Annual Report 2007

Waikato Medical
Research Foundation

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Chairman's Report 2007

The Waikato Medical Research Foundation continues to fund local researchers in a range of exciting topics. To enable us to do this it requires commitment of dedicated Trustees and the support of donors.

This is my first Chairman's Report, Michael Selby having retired from our Committee last year. Michael was not only a founding member of the foundation but served many productive years including his years as chairman. Among his many contributions has been his maintenance of a balanced group of trustees representing the range of local scientific and medical expertise and also financial advice.

Consequent upon his retirement, no new trustee has been needed but roles have changed. Warwick Aitken now chairs the Finance and Investment committee very ably helped by Rosanna Baird, Ian Jennings, Geoff McDonald and myself. This year we have engaged a fund advisor and developed a balanced investment strategy to protect and grow our funds.

We are once again most grateful to all donors to our funds and I can assure them that our funding to projects remains very prudent and very productive with some very real contribution to the health of the people of Waikato, the nation and also internationally. Without donors we would not exist and our hospital, University, AgResearch and Unitec would be the poorer for it. I have no doubt that or efforts are in part recognised by the Health Research Council this year which has supported a local scientific tuberculosis project and a joint Auckland – Waikato Clinical Project in Bronchiectasis.

We are very grateful for our continued support from Trust Waikato who once again has provided us with a grant. Their CEO Bev Gatenby has also met with us and shared helpful information on fund raising. Gratitude is also due to the local Cancer Society which has funded an application to us for research relevant to bowel cancer which is so prevalent in New Zealand. Individual donors remain our life-blood and we acknowledge their very important contribution to research in Waikato and welcome their continued support. Strengthening local institutions is a vital by product of that support.

Our operations continue to be enhanced by collaboration and shared staff with the Peter Rothwell Academic Centre of Waikato Hospital. Sadly our very capable administrator Lyn Sadler has changed roles at Waikato Hospital, but has been replaced by Fiona Williams whom we welcome aboard.

I would like to personally thank our Patron Peter Rothwell for his very active ongoing involvement and in particular for the support he has provided me as new Chairman. Adrian Molenaar has also been an important support to me and has taken over my previous role as Chairman of the Grants Committee. I thank him and his committee for their role in reviewing applications and advising the trustees on funding of research.

We look forward to another fruitful year.

Noel Karalus
Chairman

Year 2007 Report of the Grants Committee

This year we had 8 applications requesting a total of $178,000. While the applications were all of high standard, there were fewer applications than in previous years, possibly due to the concurrent FoRST funding application process. With assistance from the Waikato branch of the Cancer society, we were able to distribute $131,000 among the 8 applications. Four of the applications involved personnel from more than one institution and most were collaborative.

This year the topics included; work on development of rescue therapies in intravenous drug administration; examining Tuberculosis persistence; Induction of cancer-protective enzymes by vegetable components; examination of Heat Shock Protein (a defence protein) levels in the blood of Type 2 diabetes patients for screening and therapy purposes; examination of the effect of fruit and milk consumption by children at school on their bone and metabolic health; the development of a blood test to detect bacterial DNA in Colon Cancer and evaluate it's significance; screening Pacific Flora and Fauna for natural anti-cancer compounds; and identifying barriers to effective management of subclinical hypothyroidism. With the seed support from the WMRF, many of these projects generate data for more substantial support elsewhere and are translated into useful products and tools.

I thank the grants sub-committee members, Maggie Fisher, Amanda Oakley, Roy Daniels, and Michael Jameson who helped assess the applications this year, the former sub-committee chair, Noel Karalus for his guidance, and Fiona Williams and Lynette Sadler for their administrative support.

Adrian Molenaar

Chair, Grants Committee

Reports from Grant Recipients

Reports from 2006 Grant Recpients

Evaluation by LC-MS of the Concentrations of Triamcinolone Acetonide Solution Injected into Patient's Eyes Using Different Methods for Preparing the Injectate.

Executive Summary

This was a cooperative project between the Dr Stephen Guest of the Department of Ophthamology at the Waikato hospital and Dr Merilyn Manley-Harris of the Chemistry Department at the University of Waikato. Analytical work was carried out by Cara-Lee Davey, a graduate student in the Chemistry Department.

Triamcinalone acentonide is a steroid drug, which is administered as a solid suspension in an aqueous vehicle, and which is used for intra-ocular injection in certain disease conditions. Patients receiving repeat doses of the drug have reported varying recovery of visual clarity and it was thought that this was due to varying amounts of drug being delivered in the same volume of injectate.

