



Wellington
Medical Research
Foundation

Annual Report 2008

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WELLINGTON MEDICAL RESEARCH FOUNDATION INC.

ANNUAL REPORT 2008

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Mission Statement

To foster the strength and excellence of health research in the Wellington region and to advance the quality of health care by seeking and applying bequests and donations.

Investing in the Community's health since 1960

ISSN 0511-4497



Notice of Annual General Meeting

Notice is given that the forty-eighth Annual General Meeting of the Foundation will be held on Wednesday, 12 November 2008 at 5.30 pm in the Conference Room, National Library of New Zealand, Corner Molesworth & Aitken Streets, Wellington.

Members and others interested in the work of the Foundation are invited to attend.

Business

- 1 To receive, consider and adopt the Annual Report of the Foundation
- 2 To receive, consider and adopt the Financial Statements for the year ended 30 June 2008
- 3 To elect up to fifteen of the members of the Council
- 4 To elect the President
- 5 To appoint Auditors:
Note: PricewaterhouseCoopers have kindly signified their willingness to continue as Auditors
- 6 General

K R Macdonald

Secretary

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Annual General Meeting 2007

Minutes of the Forty-seventh Annual General Meeting of the Wellington Medical Research Foundation held in the Conference Room National Library of New Zealand, Wellington, Wednesday, 14 November 2007 at 5.30 pm.

Present:

Mr I R Small (Chairman), 20 members and guests.

Apologies:

Mr P Clarke, Dr P Holst, Ms M M Hutchison, Professor G Le Gros, Mr E C T Landell, Mr G Malaghan, Dr J Mattingley, Ms G Phipps Mr R S Stubbs, Dr J Kirman

Minutes:

The Minutes of the 46th Annual General Meeting held on 15 November 2006 were adopted.

Annual Report:

In moving the adoption of the Annual Report for the year ended 30 June 2007, Mr Small referred to the grants made in the last five years totalling \$2.08 million and to the importance those grants have for medical researchers in the Wellington region. He referred to the comments by Professor B Delahunt in his editorial for the Research Review 2007 where the process for evaluating research grant applications was explained.

Mr Small then referred to the decision made during 2007 to offer Life Membership to members of the Foundation for a once only payment of \$500 and commended this category of membership for consideration by those present.

Finally Mr Small thanked all members of committees and the Board of Management for their contribution. He noted that the Foundation was now registered as an approved charity under the Charities Act 2005.

The Annual Report for the 2006/2007 year was duly adopted.

Financial Statements:

The Treasurer Mr K R Macdonald, in moving the adoption of the Financial Statements for the year ended 30 June 2007 referred to the net increase in grants made to researchers of \$89,875. That increase was the main factor leading to the small overall deficit of \$2,952. He referred to the fact that grants had been

made from each of the funds this year, which reflected the diversity of research work being supported by the Foundation.

The Financial Statements for the 2006/2007 year were duly adopted.

Election of Council Members:

The following Council Members were declared elected under Rule 7(c);

| | |
|---------------------|--------------------|
| Mr P Barker | Dr J H Miller |
| Ms L Blake | Prof T V O'Donnell |
| Dr P M Ellis | Ms G Phipps |
| Mr T W Hall | Mr P W Schumacher |
| Professor G Le Gros | Mr I R Small |
| Prof A W Mann | |

Election of President:

It was noted that the sole nominee for the Presidency was Mr I R Small, who was therefore duly re-elected.

Appointment of Auditors:

Pricewaterhouse Coopers, having signified their willingness to continue in office, were re-appointed as Auditors.

General Business:

There being no general business, the Chairman closed the meeting at 5.45 pm.

He then introduced the guest speaker Professor Julian Crane whose topic was "Asthma and Allergies — the evolving role of health, hygiene, housing and vitamins."

After the address Mr P Barker thanked the Speaker for his interesting presentation.



