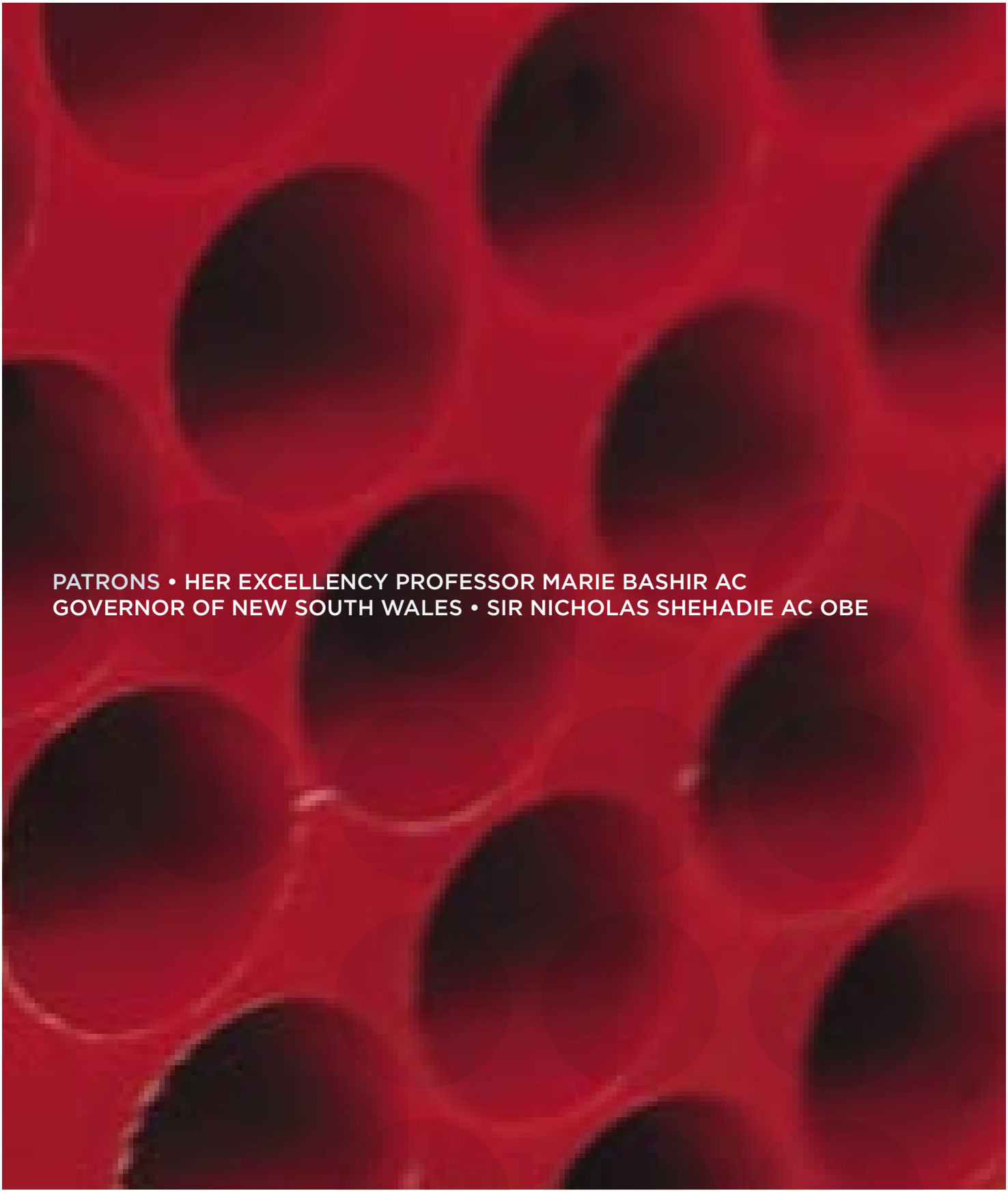
CHATA

ANNUAL REPORT 2004
NO. 91



PATRONS • HER EXCELLENCY PROFESSOR MARIE BASHIR AC
GOVERNOR OF NEW SOUTH WALES • SIR NICHOLAS SHEHADIE AC OBE

MISSION TO DEVELOP AND SUPPORT INNOVATIVE AND EFFECTIVE APPROACHES TO RESEARCH AND DEVELOPMENT IN LUNG HEALTH AND TO IMPROVE LUNG HEALTH IN COMMUNITIES, WITH EMPHASIS ON DISADVANTAGED GROUPS.

VISION

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

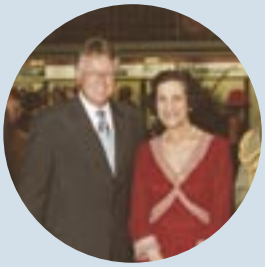
PRESIDENT'S REPORT At the end of my fourth year as President, I am pleased to be able to reflect on a successful year in CHATA's development. Through our international projects we continue to promote tuberculosis control and prevention in the Western Pacific, with an emphasis on Kiribati where the TB burden is one of the highest in the world. In Australia, we have commenced a TB project in the Maningrida Aboriginal community on the edge of Arnhem Land in the Northern Territory. I commend this annual report to you, and sincerely hope that you enjoy learning about our work as much as I have enjoyed working alongside CHATA's committed people.

One of the highlights of the year was the publication of the CHATA history *No Charge No Undressing* by consultant historian Peter Tyler. Our patron, Her Excellency Professor Marie Bashir AC, Governor of New South Wales, launched the book in the Jubilee Room at Parliament House in December 2003. This enjoyable occasion was attended by a large crowd including a number of former CHATA staff and current members.

CHATA has increased its total equity to $6.8 million as at 30 June 2004 from $6.4 million in 2003. CHATA's property investments have been valued at $3.4 million, a considerable improvement on their cost value at $2.3 million. However, a loss for the year of $71,843 was recorded as a result of the amounts spent on international project work and the allocation to research grants and scholarships in excess of investment and property income. We are definitely in a stronger financial position today than at any time in the last 90 years.

STRATEGIC DIRECTION I mentioned to you last year that the board was attempting to look into the future and see what it holds for CHATA. After much hard work and reflection, our new 3-year strategic plan is the result. The plan will guide CHATA through a process of transition, consolidating our strengths, extending our reach and carving out our niche in a competitive environment. As the organisation sets out to implement the strategic plan, I am confident that CHATA has a bright future ahead and a strong role to play within Australia and the Asia Pacific region.

During the year we have revised our research policy which has been in place since 1993. We continue to honour the memory of our late President, Professor Ann Woolcock AO, with the newly-established CHATA Ann Woolcock Australian Fellowship. Our revised CHATA Harry Windsor Australian Research Grants Scheme will continue to provide funding to worthy Australian projects to support research in tuberculosis, respiratory diseases related to other infections, and smoking-related respiratory diseases.

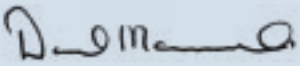


BOARD CHANGES CHATA owes a special thanks to retiring board members Dr Gregory Stewart and Associate Professor Guy Marks for their enthusiasm, commitment and endeavours on behalf of CHATA. Dr Stewart has been a board member since 1993 and served as President in 1999-2000. Associate Professor Marks joined the board in 1998 and has provided valuable expertise to CHATA's research activities. Their individual contributions have been deeply appreciated, and I offer my personal thanks to them.

THANKS On behalf of the board I would like to thank the many friends and supporters of CHATA without whom we would be unable to continue the fight against respiratory disease. In particular, I would like to give my special thanks to our donors, who are the lifeblood of CHATA. I sincerely believe there is no better way to assist humanity than to help CHATA and I look forward to continued donor support over the next 12 months.

I would like to express my gratitude to all board members, particularly the office bearers – Vice-Presidents Michael Levy and Paul Seale and Finance Director Robert Horsell – for their dedication and support over the past year and their enthusiasm for the future.

Finally, I would like to pay special tribute to the staff of CHATA. Bruce Ramage, through his meticulous attention to detail and his efforts to make my work as President easy, has allowed me to thoroughly enjoy my role. The staff makes the institution, and their continued dedication to CHATA's causes never fails to impress me. I look forward with confidence to another successful year and will continue to strive to assist in laying the foundation for the next phase and continued success of this wonderful organisation.



David Macintosh

EXECUTIVE OFFICER'S REPORT

Welcome to CHATA's 2004 annual report. I am pleased to provide you with an update of CHATA's activities over the past year. The new constitution, adopted by members last year, has now been implemented. The board has established a number of committees with appropriate terms of reference to provide it with advice. The projects committee (formerly the international committee) oversees our international and Australian project work and has an expanded membership. The research committee advises the board on research policy and makes recommendations on the funding of research grant applications.

