



ST VINCENT'S
CENTRE FOR APPLIED
MEDICAL RESEARCH

RESEARCH REVIEW 2014 & 2015



Serving
SOMETHING GREATER

MESSAGE FROM THE CEO

Healthcare service delivery in Australia and globally is facing significant challenges including population growth, ageing and chronicity, rising costs of healthcare provision, increasing consumer expectations and workforce shortages. A renewed focus on health and medical research will contribute greatly to helping us face these challenges head on, through new preventions, treatments and cures and more efficient and effective ways of doing business. Ultimately and most importantly, we know research is the key success factor in improving health-related outcomes for our patients and communities.



The healthcare services of St Vincent's are under increasing pressure to deliver high quality, patient-centred care in an ever changing and complex environment.

Research at St Vincent's is driven by a number of important and sometimes competing factors:

- ♦ The Mission, Values and ethical framework of St Vincent's Health Australia and the Trustees of Mary Aikenhead Ministries
- ♦ Government policy direction, regulation and funding
- ♦ The clinical profile and needs of the SV&MHS healthcare facilities
- ♦ Workforce shortages and a retiring generation of skilled clinician researchers
- ♦ Consumer expectations and an increasing push towards evidenced based and personalised medicine
- ♦ Industry interest and cooperation
- ♦ The individual interests of clinical researchers
- ♦ Currently available research support platforms
- ♦ The collective strengths of our research partners.

We are also operating in a political environment where health and medical research is strongly on the agenda for both the New South Wales and Federal Governments. Recent policy and reviews call for a renewed focus on research translation. Translational research aims to remove barriers to multidisciplinary collaboration between researchers across the spectrum of the investigative enterprise. It brings hospital-based research to the forefront

to ensure our research endeavours lead to improvements in health and wellbeing.

Our aim is to maintain our reputation as a pre-eminent health and medical research collaboration in Australia, however, we know we cannot achieve this alone. The scale, efficiencies and intersectoral collaboration required to produce quality research outcomes, coupled with the reality of scarce resources, mandate effective partnerships both on and off our campuses.

We draw on the talents of our people and collaborate with others who share our vision and values to continue the pioneering Spirit of Mary Aikenhead and the Sisters of Charity. We are committed to providing compassionate and innovative care, enabling hope for those we serve. As a Catholic healthcare organisation, St Vincent's has the opportunity and obligation to align its research activities with its overarching Mission particularly in regard to assisting the poor and marginalised in society to obtain improved health care outcomes. The goal of supporting mission-driven research must be balanced with other demands on resources and focus including government programs, research partner and individual researcher interests and priorities.

The prize to be gained is enhanced quality of care and health outcomes for our communities.

A/Prof Anthony Schembri

RESEARCH AT A GLANCE



2014 2015



NO. JOURNAL PUBLICATIONS

2014	2015	TOTAL
618	622	1240

NO. BOOK CHAPTERS PUBLISHED



2014	2015	TOTAL
28	16	44



NO. UNDERGRADUATES
(MEDICINE)

2014	2015	TOTAL
459	444	903

PRIZES/AWARDS (INST & STAFF)



2014	2015	TOTAL
15	12	27



NO. PHD STUDENTS

2014	2015	TOTAL
90	110	200

NO. HIGHER DEGREE STUDENTS

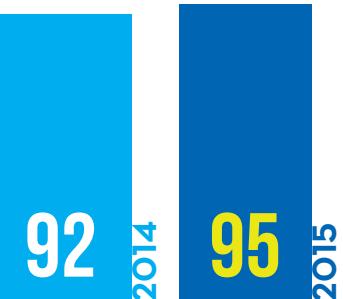


2014	2015	TOTAL
40	45	85

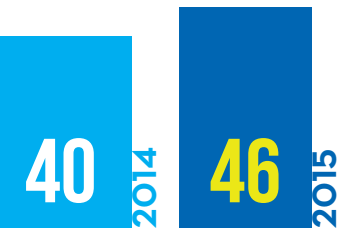
TRANSLATION INTO
PRACTICE OR POLICY
TOTAL 45



HIGH IMPACT AT NATIONAL/
INTERNATIONAL LEVEL
TOTAL 187



STRATEGIC
PARTNERSHIPS FORMED
TOTAL 86



TOTAL RESEARCH
INCOME 2014/2015

TOTAL RESEARCH
INCOME

\$5,899,826

\$7,166,896

NON-PEER
REVIEWED GRANTS

\$4,357,695

\$5,180,751

PEER REVIEWED GRANTS
(NHMRC & ARC)

\$817,131

\$1,261,145

ST VINCENT'S CLINIC
FOUNDATION GRANTS

\$725,000

\$725,000

MESSAGE FROM THE DIRECTOR OF RESEARCH

St Vincent's has a long history and strong tradition of medical research which has evolved throughout its history.



