The Members of the Australian Respiratory Council

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

Report on the Audit of the Financial Report Opinion

We have audited the financial report of Australian Respiratory Council (the registered entity), which comprises the statement of financial position as at 31 December 2018, the statement of profit or loss, statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, notes comprising a summary of significant accounting policies and other explanatory information, and the Directors' declaration.

In our opinion, the accompanying financial report of Australian Respiratory Council has been prepared in accordance with Div 60 of the Australian Charities and Not-for-profits Commission Act 2012, including:

(i) giving a true and fair view of the registered entity's financial position as at 31 December 2018 and of its financial performance for the year then ended; and

(ii) complying with Australian Accounting Standards – Reduced Disclosure Requirements and the Australian Charities and Not-for-profits Commission Regulation 2013, and the Corporations Regulations 2001;

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. For further information on the Code please refer to the ACFID website "www.acfid.asn.au".

Basis for Opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Report section of our report. We are independent of the registered entity in accordance with the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110: Code of Ethics for Professional Accountants (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

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

Information Other than the Financial Report and Auditor's Report Thereon

The Directors are responsible for the other information. The other information comprises the information included in the registered entity's annual report for the year ended 31 December 2018, but does not include the financial report and our Auditor's report thereon. Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon. In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Directors for the Financial Report

The Directors of the registered entity are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards – Reduced Disclosure Requirements and the Australian Charities and Not-for-profits Commission Act 2012 and for such internal control as the Directors determine is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the Directors are responsible for assessing the registered entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an Auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement

INDEPENDENT AUDITOR REPORT
To The Members of the Australian Respiratory Council

when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

As part of an audit in accordance with the Australian Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit.

We also:

– Identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

– Obtain an understanding of internal control relevant to the audit 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 Company's internal control.

– Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
Conclude on the appropriateness of the Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our Auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our Auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

– Evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

D R Conroy FCA
Principal
Auditor No: 2251
Sydney, 29th March 2019

Conroy Audit & Advisory

CONROY AUDIT & ADVISORY
Chartered Accountants

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MILESTONES

OVER 100 YEARS OF SERVICE

1910 The National Association for the Prevention and Cure of Consumption forms at a public meeting in Sydney

1912 Australia's first tuberculosis (TB) dispensary opens in Sydney

1913 First Annual General Meeting of the National Association for the Prevention and Cure of Consumption was held

1941 Subscription from donors funds the acquisition of the first mobile x-ray unit

1954 Mobile x-ray units in NSW and other parts of Australia take more than 500,000 x-rays in a year

1982 Mobile vans are handed over to NSW Health

1986 The first grants are provided for respiratory research and overseas TB Control

2002 Laboratory skills training programs begin in the Pacific Region

2005 Dr Ingrid Lang is appointed as the first Ann Woolcock Research Fellow. Dr Lang's research is on Genetic influences on causal pathways of acute lower respiratory tract infections in highly susceptible infants

2005 In collaboration with the US Centers for Disease Control and Prevention the ARC Nurse Consultants commence annual training for nurses and health care workers across the Northern Pacific TB Programs

2006 Name changes from Community Health and Tuberculosis Australia (CHATA) to Australian Respiratory Council (ARC), reflecting our wider focus on respiratory health

2007 ARC funds two Aboriginal Tobacco Cessation Projects; The Aboriginal Health and Medical Research Council's BREATHE Project and the Aboriginal Health Council of Western Australia's Beyond the Big Smoke Project

2008 Development of a TB Resource Kit for professional and community education

2009 Funding and technical support for the project - Combating TB in factory workers and the elderly commences. ARC partners with the Cambodian Anti-TB Association to deliver this project

2010 Dr Jodie Simpson commences as the Ann Woolcock Research Fellow. Dr Simpson's research is on Characterisation and treatment of innate immune dysfunction in older people with obstructive airway disease

2011 ARC contributes funds for training medical officers to build research skills and capacity in future leaders in respiratory public health in Vietnam

2012 ARC becomes a foundation member of the newly formed Lung Health Alliance

2013 ARC celebrates 100 years of service and advocacy for TB and respiratory health in Australia and the Asia Pacific Region

2015 ARC hosted the 5th Conference of The Union Asia Pacific Region, held in Sydney, Australia

2016 Launch of "Funding the Discovery of New Knowledge"- a compilation of reports from Harry Windsor grant recipients 1986 -2015

2018 ARC contributes to the work of The Union Asia Pacific Region and The Union Nurses and Allied Professionals Sub-Section

United Nations
High Level Meeting On TB
KEY TARGETS FOR 2022

'We, Heads of State and Government and representatives of States and Governments assembled at the United Nations in New York on 26 September 2018' Commit to:

mobilizing **SUFFICIENT AND SU**
FINANCING for universal acces
prevention, diagnosis, treatment a
to increase overall global investm
TB to at least US$13 billion a ye

PREVENTING TB for those 30 million people most at risk, including 4 million children under five years of age, 20 million other household contacts of people affected by TB, and 6 million people with HIV, receive preventive treatment by 2022.

providing **DIAGNOSIS AND TREATMENT** to successfully treat 40 million people with TB including 3.5 million children and 1.5 million people with drug-resistant TB including 115 000 children by 2022.

delivering, **NEW, SAFE, EFF**
EQUITABLE, AFFORDABLE, A
VACCINES, for adults, adoles
children for all forms of TB an

promoting and supporting **AN END TO STIGMA AND ALL FORMS OF DISCRIMINATION**, by removing discriminatory laws, policies and programmes against people with TB.

mobilizing **SUFFICIENT AND SU**
FINANCING FOR RESEA
AND DEVELOPMENT to incre
global investments to US$2

arc
australian respiratory council
prevention and cure of respiratory illness

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