STRATEGIC INITIATIVES One of the main activities of the past year has been the adoption of CHATA's new strategic plan 2004-2007, which sets in place a series of targets and reforms that will assist CHATA in better defining its niche role, extending its reach and consolidating its strengths. After 18 months of reflection and debate, I believe CHATA has a strong sense of its own purpose as well as some effective strategies for reinforcing the importance of this purpose among the Australian public.

For example, we are currently embarking on initiatives to explore ways to increase our public profile, which, in turn, will hopefully increase financial support from foundations, trusts, business and the general community. Looking to the future, a key aspect of building this platform of support will increasingly be through improving our online presence and visibility. The recent revamp of CHATA's website is the first step in a long process of strengthening the public face of CHATA. The success of these new initiatives will be critical in ensuring CHATA's long-term future.

RESEARCH The research committee undertook a major review of CHATA's research policy during the year. The previous policy had been in place since 1993 and the committee examined it in relation to CHATA's strategic directions, CHATA's other activities and value for money. The committee confirmed that support for respiratory research should continue as a major role for CHATA and dovetail more into the organisation's other activities.

The results of the deliberations are:

- CHATA has applied to the Commonwealth Department of Education, Science and Training to be included on the Australian Competitive Grants Register. If successful, this would provide additional funding to researchers' institutions.
- From 2005, CHATA will offer a three-year post-doctoral fellowship, *The CHATA Ann Woolcock Australian Fellowship,* for research in the area of tuberculosis, respiratory diseases due to other infections, or respiratory diseases related to tobacco use. Research with emphasis on the health of disadvantaged groups will be encouraged. These fellowships will be available nationally and will be valued at $100,000 per annum to support salary and on-costs.

• CHATA will offer several one-year grants for research -to be called *The CHATA Harry Windsor Australian Research Grants Scheme* - in the area of tuberculosis, respiratory diseases due to other infections, or respiratory diseases related to tobacco use. Research with emphasis on the health of disadvantaged groups will be encouraged. These grants will be awarded to investigators who have applied to the National Health and Medical Research Council (NHMRC) but have just missed the cut-off mark for funding. These research grants will also be available nationally and will be valued at least at $50,000 each. The specific number available in any one year will depend on the amount of funding available.

Unfortunately, CHATA will not be offering new scholarships for the time being. Existing scholars will continue to be funded in 2005, subject to satisfactory progress.

During the year we funded three scholarships and two research grants. Progress on this research can be found elsewhere in this report.

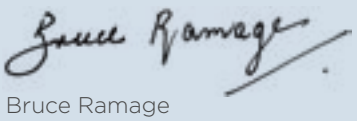
PROJECTS AND PARTNERSHIPS CHATA is continuing to implement a targeted program of technical project work, both internationally and nationally. In Kiribati, where rates of TB are among the highest in the world at 217 per 100 000, CHATA recently completed an intensive program of laboratory training for laboratory technicians and managers. CHATA is now embarking on designing and delivering a program of nursing training in Kiribati. This training is the first of its kind in the Pacific, and promises to bring findings and outcomes that will enhance TB programs throughout the entire region.

With generous support from the James N Kirby Foundation, CHATA is also working with disadvantaged communities in Australia. In conjunction with the Northern Territory Department of Health and Community Services, CHATA is developing a set of innovative awareness raising resources aimed at informing indigenous community members about the dangers of TB and how the disease can be treated and prevented.

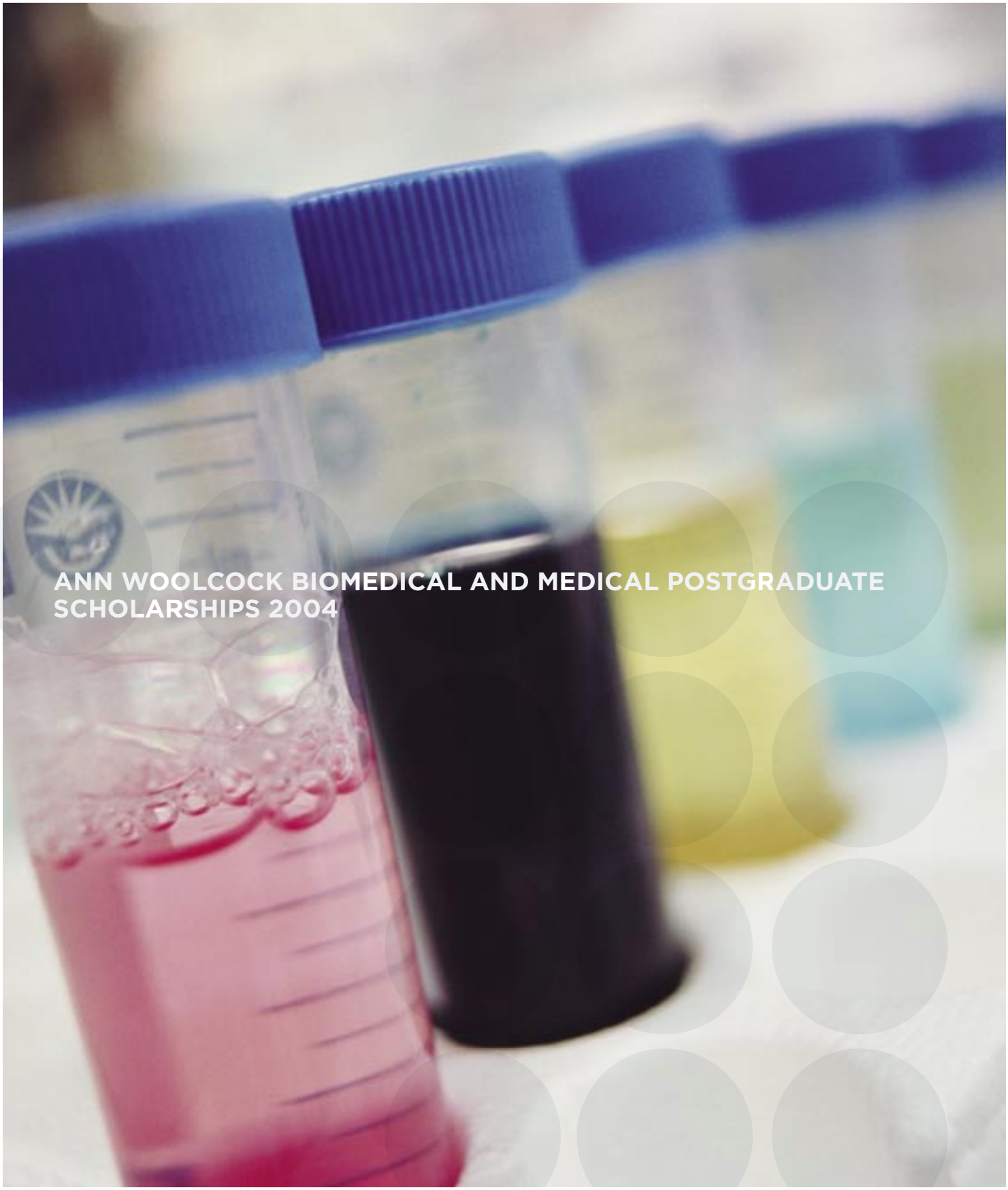
STAFF In May, CHATA's project manager, Mark Lambert, was seconded to the Secretariat for the Pacific Community (SPC) in Noumea for three months to assist in the TB Control Unit. He returned briefly to CHATA in August before accepting a year's contract with SPC. In the two years he has been with CHATA, Mark has made a significant contribution to the organisation. Everyone at CHATA wishes him well for his future.

Melissa George, CHATA's administration manager, continues to provide invaluable support to the day-to-day running of the office. Her skills in the financial aspects of her position are very much appreciated.

THANKS Finally, I would like to thank the board and our many supporters for the continued help throughout the year. There has been considerable amount of time and effort gone into achieving the outcomes generated over the past year and I thank all who have made a contribution. I am confident that as CHATA grows we will have even better results to share with you.



Bruce Ramage



ANN WOOLCOCK BIOMEDICAL AND MEDICAL POSTGRADUATE SCHOLARSHIPS 2004

KYLIE TURNER Centre for Infectious Diseases and Microbiology, Westmead Hospital; PhD Candidate, Department of Medicine, The University of Sydney.

INVESTIGATION OF THE STRUCTURE OF CRYPTOCOCCAL PHOSPHOLIPASES

Cryptococcus neoformans is a medically important fungus which causes disease mainly in immuno-compromised individuals. These include people suffering from AIDS, transplant recipients and people undergoing chemotherapy and other immunosuppressive treatments.

The organism is most commonly found growing on dry "weathered" pigeon droppings. It enters the host by being inhaled into the lungs. It is here that the organism establishes a primary infection (Figure 1), which may have no symptoms at all or take the form of a mild or chronic pneumonia. It can then spread to other parts of the body, in particular the brain, where it causes meningitis (median mortality 17%).