The research institutes on the St Vincent's Research Campus, including Garvan Institute of Medical Research, The Kinghorn Cancer Centre, Victor Chang Cardiac

Research Institute and the St Vincent's Centre for Applied Medical Research have pioneered insights into some of the most widespread diseases affecting our community today.

The St Vincent's Centre for Applied Medical Research (AMR) has a long and proud tradition of conducting research with the aim of improving outcomes for those with or at risk of disease. It was formed in 2008 when the Centre for Immunology and the Clinical Trials Unit from St Vincent's Hospital merged. The AMR conducts clinical, applied and translational research with a focus on immunology, HIV and infectious diseases, neurosciences, transplantation biology and cancer.

St Vincent's Centre for Applied Medical Research has realised many of the operational efficiencies that were anticipated through collocation and building critical mass with its partners, the Kirby Institute, HIV Immunovirology Program and the Clinical Research Program. Together these groups have implemented a model to efficiently manage their shared essential services. This includes centralising scientific stores and supplies, cryogenic stores, glassware and media preparation services, back-of-house services including waste management, engineering and maintenances, services, medical grade gases and loading dock operations.

The recent development of the Translational Research Centre on the St Vincent's Research Campus has further broadened our healthcare research agenda. This will increase the presence of research in Darlinghurst, providing greater scope for our researchers to collaborate and realise our goal of applying discoveries to cure patients and improving their quality of life.

The St Vincent's strategy is to align its research strengths with its clinical flagships. Attaining adequate scale and financial sustainability are important and necessary goals for research flagships.

In March 2015 the St Vincent's Research Precinct launched a process to create a strategic plan that would establish the vision and direction for its research enterprise.

1. Research precincts that allow the potential for integrative, collaborative, and transformational research as well as providing the necessary scale and scope for collective investment in expensive and large scale technology platforms.
2. The St Vincent's Research Campus will be a renowned health and medical research precinct, with strong strategic partnerships, and a focus on translating research into improved health and clinical outcomes.
3. The St Vincent's Research Campus will provide a supportive research environment with a well-resourced infrastructure where scientists and clinicians can work collaboratively to contribute to research-informed healthcare.



In recent times, AMR programs have actively participated in the Darlinghurst campus capital master planning process. One of the major outcomes is the overwhelming need to realign and focus on the development of structures and processes to integrate all Darlinghurst-based research and teaching initiatives. The Darlinghurst campus, one of Australia's largest and most successful bio-medical research hubs, will support and enable a greater focus on translational research where there is an intersection of clinical and research expertise.

The Research Executive Council is the peak research body for the campus, which recognises the important contributions of the co-located but independent Garvan Institute of Medical Research and Victor Chang Cardiac Research Institute (VCCRI). Their close physical proximity reflects the strong working relationships of these organisations, with many core facilities being shared among the University of NSW, the Kirby Institute, VCCRI and Garvan.

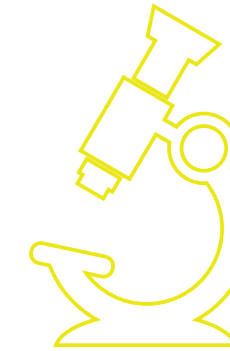
The ultimate aim of the Research Executive Committee is to provide strategic direction to support the critical mass required to deliver quality translational research, world class research talent and greater research funding. The vision is to create a world-leading health services and research campus that conducts a continuum of high quality applied and translational, discipline-based and multidisciplinary research, that is mission aligned and contributes actively to the relief of human illness and suffering.

Together, we are committed to excellence in biomedical research, disseminating the results of our research widely to the medical and scientific community and to the general public, and providing the highest standards of diagnostic service and patient care.

