St Vincent's Clinic Foundation
2007 Research Grant Recipients

In 2007, 8 grants were awarded totalling $310,000.00

The Ladies Committee Sister Mary Bernice Grant - $100,000

Chief Investigator - Assoc Prof Katherine Samaras

"The role of adipocyte-derived inflammatory cytokines in the pathogenesis of diabetes, dyslipidaemia, atherosclerosis, non-alcoholic liver disease and gastro-oesophageal reflux disease: the effects of medical and surgical weight loss"

Obesity is of epidemic proportions, affecting 50% of Australians. Its complications impact upon all facets of medicine: diabetes, heart disease, liver disease, reflux, sleep apnoea and cancer.

Bariatric surgery for obesity is a proven long term treatment. This proposal will follow patients in preparation for, and after, bariatric surgery at St Vincent's Private Hospital and examine metabolic parameters and reflux disease. Importantly, this study will examine the effects of weight loss on novel new molecules that circulate in the blood stream, inflammatory cytokines, known to influence progression to diabetes and heart disease and play a role in the initiating steps in cancer and liver disease. We will also examine how genes in fat influence these circulating cytokines.

Research undertaken at St Vincent's Clinic, St Vincent's Hospital & St Vincent's Private Hospital

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K&A Collins Cancer Research Grant - $50,000

Chief Investigator - Dr Ron Bova

"16 gene epimutations and the risk of cancer"

DNA methylation is a mechanism used by cells to keep certain genes inactive. Errors in this process result in inappropriate silencing of genes, termed "epimutation". Rare individuals are born with high-level epimutations that predispose them to develop cancer.

The researchers hypothesise that low-level epimutations predispose to cancer as well. The research will determine epimutation levels in healthy individuals and compare then with levels in people who have had cancer. We hope to determine whether low-level epimutations contribute to the risk of developing sporadic cancer.

Research undertaken at St Vincent's Hospital Head and Neck Clinic and Anatomical Pathology, Victor Chang Cardiac Research Institute Molecular Genetics Department

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Di Boyd Cancer Research Grant - $20,000

Not awarded this year.

Tancred Trust Research Grant - $50,000

Chief Investigator - Dr John Moore

"Assessment of the Common Lymphoid Progenitor (CLP) in allogenic stem cell transplantation using the OP9 thymic cell line"

Blood stem cell transplant (HSCT) is a procedure that can cure many patients with blood tumours. One of the major complications is infection. It may be possible to overcome this problem by giving patients more stem cells that are capable of making immune cells. These stem cells are called Common Lymphoid Progenitors (CLP) which produce immune cells in a gland called the thymus.

The purpose of this research is to further study a possible CLP in adults and compare it to the cord blood stem cells which may have more CLPs. In addition, the research will assess these cells in patients who are having HSCT. This work may have the potential to reduce infection and even death in the 300 patients who have this treatment every year in Australia.

Research undertaken at St Vincent's Hospital Haematology Research Laboratory

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Froulop Vascular Research Grant - $25,000

Chief Investigator - Dr Abdullah Omari

"Natural history of calf vein thrombosis in post-operative hip and knee replacement patients after treatment with short-term anticoagulation"

Adults who undergo hip or knee surgery will be screened for the presence of deep vein thrombosis (clot) in their calves after their operation. Those that are identified with a clot will have treatment for 2 weeks with blood thinning agents. They will subsequently undergo ultrasound scans of their calves 6 weeks and 3 months after their diagnosis of calf clots. The extent of the clots will be examined to determine if the have stayed the same, worsened or improved.

Research undertaken at St Vincent's Private Hospital

Annual Grant 1 - $25,000

Chief Investigator - Professor Peter Macdonald

"The nature of endothelial progenitor cell subsets in vito:
A study of EPCs from "normal" donors and patients with chronic ischaemic heart disease.
The potential of vascular stem cells in the treatment of heart disease."

This project aims to examine vascular stem cells found in the adult body that may have the potential to regenerate new blood vessel tissue. The study will examine these cells in a laboratory setting to gain a better understanding of their features and biological function. With a focus on ischaemic hearty disease, the researchers believe that the research can contribute to new therapies for treating cardiovascular disease.

Research undertaken at St Vincent's Haematology Research Unit

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Annual Grant 2 - $25,000

Chief Investigator - Professor Terry Campbell

"Protein trafficking defects as a cause of congenital Long QT syndrome"

Disturbance of the normal rhythm of the heart beat is one of the commonest causes of death in our community. In a subset of these patients the heart rhythm disturbances are caused by mutations in genes that encode for special proteins called ion channels. Even within this group, however, the severity of the condition is highly variable, ranging from a cause of sudden infant death to a mild phenotype that only becomes manifest in middle age. It is hoped that understanding the basis of the variability in these genetic conditions will contribute to a better understanding of the more common heart rhythm disturbances that occur in patients who have abnormal hearts as a result of a heart attack or long standing high blood pressure.

To investigate how mutations affect the synthesis of ion channel proteins, the researchers will engineer "coloured" labels on the proteins so that the researchers can see how they are processed from when they are first synthesised inside the cell to when the mature protein reaches the cell surface. The researchers will also investigate whether mutations that cause severe disease can bind to normal proteins and therefore disturb the flow of normal proteins in cells.

Research undertaken at Victor Chang Cardiac Research Institute

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Annual Grant 3 - $25,000

Chief Investigators - Professor David Ma and Dr Bojiang Shen

"The differentiation of autologous bone marrow messenchymal stem cells into intervetebral disc cells for tissue repair by bone morphogenetic proteins and transforming growth factor ß3"

Disc disease of the back is a common cause of back pain. Current treatment of pain relief alone is insufficient. Bone marrow stem cells have the potential to mature into disc cells, providing a new hope for disc repair, but there is a lack of research in this area. In this research project, the crucial growth factors for converting stem cells into disc cells will be determined. It will study the molecules involved, thus improving the understanding of the degenerative process of the disc. The cells generated will be tested in an animal model before entering clinical trials. This grant will allow the generation of valuable data to allow the researchers to seek external funding.

Research undertaken at St Vincent's Haematology Research Unit

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Travelling Fellowship - $10,000

Dr Anthony Chambers - Clinical Fellowship in Surgical Oncology at the University of Calgary