2022 ANNUAL REPORT NO. 109

arc
australian respiratory council
prevention and cure of respiratory illness

Our Patrons

Her Excellency the Honourable Margaret Beazley AC KC
and Mr Dennis Wilson

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 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 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 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.

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Our Vision

A world free of tuberculosis and lung disease.

Our Mission

The mission of Australian Respiratory Council is to improve lung health for vulnerable communities in Australia and the Indo-Pacific through translation of research and evidence-based practice into sustainable health solutions.

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.

ARC PRESIDENT'S REPORT 2022

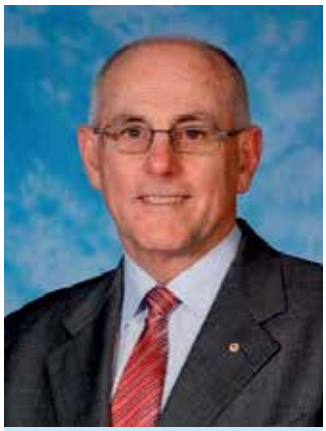
As President, I am pleased to report on the activities and outcomes of the Australian Respiratory Council (ARC). My report will highlight key events and the work undertaken by the organisation over the year.

To begin my report I would like to acknowledge in the World Health Organization's Annual Report, 2022 it is noted that tuberculosis (TB) remains one of the world's deadliest infectious killers. In 2021, 1.6 million people died from TB and 10.6 million people fell ill with this preventable and curable disease. Over the past two decades global efforts to fight TB have saved an estimated 74 million lives. However, the COVID-19 pandemic, coupled with global conflicts and socioeconomic inequities, has reversed years of progress made in the fight to end TB, and placed an even heavier burden on those affected, especially the most vulnerable people in society.

For the first time in over a decade, TB deaths and disease have increased. There is an urgent need to dramatically increase action and investments to step up the fight against TB. There is much to be done to ensure no one is left behind in accessing TB prevention and care. The ARC is committed to continuing to support people affected by TB and countries within the Indo-Pacific Region in their fight to End TB.

To ensure that ARC can continue its work in funding essential research, project activities and support for people in need, the organisation has worked this year to ensure its ongoing financial security. I would like to thank Director's past and present for their contribution to ensuring the future sustainability of the organisation.

I would like to welcome to ARC's Board two new Directors: Major General (Retd) Michael G. Smith AO and Professor Hiran Selvadurai who joined the Board in July 2022 and February, 2023 respectively.



Major General (Retd) Michael G. Smith AO

Major General (Retd) Michael G. Smith AO has had a distinguished and long career in the armed forces, he has been active in international fora on issues relating to international security, peacekeeping and complex peace operations; the responsibility to protect and the protection of civilians; ceasefire and arms monitoring; human security; disaster relief; and the Sustainable Development Goals (SDGs).

Professor Hiran Selvadurai

Professor Selvadurai is the Head of Respiratory Medicine at The Children's Hospital, Westmead and the Director of Children's Chest Research Centre. Professor Selvadurai will bring a wealth of expertise in respiratory medicine, research and education to his role as a Director of ARC.

Over the past year ARC has continued to work in partnership with Professor Ben Marais, the PEARL Project Team and the Kiribati Ministry of Health and Medical Services to implement the PEARL Project. The project is focussed on developing a pathway for the elimination of TB and leprosy in Kiribati, and the wider pacific more generally. The population of South Tarawa, Kiribati (approximately 50,000 people) will be invited to be screened and offered treatment for TB and leprosy.

The ARC is leading the component of the project relating to building workforce capacity through training and education. This work builds on exiting expertise and activities to deliver in-country training and clinical mentoring for National TB Programs in the Pacific.

Further information on the project and the activities ARC has delivered and supported are available on pages 18 - 26 of this report.

The ARC Nurse Consultant Group continues to support the University of Western Sydney (UWS) Graduate Diploma/ Master of Nursing (TB Management). The course was developed as a collaboration between ARC, the National TB Program and the UWS to support capacity building within the Australian nursing workforce. The ARC Nurse Consultants Group continue to be involved in the course design and implementation. To support the course and students ARC awards annual scholarships. This year, scholarships were awarded to Emma Hunt, Amy Peachy and Emma Just to undertake the TB specialist units within the course.

I am pleased to report that there are now six graduates of the Western Sydney University Master of Nursing (TB Management) course. On behalf of the Board of Directors I extend our congratulations to the nurses on their completion of the course.

ARC's contribution to the course and scholarship program demonstrates our commitment to supporting capacity building for the Australian TB Program through the development of specialist nurses. Further information about the course and scholarship recipients is available on pages 16 and 17 of this report.

Acknowledgement and thanks

To begin my acknowledgements and thanks, I would like to extend my sincere thanks and gratitude to ARC's loyal and generous donors who continue each year to support our work and activities that focus on the promotion of respiratory health and the elimination of TB within Australia and the Indo-Pacific Region. I am pleased to be able to share with you that all of the funds raised through our fundraising appeals were utilised to fund research and project activities. Further information about how your donations are used to support the work of the ARC can be found in this report and on our website – www.thearc.org.au.

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

I would like to acknowledge the retirement of Ian Ramsay from the Board of Directors in January 2022. On behalf of the Directors and staff of ARC, I wish Ian well for the future and thank him for his wise counsel over many years on operational and governance matters.

I would like to thank the Finance Team, led by Chris Turner and supported by Robyn Johnson, Wade Ebrahimi and Amanda Christensen for their work over the past year. In 2022 the team reviewed ARC's Investment Strategy to ensure that ARC was positioned to continue funding operational, research and project activities that contribute to mission of the organisation. Further information on ARC's financial statements are detailed on pages 36 to 56 of the annual report.

The past few years have shown that research continues to be fundamental in the fight against the COVID pandemic, tuberculosis and lung disease. The ARC is committed to continuing to support research initiatives and innovation. On behalf of Greg Fox, I would like to thank ARC's Research Committee for their support and time in assisting ARC to achieve our research goals. This year we implemented a new process to award research grants, I would like to thank the committee for the extra work involved to review and award the research grants. Further information on the grants awarded this year to ACTnet and through the ARC Research Support Grant Scheme are included in the annual report on pages 10 to 15.

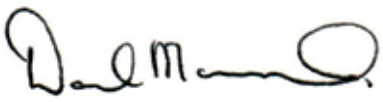
In 2022, ARC continued to work with global and local partners to fund and deliver projects, provide training and technical support for health care workers, and promote respiratory health and the elimination of TB. The ARC highly values the collaboration and relationships developed with partner agencies. These agencies include: The International Union Against TB and Lung Disease (The Union), the US Centers for Disease Control and Prevention, the Pacific Island Health Officers Association, the Kiribati Ministry of Health and Medical Services, The University of Sydney, Institute for Infectious Diseases and the Bowlers Club of NSW. I would like to acknowledge the grants received from a number of these agencies this year to support and contribute to our project activities. Further information on ARC's project activities and funding are included in the annual report on pages 18 to 26.

I would like to thank my colleague and friend Robert Estcourt AM and acknowledge the continued relationship, shared vison and valued collaboration between ARC and the Woolcock Institute of Respiratory Medicine.

I would like to thank the ARC Nurse Consultants Group (Pam Banner, Amanda Christensen, Lauren Deakin, Chris Lowbridge and Kerrie Shaw) for their ongoing contribution to the project work and activities that ARC supports and delivers within the region. Your enthusiasm and continued commitment to ARC's projects and partners contributes to the success of the organisation.

My thanks and those of the Board are extended to David Conroy and Patryk August, from Conroy Audit & Advisory for their expertise and assistance in meeting our annual auditing responsibilities. I would also like to thank our investment adviser Daniel Meech from Koda Capital for his financial guidance over the past year.

Finally, to Amanda Christensen our amazing Executive Director, on behalf of the Board of Directors I would like to acknowledge your work and contribution to the success of the organisation again this year.



David Macintosh AM KMG

GOVERNANCE

BOARD OF DIRECTORS

DAVID MACINTOSH AM KMG

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 in perpetuity; Founder since 2013 and Benefactor since 2007, Royal Alexandra Hospital for Children - The Children's Hospital at Westmead; Director, Woolcock Institute of Medical Research 2000-2011, re-appointed 2021 to Present; Director, The Australian Lung Foundation 1994-2013; Governor, St Vincent's Hospital, Curran Foundation; Life Governor, Melanoma Institute of Australia; Deputy Chairman, Ainsworth Charitable Foundation 2016 – Present; 35 years of Senior Management and Director level in the Transport and Construction Industries in Australia and Europe; Surf Life Saving Australia, 50 years of active patrol service and dedication; Life Member, Long Reef Surf Life Saving Club Inc.; Life Member - Collaroy Surf Life Saving Club Inc.; Life Member – City Tattersalls Club ; Director, Vice President - United Nations Australia Association (NSW) 2017 – 2019; Appointed Australia's United Nations Goodwill Ambassador Oceans – Life Under Water SDG-14 and The Pacific, 2018 – 2019 and Principal Advisor, Marine Life, and Oceans and The Pacific; Awarded Honorary Associate Life Membership TSANZ 2020; Appointed to the Board of ARC in 1997; President of ARC 2000-2013; 2019 - Present. Vice President of ARC 2013 - 2019; Elected Life Governor of ARC in 2010.

ROBYN JOHNSON

GAICD

Robyn Johnson has had a prominent career in the tourism and event sector in senior management roles. She has worked extensively in the not-for-profit sector and has a background in the development and implementation of business growth strategies and establishing start-ups or re-aligning existing organisations and programs to achieve successful outcomes. Robyn has developed and designed accredited education and training programs to upskill the workforce and she has commissioned research into industry skills to identify and measure skills shortages and trends to advocate to government on behalf of the meetings and events sector. Robyn is currently working with government and industry on new regional programs in response to impact of COVID-19 and bushfires on the visitor economy. She is a graduate of the Australian Institute of Company Directors. Appointed to the Board of ARC in 2012, Vive President of ARC 2021 – Present.

AMANDA CHRISTENSEN AM

Registered Nurse

Appointed as the ARC Executive Director from April 2008 to May 2009 and April 2013 – Present. NSW Tuberculosis (TB) Program Manager 1997-2013; various positions in public health for three decades including: clinical nurse consultant in public health Corrections Health Service and TB Prevention and Control Services for the NSW Ministry of Health. Member of the NSW Ministry of Health TB Advisory Committee 1997 to Present. Member of the Commonwealth Department of Health National TB Advisory Committee 1997 – 2013. Treasurer & Executive Committee Member for the International Union Against TB and Lung Disease (The Union) Asia Pacific Region 2015 to 2022. Elected as the Vice President of The Union Asia Pacific Region 2022 – Present; Programme Secretary of The Union Nursing and Allied Health Professionals Sub–Section 2017 – 2019. Chair of the Nurses and Allied Health Professionals Sub-Section of The Union 2019 to 2022. Appointed a Member of the Order of Australia June 2019 "For service to community health particularly to respiratory diseases". Appointed to the Board of ARC in 2001. Elected as a Life Governor of ARC in 2011.

PROFESSOR GREG FOX

PhD MIPH FRACP MB BS BSc(Med) GAICD

Professor of Respiratory Medicine at Sydney University and Respiratory Physician at Royal Prince Alfred Hospital, Sydney. He serves as Area Director of Tuberculosis Services fro Sydney Local Health District. He is a NHMRC Leadership Fellow and a Research Leader for the Woolcock Institute of Medical Research. Professor Fox heads a number of NHMRC-funded clinical trials and translational research studies relating to tuberculosis (TB), lung disease and antimicrobial resistance. His research aims to develop new approaches to TB control, COPD, asthma and tobacco control in resource-limited settings. Appointed to the Board of ARC in 2017.

JEAN MARIE SANTOS

BSCS IT

Bachelor of Science in Computer Science major in Information Technology with a career spanning over 20 years of experience, successfully delivering business improvement, business transformation, infrastructure and application projects globally. Jean's acquired skills in corporate social responsibility, environmental awareness and philanthropy has earned her positions as a Director of the Australian Respiratory Council 2019 - Present,

Non-Executive Director for the United Nations Association of Australia (UNAA) NSW Division 2018-Present, Director of the UNAA National Peace Program 2013-2018 and UN Women Australia NSW Chapter Executive Committee 2012-2014.

