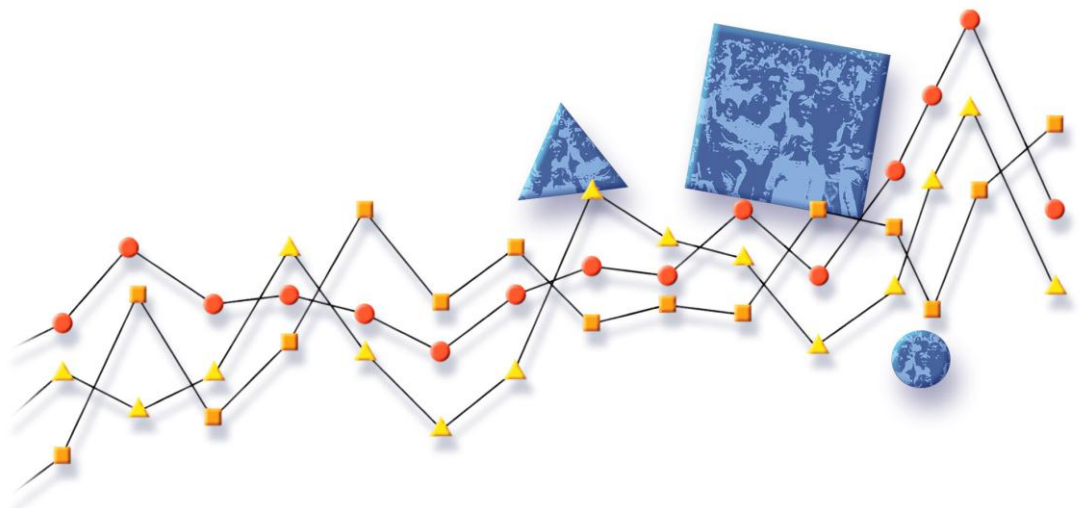
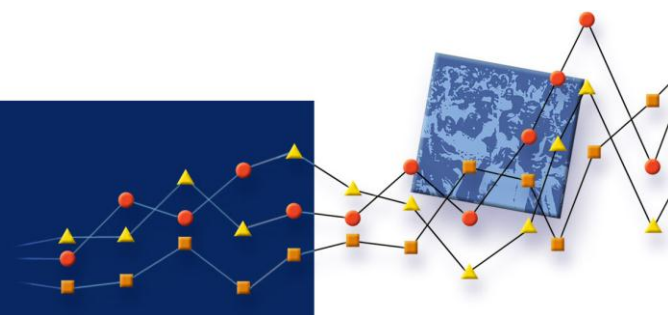


# Centre for Public Health Research

Annual Report 2006



## Contact Us



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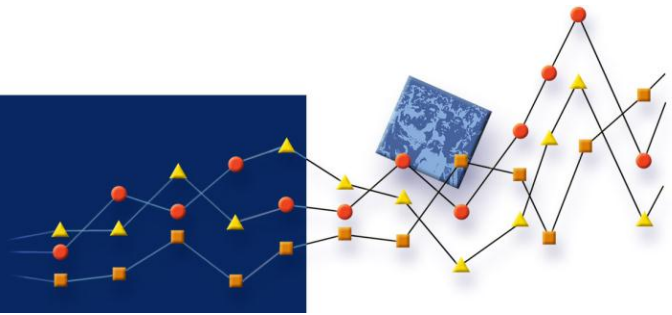
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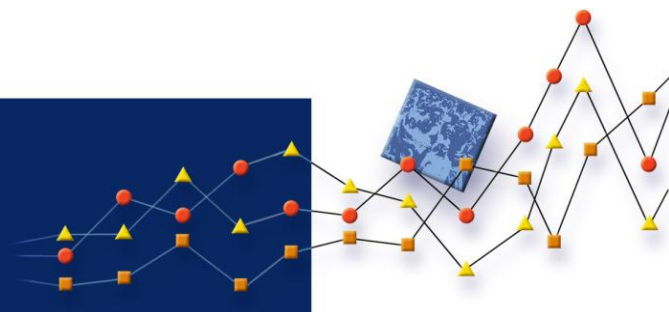
This report is also available in downloadable form from our website at:

<http://publichealth.massey.ac.nz/>  
<http://www.publichealth.ac.nz/>

# Contents



Staff	4
Introduction	6
The Year in Review	8
Research Projects	14
Training	42
Annual Symposia	45
Presentations	47
Publications	51
Seminars	55
Advisory Committees	57
International Visitors	59
Acknowledgements	60



## **Directors**

Neil Pearce – Professor and Director

Jeroen Douwes – Associate Director

## **Support Staff**

Audrey Hayman – PA

Kelly Gray – PA

Noemie Travier – Biostatistician

Soo Cheng – Biostatistician

## **Researchers**

Amanda Eng – Research Fellow

Andrea 't Mannetje – Postdoctoral Research Fellow

Ate Moala – HRC Pacific Health Research Training Fellow

Christine van Dalen – Postdoctoral Research Fellow

Colin Brooks – Research Fellow

Dave McLean - Postdoctoral Research Fellow

Elizabeth Harding – Research Fellow

Esther Banbury – Research Fellow

Fiona McKenzie – Research Fellow

Haidee MacKenzie – Research Fellow

Heather Duckett – Research Fellow

Heather Purnell – Research Fellow

Juthika Badkar – Research Fellow

Karen Blakey – Research Fellow

Ken Huang – Research Fellow

Lis Ellison-Loschmann – HRC Erihapeti Rehu-Murchie  
Postdoctoral Research Fellow

Michelle Gray – Māori Health Research Fellow

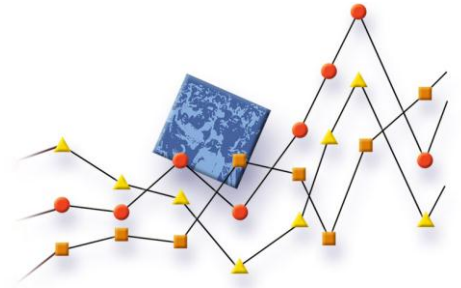
Mona Jeffreys – Postdoctoral Research Fellow

Naomi Brewer – Research Fellow

Prachee Gokhale – Research Fellow

Sunia Foliaki – Wellcome Trust Research Fellow

Tania Slater – Māori Health Research Fellow



### **Casual Research Assistants and Field Workers**

Alice Harding	Joy Stubbs
Alister Thomson	Jude Geddye
Anna Shum-Pearce	Lindsey Duckett
Catherine Douglas	Michaela Skelly
Chani Tromop-van Dalen	Myria Hudson
Charlie Holland	Nicky Curran
Cilla Blackwell	Pam Terry
Emma Turner	Penelope Whitson
Phoebe Taptiklis	Hayden Bennett
Zoe Harding	Jessica Fargher

### **Honorary Research Fellows**

Barry Borman – Epidemiology  
Bill Glass – Occupational Health  
Chris Walls – Occupational Health  
Deborah Read – Public Health  
Diana Best – Cancer Control  
Evan Dryson – Occupational Health  
Phil Shoemack – Public Health  
Wendyl D’Souza – Neuroepidemiology

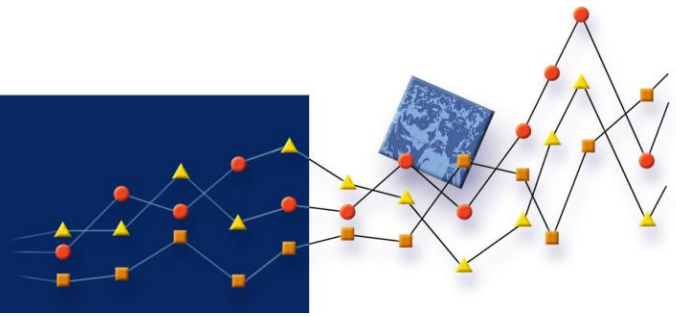
### **Waiora**

Cindy Kiro – Associate Professor and Director of Waiora  
(currently on leave)

### **Research School of Public Health**

Glenda Shaw – Business Manager  
Lei Zhang – IT Consultant

# Introduction

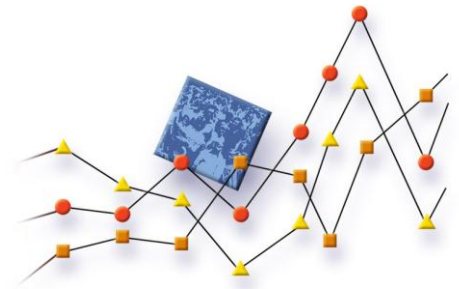


The Centre for Public Health Research is a multi-disciplinary team of researchers based on the Massey University Wellington campus. It is part of the Massey University Research School of Public Health, together with the Research Centre for Māori Health & Development, the Sleep/Wake Research Centre, the Social and Health Outcomes Research and Evaluation (SHORE) Centre and Whariki.

The Centre for Public Health Research was established in 2000. Our research programme covers all aspects of public health research, but with a focus on:

- Non-communicable disease (respiratory disease, cancer, diabetes)
- Māori health
- Pacific health
- Occupational health
- Environmental health
- Socio-economic determinants of health

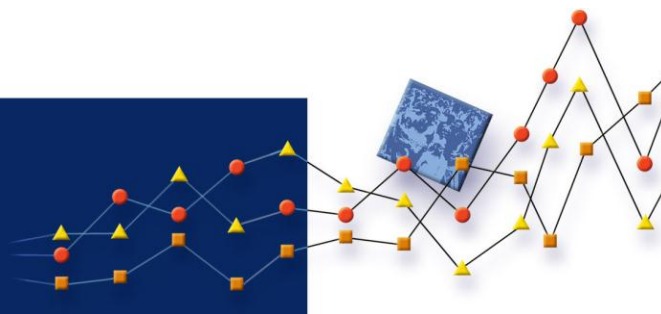
The Centre for Public Health Research recognizes the importance of the Treaty of Waitangi and its relevance to our work. We have a long history of involvement with Māori research and policy development including the Māori Asthma Review, the Wairarapa Māori Asthma Project, and the Hauora Tamariki project. Much of our Māori health research is done in collaboration with the Research Centre for Māori Health & Development, and our Māori asthma research involves a formal link with the Māori Committee of the Asthma and Respiratory Foundation of New Zealand. We are also committed to employing and training Māori health researchers.



The Centre is based in the College of Humanities and Social Sciences, but we also work with researchers at other Massey Colleges and campuses, as well as with researchers at other institutions including the Malaghan Institute for Medical Research (MIMR), the Airway Research Centre (John Hunter Hospital, Newcastle, Australia), Public Health Intelligence (Ministry of Health), Occupational Safety and Health (OSH), the Health Services Research Centre (Victoria University), the Population and Environmental Health Group of the Institute for Environmental Science and Research (ESR), the Massey University Veterinary Epicentre, the Institute for Risk Assessment Sciences (IRAS) at the University of Utrecht (The Netherlands), the US National Cancer Institute (NCI), the Institut Municipal d'Investigacio Medica (IMIM, Barcelona), the Postgraduate School of Occupational Health (Milan, Italy), the Department of Biomedical Sciences and Human Oncology, University of Turin (Turin, Italy), the Department of Epidemiology and Preventive Medicine (Monash University, Melbourne), and the International Agency for Research on Cancer (Lyon, France).

Although our main activity is research, we also work with organisations such as the Ministry of Health, Occupational Safety and Health (OSH), the Accident Compensation Corporation (ACC) and various non-governmental organisations, unions and companies to ensure that the findings of research are relevant to, and applied in, public health policy. In particular, we have served on a number of advisory committees for the Health Research Council, the Ministry of Health, ACC and OSH.

## The Year in Review



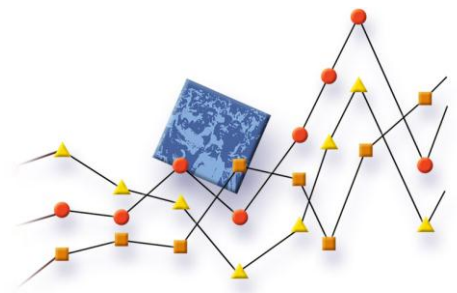
The last year has seen major developments in the work of the Massey University Centre for Public Health Research (CPHR) with and considerable success in obtaining new research funding.

Despite the current severe shortage of health research funding, we had a successful year with \$3.5 million of new funding, including the three-year extension of our Health Research Council of New Zealand (HRC) Programme Grant, the award of a major HRC Project Grant for a study of dioxin exposure levels and health effects in phenoxy herbicide production workers, and an HRC Strategic Development Grant for studies of cancer in the Pacific, a Marsden Fund Fast-start grant for a study of the role of the lung macrophage in asthma pathology, and a number of other research grants in asthma, cancer, and occupational health from Lotteries Health Research, the Cancer Society of New Zealand, and the Ministry of Health.

Recognition of the work of CPHR has also been reflected in 2005 in the election of Neil Pearce as President-Elect of the International Epidemiological Association, and as a Fellow of the Royal Society of New Zealand.