Antifungal drugs that are currently used to treat infection by this organism are ineffective, toxic or expensive. There is a need to develop new drugs which act on novel structural targets. In *C. neoformans*, a potential target is an enzyme that the fungus secretes known as phospholipase B (PLB). This enzyme helps the organism break down cell membranes and aids invasion into the lungs and survival in lungs and other tissues (Figure 2). Very little is known about the structure of PLB enzymes in this organism or any other fungus. The aim of related doctoral work is to understand how the PLB enzyme is constructed.

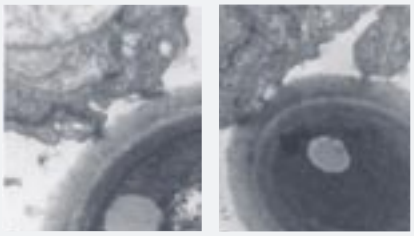


FIGURE 1 C. neoformans *contacting and invading lung cells.*

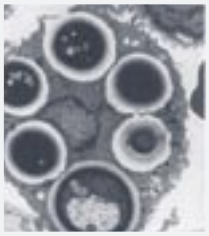


FIGURE 2 C. neoformans *surviving within lung macrophages, immune cells which should kill the organism.*

PLB is known to have a number of sugars attached to it but it is not known what role these sugars play and what happens to the enzyme if they are removed. Most of the past year has been spent determining the role of the sugars for the activity and secretion of the enzyme. To do this, a process known as site-directed mutagenesis was used to block the attachment of some sugars to the protein. Site-directed mutagenesis involves altering the DNA of the organism at certain points to cause changes to the enzyme structure.

Comparisons were then made between mutated and "normal" PLB for enzyme activity and secretion. The mutants with PLB lacking some of the attached sugars were found to have had much less activity than fungal cells with normal PLB for both secreted PLB enzyme activity and enzyme activity within the cell. Removing the sugars seemed to allow the enzyme to be broken down within the cell. Also, in the mutants, much more PLB stayed inside the cell than was secreted. This is an interesting and important finding as PLB secreted out of the cell plays a pivotal role in allowing *C. neoformans* to cause infection. The next phase of the project involves determining what part of the enzyme is important for binding to cellular lung components, again using site directed mutagenesis.

The information gained from both of these investigations will provide a greater insight into how PLB is constructed and how it allows *C. neoformans* to cause disease. This information can be used by others in the laboratory to design drugs which bind to PLB in place of cell components. It is hoped that this will block the enzyme's harmful effects and possibly kill the organism, without having any toxic effects on human cells. These drugs will be useful not only against *C. neoformans* but also other fungal pathogens, many of which also secrete PLB enzymes.

CORRINA PARKER PhD candidate, Department of Chemistry The Australian National University.

DETECTION, ISOLATION AND CHARACTERISATION OF NOVEL ANTI-INFECTIVE AGENTS FROM CULTURED MICRO-FUNGI

Nature serves as the largest reservoir of novel chemical structures for the development of new pharmaceuticals. Over 50% of the drugs on the market today are extracted from natural products or derived synthetically using a natural product as a template or starting material. Australia is one of the world's most bio-diverse nations, with habitats that include many unique organisms for the discovery of novel compounds.

WHY EXPLORE THE OCEANS FOR ANTIBIOTICS?

Traditionally, chemists working with natural products have dealt with secondary metabolites from plants and animals. However, the oceans represent the largest habitat of the world covering more than 70% of the earth's surface. With their great biological diversity, the oceans offer exciting potential for the discovery of new compounds for medical use. Over the last two decades we have seen more attention being paid to the flora and fauna of the sea.

Marine microorganisms, especially fungi, have been poorly investigated, but because of their living conditions and functions within the ecosystem, they are expected to produce a vast array of biologically active compounds with novel structures. Compared with secondary metabolites from other marine organisms such as sponges, the number of known metabolites from marine fungi is very small (Figure 1). The only compound from a marine fungus that up to now has been used as a source for partial synthetic derivatives and has become established in therapy is cephalosporin C.

Micro-fungi, found growing on or in other organisms, have the potential to produce active compounds in large amounts when grown in large-scale culture, making them ideal for antibiotic research. The New South Wales south coast has been the primary area for collection of various specimens, such as soft corals, algae and sponges (Figure 2). From these specimens there has been isolated in excess of 300 fungi. These have been extracted and the extracts tested against a panel of nosocomial pathogens for antibiotic activity. In addition, extracts have been tested for activity against the non-virulent*Mycobacterium smegmatis*, which is used as a model for *M. tuberculosis* (Table 1).

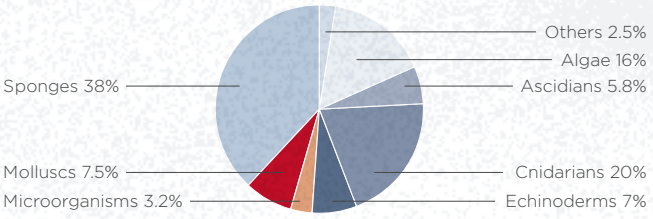


FIGURE 1 Major producers of known marine natural products (% of the total number of compounds).

SOURCES OF BIOACTIVE COMPOUNDS Compounds isolated from fungi CP-03-06-P3-1, CP-03-07-M1 and CP-03-07-N6-2-1 have shown promising activity against *S. aureus, S. epidermidis* as well as *M. smegmatis* and *E. coli*.

ISOLATION AND CHARACTERISATION OF BIOACTIVE COMPOUNDS Active fungi are grown in large-scale liquid cultures, which provide the biomass needed for the isolation of bioactive compounds. The fungal mycelia are extracted into solvents, concentrated, and then subjected to solvent partitioning. This allows a distribution of the compounds present in the crude extract based on their solubility in solvents of varying polarities. Following this the extracts are again subjected to bioactivity tests. The simplified extracts are subjected to various forms of column chromatography including size exclusion chromatography to give a partial separation of the compounds. Finally the pure compounds are isolated by high-performance liquid chromatography (HPLC).

A final round of activity testing elicits the active compounds that are then identified through instrumental analysis including infrared, ultraviolet, mass spectroscopy and nuclear magnetic resonance spectroscopy (NMR). This gives the necessary information to determine the structure of the compound.

	BACTERIUM (NUMBERS REPRESENT ZONES OF INHIBITION IN MM)				
ACCESSION NO.	S. AUREUS	S. EPIDERMIDIS	P. AERUGINOSA	E. COLI	M. SMEGMATIS
CP-03-05-P5-1		10	9	9	
CP-03-06-P6-1	22	20	10.5	16	21
CP-03-07-N6-2-1	14	21	18	20	15
CP-03-07-M1	14	8		12	15
CP-03-06-P3-1		16	12		17
CP-03-07-P1-1	13	14			15
CP-03-07-P2-1	13	15			15
CP-03-07-P2-2	12	15			13.5
CP-03-15B-M3-1	9	12			9.5
CP-03-15B-M3-2	10	8			10
CP-03-17-P1	9	8.5			11
CP-03-17-P2	8	9			10
CP-03-17-P3	8	15	10		
CP-03-17-P4	8	11			11

TABLE 1 Representative activity of tested fungi.

FIGURE 2 Sponge CP-03-07

ZOE MCKEOUGH Research Physiotherapist, Department of Respiratory Medicine Royal Prince Alfred Hospital, Sydney; enrolled in Master of Applied Science (Physiotherapy) by research at The University of Sydney.

EVALUATION OF LUNG VOLUME REDUCTION SURGERY (LVRS) IN PATIENTS WITH CHRONIC AIRFLOW LIMITATION

A randomised controlled trial (RCT) evaluating the effects of lung volume reduction surgery (LVRS) and pulmonary rehabilitation (PR) (LVRS + PR group) to PR alone (PR Group) has been running at Royal Prince Alfred Hospital (RPAH) since August 2000. This project is now complete although appropriate subject numbers were not recruited due to a decline in the number of subjects nation-wide having LVRS.

Figure 1 indicates the design of the RCT and the number of subjects actually recruited to the trial from January 2001 to July 2003.

Results have been analysed in two formats:
- A RCT comparing the 8 subjects in the LVRS + PR group to the 4 subjects in the PR group.
- An analysis of the subjects who were in the LVRS + PR group only. Data was analysed at baseline (T1), after eight weeks pulmonary rehabilitation (T2) and again four months after LVRS combined with pulmonary rehabilitation (T3).

RESULTS FROM THE RCT The results were limited by the lack of power in the study. Despite this, the LVRS + PR group showed greater improvement in lung function and quality of life (QoL) compared with the PR group.