PROFESSOR HIRAN SELVADURAI

MBBS FRACP PhD FThorSoc

Professor Selvadurai is the Head of Respiratory Medicine at The Children's Hospital, Westmead as well as the Director of Children's Chest Research Centre. He graduated from the University of Sydney and trained at the Royal Alexandra Hospital for Children, Sydney. He completed his PhD at the University of Sydney on the "The Utility of Exercise testing in children with lung disease" in 1999. He was appointed as Consultant in Respiratory medicine, Hospital for Sick Children, Toronto in 2000 and became the Director of Cystic Fibrosis. In 2006, he was appointed Consultant in Respiratory Medicine at The Children's Hospital, Westmead. He has published over a 100 peer reviewed publications and 10 Book chapters. He is on the Editorial Board of the Annals of the American Thoracic Society and Pediatric Pulmonology. He has supervised nine PhD students to completion and currently supervises two PhD students through the University of Sydney. He holds an TSANZ Innovation grant. He has received funding from NHMRC, Canadian CF Foundation, Canadian Institute of Health Research and National Institute of Health (NIH). He is an investigator on numerous CFTR modulator clinical trials. Appointed to ARC's Board of Directors in 2023.

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; elected as a Life Governor of ARC in 2021.

MICHAEL G. SMITH AO

Major General (Retd)

Development Advisor to the Calleo Indigenous Community Fund; Chair of the Gallipoli Scholarship Fund; Non-executive Director of the Institute for Economics and Peace; Past National President of the United Nations Association of Australia; former Visiting Fellow at the Asia-Pacific College of Diplomacy at the Australian National University; former Adjunct Professor at the Key Centre for Ethics, Governance, Law and Justice at Griffith University; founding Executive Director of the Australian Civil-Military Centre and the CEO of Austcare (now Action Aid Australia). Mike Smith had a distinguished military career spanning 34 years, graduating with the Sword of Honour from the Royal Military College Duntroon in 1971, and including numerous command appointments. Mike Smith holds a Master of International Relations from the Australian National University and a Bachelor of Arts in History from the University of New South Wales. He is a Graduate of the Australian College of Defence and Strategic Studies, the Cranlana leadership program in Melbourne, and the Company Directors Course at the University of New England. Appointed to the Board of ARC in 2022.

CHRISTPOHER TURNER

BCom Dip FS FPA

Principal Financial Planner for 'Turner Wealth Pty Ltd' (Corporate Authorised Representative (No.1241514) of Capstone Financial Planning Pty Ltd. ABN 24 093 733 969. Australian Financial Services License No.223135. December 2019 – to Current; Principal Financial Planner for 'Turner Wealth Pty Ltd' (Corporate Authorised Representative of Commonwealth Financial Planning Limited) May 2016 – December 2019; Senior Financial Planner - Relationship Managed Clients (Representative of Commonwealth Financial Planning Limited) Oct 2010 – May 2016; Branch Financial Planner (Inner and Mid-West suburbs of Sydney) (Representative of Commonwealth Financial Planning Limited) May 2007 – October 2010; Business Analyst / Project Manager (CMLA) (Commonwealth Bank of Australia) January 2004 – May 2007, Diploma of Financial Planning 2006; Manager of 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 Ltd) 1994 – 1995; B. Commerce Newcastle University 1990 – 1993. Appointed to Board of ARC as Finance Director in 2017.

RESEARCH COMMITTEE

Professor Greg Fox (Chair of the Committee)

NHMRC Career Development Fellow and Professor in Respiratory Medicine at Sydney University and Royal Prince Alfred Hospital, Sydney. Area Director of Tuberculosis Services, Sydney Local Health District.

Professor Carol Armour AM

Executive Director Woolcock Institute of Medical Research and Respiratory Researcher.

Professor Justin Denholm

Medical Director, Victorian Tuberculosis Program, Melbourne Health; and Professorial Research Fellow, Department of Infectious Diseases, University of Melbourne NHMRC Investigator Fellow.

Associate Professor Claudia Dobler

Conjoint Associate Professor University of NSW, Associate Professor Bond University, Consultant Respiratory Physician NSW Health

Professor Peter Gibson

Conjoint Professor, School of Medicine and Public Health, University of Newcastle.

Professor Emma McBryde

Professorial Research Fellow - Infectious Disease and Epidemiology Australian Institute of Tropical Health & Medicine, Centre for Tropical Bioinformatics and Molecular Biology, James Cook University.

David Macintosh AM KMG

ARC President.

ARC PRESIDENTS & 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 KMG

Tuberculosis Australia (from 2001)

Year	President
2001 - 2006	David Hugh Macintosh AM KMG

Australian Respiratory Council (from 2006)

Year	President
2006 - 2013	David Hugh Macintosh AM KMG
2013 - 2019	Emeritus Professor J Paul Seale AM
2019 - Present	David Hugh Macintosh AM KMG

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 KMG
2011	Amanda Christensen AM
2011	Professor Gavin Frost
2012	Robert Horsell OAM
2012	Clinical Associate Professor Peter Gianoutsos
2021	Kerrie Shaw

IDENTIFYING AGE, SEX AND VITAMIN D MODIFIED IMMUNE CORRELATES OF TB RISK

Dr Anna Coussens and Dr Dylan Sheerin, Infectious Diseases and Immune Defence division, Walter and Eliza Hall Institute of Medical Research

Background

Whilst it's estimated that a quarter of the world has been infected by *M. tuberculosis (Mtb)*, only 5-15% ever develop subsequent tuberculosis (TB) disease. Intriguingly, whilst young infants have a high risk of developing the most severe forms of disseminated TB after *Mtb* infection, children aged 6-14 display the lowest risk of TB. However, TB risk dramatically increases following puberty, with early adulthood posing the highest risk of developing pulmonary TB, the form of disease most able to transmit *Mtb*. It is following puberty that male risk of TB also increases. We know that the function and quantity of circulating immune cells during life can be dramatically influenced by fluctuations in sex hormones. Changes in the concentration of these circulating metabolites therefore have the potential to profoundly affect TB immunity through gene transcription factor modulation. Despite the potential for sex hormones to disrupt protective immune cell homeostasis required for *Mtb* control, the specific functional subsets of cells which arise during puberty and thereby increase TB risk are not yet defined.

In addition to sex hormones, the active metabolite of vitamin D is a micronutrient hormone. It similarly functions as a transcription factor ligand when binding the vitamin D receptor, regulating expression of > 900 genes, the large majority expressed by immune cells. For over a decade, our research has defined vitamin D to have dual antimicrobial and anti-inflammatory activity. In a phase 2 clinical trial we showed that providing vitamin D supplementation to TB patients during TB treatment improves their resolution of inflammation and causes a faster increase in markers of lung healing. We have just completed our phase 3 clinical trial of vitamin D supplementation in children 6-14 yrs to prevent *Mtb* infection, in Cape Town, South Africa. The samples collected in this trial allow us to now investigate changes in immune cell populations during puberty, how they relate to control of *Mtb* infection and the relationship of these changes to sex hormone and vitamin D levels over time. To understand how these changes relate to adult TB risk, we will also compare the responses we identify in children to those we investigate in a second cohort of adult TB household contacts, collected in the surrounding communities.

Our hypothesis is that unique immune cell phenotypes which develop during puberty increase TB risk in certain individuals, and that vitamin D can boost TB immunity by modifying circulating immune cell functions and frequencies prior to, and following, *Mtb* infection.

Project Aims

Aim 1. Phenotype longitudinal changes in circulating immune cell function in children during pubertal transition and compare these to immune cells identified in adult TB contacts who do and do not progress to TB disease.

Aim 2. Characterise longitudinal sex hormone and vitamin D fluctuations in children during pubertal transition and map these patterns to immune cell dynamics we identify to be associated with TB risk.

Synopsis of Vitamin D Clinical Trial Findings

In collaboration with researchers at the University of Cape Town, South Africa and Queen Mary University of London, UK, in the ViDiKids trial (NCT02880982), we screened 2271 children for prior *Mtb* infection using the QuantiFERON-Plus (QFT) test of *Mtb*-specific T cell sensitisation to *Mtb* antigens and randomized 1683 QFT-negative primary school children (6-11yrs at enrollment) to receive 10,000 IU oral vitamin D3 or placebo, weekly for 3 yrs. We tested whether vitamin D prevented *Mtb* infection at 3 years, measured by conversion from QFT-negative to QFT-positive, as well as performing laboratory assays to assess immune cell killing of *Mtb* which form the basis for our analysis of cellular functions and hormone correlates of childhood protection. In two papers of the primary trial results, one published in 2022 [1] and one currently under review [2], we found:

- Of the 2271 children screened for *Mtb* infection by QFT-Plus testing, roughly a quarter had already been *Mtb* infected by age 6-11. During the 3-year trial a higher-than-expected incidence of 12.2% QFT-Plus conversion was observed (compared to the anticipated 10.1%), demonstrating an incredibly high rate of *Mtb* infection in this community.
- The mean age of the 1683 children at enrolment was 8.9 years and 52.4% were female. Mean vitamin D levels (measured by serum 25(OH)D_3) at baseline was 71.2 nmol/l, and 51.2% of participants had serum 25(OH)D_3 below the optimal level for immune function of 75 nmol/l.
- Older children were most likely to have sub-optimal vitamin D levels; children at age 6 had a mean 25(OH)D_3 of 80.4 nmol/l vs 61.2 nmol/l for children 11+.
- Mean serum 25(OH)D*3* was also lowest in winter months (July-Sept, 59 nmol/L) compared to summer (Jan-Mar, 83.0 nmol/L) (Figure. 1) and lowest is those with a BMI-for age Z-score > 3+ and those who spent the least hours in daylight.
- At the end of the trial, 90.4% of children in the vitamin D group and 25.0% in the placebo group had serum 25(OH) D_3 ≥75 nmol/L (P<0.001); mean serum 25(OH)D_3 was 104.3 vs. 64.7 nmol/l, respectively.
- 76/665 (11.4%) participants allocated to vitamin D vs. 88/684 (12.9%) participants allocated to placebo tested QFT-Plus positive at 3-year follow-up, multiple regression

analysis adjusted odd ratio (aOR) of 0.84, 95% CI 0.60 to 1.17, P = 0.29. A trend for greater protection was also seen in children with baseline 25(OH)D_3 <75 nmol/l, aOR of 0.81, 95% CI 0.50 to 1.3, P = 0.38.

- The wide confidence intervals (CI) of protection from infection indicating likely benefit in a proportion of the children enrolled, which our immunological analyses will further investigate.
- Incident active TB was diagnosed during follow-up in 0/829 participants randomised to vitamin D vs. 3/853 (0.4%) participants randomised to placebo.

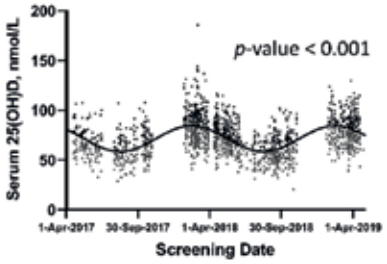


Figure 1. *Seasonal differences in vitamin D (serum 25OHD3) in children at enrollment into the ViDiKids trial. From [1].*

Ongoing immunological research

With our ARC funding support we have recently received at WEHI serum and fixed whole blood cells from 650 children in the trial who participated in the immunological sub-study. We are now using these to analyse annual longitudinal changes in immune cell functional phenotypes and sex hormone and vitamin D levels, from age 6-14. We will compare changes in immune cell phenotypes between those who did or do not become *Mtb* infected and determine if vitamin D supplementation modifies the abundance of phenotypes of cells that may be associated with protection from infection.

To understand how immune cell changes which arise during puberty correlate with markers of TB risk in adults we are also performing identical immune cell phenotyping and hormone quantification in samples collected from 90 adult TB household contact study 20 who developed TB over 3-years, 20 we identified with radiographic evidence of subclinical TB who didn't develop symptomatic TB, 40 QFT-positive with no radiographic evidence of subclinical TB and a rare group of 10 who remained QFT-negative during follow-up, despite living in this *Mtb* high-transmission setting.

