St Vincent's Clinic Foundation
2001 Research Grant Recipients

In 2001, a total of $284,000 was awarded for research grants

The Ladies' Committee Sr Mary Bernice Research Grant - $108,000

Prof Ken Ho - Principal Investigator

"Preventing obesity during oestrogen treatment"

The beneficial effects of hormone replacement treatment in post menopausal women are limited by their side effects of increased body fat. These effects result from direct action of oestrogen on the liver. SERMs are a group of newly developed oestrogen-like compounds, and phytoestrogens are naturally occurring oestrogen-like compounds. Their action on the liver is unknown. We propose to study how oestrogens and oestrogen-like compounds such as SERMs and phytoestrogens affect the liver in order to define safer and more effective oestrogens.

Research undertaken at Garvan Institute of Medical Research

Kathleen and Ann Collins Cancer Research Grant - $50,000

Dr Maxwell Coleman- Principal Investigator

"Investigation of BRCA1 and BRCA2 in sporadic breast cancer"

BRCA1 and BRCA2 are breast cancer susceptibility genes. They are mutated in hereditary breast cancer such that the cancer loses expression of the BRCA1 and BRCA2 proteins. Mutations in these genes in sporadic breast cancer have not been identified. Despite the lack of genetic mutation, many sporadic breast cancers show altered levels of BRCSA1/2 proteins. We predict that the loss of BRCA1 and/or BRCA2 in sporadic breast cancer is due to methylation of the respective genes within their regulatory domains. We hypothise that patients with methylation of these genes may be methylating other cancer specific genes, and that this subset of patients may have a better prognosis.

Research undertaken at St Vincent's Clinic and St Vincent's Hospital Research Laboratory

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"Dial A Dump" Research Fund - $25,000

Dr Beth Kotze & A/Prof Kay Wilhelm - Principal Investigators

"The study of depression in the medically ill"

Depression is a common problem in people with medical illness. It is often unrecognised by the patient's health carers and therefore untreated. Hence, the depressive episode can continue for long periods of time with considerable suffering for the patient, increased length of time in hospital and increased complications in the medical illness. The Consultation-Liaison Psychiatry Unit is trialling a measure to improve the detection of depression in the medically ill.

Research undertaken at St Vincent's Hospital

Di Boyd Cancer Grant - $20,000

Ms Teresa Rede - Principal Investigator

"A study of the effect of a new light activated anti-cancer drug on gene expression using gene chip technology"

BCL-2 is a key gene in the development of half of all cancers. BCL-2 stops cancer cells from dying. We have made a molecule to destroy BCL-2 and to kill lymphoma cancer cells. The exciting discovery of our work is that this effect is increased with light exposure. We are the first to discover this anti-cancer effect. It is not clear how this light-enhancement effect works. This project aims to discover other genes that are affected by this treatment, using the new gene chip technology (DNA microarrays). DNA microarrays allow us to track changes in thousands of genes simultaneously which would otherwise take years to do. Results from this research will lead to the development of new anti-cancer therapies.

Research undertaken at St Vincent's Hospital

St Vincent's Clinic Foundation

Annual Grant I - $20,000

Dr M. Handel - Principal Investigator

"Gene expression in osteoarthritis"

Osteoarthritis is a major cause of pain and disability that originates in the cartilage of joints. Repeated compression from years of weight bearing and trauma leads to fragmentation and erosion of cartilage. Chondrocytes are cells within cartilage that maintain its integrity. In this study, we will apply compressive forces to human chondrocytes grown in culture. Genes that are turned on and off in response to compressive forces will be identified with new gene chip technology, providing insight into how osteoarthritis develops.

Research undertaken at Garvan Institute of Medical Research

St Vincent's Clinic Foundation

Annual Grant II - $20,000

Prof Reginald Lord - Principal Investigator

"Analysis of the expression of co-stimulatory molecules by dendritic cells accumulating in athrosclerotic lesions"

This study should provide novel information on antigen-presenting dendritic cells and their role in athrosclerotic lesion formation. The project will seek to examine the mechanisms of the interaction of vascular dendritic cells with T-cell subtypes in athrosclerotic lesions concentrating on the characteristics of co-expression of antigen-presenting and co-stimulatory molecules by dendritic cells clustering with T-cells. The results of this study will offer new insight into immune mechanisms of atherogenesis.

Research undertaken at St Vincent's Hospital Surgical Professional Unit

St Vincent's Clinic Foundation Annual Grant III - $20,000

Dr Joanne Joseph & Pro David Muller - Principal Investigators

"Platelets and stenting study"

Patients who suffer from atherosclerosis (hardening) of their arteries may have small tubes (called stents) placed into these arteries to improve the blood flow. Oral drugs (such as aspirin) are given so that blood cells (platelets) do not block the stent, however there are other more expensive drugs that are sometimes used. This study aims to measure patients' platelet function to determine whether it helps doctors to decide who would most benefit from these expensive drugs.

Research undertaken at St Vincent's Campus

St Vincent's Clinic Foundation Annual Grant IV - $20,000

Dr Diane Fatkin - Principal Investigator

"Identification of gene defects that cause heart muscle disorders"

We propose to find genes that cause abnormalities in the heart's contraction and rhythm by analysing DNA from patients with these heart disorders. We will incorporate the latest information from the Human Genome Project in these studies. Identification of gene defects will help us to fully understand why heart muscle disorders occur and will ultimately lead to new ways of treating heart failure. This work will put St Vincent's Hospital at the cutting edge of heart muscle research in Australia.

Research undertaken at St Vincent's Hospital & Victor Chang Cardiac Research Institute

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St Vincent's Clinic Foundation Annual Grant V - $20,000

Dr Katherine Samaras - Principal Investigator

"Relationships between body fat, lipids, blood pressure & insulin resistance: The influence of genetic & environmental factors on the metabolic syndrome"

It is known that heart disease, adult onset diabetes, blood fats, high blood pressure and excess body fat frequently cluster together in the same individual. The influence of genes and environment in promoting this clustering is recognised, however, accurate estimates of their influence is lacking. Few studies have investigated whether diet or exercise alters the expression of these conditions in genetically susceptible individuals, that is, gene-environment interactions. The overall goal of this proposal is to determine the genetic and environmental interrelationships between body fat and blood fats, insulin resistance (precursor to diabetes) and blood pressure.

Research undertaken at St Vincent's Clinic

St Vincent's Hospital Medical Student Research Grant - $6,000

Payal Mukherjee and Navin Niles- Principal Investigators

"The validation of a quantitative measurement for severity of osteoarthritis in distal interphalyngeal joints"

The primary aim is to validate a quantitative measurement for the severity of the OA phenotype at the distal interphalangeal joints. The intended application is to develop a quick, simple and reliable measurement for patients in the Dubbo study when they return for assesment. Once the quantitative OA phenotype of patients has been determined it is intended that this information will be used to reanalyse the stored genetic information.