## Respiratory Disease



Our asthma research programme has been enhanced by the award of a Marsden Fund Fast-start grant for a study of the role of the lung macrophage in asthma pathology to Dr Christine van Dalen. We are also currently conducting two HRC-funded projects, both of which are being conducted in collaboration with the Malaghan Institute of Medical Research.

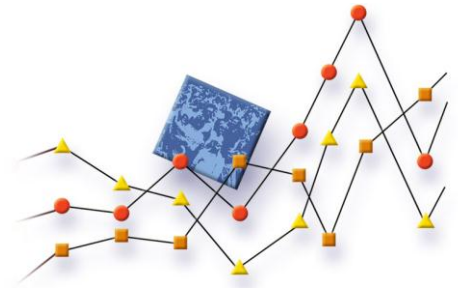
The first study is examining the protective factors of farming on asthma in farmers' children and their parents. Phases I and II of the study have been completed, and we are now commencing Phase III of the study which is examining the immune status of babies born on farms and a group of control babies.

The second study is investigating the hypothesis that endotoxin exposure later in life may reverse pre-existing allergies and allergic diseases. We are examining this in a prospective cohort

of previously unexposed allergic adults who are starting a work career in industries with moderate to high endotoxin exposures. If endotoxin exposure is indeed associated with a lower prevalence of allergies in adults then potentially vaccines could be developed not only to protect but also potentially to treat allergic disease (e.g allergic asthma, hay fever, eczema), both in children and in adults.

We are also continuing to work on the International Study of Asthma and Allergies in Childhood (ISAAC). Neil Pearce is a member of the ISAAC Executive and the ISAAC Steering Committee. Sunia Foliaki is Regional Coordinator for Oceania and a member of the Steering Committee. We have completed the ISAAC Phase III study in Wellington, and in Tonga, Fiji Islands, Cook Islands, Samoa, Niue, Tokelau Islands, Nauru, French Polynesia and New Caledonia.

## Cancer



Our cancer research programme has been greatly enhanced by the arrival of Dr Mona Jeffreys as a Postdoctoral Research Fellow in cancer epidemiology, and the award to Lis Ellison-Loschmann of an HRC Erihapeti Rehu-Murchie Postdoctoral Research Fellowship in cancer epidemiology. The programme now not only includes studies of occupational cancer (see below), but also studies of cancer survival (with funding from Lotteries Health Research) and a case-control study of breast

cancer. The Māori component of the latter study is currently funded and the Pacific and non-Māori non-Pacific components are partially funded.

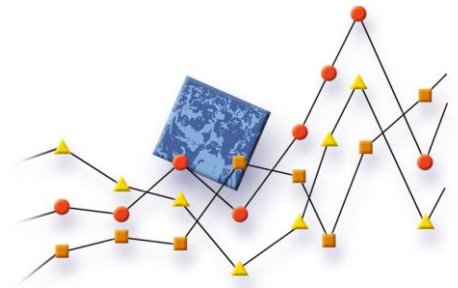
In addition we have been conducting a series of analyses, in collaboration with Public Health Intelligence and the New Zealand Health Information Service (Ministry of Health) using routine data to examine ethnic and socioeconomic differences in cancer survival.

## Other Non-communicable Disease

Other non-communicable disease research has included a series of analyses, in collaboration with Public Health Intelligence to examine mortality in patients with diabetes, a series of analyses in collaboration

with the New Zealand Hepatitis Foundation to examine mortality, cancer incidence, and diabetes incidence in patients screened for diabetes using the HbA1c test.

## Occupational and Environmental Health



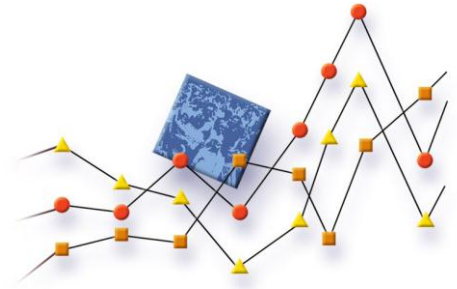
We have received funding from the HRC, Lotteries Health Research and the Cancer Society of New Zealand to conduct a series of case-control studies of bladder cancer, non-Hodgkin's lymphoma, leukemia, and lung cancer, to quantify the proportion of cases of these cancers due to known occupational exposures, and to identify new occupational causes of these cancers.

We are also currently conducting a study funded

by the HRC/OSH/ACC of the current and future burden of occupational ill health in New Zealand, and an HRC/OSH funded study of health outcomes in former New Zealand timber workers exposed to pentachlorophenol (PCP).

Finally, in 2005 we received funding from the HRC for a major study of dioxin exposures and health effects in former phenoxy herbicide production workers.

## Māori Health



Dr Lis Ellison-Loschmann is currently based at the Institut Municipal d'Investigacio Medica (IMIM) in Barcelona, Spain, as part of her four-year HRC-funded Postdoctoral Fellowship for studies of cancer epidemiology in Māori.

Lis is conducting a case-control study of breast cancer in Māori, and we are

seeking funding for the Pacific and non-Māori non-Pacific components of the study.

We are also developing a proposal for a case-control study of causes of gastric cancer in Māori, together with colleagues at the Auckland School of Medicine.

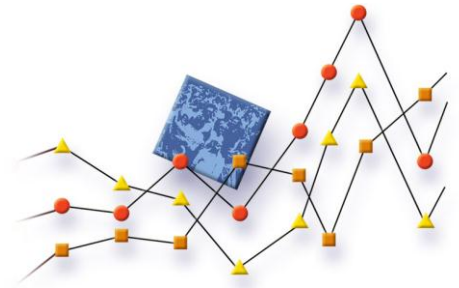
## Pacific Health

Dr Sunia Foliaki is coordinating the ISAAC Phase III study in the Pacific. The ISAAC Phase III study is currently being conducted in Tonga, Samoa, Fiji Islands, Cook Islands, Niue, Nauru and the Tokelau Islands. Further studies include an asthma self-management trial in Tonga funded by the Wellcome Trust, and a study of cancer in Pacific populations (Tonga, Samoa, Niue, Fiji) funded by the HRC.

Dr Ate Moala is conducting research into the development of a health promotion model for fanau Pasifiki and their families with funding from an HRC Pacific Health Research Training Fellowship.

Ridvan Firestone has been awarded an HRC-funded Postdoctoral Fellowship in Pacific Health research, which she will commence in mid-2006.

## Teaching



In 2005 we hosted a short-course in Advanced Methods in Epidemiology and Biostatistics with Professor Sander Greenland (UCLA School of Public Health)

The Massey University Research School of Public Health Master of Public Health (MPH) Programme includes a Postgraduate Diploma in Public Health (PGDipPH) which commenced in 2005; it involves the equivalent of one year fulltime study (four 25 point papers of which two

are compulsory – the core paper, and a research project). The programme involves an applied approach to public health education and training that is different from existing public health qualifications, integrating public policy more strongly with public health, and also providing the opportunity for a greater emphasis on Māori health and Pacific health. An MPH-by-thesis option has been available since 2004 for candidates who have already completed an equivalent of the PGDipPH.

## Concluding Remarks

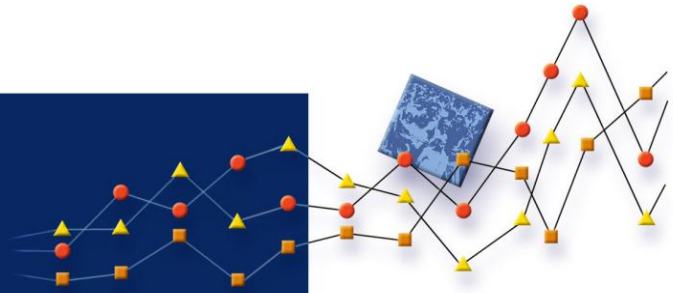
In closing we wish to thank all research collaborators involved in our various projects who have played an important role in ensuring a productive year, the agencies who have funded this programme of research,

and all those who have participated in our studies.

We also wish to thank Massey University and its staff for its excellent support for our research programme.

# Research Projects

## Projects completed during 2005



### 1. Development of a model of health promotion for fanau Pasifiki and their families

**AIMS:**

1. To determine: (a) what constitutes measurable positive Pacific health outcomes; (b) the key health indicators; (c) effective health promotion service delivery mechanisms; (d) the criteria for effective health promotion for fanau Pasifiki and their families.
2. To develop a Pacific health promotion model.
3. To perform an evaluation for the model on several 'case-study' health promotion programmes.

**FUNDING:** Health Research Council of New Zealand (HRC)

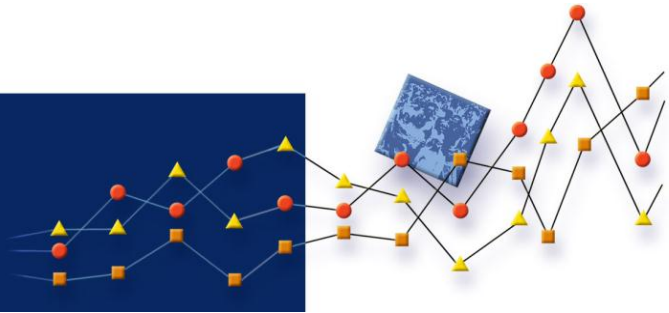
**RESEARCHERS:** Ate Moala

**COLLABORATORS:** Dr Sitaleki Finau (Fiji School of Medicine)

**KEY WORDS:** Health Promotion, Pacific Health

# Current Research Projects

## Ongoing projects



## 2. The current and future burden of occupational ill health

### AIMS:

1. To assess, through telephone interviews, current exposures and work practices in a random sample of the workforce.
2. To conduct more detailed exposure assessments in selected key industries through workplace visits, more detailed questionnaires, industrial hygiene measurements, and ergonomic assessments.
3. To further develop a New Zealand Job-Exposure-Matrix (NZ JEM) based on the categories of the New Zealand Standard Classification of Occupations (NZSCO).
4. To conduct analyses of occupational differences in mortality and cancer registration rates in New Zealand during 1998-2002 (with Public Health Intelligence, Ministry of Health).
5. To assess the current burden of occupational ill-health in New Zealand (with Occupational Safety and Health (OSH)).
6. To identify current and emerging hazards that account for, or will account for, a significant burden of occupational ill-health.

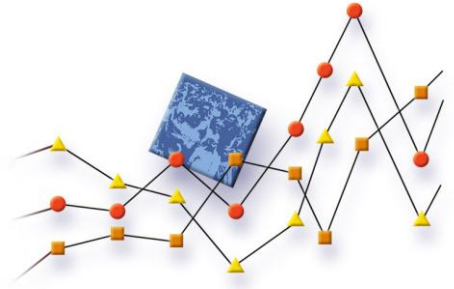
**FUNDING:** Health Research Council of New Zealand (HRC), Occupational Safety and Health (OSH)

**RESEARCHERS:** Neil Pearce, Bill Glass, Dave McLean, Andrea 't Mannetje, Lis Ellison-Loschmann, Jeroen Douwes, Amanda Eng, Karen Blakey, Soo Cheng

**COLLABORATORS:** Professor Philippa Gander (Sleep/Wake Research Centre), Professor Stephen Legg, Dr Ian Laird (Centre for Ergonomics, Occupational Safety and Health), Dr Barry Borman, Craig Wright (Public Health Intelligence)

**KEY WORDS:** Occupational Health, Exposures

### 3. Asthma causation, mechanisms and prevention



#### **AIMS:**

1. To assess whether atopic sensitisation can be reversed over time in a working adult population newly exposed to moderate to high levels of endotoxin.
2. To assess whether there is a dose-response between endotoxin exposure and change in atopic status.
3. To assess the time period in which the reduction in atopy takes place.
4. To assess the association between endotoxin exposure and lung function and respiratory symptoms.
5. To assess whether a change in atopic status is associated with a change in lung function and respiratory symptoms.
6. To assess the level of exposure at which the protective effect on atopy is most effective and the adverse effects on the airways (induced by non-atopic mechanisms) are minimal.

**FUNDING:** Health Research Council of New Zealand (HRC)

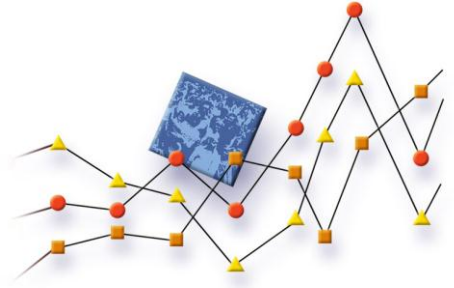
**RESEARCHERS:** Jeroen Douwes, Dave McLean, Neil Pearce, Christine van Dalen, Elizabeth Harding, Lis Ellison-Loschmann, Amanda Eng

**COLLABORATORS:** Professor Graham Le Gros, Dr Jacquie Harper (Malaghan Institute of Medical Research)

**KEY WORDS:** Asthma, Respiratory Disease, Occupational Health



#### 4. ISAAC (International Study of Asthma And Allergies In Children). Phase III



##### **AIMS:**

1. To describe the prevalence and severity of asthma, rhinitis and eczema in children living in different centres and to make comparisons within and between countries.
2. To conduct ecologic analyses of the association of asthma prevalence with factors such as diet, infections, immunisation, air pollution and allergen levels.
3. To examine trends in asthma prevalence over time.
4. To provide a framework for further etiological research into genetic, lifestyle, environmental and medical care factors affecting these diseases.

