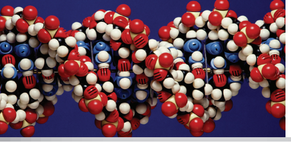

St Vincent's Clinic Foundation

STROKE STUDY – Professor Sandy Middleton

Acute stroke patients who receive three clinical protocols to manage fever, sugar and swallowing, are 16 percent more likely to be alive and independent three months later. Professor Sandy Middleton, Director of the Nursing Research Institute, a partnership between St Vincents & Mater Health Sydney and the Australian Catholic University, led the collaborative research which was published in *The Lancet*. The research provides critical data demonstrating significant improvements for the management of patients following stroke.

Stroke is caused by a clot or a bleed in the brain and is Australia's second biggest cause of death and leading cause of disability. While a patient suffers irreversible brain damage as a result of the stroke, there is potential to salvage surrounding brain tissue and limit the damage by effectively managing fever, sugar and swallowing.

The project funded by the National Health and Medical Research Council is the first nurse-led trial in acute stroke to be carried out in Australia and involved 19 acute stroke units across New South Wales and more than 1,600 patients.

The trial developed, implemented and evaluated the effectiveness of team-building workshops and education to introduce three clinical protocols to manage fever, sugar and swallowing following an acute stroke.

"Patients admitted with an acute stroke to hospitals that were randomised to receive our support to implement these protocols, were 16 percent more likely to be alive and independent at 90 days," Professor Middleton said.

"These results are better than any current drug or treatment for stroke including clot busting therapy and can be universally applied in acute stroke units."

Published in *The Lancet*, the study shows that patients who received care in stroke units using these protocols were also more likely to have fewer episodes of fever, lower average temperatures and sugar levels, and better screening for swallowing difficulties.

"We found better outcomes for patients and consistently better processes of care in these hospitals because we created opportunities for teams to come together and agree on what they could do as an integrated service to improve quality of care. These results provide some of the best evidence to date in Australia on how to change clinicians' behaviour and also evidence for effective team work and good nursing care," Professor Middleton said.

"Good management of fever, high blood sugar levels and swallowing can salvage brain tissue – poor management however can result in extension of the stroke and have devastating consequences for the patient."

The study was a collaboration between the Australian Catholic University, the University of Newcastle, the University of Ottawa, the University of Western Sydney, the University of Sydney and the University of Melbourne, as well as a team of clinicians from NSW Health and support from the Agency for Clinical Innovation's Stroke Services NSW.

The National Stroke Foundation is encouraging the delivery of such programs in Australian stroke units to support the use of these protocols based on the success of Professor Middleton's trial.

"Recovery after a stroke can be significantly improved when health professionals are supported to implement protocols that ensure consistent and prompt clinical management of these three factors – fever, blood sugar levels and swallowing. Stroke is Australia's second leading cause of death and a major cause of disability. The delivery of programs resulting in improved care for stroke is critical in ensuring more Australians survive stroke and that costs associated with stroke care are minimised," says Chief Executive Officer of the National Stroke Foundation, Dr Erin Lalor.

Professor Sandy Middleton

"These results provide some of the best evidence to date on how to change clinicians' behaviour in stroke and also evidence for effective team work and good nursing care," Professor Middleton said.

The research received top-up funding with a multidisciplinary patient focused grant of $50,000 from the St Vincent's Clinic Foundation in 2009.

The multidisciplinary patient focused grants promote continuous quality improvement and clinically based research that enhances patient care and outcomes.

In collaboration with colleagues, Professor Middleton has received $2.2 million in the latest National Health and Medical Research Council grant rounds to build on this research and undertake a trial of triage, treatment and transfer of stroke patients in Australian emergency departments.

PRESSURE ULCER PREVENTION AND MANAGEMENT – THE TURNING AND REPOSITIONING OBSERVATIONAL PILOT STUDY (TROPS)

by Elizabeth McInnes and Todd Allen

Pressure injury (also called a bedsore or pressure ulcer) is a term used to describe local areas of irritated or broken skin caused by unrelieved pressure or a shearing force. They commonly occur over bony areas of the body such as the lower back, the buttocks, the back of the head and the heels. While pressure injuries can develop in anyone of any age, the elderly and those with impaired mobility, such as hospital inpatients are at greater risk than the general population. The prevention of pressure injury is one of 16 indicators in the Australian National Safety and Quality Indicators set.