Prof Terry Campbell

Seeing
SOMETHING GREATER

ST VINCENT'S RESEARCH CAMPUS



TRANSLATIONAL RESEARCH CENTRE

In 2015, the Translational Research Centre (TRC) of St Vincent's Centre for Applied Medical Research was officially opened by the Hon Pru Goward, NSW Minister for Medical Research. The TRC will serve as a major research and treatment centre for HIV and other infectious diseases.

St Vincent's started treating Australia's first patients with HIV over 30 years ago and today has treated well over half the country's patients for this disease. During this time, the Hospital worked closely with researchers from UNSW's Kirby Institute and other leading research affiliates to develop a reputation as a world leader in clinical research into HIV/AIDS as well as other infectious diseases. Integration of clinical service provision and research has been a hallmark of the collective effort.

The St Vincent's Centre for Applied Medical Research building is a translational research centre where Kirby Institute staff interface with St Vincent's clinicians including speciality HIV inpatient and ambulatory services and the NSW State Reference Laboratory for HIV. The Centre will conduct several multi-centered clinical research projects in clinical specialties such as HIV infection, viral hepatitis, anal cancer, immunology, rehabilitation medicine and neurology. The redesigned and refurbished building has allowed for different aspects of the research agenda to be realised with client interview spaces, clinical consultation rooms, dry research

office spaces for clinical academics, nurses, study coordinators and administrative staff. The building also provides space to undertake research involving outreach pathology and point of care testing services and will allow for the collection of low risk research bio-specimens.

The realisation of the TRC was made possible by the Late Peter Ikin and the wishes of his estate to support HIV clinical research at St Vincent's.



RESEARCH OFFICE

The St Vincent’s Hospital Research Office manages and provides secretarial support to the St Vincent’s Hospital Human Research Ethics Committee (HREC) and is responsible for research governance across the St Vincent’s Health Network Sydney (SVHNS), the Darlinghurst Research Precinct and the Mater Hospital.



The Research Office ethics and governance officers have extensive experience preparing and reviewing submissions to the St Vincent’s Hospital HREC and are able to provide advice and assistance with submissions to the HREC, as well as site specific applications for governance review. The Research Office currently manages approximately 1500 research projects.

The Research Office also provides secretarial support to the New Interventional Procedures Assessment Committee (NIPAC).

The role of the Research Office expanded during 2015 to encompass intellectual property management and technology commercialisation and is responsible for providing secretarial support to the Intellectual Property Committee (IPC). St Vincent’s Hospital has a small but very active intellectual property portfolio and has a number of licensing agreements in place with a variety of industry partners. The IPC meets regularly to oversee this portfolio and review the hospital’s technology pipeline.

The Research Office is increasingly involved in the broad facilitation of research across the Darlinghurst Research Precinct and beyond in accordance with Research Strategic Plan 2013-2018.

RESEARCH OFFICE METRICS		
	2014	2015
HREC submissions	90	102
Low/negligible risk submissions	139	129
Site Specific Assessment - full submissions	101	115
Site Specific Assessment for Low/Negligible Risk projects	133	111
Clinical Trials - new	50	54
Clinical Trials - continuing	189	222
Clinical Trials - completed	27	21
RO gross revenue	\$225,645.00	\$342,299.00

IP AND COMMERCIALISATION METRICS		
	2014	2015
New invention disclosures	5	5
Provisional patent applications filed	3	2
No. active patent families	15	17
No. license agreements executed	0	2
No. active patent families managed by SVH to licensed commercial parties	8	8
gross commercialisation revenue	n/a	\$2,128,600.00

CLINICAL ETHICS FORUM

In March 2015, St Vincent’s Hospital, Sydney, hosted a Clinical Ethics Forum titled “Clinical ethics, healthcare and vulnerable populations”. This was a highly successful event, conducted in collaboration with the NSW Ministry of Health, which was attended by over 100 people from across Sydney.

The discussion centred on the meaning of vulnerability and the specific issues faced by various vulnerable patient populations and the clinicians who treat them. The forum was a mix of presentations, case studies and interactive panel discussions informed by clinicians, researchers, nurses, social workers and bioethicists.