Directory 2008

Council

President of the Foundation and Chairman of Council

Mr I R Small

Members Ex Officio

Ms K Prendergast, *Mayor of Wellington*

Prof P Crampton, *Dean of the Wellington School of Medicine*

Appointed Members

Prof A C Dowell, *Royal New Zealand College of General Practitioners*

Mr P C Dukes, *Royal New Zealand College of Obstetricians and Gynaecologists*

Prof R Beasley, *Royal Australasian College of Physicians*

Dr T W Jordan, *Victoria University of Wellington*

Mr R Stubbs, *Royal Australasian College of Surgeons*

Dr C A Teague, *Royal College of Pathologists of Australasia*

Elected Members

Mr P Barker

Ms L Blake

Dr P M Ellis

Mr T W Hall

Professor G Le Gros

Professor A W Mann

Dr J H Miller

Prof T V O'Donnell

Ms G Phipps

Mr P W Schumacher

Mr I R Small

Board of Management

Mr I R Small (Chair)

Mr P Barker

Professor B Delahunt

Mr T W Hall

Professor A W Mann

Professor P Crampton

Professor T V O'Donnell

Ms G Phipps

Mr P W Schumacher

Communications Committee

Mr P W Schumacher (Chair)

Mr T W Hall

Investment Committee

Mr T Hall (Chair)

Mr P Barker

Prof A W Mann

Mr P W Schumacher

Mr I R Small

Research Advisory Committee

Professor B Delahunt (Chair)

Dr T Bäckström

Professor C D Burgess

Dr D Slaney

Dr D C Galletly

Professor G Le Gros

Dr T W Jordan

Associate Professor J H Miller

Secretary/Treasurer

Mr K R Macdonald

Auditors

PricewaterhouseCoopers

Solicitor

Mr D F Gault



Presidents Annual Report 2007—2008

I am pleased to present the 48th Annual Report of the Foundation.



Research Grants

The grants available from the Foundation are an important source of funding for researchers in the Wellington region. 18 new grants were made bringing to 31 the number of grants under management at balance date. The grants made this year ranged over projects covering many medical conditions, including cancer, imported infectious diseases, tuberculosis, gout and diabetes.

The new grants totalled \$242,591. Summer Studentships, Travel Grants and continued support for the Malaghan Fellowship and a Biomedical Research Unit brought the total for the year to \$380,504.

Professor Brett Delahunt has again edited the Research Review which is sent with the Annual Report. This contains reports from the researchers on the projects we have supported in recent years.

An important adjunct to our research grants is the travel grants we make to enable researchers to present their findings at national and international gatherings. We increased the budget for travel grants from \$14,000 to \$20,000 this year. These grants are particularly important for young researchers seeking to establish themselves in the research community and the people we have been able to help in this way are truly appreciative of the support.

Malaghan Fellowship

Dr. Thomas Bäckström completed his tenure of the Malaghan Fellowship in July 2008 and returned to Scandinavia to continue his career. His work sought to make some fundamental discoveries into how new therapies can be made to treat inflammatory diseases such as Multiple Sclerosis.

Applications for the next three year Fellowship closed on 30 September 2008. This is the 13th year that we have funded this Fellowship and we look forward to continuing to do so, provided that the applications meet our criteria.

Membership

It was pleasing to note that 5 members took advantage of the change whereby a once only payment of \$500 secures Life Membership. This brings the total life members to 12, as distinct from the 5 Honorary Life Members. I encourage members to consider supporting the Life Membership option.

Council

The annual gathering of the Council members featured two presentations, the first by Professor Delahunt as Chair of the Research Advisory Committee. He explained the grants made during the previous year and drew attention to the current funding policies of the Health Research Council.

The second presentation was by Mr. Rue Bourke of First NZ Capital who assists the Investments Committee in its stewardship of the Investments made by the Foundation. He discussed the recent turbulence in the financial markets, the current features of the market and the investment policy of the Foundation.

Financial

The financial result for the year was very pleasing, with an overall surplus of \$60,774 after charging all the grants against the operating surplus of \$416,374.

Despite the turbulence of the financial markets, investment income increased by \$29,727 while the market value of our investments increased by \$342,810. However, the present market environment is challenging and inevitably we will be affected by it.

Acknowledgments

The Foundation acknowledges with thanks

- Professor Julian Crane for his address to the 2007 Annual Meeting on Asthma and Allergies.
- Professor Brett Delahunt for again editing the Research Review and chairing the Research Advisory Committee.
- Dr. D Ackerley and Dr. D. Day for acting as alternates for members of the Research Advisory Committee.
- The work of the Research Advisory Committee in evaluating grant applications.
- Professor T.V. O'Donnell and Professor P. Crampton who evaluated all travel grant applications.
- The work of the Investment Committee, chaired by Mr. Terry Hall.
- The many members who made donations during the year.
- Our Auditors Pricewaterhouse Coopers for their services and the use of their meeting facilities.
- And lastly to the Board Members and able Secretary for the support they continue to give me.

Ian R Small

President



The Wellington Medical Research Foundation Incorporated

Summary Financial Statements

For the year ended 30 June 2008

The summary financial statements have been extracted from the full financial statements authorised for issue on 23 September 2008.