Expected outcomes and significance

Our goal is to identify immune cell functional correlates of increased TB risk which emerge during puberty. Our results will provide unprecedented insight into differences in childhood and adult TB immunity and determine the contribution of sex hormone fluctuations and vitamin D on immunological development. This work may have broad relevance to other infectious diseases, such as COVID-19, where children are also generally protected and men are also at higher risk. Changes we identify that correlate with vitamin D supplementation will also provide immunological understanding of the outcomes of the ViDiKids prevention of Mtb infection trial.

Figure 2. *The ViDiKids laboratory team at University of Cape Town. Left to right: PhD student Mthawelanga Ndengane, Dr Anna Coussens, research assistant Nzwaki Bangani.*

Figure 3. *PhD student Mthawelanga Ndengane working in the Biosafety Level 3 laboratory inserting ViDiKids blood samples infected with Mtb into the BACTEC Mtb growth monitoring system.*

References:

1. Middelkoop K, Walker N, Stewart J, Delport C, Jolliffe DA, Nuttall J, Coussens AK, Naude CE, Tang JCY, Fraser WD, Wilkinson RJ, Bekker LG, Martineau AR. Prevalence and Determinants of Vitamin D Deficiency in 1825 Cape Town Primary Schoolchildren: A Cross-Sectional Study. Nutrients. 2022 Mar 16;14(6):1263. doi: 10.3390/nu14061263.

2. Middelkoop K, Stewart J, Walker N, Delport C, Jolliffe DA, Coussens AK, Nuttall J, Tang JC, Fraser WD, Griffiths CJ, Kumar GT, Hooper SF, Wilkinson RJ, Bekker LG, Martineau AR. Vitamin D Supplementation to Prevent Tuberculosis Infection in South African Schoolchildren: Multicentre Phase 3 Double-Blind Randomised Placebo-Controlled Trial (ViDiKids). Available at http://dx.doi.org/10.2139/ssrn.4325228.

ARC RESEARCH SUPPORT GRANTS 2022

The ARC supports prevention, treatment and research into tuberculosis (TB) and respiratory disease at a national and international level. The ARC has been committed to building expertise and sustainable capacity in respiratory health by fostering innovative research to promote respiratory health. ARC's contribution to the discovery of new knowledge and enhanced scientific understanding in the field of respiratory health is through research grants.

In 2022, ARC will be supporting four research projects, these projects address basic science, clinical research and public health relating to the following themes: (i) infectious lung diseases due to *M. tuberculosis* or other respiratory pathogens, and (ii) chronic respiratory diseases related to environmental factors.

Research funding is awarded in open competition, on the basis of merit, utilising the following criteria: alignment with ARC's research themes and priority areas, the scientific quality of the application, the capability of the applicant and potential impacts of the proposed work. A summary of each project is listed below. A report on the outcomes of each project will be reported in the ARC 2023 annual report.

Associate Professor Stephen Corbett
Sydney University, Western Clinical School

Associate Professor Stephen Corbett

A case control study investigating the high incidence of tuberculosis (TB) among Nepalese immigrants in NSW: Descent from altitude or a legacy of genetic adaptations to hypoxia?

The Research Team have shown that among all immigrants into Western Sydney, people from Nepal and Tibet have the highest incidence of TB; almost double the rates seen in immigrants from adjacent countries such as India, Pakistan and Bangladesh. It has been known for over 150 years that when people from Nepal or Tibet descend to lower altitudes, their rates of TB climb.

The team have embarked on a case control study to try and understand why. The team are focussing on two potential risks. The first is the change in oxygen concentration in inspired air that occur with descent from mountainous areas. The second is the presence of known "Tibetan" adaptations to high altitude. These mutations are plausibly linked to an impaired immune response to TB infection.

The Research Team have obtained ethical approval and currently have interviewed 34 cases and controls. Cases are Nepalese or Tibetan people diagnosed with TB , and controls are Nepalese or Tibetan people from the community without TB.

The team have developed a questionnaire with help from WHO and GIS methods to estimate altitude of residence in Nepal before emigrating. Genetic testing for the presence of these mutations will be done by an international collaborator, Professor Joe Prchal from the University of Utah.

Ultimately the team may need to recruit 120 cases and 240 controls. Funds from the ARC will help to extend the study to other parts of Sydney.

There are over 80 million people globally living above 2500 metres. Understanding the causes of the high vulnerability of Nepalese and Tibetans to TB will open new avenues of research into preventive or host directed interventions in these populations.

Associate Professor Larcombe
Curtin University/Telethon Kids Institute

The impact of heated-tobacco-product use on gene expression in the lung - are they really a better alternative to cigarette smoking?

Heated tobacco products (HTPs) are electronic devices, similar to e-cigarettes, that heat a processed tobacco/"e-liquid" mixture. This produces an aerosol containing nicotine, particulate matter and other harmful substances which is inhaled by the user. Along with e-cigarettes, they are the next 'hot-product' for Big Tobacco with many companies producing

Dr Katherine Landwehr & Associate Professor Alex Larcombe

devices and marketing them as "reduced-risk" alternatives to conventional tobacco cigarettes. This claim is based on the devices using heating rather than combustion, however it is not based upon rigorous, unbiased research.

In this project, Associate Professor Larcombe and colleagues will leverage existing, unique samples of human airway epithelial cells which have previously been exposed to HTP aerosols to investigate the effects of exposure on gene expression in the lungs. Using RNA seq analyses, the team will assess the relative risk of heated-tobacco-products compared with tobacco smoking (i.e. are they "reduced-risk" as the manufacturers claim). The data generated will complement a suite of toxicological and physico-chemical data they have already collected using this protocol.

Professor Mark Nicol
University of Western Australia

A comparative evaluation of the accuracy of TB-specific skin tests in Thailand

Tuberculosis (TB) preventive treatment is used to prevent TB disease in people with TB infection. The tuberculin skin test (TST) is the most widely used test for diagnosis of TB infection, however, TST may give false positive results in people exposed to non-tuberculous mycobacteria or those who have been BCG-vaccinated.

Professor Mark Nicol

In 2022, the World Health Organization recommended novel tuberculosis antigen-specific skin tests (TBST) as alternatives to TST for diagnosis of TB infection. The WHO guideline supports the use of three different TBST: C-Tb (Serum Institute of India), C-TST (Anhui Zhifei Longcom, China) and Diaskintest (Generium, Russian Federation). However, there are no head-to-head comparisons of the accuracy of the new TBST. Such information is critical for TB programme managers to make informed decisions on which TBST to implement. We will therefore conduct a head-to-head comparison of the accuracy of C-Tb and C-TST, in three groups of participants (people with active TB, people at low risk of TB infection and people at high risk of TB infection) in Thailand. We will compare their accuracy to that of TST and the reference standard test for TB infection, the interferon-gamma release assay.

Associate Professor Michelle Redman-MacLaren & Dorothy Esau
James Cook University

Understanding the experience of women in a tuberculosis (TB) hot spot in Solomon Islands to help effectively find, treat and care for people with TB.

TB remains at inequitable and unacceptably high rates in East Kwaio, Malaita Province, Solomon Islands. Even though important gains have been made in recent years, there are still undiagnosed cases, or new cases, known to occur amongst people living in mountainous areas, and there continues to be TB-related deaths.

Women are central to the care of children and family members, including being responsible for growing the food Kwaio people eat. Because of these responsibilities, they experience TB, and the care of people with TB, in a different way to men and children.

Using *Tok Stori* research methods, East Kwaio and James Cook University researchers will explore and describe women's experience of TB with women, men and youth in hamlets in the mountains to determine how to effectively test, treat and support people with TB. *Tok Stori* will be facilitated in East Kwaio and Solomon Islands Pijin languages. Outcomes of the research will be reported and returned to the East Kwaio people using *A' imai* (traditional song format for sharing knowledge), a policy brief for decision makers and found poetry (using the words of participants). This study has been requested by tribal leaders in East Kwaio.

Baru Conservation Alliance TB Rangers and Health Committee members with Associate Professor Michelle Redman-MacLaren and Sue Devlin

2022 ANNUAL REPORT OF THE AUSTRALASIAN CLINICAL TUBERCULOSIS NETWORK (ACTNET)

Dr Andrew Burke
Chair ACTnet Steering Committee

The Australasian Clinical Tuberculosis Network is a network of clinicians and researchers in Australia and New Zealand who aim to conduct high-quality multicenter clinical research. The focus of ACTnet is the development of new evidence to support TB elimination in Australia and beyond. The Australian Respiratory Council (ARC) is the principal partner organization of ACTnet. ARC provides funding for administration officer salary support for which we are grateful.

The aims of ACTnet are met through 3 main activities:

1. Establishing collaborative networks of researchers (SIGs) in key areas which facilitates discussion at a high level of expertise
2. Education to clinicians/ researchers and public health professionals
3. Facilitating TB research projects – particularly those that allow for collaboration between different health services within Australia and New Zealand.

One of the goals of ACTnet is to develop networks of established and emerging researchers in TB in Australia and New Zealand. In order to develop productive working relationships, ACTnet has establishing links in the following areas:

1. Epidemiology / data collection
2. TB microbiology / diagnostics
3. Clinical trials / international health
4. Mycobacterial therapy pharmacokinetics.

ACTnet has standing representation from ASID and TSANZ and the ARC.

Membership: Our current membership number is 85. We have a larger number of people who follow ACTnet through twitter/social media. It is planned to increase our membership by increasing circulation of the TBPod podcast, sharing information about our activities widely (including to TSANZ, ASID and the TB CRE) and through our research networks across all states and territories.

As ACTnet does not hold funding for research, it is expected that our main role will be in connecting researchers acknowledging that many ACTnet members will be conducting their TB research in institutions independent of ACTnet.

Educational activities: In February 2023 we had our first online symposium on TB genomics. We were delighted to have in excess of 100 participants online with many virtual links representing institutional groups so the actual number of people in attendance was higher. The interest levels represent the rapid advances in molecular diagnostics in TB and we had a broad representation of attendees from clinical infectious disease, microbiology, and public health.

The speakers were: Dr Chris Coulter, 'Introduction to Genomics', Dr Norelle Sherry "Implementation of TB Genomics for AMR and Public Health", and Professor Vitali Sintchenko "Case Studies in TB Genomics".

In the second half of 2023 we are holding another online seminar on public health and nursing in TB. This will be aimed primarily at TB and public health nurses although again we expect a broad group of clinicians and researchers to attend.

ACTnet Podcast: ACTnet and the TB Forum have established The TBPod. The TBPod is a podcast designed for clinicians and policy makers caring for patients with TB. The TBPod consists of conversations with expert clinicians, researchers, policy makers and advocates about their work in the field of TB. Over the past 12 months we have increased the frequency of our TB podcasts under the initiative of Dr Jack Callum, a thoracic senior registrar and emerging TB clinician based in Sydney.

Topics recorded this year and available on Spotify include: "TB and therapeutic drug monitoring, "Prof.Jan-Willem Alffanaar; "Predicting side effects in 3HP," Prof Jann-Yuan Wang; "Treatment of Drug Resistant TB," Prof Greg Fox; "Vaccination in TB," Emeritus Prof. Warwick Britton, and "Ethical Issues in TB, "Dr Paul Mason. We continue to record higher numbers of downloads and are now increasingly receiving positive feedback from international listeners. We aim to make our podcast guests Australasian experts and researchers in order to align with our core mission of promoting domestic TB research.

Newsletter: A goal in 2023 is to improve the content and regularity of our newsletter and expand its role from merely notifications of educational activities to including clinical case studies, grant opportunities, researcher profiles and summaries of recent guideline updates. We also intend to provide a regular opportunity for ARC to contribute content of interest, e.g., a brief outline of research or other projects being supported by them.

2023- The Evolution of ACTnet: We have been approached by the TB Forum which is planning on ceasing its formal activity and they have requested we incorporate their membership into ACTnet. TB Forum was established primarily as a TB advocacy charity and already shares some active members with ACTnet. One of the reasons we were approached by TB Forum was the perceived need to have a more prominent single "brand" in the Australasian TB research landscape. Although research remains the focus of ACTnet it may be that we have some additional secondary advocacy role in the future however this will need to be clarified.

The TB-CRE based at the University of Sydney ceases in its current iteration at the end of this year with the completion of its funding cycle. The TB-CRE has been one of the most prominent TB research groups in Australia. ACTnet and the TB-CRE have forged close links and it is anticipated that with the end of the TB-CRE that the relevance of ACTnet will continue to grow. Indeed, ACTnet was conceived as a way of maintaining long term links between TB researchers given the inevitable ebbs and flows of particular institutional research activity.