GUEST SPEAKERS

Professor Lynn Gillam

Professor in Health Ethics at the Centre for Health and Society, Melbourne School of Population and Global Health, Clinical Ethicist at the Royal Children’s Hospital in Melbourne , Academic Director of the Children’s Bioethics Centre, Chair of the University of Melbourne Human Research Ethics Committee and serves on a number of ethics advisory bodies for state government agencies, professional bodies and the NHMRC.

Professor Wendy Rogers

Professor of Clinical Ethics at Macquarie University, Deputy Director of the Macquarie Research Centre on Agency, Values and Ethics. Member of the Australian Health Ethics Committee and co-chair of NSW Health Clinical Ethics Advisory Panel.

Professor Catriona Mackenzie

Professor of Philosophy at Macquarie University and Director of the Macquarie University Research Centre for Agency, Values and Ethics. She is currently Associate Dean (Research) in the Faculty of Arts. An academic philosopher by training, her research interests are in theoretical and applied ethics.

ST VINCENT’S CLINICIAN PANELISTS

Clare Nolan RSC,

Congregational Leader of the Sisters of Charity of Australia, Sister Clare was the Director of Nursing at St Vincent’s Hospital Sydney when the AIDS epidemic took hold in Australia and she remembers this as a very special time in her ministry.

Associate Professor Nadine Ezard (St Vincent’s Clinical School)

Area of interest: Drug and alcohol addiction, vulnerability and clinical outcomes.

Pauline Deweerd (Aboriginal Health Network Coordinator, SVH)

Area of expertise: Indigenous culture and healthcare.

Professor Jo-Anne Brien

Professor of Clinical Pharmacy (St Vincent’s and University of Sydney), SVH HREC Chair
Area of interest: Clinical Pharmacy, Health Services Research, Drug Access and Policy.

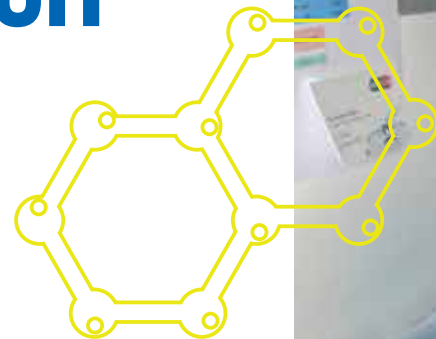
Professor Greg Dore (Kirby Institute, UNSW)

Area of expertise: Infectious disease, viral hepatitis clinical research.

Ms. Jenny O’Mahony (St Vincent’s Homeless Health Service)

Area of expertise: Mental health, alcohol and drug abuse, homelessness.

ST VINCENT'S CENTRE FOR APPLIED MEDICAL RESEARCH AMR REPORT



STRATEGIC DIRECTION

In October 2008 the Centre for Immunology and the Clinical Trials Unit from St Vincent's Hospital formed the St Vincent's Centre for Applied Medical Research or "AMR". This has since expanded to encompass all research on the SVHNS, SVPH and Sacred Heart Campuses. The AMR together with the Victor Chang Cardiac Research Institute, and the Garvan Institute of Medical Research form the Darlinghurst research hub.

The Centre for Immunology evolved from the first Clinical Immunology department in New South Wales at St Vincent's Hospital and was only the second in Australia. The Centre for Immunology was established in 1983 as a centre of St Vincent's Hospital Sydney and the University of New South Wales.

The Centre's headquarters is currently located on the St Vincent's Darlinghurst campus in the Lowy-Packer building, which it shares with the Victor Chang Cardiac Research Institute. AMR has dedicated modern research laboratory facilities in the building that is also physically connected with the Garvan Institute building with significant shared infrastructure including essential services and scientific resources.

AMR is committed to:

- ◆ Excellence in biomedical research. Disseminating the results of this research widely to the medical and scientific community and to the general public
- ◆ Undertaking undergraduate and postgraduate training and teaching
- ◆ Providing the highest standards of diagnostic service and patient care in accordance with the Mission of St Vincent's Hospital
- ◆ Strategic investment in programs and infrastructure that will promulgate high quality research across the campus. Recent examples include peer reviewed grants (\$100K), equipment grants, scholarship supplementation 'top-up' scheme for post graduate students, schemes to release clinician researchers to undertake research projects, centralised biobanking and tissue storage, biostatistical and clinical trial advisory services.

Strengthening St Vincent's research capacity has been a key strategic objective.