Pressure injury prevention care is a key area of nursing practice and current guidelines advise that those at risk of developing pressure injury should be repositioned or encouraged to reposition and mobilise regularly. However, it is unknown how effective nurses are at achieving the desired patient postures during turning and repositioning, and whether/how patient posture alters between turning episodes. Both of these factors have significant implications for the well-being of hospitalised patients and warrant investigation.

In 2012 the St Vincent's Clinic Foundation is funding a pilot study called the Turning and Repositioning Observational Pilot Study (TROPS) for the Nursing Research Institute – St Vincents and Mater Health Sydney (NRI). This study is focusing on the patient's role in the prevention of pressure injury with an emphasis on repositioning.

This study is one of 4 pilots being conducted in Queensland, New South Wales and Victoria. The overall aim of these studies is to provide pilot data to inform the development of a repositioning intervention to prevent pressure injury. This intervention will later be tested in a large cluster randomised controlled trial in acute care settings. National Health and Medical Research Council (NHMRC) research funding will be sought in 2013 to support this trial, informed by the pilot studies, with the NRI playing a key role in developing and implementing the study.

TROPS will use a variety of methods to collect information. Uniquely, consenting patients will be observed to see how often they reposition and move while in hospital. The assistance that patients receive with pressure injury prevention care will be recorded alongside what patients can do to reduce their pressure injury risk. In addition, consenting patients will be interviewed to establish an understanding of their knowledge of pressure injury prevention and what they think could be their role in pressure injury prevention.

Human Research Ethics Committee (HREC) approval for TROPS has been granted and data collection has commenced at both St Vincent's Public and St Vincent's Private Hospitals. One of the positive outcomes so far arising from this project is the involvement of clinicians in helping to set up the study, piloting and refining the data collection tools and also undertaking data collection. Louise Webber and Edel Murray, the Clinical Nurse Consultants for the public and private hospitals respectively and Peter Jones, Clinical Nurse Educator at the Public hospital are all involved in TROPS. The Chief Investigator on the St Vincent's Clinic Foundation project is Associate Professor Liz McInnes and the project is co-ordinated by Todd Allen, an NRI Research Assistant and Project Co-ordinator. Another positive outcome to date is the links with other participating hospitals in Queensland and Victoria and the NHMRC Centre of Research Excellence in Nursing Interventions for Hospitalised Patients which is based at Griffith University.

Left to Right: TROPS team, Todd Allen, Edel Murray, Louise Webber, Peter Jones and Elizabeth McInnes

St Vincent's Clinic Foundation

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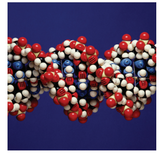
St Vincent's Clinic Foundation

Supporting Excellence in Clinical Research



May 2012

Welcome to the 2012 edition of the St Vincent's Clinic Foundation newsletter.

2012 marks a milestone for the Foundation – 20 years since it was established in 1992 to strengthen the research and educational aims of the Clinic.

Looking back over this period, the Foundation has certainly achieved its aim. The first research grants were awarded in 1993 – 10 grants at approximately $250,000. In 2012 the Foundation has awarded funding of $829,000 for 13 research grants, 5 multidisciplinary research grants, a travelling scholarship, support for nursing and allied health staff presenting research papers and the excellence awards for clinical researchers.

Over the last 20 years the Foundation has provided over $10million in funding to 243 grants. This is an achievement of which we are proud but it would not have been possible without the tremendous support and generosity of our supporters and donors. Nor would it have been possible without the involvement of the commitment and professional skill of our researchers.

I would also like to take this opportunity to acknowledge the work and support of the Trustees of the Foundation.

It is an exciting time for research on the Campus with the completion of the Campus Research, Teaching and Education Plan. This positions the Campus to continue to grow and develop. The key trend (and opportunity) for St Vincent's arises from an emerging focus on translational research to complement a strong emphasis (and significant investment) in basic biomedical research. And this sits well with the Foundation's support for research that underpins evidence-based care.

Thank you for supporting St Vincent's Clinic Foundation and playing a part in our search for better treatments and cures for those illnesses and diseases that touch so many in our society.

We look forward to the next 20 years of continuing our support of our researchers.