The summary financial statements cannot be expected to provide a complete understanding as provided by the full financial statements of the financial performance and financial position of the Foundation.

The full financial statements have been audited and an unqualified audit opinion was expressed by the auditors on 23 September 2008.

For a copy of the full financial statements, please contact the Secretary at PO Box 51 211, Tawa, Wellington.



**THE WELLINGTON MEDICAL RESEARCH
FOUNDATION INCORPORATED**

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STATEMENT OF FINANCIAL PERFORMANCE

FOR THE YEAR ENDED 30 JUNE 2008

| | 2008 | 2007 |
|---|-------------------------|-------------------------|
| | \$ | \$ |
| Operating Revenue | 475,117 | 444,907 |
| Less: Operating expenses | (58,743) | (56,200) |
| Operating surplus before Research Grants | 416,374 | 388,707 |
| Less: Research Grants | (355,600) | (391,659) |
| NET OPERATING SURPLUS/(DEFICIT) | 60,774 | (2,952) |
| | | |
| FUNDS AT BEGINNING OF THE YEAR | <u>4,149,264</u> | <u>4,152,216</u> |
| | | |
| FUNDS AT END OF THE YEAR | <u>4,210,038</u> | <u>4,149,264</u> |



**THE WELLINGTON MEDICAL RESEARCH
FOUNDATION INCORPORATED**

STATEMENT OF FINANCIAL POSITION

AS AT 30 JUNE 2008

| | Note | 2008 \$ | 2007 \$ |
|----------------------------------|------|------------------|------------------|
| FUNDS | | <u>4,210,038</u> | <u>4,149,264</u> |
| <i>Represented by:</i> | | | |
| CURRENT ASSETS | | 120,500 | 169,495 |
| Add: NON-CURRENT ASSETS | | | |
| Investments | | <u>4,391,664</u> | <u>4,287,121</u> |
| | | 4,512,164 | 4,456,616 |
| Less: CURRENT LIABILITIES | | (302,126) | (307,352) |
| NET ASSETS | | <u>4,210,038</u> | <u>4,149,264</u> |

The Council of the Wellington Medical Research Foundation Incorporated authorised these financial statements for issue on 23 September 2008



President



Secretary/Treasurer



**THE WELLINGTON MEDICAL RESEARCH FOUNDATION
INCORPORATED**

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED 30 JUNE 2008

1. Investments

Market values of investments at balance date are as follows:

| | 2008 \$ | 2007 \$ |
|-----------------|------------------|------------------|
| Notes and bonds | 2,902,374 | 2,555,102 |
| Shares | <u>2,811,242</u> | <u>2,815,704</u> |
| | <u>5,713,616</u> | <u>5,370,806</u> |

2. Funds

| | Balance 30 June 2007 \$ | Bequests and Grants \$ | Operating surplus before research grants \$ | Research Grants Approved \$ | Research grants written back \$ | Balance 30 June 2008 \$ |
|---|----------------------------------|---------------------------------|--|--------------------------------------|---|----------------------------------|
| Funds available for distribution: | | | | | | |
| General Fund | 48,754 | - | 4,892 | (42,273) | | 11,373 |
| Malaghan Haematology Fund | 215,712 | - | 152,884 | (145,640) | 23,700 | 246,656 |
| Sir Clifford Plimmer Research Fund | 8,436 | - | 847 | (5,000) | - | 4,283 |
| Sir Fred & Lady Bowerbank Fund | 458,582 | - | 45,817 | (39,871) | 3 | 462,531 |
| Gwyn & Kelvin Day Charitable Trust Fund | 64 | - | 6 | | 4 | 74 |
| Diabetes Wellington Inc. Research Fund | 388,312 | - | 38,967 | (36,316) | - | 390,963 |
| The Leura Trask Trust Kidney Research Fund | 37,666 | - | 3,782 | (9,094) | 938 | 33,312 |
| Sarah Mulholland Fund | 1,685,910 | - | 169,179 | (102,310) | 259 | 1,753,038 |
| Funds not available for distribution: | | | | | | |
| The Leonard Malaghan Medical Research Endowment Fund | 1,307,808 | - | | - | - | 1,307,808 |
| | <u>4,149,264</u> | - | <u>416,374</u> | <u>(380,504)</u> | <u>24,904</u> | <u>4,210,038</u> |

3. Commitments

The Foundation has a commitment at balance date of \$23,734 (2007: \$39,062) for the funding of a technician at the Wellington School of Medicine Biomedical Unit. This is a commitment to December 2009 and is linked to continuing research into diseases of the blood.