Commencing in around 2012, a series of strategies has been implemented including:

- ◆ The appointment of Professor Terry Campbell as Director of Research for SV&MHS.
- ◆ Development of a 5 year strategic plan, 'Research Strategic Plan 2013-2018 - Developing Healthcare Research', to guide the implementation and monitor the progress and success of our research strategic vision.
- ◆ Establishment of the Governance of St Vincent's Research Campus as a whole including a broadly representative Research Advisory Council which meets second monthly and a Research Executive Council which currently meets monthly and includes the most senior executives in the various entities within the Campus.

In broad terms, the St Vincent's strategy is to align its research strengths with its clinical flagships. Attaining adequate scale and financial sustainability are important and necessary goals for research flagships. It is acknowledged however, that some research areas may never attain significant scale but may nevertheless be supported for mission, clinical service or other reasons.



RESEARCH GOALS

1. Create an integrated research infrastructure and governance that supports collaborative research.
2. Develop priority research programs that build upon current strengths and strategic opportunities.
3. Generate robust funding to support & grow the research enterprise.
4. Recruit, retain, nurture & develop high quality researchers.
5. Leverage the benefits of the precinct for increased efficiency & integrated activities through resource sharing.
6. Enhance the application of research and its evaluation.

PARTNERSHIPS AND GROUPS

Research partnerships and Groups on the Research Campus include:

- Garvan Institute of Medical Research
- The Kinghorn Cancer Centre with Garvan
- Victor Chang Cardiac Research Institute
- Kirby Institute for Infection and Immunity in Society (with UNSW)
- Cunningham Centre for Palliative Care
- Nursing Research Institute (with Australian Catholic University)
- Clinical Research Unit for Anxiety and Depression (with UNSW)
- The Poche Centre Melanoma Institute, (with the University of Sydney)
- The Patricia Ritchie Centre for Cancer Care and Research (with the University of Sydney)

Together, we are committed to excellence in biomedical research, disseminating the results of our research widely to the medical and scientific community and to the general public, and providing the highest standards of diagnostic service and patient care.

GARVAN'S RESEARCH SCOPE

Research at Garvan is focused upon understanding the role of genes and molecular and cellular processes in health and disease as the basis for developing future preventions, treatments and cures.

For over 50 years, significant breakthroughs have been achieved by Garvan scientists in the understanding and treatment of diseases such as:

- ♦ Cancer
- ♦ Diabetes and obesity
- ♦ Neurological diseases such as Alzheimer's, Parkinson's, hearing loss, mental illnesses and eating disorders
- ♦ Osteoporosis
- ♦ Immunological diseases such as asthma, rheumatoid arthritis, multiple sclerosis and Sjogren's syndrome

THE KINGHORN CANCER CENTRE

The vision of The Kinghorn Cancer Centre is to realise the promise of innovative personalised medicine for people affected by cancer.

The Kinghorn Cancer Centre mission

As a Centre focusing on translational research and personalised cancer care, our mission is to align world-class cancer research with rapid translation to the clinic to improve outcomes for cancer patients by:

- ♦ building world-class facilities and strategic collaborations to enhance advances in science that translate into improved cancer diagnosis, treatment and prevention
- ♦ developing integrated, multi-disciplinary, multi-institutional approaches to cancer research and patient care to reduce the impact of cancer in the community
- ♦ providing a holistic, compassionate approach to cancer care throughout the entire cancer journey, from diagnosis to full recovery where cure is possible, and supportive care and information to all, with preservation of patient dignity
- ♦ establishing world-class educational and training programs to develop high quality researchers and clinicians to optimise translational outcomes.

The Kinghorn Cancer Centre is placed as a major centre in Australia focused on the translation of research breakthroughs into novel diagnostic, prognostic, treatment and prevention options for a number of key National Health Priority cancers including: breast, prostate, GI (pancreas and colorectal) and non-Hodgkins lymphoma.

THE VICTOR CHANG CARDIAC RESEARCH INSTITUTE

The Victor Chang Cardiac Research Institute has earned its place on the global stage as one of the most respected heart research facilities in the world. Dedicated to finding cures for cardiovascular disease, our fundamental mission is to relieve pain and suffering and promote the wellbeing of people everywhere. Renowned for the quality of its breakthroughs, the Victor Chang Institute uses innovative transplantation techniques and conducts complex molecular and genetic analysis, to discover better ways to diagnose, treat and ultimately prevent the onset of heart disease.