The International Study of Asthma and Allergies in Childhood (ISAAC) was developed and organized together with colleagues in Auckland, London and Münster. This study now includes more than 1,000,000 children in more than 280 centres in 100 countries. Our involvement includes:

- Sunia Foliaki is Regional Co-ordinator for Oceania and a member of the ISAAC Steering Committee.
- We are participating in the New Zealand ISAAC Phase III survey, and have conducted the survey in Wellington.
- Neil Pearce is a member of the ISAAC Executive and ISAAC Steering Committee, and is the ISAAC Publications Co-ordinator.

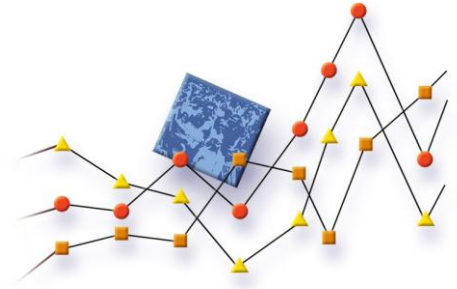
**FUNDING:** Health Research Council of New Zealand (HRC), Wellcome Trust

**RESEARCHERS:** Neil Pearce, Lis Ellison-Loschmann, Sunia Foliaki, Soo Cheng

**COLLABORATORS:** Professor Innes Asher (Auckland Medical School), Professor Bengt Björkstén (Karolinska Institute, Stockholm), Professor David Strachan (St George's Hospital Medical School, London), Professor Stephan Weiland (University of Ulm, Germany) and many other colleagues in more than 280 centres in 100 countries

**KEY WORDS:** ISAAC, Asthma, Respiratory Disease, Child Health

## 5. Non-allergic causes of asthma



### **AIMS:**

1. To study airway inflammation in asthmatic and non-asthmatic children.
2. To assess whether childhood asthma can be divided into two (or more) inflammatory sub-types: allergic and non-allergic asthma.
3. To assess the relative importance of non-allergic asthma in a random sample of asthmatic children.
4. To assess whether allergic and non-allergic asthmatics differ with respect with bronchial re-activity, skin prick test results, disease severity and medication use.

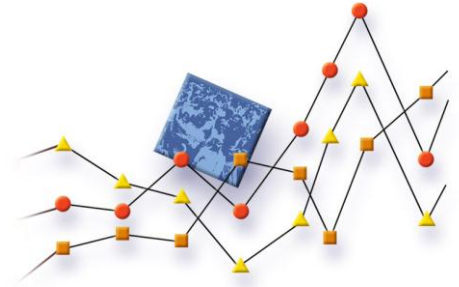
**FUNDING:** Health Research Council of New Zealand (HRC), Lotteries Health Research

**RESEARCHERS:** Jeroen Douwes, Christine van Dalen, Elizabeth Harding, Alice Paul, Neil Pearce, Catherine Cohet, Karen Blakey, Soo Cheng

**COLLABORATORS:** Professor Graham Le Gros, Dr Jaquie Harper (Malaghan Institute), Professor Peter Gibson, Jodie Simpson (John Hunter Hospital, Newcastle, Australia), Dr Ian St George, Dr Wallace Farquhar (John St Doctors), Dr Angela Zacharasiewicz (University of Vienna), Professor Chris Cunningham (Research Centre for Māori Health & Development)

**KEY WORDS:** Asthma, Respiratory Disease, Child Health

## 6. Health outcomes of former New Zealand timber workers exposed to pentachlorophenol (PCP)



### **AIMS:**

1. To ascertain whether timber workers exposed to PCP are dying more often than other workers of comparable sex and age.
2. To ascertain whether timber workers exposed to PCP are getting cancer more often than other workers of comparable sex and age.
3. To ascertain whether timber workers exposed to PCP are experiencing more hospital admissions than other workers of comparable sex and age.

### **FUNDING:**

Health Research Council of New Zealand (HRC), Occupational Safety and Health (OSH)

### **RESEARCHERS:**

Neil Pearce, Dave Mclean, Andrea 't Mannetje, Chris Walls, Evan Dryson, Lis Ellison-Loschmann, Tania Slater, Amanda Eng

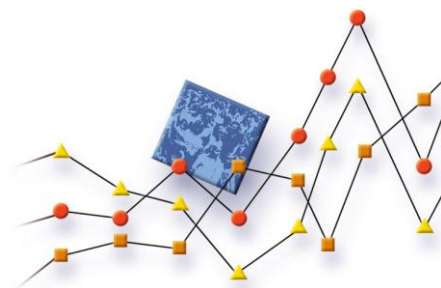
### **COLLABORATORS:**

Dr Phil Shoemack (Bay of Plenty District Health Board), Dr Barry Borman (Public Health Intelligence, Ministry of Health)

### **KEY WORDS:**

Cancer, Occupation, Chronic Disease, Timber Workers

## 7. Early life factors and breast cancer risk



### **AIMS:**

1. To assess adolescent exposures which may be pertinent to breast cancer risk.
2. To investigate the relationship between the potential risk factors and breast cancer risk in the New Zealand population.
3. To investigate whether these relationships differ between ethnic groups.
4. To follow the cases to assess which factors affect cancer survival (not funded from the current application).

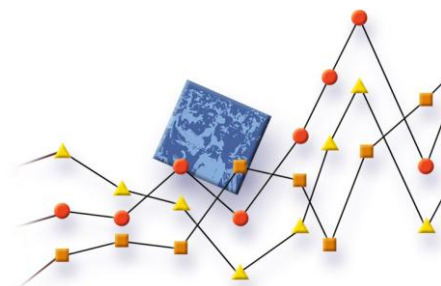
**FUNDING:** Health Research Council of New Zealand (HRC), Cancer Society of New Zealand

**RESEARCHERS:** Mona Jeffreys, Lis Ellison-Loschmann, Ate Moala, Sunia Foliaki, Neil Pearce

**COLLABORATORS:** Dr Simon Baker (Ministry of Health), Dr Siale 'Akau'ola (Ministry of Health, Tonga), Peter Dady (Cancer Society of New Zealand), Professor George Davey Smith (University of Bristol, United Kingdom)

**KEY WORDS:** Breast Cancer, Early Life Factors, Life-course Epidemiology

## 8. Cancer in Pacific populations



### **AIMS:**

1. To conduct descriptive analyses of cancer incidence and mortality in four Pacific countries (Tonga, Samoa, Fiji and Niue) and in Pacific people in New Zealand.
2. To conduct a case-control study of breast cancer in women which will be conducted in the same four Pacific countries in parallel with a similar study of Pacific women in New Zealand.

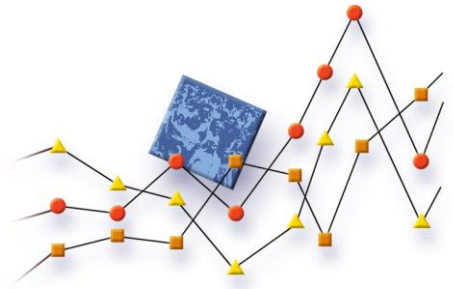
**FUNDING:** Health Research Council of New Zealand (HRC)

**RESEARCHERS:** Sunia Foliaki, Mona Jeffreys, Ate Moala, Lis Ellison-Loschmann, Neil Pearce

**COLLABORATORS:** Dr Lepani Waqatakirewa (Ministry of Health, Fiji), Dr Siale 'Akau'ola (Ministry of Health, Tonga), Dr Semisi Aiono (Ministry of Health, Samoa), Dr Hale Paka (Department of Health, Niue), Dr Paolo Boffetta (International Agency for Research on Cancer, Lyon, France), Dr Marc Goodman, University of Hawaii), Professor George Davey Smith (University of Bristol, United Kingdom)

**KEY WORDS:** Cancer, Breast Cancer, Pacific

## 9. Asthma and atopy in farmers' children and their parents



### **AIMS:**

1. To measure the prevalence of respiratory symptoms (with the focus on asthma) in farmers' children and their parents, and in a comparison group from a non-farming population (Phase I).
2. To compare the prevalence of respiratory symptoms in children and parents in various types of farming (dairy, sheep & beef, and crop farming) (Phase I).
3. To measure the prevalence of atopy in a sample of children and their parents (farming and non-farming) in order to ascertain whether any protective effect of farming involves atopic mechanisms (Phase II).
4. To measure relevant environmental exposures in a sample of households (farming and non-farming) including house dust allergen and endotoxin, and to examine their association with the occurrence of atopy and asthma, while adjusting for other risk factors for asthma (Phase II).
5. To study the immune status of babies born on farms, and control babies (Phase III).

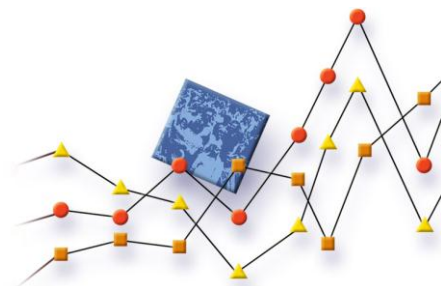
**FUNDING:** Health Research Council of New Zealand (HRC)

**RESEARCHERS:** Jeroen Douwes, Neil Pearce, Soo Cheng, Elizabeth Harding, Alice Paul, Heather Duckett, Michelle Gray.

**COLLABORATORS:** Dr Joanna McKenzie (Massey University Veterinary Epicentre), Professor Graham Le Gros, Dr Jacquie Harper (Malaghan Institute of Medical Research), Dr Erika Von Mutius (University Children's Hospital, Munich, Germany), Professor Chris Cunningham (Research Centre for Māori Health & Development)

**KEY WORDS:** Asthma, Respiratory Disease, Child Health, Occupation

## 10. Occupational cancer in adult New Zealanders



### **AIMS:**

1. To obtain an overview of the importance of occupational factors for bladder cancer, non-Hodgkin's lymphoma, leukaemia and lung cancer in New Zealand.
2. To quantify the proportion of cases due to known occupational causes.
3. To identify new occupational causes of these cancers.

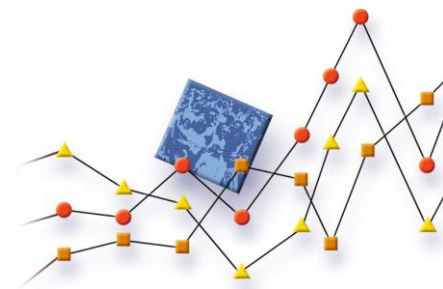
**FUNDING:** Health Research Council of New Zealand (HRC), Lotteries Health Research

**RESEARCHERS:** Evan Dryson, Chris Walls, Dave Mclean, Neil Pearce, Soo Cheng, Andrea 't Mannetje, Fiona McKenzie.

**COLLABORATORS:** Professor Hans Kromhout (IRAS, University of Utrecht, The Netherlands), Dr Paolo Boffetta (IARC, Lyon, France), Dr Aaron Blair (NCI, Washington DC, USA), Professor Chris Cunningham (Research Centre for Māori Health & Development)

**KEY WORDS:** Occupation, Cancer, Bladder Cancer, Non-Hodgkin's Lymphoma, Leukemia, Lung Cancer

## 11. Microbial and arsenic content of roof, well and public water supplies in rural New Zealand communities and impact on health



### **AIMS:**

1. To assess the microbial water quality of roof, well and public water supplies in rural New Zealand.
2. To assess arsenic levels in roof, well and public water supplies in rural New Zealand.
3. To measure the association between water quality and health symptoms in rural New Zealand communities.

**FUNDING:** Massey University

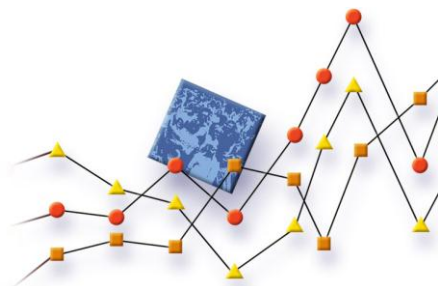
**RESEARCHERS:** Jeroen Douwes, Neil Pearce, Soo Cheng, Elizabeth Harding, Alice Paul, Heather Duckett

**COLLABORATORS:** Stan Abbott (Institute of Food, Nutrition & Human Health, Massey University)

**KEY WORDS:** Water Quality, Arsenic, Health, Farming



## 12. Determinants of survival in cancer



### **AIMS:**

1. To document cancer survival rates in New Zealand and investigate whether these are comparable to those in other developed countries.
2. To describe differences in cancer survival rates in New Zealand according to gender, socio-economic status and ethnicity.
3. To quantify the proportion of the socio-economic and ethnicity differences which are attributable to differences in age or extent of disease at presentation.