The Foundation also has a commitment at balance date of \$8,541 (2007: \$8,333) for a Malaghan Research Fellow. This is a commitment to 31 July 2008 and is linked to continuing research into diseases of the blood.



Auditors' Report to the Members of
Wellington Medical Research Foundation Incorporated

We have audited the summary financial statements of the Foundation for the year ended 30 June 2008 on pages 1 to 3.

Council responsibilities

The Foundation's Council is responsible for the preparation and presentation of the summary financial statements in accordance with generally accepted accounting practice in New Zealand.

Auditors' responsibilities

We are responsible for expressing to you an independent opinion on the summary financial statements presented by the Council.

Basis of opinion

Our audit was conducted in accordance with New Zealand Auditing Standards and involved carrying out procedures to ensure the summary financial statements are consistent with the full financial statements on which the summary financial statements are based. We also evaluated the overall adequacy of the presentation of information in the summary financial statements against the requirements of FRS 43: *Summary Financial Statements*.

We have no relationship with or interests in the Foundation other than in our capacity as auditors and assisting with the preparation of financial statements.

Unqualified opinion

In our opinion:

- (a) the amounts set out in the summary financial statements have been correctly extracted from the full financial statements of the Foundation and are consistent in all material respects with the full financial statements, upon which we expressed an unqualified audit opinion in our report to the members dated 23 September 2008; and
- (b) the information reported in the summary financial statements complies with FRS-43: *Summary Financial Statements*.

We completed our work for the purposes of this report on 23 September 2008 and our unqualified opinion is expressed as at that date.



Chartered Accountants

Wellington

Funds used by the Foundation for Research Grants

Sir Fred & Lady Bowerbank Fund:

Grants from this fund are made for research in cardiovascular diseases. There is no limit on the use of capital and income.

Day Cancer Fund:

Grants from this fund are made for research in cancer. There is no limit on the use of capital or income.

Diabetes Wellington Research Fund:

The money in this fund was made available to the Foundation from a bequest made to Diabetes Wellington Inc. The fund is used for research into diabetic disease. The amount allocated to research in any financial year must not exceed 20% of the original balance of the fund.

General Fund:

The capital of the fund and its income may be used for any type of medical research.

Leonard Malaghan Medical Research Trust:

This trust was created by Leonard Malaghan in 1966 and was later supplemented by a grant from Mrs Malaghan. Income from the trust is credited to the Malaghan Haematology Fund. The income from this latter fund may be used for the purposes of the Foundation with preference to research in diseases of the blood.

Sarah Mulholland Fund:

The fund arose from a bequest from Sarah Mulholland. It is used for the general purposes of the Foundation.

Sir Clifford Plimmer Fund:

There is no limit on the use of capital or income, nor on the types of research which can be supported.

Leura Trask Trust Kidney Research Fund:

This fund was established from grants made by the Leura Trask Trust. A kidney research Fellowship was established in 2004. Grants are made for work in the field of renal diseases.

Project Grants 2008

The following projects were approved for funding in April 2008 and will be reported on in subsequent Annual Reports of the Foundation.

Darren Day

Victoria University of Wellington

Relating neurochemical changes associated with cannabis use to juvenile learning and memory.

The aim of this project is to investigate the neurochemical changes THC exposure has on neurogenesis in the juvenile rat and to explore the interaction of the opioid and cannabinoid systems in Lippocampus following THC exposure. The prevalence of cannabis use and abuse in New Zealand poses a significant public health issue that places the developing minds of teenagers experimenting with cannabis during a critical period of final neuronal maturation at risk. This project aims to better understand the consequences that experimentation with cannabis has on adolescence memory and learning.

Jacqueline Harper

Malaghan Institute of Medical Research

Monocyte phenotypes in gouty inflammation

Gout is a significant public health problem in New Zealand causing a large amount of human suffering. Up to 20% of individuals are unable to manage the disease effectively with the current medical regimes.

Gouty arthritis is an inflammatory condition triggered by the deposition of monosodium urate crystals (MSU) in the joints. By understanding how monocyte activity is involved in the inflammatory response to MSU it will be possible to identify cellular targets and assay systems for development therapies.

Kylie Hood

Wakefield Gastroenterology Research Institute

Characterization of the Invasive Front of Metastatic Colorectal Tumours.