Heart disease remains the single biggest killer of all Australians. Our world class scientists are striving to make discoveries which could help prevent the deaths of millions of men, women and children every year.

Dr Victor Chang, AC (1936 – 1991)

Dr Victor Chang was one of Australia's most gifted heart surgeons, a pioneer of modern heart transplant surgery and a humanitarian. Dr Chang was passionate about the power of discovery. He had a bold vision to establish a world-class medical research institute, knowing that while he could save hundreds of lives through surgery, he could save millions through research.

THE KIRBY INSTITUTE

The Kirby Institute for Infection and Immunity in Society was formed on the 25th anniversary of the establishment of the National Centre in HIV Epidemiology and Clinical Research (NCHECR). Named for former High Court judge Michael Kirby AC, the Kirby Institute now fulfils a much broader role than was first imagined in 1986 when the three National Centres in HIV research were formed in response to the then-emerging and little understood HIV pandemic.

NCHECR collaborated extensively in the international effort that ensured that HIV became one of the most intensively studied diseases in the history of medical science. Over time, the skills, techniques and expertise developed in the study of HIV was applied to a range of other infectious diseases, notably viral hepatitis and sexually transmissible infections. The new name of the Kirby Institute takes in this broader scope and, reflecting Justice Kirby's lifelong interest in health and human rights, also reflects the diverse and often disadvantaged communities which form the client groups of our study.

NURSING RESEARCH INSTITUTE

The Nursing Research Institute (NRI) is a collaboration between St Vincent's and the Australian Catholic University (ACU). The Institute undertakes multidisciplinary clinical and health services research focused on patient outcomes and implementing evidence into practice.

The NRI conducts nursing research while promoting evidence based implementation of clinical practices within a robust culture of inquiry and innovation in nursing and patient care. Our team undertakes programs of rigorous collaborative, multi-disciplinary research in line with national health priorities. Our key research areas are:

- ♦ Acute Care
- ♦ Chronic Care
- ♦ Innovative Healthcare Delivery
- ♦ Implementation Research

A major focus of research conducted at the Nursing Research Institute centres on knowledge transfer or implementation research. NRI researchers are currently conducting projects that examine ways to change clinician behaviour by implementing evidence based interventions to improve patient outcomes.

THE CUNNINGHAM CENTRE FOR PALLIATIVE CARE

The Cunningham Centre for Palliative Care sits within the Sacred Heart Health Service.

The Centre aims to achieve its goals through academic collaboration and leadership and by promoting evidence-based practice through health professional education, quality improvement activities and the integration of research outcomes into clinical practice and policies.



2014 RESEARCH WEEK AND RESEARCH SYMPOSIUM

St Vincent's Campus Research Week is a celebration of the remarkable depth and breadth of translational healthcare research which occurs every day across the St Vincent's Network. This is an opportunity to showcase our research, meet our researchers and acknowledge our achievements.



We were fortunate to be able to have the Hon Malcolm Turnbull MP, Member for Wentworth (at the time), to open and launch Research Week with Mr Paul McClintock AO, from the SVHA Board.

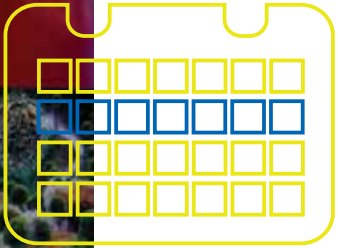
There were exciting activities occurring each day including meeting researchers from various clinical departments. Throughout the week staff and visitors were able to view the many displays in the foyer and mezzanine levels of the public hospital; learning about current research projects at one of the educational symposia or special lectures; viewing the exhibition of photographs and displays of how technology and teaching has advanced innovative healthcare over the decades. Each year, the Grand Finale of Research Week is concluded with the St Vincent's Campus Research Symposium.

A highlight of the 2014 Research Week was the 'Then and Now' exhibition on Level 4 of the Xavier Building which demonstrated the history of teaching and research at St Vincent's.

2015 RESEARCH WEEK AND RESEARCH SYMPOSIUM

The St Vincent's Campus Research Week encouraged all of our staff to take the time to get involved and to learn more about the incredible achievements of the researchers across our Campus.