Yours sincerely

MR A E HARRIS AC
President, St Vincent's Clinic Foundation

Your support is needed now to continue and to maximise research like this. Please support St Vincent's Clinic Foundation.

HOW YOU CAN PLAY YOUR PART – ST VINCENT'S CLINIC FOUNDATION

All donations are tax deductible and can be made in a number of ways.

- An annual donation of $200
- An annual donation/one off donation of $ _____
- St Vincent's Clinic Foundation has also developed the opportunity for donors to nominate the Foundation in their Estate. Please call us for further information.

☐ A cheque made payable to St Vincent's Clinic Foundation for the amount of ☐ $200 or ☐ $ _____

☐ Please debit my Credit Card. Nominate Card: Bankcard / Mastercard / Visa

Name on Card: _____

Expiry date: ____ / ____ Amount: _____

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Telephone: _____

Email: _____

Please send to: St Vincent's Clinic Foundation, 438 Victoria Street Darlinghurst NSW 2010

☐ If you are not already a Friend of St Vincents Clinic Foundation (no charge) and would love to become a Friend please tick the box. Friends will receive an invitation to the AGM, Foundation functions, copies of "Proceedings" and other material related to the Foundation.

☐ If you do not wish to receive this material, please tick the box.

A PROJECT TO CREATE SYNTHETIC CANCER-RESISTANT CELLS IN THE LABORATORY – Professor Richard Epstein

The Department of Oncology in St Vincent's Hospital, and the Laboratory of Genome Evolution & Informatics in the Cancer Program of the Garvan Institute, is grateful to acknowledge the vital support of the SVC Foundation in supporting our research with both the 2012 K&A Collins Cancer Grant and the 2012 Di Boyd Cancer Research Grant.

Our previous work has shown that human genes contain inbuilt vulnerabilities which predispose us – even those who are healthy, and don't smoke – to developing cancer as we get older. In this project, we will systematically remove these 'weak points' located within a key cancer-preventive human gene and replace them with more robust DNA sequences that encode exactly the same protein in full working order.

This project aims to discover (i) whether it is indeed technically possible to make a more stable gene that still works normally and (ii) whether putting such an artificial gene back into cells can reduce the risk of cancer in at-risk tissues. If this hypothesis is supported by our work, we will proceed to create model animals and transplantable human organs that are resistant to cancer – an exciting prospect for those of us engaged in cancer research.

A final part of this work will be to clarify why Nature has 'designed' these inbuilt genetic weaknesses which seem so prone to mutation and cancer. Our hypothesis is that these 'weak points' in our genes may actually be helpful during embryonic development, as they could reduce the effect of insults that would otherwise cause miscarriages or serious malformations. If proven, this work could lead to new diagnostic assays for detecting environmental exposures that either harm babies or predispose to adult-onset cancer.

THE 2012 ST VINCENT'S CLINIC FOUNDATION RESEARCH GRANT RECIPIENTS

The Ladies' Committee Sr Mary Bernice Research Grant $80,000
Professor David Ma – St Vincent's Centre for Applied Medical Research
"Identification of MicroRNAs that predict treatment success in patients with acute Myleloid Leukaemia"

Adult Stem Cell Research Grant 1 $30,000
Dr Robyn Lukeis – St Vincent's Hospital
"Improving the scope and sensitivity of donor chimerism monitoring post stem cell transplant by fluorescence in situ hybridisation (FISH) using cell separation and deletion polymorphism detection"

Adult Stem Cell Research Grant 2 $50,000
A/Professor Anthony Dodds – St Vincent's Centre for Applied Medical Research
"Role of microRNAs in Haematopoietic Stem Cell Differentiation and Acute Leukaemia"

Di Boyd Cancer Research Grant & K&A Collins Cancer Research Grant $80,000
Professor Richard Epstein – Garvan Institute of Medical Research / Kinghorn Cancer Centre
"Creation of "cancer-proof" cells using genetic engineering to vary the mutational stability of human TP53 gene"

Tancred Trust Research Grant $50,000
Professor Peter Macdonald – Victor Chang Cardiac Research Institute
"Esmolol cardioplegia as an alternative to hyperkalaemic cardioplegia: Using a rodent model of brain death to assess a novel preservation solution in cardiac transplantation"