To ascertain if this was correct and to discover the optimum conditions for preparation of the injectate four different methods of preparation were trialled by a medical professional. The total injectate was then analysed by LC-MS in the chemistry department at UW to discover the quantity of drug present. It was found that certain types of preparation gave wide variations in the quantity of drug that would be administered and a procedure that gives the narrowest variation has been identified.

Conclusion If the optimum dose is 4 mg and a minimum of 4 mg/dose is mandatory then method 2 should be used and inter-dose variation accepted. Alternatively method 3 will give smaller variation but will shorten the repeat interval since the minimum dose of 4 mg is not attained. Method 3 may be a compromise here.

Note that these results are predicated on the assumption that the ampoules supplied from the manufacturer do indeed contain exactly 40mg/mL and that very little variation occurs at the point of manufacture.

Dissemination of Information: These results have been presented at the Royal Australian and New Zealand College of Ophthalmologist's meeting May 2006 in Auckland and will be submitted for publication in the international, peer-reviewed journal Retina.

Reports from 2006 Grant Recipients

Waikato Chronic Obstructive Pulmonary Disease Exacerbation Cohort (COPDEC)

Study Summary 2006-2007

Investigators

Dr Catherina Chang	*Research Fellow*
Dr Noel Karalus	*Consultant Physician*
Ms Glenda Sullivan	*Nurse Specialist (COPD)*

Department of Respiratory Medicine
Waikato Hospital

Background

Chronic obstructive pulmonary disease (COPD) is an important cause of disability, hospital admissions, mortality and socio-economic burden. COPD exacerbations are a major cause of morbidity – an estimated 25% of dyspnoea presentations to emergency have been attributed to this disease. Hospitalisation for exacerbations of COPD usually occurs during advance stages of disease and mortality is high.

A formal risk-assessment model utilising information easily gleaned from the bed-side would be a valuable tool in the clinical assessment and management of COPD exacerbations. We have previously identified several risk predictors in this disease by applying the well-known CURB-65 score (for community acquired pneumonia) retrospectively to COPD patients.

We aimed to set up a prospective cohort of COPD patients to examine the relevant clinical and social characteristics – so that we may develop a bed-side scoring tool for risk stratification in this group of patients by multiple regression analysis.

Current Study Status

We originally aimed to recruit 160 to 200 patients (for 80% power to detect a 50% difference in mortality between risk groups – based on previous retrospective studies).

Interim results were analysed at 6 months into recruitment (170 patients with in-hospital and 30-day outcomes). This indicated that the following are significant predictors of increased risk by uni-variant analysis:

- CURB-65 score
- Troponin-T > 0.03
- BNP > 220

Both bio-markers showed a trend towards increased risk (but not statistically significant) in multi-variant analysis.

Given the above positive results, this project has been extended to 1 year recruitment period – this is due to end on 10th July 2007.

Current number of patients recruited: 245

Reports from 2006 Grant Recpients

WMRF Project Number 123

Project Title: Recombinant expression and characterisation of a bovine derived, prospective adiposity regulator.

Principal Researcher / :	*Dr Adrian Molenaar*
Masters Student:	*Lilly Sommer*
Student Supervisor AgResearch:	*Dr. Adrian Molenaar*
Student Supervisor FSU:	*Prof. Dr. Frank Grosse*

Lilly Sommer, a German exchange student carried out this project at AgResearch, Ruakura as part of her Masters Level degree for the Friedrich-Schiller-University, Jena, Germany during the period of 27 July 2006 to April 27 2007 under the supervision of Dr Adrian Molenaar for the whole project, and Dr Mark Dines, Dr Harold Henderson and Mr Broadhurst for parts of the project.

Institution: AgResearch, Food and Health, Dairy Science and Technology, Ruakura Research Centre, Hamilton.

A bovine gene transcript has been discovered that has high homology to a known protein with a wide range of desirable bioactive activities including the reversal of insulin resistance and alleviation of fatty liver diseases. Though there is a wealth of information in some other species, there is not a lot of information on the bovine protein. This project proposed to produce expression constructs based on the bovine sequence so that sufficient quantities of the full length and the short form of the protein could be made in, and harvested from bacteria, for functional testing by oral or injected dosing in mice. This work could lead to the development of a nutraceutical or pharmacological product that can address several health related issues, including obesity, since one of its homologue's actions in other species is to reduce fat tissue mass without change in diet.

The mice trial revealed, after statistical analysis, that while no firm statements could be made concerning the oral or injected short form, the mice treated with the full length protein by injection had 41% less total body fat when compared the mice in the corresponding control cage. This was an exciting finding and one that awaits confirmation in a more extensive trial.