Accurate identification of the metastatic precursor population in tumours is vital to the development of clinically useful new molecular diagnostics and drug targets aimed at preventing or treating metastasis, since these need to target the relevant population of cells that is responsible for the aggressive disease progression. The project involves the use of the latest technological advancements in proteomics to address an important clinical problem.



Isabelle Hoong

Massey University

SPiRiT Study: Beneficial health effects for Polynesians with type 2 diabetes?

The incidence of type 2 diabetes and obesity is rapidly escalating in New Zealand, especially in the Polynesian population. This study aims to investigate the effect of progressive resistance training exercise on obesity, glycemic control and insulin resistance in obese and diabetic Polynesians residing in the greater Wellington region.

Anne La Flamme

Victoria University of Wellington

Diagnostic markers of hepatosplenic schistosomiasis

Schistosomiasis is a parasitic disease that afflicts more than 200 million people worldwide. This project has two goals: to determine the impact of schistosomiasis on protein expression in the liver and to develop assays to detect marker proteins in serum to enable early detection of infected individuals at high risk of developing severe hepatosplenic disease.

Franca Ronchese

Malaghan Institute of Medical Research

Adoptive T cell transfer therapy of cancer

Adoptive cell transfer (ACT) is a method of cancer immunotherapy that involves isolating tumour specific CD8 + T cells from a patients blood or tumour issue, activating and expanding these cells in vitro, and infusing them back into the patient. The project will characterise the specific elements required for the generation of tumour – specific T cells that are capable of rejecting tumour challenge in vitro.

By determining the importance of the relationship between the antigen presenting cells and T cells during activation and investigation the in vivo requirements for survival and anti-tumour function, this research might be able to further improve the success rate of ACT and establish this promising therapeutic strategy as a viable mainstream therapy of cancer.

Shieak Tzeng

University of Otago, Wellington

Different effects of anaesthetic agents on respiratory sinus arrhythmia (RSA) in the rat.

The research group for this project has a special interest

in cardiovascular autonomic research, and has focused on the role of the parasympathetic nervous system (PNS) on mediating respiratory sinus arrhythmia, which usually manifests as an increase and decrease in heart rate during inspiration and expiration respectively.

The outcomes of this study will contribute to the assessment of an anaesthetised rat model more suitable for future RSA research where protocols cannot be applied to human volunteers.

Angela Gruber

Diabetes Unit, Wellington Hospital

The impact of a lifestyle modification programme

This project aims to investigate the effects of low impact exercise classes on diabetes control, future exercise and quality of life in a group of overweight and obese patients with diabetes and poor exercise tolerance.

Peter Ferguson

Victoria University of Wellington.

Iron Carbide nanoparticles as magnetic resonance (MRI) contrast agents

The incidence and mortality rates of malignant melanoma have more than doubled in New Zealand over the past 3 decades, and remain some of the highest in the world. Early diagnosis with accurate staging may reduce morbidity and prolong survival.

This project has the potential to develop novel magnetic resonance contrast agents with greater efficacy and safety than other agents available on the market. Effectively deployed, these agents improve the ability of MRI to detect cancer in its earlier and treatable stages.

Melanie-Jane McConnell

Malaghan Institute

Sirtuins, Stress and Survival : A problem in anti-tumour therapy

The fundamental aspect of cancer cell survival is the ability of cancer cells to change metabolic pathways to cope with cellular stress. This can impact on the effectiveness of anti-tumour compounds induction of a stress response by a compound can enhance survival mechanisms resulting in less tumour cell killing.

Understanding the survival mechanisms is key to designing effective anti-tumour therapeutics.



Summer Studentships

Six studentships were awarded for 2007-2008, each recipient receiving \$4,000. The studentships enable senior medical students to gain research experience and training over a three month appointment.

1. **Evaluation of the framework for the measurement of community mobility.**
Leigh Halkett, supervised by Dr. Sue Lord.
2. **Early vascular disease in children with epilepsy receiving anticonvulsants.**
Ngairé Keenan, supervised by Dr. Lynette Sadleir and Dr. Ersko Wiltshire.
3. **Audit of implanted cardioverter defibrillator outcomes in New Zealand.**
Praveen De Silva, supervised by Dr. Peter Larsen and Dr. Nigel Lever.
4. **Policymaking for Smokefree public playgrounds.**
Sharon Tay, supervised by Dr. George Thomson.
5. **Mosquito activity in the Waikanae peri-urban area and around dairy sheds, and human exposure to nuisance and potential arbovirus carrying mosquitoes.**
James Pizarro, supervised by Dr. Mary McIntyre.
6. **Exploring changing prescription charges – A survey of pharmacists and patients.**
Emily-Jane Willmot, supervised by Dr. Beverley Lawton.