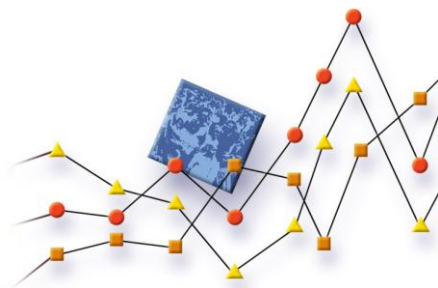
**FUNDING:** Lotteries Health Research

**RESEARCHERS:** Mona Jeffreys, Lis Ellison-Loschmann, Sunia Foliaki, Neil Pearce

**COLLABORATORS:** Craig Wright, Dr Barry Borman, Dr Martin Tobias (Public Health Intelligence, Ministry of Health), Dr Tony Blakely (Wellington School of Medicine), Dr Vladimir Stevanovic (NZ Health Information Service, Ministry of Health).

**KEY WORDS:** Cancer, Survival

## 13. Dioxin exposure levels and health effects in former phenoxy herbicide production workers



### **AIMS:**

1. To examine the long term effects on mortality and cancer incidence in production workers and pesticide sprayers exposed to phenoxy herbicides, chlorophenols and dioxin contaminants.
2. To measure the dioxin levels and related biomarkers of dioxin toxic effects in the blood of former phenoxy herbicide production workers.
3. To determine whether dioxin levels are associated with higher cancer mortality and incidence in this population.
4. To determine whether dioxin levels are associated with chronic health problems and adverse reproductive outcomes in this population.
5. To determine whether dioxin levels are associated with biomarkers of dioxin toxic effects including effects on AhR-regulated biological functions.

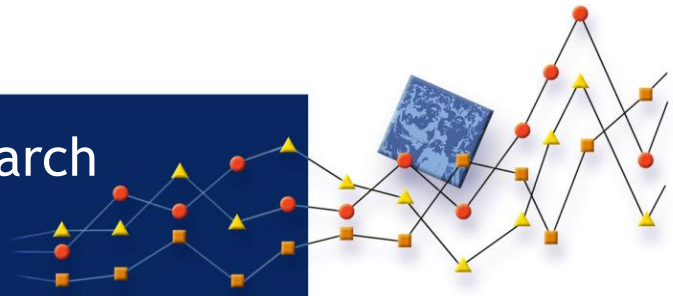
**FUNDING:** Lotteries Health Research

**RESEARCHERS:** Dave McLean, Andrea 't Mannetje, Tania Slater, Amanda Eng, Evan Dryson, Chris Walls, Neil Pearce

**COLLABORATORS:** Professor Manolis Kogevinas (IMIM, Barcelona), Professor Pier Bertazzi (University of Milan), Dr Rod Lea (ESR), Dr Barry Borman (Ministry of Health), Dr Patrick O'Connor (MidCentral Health).

**KEY WORDS:** Cancer, Occupation, Pesticides, Dioxin

## Projects Based in Other Research Groups and Institutions



### 1. Health effects of mobile (cellular) phones

**AIMS:**

1. To investigate whether mobile phone use causes brain cancer.
2. To investigate occupational causes of brain cancer.

**COLLABORATORS:** Professor Alistair Woodward (University of Auckland), Dr Angus Cook, Dr Tony Blakely (Wellington School of Medicine), Dr Elizabeth Cardis (IARC)

**CPHR RESEARCHERS:** Dave McLean, Neil Pearce

**KEY WORDS:** Cancer, Environmental Health

### 2. The New Zealand Census Mortality Study

**AIM:**

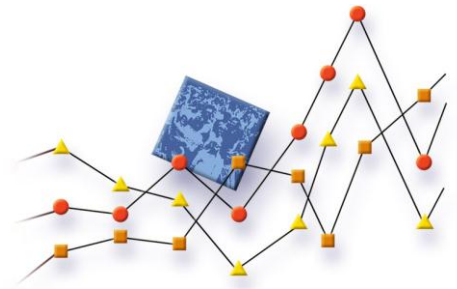
To investigate measure socio-economic differences in mortality in New Zealand.

**COLLABORATORS:** Dr Tony Blakely, Dr Clare Salmond, June Atkinson, Jackie Fawcett (Wellington School of Medicine), Professor Alistair Woodward (University of Auckland), Professor Peter Davis (Christchurch School of Medicine)

**CPHR RESEARCHERS:** Cindy Kiro, Neil Pearce

**KEY WORDS:** Social Class, Mortality

### 3. Estimating the long-term health outcomes of people with epilepsy



#### **AIMS:**

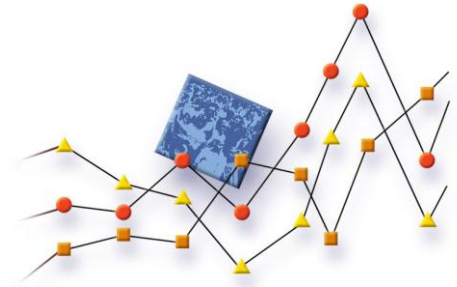
1. To establish an epilepsy register in Tasmania.
2. To undertake a cross-sectional study of this community sample of people with epilepsy to investigate the prevalence of epilepsy syndromes, and their severity, epilepsy-related injuries and health service utilization.
3. To establish a community cohort of people with epilepsy which can be followed prospectively to monitor health outcomes, measure risk factors contributing to these outcomes if indicated (with second stage case-control studies), and perform intervention trials if considered appropriate.

**COLLABORATORS:** Dr Wendyl D'Souza, Dr Mark Cook, Dr Terry O'Brien (St Vincent's Hospital, Melbourne), Dr Bruce Taylor (Hobart Hospital, Tasmania), Professor Terry Dwyer (Menzies Centre, Hobart, Tasmania)

**CPHR RESEARCHERS:** Neil Pearce

**KEY WORD:** Epilepsy

#### 4. Centre for Māori Health Research and Development (HRC Programme Grant)



**AIM:**

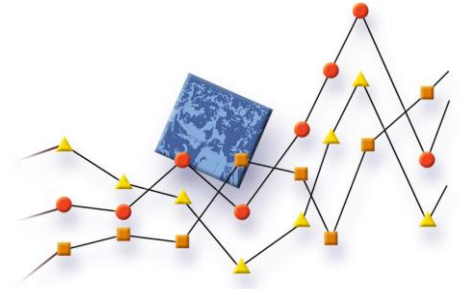
Programme of research in Māori health, including studies of child health, mental health and the health of older Māori (Research Centre for Māori Health & Development HRC Programme Grant).

**COLLABORATORS:** Professor Mason Durie, Professor Chris Cunningham, Dr Maureen Holdaway, Dr Stephanie Palmer, Dr Te Kani Kingi, John Waldon, Amohia Boulton, Sharon Taite (Research Centre for Māori Health & Development)

**CPHR RESEARCHERS:** Neil Pearce

**KEY WORD:** Māori Health

## 5. Prevention and Incidence of Asthma and Mite Allergy (PIAMA)



### **AIMS:**

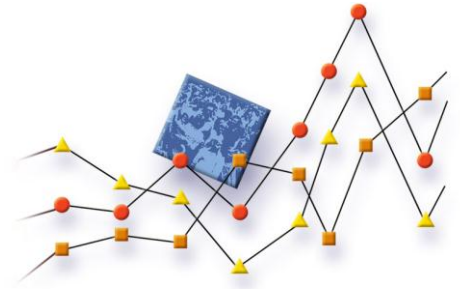
1. To evaluate the effectiveness of house dust mite impermeable mattress covers in the prevention of asthma and respiratory allergy in children at high risk to develop asthma or respiratory allergy.
2. To assess the role of early microbial exposure on the development of asthma and respiratory allergy in children at high risk to develop asthma or respiratory allergy.
3. To investigate the natural history of childhood asthma in high and low risk children in relation to environmental and lifestyle factors.

**COLLABORATORS:** Professor Bert Brunekreef (Institute for Risk Assessment Sciences, Utrecht University, The Netherlands); Dr Rob van Strien (Utrecht University); Gert Doekes (Utrecht University), Dr Jet Smit (National Institute of Public Health and Environment, Bilthoven), Marjan Kerkhof (Beatrix Children's Hospital, Groningen University), Dr Jorrit Gerritsen (Beatrix Children's Hospital, Groningen University), Dr Rob Aalberse (Central Laboratory of the Blood Transfusion Service, Department of Allergy, Amsterdam), Dr Herman Neijens (Sophia Children's Hospital, Erasmus University, Department of Paediatrics, Rotterdam), Dr Johan de Jongste (Sophia Children's Hospital, Erasmus University, Department of Pediatrics, Rotterdam)

**CPHR RESEARCHERS:** Jeroen Douwes

**KEY WORDS:** Asthma, Respiratory Disease, Child Health

## 6. Protection against Allergy: Study in Rural Environments (PASTURE)



### AIMS:

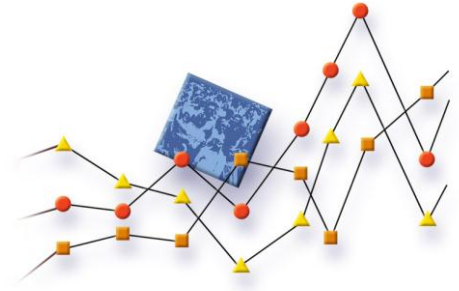
1. To assess whether T-cell effector status is more characteristic of Th1 immunity in farmers' infants at 12 months of age compared to non-farming control infants.
2. To assess whether mothers' exposures during pregnancy to indoor endotoxin, unpasteurised milk, and barn environment are associated with Th1 immunity in their offspring.
3. To assess whether elevated levels of endotoxin in house dust and milk samples are associated with a maturation of initially Th2-like skewed immune responses to Th1 immunity, and a lack of IgE response to common allergens at age 12 months.
4. To assess whether the expression of genes related to the recognition of microbial products differs with respect to microbial exposures and a subject's genetic background (polymorphisms in these genes).
5. To assess whether subjects with polymorphisms in those genes differ with respect to the relation between environmental exposures and atopic outcomes.

**COLLABORATORS:** Dr Erika von Mutius (Dr. Von Haunersche Kinderklinik, München, Germany), Dr Charlotte Braun-Fahländer (Institute for Social and Preventive Medicine, University of Basel, Switzerland), Dr Juha Pekkanen (National Public Health Institute, Kuopio, Finland), Dr Josef Riedler (Childrens Hospital, Salzburg, Austria), Dr Jean-Charles Dalphin (UFR Faculté de Médecine & Pharmacie, Besancon, France), Professor Harald Renz (Marburg, Germany), Professor Bert Brunekreef (Institute for Risk Assessment Sciences, Utrecht, The Netherlands), Dr Michael Kabesch (Munich, Germany), Dr Roger Lauener (Zürich, Switzerland), Professor Stephan Weiland (University of Ulm, Germany)

**CPHR RESEARCHERS:** Jeroen Douwes

**KEY WORDS:** Asthma, Allergy, Anthrosophy, Farming, Respiratory Disease, Child Health

## 7. Prevention of allergy – risk factors for sensitisation in children related to farming and anthroposophic lifestyle (PARSIFAL)



### **AIMS:**

1. To assess which specific factors related to farming and anthroposophy offer protection against asthma and allergies.
2. To assess whether microbial exposures in the indoor and stable environment are associated with a reduced risk of asthma and allergies in farmers' and anthroposophic children.

**COLLABORATORS:** Prof Göran Pershagen (Karolinska Institutet, Sweden), Dr Charlotte Braun-Fahrländer (Institute for Social and Preventive Medicine, University of Basel, Switzerland), Professor Bert Brunekreef (Institute for Risk Assessment Sciences, Utrecht University, The Netherlands), Dr Erika von Mutius (Dr von Haunersche Kinderklinik, München, Germany), Dr Josef Riedler (Childrens Hospital, Dept. of Paediatric Pulmonology, Salzburg, Austria)

**CPHR RESEARCHERS:** Jeroen Douwes

**KEY WORDS:** Asthma, Respiratory Disease, Child Health, Occupation

## 8. The Glasgow Alumni Project

### **AIM:**

To determine the influence of life-course exposure patterns on disease occurrence in later life.

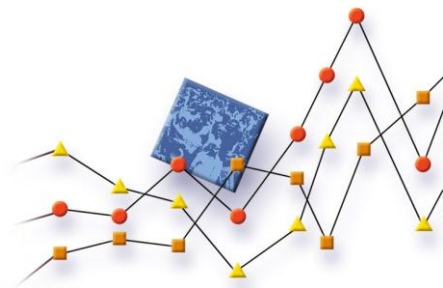
**COLLABORATORS:** Professor George Davey Smith, Professor David Gunnell, Dr Sanjay Kinra, Dr Bruna Galobardes (University of Bristol, UK)

**CPHR RESEARCHERS:** Mona Jeffreys

**KEY WORDS:** Life-course Epidemiology, Cancer Cardiovascular Disease, Diabetes



## 9. The Glasgow Alumni Project Mammography Study



### **AIMS:**

1. To describe a novel technique of modeling volumetric breast density.
2. To determine the influence of life-course patterns on volumetric breast density.