Last year we welcomed Ms. Tania Mukherjee, a final year medical student at the University of Sydney, as our new ACTnet educational officer. Tania has brought new energy to the role, and we are grateful to ARC for the funding which supports the educational officer's salary

ACTnet thanks the Australian Respiratory Council for its continuing support. Membership to ACTnet is free. Please see our website www.actnet.org.au for further information.

ARC SHEILA SIMPSON OAM NURSING EDUCATION SCHOLARSHIPS

Building Nursing Capacity in Australia

To support TB elimination efforts in Australia, ARC has been working in partnership with Western Sydney University, School of Nursing and Midwifery and the National TB Program stakeholders to develop and implement the Graduate Diploma/Master of Nursing (TB Management). The course implemented in 2020 represents a significant educational opportunity for developing nursing workforce capacity within the Australian TB Program. The ARC is committed to supporting capacity building for the Australian TB Program through the development of specialist nurses. To date, four nurses have completed the course and have been awarded a specialist Master qualification in TB Management.

In 2022, ARC's Nurse Consultants: Pam Banner, Chris Lowbridge and Kerrie Shaw were the tutors for the TB specialist units within the course. The ARC thanks Pam, Chris and Kerrie for their ongoing contribution to nursing education and support for their peers undertaking the course.

To support future students, ARC awards scholarships each year to enable nurses to undertake the speciality units within the Master in Nursing (TB Management) course. The scholarships have been named in recognition of the outstanding contribution of Sheila Simpson OAM, to the work of ARC, her clinical leadership and mentoring of the nursing workforce within the speciality area of TB, over four and a half decades.

ARC Sheila Simpson OAM Nursing Education Scholarship Recipients 2020 – 2022	
2022	Emma Hunt, Emma Just and Amy Peachy
2021	Cathie McKenna and Amy Peachy
2020	Cathie McKenna, Amy Peachy and Sherri Towle

Overview of the 2022 Scholarship Recipients

In 2022 scholarships were awarded to Emma Hunt, Amy Peachy and Emma Just. A profile and feedback from the scholarship recipients is provided below.

Amy Peachy

Amy Peachy

Amy Peachy advises that in her 22 years working as a registered nurse that she has been fortunate to gain experience in many different fields of nursing, including acute, community, primary and public health care settings. While working in these areas, Amy obtained postgraduate qualifications in public health, mental health, paediatric and neonatal nursing, sexual health, and immunisation and has always valued further learning and education to develop and improve her nursing skills.

Amy advises that she is very grateful to have had the opportunity to take part in this Western Sydney University and ARC initiative. Amy was inspired to pursue a career in public health when working as a child health nurse in remote Aboriginal communities in the Northern Territory. Amy reports that she had the opportunity to learn about Aboriginal culture, and gain valuable awareness of the impact of the social determinants of health on individuals and communities. Amy has since worked in a range of public health roles, including at the Centre for Disease Control (CDC) in Central Australia as a program coordinator for the Trachoma Elimination Program, the HPV Surveillance Program as a Clinical Nurse Coordinator, Melbourne Sexual Health Centre, and Alfred Infectious Disease Clinical Research Unit as a Clinical Research Coordinator. This wide range of experience has given Amy a strong foundation for her current public health role as a Clinical Nurse Consultant (CNC) in the Victorian Tuberculosis Program (VTP). As a CNC in the VTP team for over 3 years, Amy has contributed to the Australian TB Program through management of active cases of TB and prevention of reactivation of latent TB. Amy conducts case management, surveillance, contact tracing, patient and clinician education and liaises with clinical services and treating teams around TB and TB treatment, working with individuals and families with active and latent TB to overcome barriers to treatment and care.

Amy reports that the direct impact of the Master's of Nursing (TB Management) on her practice has been substantial. Amy's individual ability to contribute effectively to the Australian TB elimination agenda depends upon her knowledge, understanding, and implementation of current best practice TB management. Together the specialist TB units within the course have provided Amy with a depth and breadth of up to date, practical and evidence based knowledge and skills. Each individual unit has contributed to Amy's capacity to advocate, educate and care for her patients, and to support clinicians in general practice, NGOs and tertiary clinics to deliver TB care.

Emma Just

Emma Just

Emma's current role is based at Mona Vale Chest Clinic as a Clinical Nurse Specialist within TB Services for the Northern Sydney Local Health District. The role largely consists of case management, follow up and care of people with active TB, latent TB infection (LTBI) and other non-tuberculosis mycobacterial infections and contact tracing. Emma and the TB Service work in partnership with local hospitals, doctors, outpatient clinics and other area health service providers to achieve the best care for their patients. Emma says that she is fortunate to be able to provide support and advocacy for patients through the challenges of TB treatment. The team work alongside local community groups to practice in a culturally sensitive way utilising interpreting and multicultural services and have developed strong connections with key stakeholders to maintain best practice in the area of TB care and treatment. Emma's role works alongside immigration and occupational screening providers to identify people with active TB and LTBI.

Emma advises that she is grateful for the opportunity to develop her skills and knowledge in the area of TB. The scholarship has provided Emma the opportunity to challenge her thinking and nursing practice. It has enabled Emma to consolidate her knowledge and build skills in report writing and critical analysis of research to maintain current knowledge in clinical practice and management of TB. In doing so, this contributes to building a TB nursing workforce that is well equipped to achieve the priorities of TB elimination and control in Australia. Emma advises that there is always something more to learn in the interesting field of TB and says that the course has reinvigorated her to achieve more in her work. Emma reports that Australia is starting to see immigration increase post COVID restrictions and it is vital that a high standard of active case finding and treatment of people with latent TB infection is maintained to achieve Australia's goals for TB elimination.

Emma Hunt

Emma Hunt

Emma's current role is the acting Tuberculosis Coordinator/CNC for the Southern and Murrumbidgee Local Health District, NSW Health.

Emma is undertaking the Master of Nursing in TB Management to contribute to her professional development. Participating in the course will enable Emma to gain valuable knowledge and skills that can be applied and delivered to regional NSW through her role as the TB Coordinator. Emma has noted that increasing knowledge around the clinical and public health management of TB has positive outcomes, by implementing effective and evidence based strategies to contribute to the Australian TB elimination agenda.

ARC PROJECTS REPORT

Building Capacity Through Training and Education in the USAPI

Pacific Island TB Controllers Association (PITCA) Annual Conference

The Division of TB Elimination of the US Centers for Disease Control (CDC) host an annual training event for the National TB Program (NTP) staff of the US Affiliated Pacific Islands (USAPI). The ARC was invited to participate in the planning meetings, development and delivery of the annual PITCA conference program. Amanda Christensen and Lauren Deakin attended the PITCA conference representing ARC to coordinate and deliver the Nurses and Community Outreach Workers Program.

PITCA 2022 – Nurses and Outreach Workers

The conference was held in Honolulu, Hawaii from the 5th to the 9th December, 2022. Program managers, community health outreach workers, medical, nursing and laboratory staff from the USAPI NTPs attended the conference.

The conference consisted of plenary and breakout sessions for the respective professional groups over a four-day program. The nurses and community health outreach workers breakout sessions covered the following topics:

- Revisiting the TB Contact Investigation Processes: Decisions to initiate investigations, timeframes for screening and evaluating contacts
- Introducing and using the updated US Interjurisdictional TB Notification Form
- Unpacking contact investigation processes
- TB genotyping & whole gene sequencing analysis: What you need to know and practical applications
- Managing TB medication side effects – The Nurses and Community Health and Outreach Workers role
- Identifying Children with TB, preventing diagnostic and treatment delays
- Utilising the ARC USAPI Sputum information education and communication materials (posters, patient information sheets, flipbook and training resources)
- Site visit to the Diagnostic Laboratory Services Inc – Honolulu
- Site visit to the Hawaii TB Control Program at the Lanakila Health Center.

The CDC provide funding for ARC to undertake the planning, coordination and delivery of the annual PITCA training activities.

Pacific Island TB Nurses Network Meetings

Each month the ARC Nurse Consultants meet online with the NTP staff of the USAPI and the CDC to present cases, discuss clinical issues, undertake educational activities. The monthly meetings are coordinated by ARC and hosted by the CDC. Each of the countries within the USAPI actively participate in the meetings and present cases for clinical discussion and review. The number of people attending the meetings within the countries increased over the year which is pleasing as the network continues to expand.

The ARC Nurse Consultants Group provide ongoing technical support, educational sessions and mentoring for the nurses and outreach workers of the USAPI TB Programs. The CDC provide funding for ARC to undertake these activities and support for the USAPIs.

Graduate Diploma/Master of Nursing (TB Management) Course University of Western Sydney (UWS)

The Graduate Diploma/Master of Nursing (TB Management) Course continued this year, with all three of the speciality TB units offered for students to undertake. Australian and international nursing students engaged in a range of global services, roles and activities are currently enrolled in the course.

The course, the first of its kind internationally is seen as an important opportunity to further develop the speciality of TB nursing within Australia and enhance national efforts towards TB elimination. In 2022, five additional students graduated from the Master of Nursing (TB Management) Course.

Feedback received from the university and students about the course has been very positive.

Over the past year, the courses within the Master's Program were reviewed by the UWS, as a result the number of speciality courses offered in the prorgam were reduced. The TB stream was retained due to student interest, international marketability and quality of the course content. All retained courses were asked to offer four speciality units within the course structure. It was recommended that a Clinical Skills Unit - *TB Screening and Vaccination*, be developed to meet this requirement.

The *TB Screening and Vaccination Unit* will be developed and implemented in 2023. The unit will be designed to equip nurses with the essential knowledge and skills required to perform TB screening and vaccination and will meet the National Standards for Immunisation Courses. Students will examine the skills required to perform, advocate and promote screening for TB, latent TB infection and vaccination to prevent TB in at risk populations. It's proposed that skills competency will be assessed in an online environment which incorporates virtual clinical placements and assessment thus making the course readily available to students, nationally and internationally.

The ARC Nurse Consultants Group (Pam Banner, Amanda Christensen, Lauren Deakin, Chris Lowbridge and Kerrie Shaw) continue to work with the Western Sydney University, School of Nursing and Midwifery to implement the Graduate Diploma/Master of Nursing (TB Management) Course, provide advice on the academic content of the specialist units and provide support for the students through the teaching team.

Support for Homeless and Vulnerable People with TB

Over the past five years, ARC with the financial support of the Clubs Grant NSW Scheme has implemented a project to support homeless and vulnerable people with TB within the Greater Sydney metropolitan area. Through this project ARC is able to provide funding for people experiencing financial hardship, which was particularly important this year as the increasing costs of living, reduced access to affordable housing and casualisation of the workforce are experienced by many people in the community.

The people ARC supported through the grants were people who were unable to obtain financial support through welfare and emergency payments. The grants recognise the benefits to individuals and community of caring for our most vulnerable during a difficult period in their life. In the past 12 months $7,500 was received in grants from the Bowlers Club of NSW Ltd, the City of Sydney RSL and City Tattersalls Club. With this funding ARC was able to provide six grants to people affected by TB. The financial support was used to contribute to the costs associated with accommodation, food and transport (to attend medical appointments).

Homelessness in Australia is a significant social issue that can have a long-term impact on individuals and families. Homelessness is complex issue, it is often the end point of a series of life events and crisis. Homeless people often have a poor general health status, coexistent substance and mental health issues, limited financial resources and support networks in the community which make them particularly vulnerable to TB.

The initial management of the homeless with TB is through admission to hospital. For others, homelessness or housing difficulties may arise as a consequence of TB. Difficulties can also arise when the person is to be discharged from hospital to complete treatment in the community. The path to cure from TB is long and slow, people require treatment for six months or longer. Discharging people to live in unstable settings is extremely problematic with many people defaulting from treatment and becoming lost to follow up. 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.

The ARC is pleased to be able to continue to work in partnership with The Clubs NSW Grant Scheme on this project as support for homeless and vulnerable people with TB is an important social and public health issue.

PEARL PROJECT

The Australian Respiratory Council partners in the Pathway to the Elimination of Antibiotic Resistant and Latent Tuberculosis in the Pacific (PEARL) Study

The Australian Government through the Medical Research Futures Fund Global Health Initiatives Grant Scheme awarded $ 4.25 million in funding to support research around the diagnosis, prevention and treatment of drug resistant tuberculosis (DR-TB) in Pacific Island Countries.