Travel Grant Recipients

1. **Anja Wilmes**, Victoria University of Wellington.
Attendance at 13th Annual Proteomics Symposium and 20th Lorne Cancer Conference, Victoria, Australia. February 2008.
2. **Peter Sin**, Wellington School of Medicine.
Attendance at the Medical Sciences Congress, Queenstown. November 2007.
3. **An Tan**, Malaghan Institute.
Attendance at 14th Annual Meeting of Society for Free Radical Biology and Medicine. Washington DC. November 2007.
4. **Shieak Y C Tzeng**, Wellington School of Medicine.

Attendance at the Medical Sciences Congress, Queenstown. November 2007.

5. **Amy Lewis**, Victoria University of Wellington.
Attendance at the Annual Meeting, Society for Neuroscience, San Diego, California. November 2007.
6. **Yan Bai**, Malaghan Institute.
Attendance at 6th International Congress on Autoimmunity, Portugal. October 2008.
7. **Laura Green**, Victoria University of Wellington.
Attendance at 7th Louis Pasteur Conference on Infectious Diseases. Paris. November 2008.
8. **William Levack**, Wellington School of Medicine.
Attendance at 10th International Congress of Behavioural Medicine. Tokyo. August 2008.
9. **Helen Simkins**, Malaghan Institute.
Attendance at the Gordon Research Conference, Oxford UK. August 2008.
10. **Peter Sin**, Wellington School of Medicine.
Attendance at Scientific meeting of UK Physiological Society at Cambridge University. July 2008.
11. **Anasuya Vishvanath**, Victoria University of Wellington.
Attendance at 17th International Conference on Vascular Anomalus. Boston. June 2008.

Niwa Wellington Science and Technology Fair 2007

Winners of WMRF Prizes:

1. **Joseph Bennett**, Year 7 Wadestown School with an exhibit "Staying Cool".
2. **Annie Noakes**, Year 7 Raroa Normal Intermediate with an exhibit "Sweet as".
3. **Beth Passmore and Makayla Woodhead**, Year 8 Students Maidstone Intermediate, with an exhibit "Smoking is a Drag".
4. **Claire Middleton**, Year 9 Tawa College with an exhibit "Do Low Fat Foods Taste Different?".



Annual Meeting Address 2007

Dr Julian Crane is Director of the Wellington Asthma Research Group.

Asthma and Allergies – The evolving world of hygiene, housing and vitamins. Presentation at the Wellington Medical Research Foundation AGM, Wednesday 14 November 2007.

This talk discussed some rather disparate aspects of our current research into asthma and allergies. Firstly despite a huge amount of work looking at the underlying immunology of allergy and allergic asthma there are still many aspects that remain to be sorted out. For example, it is not clear that we really understand what asthma is except that we are beginning to recognise a number of different asthma phenotypes, for example, allergic asthma, non allergic asthma and in early life, transient wheezing. We do not understand why asthma differs in severity between individuals and although we have made significant advances in relation to management, it remains unclear exactly how asthma should be managed.

Defining asthma has always been a problem and while delineating some of these phenotypes can be very helpful we still have no universally recognised definition. A recent paper published in *Allergy* showed that by using different definitions that had been used in the community setting, asthma prevalence amongst a group of Cuban children could vary between 5 and 39% and for eczema between 1 and 46%. In this group of children 66% overall had one or more atopic diseases by one or more definitions.

It may be more helpful to think of wheezing as a continuum rather than thinking of asthma as discreet entity. This would be somewhat analogous to the relationship between blood pressure and disease as put forward by Pickering in 1964. That is, that there really is no sharp distinction between health and disease but it is a continuum and to some extent the same maybe true of wheezing, the more wheezing one has the more likely an individual is likely to be labelled as having asthma. There is growing evidence that in fact wheezing is normal. Studies of prevalence of asthma

in children in Melbourne for example, showed that 54% had a history of wheezing and from the Dunedin cohort study between the ages of 3 and 26 years, 70% of that cohort had reported wheezing at some time and 50% had reported wheezing on more than one occasion.

The recent studies of exhaled nitric oxide which appears to be elevated in eosinophilic asthma, the common allergic type of asthma, has also been shown to be elevated in those with no history of asthma or allergic rhinitis but who have a positive skin prick test response to house dust mite or other allergens. These findings suggest that there is subclinical allergic airway inflammation in the lungs of subjects who simply have atopy.