**COLLABORATORS:** Professor George Davey Smith, Professor David Gunnell (University of Bristol, UK), Dr Peter McCarron (Queen's University, Belfast, UK), Ruth Warren (University of Cambridge)

**CPHR RESEARCHERS:** Mona Jeffreys

**KEY WORDS:** Life-course Epidemiology, Breast Cancer, Breast Density

## 10. Cardiovascular disease and oral health: The Glasgow Alumni Study

### **AIMS:**

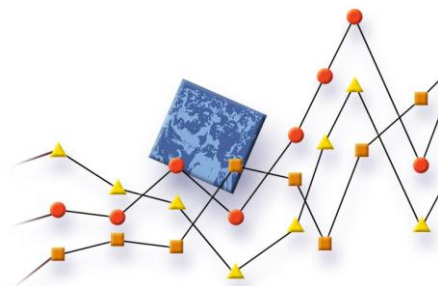
1. To investigate the relationship between cardiovascular disease and oral health, accounting for socioeconomic background.
2. To investigate the relationship between parental socioeconomic background and early adult oral health status.

**COLLABORATORS:** Dr Mark Gilthorpe, Dr Yu-Kang Tu (University of Leeds), Professor George Davey Smith, Professor David Gunnell Dr Sanjay Kinra, Dr Bruna Galobardes (University of Bristol, UK), Dr Peter McCarron (Queen's University, Belfast, UK)

**CPHR RESEARCHERS:** Mona Jeffreys

**KEY WORDS:** Foetal Origins of Adult Disease; Life-course Epidemiology, Cardiovascular Disease, Oral Health

## 11. IARC multicentre case-control study of occupation, environment and lung cancer in Central and Eastern Europe



### **AIMS:**

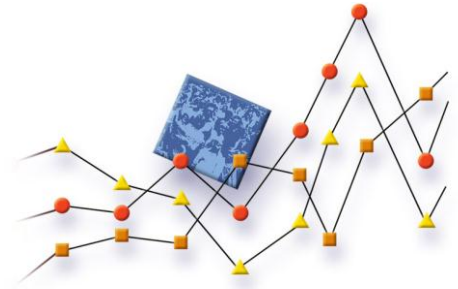
1. Investigate the role of occupational risk factors in the aetiology of lung cancer in Central and Eastern Europe.
2. Investigate other factors including tobacco consumption, air pollution and genetic susceptibility.
3. Conduct this analysis after combining the datasets of individual centers.

**COLLABORATORS:** Dr Paolo Boffetta (International Agency for Research on Cancer), Dr Tony Fletcher (London School of Hygiene and Tropical Medicine), Dr Joelle Fevotte (Institut Universitaire de Médecine du Travail, UCB, France), Dr Dana Mates (Institute of Hygiene, Public Health, Health Services and Management, Bucharest, Romania), Dr Peter Rudnai (National Institute of Environmental Health, Budapest, Hungary), Dr David Zaridze (Institute of Carcinogenesis, Cancer Research Centre, Moscow, Russia), Dr Eleonóra Fabiánová (Specialized State Health Institute, Banská Bystrica, Slovakia), Dr Witold Zatonski (Maria Skłodowska Institute of Oncology, Warsaw, Poland), Dr Neonila Szeszenia-Dabrowska (Department of Epidemiology, Lodz, Poland), Dr Vladimir Janout (Department of Preventive Medicine, Palacky University of Medicine, Olomouc, Czech Republic), Dr Vladimir Bencko (Charles University of Prague, First Faculty of Medicine, Praha, Czech Republic), Dr Lenka Foretova (Department of Cancer Epidemiology, Masaryk Cancer Institute, Brno, Czech Republic), Dr Judith Youngson (Roy Castle International Centre for Lung Cancer Research, Liverpool, UK)

**CPHR RESEARCHERS:** Andrea 't Mannetje

**KEY WORDS:** Lung cancer, Occupation, Tobacco

## 12. International study of environment, viruses and cancer of the oral cavity and the larynx



### **AIMS:**

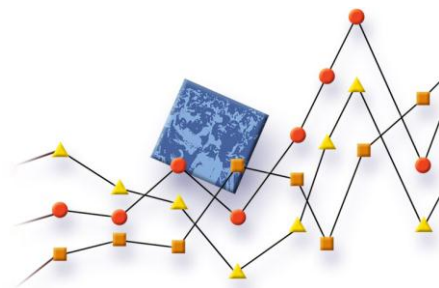
1. To assess the role of known (i.e., occupation, smoking, alcohol drinking, fruit and vegetable intake) or putative (i.e., HPV infection) risk factors for cancer of the oral cavity and the larynx in the study populations.
2. To investigate the presence and pattern of P53 mutations and to assess whether they differ according exposure to risk factors.
3. To assess the role of genetic susceptibility mediated through genetic polymorphisms of enzymes potentially implicated in the metabolism of carcinogens.

**COLLABORATORS:** Dr Paul Brennan, Dr Paolo Boffetta (International Agency for Research on Cancer), Dr Maria Paula Curado (Registro de Câncer de Goiânia, Associação de Combate ao Câncer em Goiás, Brazil), Dr Alexander Daudt (Cancer Prevention and Control Section, Hospital de Clínicas de Porto Alegre, Brazil), Dr Sergio Koifman (Escola Nacional de Saúde Pública, Fundação Oswaldo Cruz, Brazil), Dr Ana Menezes (Departamento de Clínica Médica, Faculdade de Medicina, Universidade Federal de Pelotas, Brazil), Dr Victor Wünsch-Filho (Departamento de Epidemiologia, Faculdade de Saúde Pública, Universidade de São Paulo, Brazil), Dr Elena Matos (Depto. de Carcinogenesis Química y Ambiental, Instituto de Oncología Angel H. Roffo, Universidad de Buenos Aires, Argentina), Dr Leticia Fernandez (Institute of Oncology and Radiobiology, Havana, Cuba), Dr Jan Walboomers, Dr Peter Snijders (Department of Pathology, Free University Hospital, Amsterdam, The Netherlands), Dr Joelle Fevotte (Institut Universitaire de Médecine du Travail, UCB, Lyon, France)

**CPHR RESEARCHERS:** Andrea 't Mannetje

**KEY WORDS:** Oral Cancer, Laryngeal cancer, Lifestyle Factors, Occupation

## 13. Environmental exposures and lymphoid neoplasms



### **AIMS:**

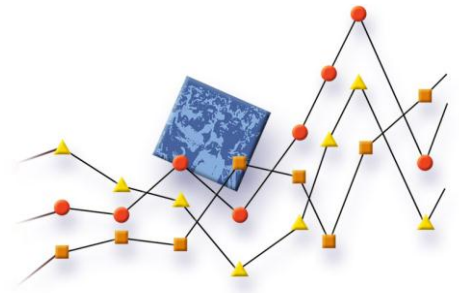
1. To identify the contribution of Epstein-Barr virus, Human Immunodeficiency virus, Hepatitis C virus and Herpes virus 8 to the occurrence of lymphoid neoplasms.
2. To explore the potential associations of other infectious agents (Chlamydia, other related herpes virus, papovavirae virus) to the occurrence of lymphoid neoplasms.
3. To identify the contribution of specific occupational exposures (inorganic pesticides, organic pesticides, animal viruses, organic dust, organic solvents and radiation) to the occurrence of lymphoid neoplasms.
4. To explore the possible interactions between occupational/environmental factors and infectious agents.
5. To explore the possible contribution of exposure to UV radiation to the occurrence of lymphoid neoplasms.

**COLLABORATORS:** Dr Paul Brennan, Dr Paolo Boffetta (IARC), Dr Silvia de Sanjosé (Oncology Institute, Barcelona, Spain), Dr Marc Maynadie (Hôpital du Bocage, Dijon, France), Dr Nikolaus Becker (German Cancer Research Centre, Heidelberg, Germany), Dr Anthony Staines (Department of Public Health, University College, Dublin, Ireland), Dr Jose Iscovich (International Fertility Institute, Raanana, Israel), Dr Lenka Foretova (Department of Cancer Epidemiology, Masaryk Cancer Institute, Brno, Czech Republic), Dr Martine Vornanen (Department of Clinical Pathology, Kuopio University Hospital, Kuopio, Finland), Dr Pier Luigi Cocco (Institute of Occupational Health, Cagliari, Italy)

**CPHR RESEARCHERS:** Andrea 't Mannetje, Lis Ellison-Loschmann

**KEY WORDS:** Lymphoid Neoplasms, Environmental Exposures, Infectious Agents, Occupational Exposures

## 14. Social capital: How does social connectedness work to benefit all?



### **AIMS:**

1. To inquire into people's understandings of their connections with others as positive assets.
2. To compare the shared meanings of social connectedness for people across groups of different levels of socioeconomic status.
3. To explore the meaning of social connectedness at different levels of connection, from individual to neighbourhood, to broader groups in society.
4. To inquire into the meaning of place as an aspect of social capital in relation to economic, cultural and symbolic capital.

**COLLABORATORS:** Dr Christine Stephens (School of Psychology, Massey University)

**CPHR RESEARCHERS:** Neil Pearce

**KEY WORDS:** Social Connectedness, Social Capital

## 15. Work-related determinants of health, safety and well-being of New Zealanders

### **AIM:**

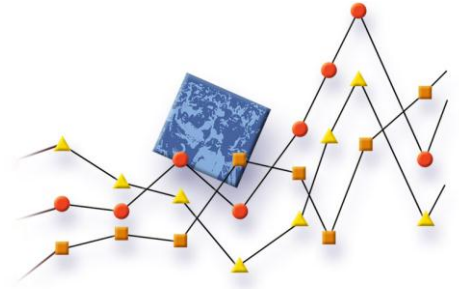
To develop methods and assess the feasibility of characterising work-related hazards in New Zealand, their associated health effects and the impact these hazards may have on different worker socio-economic groups.

**COLLABORATORS:** Dr Hilda Firth, Dr Dorothy Broom, Peter Herbison, Rebecca Lilley (Dunedin School of Medicine, University of Otago), Dr Peter Crampton (Wellington School of Medicine, University of Otago), Professor Chris Cunningham (Research Centre for Māori Health & Development)

**CPHR RESEARCHERS:** Neil Pearce

**KEY WORD:** Occupational Health

## 16. Social variation in New Zealand health expectancy trends



**AIM:**

To investigate changes in social class differences in health expectancy over time.

**COLLABORATORS:** Professor Peter Davis, Dr Patrick Graham (Christchurch School of Medicine, University of Otago), Andrew Sporle (University of Auckland), Dr Tony Blakely (Wellington School of Medicine, University of Otago)

**CPHR RESEARCHERS:** Neil Pearce

**KEY WORDS:** Social Class, Health Expectancy

## 17. Upper gastrointestinal cancer in Māori

**AIM:**

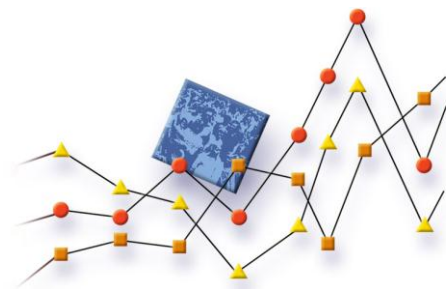
To identify potential points of intervention to reduce both population and individual risk of gastrointestinal cancer in Māori.

**COLLABORATORS:** Professor Iain Martin, Associate Professor Jonathan Koea, Dr Vanessa Blair, Andrew Sporle, Professor Lynn Fergusson (University of Auckland)

**CPHR RESEARCHERS:** Neil Pearce, Lis Ellison-Loschmann, Mona Jeffreys

**KEY WORDS:** Māori Health, Cancer

## 18. Arsenic and childhood respiratory health in Bangladesh



### **AIMS:**

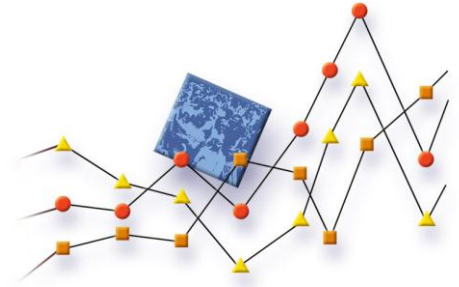
1. Investigate the impact of exposure to arsenic in drinking water on lung function and respiratory symptoms and diseases in children.
2. To assess possible synergy between ingested arsenic and inhaled indoor air pollutants from biomass burning and second hand smoke on lung function and respiratory outcomes in children.
3. To investigate nutritional susceptibility to arsenic-related respiratory effects in children.
4. To assess whether or not methylation of arsenic to MMA3 and MMA5 as measured in urine affects the risks of arsenic-related respiratory system effects in children and to store remaining urine samples for other testing including proteomics.
5. To identify whether children with reduced height-for-age, weight-for-height, or weight-for-age are at increased risk of developing arsenic-related respiratory symptoms and impaired lung function, while considering modifying factors, particularly nutrition.
6. To start a cohort for long-term follow-up into late adolescence and young adulthood to investigate the relation of childhood arsenic exposure and individual arsenic methylation status with lung function and respiratory effects later in life.