Reports from 2006 Grant Recipients

Prognostic markers in invasive Squamous cell carcinoma of the head and neck

Investigators

I Gunawardena
M Ardense
M Jameson
RT Gregor

Background: Over 90% of head and neck cancers are of the squamous cell carcinoma (SCC) type. The incidence of SCC of the head and neck region is high in New Zealand. Approximately 500 cases have been investigated and/or treated at Waikato hospital in the last 5 years. Recent international studies have used immunohistochemistry to detect "markers" of aggression of this tumour that give a much better indication of the likely prognosis. This study aimed to investigate 7 tumour markers that would help determine the prognosis of invasive squamous cell carcinoma of the head and neck.

Method: Tumour blocks from 50 patients with SCC were selected from the Head and Neck database, Department of Otolaryngology and Head and Neck Surgery, Waikato Hospital. Seven sections were cut from each patient's paraffin-embedded tumour block (tissue blocks are stored in the Pathology Department following standard protocols) and each slide was immunostained using standard laboratory protocols for each of the tumour markers (MMP-2, MMP-9, TIMP-1, TIMP-2, Alpha Crystalline B, sLea and sLex).

Results: The first 50 patients in the Head and Neck database were included in the study.

The patients demographics, risk factors, diagnosis and treatment have been analysed to correlate this with tumour marker immunostaining results. Final immunostaining results are pending at present. A final report will be submitted in the near future.

Reports from 2006 Grant Recpients

Interim Report:

WMRF Grant 125

Automated Detection of Exudates in Digital Retinal Images

Principal Investigator: M.Cree

The main body of research for this study is yet to be completed. It has been held up because of the time it took to arrange suitable retinal images from the Waikato Eye-Screening Programme and energy being focussed on completing the Automated Microaneurysm Detection Study.

At this stage we have 1965 retinal images, from the Waikato Eye-Screening Programme, that have been graded for the presence of various diabetic retinopathy lesions. Of those 1965 images 44 contain exudates and 2 contain possible exudates. As can be seen, a large number of images have to be collected before a reasonable number of images with exudates are obtained. We have a further 3000 retinal images received in the past month from the Waikato Eye-Screening Programme. They are yet to be graded for presence of exudates by the Ophthalmologist (David Worsley – co-investigator).

The remaining money in the project fund will be used to pay for a graduate research assistant (Hono Kayano), who was very recently taken on for the project, to run the automated exudate detection computer code on the retinal images and to make improvements to the computer code. Hono is now in the position to begin this work under my direction, and so we expect it to be completed, with a final report by the end of August.

Reports from 2006 Grant Recipients

Management of Neonatal Hypoglycaemia

Deborah Harris

Final Report

In our first experiments, we found that infusion of insulin, to induce low blood glucose levels, caused the same kind of symptoms as can be seen in babies. The brain monitor did not consistently show changes in brain function caused by low glucose levels. However the continuous glucose monitor appears to correspond very well with blood glucose levels, suggesting that it might be useful to provide more frequent information about glucose levels in babies without the need for repeated blood tests. The results from this study are currently being written up for publication.

The next study, the Babies and Blood Sugar's Influence on EEG Study (BABIES) is now under way in the Newborn Intensive Care Unit at Waikato Hospital. We have found the staff to be excited and supportive of the study. We have trained staff about the study and also solved some minor technical problems. We will be continuing the BABIES study over the next eighteen months.

We are very grateful to the Waikato Medical Research Foundation for the generous funding. Without the funding these studies would not have been possible.

Abstracts of 2007 Grant Recipients

Abstracts of 2007 Grant Recipients

Induction of cancer-protective enzymes by vegetable components.

Rex Munday, AgResearch, Ruakura Research Centre, Hamilton.

We are continually exposed to cancer-causing chemicals, which are present in the air and in food and which are also produced in our bodies during the normal processes of metabolism. However, we possess very effective defences against such chemicals, in the form of the so-called Phase 2 enzymes, which convert the carcinogenic chemicals to harmless substances that are readily eliminated from the body.

There is increasing evidence that a diet containing a high proportion of fruit and vegetables protects against cancer at various sites of the body. The protective effect of these foodstuffs is attributed to their ability to increase the activity of the Phase 2 enzymes in tissues, thus enhancing the natural defences against carcinogens. We have previously shown that some vegetables of the Brassica (cabbage) family are very effective inducers of these enzymes in rats, with the greatest effect being seen in the urinary bladder. The compounds responsible for this effect are called isothiocyanates, which are formed from precursor substances when the vegetables are chewed or cut. In a recent experiment, we have shown that a brassica extract containing high levels of isothiocyanate gave excellent protection against chemically-induced bladder cancer in rats. This observation is consistent with epidemiological evidence showing that humans who eat diet high in Brassica vegetables have a decreased risk of developing bladder cancer.