RESULTS FROM THE LVRS + PR GROUP ONLY
The analysis of the LVRS + PR group only examined arm and leg exercise capacity, arm strength and resting energy expenditure (REE). REE was elevated at baseline but decreased following LVRS which may have been related to an improvement in work of breathing. Leg exercise capacity and supported and unsupported arm exercise capacity increased following LVRS + PR when no change had occurred from pre-operative pulmonary rehabilitation. This increase was mostly due to the increased ventilatory capacity achieved as a result of LVRS rather than a training response from continued post-operative pulmonary rehabilitation. Despite improvements in arm exercise capacity, the arm muscles were not stronger four months following LVRS + PR.

GAS EXCHANGE MEASURES Detailed gas exchange measures were also taken before and four months following LVRS on three subjects. At baseline all three subjects showed relatively well-preserved gas exchange. Following LVRS there was no substantial alteration to gas exchange. Some small benefit in oxygenation occurred due to a reduction in shunt and a redistribution of blood away from low ventilation/perfusion units.

QUADRICEPS MUSCLE METABOLISM There were insufficient subjects having LVRS to examine the effect of LVRS and post-operative pulmonary rehabilitation on muscle metabolism. Instead a group of subjects with COPD who were undergoing pulmonary rehabilitation at RPAH were recruited to investigate the effect of an eight week pulmonary rehabilitation program on muscle metabolism using magnetic resonance spectroscopy. A group of age-matched, sedentary, healthy subjects were also recruited to act as a control group. The main outcomes were Qmax (a measure of mitochondrial function) and quadriceps muscle cross-sectional area (CSA). At baseline, Qmax was lower in the COPD subjects compared with the healthy subjects indicating some reduction in mitochondrial function in the COPD subjects. Following exercise training in the COPD subjects, both Qmax and muscle CSA significantly increased. This evidence suggests that a standard pulmonary rehabilitation program of endurance and strength training will improve the oxidative capacity of the muscle and also increase muscle mass.

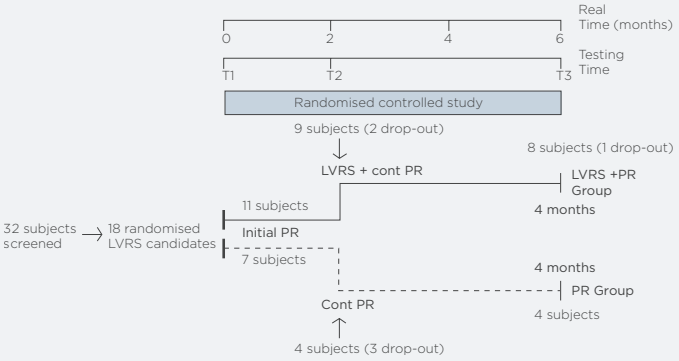


FIGURE 1 RCT of LVRS combined with pulmonary rehabilitation (LVRS + PR group) compared to pulmonary rehabilitation alone (PR group).

HARRY WINDSOR RESEARCH GRANTS 2004

1. Dr Bernadette Saunders
2. Dr Suran Fernando


1.


2.

PROFESSOR WARWICK BRITTON ASSOCIATE PROFESSOR GUY MARKS DR BERNADETTE SAUNDERS Mycobacterial Research Laboratory Centenary Institute of Cancer Medicine and Cell Biology, Sydney.

EVALUATION OF GENETIC AND ENVIRONMENTAL RISK FACTORS FOR PROGRESSION OF ACTIVE TUBERCULOSIS IN THE LIVERPOOL COHORT

Tuberculosis develops in only a proportion (~10%) of all the people infected with the causative organism, *Mycobacterium tuberculosis*. Both environmental factors, such as malnutrition and other infections, notably HIV and measles infections, and genetic host factors influence the progression from acute or latent tuberculosis infection to active disease.

To investigate the potential association between $P2X_7$ polymorphisms and the risk of active tuberculosis among individuals who carry latent infection with *M. tuberculosis*, a case control study nested within the Liverpool Refugee Cohort is being conducted. This is a cohort of approximately 25,000 predominantly south-east Asian people who were screened for TB infection and disease at the Refugee Health Service (initially at Lidcombe and subsequently at Liverpool) soon after their arrival in Sydney as refugees during the period 1984 to 1994. Using database linkage, those members of this cohort have been identified who have subsequently developed active tuberculosis.

In the present study 119 cases have been identified, that is, people who had evidence of infection at the time of arrival and subsequently developed active TB, and 557 controls, that is a random selection of people who also had evidence of infection at the time of arrival but have not subsequently developed active TB. The selected subjects are currently being contacted, using Australian Electoral Commission rolls and the Electronic White Pages, and invited to take part in the study. If they agree, a brief questionnaire is administered and blood is collected for DNA analysis. At the present time, 28 cases and 39 controls have been enrolled and tested.

This project will complement a broader, Sydney-wide study on the genetic susceptibility to tuberculosis. Ninety patients with tuberculosis have already been enrolled in this study. Both populations of patients will be used to study the effects of polymorphisms or changes in the gene for the $P2X_7$ receptor on white cells. This receptor is increased on macrophages which are the host cells for *M. tuberculosis*. The stimulation of the $P2X_7$ receptors on macrophages with extracellular ATP leads to the activation of mechanisms that kill the resident mycobacteria. The cell then undergoes apoptosis or programmed cell death, and dies without releasing viable mycobacteria. This is an important mechanism for the control of mycobacteria infection in humans.

In collaboration with Professor James Wiley at Nepean Hospital, a number of non-functioning polymorphisms have been identified which render the receptor unresponsive to ATP. Individuals who are homozygous for a non-functioning polymorphism in the intracytoplasmic tail of the protein (1513A-C) are unable to kill mycobacteria following stimulation with interferon-D and ATP[1]. This is illustrated in Figure 1 where the BCG infected macrophages from homozygous individuals failed to undergo apoptosis. Human monocyte-derived macrophages were infected for 48 h. Cells were then pulsed for 20 min with 3 mM ATP, washed, and incubated

for an additional 16 h. Cells were stained with annexin V and PI to identify apoptotic cells. Data are the percentage of apoptotic cells in ATP-pulsed cultures minus non-ATP-pulsed cultures from three individuals homozygous for the 1513A-C polymorphism and in three wild-type individuals tested on two separate occasions. Differences between wild-type individuals and individuals homozygous for the 1513A-C polymorphism were significant at *p < 0.001.

Figure 2 shows where these macrophages, following stimulation with interferon-D and ATP, failed to kill *Mycobacterium bovis* (BCG). Human monocyte-derived macrophages were infected for 48 h. Cells were then pulsed for 20 min with 3 mM ATP, washed, and incubated for another 16 h. Cells were lysed and viable bacilli were enumerated by plating serial dilutions of cell lysates onto 7H11 agar. Data show the log reduction in viable bacilli in ATP-pulsed cultures minus non-ATP-pulsed cultures in three individuals homozygous for the 1513A-C polymorphism and in three wild-type individuals tested on two separate occasions. Differences between wild-type individuals and individuals homozygous for the 1513A-C polymorphism were significant at *p < 0.001.

More recently, a number of other non-functioning polymorphisms have been identified in the gene for the $P2X_7$ receptor. Subjects who are compound heterozygotes, that is, they have different polymorphisms for the receptor genes on each chromosome, have been characterised. Macrophages from these subjects were also unable to kill mycobacteria[2]. The DNA samples being collected from subjects in the Liverpool Refugee Cohort will be used to determine if individuals with polymorphisms in the gene are more likely to progress following infection to active tuberculosis.

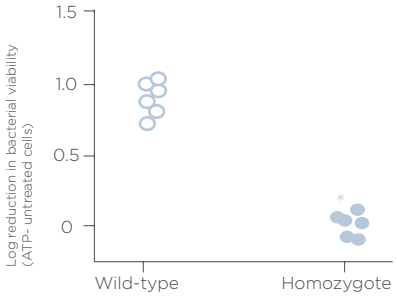


FIGURE 1 ATP induced killing of BC within human macrophages.

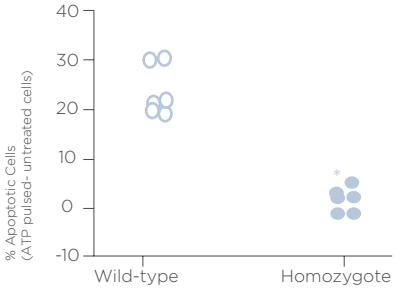


FIGURE 2 ATP induced apoptosis in BCG-infected human macrophages.

REFERENCES
1 Saunders BM, Fernando SL, Sluyter R, Wiley, J, Britton WJ. (2003) A loss-of-function polymorphism in the human $P2X_7$ receptor abolishes ATP mediated killing of mycobacteria. *The Journal of Immunology*, 2003, 171: 5442-5446.
2 Fernando SL, Saunders BM, Sluyter R, Wiley J, Britton WJ. (2004) ATP mediated killing of mycobacteria is impaired in human macrophages from compound heterozygotes with loss of function polymorphisms in the $P2X_7$ receptor. (in preparation).