Throughout Research Week 2015, display booths were set up where passers-by had the opportunity to meet researchers from St Vincent's, Victor Chang Cardiac Institute and the Garvan Institute for Medical Research. These display booths showcased medical research from a variety of disciplines, with many featuring hands-on health checks and an opportunity to speak to the researchers to learn more about their work.



- For the first time, guests were able to listen to five minute "fast forward" medical presentations by researchers and patients. Held from midday to 1pm from Monday to Wednesday, these bite-sized presentations give a diverse overview of topics including genomics, translational cancer research and using zebra fish for research.
- A number of different events were offered and staff were encouraged to participate in them:
- ♦ **Opportunity to meet our researchers** - The annual St Vincent's Research Week brought together world-renowned researchers and clinicians from around the Campus to present their latest research through displays in the foyer of the Public Hospital and on the Level 4 Mezzanine. It provided the opportunity to speak to incredible researchers from across the Institutes and Departments, learn more about their huge range of research that is being undertaken at St Vincent's and take part in their studies.
 - ♦ **Educational seminars** - Numerous seminars on a variety of research topics were held throughout the week. For the first time, our researchers hosted five minute "pop up" seminars in the Mezzanine during lunch time, giving a snapshot of their work and studies.
 - ♦ **Research Skills Workshops** - held on the 9th September hosted by the Nursing Research Institute and Allied Health Research Unit.
 - ♦ **Allied Health Research Symposium** - held on 8th September. This year's topic was Health Technology in Allied Health Research and implications for practice. This symposium was in collaboration with the Faculty of Health Sciences, University of Sydney.
 - ♦ **St Vincent's Campus Research Symposium** - held over Thursday 9th September and Friday 10th September, this Research Symposium brought together the brightest minds across the Campus to share their research with peers.

AWARDS BY SPECIALTY OR DEPARTMENT



DR MARK POLIZZOTTO – CANCER INSTITUTE NSW- FUTURE RESEARCH LEADERS FELLOWSHIP

Dr Mark Polizzotto, a St Vincent's Haematologist and Kirby Institute researcher has been awarded a major Cancer Institute NSW grant to develop a clinical trial program in cancers associated with HIV infection. The goal of the prestigious five year Future Research Leaders Fellowship is to develop new therapies to improve outcomes for people with HIV and cancer.

PROF LESLEY CAMPBELL - SIR KEMPSON MADDOX AWARD (2014)

We're very proud to announce that Prof Lesley Campbell, Director of Diabetes Services at St Vincent's was recently the recipient of Australian Diabetes Council NSW's most prestigious award – the Sir Kempson Maddox Award, in recognition of her significant contribution to research, education and advocacy in diabetes.

In presenting the award, Sturt Eastwood, CEO of Diabetes NSW said "Her distinguished career and personal passion for helping people living with diabetes should be applauded." We applaud you, Professor Campbell.

ST VINCENT'S STROKE RESEARCH AMONG THE BEST OF THE BEST (2014)

St Vincent's is very proud to have been nominated for a NSW Health Award, for our joint project with NSW Agency for Clinical Innovation – 'The Quality in Acute Stroke Care Implementation Project' (QASCIP).

Nominated under the Translational Research category, the landmark project achieves better service delivery by providing multi-disciplinary clinician education, barrier assessments and clinical support.

The QASCIP introduced three clinical protocols to manage fever, hyperglycaemia and swallowing after strokes across NSW. It was the result of a collaboration with clinicians, the NSW Agency Foundation, and all Local Health Districts from April 2013 to June 2014.

The findings of this collaboration demonstrated how spread of proven interventions can be achieved on a large scale and within a short time to the betterment of stroke patients across NSW. Congratulations to Professor Sandy Middleton and team. The NSW Health Awards are extraordinarily competitive and to be nominated as a finalist is a wonderful achievement.

ST VINCENT'S IMPLANTS WORLD'S SMALLEST HEART SUPPORT DEVICE

September 2015

The MVAD is a heart pump that provides circulatory support for patients with advanced heart failure. Providing improved blood-flow paths, the MVAD significantly improves hemodynamic function. In addition, the MVAD incorporates a pulsatility algorithm that allows the cardiologist to customise the device for each patient, providing four pulse settings designed to enhance aortic valve function and reduce chronic bleeding events.