Froulop Research Grant $28,000
A/Professor Rajesh Subbiah – St Vincent's Hospital / Victor Chang Cardiac Research Institute
"Beat to beat variability of QT interval and stratification of risk for sudden cardiac death in long QT syndrome"

Annual Grant 1 $28,000
Dr Mark Danta – St Vincent's Clinical School
"Medicare usage in chronic hepatitis C (MUCH-C) study"

Annual Grant 2 $30,000
A/Professor Jane McCrohon – St Vincent's Hospital
"Non-invasive detection of cardiac transplant rejection using advanced cardiac MRI and ultrasound techniques – Correlation with biopsy"

Annual Grant 3 $30,000
Ms Melissa Baysari – St Vincent's Hospital
"Reducing hospital prescribing errors by enhancing the effectiveness of computerised decision support"

Annual Grant 4 $30,000
Dr Kersten Koelsch – St Vincent's Centre for Applied Medical Research
"GALT in health (GIS) study"

Annual Grant 5 $50,000
Dr Paul Jansz – St Vincent's Hospital / St Vincent's Centre for Applied Medical Research / Victor Chang Cardiac Research Institute
"A longitudinal investigation of the effects of centrifugal continuous flow left ventricular assist devices (LVAD) on haemostatic parameters"

Annual Grant 6 $30,000
Dr Gail Matthews – St Vincent's Hospital
"Long term behavioural, clinical and immunovirological outcomes in individuals previously treated for acute hepatitis C"

Annual Grant 7 $40,000
Professor Bruce Brew – St Vincent's Hospital
"Link between quinolinic acid and tauopathy in Alzheimer's disease, diabetes and multiple sclerosis"

Annual Grant 8 $30,000
Professor Terry Campbell – Victor Chang Cardiac Research Institute
"Investigation of the role of KCNH2 Isoforms in Schizophrenia"

Travelling Fellowship $10,000
Dr Camilla Wainwright – Cardiology Department – St Vincent's Hospital
"Cardiac Research Fellow & PhD Candidate - University of Oxford, UK"

Travelling Fellowship $10,000
Dr Rowan Gillies – Plastic & Reconstructive Surgery Department – St Vincent's Hospital
"Fellowship in Reconstructive Microsurgery - Bellevue Hospital, New York, USA"

Multidisciplinary Patient Focused Research Grant $30,000
Ms Zoe Potgieter – St Vincent's Hospital
"Impact of advanced liver disease clinic study"

Multidisciplinary Patient Focused Research Grant $20,000
Mr Daniel Behan – St Vincent's Hospital
"Towards reducing blood product usage in cardiothoracic surgery"

Multidisciplinary Patient Focused Research Grant $25,000
A/Professor Elizabeth McInnes – Nursing Research Institute / St Vincent's Hospital
"Pressure ulcer prevention and management – an observational study of nursing practice and examination of inter-rater reliability of outcome measurement"

Multidisciplinary Patient Focused Research Grant $25,000
Ms Jan Alford – St Vincent's Hospital
"Pathways to mental health care in diabetes: Implementation and evaluation of a mental health screening and referral procedure for patients with diabetes"

Multidisciplinary Patient Focused Research Grant $24,930
Ms Judith Rough – St Vincent's Hospital
"Improving the delivery of allied health services to patients with Parkinson's Disease through Telehealth"

2011 Excellence Award for Clinical Researcher – Emerging Researcher $1,500
Ms Sally Sutherland Fraser – St Vincent's Hospital
Clinical Nurse Consultant, Perioperative Services, St Vincent's Hospital

Professor John Shine AO

THE 2011 SANDRA DAVID ORATION TODAY'S MEDICAL RESEARCH – "BIG" SCIENCE AND HEALTH CARE IMPACTS – Professor John Shine, AO FAA

At the annual event, hosted by the St Vincent's Clinic Foundation, Professor John Shine, AO FAA, former Executive Director of the Garvan Institute of Medical Research, looked at Today's Medical Research – "Big" Science and Health Care Impacts.

Professor Shine provided a fascinating insight into the human genome, the understanding of multifactorial disorders, the growth of personalised medicine, stem cells and the social issues related to advances in genetics.

Attended by over 100 people the Oration, was followed by the presentation of the 2011 excellence awards for clinical researchers and the announcement of the 2012 research and multidisciplinary grant recipients.