ASSOCIATE PROFESSOR PAUL KELLY
PROFESSOR NICHOLAS ANSTEY DR GRAEME MAGUIRE Menzies School of Health Research, Darwin in collaboration with the Indonesian National Institute for Health Research and Development, Jakarta and local partners*

PULMONARY FUNCTION IN TUBERCULOSIS PATIENTS IN MIMIKA DISTRICT, PAPUA PROVINCE, INDONESIA

This is the second year of CHATA funding for this Indonesian-based project to examine the short and medium-term effects of tuberculosis (TB) on lung function. The project has brought significant Australian and Indonesian expertise in infectious diseases, respiratory medicine, public health, mycobacterial laboratory and research methods together to examine this issue.

The World Health Organization estimates that Indonesia has the third highest number of TB cases in the world. The Mimika District, on the southern coast of Papua Province (formerly Irian Jaya) has a very high burden of TB, with notification rates for pulmonary TB exceeding 200 cases per 100,000 population. There is also a rapidly expanding HIV epidemic which will adversely impact on TB control activities in the coming years.

Pulmonary TB may cause pulmonary dysfunction in the short term, but there is a paucity of studies documenting the precise nature, extent and duration of this effect. It also remains unclear whether microbiological cure of TB in this setting can prevent a significant long-term reduction in lung function and, if this does occur, whether it is associated with functional impairment, disability and resultant reduced productivity. As with other high TB prevalence settings, access to services and resources for treating chronic lung dysfunction is limited, leading to constraints in the early diagnosis and adequate treatment of the disease. If prevention is possible, it is the best option for this population.

Previous lung disease, high smoking rates, long delay before seeking treatment, difficulties with compliance and exposure to occupational and household pollutants are highly prevalent in Mimika. The effect of TB on lung function is being examined in the context of these other potential mechanisms and potential prevention strategies are being investigated.

METHOD All smear positive TB patients diagnosed in Mimika District between July 2003 and May 2004 were eligible for enrolment. Healthy controls have provided information to allow comparison with subjects with tuberculosis. At baseline, measurements of lung function (spirometry, a six minute walk test and a standardised respiratory function questionnaire) were taken. These tests are being repeated at follow-up (at two, six and 12 months post-diagnosis) together with more sophisticated tests of pulmonary function (DLCO). In addition, sputum was collected for culture and sensitivity testing and various demographic and other exposure parameters were collected at baseline. Anatomical (radiology), physiological (respiratory function tests) and micro-biological measures of the severity of TB illness will be correlated with pulmonary disability at baseline and during the follow-up period.

THE LUNG FUNCTION STUDY So far, recruitment of 115 sputum smear positive pulmonary TB patients has been completed and follow-up examinations have been made on over 60 patients at two months and over 20 patients at six months. Co-infection with HIV is uncommon (4.4%). Preliminary analysis confirms that TB patients at diagnosis have significantly impaired lung function compared with community controls, significantly improve on treatment at two months but are still significantly worse than the control group. The results are consistent with a restrictive form of lung disease in this group of patients. Longer term follow-up is proceeding and more detailed analysis will be done over the next few months leading to publication of the results.

A TB DRUG RESISTANCE SURVEY One hundred specimens have successfully cultured at the Institute for Medical and Veterinary Science (IMVS) mycobacterial laboratory in Adelaide, and for the first time, a community-based sample of Indonesian TB patients can be reported. Drug resistance is present in 11% of patients (isoniazid and/or streptomycin) and 2% have multi-drug resistance (MDR-TB, resistance to at least rifampicin and isoniazid). This shows that MDR-TB is present in Mimika, but the rates are not high enough to threaten TB control with standard TB drugs at this time. The results are informing plans for treatment of MDR-TB in Mimika District.

PARAMETER	S. AUREUS		S. EPIDERMIDIS		P*
	MEAN	SD	MEAN	SD	
FEV1 (L)	2.96	0.68	1.87	0.74	<0.001
FVC (L)	3.6	0.74	2.39	0.8	<0.001
FEV1/FVC (%)	81	0.09	82	0.09	1

* ADJUSTED FOR SEX, AGE, HEIGHT, ETHNIC GROUP & SMOKING HISTORY

TABLE 1 Adjusted values for spirometry, TB patients at baseline versus control group.

PARAMETER	ENROLMENT		2/12 RX		P
	MEAN	95% CI	MEAN	95% CI	
6 MIN WALK TEST (M)	398	376,420	440	425,460	0.003
FEV1 (L)	1.89	1.64,2.13	2.3	2.08,2.57	0.02
FVC (L)	2.5	2.26,2.75	2.88	2.58,3.17	0.07
FEV1/FVC (%)	80.3		81.7		0.7

TABLE 2 Unadjusted values for spirometry and walk test, baseline versus two month of treatment.

FUTURE POTENTIAL TB STUDIES IN MIMIKA Through our research collaboration, several related issues have emerged which are adversely effecting TB control in Mimika. These include a trend to lower case detection of smear positive pulmonary TB, a higher than expected smear positivity and extensive disease on chest Xrays (reflection of the burden of disease, and probably duration of illness), a number of patients who have been diagnosed with TB but have not reported to the TB clinic for treatment, less than optimal approach to directly observed treatment at the TB clinic and a high proportion of smears still positive after two months of treatment. Potential new studies that could help to address these issues and further strengthen TB control are being planned in Mimika.

CONCLUSION There have been many positive spin-offs from the CHATA-funded research project in addition to the research outputs, discussed above. This project shows the potential for clinical and operational TB research not only to address CHATA's research focus, but also to dovetail with the aims of its international project work. These include the strengthening of TB clinical services and TB laboratories, capacity building and training and the strengthening of research collaborations for TB in Indonesia and Australia.

FIGURE 3 Dr Enny Kenengalem and patient in the pulmonary function laboratory, Community Hospital, Mimika, Papua, Indonesia.

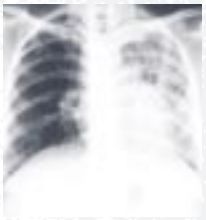


FIGURE 4 An Xray showing the typically extensive disease of TB patient in the Mimika TB Lung Study.

*COLLABORATORS Dr Emiliana Tjitra (National Institutes of Health Research and Development, Jakarta), Dr Ardian Muhammad, Govert Waramori (Public Health & Malaria Control, Timika, Mimika District, Papua), Dr Handojo Tjitra & Dr Enny Kenengalem (Community Hospital, Timika) Richard Lumb and Dr Ivan Bastian (Institute for Medical & Veterinary Science, Adelaide).

BOARD OF DIRECTORS

AMANDA CHRISTENSEN

QUALIFICATIONS AND EXPERIENCE Dip Nursing
NSW TB Program Manager 1997-; various positions in public health for sixteen years including tuberculosis control for nine years. Appointed to the Board in 2001.

PROFESSOR STEPHANIE FAHEY

QUALIFICATIONS AND EXPERIENCE BA (Hons), PhD
Director, Research Institute for Asia and the Pacific, University of Sydney 1998-; Head, Department of Asian and International Studies, Victoria University of Technology 1992-1998; Director, Centre for Asia and Pacific Studies, Victoria University of Technology 1992-1994; Principal Lecturer (Asian Studies), Victoria University of Technology 1990-1991; Lecturer, Department of Geography, University of Melbourne 1989; Lecturer, Department of Humanities, Footscray Institute of Technology 1984-1989; Urban Geographer, City of Doncaster and Templestowe, Melbourne 1983-1984; Lecturer, Department of Geography, Canberra College of Advanced Education 1981. Extensive consulting experience in the Asia Pacific region in the area of business, political and cultural relationships with the region. Member, Australian Government's Foreign Affairs Council; board member, Australia Korea Foundation; board member, NSW Asia Business Advisory Council; National Vice-President, Australia East Timor Business Council; member, Women in Leadership Network (under APEC). Appointed to the Board in 2001.

DR GAVIN FROST

QUALIFICATIONS AND EXPERIENCE MBBS, MPH, FRACMA, FAFPHM Chief Medical Officer, MBF Australia 1998-; in addition to his appointment at MBF, General Manager – Business Development, Aus Health International since July 2004; Censor-in-Chief, Royal Australasian College of Medical Administrators 1999-; Executive Director, Royal North Shore Hospital 1997-1998; Senior Adviser AIDS/ Communicable Diseases, Commonwealth Department of Health 1994-1996; Deputy Chief Health Officer, NSW Health 1990-1994. Appointed to the Board in 1980.

ROBERT HORSELL

QUALIFICATIONS AND EXPERIENCE CPA Partner, R E Horsell & Co Public Accountants 1978-; Director, Cricket Australia 1997-2004; Chairman, Cricket NSW 1997-; Director, Bradman Foundation 1999-. Appointed to the Board in 1999; Finance Director.