The funding is for research and activities that will enhance existing knowledge and develop tools to combat threats to national health security posed by the regional and global challenges of DR TB. The study is being undertaken in collaboration with researchers from pacific countries to promote capacity building to ensure the risks associated with TB can be managed on both sides of the border, in Australia and overseas.

The Australian Respiratory Council (ARC) is partnering with a team of researchers and capacity building experts led by Professor Ben Marais, to deliver the study. The team includes: the Kiribati Ministry of Health and Medical Services (MHMS), the NHMRC TB Centre of Research Excellence, Sydney University, Monash University, the Australian National University, the WHO Western Pacific Region Office END TB & Leprosy Unit and ARC. The Government of Kiribati has expressed a commitment to the project to support local efforts and progression towards elimination for TB and Leprosy within their country.

Background

The emergence and spread of antibiotic resistant strains of TB is a major concern globally. Within the Pacific, TB and Leprosy hotspots such as Kiribati pose a particular challenge and threat. The incidence of TB and Leprosy in Tarawa (the main population centre in Kiribati) are amongst the highest globally, combined with the population density and ongoing transmission of TB and Leprosy, the potential for amplification of TB, DR TB and Leprosy is a public health concern.

The main objective of the study is to mitigate the threat posed by DR-TB in the Pacific by enhancing knowledge and testing new strategies to combat TB within the pacific island nations. The Pathway to the Elimination of Antibiotic Resistant and Latent tuberculosis in the Pacific (PEARL) Study, proposes a body of work that will provide a pathway towards DR-TB prevention, TB and Leprosy elimination in the Pacific.

The project aims to strengthen collaborative partnerships between Australia and Pacific Island Countries. The training and mentoring program will establish better surveillance and care networks across the Pacific to prevent the emergence and spread of DR-TB, while the intervention and modelling data will have direct impact on practice and policy. Overall, the project will strengthen regional Health Security by reducing the threat of DR-TB and Leprosy in the Pacific and play a role in regional TB and Leprosy elimination efforts.

The ARC is leading the component of the study relating to building workforce capability through training and education for TB elimination in Kiribati, and more broadly within the Pacific. This will be achieved through a program of training and mentoring. The work undertaken by ARC is building on existing expertise and activities within the pacific to deliver in-country training and clinical mentoring in Kiribati and the Pacific more broadly.

Over the past year work has continued in preparation for the commencement of the PEARL Study. The project team and ARC have been working to set up the study, build relationships with the Kiribati government and MHMS, community leaders, health services and population. Extensive work has been undertaken to develop information, education and communication resources and training materials to support the study.

The ARC Nurse Consultants have developed training tools and resources to support orientation training for the study team. Mareta Hauma, the lead Study Nurse has used these resources and supporting tools to train local staff employed within the study. These training resources will be adapted and used to train health care workers across the south pacific over the next three years.

Screening and Active Case Finding Plan

Every person aged three years & older in a population of more than 60, 000 people in South Tarawa, Kiribati will be offered screening for TB & Leprosy. A series of mobile clinics will be set up in the community for people to access. The screening sites will move around Tarawa over a three-year period to reach maximum numbers of people. A team of local staff will be employed to work in collaboration with the project team to undertake the screening activities.

People with active TB and/or Leprosy will be referred to the Kiribati National TB and Leprosy Program for TB care and treatment. People identified with TB infection (sleeping TB) will be treated with preventative therapy to reduce the number of people at risk of developing active TB in the future. Single dose preventive therapy will be given to people to prevent people developing Leprosy.

Report from Dr Jeremy Hill

Dr Hill, the in-country medical lead reports that during Q3 and Q4 2022 the PEARL study was initiated in Kiribati, building on a long phase of remote preparations during the COVID-19 pandemic. Commencing in August, ARC supported the recruitment, contracting and training of an initial core team of nurses and health workers. This was accompanied by an initial phase of stakeholder engagement, micro-planning and set-up of operations in South Tarawa. The first step was to complete a pilot of the flagship PEARL public health intervention in Nanikai village, which was accomplished between October and December 2022, with follow up during Q1 2023.

Implementation of the pilot allowed the PEARL project team to make improvements and adjustments to all phases of the intervention, from household enumeration and community engagement, to community-based TB and leprosy screening and referral, to supported self-administered TB preventive treatment for those eligible.

In 2023, the PEARL project will expand operations with key support from ARC for recruitment, training, capacity building and wider engagement with the national TB programme and other stakeholders in Kiribati.

Acknowledgement: photos supplied by Dr Jeremy Hill

Dr Jeremy Hill and members of the PEARL Team

COUGH AND TB IN THE SOLOMON'S:

An assessment of respiratory symptoms, spirometry and tuberculosis testing in Gizo, Solomon Islands, November 2022.

Report submitted by Byrne AL, Miruno K, Di Michiel J, Gawthorne J, Malasa G, Mark DP and Eddie R.

Background

The symptom of "cough" is common and often presents a clinical challenge for health care workers in terms of obtaining the correct diagnosis. There are many possible causes of cough including acute or chronic respiratory infection, asthma, chronic obstructive pulmonary disease (COPD) and more recently, COVID-19 (acute and post acute sequela).

The evaluation of cough requires a careful history, physical examination and diagnostic testing such as lung function, microbiological testing and radiography. These require specific equipment (that is often expensive) and specialised training which are not available in all resource limited settings. In communities where Mycobacterium tuberculosis (tuberculosis) is common, such as the Solomon Islands, the possibility of active tuberculosis requires consideration as a cause of cough.

The eradication of tuberculosis forms the basis of the "EndTB" strategy of the World Health Organization (WHO). This requires detection and treatment of active tuberculosis as well as preventative treatment of latent tuberculosis infection (LTBI). The WHO treatment guidelines for LTBI (reference) identify healthcare workers and household tuberculosis contacts as particularly important high risk groups to target for preventative treatment. However, the diagnosis of LTBI is often difficult in resource limited settings because of the reduced availability of tuberculin for the tuberculin skin test (TST, Mantoux) and the potential for false positives in a previous BCG vaccinated population. It is also important to confidently exclude active tuberculosis, which can be difficult in a symptomatic patient (with cough for example).

We therefore sought to evaluate the frequency and cause of cough among people living in a resource limited setting with reduced access to respiratory specialist healthcare, as well as the prevalence of LTBI in this population that included healthcare workers.

Questions

1. How common is cough among three groups of people in Gizo, Solomon Islands; healthcare workers, household TB contacts and people from the general community?
2. What are the possible causes of cough in these populations?
3. What is the prevalence of latent TB infection in these groups?
4. How can latent tuberculosis infection among healthcare workers be best managed in Gizo, Solomon Islands.

Methods

We prospectively invited three groups to participate following informed consent being obtained. Group 1. Household contacts of recently diagnosed, smear positive (acid fast bacilli) pulmonary tuberculosis contacts of Gizo island in the western province of the Solomon Islands, Group 2. Healthcare workers of Gizo hospital and Group 3. Community members (including family members of healthcare workers). Subjects completed (with assistance of study personnel), the Chronic obstructive pulmonary disease assessment test (CAT), pre and post bronchodilator spirometry (400mcg inhaled salbutamol via spacer) using the Easyone World Spirometer (Niche medical), sputa assessed with Gene Xpert Rif/TB (Cepheid Sunnyvale, USA) and blood test (1ml plasma) for Interferon Gamma Release Assay (QuantiFERON "e-stick", Qiagen diagnostics). Sputa was "pooled" in batches of 10 patients. All participants received a clinical evaluated by a Respiratory Physician for signs of chronic respiratory disease or active TB.

The results of the clinical examination and spirometry were provided to each participant along with a treatment recommendation if abnormal. Participants with positive sputa for M. tuberculosis were referred to the local TB service for assessment and treatment. Positive blood tests for IGRA were referred to the medical officer for the hospital with the recommendation for a Chest X-ray and consideration for

preventative therapy per local guidelines. Communication and feedback of the results of the project with the Ministry of Health and national Tuberculosis Program of the Solomon Islands also took place.

Results

There were 100 participants identified from the three groups with 97 completing the assessments. These included 10 household contacts (Group 1), 54 healthcare workers (Group 2) and 33 community controls. All except one participant in Group 2 were able to provide a sample for Gene Xpert TB/Rif. There were no cases of active TB were identified by Gene Xpert TB/Rif, however, one participant from Group 3 had clinical and radiological evidence of active TB (7 year old girl with cervical lymphadenopathy, failure to gain weight and an abnormal chest X-ray).

Positive IGRA, consistent with a diagnosis of latent TB infection was found in 50% of Group 1 (4 of 8), 60.4% of Group 2 healthcare workers (32 of 54) and 60.6% of Group 3 community controls (20 of 33).

Pre and post bronchodilator spirometry was available from 88 participants (91%), with the results not yet available for analysis. CAT questionnaires of respiratory symptoms including cough prevalence was collected from 97 participants (100%). Symptoms of cough and sputa production were commonly reported, with similar rates between groups. Any cough was reported by 70% of TB contacts (group 1), 74.1% of healthcare workers (group 2) and 75.8% of community controls. For any sputa production the results were 60%, 59.3% and 42.4% for each group, respectively.

Preliminary Discussion

Respiratory symptom data using the CAT questionnaire was able to be collected from all participants in the Solomon Islands with the assistance of an English speaking healthcare worker. Symptoms of cough and sputa (phlegm) production were very common (>50%) across all populations, indicating the presence of possible lung disease. The spirometry data will be important to analyse to determine if some of these symptoms may be due to obstructive always disease (asthma/COPD).

Tuberculosis is an important cause of cough and sputa production in the Solomon Islands, especially among household TB contacts and healthcare workers. The GeneXpert TB/Rif cartridge based nucleic amplification test is a reliable and accurate test that allows the exclusion of microbiological active (infectious) M. tuberculosis from respiratory samples. We have previously demonstrated the utility of "pooled" sputa assessment for the diagnosis of TB compared to three standard smear and mycobacterial culture. All but one participant was able to provide an expectorated sputa sample for pooled analysis and no positive results were obtained.

The e-stick IGRA blood test (Quiagen diagnostics) was simple to perform among this population and is a feasible test for the diagnosis of latent TB infection in this low income setting. The prevalence of latent TB infection (positive IGRA) was high among known high risk house holds contacts of known pulmonary TB patients. This provides an opportunity to provide preventative therapy to this group to reduce the risk of progression to active TB. The prevalence of latent TB infection in both the healthcare workers and community controls was also high (>50%), suggesting a potential role for preventative therapy. The biochemistry machine for testing liver function and electrolytes was non-functional at the time of the study. This is a barrier to monitoring liver function and electrolyte abnormalities among people eligible for preventative pharmacotherapy for tuberculosis infection. Prioritisation of high-risk household TB contacts and healthcare workers under the age of 50 years may therefore be reasonable. Following communication with the ministry of health and the national TB program, the provision of three months of (daily) fixed dose combination Rifampicin-Isoniazid following chest X-ray assessment was suggested as a locally-acceptable management option for latent TB infection.

SOLOMON ISLANDS PROJECT

Community-based tuberculosis (TB) case finding and treatment support: working with Baru Conservation Alliance rangers in the remote mountain areas of East Kwaio

Report submitted by Dorothy Esau and Associate Professor Peter Massey

Why TB:

- TB was brought to Solomon Islands and is seen as an invader or a small giant attacking people
- TB remains at unacceptable rates in the East Kwaio area of Solomon Islands. At the Atoifi Adventist Hospital (AAH) approximately 10-15 people are treated for TB each year. In a population of 10,000 this equates to 100-150 cases/100,000 pop. There are many more undiagnosed cases known to occur in mountain areas and distant villages
- TB disrupts families and ways of life
- Kwaio people live close together in family units, cooking fires and no windows are usual in houses.

Why Baru?

- Baru Conservation Alliance is a well-respected community based organisation in Kwaio, Solomon Islands. Supporting remote villages and families to maintain conservation values
- Baru has a holistic approach to care for plants, animals and people within mountain conservation areas. Baru works within Wado (land), Fufutunga (genealogy) & Falafola (custom/culture)
- Baru has a well-trained, capable and willing ranger workforce

- The rangers identified TB as an ongoing threat to the people who live within the conservation areas.