**COLLABORATORS:** Professor Allan Smith, Dr Ondine von Ehrenstein (University of California, Berkeley)

**CPHR RESEARCHERS:** Neil Pearce, Jeroen Douwes

**KEY WORDS:** Arsenic, Asthma, Respiratory Disease, Child Health

## 19. Domestic environment and lifestyle determinants of childhood asthma in Palestine



### **AIMS:**

1. To describe the prevalence of asthma and asthma symptoms in different districts in Palestine.
2. To obtain baseline measures for assessment of future trends in the prevalence and severity of disease in Palestine.
3. To describe “objective” markers of asthma in Palestinian children.
4. To assess the relation between the prevalence of these “objective” markers and symptom prevalence.
5. To estimate to what extent the variation in the prevalence and severity of childhood asthma in Palestine can be explained by differences in known or suspected risk factors.

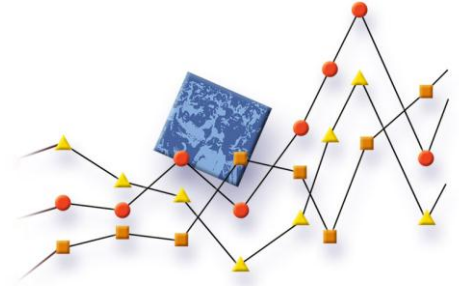
**COLLABORATORS:** NA Sharif, F Barghuty, S Mortaja, R Qasrawi, Z Abdeen (Al Quds University, Palestine), B Nemery, PHM Hoet (Leuven University, Belgium), G Doekes B Brunekreef (Utrecht University, The Netherlands)

**CPHR RESEARCHERS:** Jeroen Douwes

**KEY WORDS:** Asthma, Child Health, Allergen, Endotoxin, Risk, Protective Factors



## 20. Risk factors for asthma prevalence in Italian children



### **AIMS:**

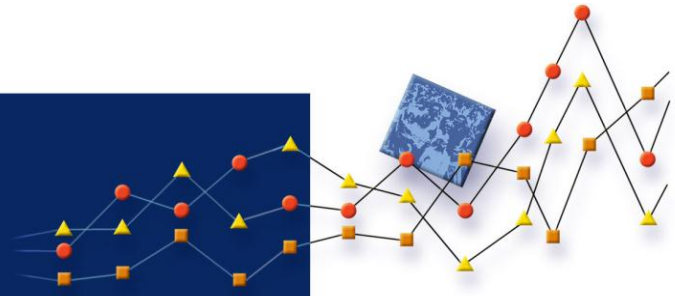
1. To examine the associations of exposure to traffic fumes with childhood asthma and other respiratory symptoms.
2. To examine the effects of immigration to Italy on the prevalence of childhood asthma and other respiratory symptoms.
3. To examine the associations of maternal complications and procedures in pregnancy and at birth with the prevalence of childhood asthma and other respiratory symptoms.

**COLLABORATORS:** Dr Claudia Galassi, Professor Franco Merletti (University of Turin, Italy), Professor Francesco Forastiere (Local Health Authority, Rome, Italy)

**CPHR RESEARCHERS:** Neil Pearce

**KEY WORDS:** Asthma, Child Health, Risk and Protective Factors, ISAAC, SIDRIA

# Training MPH theses

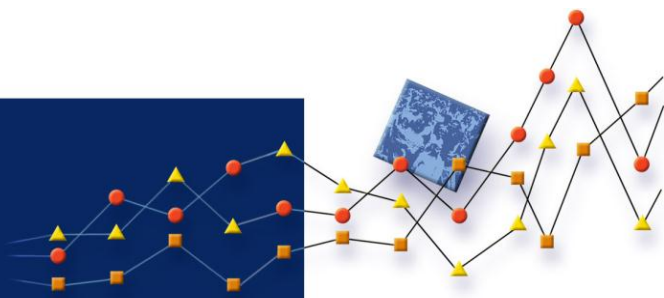


Karen Blakey

**Title: WHO Long Form reliability, validity and norms for New Zealand**

*Supervisors: Neil Pearce and Dr Barry Borman (Public Health Intelligence)*

# Training Doctoral



Ate Moala

HRC Pacific Health Research Training Fellow

**Title: Health promotion in Pacific people**

*Supervisors: Neil Pearce and Dr Sitaleki Finau (Fiji School of Medicine)*

Sunia Foliaki

Wellcome Trust Research Fellow

**Title: Epidemiology of asthma in Pacific children**

*Supervisors: Neil Pearce and Jeroen Douwes*

Wendyl D'Souza

**Title: Is there a common susceptibility gene for epilepsy?**

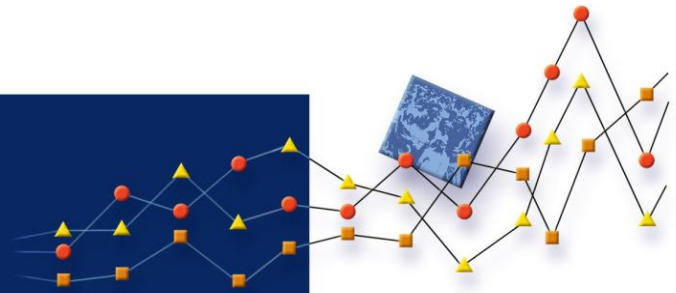
*Supervisors: Neil Pearce and Professor Simon Eastaugh (ANU, Canberra)*

Angus Cook

**Title: Brain cancer in cell phone users**

*Supervisors: Professor Alistair Woodward (University of Auckland) and Neil Pearce*

# Training Postdoctoral



Andrea 't Mannetje

HRC Postdoctoral Research Fellow (CPHR Programme Grant)

**Title: Occupational epidemiology**

*Supervisor: Neil Pearce*

Christine van Dalen

Massey University Postdoctoral Research Fellow

**Title: Clinical and epidemiological studies of childhood asthma**

*Supervisors: Neil Pearce, Jeroen Douwes*

Dave McLean

HRC Postdoctoral Research Fellow (CPHR Programme Grant)

**Title: Occupational epidemiology**

*Supervisor: Neil Pearce*

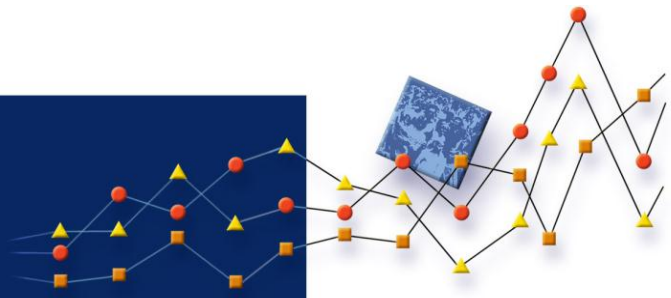
Lis Ellison-Loschmann

HRC Māori Health Postdoctoral Research Fellow

**Title: Epidemiology and Māori health research**

*Supervisors: Neil Pearce, Mona Jeffreys, Chris Cunningham  
(Research Centre for Māori Health & Development)*

# Annual Symposia in Health Research And Policy



## Dioxin: Exposures, Health Effects and Public Health Policy

Museum Theatrette, Massey Wellington Campus,  
Wednesday, 7 September, 2005

### Keynote Speakers:

**Professor Pier Bertazzi** (*University of Milan*) – Health effects of environmental exposures: the case of Seveso

**Professor Allan H Smith** (*University of California*) – Public health policy and dioxin in the environment

**Professor Kyle Steenland** (*Emory University*) – Health effects of occupational exposures

### Other Speakers and Chairs:

**Virginia Baker** (*ESR*)

**Dr Simon Buckland** (*ERMA*)

**Jonathan Coakley** (*Ministry for the Environment*)

**Bob Hill** (*Department of Labour*)

**Dr Mark Jacobs** (*Ministry of Health*)

**Dr Andrea 't Mannetje** (*CPHR*)

**Dr Don Matheson** (*Ministry of Health*)

**Dr Dave McLean** (*CPHR*)

**Red Middlemiss** (*EPMU*)

**Dr John Monigatti** (*ACC*)

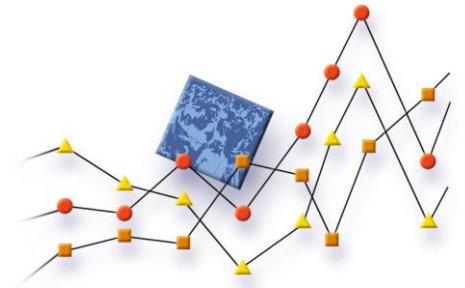
**Dr Patrick O'Connor** (*MidCentral Health*)

**Gwenda Paul, Joe Harawira** (*SWAP*)

**Professor Neil Pearce** (*CPHR*)

**Dr Deborah Read** (*Organochlorines Technical Advisory Group*)

**Rua Williams** (*National Distribution Union*)



This was the fourth in a series of Annual Symposia in Health Research and Policy. The symposium was organised by the Centre for Public Health Research (Massey University). The presentations and written manuscripts are available in downloadable form on our website. An edited version of the Symposium proceedings will be available on the website as a downloadable pdf file, and will also be published in hard copy in 2006.

## Advanced Methods in Epidemiology and Biostatistics

Rangimarie 1, Te Papa, Wellington  
Thursday 29 September, 2005

**Keynote Speaker:**

**Professor Sander Greenland** (*University of California*)

**Other Speakers:**

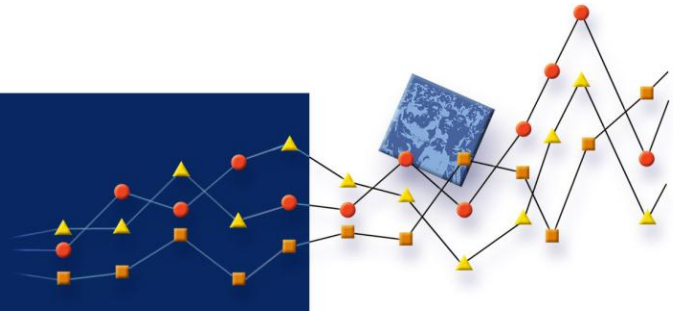
**Dr Patrick Graham** - (*Christchurch School of Medicine*)

**Professor Neil Pearce** - (*CPCR*)

**Dr Jim Young** - (*Christchurch School of Medicine*)

The symposium was organised by the Centre for Public Health Research (Massey University). Hard copies of presentations are available on request from the Centre for Public Health Research.

# Presentations



*BreastScreen Aotearoa  
Advisory Group, New Zealand,  
February 2005.*

**Jeffreys M**, Stevanovic V,  
Tobias M, Lewis C, **Ellison-  
Loschmann L**, **Pearce N**,  
Blakely T. Ethnic Inequalities in  
Cancer Survival in New  
Zealand.

*University of Turin, Italy,  
February 2005.*

**Pearce N.** Analysis of time-  
related variables.

*Cancer Treatment Working  
Party, New Zealand, March  
2005.*

**Jeffreys M**, Stevanovic V,  
Tobias M, Lewis C, **Ellison-  
Loschmann L**, **Pearce N**,  
Blakely T. Ethnic Inequalities in  
Cancer Survival in New  
Zealand.

*University of Milan, Milan, Italy,  
March 2005.*

**Pearce N.** Why is asthma  
prevalence (no longer)  
increasing?

*University of Bristol, Bristol,  
United Kingdom, March 2005.*

**Pearce N.** Why is asthma  
prevalence (no longer)  
increasing?

*University of Turin, Turin, Italy,  
April 2005.*

**Pearce N.** Why is asthma  
prevalence (no longer)  
increasing?

*Osservatorio Epidemiologico  
Regionale, Roma, Italy, April  
2005.*

**Pearce N.** Why is asthma  
prevalence (no longer)  
increasing?

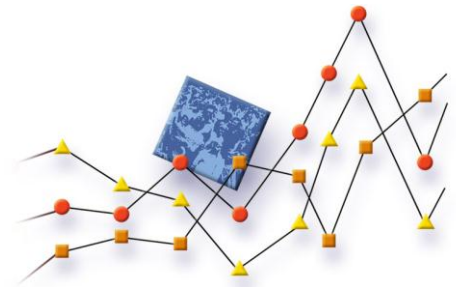
*Italian Epidemiology  
Association Annual Meeting,  
Taranto, Italy, April 2005.*

**Pearce N.** Methodological  
aspects in environmental  
epidemiology.

*Municipal Institute of Medical  
Research (IMIM), Barcelona,  
Spain, May 2005.*

**Pearce N.** Why is asthma  
prevalence (no longer)  
increasing?

*Studi Italiani sui Disturbi  
Respiratori nell' Infanzia  
(SIDRIA), Annual Meeting,*



*Italy, August 2005.*

*Rome, Italy, May 2005.*

**Pearce N.** Preliminary findings from ISAAC Phase III.

*University of Turin, Italy, May 2005.*

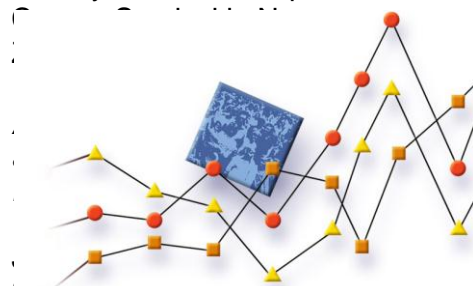
**Ellison-Loschmann L.** Asthma in Maori in Aotearoa/New Zealand.