CLINICAL ASSOCIATE PROFESSOR MICHAEL LEVY

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

DAVID MACINTOSH

QUALIFICATIONS AND EXPERIENCE BBS (UTS), ACA
Chairman, Payce Consolidated Limited 1992-; Director, Payce Consolidated 1990-; Managing Director, Paynter Dixon 2001-; Director of numerous private companies; twenty-five years of senior management and director level in the transport and construction industries in Australia and Europe; Member of Board of Governors, Woolcock Institute of Medical Research; Member of the President's Council, The Children's Hospital at Westmead; Director, The Australian Lung Foundation; Chairman, The Macintosh Foundation; actively involved in the Surf Life Saving movement for over thirty-seven years. Appointed to the Board in 1997; President.

EMERITUS PROFESSOR NOEL MARTIN AM

QUAILFICATIONS AND EXPERIENCE MDS, FACD, FRACD, FAPHA, FICD, AIAOP, FRAH (Ireland), FRSM (Eng) Director, United Dental Hospital of Sydney 1987-1991; Dean, Faculty of Dentistry, University of Sydney 1970-1988; President, CHATA 1967-1997. Appointed to the Board in 1960.

PROFESSOR ROBYN RICHMOND

QUALIFICATIONS AND EXPERIENCE BA, MA, MHEd, PhD Professor of Community Medicine, School of Public Health and Community Medicine, University of New South Wales (UNSW) 2003-; Associate Professor, UNSW 1989-2003; principal investigator of a number of research projects designed to reduce smoking prevalence and excessive alcohol consumption in community settings and groups (general practice, hospital, workplace, prison, those with mental illness, and Indigenous people); Coordinator in Population Health for Years 4 and 5 medical students at UNSW; Coordinator of three courses in the Master of Public Health at UNSW; Deputy Chair and Chair, Tobacco Prevention Section, IUATLD 1994-2000; former Director, Healthy Lifestyle Centre, St Vincent's Hospital; former Director, Lifestyle Unit, Prince of Wales Hospital. Involved in developing and teaching in the new medical course at UNSW. Appointed to the Board in 1994.

PROFESSOR J PAUL SEALE

QUALIFICATIONS AND EXPERIENCE MBBS, PhD, FRACP, FRCP Professor of Clinical Pharmacology, University of Sydney 1992-; Pro-Dean, Faculty of Medicine, University of Sydney 1997-2003; Consultant Physician, Royal Prince Alfred Hospital 1980-; Deputy Director, Woolcock I nstitute of Medical Research; Member, Australasian Society for Clinical and Experimental Pharmacologists and Toxicologists; Past President, Thoracic Society of Australia and New Zealand; former Congress President, Asia Pacific Society of Respirology; Member of TAG. Appointed to the Board in 1997; Vice-President.

FREDERICK SMITH

QUALIFICATIONS AND EXPERIENCE FCA Chartered accountant since 1955; previously partner in large international accounting firm. Extensive experience as a director of public and private companies. Appointed to the Board in 1998.

CLINICAL ASSOCIATE PROFESSOR IVEN YOUNG

QUALIFICATIONS AND EXPERIENCE BSc (Med), MBBS, PhD FRACP Head, Department of Respiratory Medicine, Royal Prince Alfred Hospital (RPAH) 1991-; Visiting Medical Officer, RPAH 1979-1985; Senior Staff Specialist in Respiratory Medicine, RPAH 1985-; Post-Doctoral Fellow, University of California, San Diego 1976-1978; Research Fellow, University of Sydney 1974-1976; Respiratory Physician 1975-; Member, Thoracic Society of Australia and New Zealand; Member, American Thoracic Society; Senior Examiner, Australian Medical Council 1997-; elected to the Adult Medicine Division, Royal Australasian College of Physicians 2000-2001; Chairman, Division of Medicine, RPAH 2001-. Appointed to the Board in 1998.

COMPANY SECRETARY AND EXECUTIVE OFFICER BRUCE RAMAGE

QUALIFICATIONS AND EXPERIENCE BSc, BA (Hons) (Syd) Joined CHATA in 2001 after more than twenty years experience in university administration.

COMMITTEES

PROJECTS COMMITTEE

DR GARTH ALPERSTEIN
Central Sydney Area Health Service

PROFESSOR STEPHANIE FAHEY (CHAIR)
Director, Research Institute for Asia and the Pacific, University of Sydney

DR VICKI KRAUSE
Director, Centre for Disease Control, Northern Territory Health Services

ASSOCIATE PROFESSOR MICHAEL LEVY
Director, Centre for Health Research in Criminal Justice Justice Health

DAVID MACINTOSH
Chairman, Payce Consolidated; CHATA President (*ex officio*)

DR PETER PIGOTT
Department of Respiratory Medicine, Royal North Shore Hospital

PROFESSOR AILEEN PLANT
Centre for International Health, Curtin University

PROFESSOR ROBYN RICHMOND
Professor of Community Medicine, University of NSW

ASSOCIATE PROFESSOR JAN RITCHIE
School of Public Health & Community Medicine, University of NSW

SHEILA SIMPSON
TB Nurse, Liverpool Health Service

ASSOCIATE PROFESSOR RICHARD TAYLOR
School of Public Health, University of Sydney

RESEARCH COMMITTEE

PROFESSOR CAROL ARMOUR
Professor of Pharmacy, University of Sydney

PROFESSOR STEPHANIE FAHEY
Director, Research Institute for Asia and the Pacific University of Sydney; Chair, CHATA Projects Committee

ASSOCIATE PROFESSOR PETER GIBSON
Staff Specialist, Respiratory Medicine Unit. John Hunter Hospital

ASSOCIATE PROFESSOR MICHAEL LEVY
Director, Centre for Health Research in Criminal Justice Justice Health

DAVID MACINTOSH
Chairman, Payce Consolidated; CHATA President (*ex officio*)

ASSOCIATE PROFESSOR IVEN YOUNG (CHAIR)
Head, Department of Respiratory Medicine, Royal Prince Alfred Hospital

CONCISE FINANCIAL REPORT

DIRECTORS' REPORT

DIRECTORS The names of the directors of the company in office during the financial year and until the date of this report are as follows. Directors were in office for this entire period unless otherwise stated. Amanda Julie Christensen, Stephanie Ann Fahey, Gavin Walter Frost, Robert Eric Horsell, Michael Herbert Levy, David Hugh Macintosh, Guy Barrington Marks (resigned May 2004), Noel Desmond Martin AM, Robyn Lesley Richmond, John Paul Seale, Frederick Charles Samuel Smith, Gregory Joseph Stewart (resigned June 2004), Iven Hunter Young.

DIVIDENDS No dividend has been recommended or paid.

CORPORATE INFORMATION

CORPORATE STRUCTURE The company is a public company, limited by guarantee, that was incorporated in New South Wales, Australia.

NATURE OF OPERATIONS AND PRINCIPAL ACTIVITIES The principal activity during the financial period of the company was the provision of grants for health research and related activities.

EMPLOYEES The entity employed 3 employees as at 30 June 2004 (2003: 3 employees).

REGISTERED OFFICE The company's registered office and the principal place of business are located at Suite 2, 2 Norwich Road, Rose Bay NSW 2029.

REVIEW AND RESULTS OF OPERATIONS The company made an operating loss for the year ended 30 June 2004 of $71,843 (2003: loss $289,737). Income received during the year from normal trading activities amounted to $2,265,129 (2003: $1,114,793). Operating expenses for the year amounted to $2,336,972 (2003:$1,404,530).

SIGNIFICANT CHANGES IN THE STATE OF AFFAIRS In the opinion of the directors, there were no other significant changes in the state of affairs of the company that occurred during the financial year under review not otherwise disclosed in this report or the financial statements.

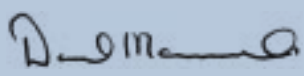
SIGNIFICANT EVENTS AFTER THE BALANCE DATE No matter or circumstances have arisen since the end of the financial year that have significantly affected or may significantly affect the operations of the company or the results of those operations or the state of the affairs of the company.

LIKELY DEVELOPMENTS AND EXPECTED RESULTS The company will continue to collect appeals monies and distribute health research grants and provide funding assistance to worthy projects.

ENVIRONMENTAL REGULATION AND PERFORMANCE The company is not subject to any particular or significant environmental regulation.

INDEMNIFICATION AND INSURANCE OF DIRECTORS The company has insured the directors against breaches leading to lawsuits as a result of their holding the office of a director. The premiums paid under this policy have not been disclosed, as disclosure of premiums paid will breach the insurance policy.

Signed in accordance with the resolution of directors.