In closing, Professor Shine left us with a very thought provoking statement "Imagination, based on knowledge, is the key to discovery".

For a copy of Professor Shine's Oration, please visit the St Vincent's Clinic website:

http://www.clinic.stvincents.com.au/whats-happening/events or email clinic@stvincents.com.au to request a copy.

IMPROVING THE DELIVERY OF ALLIED HEALTH SERVICES TO PATIENTS WITH PARKINSON'S DISEASE THROUGH TELEHEALTH.
Judith Rough, Helen Brake, Dr Stephen Tisch, Phillip Fay

Parkinson's disease is a chronic, degenerative neurological disease. Most patients with Parkinson's disease will develop voice and speech problems over the course of the illness, e.g soft, breathy, hoarse voice, rapid bursts of speech and speech which is hard to understand. This makes it very hard for patients with Parkinson's disease to communicate with their families and friends or work colleagues and can lead to social isolation, difficulty maintaining employment and difficulty conveying important information.

The Lee Silverman Voice Treatment (LSVT) is currently recognised as the most effective behavioural treatment for voice and speech problems associated with Parkinson's disease, and has been provided to patients at St Vincent's Hospital since 1996. It is an intensive program which requires the patient to attend the hospital for an initial assessment followed by 16 sessions of treatment over 4 weeks. The intensity of the treatment is a major factor in its success but it can also create a barrier to some patients with Parkinson's disease accessing speech pathology services. Patients may have physical disability as a consequence of their disease making it hard to attend the hospital so frequently; they may have transport limitations which prevent them from attending. If they live in rural or remote areas, they may need to travel to metropolitan centres where the programme is run, incurring high costs of transport and accommodation and lack of the normal supportive living environment and opportunities to apply the new techniques in their normal communication environment.

In 2012 the St Vincent's Clinic Foundation is funding a study to trial a different service delivery model of the LSVT program, using Tele-health technology to enable delivery of the program at home without compromising the principles underlying the LSVT. If outcomes are similar to face-to-face delivery, it may be possible to develop and deliver the LSVT via Tele-health on a regular basis. This would reduce discrimination due to distance or physical handicap and enable access to a proven, effective treatment regime. The results of this study will also contribute to the wider body of knowledge relating to treatment of Parkinson's disease and more specifically LSVT.

The project team consists of Judy Rough who is the Senior Speech Pathologist in voice at St Vincent's Hospital, Helen Brake, Speech Pathology Manager, Dr Stephen Tisch, Head of Neurophysiology, Consultant Neurologist and Staff Specialist at St Vincent's Hospital and Phillip Fay, Occupational Therapy Manager at St Vincent's Hospital.

IDENTIFICATION OF MICRORNAS THAT PREDICT TREATMENT SUCCESS IN PATIENTS WITH ACUTE MYLELOID LEUKAEMIA – Professor David Ma

The 2012 Ladies' Committee Sr Mary Bernice Research Grant has been awarded to Professor Ma and his team for their work on using MicroRNAs to predict treatment response in patients with acute myeloid leukaemia. Acute myeloid leukaemia is a cancer that affects all ages. Advances in intensive chemotherapy have increased survival of many young patients, however, over half of acute leukaemia occurs in adults over the age of 60 and the current treatment for them is limited. MicroRNAs are small gene switches that have recently been discovered to perform critical roles in controlling cell function. Professor Ma's team has identified some types of leukaemia that have unique mircroRNA signatures and several of these gene switches appear to link with patient outcome. His team went on to discover that these regulatory genes turn off important biochemical circuits in the cancer cell and thus allow the cancer cell to live and multiply. The project funded by the Ladies' Committee Sr Mary Bernice Research Grant aims to build on this research, establishing how abnormal microRNAs can lead to the development of acute leukaemia and translate this into meaningful clinical information. This means developing new tests that will help doctors to predict and monitor who will or will not respond to treatment. Increased surveillance of patients with a high chance of relapse would allow early treatment intervention. This research, if successful, will drive further work to develop simple and less invasive blood tests for patients with acute leukaemia and the investigation of the potential of microRNAs to drive the development of acute myeloid leukaemia. This generous grant from the St Vincent's Clinic Foundation will enable Professor Ma and his team to move a step closer to achieving their research goals.

Professor David Ma