*Istituto Superiore di Sanita, Rome, Italy, June 2005.*

**Pearce N.** Epidemiology as a population science.

*Mid-Winter Dialogues, Christchurch School of Medicine, New Zealand, June 2005.*

**Jeffreys M** , Stevanovic V, Tobias M, Lewis C, **Ellison-Loschmann L**, **Pearce N**, Blakely T. Ethnic Inequalities in



term outcomes of childhood deprivation.

*17th World Congress of Epidemiology, Bangkok,*

**Pearce N**, Ait-Khaled N, Beasley R, Mallol J, Keil U, Mitchell E, Robertson C, and the ISAAC Phase III Study Group. Worldwide trends in the prevalence of asthma symptoms: Phase III of the International Study of Asthma and Allergies in Childhood (ISAAC).

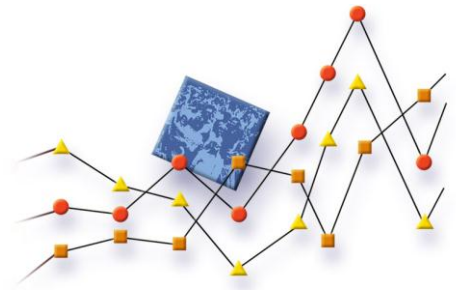
**Pearce N.** Genetics, race, ethnicity and health.

*17th Annual Conference of the International Society for Environmental Epidemiology, Cape Town, South Africa, September 2005.*

Galassi C, Migliore E, **Pearce N**, **Douwes J**, Bugiani M, Galletti G, Russo A, Ciccone C, and the SIDRIA-2 Collaborative Group. Prevalence of asthma in migrant and non-migrant children in Italy.

Migliore E, Berti G, Galassi C Forastiere F, **Pearce N**, Viegi G, Ciccone G and the SIDRIA-2 Collaborative Group. Truck traffic and adverse effects on respiratory health in childhood: the results of a large Italian multicentre survey (Sidria 2). *Epidemiolo 2005; 16: S142* (abstract).





*17th EPICOH Congress on  
Epidemiology in Occupational  
health, Bergen, Norway,  
September 2005.*

**Douwes J, Pearce N.** Can exposure to microbial agents reverse allergic immune responses?

**McLean D, Prause M, Fransman W, Travier N, Douwes J, Pearce N.** Formaldehyde exposure and respiratory symptoms in New Zealand plywood mill workers.

**'t Mannetje A, Pearce N.** Bladder cancer risk in sales workers: artefact or cause for concern?

*XV Annual Meeting of the  
Australasian Epidemiological  
Association, Newcastle,  
Australia, October, 2005*

**Badkar J, Jeffreys M.** Trends in cancer incidence and mortality in Asian New Zealanders. *Australasian Epidemiologist* 2005; 12: 59 (abstract).

**Brewer N, Jeffreys M, Travier N, Wright C, Cunningham C, Hornell J, Pearce N.** A New Zealand linkage study examining the association between glycosylated haemoglobin concentration, mortality and hospital usage.

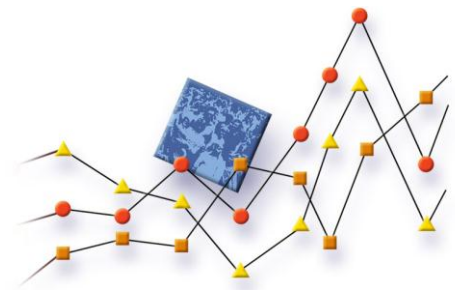
*Australasian Epidemiologist* 2005; 12: 21 (abstract).

**Jeffreys M, Stevanovic V, Sarfati D, Tobias M, Lewis C, Pearce N, Blakely T.** Socioeconomic inequalities in cancer survival in New Zealand. *Australasian Epidemiologist* 2005; 12: 60 (abstract).

**Jeffreys M, Travier N, Wright C, Brewer N, Cunningham C, Hornell J, Pearce N.** The burden of undiagnosed diabetes in New Zealand. *Australasian Epidemiologist* 2005; 12: 21 (abstract).

**McKenzie F, Dryson E, McLean D, 't Mannetje A, Cheng S, Walls C, Pearce N.** Occupation and bladder cancer: a New Zealand Cancer Registry-based case-control study. *Australasian Epidemiologist* 2005; 12: 62 (abstract).

**McLean D, Dryson E, 't Mannetje A, Cheng S, Walls C, McKenzie F, Pearce N.** Occupation and Leukaemia: preliminary results from a New Zealand cancer registry-based case-control study. *Australasian Epidemiologist* 2005; 12: 52 (abstract).  
**Pearce N, Ait-Khaled N, Beasley R, Mallol J, Keil U, Mitchell E, Robertson C, and**



the ISAAC Phase III Study Group. Worldwide trends in the prevalence of asthma symptoms: Phase III of the International Study of Asthma and Allergies in Childhood (ISAAC). *Australasian Epidemiologist* 2005; 12: 22 (abstract).

**Pearce N, Jeffreys M, Brewer NJ.** Socioeconomic inequalities in cancer in Australia and New Zealand. *Australasian Epidemiologist* 2005; 12: 34 (abstract).

**'t Mannetje A, Dryson E, McLean D, Walls C, McKenzie F, Cheng S, Pearce N.** Occupational risk factors for Non-Hodgkin Lymphoma in New Zealand. Preliminary results of a case-control study. *Australasian Epidemiologist* 2005; 12: 52 (abstract).

**Travier N, Jeffreys M, Brewer**

**N, Wright C, Cunningham C, Hornell J, Pearce N.** Association between glycyated haemoglobin and cancer risk: a New Zealand linkage study. *Australasian Epidemiologist* 2005; 12: 31 (abstract).

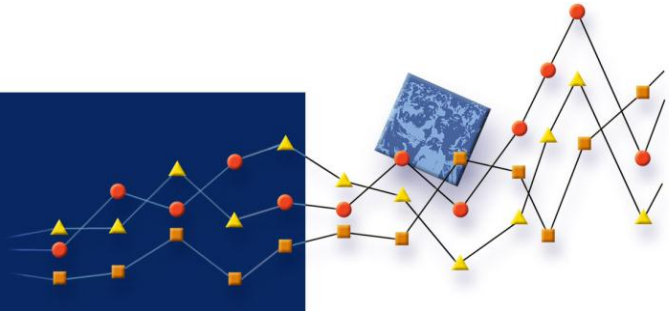
*10th Congress of the Asian Pacific Society of Respirology, 1st Joint Congress of the Asian Pacific Society of Respirology & American College of Chest Physicians, Guangzhou, China, November, 2005*

**Pearce N.** Global time trends in asthma.

*School of Population Health, University of Auckland, November, 2005*

**Pearce N.** Dioxin

# Publications



## Journals

Boffetta P, **'t Mannetje A**, Zaridze D, Szeszenia-Dabrowska N, Rudnai P, Lissowska J, Fabiánová E, Mates D, Bencko V, Navratilova M, Janout V, Cardis E, Fevotte J, Fletcher T, Brennan P. Occupational X-ray examinations and lung cancer risk. *Int J Cancer*. 2005;115: 263-7.

Dalmasso P, Pastore G, Zuccolo L, Maule MM, **Pearce N**, Merletti F, Magnani C. Temporal trends in the incidence of childhood leukemia, lymphomas and solid tumors in North-West Italy, 1967-2001: A report of the Childhood Cancer Registry of Piedmont. *Haematologica* 2005; 90: 1197-1204.

**Douwes J.** (1-3)- $\beta$ -D-Glucans and respiratory health: A review of the scientific evidence. *Indoor Air* 2005; 15: 160-9.

**Dryson E, Walls C, McLean D, Pearce N.** Occupational bladder cancer in New Zealand: a one-year review of cases notified to the New Zealand Cancer Registry. *Internal Med J* 2005; 35: 343-7.

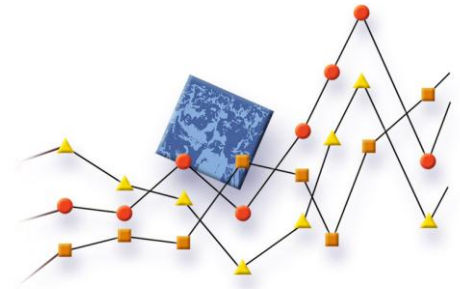
Galobardes B, Davey Smith G, **Jeffreys M**, Kinra S, McCarron P. Acne in Adolescence and Cause-specific Mortality: Lower Coronary Heart Disease but Higher Prostate Cancer Mortality. The Glasgow Alumni Cohort Study. *Am J Epidemiol* 2005; 161: 1094-1101.

Ellwood P, Asher MI, Beasley R, Clayton TO, Stewart AW and **the ISAAC Steering Committee**. International Study of Asthma and Allergies in Childhood (ISAAC III): Phase III rationale and methods. *Int J Tuberc Lung Dis* 2005; 9: 10-6.

**Jeffreys M**, Stevanovic V, Tobias M, Lewis C, **Ellison-Loschmann L, Pearce N**, Blakely T. Ethnic Inequalities in Cancer Survival in New Zealand: linkage study. *Am J Public Health* 2005; 95: 834-7.

Kogevinas M, **Pearce N.** Geographically-based approaches can identify environmental causes of disease. *J Epidemiol Comm Health* 2005; 59: 717-8.

Lissowska J, Bardin-Mikolajczak A, Fletcher T, Zaridze D, Szeszenia-



Dabrowska N, Rudnai P, Fabianova E, Cassidy A, Mates D, Bencko V, Foretova L, Janout V, 't Mannelje A, Brennan P, Boffetta P. Lung cancer and indoor pollution from heating and cooking with solid fuels - IARC International Multicentre Case-Control Study in Eastern and Central Europe. *Am J Epidemiol* 2005; 162: 326-33.

**Pearce N, Douwes J.** Asthma time trends: mission accomplished? *Int J Epidemiol* 2005; 34: 1018-9.

**Pearce N, McLean D.** Agricultural exposures and non-Hodgkin's lymphoma. *Scand J Work Environ Health* 2005; 31 (suppl 1): 18-25.

**Pearce N.** SIDRIA in the international context. *Epidemiologia & Prevenzione* 2005; 29 (suppl 2): 94-6.

Schram d, Doekes G, Boeve M, **Douwes J**, Riedler J, Üblagger E, von Mutius, E, Budde J, Pershagen G, Nyberg F, Alm J, Braun-Fahrländer C, Waser M, Brunekreef B. Bacterial and fungal components in house dust of farm children, Rudolf

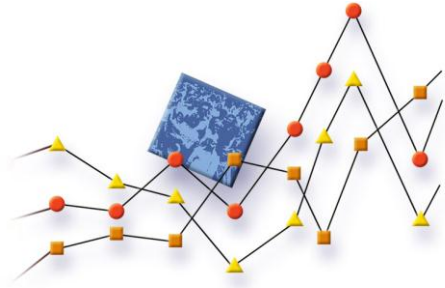
Steiner school children and reference children – the PARSIFAL study. *Allergy* 2005; 60: 611-8.

Schram-Bijkerk D, Doekes G, **Douwes J**, Boeve M; Riedler J, Üblagger E, Von Mutius E, Benz MR, Pershagen G, Van Hage M, Scheynius A, Braun-Fahrländer C, Waser M, Brunekreef B. Bacterial and fungal agents in house dust and wheeze in children - the PARSIFAL study. *Clin Exp Allergy* 2005; 35: 1272-8.

't Mannelje A, McLean D, **Cheng S**, Boffeta P, Colin D, **Pearce N.** Mortality in New Zealand workers exposed to phenoxy herbicides and dioxins. *Occup Environ Med* 2005; 62: 34-40.

't Mannelje A, **Pearce N.** Quantitative estimates of work-related death, disease and injury in New Zealand. *Scand J Work Environ Health* 2005; 31: 266-76.

**Wilson H**, Huntington A. Deviant (M)others: the construction of teenage motherhood in contemporary discourse. *Jnl Soc Pol* 2005; 35: 59-76.



## Conference Proceedings and Book Chapters

### **Brewer N, Jeffreys M, Pearce N.**

An overview of causes of cancer in New Zealand. In: Slater T, Jeffreys M, Bloomfield A, Cunningham C, McKenzie F, Moala A, Pearce N (eds). Cancer control. Proceedings of the fourth Annual CPHR Symposium in Health Research and Policy. Wellington: Centre for Public Health Research, 2005, pp 71-80.

**Douwes J.** Health effects of (1-3)-Beta-D-glucans: the epidemiological evidence. In: Young SH, Castranova V (eds). Toxicology of 1-3-Beta-Glucans: glucans as a marker for fungal exposure. Boca Raton, FL: CRC Press, 2005, pp 35-52.