David H Macintosh
Director
Dated Sydney
27 September 2004

PARTICULARS OF DIRECTORS AND MEETINGS ATTENDED

NAME OF DIRECTOR	QUALIFICATIONS, EXPERIENCE AND SPECIAL RESPONSIBILITY	INTEREST IN CONTRACTS
Amanda Christensen	Dip Nursing Appointed to Board on 22 February 2001. Re-elected to Board on 1 November 2001.	Nil
Professor Stephanie Fahey	BA (Hons) PhD Appointed to Board on 26 April 2001. Re-elected to Board on 1 November 2001. Re-elected to Board on 24 November 2003.	Nil
Dr Gavin Frost	MB BS FRACMA FAFPHM Appointed to the Board in 1980. Re-elected to Board on 14 November 2002.	Nil
Robert Horsell	CPA Appointed to the Board and appointed Treasurer on 24 June 1999. Re-elected to Board on 1 November 2001. Re-elected Treasurer on 6 December 2001. Re-elected Treasurer on 5 December 2002. Elected Finance Director on 31 July 2003.	Nil
Associate Professor Michael Levy	MB BS MPH FAFPHM Appointed to the Board in 1998. Appointed Vice-President on 2 November 2000. Re-elected to Board on 1 November 2001. Re-elected Vice-President on 6 December 2001. Re-elected Vice-President on 5 December 2002. Re-elected Vice-President on 31 July 2003.	Nil
David Macintosh	BBS, ACA Appointed to the Board in 1997. Appointed Vice-President on 4 November 1999. Appointed President on 2 November 2000. Re-elected President on 6 December 2001. Re-elected to Board on 14 November 2002. Re-elected President on 5 December 2002. Re-elected President on 31 July 2003.	Nil

Associate Professor Guy Marks *resigned May 2004*	MB BS PhD FRACP FAFPHM Appointed to the Board in 1998. Re-elected to Board on 1 November 2001.	Nil
Emeritus Professor Noel Martin	AM MDS FACD FRACD FAPHA FICD AIAOP FRAH (Ire) FRSM (Eng) Appointed to Board in 1961. Appointed President in 1967. Appointed Vice-President in 1995. Appointed Emeritus Vice-President on 9 December 1999. Re-appointed to Board on 2 November 2000. Re-elected to Board on 1 November 2001. Re-elected to Board on 14 November 2002.	Nil
Professor Robyn Richmond	BA MA PhD Appointed to Board in 1994. Re-elected to Board on 24 November 2003.	Nil
Professor J Paul Seale	MB BS PhD FRACP Appointed to the Board in 1997. Elected Vice-President on 6 December 2001. Re-elected to Board on 14 November 2002. Re-elected Vice-President on 5 December 2002. Re-elected Vice-President on 31 July 2003.	Nil
Frederick Smith	FICAA Appointed to Board on 3 September 1998. Re-elected to Board on 24 November 2003.	Nil
Dr Gregory Stewart *resigned June 2004*	MB BS MPH (Syd) FRACMA FAFPMPH Appointed to Board in 1993. Re-appointed Vice-President on 2 November 2000. Re-elected to Board on 14 November 2002.	Nil
Associate Professor Iven Young	B Sc(Med), MB BS, PhD, FRACP. Appointed to the Board on 6 August 1998. Re-elected to Board on 24 November 2003.	Nil

MEETINGS OF THE BOARD OF DIRECTORS

TOTAL NUMBER OF MEETINGS HELD:	7
NUMBER OF MEETINGS ATTENDED:	
Amanda Christensen	5
Stephanie Fahey	5
Gavin Frost	4
Robert Horsell	6
Michael Levy	6
David Macintosh	7
Guy Marks	2
Noel Martin	4
Robyn Richmond	4
J Paul Seale	6
Frederick Smith	4
Gregory Stewart*	0
Iven Young	4

* LEAVE OF ABSENCE WAS GRANTED FROM 31 JULY 2003 TO 24 NOVEMBER 2003.

PROJECTS COMMITTEE*

TOTAL NUMBER OF MEETINGS HELD:	3
NUMBER OF MEETINGS ATTENDED:	
Stephanie Fahey	3
Michael Levy	2
Robyn Richmond	2

* OTHER MEMBERS OF THE PROJECTS COMMITTEE ARE NON-DIRECTORS OR EX OFFICIO MEMBERS.

RESEARCH COMMITTEE*

TOTAL NUMBER OF MEETINGS HELD:	3
NUMBER OF MEETINGS ATTENDED:	
Stephanie Fahey	1
Michael Levy	2
Iven Young	3

* OTHER MEMBERS OF THE RESEARCH COMMITTEE ARE NON-DIRECTORS OR EX OFFICIO MEMBERS.

STATEMENT OF FINANCIAL PERFORMANCE

YEAR ENDED 30 JUNE 2004	2004 $	2003 $
REVENUES FROM ORDINARY ACTIVITIES	2,265,129	1,114,793
Depreciation expenses	(9,755)	(11,606)
Research grants and scholarships	(148,703)	(225,938)
Salaries and employee benefits expenses	(187,077)	(190,595)
Investment expenses	(21,744)	(201,755)
Administrative expenses	(74,548)	(70,474)
Consultancies fees expenses	(57,209)	(79,630)
Cost of investments sold during the year	(1,715,177)	(562,500)
Other expenses	(122,759)	(62,032)
LOSS FROM ORDINARY ACTIVITIES BEFORE INCOME TAX EXPENSE	(71,843)	(289,737)
INCOME TAX EXPENSE RELATING TO ORDINARY ACTIVITIES	–	–
LOSS FROM ORDINARY ACTIVITIES AFTER INCOME TAX EXPENSE	(71,843)	(289,737)
NET INCREASE/(DECREASE) IN ASSET REVALUATION RESERVE	482,511	(56,665)
TOTAL REVENUES, EXPENSES AND VALUATION ADJUSTMENTS RECOGNISED DIRECTLY IN EQUITY	482,511	(56,665)
TOTAL CHANGES IN EQUITY	410,668	(346,402)

DISCUSSION AND ANALYSIS OF STATEMENT OF FINANCIAL PERFORMANCE The operating loss was $71,843 (2003: loss of $289,737) after contributing $1,715,177 cost of investments sold during the year as compared to only $562,500 in 2003.

EFFECTS OF SIGNIFICANT ECONOMIC OR OTHER EVENTS
There were no significant economic or other events.

STATEMENT OF FINANCIAL POSITION

AT 30 JUNE 2004	2004 $	2003 $
CURRENT ASSETS		
Cash assets	765,801	1,023,733
Receivables	50,622	43,520
Other financial assets	50,845	50,723
Other	7,667	4,903
TOTAL CURRENT ASSETS	874,935	1,122,879
NON-CURRENT ASSETS		
Property, plant and equipment	15,473	23,198
Other financial assets	6,019,642	5,432,308
Other	20,115	–
TOTAL NON-CURRENT ASSETS	6,055,230	5,455,506
TOTAL ASSETS	6,930,165	6,578,385
CURRENT LIABILITIES		
Payables	63,607	127,925
Provisions	9,992	4,562
TOTAL CURRENT LIABILITIES	73,599	132,487
TOTAL LIABILITIES	73,599	132,487
NET ASSETS	6,856,566	6,445,898
EQUITY		
Reserves	3,468,912	2,986,401
Retained profits	3,387,654	3,459,497
TOTAL EQUITY	6,856,566	6,445,898

DISCUSSION AND ANALYSIS OF STATEMENT OF FINANCIAL POSITION

CHANGES IN THE COMPOSITION OF ASSETS Investments have increased in value during the year by $587,334. Revaluations of listed shares and managed funds are made monthly. The decrease in cash of $257,932, from $1,023,733 in 2003 to $765,801 in 2004 is due to the increase in purchases of investments.

OTHER SIGNIFICANT MOVEMENTS IN STATEMENT OF FINANCIAL POSITION ITEMS There have been no other significant movements in Financial Position items.

STATEMENT OF CASH FLOWS

YEAR ENDED 30 JUNE 2004	2004 $	2003 $
CASH FLOWS FROM OPERATING ACTIVITIES		
Distributions received	134,758	52,450
Receipts from appeal, legacies and donations	124,347	100,154
Payments to suppliers and employees	(695,837)	(597,123)
Dividends received	9,935	40,076
Refund of imputation credits	40,321	–
Interest received	25,985	142,335
Rent received	236,768	191,995
NET CASH FLOWS FROM/(USED IN) OPERATING ACTIVITIES	(123,723)	(70,113)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(2,030)	(1,853)
Purchase of development application	(20,115)	–
Purchase of shares and unlisted investments	(1,820,000)	(306,785)
Purchase of term deposits	(152,323)	(50,000)
Proceeds from term deposits	152,201	100,000
Proceeds from sale of units in unlisted investments and shares	1,708,058	608,823
NET CASH FLOWS FROM/(USED IN) INVESTING ACTIVITIES	(134,209)	350,185
CASH FLOWS FROM FINANCING ACTIVITIES	–	–
NET CASH FLOWS FROM/(USED IN) FINANCING ACTIVITIES	–	–
NET INCREASE/(DECREASE) IN CASH HELD	(257,932)	280,072
Add opening cash brought forward	1,023,733	743,661
CLOSING CASH CARRIED FORWARD	765,801	1,023,733

DISCUSSION AND ANALYSIS OF STATEMENT OF CASH FLOWS

CHANGES IN THE CASH FLOWS FROM OPERATIONS Net cash flows used in operations was $53,610 greater this year then for the year ended 30 June 2003. This was largely due to the decrease in dividend and interest income.