In addition to the effect in the bladder, we have some preliminary evidence that isothiocyanates can also increase the activity of the cancer-protective enzymes in skin. We plan to follow up this observation, and examine in detail the effect of some isothiocyanates that are present in Brassica vegetables on the activity of skin enzymes in rats, with a view to evaluating the possibility that Brassica vegetables could also protect against skin cancer.

We will also investigate the effect of parsley on Phase 2 enzyme activity. There is some evidence that this vegetable can protect against cancer, but this has not been studied in detail, and it is not known if the mechanism of protection involves induction of Phase 2 enzymes. We will examine the effects of the vegetable itself, and the oil derived from its leaves, on the activity of the cancer-protective enzymes in various tissues of the rat.

Abstracts of 2007 Grant Recipients

The Barriers To Effective Clinical Management Of Subclinical Hypothyroidism.

Investigators

Veronique Gibbons
Steven Lillis
John Conaglen
Ross Lawrenson

Background Subclinical hypothyroidism (SH) refers to an elevated serum thyroid stimulating hormone (TSH) level combined with normal thyroid hormone levels in patients who have mild or minimal symptoms. Community studies have found that SH is common (6.4 – 9.5%) in the adult population without known thyroid disease. There is evidence that patients with SH have an increased risk of cardiovascular disease. Our aims are review current diagnostic practice and management of those with SH; to identify barriers to care for patients with subclinical hypothyroidism; and to inform the development of a clinical trial of active treatment for patients with SH.

Study design. This study will review patient records from a cohort of patients with subclinical hypothyroidism, and will undertake focus group interview with general practitioners (GPs). We will review notes of those patients identified from lab results (Dec 2005-Nov 2006) as fitting the definition of subclinical hypothyroidism. Records will be reviewed 12 months from the time of their first raised TSH test. Research will also seek to understand how GPs currently manage subclinical hypothyroidism as well as specific management of their registered patients.

Main Outcome Measures. We wish to identify the clinical features and outcomes of patients identified with subclinical hypothyroidism in an incident cohort to enable the development of a likelihood ratio for GPs when results are suggestive of subclinical hypothyroidism, to guide GPs in the management of these patients, and to develop a clinical trial of active treatment for patients with SH.

Abstracts of 2007 Grant Recipients

Summary WMRF Research Project # 130 "Evaluation of Clomipramine Pharmacokinetics following Intralipid Infusion"

Dr Martyn Harvey

Introduction: Infusion of lipid emulsions is gaining acceptance in the clinical scenario of severe local anaesthetic toxicity following demonstration of beneficial effect in animal models and human subjects. The principal applicant has further demonstrated similar benefit of lipid infusion in animal models of a number of non-local-anaesthetic drug toxidromes. The postulated beneficial mechanism of action in these studies is sequestration of lipid-soluble drug into a newly created lipid sink, but this postulate is yet to be confirmed.

Aims: We aim to determine the exact pharmacokinetic interaction between clomipramine (a lipid-soluble tricyclic antidepressant) and Intralipid (a lipid emulsion) in a rabbit model.

Method: Twenty anaesthesised, invasively monitored and mechanically ventilated adult New Zealand white rabbits will be infused with clomipramine at constant rate until blood pressure (mean arterial pressure [MAP]) is 50% baseline. Animals will subsequently be rescued with 6ml/kg 20% intralipid, or 6ml/kg 0.9% saline solution over a two minute period according to prior randomisation. Blood pressure response will be monitored continuously. Blood sampling for clomipramine assay will be conducted at MAP 25% baseline, 50% baseline, and at 2,4,6,10 and 30 minutes post infusion. Non mixed-effects-modeling (non-MEM) statistical analysis will be utilised to evaluate drug redistribution.

Expected Results: We expect to demonstrate a newly created intravascular lipid compartment into which clomipramine is sequestered. Drug sequestration is likely to correlate inversely with the effect on MAP.