Over a number of years through a variety of studies we have shown that house dust mite allergen levels are particularly high in the homes of New Zealanders with the highest levels being found in bedding materials and particularly in infant sheepskins. A number of domestic environmental determinants have been shown including type and age of carpeting, the level of floor insulation, the number of people in a dwelling and the aspect of the dwelling in relation to exposure to sunlight. We have also shown that there are significantly higher levels of house dust mite allergen on synthetic bedding materials versus feather bedding materials and that accumulation is much more rapid on synthetic materials than feather. The most likely explanation for this is the density of the weave of the covering materials which tends to be much closer for feather containing materials than it does for synthetic. A number of studies have shown that bedding material in early infancy is important in relation to the development of asthma and allergies with feather bedding materials appearing to be protective. One possible explanation is the level of derp1 on synthetic versus feather bedding materials.

We have also been involved with Philippa Howden-Chapman and the Housing and Health Group in looking at the effects of simple modifications to housing in relation to health and respiratory health

in particular. By introducing a simple package of insulation to uninsulated homes we have been able to show an improvement in self related health status, significant reductions in reported mould and condensation, improved energy efficiency of the dwelling and a reduction in self reported symptoms of colds and flu, wheezing in the past three months, morning sputum production and sleep disturbed wheezing.

We have also recently looked at the relationship between vitamin D and early wheezing in childhood in our infant cohort study. This is work undertaken in conjunction with Dr Carlos Camargo who measured cord vitamin D levels in our cohort of 1000 children. We have been able to show that indeed there are considerable seasonal variations in cord blood to vitamin D and that a number of infants are deficient at the time of birth. We have been able to show an association between wheezing from birth to 5 years and the level of vitamin D at birth with increase risk of reported wheezing associated with lower levels of vitamin D. This does not however appear to apply to asthma more rigidly defined as diagnosed asthma together with recent wheezing or inhaler use. This suggests that the relationship between asthma and vitamin D in the first few years of life is related to an effect on protection from viral upper and lower respiratory tract infection in the first few years of life. Indeed there was a positive association between low levels of vitamin D in cord blood and increased risk of respiratory infections at aged 3 months. Interestingly we also found a protective effect of higher levels of vitamin D for eczema for those who were non-atopic.

The other piece of work that was discussed related to the Phase Two of the ISSAC programme in which a clear association between asthma and atopy was found for economically developed countries but not for less developed countries thus the relationship between atopy and disease appears to be influenced by some factor in the Western or developed economic environment or alternatively there is some loss of protective factor from those environments.



Members as at 30 June 2008

Honorary Life Members:

Dr I A M Prior
Ms M M Hutchison
Dr J Mattingley
Professor T V O'Donnell
Sir Roderick Weir

Life Members:

Mr & Mrs J G E Benton
Mr H R Cummins
Dr P M Ellis
Mr J R Faulls
Miss M A Gardner
Mr E K Huffam
Mr B E Johnson
Mrs F P Taylor
Dr C A Teague
Sir Ron & Lady Trotter
Mrs P Voss
Egley Electrical Co. Ltd

Corporate Members:

W M Bamford & Co Ltd
Boulcott Clinic Ltd
Aotea Pathology
Order of Lazarus

Subscribing Members:

Dr D Ackerley
Dr A B Arthur
Dr T Bäckström
Mr P Barker
Dr P Boy
Ms L Blake
Dr M Berridge
Dr R T Bush
Mr C J Calcinai
Mr D H Catley
Ms J M Cheetham
Mr P Clarke
Dr J Crane
Prof B Delahunt
Mr P C Dukes
Dr D Elder
Prof R J Ferrier
Mr D F Gault
Mr & Mrs C Gibbs

Mr N E Gray
Mrs R C Grove
Mr & Mrs T W Hall
Dr D Hingston
Dr P E Holst
K Jones & D Long
Dr J Kirman
Dr A La Flamme
Mr E C T Landall
Prof G Le Gros
Mr K R Macdonald
Dr T J B Maling
Prof A W Mann
Mr N F Manthel
Mr R H Matthew
Prof J E A McIntosh
Dr J H Miller
Dr A W Mitchell
Miss M Mitchell
Dr R O'Toole
Dr R G Park
Mr C Parkin
Dr N Pearce
Dr E I F Pearce
Mr R W Pharaoh
Ms G Phipps
Dr F Ronchese
Mr P W Saunders
Mr R Siebers
Dr C H Sissons
Mr I R Small
Dr R B Smith
Dr N H Stace
Mr R Stallworthy
Mr R S Stubbs
Dr B L J Treadwell
Mr C L Tucker
R J & J K Webster
Mr D H Wale
Mr D C Wright
Dr J Wyeth
Mr W C Young
Dr D Zame

Donations 2008

The Foundation acknowledges with thanks donations made during the last financial year by the following.