Baru Rangers become TB Rangers

- To fight back against TB, and to help conserve people, who are part of the environment, genealogy and culture the Rangers were keen to learn about TB
- Rangers are visiting every family in their area to talk about TB and find people with symptoms to support them to get help

- With funding support from ARC again the Rangers were trained in detection of TB and what to do. During 2022 additional training was provided about TB in children
- Rangers provided community awareness and consultations in the four conservation areas. The previously developed ARC/Kwaio TB DVDs were used as part of the awareness raising
- Rangers work as TB Rangers 2 days per week
- A female and a male Ranger were designated for each of the four areas, to enable good access to all people within the hamlets and tribes of the conservation areas.

TB Ranger at the Baru base

Some wins in the battle against TB

- In the (translated) words of the Rangers and families:
    - *"….All the detected case patients were so pleased to share their stories, shedding tears of joy at having been healed. Some said they had been near death, but when they received and took the medicine as instructed by the Rangers, they healed, and now they can go to their gardens and do other work they could not before*
    - *Some were mothers who were thrilled because their kids are now healed thanks to the treatments the TB Rangers gave them.…."*
- Six people completed treatment during 2022. Further people were found to have TB and are on treatment. Due to important cultural issues many people cannot attend the hospital so the hamlet/home based model of TB detection, diagnosis and treatment is saving lives and preventing the spread of this "little giant"
- Across the year the following number of people were detected with possible TB, and the number seen in each conservation area:
    - **Aifasu:** 14 people detected with possible TB, 3 people with TB, 1 currently on TB treatment, 1 completed, 1 passed away
    - **Kwainaa`isi:** 52 people detected with possible TB, 5 people with TB, 3 currently on TB treatment, 2 people completed treatment
    - **Burui:** 21 people detected with possible TB, 2 people with TB, 0 currently on TB treatment, 2 people completed treatment
    - **Fulantofe:** 18 people detected with possible TB, 2 people with TB, 2 currently on TB treatment
- Of the 115 total people with possible TB, 12 people were diagnosed with TB and started treatment
    - Mum: *"So proud of the Rangers that I asked them to help our family. Child 1 sick for nineteen months, child 2 sick for three months, struggled as a family.…now family is ok…"*

TB Ranger support families

- For each case of TB successfully treated 10-15 new infections are likely prevented, so this program of work is already delivering generational impact
- During July-September, 2022 the TB Program Coordinator for Baru had a series of discussions and meetings with Provincial and National TB Program people; Provincial Health Department and local hospitals at Atoifi and Auki. The purpose of the discussions and meetings was to problem solve issues about the testing of the sputum specimens
- During October as part of the evaluation some videos were recorded to enable reflection on the strengths and on the issues and changes needed.

Some losses in the battle against TB

- Weather: rain, flood, wind most time caused big challenges for Rangers to walk to the hospital with specimens and if they don't arrive on the same day, all the sputum are spoiled and they have to go back and re-collected again
- Health systems designed by European centric, paternalistic people so are not attune to the real needs of the people the health systems are supposed to serve
- Ongoing struggles with the hospital system to process specimens that have not been ordered by a Doctor or Nurse

SOLOMON ISLANDS PROJECT (cont.)

- TB is really tough for women. Tough at home, tough to access health care, tough to make space to regain health. The female Rangers found the work difficult because of the needs at home in gardening and care of their own families, as well as the need of the wider community to be checked for TB
- Covid: everyone's problem, especially for those that face cultural and disease based stigma.

Next steps

- Baru to continue support the work of Rangers in conservation
- Rangers to continue with their work on visiting families in the conservation area and talk with them about TB, check for symptoms, and support families with TB. Dependent on funding
- Continue to build the network with the hospital, and advocate for the TB Program to have a real focus on community with sustainable funding
- TB Rangers continue to support treatment and recovery of people with TB
- Reflection and evaluation. Learning together about how communities and families can work together to hunt out TB
- Advocacy, Advocacy, Advocacy
- Report of TB Rangers evaluation is provided below.

TB Video Shooting for the TB Rangers Report

From the 4th to the 7th October 2022 the two Baru executives climbed the mountain to shoot video footage about the story of the TB Rangers, and collect their reflections on their work experiences finding TB cases. The video covers not just the stories of the TB Rangers but also those of people whose positive TB cases the Ranger's detected and who have now recovered their health. The team and all of the Rangers are based at the Kwainaa`isi Cultural Centre in central `Ai`eda because that location is a center for all the Rangers and also most of the TB cases detected were from around that area.

Day one – On day one, we met with all the TB Rangers and gave them a short update. They also shared with us some updates of their work. We explained the purpose of the video project. They ask us to give them some tips on how to best talk to the camera in interviews, and we suggested ways to effectively talk about and reflect on their work in the field. We also showed some previous videos about TB to give them examples of ways to voice ideas when the shooting would take place. All the rangers said they were very happy to record their stories about their work and that they were all looking forward to the next day's shoot.

Day 2 – The next day we started shooting the video and recording the Rangers' reflection on their ongoing work and tell about how they interact in field with people who are sick with TB. All eight rangers had a good time recording their stories on this first day. In the evening we all came together to watch the day's footage and comment on it. All were eager to push ahead, so the next day we followed their wishes and continued videotaping.

Days 3 and 4 – The next two days we spent shooting further videos of the TB rangers and video-recorded interviews with some of the TB patients who the Rangers have detected, including some who have now recovered from the disease. All the detected case patients were so pleased to share their stories, shedding tears of joy at having been healed. Some said they had been near death, but when they received and took the medicine as instructed by the Rangers, they healed, and now they can go to their gardens and do other work they could not before. Some were mothers who were thrilled because their kids are now healed thanks to the treatments the TB Rangers gave them.

SUPPORTERS OF ARC

BREATH OF LIFE

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

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. 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 can 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 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 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 ARC, 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 Indo-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".

arc

HISTORY OF FUNDING FOR RESEARCH ACTIVITIES 1999 – 2022

RESEARCH AWARDS
1999 – 2022

ARC RESEARCH SUPPORT GRANTS (2020 – 2022)

Date	Recipient	Subject	Award
2022	Associate Professor Stephen Corbett *Sydney University, Western Clinical School*	A case control study investigating the high incidence of TB among Nepalese immigrants in NSW: Descent from altitude or a legacy of genetic adaptations to hypoxia?	$20,000
2022	Associate Professor Larcombe *Curtin University/Telethon Kids Institute*	The impact of heated-tobacco-product use on gene expression in the lung - are they really a better alternative to cigarette smoking?	$20,000
2022	Professor Mark Nicol *University of Western Australia*	A comparative evaluation of the accuracy of tuberculosis-specific skin tests in Thailand	$19,923
2022	Associate Professor Michelle Redman-MacLaren *James Cook University, Queensland*	Understanding the experience of women in a TB hot spot in Solomon Islands to help effectively find, treat and care for people with TB	$20,000
2021	Associate Professor Anna Coussens *Walter & Eliza Hall Institute, Victoria*	Identifying Age, Sex and Vitamin D Modified Immune Correlates of TB Risk	$20,000
2021	Professor Graeme Zosky *University of Tasmania*	The role of the placenta in determining the post-natal effects of in utero exposure to bushfire smoke	$20,000
2020	Professor Gary Lee *Institute for Respiratory Health, University of Western Australia*	Mechanisms of Streptococcus pneumoniae mesothelial cell invasion	$20,000
2020	Associate Professor Katharina Ronacher *Mater Research Institute, The University of Queensland*	Pre-clinical validation of a novel target for host-directed therapy for the treatment of TB	$20,000
2020	Dr Hannah Moore *Telethon Kids Institute, WA*	Understanding the true burden of paediatric respiratory syncytial virus in order to optimise prevention programs	$20,000

ARC HARRY WINDSOR MEDICAL RESEARCH GRANTS (2001 - 2019)

Date	Recipient	Subject	Award
2019	Warwick Britton *Centenary Institute, University of Sydney, NSW*	Protecting the lungs against TB by pulmonary delivery of a novel TB Service.	$20,000
2019	Chris Degeling *University of Wollongong, NSW*	TB elimination: a qualitative investigation of the perspectives of South Asian migrant communities in the Illawarra.	$20,000
2019	Justin Denholm *University of Melbourne, VIC*	Evaluating the impact of LTBI treatment strategies in Australia	$20,000
2018	Paul King *Monash Medical Centre and Monash University, VIC*	Influenza A virus (IAV) infection induces the formation of phagocytic extracellular traps, which contribute to the pathogenesis of exacerbations of COPD	$50,000

Date	Recipient	Subject	Award
2018	Cynthia Whitchurch *University of Technology Sydney, NSW*	Understanding the immunology of Pseudomonas aeruginosa lung infection.	$50,000
2017	Michael Berk *Deakin University, VIC*	Can we reduce tobacco smoking using N-acetylcysteine as a cessation treatment	$50,000
2017	Greg Fox *University of Sydney, NSW*	New digital strategies to enhance tuberculosis treatment adherence in Vietnam	$50,000
2016	Graeme Zosky *University of Tasmania, TAS*	Iron laden particulate matter enhances bacterial growth in the lung	$50,000
2016	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	Ian Yang *University of Queensland, QLD*	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, VIC*	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
2007	Stephen Bozinovski and Ross Vlahos *University of Melbourne, VIC*	Cigarette smoke chemically modifies and inactivates lung innate immunity mediated by the bacterial receptor, TLR4	$50,000

Date	Recipient	Subject	Award
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, QLD*	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, WA*	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, NT*	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, Sydney, NSW*	Effect of mannitol on the clearance of mucus in patients with COPD	$38,593
2001	Amanda Baker and Vaughan Carr *University of Newcastle, NSW*	Randomised controlled trial of a smoking cessation intervention among people with a mental illness	$63,370
2001	Terence Amis and John Wheatley *Westmead Hospital, NSW*	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
2001	John Wiggers, Afaf Girgis, Robyn Considine, Jenny Bowman *University of Newcastle, NSW*	Preventing infant exposure to tobacco smoke: evaluation of an early childhood intervention	$53,006

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

HISTORY OF FUNDING FOR PROJECT ACTIVITIES 1999 – 2022

PROJECT FUNDING

1999 – 2022

Date	Recipient/Project	Award
2022	East Kwaio, Malaita, Solomon Islands Community-based TB case finding and treatment support: working with Baru Conservation Alliance rangers in the remote mountain areas of East Kwaio	$19,757
2022	Kiribati Pathway to the Elimination of Antibiotic Resistant and Latent TB (and Leprosy) in the Pacific "PEARL Study"	$258,338
2021	Development of Cultural Competency Guides for the USAPIs	$13,593
2020	Solomon Islands Cough and Premature Death in the Solomon Islands	$18,000
2020-2021	East Kwaio, Solomon Islands Community based TB case finding and treatment support	$19,703
2018-2022	Australia Homeless and vulnerable with TB	$29,770
2018	The Safe Working Practices Laboratory Handbook - a Global Resource	$13,500
2018-2020	Pacific Island TB Network Sputum Quality project	$10,000
2017	Marshall Islands Funding A1c kits for the screening activity on Ebeye Island	$5,264
2017-2018	Papua New Guinea Economic evaluation of patient costs associated with tuberculosis and care in Papua New Guinea.	$25,000
2015-2022	Australia Establishing a framework for TB nursing education in Australia	$87,900
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	Australia 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	Australia Menzies School of Health Research Development of educational resources, 3 Talking posters and 3 flipcharts on pneumonia, bronchiolitis and bronchiectasis	$35,000

PROJECT FUNDING

1999 – 2022

Date	Recipient/Project	Award
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	Australia 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	Australia 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
2006-2022	US Affiliated Pacific Islands - Capacity building through education and training PITCA – Training of nurses and related workers in the Northern Pacific	$219,127
2006	Kiribati Nurse training in Kiribati	$41,699
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

2022 FINANCIALS AND ACFID SUMMARY FINANCIALS

DIRECTORS' REPORT

Your Directors present their report on the Company for the financial year ended 31 December 2022.