Expected Benefits: Knowledge of the exact mechanism of action of Intralipid in clomipramine poisoning will provide a foundation for understanding the role of lipid emulsions in lipid soluble drug toxicity. This may result in a broader number of lipid-soluble drugs being investigated for their response to lipid emulsion therapy in overdose. Significant reduction in human morbidity and mortality is likely to ensue if the toxicity of additional agents are found to be ameliorated with lipid infusion

Abstracts of 2007 Grant Recipients

"Natural Products from Pacific Flora and Fauna"

Dr. Michèle Prinsep

At the Chemistry Department of the University of Waikato, Dr. Michèle Prinsep and her students are undertaking research towards finding biologically active (bioactive) and/or novel metabolites from natural sources. The work primarily focuses on two different types of organisms, both of which have proven to be excellent sources of novel, bioactive compounds: marine bryozoans (moss animals) and terrestrial cyanobacteria (blue-green algae) but other marine organisms may be investigated as appropriate.

Bryozoans are collected from New Zealand waters, while cyanobacteria will be collected from so-called "algal blooms" in lakes and other water bodies in the greater Waikato region. Samples are extracted in a suitable solvent and the crude extracts are tested for a wide variety of biological activities, including antitumour, antiviral, antibacterial and antifungal activity. The range of assay systems employed is being expanded to encompass those with an emphasis on different therapeutic areas to maximise the chances of discovering compounds with useful properties.

Once a promising extract has been identified, it is investigated further to isolate the compound/s responsible for the observed biological activity. This involves large-scale extraction, then separation and isolation of the active component/s. Biological activity is monitored at every step of the isolation process to ensure that it is being concentrated and that no loss of activity occurs.

When a pure bioactive compound is isolated, its structure is determined using a variety of instrumental techniques, especially high field nuclear magnetic resonance (NMR) spectroscopy and increasingly, mass spectrometry. If possible, analogues of the isolated compound are prepared to see if the activity can be improved. This research will identify potential pharmaceutical compounds or useful chemicals for biomedical research into the mechanisms that cause and promote cancer and other diseases.

Collection and screening of samples are essential and expensive aspects of this research which are made possible by funding from the WMRF.

Abstracts of 2007 Grant Recipients

Heat Shock Protein CPN60 Peripheral Blood Levels in Type 2 Diabetes

Investigators

Justina Wu
Peter Dunn
Gerald Waters
Ryan Martinus

Diabetes mellitus is a growing health issue in New Zealand as it is throughout the world. It affects approximately 4% of the population, and the number of newly diagnosed diabetes within the Waikato region is increasing by 6% per year (Dunn, P., 2006 WRDS Annual Report). Approximately 95% of diabetes is type 2 diabetes (DMII). Cellular oxidative stress, especially within mitochondria, has been implicated in the development of DMII and its health complications, especially cardiovascular diseases such as heart attacks and strokes (reviewed by Delarue and Magnan, 2007). Chaperone proteins (also known as heat shock proteins) help protect against cellular stresses. The expression of these proteins is increased during cellular oxidative stress. Given the role of chaperone proteins and the increased cellular oxidative stress found in DMII, we postulated that the chaperone proteins may play a role in DMII and that their expression may be aberrant in DMII. We have preliminary evidence that a mitochondrial-derived chaperone protein called CPN60 may be significantly elevated in the serum of patients with DMII versus controls. Our proposed study aims to test this hypothesis and confirm the presence of increased expression of CPN60 in DMII versus control and to investigate possible correlations with blood sugar control in newly diagnosed DMII subjects. Studying the function of CPN60 in DMII can potentially help further elucidate the mechanism of mitochondrial oxidative stress and dysfunction in the development of DMII and diabetes complications. Such information would aid in directing potential drug therapy to protect against oxidative stress, thus, ameliorating DMII and deterring the development of diabetes complications. In addition, if CPN60 is involved in the pathogenesis of diabetes and its health complications, screening for aberrant serum expression of CPN60 could be an easy and useful tool to detect individuals at risk for developing DMII and DMII complications.

[1] Delarue, J., Magnan, C. (2007) Free fatty acids and insulin resistance. *Curr Opin Clin Nutr Metab Care* 10:142-8.