**Jeffreys M.** Cancer survival in New Zealand. In: Slater T, Jeffreys M, Bloomfield A, Cunningham C, McKenzie F, Moala A, Pearce N (eds). Cancer control. Proceedings of the fourth Annual CPHR Symposium in Health Research and Policy. Wellington: Centre for Public Health Research, 2005, pp 107-117.

**Moala A.** Cancer in Pacific people. In: Slater T, Jeffreys

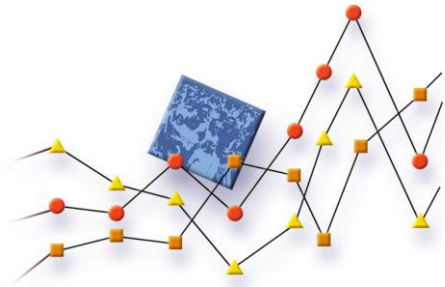
M, Bloomfield A, Cunningham C, McKenzie F, Moala A, Pearce N (eds). Cancer control. Proceedings of the fourth Annual CPHR Symposium in Health Research and Policy. Wellington: Centre for Public Health Research, 2005, pp 85-93.

**Pearce N.** Asthma epidemics, monitoring mortality. In: Gibson PG (ed). Monitoring asthma. New York: Taylor & Francis, 2005, pp 383-416.

## Books and Reports

National Health Committee (Logan R, Fougere G, Georgeson S, Hague K, Haretuku R, Holloway L, Moore A, Carruth-Page A, **Pearce N**, Stewart L, Talemaitoga A, Tepania-Palmer G). Decision-making about new health interventions. Wellington: National Health Committee, 2005.

National Health Committee (Logan R, Fougere G, Georgeson S, Hague K, Haretuku R, Holloway L, Moore A, Page-Carruth A, **Pearce N**, Stewart L, Talemaitoga A, Tepania-Palmer G). People with chronic health conditions: a discussion paper.



Wellington: National Health Committee, 2005.

**Pearce N.** A short introduction to epidemiology. 2nd ed. Wellington: Centre for Public Health Research, 2005 [ISBN 0-476-01236-8; ISSN 1176-1237].

**Pearce N, Dryson E, Feyer A-M, Gander P, McCracken S, Wagstaffe M.** Surveillance of occupational disease and injury in New Zealand: Report to the Minister of Labour Wellington: NOHSAC, 2005

**Slater T, Jeffreys M, Bloomfield A, Cunningham C, McKenzie F, Moala A, Pearce N** (eds). Cancer control. Proceedings of the Fourth Annual CPHR Symposium in Health Research and Policy. Wellington: Centre for Public Health Research, 2005 [ISBN 0-473-10277-3].

## Other Publications

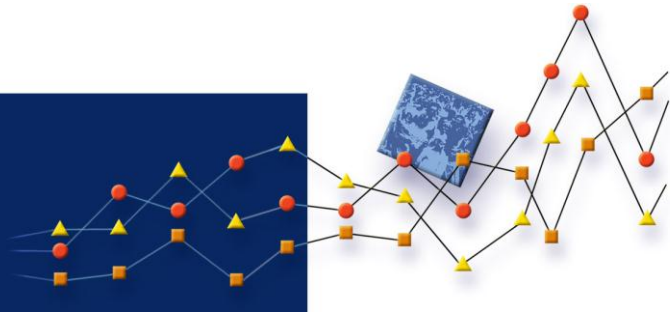
**Douwes J, Le Gros G, Gibson P, Pearce N.** On the hygiene hypothesis: regulation down, up, or sideward? *J Allergy Clin Immunol* 2005; 115: 1326 (letter).

Galobardes B, Davey Smith G, **Jeffreys M**, McCarron P. Has acne increased? Prevalence of acne history among university students between 1948-1968. The Glasgow Alumni Cohort study (letter). *Br J Dermatol* 2005; 152: 824-825.

**Jeffreys M, 't Mannetje A, Pearce N.** Cancer. In: Blakely T, Fawcett J, Atkinson J, Tobias M, Cheung J. Decades of Disparity II: Socioeconomic mortality trends in New Zealand, 1981-1999. Wellington: Ministry of Health and University of Otago, 2005, pp 112-4 (invited commentary).



# Seminars



*22 February* - Ate Moala.  
Tuberculosis among Pacific People.

*8 March* - Sara Arber.  
Negotiating sleep among couples across the life course.

*23 March* - Mona Jeffreys.  
Weight patterns, diabetes and mortality.

*12 April* - Jeroen Douwes. How useful are measures of airway inflammation in epidemiological studies?

*26 April* - Paul White. A strategy for analysing population health impacts arising from the Ministry of Agriculture and Forestry's airborne spray eradication programme.

*10 May* - Stan Abbott. Roof-collected rainwater consumption and health.

*7 June* - Mona Jeffreys. The influence of recall errors in anthropometry on interpreting associations with cancer.

*28 June* - Sylvia Rumball.  
Research Ethics at Massey University.

*12 July* - Christine van Dalen.  
Does spirometry accurately assess asthma severity-control in adolescent asthmatics?

*9 August* - Rod Lea.  
Population genetics meets public health: Relevance to smoking and Maori.

*30 August* - Dave McLean.  
Formaldehyde exposure and respiratory symptoms in New Zealand plywood mill workers.

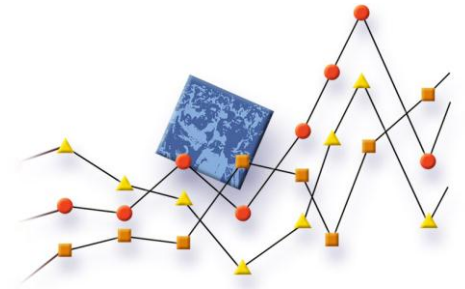
*27 September* - Mona Jeffreys.  
The burden of undiagnosed diabetes in New Zealand;

*27 September* - Naomi Brewer.  
New Zealand linkage study examining the association between HbA1c concentration, mortality and hospital discharges;

*27 September* - Noemie Travier.  
Association between glycosylated haemoglobin and cancer risk: a New Zealand linkage study.

*11 October* - Sarah-Jane Paine.  
Early Birds and Night Owls: a survey of morningness/eveningness in the general population.

*25 October* - Professor Neil Pearce.  
Worldwide trends in the prevalence of asthma symptoms: Phase III of the International Study of Asthma and Allergies in Childhood (ISAAC).



*8 November* - Andrea 't Mannetje. Bladder cancer risk in sales workers: artefact or cause for concern? A systematic review.

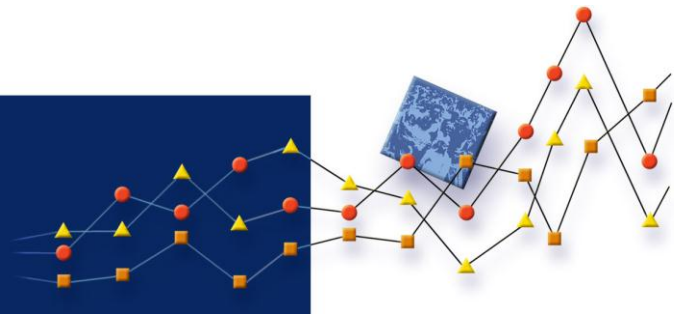
*25 November* - Dave Kennaway. Chronobiology  
- It is about time!

*29 November* - Philippa Gander. Sleep, safety and health: challenges for aviation.

*13 December* - Wijnand Eduard. A criteria document on fungal spores in the work environment.



# Advisory Committees



Advisory Board for Healthwise Alumina Workforce Studies. Monash University, Melbourne, Australia (Neil Pearce)

Advisory Board for New Zealand Guidelines Group (Ate Moala, Director)

Advisory Committee for Tasmanian Epilepsy Register (Neil Pearce)

Cancer Control Task Force (Mona Jeffreys)

Cancer Registration Advisory Committee. New Zealand Health Information Service, Ministry of Health (Neil Pearce)

Committee on Guidance for Biological Agents in the Indoor Environment. World Health Organisation (WHO) (Jeroen Douwes).

Consultant Epidemiologist to the New Zealand Cancer Registry (Neil Pearce)

Education and Advocacy Committee. Asthma and Respiratory Foundation of New Zealand (Lis Ellison-Loschmann)

International Study of Asthma and Allergies in Childhood (ISAAC) Executive (Neil Pearce)

International Study of Asthma and Allergies in Childhood (ISAAC) Steering Committee (Neil Pearce, Sunia Foliaki)

International Epidemiology Association (Neil Pearce, President Elect and Council member)

Māori Asthma Committee. Asthma and Respiratory Foundation of New Zealand (Lis Ellison-Loschmann)

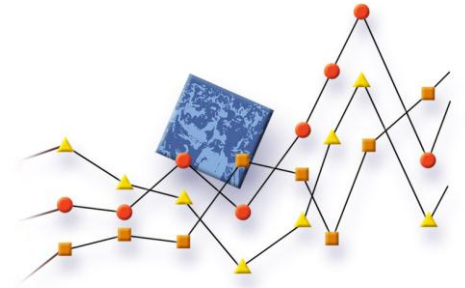
Massey University Human Ethics Committee: Wellington (Tania Slater)

Ministerial Advisory Panel on Work-related Gradual Process, Disease, or Infection. Accident Compensation Corporation (ACC) (Neil Pearce)

National Advisory Committee on Health and Disability (National Health Committee). Ministry of Health (Neil Pearce)

National Occupational Health and Safety Advisory Committee (NPHSAC). Occupational Safety and Health (OSH) (Neil Pearce, Chair)

NHI Upgrade Programme Steering Group. Ministry of Health (Neil Pearce).



Organochlorines Technical Advisory Group. Ministry of Health (Andrea 't Mannetje, Dave McLean)

OSH Cancer Panel. Occupational Safety and Health (OSH) (Andrea 't Mannetje, Dave McLean, Neil Pearce)

Pacific Advisory Drafting Group. Massey University (Sunia Foliaki)

Pacific Health Research Committee. Health Research Council (Ate Moala, Neil Pearce).

Pasifika Medical Association of New Zealand (Ate Moala, Vice-President)

Research Policy Advisory Committee. Health Research Council (Neil Pearce).

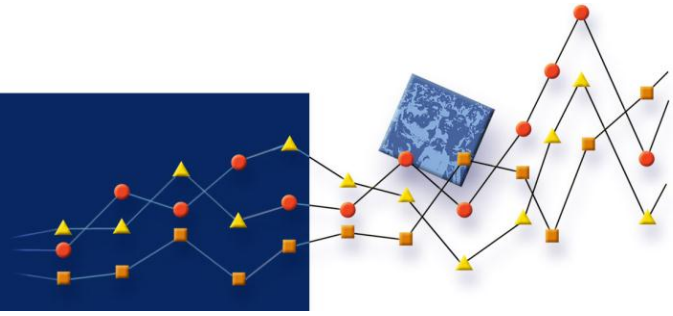
Scientific Advisory Committee, Defence Health Surveillance Program (DHSP), Department of Defence, Australia

Technical Review Panel, asthma Drug Facility, International Union Against Tuberculosis and Lung Disease (IUATLD) (Neil Pearce).

US National Academy of Sciences Working Group on Damp Indoor Spaces and Health (Jeroen Douwes).

Worksafe Advisory Group, Occupational Safety and Health. Occupational Safety and Health (OSH) (Neil Pearce)

# International Visitors



**Professor Pier Bertazzi**

Dipartimento de Medicina del Lavoro “Clinica L. Devoto”  
Universita Di Milano  
Via San Barnaba, 8  
20122 Milano, Italy

**Dr Wjnand Eduard**

National Institute of Occupational Health  
Oslo, Norway

**Professor Sander Greenland**

School of Public Health  
University of California  
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Los Angeles, California,USA

**Tom Jeavons**

Department of Epidemiology and Preventive Medicine  
Monash Medical School  
Melbourne, Australia

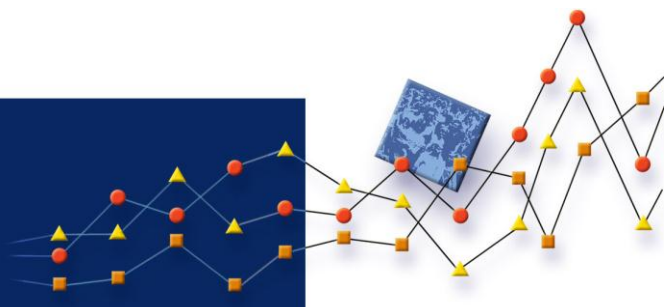
**Professor Allan Smith**

School of Public Health  
University of California,  
Berkeley, California, USA

**Professor Kyle Steenland**

Department of Epidemiology  
Emory University  
Atlanta, GA, USA

# Acknowledgements



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- Health Research Council of New Zealand
- Lotteries Health Research
- Cancer Society of New Zealand
- OSH (Occupational Safety and Health)
- Marsden Fund
- Ministry of Health
- Wellcome Trust

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