Dr T Bäckström
Dr M V Berridge
Ms L Blake
Dr R T Bush
Mr C J Calcinai
Ms J Cheetham
Mr P Clarke
Prof B Delahunt
Mr P C Dukes
Dr D Elder
Prof R J Ferrier
Mr D F Gault
Mr & Mrs C Gibbs
Mr N E Gray
Mrs R C Grove
Dr P E Holst
Ms M M Hutchison
Mr E C T Landall
Prof G Le Gros
Mr K R Macdonald
Prof A W Mann
Mr N F Manthel
Mr R H Matthew
Dr J M Mattingley
Prof J E A McIntosh
Dr J H Miller
Miss M Mitchell
Mr C Parkin
Dr E I F Pearce
Mr R W Pharaoh
Dr F Rochese
Mr P W Saunders
Dr C Sissons
Mr I R Small
Dr R B Smith
Dr N H Stace
Mr R Stallworthy
Mr R S Stubbs
Dr B L J Treadwell
Mr C L Tucker
Dr D H Wale
R J & J K Webster
Dr J Wyeth
Mr W C Young
Mr D Zame



Information about the Foundation

Subscriptions:

- Ordinary members — \$22 per annum
- Corporate members — \$275 per annum
- Life Membership — \$500 once only payment

Taxation:

The Foundation is an approved body for Income Tax purposes. The position in respect of donations and subscriptions is as follows:

Companies

A company making cash donations, or paying a membership subscription to any one donee may treat the amount as a deductible item for tax purposes up to a limit of \$4,000 or 1% of the company's assessable income (whichever is the greater.)

Medical Practitioners

Annual Subscriptions — claim as a deduction
Donations can be claimed as a rebate for individual taxpayers.

Individual Taxpayers

(including full-time salaried doctors):

All taxpayers are entitled to a rebate on donations in excess of \$5. From 1 April 2008 taxpayers are able to claim a 33.33% tax rebate on all donations up to their annual net income.

Gift Duty

No gift duty is payable by an individual on gifts to the Foundation.

MEMBERSHIP

A form for membership applications or donations is included with this report.

If you require further information on any point or a form for application for membership, please write to:

The Secretary
Wellington Medical Research Foundation
PO Box 51211
Tawa
WELLINGTON 5249

Phone: (04) 232 5475
Fax: (04) 232 5494
Email: info@wmrf.co.nz
Website: www.wmrf.co.nz

How you may help the Foundation

The Wellington Medical Research Foundation Incorporated is a voluntary association whose membership is open to firms and corporations and to persons in all walks of life. To carry out its mission of fostering medical research it seeks support by membership subscriptions, donations or benefactions under will.

The Foundation is recognised as holding its property in a charitable trust within the meaning of the Estate and Gift Duties Act 1968 and the Stamp and Cheque Duties Act 1917. This means that any outright gift to the Foundation actually made during the donor's life-time is exempt from gift duty.

For income tax purposes the membership subscription, as well as a donation to the Foundation is, within the stipulated limits, allowable as a "rebate" against tax assessed. Moreover the Foundation is an approved body under Section DB 32 of the Income Tax Act 2004. The Foundation is therefore one of the bodies to whom a donation for research made by a company may, within specific limits, be allowed as a deduction in calculating the company's assessable income. You may wish to have your contribution take the form of a legacy or bequest in which case you will no doubt obtain proper advice.

Form of Bequest

A suitable clause in a will to provide for a bequest would be on the following lines:

"I give and bequeath (free of all duty) to the Wellington Medical Research Foundation (Inc) The sum of \$..... (or description of other property or assets) for research purposes that may relate to a diverse range of health problems including cancer and heart disease, AND I DECLARE that the receipt of the Secretary or other proper officer thereof shall be a full and sufficient discharge to my Trustee for the said Legacy nor shall my Trustee be bound to see the application thereof.

Flower Fund Donations

On the occasion of bereavement, you may be invited and may wish to make a donation to the Foundation to mark your sympathy and regard. On being informed of the name of the deceased and the name and address of the bereaved (and relationship to the deceased) the Secretary of the Foundation will send a message of condolence, at the same time advising that a donation is made to the Foundation. Donors will receive personal acknowledgment.



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