Abstracts of 2007 Grant Recipients

Tuberculosis Persistence and the Role of Toxin-Antitoxin Proteins

Investigators

Vic Arcus
Ray Cursons
Noel Karalus

Mycobacterium tuberculosis is the name of the bacteria which causes tuberculosis (TB) in humans. This is a devastating infectious organism which kills approximately two million people annually. In New Zealand, TB disproportionately affects lower socio-economic, and immigrant populations including Maori, Pacific peoples and South East Asian communities. The current suite of antibiotics used to treat TB faces two main difficulties: (a) the emergence of multidrug-resistant (MDR) strains of *M. tuberculosis*, and (b) the persistent state of the bacterium which is less susceptible to antibiotics and dictates very long antibiotic treatment times (6 – 8 months). We have recently discovered a set of TB proteins called "PIN" domains which potentially play an important role in TB persistence. This research project will investigate the role that these proteins play in the biology and pathology of this important him pathogen. *M. tuberculosis* has a surprisingly large number of PIN-domain proteins (48 in total) and we think that the bacterium uses these proteins to control its growth in response to being attacked by the immune system. This may be one way by which *M. tuberculosis* enters a dormant or "persistent" state. Each PIN-domain has an inhibitor associated with it so that under conditions of normal growth the PIN-domain (toxin) and its inhibitor (antitoxin) form a benign protein complex. It is only when the bacterium is being attacked that the PIN-domain comes into play and stops the bacteria growing. Using protein biochemistry, molecular microbiology and structural biology we will elucidate the biological roles of this set of toxin-antitoxin proteins and seek potential avenues to new anti-TB therapies. Indeed, inhibitors to these PIN-domain toxins could make powerful adjuvants for existing anti-TB drugs by forcing the bacterium out of the persistent state and thus making them more susceptible to existing antibiotics.

Abstracts of 2007 Grant Recipients

Can Fruit and milk in school improve bone and metabolic health in children

Investigators

David Graham
Elaine Rush
John Conaglen

This study is a substudy of Project Energize, a through-schools activity and nutrition programme which has run for two years in 62 Waikato primary schools, with longitudinal evaluation against 62 control schools. This substudy is designed to compare biological markers of bone health, fat and glucose metabolism in 400 children enrolled in Project Energize Programme or Control schools. Children in Decile 1 Programme schools aged 5 at programme commencement (including both those consenting to be part of the overall Project Energize study and their classmates) have had high calcium low fat dairy milk supplied each school day, as have all new-entrant children as they enter. All of these children, and all of their schoolmates, have also received daily fruit in school. We are interested in establishing whether the fruit and milk provided to these children has had additional impact on aspects of their health, including bone health, asthma, dentition and metabolic risk profile, compared with children in matched control schools. Each consenting child will have their height and weight measured and a Household Questionnaire as per the Project Energize full study. In addition, each child will be have a fasting blood test undertaken, to measure markers of bone, lipid, and glucose health, and a quantitative heel ultrasound measurement of bone mineral density. This study has the potential to demonstrate whether a through-school nutrition and activity programme incorporating supplemental milk and fruit, modifies long-term risk factors for bone and metabolic health. While there is association data to support this in international studies, there is very little intervention data to provide stronger evidence of effect. This study addresses that key gap in knowledge.

Waikato Medical Research Foundation (Inc)

Financial Statements

For the year ended 31 May 2007

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Waikato Medical Research Foundation (Inc)

Statement of Financial Position
As at 31 May 2007

	2007 $	2006 $
Accumulated Funds	**1,301,577**	1,248,562
Represented by:		
Current Assets		
Westpac	**25,335**	45,379
ASB	**80**	-
	25,415	45,379
Investments		
Cash and Equivalents	**260,631**	331,332
NZ Fixed Interest	**877,720**	708,384
NZ Listed Property	**73,377**	165,152
Australian Investments	**75,130**	-
American Investments	**15,279**	-
	1,302,138	1,204,868
Total Assets	**1,327,552**	1,250,247
Current Liabilities		
Accounts Payable	**25,975**	1,685
Net assets	**1,301,577**	$1,248,562

N Karalus
Chairman

4 July 2007

R Baird
Treasurer

4 July 2007

The notes to these statements should be read in conjunction with the financial reports

Waikato Medical Research Foundation (Inc)

Statement of Movements in Equity
For the year ended 31 May 2007

	2007 $	2006 $
Accumulated Funds		
Opening balance as at 1st June 2006	**1,248,562**	1,220,661
Plus: Net Surplus/(deficit)	**53,015**	27,901
Closing Balance as at 31st May 2007	**$1,301,577**	$1,248,562

The notes to these statements should be read in conjunction with the financial reports

Waikato Medical Research Foundation (Inc)

Statement of Financial Performance
For the year ended 31 May 2007

	Note	2007 $	2006 $
Income			
Dividends		**4,525**	9,114
Donations	3	**2,475**	16,050
Grant - Trust Waikato		**65,000**	65,000
Grants refunded		**34,835**	24,361
Interest		**83,947**	81,414
Income on realisation of investments		**3,529**	1,662
Unrealised gain on investments		**28,516**	13,933
		222,827	211,534
Expenditure			
Administration expenses including website		**21,742**	5,879
Advertising and promotion expenses		**1,899**	2,031
Audit fee		**2,194**	2,025
Fees paid to auditor for other services		**5,501**	3,885
Foreign exchange loss		**1,573**	-
Grants	2	**131,117**	159,654
Loss on realisation of investments		**1,461**	10,159
Portfolio management fees		**4,325**	-
		169,812	183,633
Net surplus/(deficit)		**$53,015**	$27,901