CASH FLOWS FROM INVESTING ACTIVITIES During the year, management changed the portfolio mix of managed funds and listed shares which increased the cashflows used in investing activities by $484,394. This was largely due to the large amount of purchases of investments made during the year.

NOTES TO THE FINANCIAL STATEMENTS

30 JUNE 2004

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(A) BASIS OF ACCOUNTING

The concise financial report has been prepared in accordance with the requirements of the Corporations Act 2001 and Accounting Standard AASB1039 'Concise Financial Reports'. The accounting policies adopted are consistent with those of the previous year.

	2004 $	2003 $
2. REVENUE FROM ORDINARY ACTIVITIES		
REVENUES FROM OPERATING ACTIVITIES		
Rent received	198,219	191,995
Dividends received	9,935	9,300
Fund distributions from investments	134,758	172,908
Legacies & donations	11,130	7,229
Seal appeal	111,573	91,364
Interest received	34,731	4,012
Refund of imputation credits	40,321	–
Proceeds on sale of investments	1,708,058	608,823
Insurance claims recovered	2,710	–
Sundry income received	13,694	29,162
TOTAL REVENUES FROM OPERATING ACTIVITIES	2,265,129	1,114,793
REVENUES FROM NON-OPERATING ACTIVITIES	–	–
TOTAL REVENUES FROM ORDINARY ACTIVITIES	2,265,129	1,114,793
3. INFORMATION AND DECLARATIONS TO BE FURNISHED UNDER THE CHARITABLE FUNDRAISING ACT 1991		
DETAILS OF AGGREGATED GROSS INCOME AND TOTAL EXPENSES OF FUNDRAISING APPEALS		
Gross proceeds from fundraising appeals	111,682	91,364
Other income	2,153,447	1,023,429
Total income	2,265,129	1,114,793
Less: Total direct costs of fundraising	46,995	56,067
Other expenses	2,289,977	1,348,463
Total expenses	2,336,972	1,404,530
Net result from fundraising activities and operations	(71,843)	(289,737)
Net Surplus from fundraising activities	64,687	35,297

DIRECTORS' DECLARATION

In accordance with a resolution of the directors of Community Health and Tuberculosis Australia, we state that:

(1) In the opinion of the directors:

(a) the financial statements and notes of the company are in accordance with the Corporations Act 2001, including:

(i) giving a true and fair view of the company's financial position as at 30 June 2004 and of the company's performance for the year ended on that date; and

(ii) complying with Accounting Standards and Corporations Regulations;

(b) there are reasonable grounds to believe that the company will be able to pay its debts as and when they become due and payable.

(c) the Statement of Financial Position gives a true and fair view of the state of affairs of the company with respect to fundraising appeals;

(d) the provisions of the Charitable Fundraising Act 1991, the regulations under the Charitable Fundraising Act 1991 and the conditions attached to the fundraising authority have been complied with by the company; and

(e) the internal controls exercised by the company are appropriate and effective in accounting for all income received and applied by the company from any of its fundraising appeals.

On behalf of the Board

David H Macintosh
Director

Sydney
Dated: 27 September 2004

IMPORTANT INFORMATION ABOUT THIS CONCISE REPORT The Directors' Report, Concise Financial Report, including the Independent Audit Report, contained within this document represents a Concise Report.

The full financial report of Community Health and Tuberculosis Australia for the year ended 30 June 2004 and the Auditor's Report thereon will be sent, free of charge, to members upon request. Members wishing to receive the full financial report and Auditor's Report may arrange delivery by contacting the Executive Officer on telephone (02) 9371 7952; facsimile (02) 9371 9768; or email chata@chata.org.au.

The Concise Report contained within this document has been derived from the full financial report of Community Health and Tuberculosis Australia for the financial year ended 30 June 2004 and cannot be expected to provide as full an understanding of the financial performance, financial position and financing and investing activities of the company as the full financial report.

CHARITABLE FUNDRAISING ACT The disclosures required under the Charitable Fundraising Act have been reported fully in the full financial report and are consistent with the requirements. Further information can be obtained as detailed above.

INDEPENDENT AUDIT REPORT

ERNST & YOUNG

The Ernst & Young Building
321 Kent Street
Sydney NSW 2000
Australia

GPO Box 2646
Sydney NSW 2001

Tel 61 2 9248 5555
Fax 61 2 9262 6565
DX Sydney Stock Exchange 10172

Independent audit report to members of Community Health and Tuberculosis Australia

Scope

The concise financial report and directors' responsibility

The concise financial report comprises the statement of financial position, statement of financial performance, statement of cash flows, accompanying notes to the financial statements for Community Health and Tuberculosis Australia (the company) for the year ended 30 June 2004.

The directors of the company are responsible for preparing a concise financial report that complies with Accounting Standard AASB 1039 "Concise Financial Reports", in accordance with the *Corporations Act 2001*. This includes responsibility for the maintenance of adequate accounting records and internal controls that are designed to prevent and detect fraud and error, and for the accounting policies and accounting estimates inherent in the concise financial report.

Audit approach

We conducted an independent audit on the concise financial report in order to express an opinion on it to the members of the company. Our audit was conducted in accordance with Australian Auditing Standards in order to provide reasonable assurance as to whether the concise financial report is free of material misstatement. The nature of an audit is influenced by factors such as the use of professional judgement, selective testing, the inherent limitations of internal control, and the availability of persuasive rather than conclusive evidence. Therefore, an audit cannot guarantee that all material misstatements have been detected.

We performed procedures to assess whether in all material respects the concise financial report is presented fairly in accordance with Accounting Standard AASB 1039 "Concise Financial Reports". We formed our audit opinion on the basis of these procedures, which included:

- testing that the information in the concise financial report is consistent with the full financial report, and
- examining, on a test basis, information to provide evidence supporting the amounts, discussion and analysis, and other disclosures in the concise financial report that were not directly derived from the full financial report.

We have also performed an independent audit of the full financial report of the company for the year ended 30 June 2004. Our audit report on the full financial report was signed on 12 October 2004, and was not subject to any qualification. For a better understanding of our approach to the audit of the full financial report, this report should be read in conjunction with our audit report on the full financial report.

Independence

We are independent of the company, and have met the independence requirements of Australian professional ethical pronouncements and the *Corporations Act 2001*.

Audit opinion

In our opinion, the concise financial report of Community Health and Tuberculosis Australia complies with Accounting Standard AASB 1039 "Concise Financial Reports".

Ernst & Young
Ernst & Young

J K Hayden
Partner
Sydney
Date: 12 October 2004

DISCLAIMER OF ADDITIONAL FINANCIAL INFORMATION

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DISCLAIMER OF ADDITIONAL FINANCIAL INFORMATION

The additional financial information, being the Cash Movements for Designated Purposes, has been compiled by the management of Community Health and Tuberculosis Australia.

No audit or review has been performed by us and accordingly no assurance is expressed.

To the extent permitted by law, we do not accept liability for any loss or damage which any person, other than Community Health and Tuberculosis Australia may suffer arising from any negligence on our part. No person should rely on the additional financial information without having an audit or review conducted.

Ernst & Young

ERNST & YOUNG

Sydney. 12 October 2004

TABLE OF CASH MOVEMENTS FOR DESIGNATED PURPOSES – UNAUDITED

YEAR ENDED 30 JUNE 2004 The purpose of this table is to show funds raised, disbursed and remaining unspent for designated or specific purposes.

TOTAL FOR:	CASH AVAILABLE AT THE BEGINNING OF THE YEAR	CASH RAISED DURING THE YEAR	CASH DISBURSED DURING THE YEAR	CASH AVAILABLE AT THE END OF THE YEAR	COMMENTS
Australian research grants and scholarships	–	111,573	(148,703)	–	In the financial year 2003-2004 the Board allocated an amount for Australian research grants and scholarships. The shortfall in the cash reserves is compensated by cash raised from investment activities.
International projects	23,646	–	(46,900)	–	At the commencement of each project, the Board provides an appropriate budget for its total duration. The 2003-2004 budget for Project 1 (now completed) was $12,000; and for Project 2 the budget in 2003-2004 was $35,000.
Other purposes	1,000,087	2,320,800	(2,494,702)	765,801	

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Registered under the Charitable Fundraising Act 1991

Community Health and Tuberculosis Australia (CHATA) 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.