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

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

Robyn Johnson
GAICD
Appointed to the Board 5 November 2012. Vice President
Interest in contracts: Nil

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

Kerrie Shaw
Registered Nurse
Appointed to the Board 4 February 2013. Chair ARC Project Group
Interest in contracts: Nil

Professor Gregory Fox
PhD MIPH FRACP MB BS BSc(Med) GAICD
Appointed to the Board 22 May 2017. Chair ARC Research Committee
Interest in contracts: Nil

Jean Santos
BSCS IT
Appointed to the Board 27 May 2019
Interests in contracts: Nil

Michael Smith AO
Major General - Retired
Appointed to the Board 10 July 2022
Interests in contracts: Nil

Amanda Christensen AM
Registered Nurse
Appointed to the Board 22 January 2001. Executive Director
Interests in contracts: Nil

Professor Hiran Selvadurai
MBBS FRACP PhD FThorSoc
Appointed to the Board on 16 February 2023
Interests in contracts: Nil

Ian W Ramsay
LL.B (Syd.)
Retired from the Board 18th January 2022
Interests 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
David Macintosh AM KMG	4	4
Robyn Johnson	4	4
Christopher Turner	4	4
Kerrie Shaw	4	4
Gregory Fox	4	3
Jean Santos	4	1
Michael Smith AO	2	2
Hiran Selvadurai	–	–
Ian Ramsay	–	–
Amanda Christensen AM	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 2022 the collective liability of members was $24 (2021:$25)

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:

Christopher Turner
Director
Sydney, 5th April 2023

Amanda Christensen
Executive Director
Sydney, 5th April 2023

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

In accordance with s 307C of the Corporations Act 2001, I am pleased to provide the following declaration of independence to the directors of the Australian Respiratory Council. As the lead audit partner for the audit of the financial report of Australian Respiratory Council for the year ended 31/12/2022, I declare that, to the best of my knowledge and belief, there have been no contraventions of:

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

The audit opinion expressed in this report has been formed on the above basis.

CONROY AUDIT AND ADVISORY

D R Conroy FCA
Principal
Auditor No: 2251
Sydney, 5th April 2023

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the Year Ended 31 December 2022

	Note	2022 $	2021 $
Revenue	2	3,031,859	560,136
Depreciation and amortisation expense	3	(3,282)	(3,832)
Research grants, fellowships and scholarships		(90,000)	(40,000)
Education & scholarships		(12,769)	(2,795)
Project funding & Unexpended Funds		(376,585)	(119,367)
Investment expense		(19,890)	(19,203)
Employee benefits expense		(195,757)	(194,990)
Other expenses		(99,483)	(150,748)
Profit/(Loss) before income tax		2,234,093	29,201
Income tax expense	1	-	-
Profit/(Loss) for the year		2,234,093	29,201
Other comprehensive income after tax:			
Net gain on revaluation of investment property		-	-
Net gain /(Loss) on revaluation of financial assets		(205,820)	161,229
Other comprehensive income for the year net of tax		(205,820)	161,229
Total comprehensive income for the year		2,028,273	190,430

The accompanying notes form part of these financial statements

STATEMENT OF FINANCIAL POSITION

As At 31 December 2022

	Note	2022 $	2021 $
ASSETS			
Current Assets			
Cash and cash equivalents	5	6,209,826	746,789
Trade and other receivables	6	43,000	18,000
Other current assets	7	6,986	7,189
Total Current Assets		**6,259,812**	**771,978**
Non-Current Assets			
Financial assets	8	1,719,646	1,894,374
Property, plant and equipment	9	39,870	42,309
Investment property	10	-	3,000,000
Total Non-Current Assets		**1,759,516**	**4,936,683**
TOTAL ASSETS		**8,019,328**	**5,708,661**
LIABILITIES			
Current Liabilities			
Trade and other payables	11	18,284	67,275
Unexpended Funds	12	678,035	354,859
Employee Entitlements	13	74,884	66,675
Total Current Liabilities		**771,203**	**488,809**
TOTAL LIABILITIES		**771,203**	**488,809**
NET ASSETS		**7,248,125**	**5,219,852**
EQUITY			
Reserves	14	2,452,003	4,528,880
Retained earnings		4,796,122	690,972
TOTAL EQUITY		**7,248,125**	**5,219,852**

The accompanying notes form part of these financial statements

STATEMENT OF CHANGES IN EQUITY

For The Year Ended 31 December 2022

	Capital Profits Reserves $	Asset Revaluation Reserves $	Retained Earnings/ (Accumulated Losses) $	Total $
Balance at 1 January 2021	2,411,980	1,955,671	661,771	5,029,422
Profit/(Loss) attributable to members	-	-	29,201	29,201
Total comprehensive income for the year	-	161,229	-	161,229
Balance at 31 December 2021	**2,411,980**	**2,116,900**	**690,972**	**5,219,852**
Profit/(Loss) attributable to members	-	-	2,234,093	2,234,093
Total comprehensive income for the year	-	(2,076,877)	1,871,057	(205,820)
Balance at 31 December 2022	**2,411,980**	**40,023**	**4,796,122**	**7,248,125**

STATEMENT OF CASH FLOWS

For The Year Ended 31 December 2022

	Note	2022 $	2021 $
Cash Flows From Operating Activities			
Receipts from customers		995,927	997,243
Payments to suppliers and employees		(932,757)	(665,459)
Interest received		70,725	62
Distributions received		65,148	86,739
Net cash provided by (used in) operating activities	18(b)	**199,043**	**418,585**
Cash Flows From Investing Activities			
Proceeds from sale of available-for-sale investments		5,409,485	264,468
Payment for property, plant and equipment		(1,814)	(545)
Payment for available-for-sale investments		(143,677)	(330,330)
Net cash provided by (used in) investing activities		**5,263,994**	**(66,407)**
Net Increase/(Decrease) in Cash Held		5,463,037	352,178
Cash at beginning of financial year		746,789	394,611
Cash at end of financial year	18(a)	**6,209,826**	**746,789**

The accompanying notes form part of these financial statements

NOTES TO AND FORMING PART OF THE ACCOUNTS

For The Year Ended 31 December 2022

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Preparation

The financial statements are general purpose financial statements that have been prepared in accordance with Australian Accounting Standards – Simplified Disclosures (SD) of the Australian Accounting Standards Board (AASB) and the Corporations Act 2001. The entity 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.

The financial statements are signed in accordance with a resolution of the directors.

Accounting Policies

Income Tax

No provision for income tax has been raised as the entity is exempt from income tax under DIV 50 of the Income Tax Assessment Act 1997. The Australian Taxation Office also endorsed the Company as a deductible gift recipient.

Inventories

Inventories are measured at the lower of cost and net realisable value.

Investment Property

Investment property is property held either to earn rental income or for capital appreciation or for both, but not for sale in the ordinary course of business use in the production or supply of goods or services or for administrative purposes. Investment property is measured at cost on initial recognition and improvements have been depreciated over their useful life.

When the use of a property changes such that it is reclassified as property, plant and equipment, its fair value at the date of reclassification becomes its cost for subsequent accounting.

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.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains and losses are included in the statement of profit or loss.

Impairment of non-financial assets

Non-financial assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount.

Recoverable amount is the higher of an asset's fair value less costs of disposal and value-in-use. The value-in-use is the present value of the estimated future cash flows relating to the asset using a pre-tax discount rate specific to the asset or cash-generating unit to which the asset belongs. Assets that do not have independent cash flows are grouped together to form a cash-generating unit.

Leases

At inception of a contract, the entity assesses if the contract contains or is a lease. If there is a lease present, a right-of-use asset and a corresponding lease liability is recognised by the entity where the entity is a lessee. However all contracts that are classified as short-term leases (lease with remaining lease term of 12 months or less) and leases of low-value assets are recognised as an operating expense on a straight-line basis over the term of the lease.

Initially the lease liability is measured at the present value of the lease payments still to be paid at the commencement date. The lease payments are discounted at the interest rate implicit in the lease. If this rate cannot be readily determined, the entity uses the incremental borrowing rate.

Lease payments included in the measurement of the lease liability are as follows: –fixed lease payments less any lease incentives;

NOTES TO AND FORMING PART OF THE ACCOUNTS

For The Year Ended 31 December 2022

- variable lease payments that depend on an index or rate, initially measured using the index or rate at the date;
- the amount expected to be payable by the lessee under residual value guarantees;
- the exercise price of purchase options, if the lessee is reasonably certain to exercise the options;
- lease payments under extension options, if the lessee is reasonably certain to exercise the options; and
- payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The right-of-use assets comprise the initial measurement of the corresponding lease liability as mentioned above, any lease payments made at or before the commencement date, as well as any initial direct costs. The subsequent measurement of the right-of-use assets is at cost less accumulated depreciation and impairment losses.

Right-of-use assets are depreciated over the lease term or useful life of the underlying asset, whichever is the shortest. Where a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the entity anticipates to exercise a purchase option, the specific asset is depreciated over the useful life of the underlying asset.

Trade and other payables
These amounts represent liabilities for goods and services provided to the company prior to the end of the financial year and which are unpaid. Due to their short-term nature they are measured at amortised cost and are not discounted. The amounts are unsecured and are usually paid within 30 days of recognition.

Employee Benefits
Short-term employee benefits
Liabilities for wages and salaries, including non-monetary benefits, annual leave and long service leave expected to be settled wholly within 12 months of the reporting date are measured at the amounts expected to be paid when the liabilities are settled.

Other long-term employee benefits
The liability for annual leave and long service leave not expected to be settled within 12 months of the reporting date are measured at the present value of expected future payments to be made in respect of services provided by employees up to the reporting date using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the reporting date on national government bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows.

Revenue recognition
The company recognises revenue as follows:

Revenue from contracts with customers
Revenue is recognised at an amount that reflects the consideration to which the company is expected to be entitled in exchange for transferring goods or services to a customer. For each contract with a customer, the company: identifies the contract with a customer; identifies the performance obligations in the contract; determines the transaction price which takes into account estimates of variable consideration and the time value of money; allocates the transaction price to the separate performance obligations on the basis of the relative stand-alone selling price of each distinct good or service to be delivered; and recognises revenue when or as each performance obligation is satisfied in a manner that depicts the transfer to the customer of the goods or services promised.

Variable consideration within the transaction price, if any, reflects concessions provided to the customer such as discounts, rebates and refunds, any potential bonuses receivable from the customer and any other contingent events. Such estimates are determined using either the 'expected value' or 'most likely amount' method. The measurement of variable consideration is subject to a constraining principle whereby revenue will only be recognised to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. The measurement constraint continues until the uncertainty associated with the variable consideration is subsequently resolved. Amounts received that are subject to the constraining principle are recognised as a refund liability.

Sales revenue
Interest revenue
Interest revenue is recognised as interest accrues using the effective interest method. This is a method of calculating the amortised cost of a financial asset and allocating the interest income over the relevant period using the effective interest rate, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to the net carrying amount of the financial asset.

Donations
Donations are recognised when received.

NOTES TO AND FORMING PART OF THE ACCOUNTS

For The Year Ended 31 December 2022

Grants
Grant revenue is recognised in profit or loss when the company satisfies the performance obligations stated within the funding agreements. If conditions are attached to the grant which must be satisfied before the company is eligible to retain the contribution, the grant will be recognised in the statement of financial position as a liability until those conditions are satisfied.

Other revenue
Other revenue is recognised when it is received or when the right to receive payment is established.

Current and non-current classification
Assets and liabilities are presented in the statement of financial position based on current and non-current classification.

An asset is classified as current when: it is either expected to be realised or intended to be sold or consumed in the company's normal operating cycle; it is held primarily for the purpose of trading; it is expected to be realised within 12 months after the reporting period; or the asset is cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period. All other assets are classified as non-current.

A liability is classified as current when: it is either expected to be settled in the company's normal operating cycle; it is held primarily for the purpose of trading; it is due to be settled within 12 months after the reporting period; or there is no unconditional right to defer the settlement of the liability for at least 12 months after the reporting period. All other liabilities are classified as non-current.

Deferred tax assets and liabilities are always classified as non-current.

Cash and cash equivalents
Cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Trade and other receivables
Other receivables are recognised at amortised cost, less any allowance for expected credit losses.

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.

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.

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.

Classification and subsequent measurement

1. Financial assets at fair value through profit or loss
   Financial assets are classified at fair value through the profit or loss when they are held for trading for the purpose of profit or loss in the short term profit taking. Realised and unrealised gains and losses arising from changes in fair value are included in profit or loss in the period in which they arise.

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.