The notes to these statements should be read in conjunction with the financial reports

Waikato Medical Research Foundation (Inc)

Statement of Cash Flows
For the year ended 31 May 2007

	2007 $	2006 $
Cash Flows from Fund Raising Activities		
Receipts from donations and grants	**67,475**	81,050
Less Fundraising expenses	**(1,899)**	(2,031)
Net cash flow from fund raising activities	**65,576**	79,019
Cash Flows from Investing Activities		
Receipts from dividends and interest	**88,472**	90,528
Plus Sale of investments	**426,012**	311,547
Less Investments made	**(494,271)**	(326,204)
Less Portfolio Management fees	**(4,325)**	-
Net cash flow from investing activities	**15,888**	75,871
Cash Flows from Research Activities		
Grants made	**(111,118)**	(159,654)
Administration and audit fees	**(25,145)**	(11,904)
Grants refunded	**34,835**	24,361
Net cash flow from research activities	**(101,428)**	(147,197)
Net increase/(decrease) in cash held	**(19,964)**	7,693
Add Opening cash brought forward	**45,379**	37,686
Ending cash carried forward	**25,415**	45,379
Cash balances in statement of financial position	**$25,415**	$45,379

The notes to these statements should be read in conjunction with the financial reports

Waikato Medical Research Foundation (Inc)

Notes to the Financial Statements
For the year ended 31 May 2007

1. Statement of Accounting Policies

Reporting Entity
Waikato Medical Research Foundation is a non profit organisation registered under the Incorporated Societies Act 1908.

General Accounting Principles
The general accounting principles recognised as appropriate for the measurement and reporting of income and financial position on an historical cost basis, except for valuation of investments, have been consistently followed by the Foundation. Accrual accounting has been used to match revenue and expenses.

Particular Accounting Policies
The following particular accounting policies which materially affect the measurement of income and the financial position have been applied.

Investments
Investments are valued at market value in NZ dollars.

Income Tax
The Waikato Medical Research Foundation (Inc) has been approved for legal charitable status and has obtained from the Inland Revenue Department an exemption for income tax.

Differential Reporting
The Society qualifies for differential reporting because of it's size and nature. The Society has taken advantage of all available differential reporting exemptions, except in that it has produced a Statement of Cashflow.

Changes in Accounting Policies
There have been no changes in accounting policies since the previous annual financial statements.

Waikato Medical Research Foundation (Inc)

Notes to the Financial Statements Continued
For the year ended 31 May 2007

2.	**Grants Made**	**2007**	2006
		$	$
	V Arcus & Associates	**17,950**	-
	C Chang	-	13,500
	M Cree	-	7,128
	G Devlin	-	29,100
	V Gibbons & Associates	**8,900**	-
	D Graham & Associates	**15,000**	-
	I Gunawardena	-	15,000
	S Guest	-	5,600
	D Harris	-	20,545
	M Harvey	**10,850**	-
	A Molenar	-	21,000
	R Munday	**17,417**	24,781
	M Prinsep	**17,000**	-
	E Van Haren	-	23,000
	S Parkar & Associates	**20,000**	-
	J W U & Associates	**24,000**	-
		$131,117	$159,654

3.	**Donations**		
	General	**2,475**	3,050
	Perry Foundation	-	10,000
	Bill & Joan Flower Trust	-	3,000
		$2,475	$16,050

4. Commitments and Contingencies

At balance date there are no known contingent liabilities. (2006: Nil)

At balance date there are no known capital commitments. (2006: Nil)

The notes to these statements should be read in conjunction with the financial reports

WEL House | PO Box 9159 | Telephone 64 7 834 6800
Cnr. London & Victoria Streets | Hamilton 3240 | Facsimile 64 7 838 2881
Hamilton, New Zealand | New Zealand | staples@staplesham.co.nz | www.staplesrodway.com

STAPLES RODWAY
chartered accountants
dynamic financial answers

Audit Report
To the Members of Waikato Medical Research Foundation (Inc)

We have audited the financial report on pages 20 to 25. The financial report provides information about the past financial performance of the Foundation and its financial position as at 31 May 2007. This information is stated in accordance with the accounting policies set out on page 24.

Trustees' Responsibilities
The Trustees are responsible for the preparation of a financial report which fairly reflects the financial position of the Foundation as at 31 May 2007 and the results of operations and cash flows for the year ended on that date.

Auditor's Responsibilities
It is our responsibility to express an independent opinion on the financial report presented by the Trustees.

Basis of Opinion
An audit includes examining, on a test basis, evidence relevant to the amounts and disclosures in the financial report. It also includes assessing:

- the significant estimates and judgements made by the Trustees in the preparation of the financial report; and
- whether the accounting policies are appropriate to the Foundation's circumstances, consistently applied and adequately disclosed.

We conducted our audit in accordance with New Zealand Auditing Standards. We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to obtain reasonable assurance that the financial report is free from material misstatements, whether caused by fraud or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial report.

Other than in our capacity as auditor we have provided accounting services to the Foundation.

Unqualified Opinion

We have obtained all the information and explanations we have required.

In our opinion the financial report on pages 20 to 25 fairly reflects the financial position of the Foundation as at 31 May 2007 and the results of its operations and cash flows for the year ended on that date.

Our audit was completed on 4 July 2007 and our unqualified opinion is expressed as at that date.

Staples Rodway

STAPLES RODWAY
Hamilton

Major Donors and Life Members

The Waikato Community Trust
Donny Charitable Trust
Norah Howell Charitable Trust
P J Holman Family Trust
Sir John Logan Campbell Residential Estate
W E & A M Fullerton
Hamilton Pakeke Lions Club
Don McInnes
Ngaruawahia Lions Club
Te Aroha Mountain Lions
South Waikato District Council
Dianne Yates
Mrs J R Allen
A & I Bojesen-Trepka Family Trust
Jocelyn Cooney
Mrs Genepher Glenn
Bruce & Colleen Potter
Rose Optometrists
Estate of Valerie Esther Worth
Ready Mixed Concrete Ltd
D V Bryant Trust
Glaxo Wellcome (NZ) Ltd
New Zealand Breweries Ltd
Mrs A Sandford
Gallagher Electronics Ltd
3M Pharmaceuticals (NZ) Ltd
Tompkins Wake
Mr L F Clements
Mr P J Vela
D J Carter Estate
Mobil Oil (NZ) Ltd
The Rotary Club of Frankton
Merck Sharp & Dohme Ltd
A H Franks Ltd
Cross Country Rentals Ltd
ANZ Banking Group
Page Trust
Perry Foundation
Roche Products (NZ) Ltd
Stace Hammond
Te Aroha Rotary Club Charitable Trust
June and Rex Hautain
D G McInnes
Mr HT Spencer
AXA New Zealand
Mr Robert A Jane
Lodge Real Estate (Ham) Ltd
J & B Mortimer
Mr Malcolm Dunshea
E R Squibb
Mr E A Taylor
Medlab
Monpark Lands Ltd
Boehringer Ingelheim Ltd
Dr Richard Clark
Viking Windows Ltd
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Westpac Trust
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McLeod European Ltd
Warwick Cashmore Motors Ltd
Justice B Paterson
J M and J A Grace Family Trust
Rothmans NZ Ltd
D and C Lindale
Progressive Enterprises
Parke Davis Pty Ltd
Sandoz Pharma Ltd
Turners Waikato Markets Ltd
Mr Fergus Campbell
Matamata College
Mr G Wynne-Jones
The Valmai Trust
G W & L R Laugeson
John Gillies Family Trust
Bank of New Zealand Ltd
Mr J G Macaulay
Mr D A Bell
Mrs F E Robinson
Mr L S Robinson
Mrs F J Chatterton
Mr & Mrs Campbell Johnstone
P R & S J Rose
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Mr David Hoskin
Dr J Earwater
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Brian & Lorraine Adams
Judd Family Trust
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R E Wright-St Clair
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Invitrogen New Zealand Limited

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I wish to contribute to the
Waikato Medical Research Foundation

- ○ $20,000 Platinum Sponsor
- ○ $5,000 Major Sponsor
- ○ $2,000 Major Donor
- ○ $500 Life Member
- ○ or become an Annual Subscriber
  ○ $50 ○ $100 ○ $200 ○ $300
- ○ I would like to discuss making a financial contribution or bequest. Please have a trustee call me to discuss this.

Name _____

Address _____

_____

_____

Phone _____

Cheque enclosed $ _____

○ Please send me a receipt

Post to:

Waikato Medical Research Foundation
Peter Rothwell Academic Centre
Private Bag 3200
Waikato Hospital, Hamilton

We have a new website: www.wmrf.org.nz
We have a new email address: wmrf@waikatodhb.govt.nz
Telephone (07) 839 8750 Fax (07) 839 8712