NOTES TO AND FORMING PART OF THE ACCOUNTS

For The Year Ended 31 December 2022

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

Fair value measurement
When an asset or liability, financial or non-financial, is measured at fair value for recognition or disclosure purposes, the fair value is based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date; and assumes that the transaction will take place either: in the principal market; or in the absence of a principal market, in the most advantageous market.

Fair value is measured using the assumptions that market participants would use when pricing the asset or liability, assuming they act in their economic best interests. For non-financial assets, the fair value measurement is based on its highest and best use. Valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, are used, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

Critical Accounting Estimates Judgments and Assumptions
The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts in the financial statements. Management continually evaluates its judgements and estimates in relation to assets, liabilities, contingent liabilities, revenue and expenses. Management bases its judgements, estimates and assumptions on historical experience and on other various factors, including expectations of future events, management believes to be reasonable under the circumstances. The resulting accounting judgements and estimates will seldom equal the related actual results. The judgements, estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities (refer to the respective notes) within the next financial year are discussed below.

Estimation of useful lives of assets
The company determines the estimated useful lives and related depreciation and amortisation charges for its property, plant and equipment and finite life intangible assets. The useful lives could change significantly as a result of technical innovations or some other event. The depreciation and amortisation charge will increase where the useful lives are less than previously estimated lives, or technically obsolete or non-strategic assets that have been abandoned or sold will be written off or written down.

Impairment of non-financial assets other than goodwill and other indefinite life intangible assets
The company assesses impairment of non-financial assets other than goodwill and other indefinite life intangible assets at each reporting date by evaluating conditions specific to the company and to the particular asset that may lead to impairment. If an impairment trigger exists, the recoverable amount of the asset is determined. This involves fair value less costs of disposal or value-in-use calculations, which incorporate a number of key estimates and assumptions.

Employee benefits provision
As discussed in note 1, the liability for employee benefits expected to be settled more than 12 months from the reporting date are recognised and measured at the present value of the estimated future cash flows to be made in respect of all employees at the reporting date. In determining the present value of the liability, estimates of attrition rates and pay increases through promotion and inflation have been taken into account.

The Notes to the Financial Statements
The notes present information that is relevant to an understanding of the material items contained in the financial statements. The notes give prominence to areas that are considered to be most relevant to an understanding of the statement of financial position and the profit or loss and other comprehensive income and statement of changes in equity and cashflows and are cross referenced to those statements.

New and Amended Accounting Standards Adopted by the Entity
Initial adoption of AASB 1060: General Purpose Financial Statements – Simplified Disclosures for For-Profit and Not-for-Profit Tier 2 Entities

The entity has adopted AASB 1060: General Purpose Financial Statements – Simplified Disclosures for For-Profit and Not- for-Profit Tier 2 Entities for the first time this reporting period. The Standard, which sets out a new separate disclosure Standard to be applied by all entities that are reporting under Tier 2 of the Differential Reporting Framework in AASB

1053: Application of Tiers of Australian Accounting, replaces the previous Reduced Disclosure Requirements (RDR) framework. The application of this standard has resulted in reductions in disclosures compared to RDR in Revenue, Leases and Financial Instruments; however has resulted in new and/or increased disclosures in areas such as Audit Fees and Related Parties.

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2022

	2022 $	2021 $
2. Revenue		
Operating Activities		
Appeals	69,728	57,311
Net profit/(loss) on sale of investments	21,243	(13,242)
Rental revenue for property investment	123,096	238,261
Interest received	70,725	62
Fund distributions from investments	65,148	86,739
Legacies & donations	3,408	16,226
Member subscriptions	545	636
Miscellaneous income	1,732	1,543
Covid 19 Relief - Jobkeeper/Jobsaver	-	33,000
State Grants	-	1,500
Project Funding	363,749	101,272
Sundry income	36,828	36,828
Profit on Sale of Investment Property	2,275,657	-
Total Revenue	3,031,859	560,136
3. Profit From Ordinary Activities		
Expenses		
Depreciation of Non-Current Assets:		
Plant and equipment	3,282	3,832
4. Auditor's Remuneration		
Remuneration of the Auditor of the Company for:		
- Auditing the Financial Report	16,250	15,400
5. Cash and Cash Equivalents		
Cash at bank	1,059,826	746,789
Term Deposit	5,150,000	-
	6,209,826	746,789
6. Trade and Other Receivables		
Trade debtors	-	18,000
Accrued Income	43,000	-
	43,000	18,000
7. Other Current Assets		
Prepayments	6,986	7,189

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2022

	2022 $	2021 $
8. Financial Assets		
Non Current		
Managed funds - at fair value	1,719,646	1,894,374
Total financial assets	**1,719,646**	**1,894,374**
9. Property, Plant & Equipment		
Non Current		
Plant & equipment at cost	74,983	128,579
Less: accumulated depreciation and impairment	(35,113)	(86,270)
Total property, plant and equipment	**39,870**	**42,309**

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	42,309	42,309
Additions	1,814	1,814
Disposals	(971)	(971)
Depreciation expense	(3,282)	(3,282)
Carrying amount at the end of year	**39,870**	**39,870**

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

Investment Property Revaluations

The Company exchanged contracts for the sale of its investment property at Lot 5, Level 4, 16 O'Connell St Sydney on the 18th November, 2021. The sale price was $5,334,450. The sale was recorded in the company's books on the date of settlement - 30 June 2022 in accordance with accounting standard AASB 140.

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2022

		2022 $	2021 $
11.	**Trade and Other Payables**		
	Unsecured liabilities		
	Trade payables	6,084	4,731
	Sundry payables and accrued expenses	12,200	62,544
	Total	**18,284**	**67,275**
12.	**Unexpended Funds**		
	Unexpended Funds	678,035	354,859
	Total	**678,035**	**354,859**
13.	**Employee Entitlements**		
	Provision for annual leave	44,292	38,842
	Provision for long service leave	30,592	27,833
	Total	**74,884**	**66,675**
	Number of employees		
	Number of employees		
	Number of employees at year end	2	3
14.	**Reserves**		
	Capital profits reserve	2,411,980	2,411,980
	Asset revaluation reserve	40,023	2,116,900
	Total	2,452,003	4,528,880
	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	2,116,900	1,955,671
	Revaluation increment/(decrement)	(2,076,877)	161,229
	Transfers	-	-
	Balance at end of year	**40,023**	**2,116,900**

15. 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 2022 the number of members was 24 (2021:25).

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2022

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:

	2022 $	2021 $
Key management personnel compensation	192,052	220,844

17. After Balance Day Events

From 31st December 2022 to the date of this report, there has been no subsequent event that would have a material effect on the financial position of the company except as disclosed in these financial statements.

18. Cash Flows Information

(a) Cash at the end of the financial year as shown in the cash flow statement reconciled to items in the balance sheet as follows:

Cash and cash equivalents	6,209,826	746,789

(b) Reconciliation of Cash Flow from Operations with Profit after Income Tax		
Net income/loss for the period	2,234,093	29,201
Cash flows excluded from profit attributable to operating activities		
Non cash flows in profit		
Depreciation	3,282	3,832
Net (gain)/loss on disposal of investments	(2,295,929)	13,242
Changes in assets and liabilities, net of the effects of purchase and disposal of subsidiaries		
(Increase)/decrease in trade and term receivables	(25,000)	8,850
(Increase)/decrease in prepayments	203	694
Increase/(decrease) in trade payables and accruals	(48,991)	(491)
Increase/(decrease) in unexpended funds	323,176	354,859
Increase/(decrease) in provision for employee benefits	8,209	8,398
Net cash inflow/(outflow) from operating activities	199,043	418,585

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2022

	2022 $	2021 $
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	73,137	73,536
Less: Total direct costs of fundraising	11,823	12,126
Net surplus from fundraising activities	**61,314**	**61,410**
(b) Statement showing how funds received were applied to charitable purposes		
This surplus is used for research grants, fellowships and scholarships.		
(c) Fundraising appeals conducted during the financial period		
Appeals only.		
(d) Comparisons		
Total cost of fundraising/gross income from fundraising	16%	16%
Net surplus from fundraising/gross income from fundraising	84%	84%
Total cost of services/total expenditure	100%	100%
Total cost of services/total income received	16%	16%

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2022

	2022 $	2021 $
REVENUE		
Donation and Gifts - Monetary & Non monetary	73,137	60,073
Bequests and Legacies	-	13,463
Grants		
Other Australian	105,458	59,247
Other overseas	520,445	396,885
Investment Income	280,212	311,820
Profit on Sale of Investment Property	2,275,657	-
Other Income	2,277	73,507
TOTAL REVENUE	**3,257,186**	**914,995**
EXPENDITURE		
International Aid and Development		
International programs		
Funds to international projects	310,375	53,157
Program Support Costs	66,210	66,210
Community education	14,469	12,510
Fundraising Costs		
Public	11,823	12,126
Accountability and Administration	214,952	216,369
Total International Aid and Development Programs Expenditure	**617,829**	**360,372**
Domestic projects	124,998	79,863
Investment Expenditure	38,387	61,892
Grants Unexpended	225,326	354,859
Other Expenses	16,553	28,808
TOTAL EXPENDITURE	**1,023,093**	**885,794**
EXCESS/(SHORTFALL) OF REVENUE OVER EXPENDITURE	2,234,093	29,201
Net gain/(loss) on revaluation of financial assets and investment property	(205,820)	161,229
EXCESS/(SHORTFALL) OF REVENUE OVER EXPENDITURE	2,028,273	190,430

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".

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2022

	2022 $	2021 $
ASSETS		
Current Assets		
Cash and cash equivalents	6,209,826	746,789
Trade and other receivables	43,000	18,000
Other current assets	6,986	7,189
Total Current Assets	**6,259,812**	**771,978**
Non-Current Assets		
Financial assets	1,719,646	1,894,374
Property, plant and equipment	39,870	42,309
Investment property	-	3,000,000
Total Non-Current Assets	**1,759,516**	**4,936,683**
TOTAL ASSETS	**8,019,328**	**5,708,661**
LIABILITIES		
Current Liabilities		
Trade and other payables	18,284	67,275
Unexpended Funds	678,035	354,859
Provisions	74,884	66,675
Total Current Liabilities	**771,203**	**488,809**
TOTAL LIABILITIES	**771,203**	**488,809**
NET ASSETS	**7,248,125**	**5,219,852**
EQUITY		
Reserves	2,452,003	4,528,880
Retained earnings	4,796,122	690,972
TOTAL EQUITY	**7,248,125**	**5,219,852**

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".

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2022

	Capital profits Reserves $	Asset Revaluation Reserves $	Retained Earnings/ (accumulated losses) $	Total $
Balance at 1 January 2021	2,411,980	1,955,671	661,771	5,029,422
Excess of revenue over expense	-	-	29,201	29,201
Total comprehensive income for the year	-	161,229	-	161,229
Balance at 31 December 2021	2,411,980	2,116,900	690,972	5,219,852
Excess of revenue over expense	-	-	2,234,093	2,234,093
Total comprehensive income for the year	-	(2,076,877)	1,871,057	(205,820)
Balance at 31 December 2022	**2,411,980**	**40,023**	**4,796,122**	**7,248,125**

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, are in accordance with the Australian Charities and Not-for-profits Commission Act 2012 and:

   i. comply with Australian Accounting Standards - Simplified Disclosures (SD) applicable to the entity; and

   ii. give a true and fair view of the financial position of the registered entity as at 31 December 2022 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.

Christopher Turner
Director
Sydney, 5th April 2023

Amanda Christensen
Executive Director
Sydney, 5th April 2023

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 2022, the statement of profit or loss and other 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 2022 and of its financial performance for the year then ended; and

(ii) complying with Australian Accounting Standards - AASB 1060: General Purpose Financial Statements - Simplified Disclosures for For-Profit and Not-for-Profit Tier 2 Entities 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 2022, 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 entity are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards – AASB 1060: General Purpose Financial Statements – Simplified Disclosures for For-Profit and Not-for-Profit Tier 2 Entities and the Corporations Act 2001 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 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

INDEPENDENT AUDITOR REPORT

To The Members of the Australian Respiratory Council

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, 5th April 2023

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

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

2020 Graduate Diploma/Master of Nursing (TB Management) commenced

2022 PEARL Study screening and capcity building activities commenced

arc
australian respiratory council
prevention and cure of respiratory illness

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