In Sept 2015 2 patients of St Vincent's (aged 21 and 34) became the world's third and fourth patients to receive the HeartWare MVAD Pump. St Vincent's is participating in an international trial of the MVAD with the first two patients being implanted recently in Europe.

Both patients were experiencing end-stage heart failure. In both cases there were no donor hearts available so the St Vincent's Transplant Team implanted the new device as a last resort.

"Currently, nearly one half of our patients undergoing a heart transplant at St Vincent's have already been implanted with mechanical devices, like the MVAD, as a bridge to transplant. Having such a small device that can be more easily implanted will potentially make a major difference in the management of some of our end-stage heart failure patients," said Professor Chris Hayward, St Vincent's Cardiologist.

"I am confident that the new device could lead to better patient outcomes and an improved quality of life for our patients," said Dr Paul Jansz, Principal Investigator and St Vincent's Heart Lung Transplant Surgeon.

PHARMACY - SUSAN WELCH

Winner, SVHA Quality Award
Exceptional Care –

"Pain assessment and management in elderly patients - implementing evidence based practice in the acute care setting."

NURSING RESEARCH INSTITUTE – PROF SANDY MIDDLETON

Winner, 2014 NSW Premier's Public Sector Award for Improving Performance and Accountability. Quality in Acute Stroke Care Implementation Project.

Finalist, NSW Health Awards 2014, Translational Research.

Winner, NSW Health Excellence in Nursing and Midwifery Awards 2014. Excellence in Innovation Research.

Runner up, National Lead Clinicians Group, 2014 Awards for Excellence in Innovative Implementation of Clinical Practice.

NEUROSCIENCE

Bruce Brew – Order of Australia (AM)
June 8 2015

Prof Guillemin – Scientific paper of the year award, Sultanate of Oman (PLoS ONE) 2015

Dr Cysique – 2015 Gilead Science Fellowship

INNOVATION AND EXCELLENCE AWARDS



St Vincent's Health Australia (SVHA) Innovation and Excellence Awards are held annually to recognise the great work and celebrate the successes across the wider organisation. The awards are open to any individual or team of people across any of the SVHA health or aged care services.

In 2014, St Vincent's Hospital Sydney won awards in the following categories:

**ADVOCATING FOR THE POOR AND
VULNERABLE IN OUR COMMUNITY**

The Aboriginal Identification in Hospital
Quality Improvement Project (AIHQIP)
St Vincent's Hospital Sydney.

Pauline Deweerdt, Social Worker & Director
of Aboriginal Health.

**EFFECTIVE CLINICAL GOVERNANCE –
JOINT WINNERS**

Pain assessment and management in
elderly patients - implementing evidence
based practice in the acute care setting.

Julie Gawthorne, Clinical Nurse Consultant,
Emergency Department.



RESEARCH GRANTS

ST VINCENT'S CLINIC FOUNDATION

The St Vincent's Clinic Foundation was established in 1992 to further the educational and research development on the St Vincent's and St Joseph's Campuses. The research that is funded covers a wide range of projects with an emphasis on supporting upcoming researchers on the Campus.

The Foundation has contributed more than \$13 million in funding for research and education projects across St Vincent's. In particular, the Foundation aims to assist research programs so that they are eligible to apply for external grants (eg NHMRC grants), to underpin clinical excellence with quality research and to financially assist "up and coming" researchers.



In 2014 and 2015, the Foundation's Scientific Committee assessed projects for the AMR and St Vincent's Private Hospital. In this time, 39 research grants were awarded totalling \$1,500,000.

AMR GRANTS

Translational Research Grants offered by St Vincent's Centre for Applied Medical Research are to promote translation research particularly in its early phase.

The grant is envisaged to support salary, equipment and research consumable costs to assist early stage healthcare researchers to participate directly in research projects as a component of their professional career. These grants are intended for early stage researchers to mobilise a translational research project to publication with a view to attracting further funding from other peer reviewed grant agencies (eg NHMRC, non-government organisations).

There are 3 grants intended to seed fund projects that have a clear project trajectory to improve clinical practice.

- ♦ One major grant of \$50,000 per annum
- ♦ Two additional grants \$25,000 each per annum



SOCIAL JUSTICE GRANTS

Social Justice through Health Program & SVHA's Inclusive Health Innovation Fund (IHIF)

Inequity in health outcomes arising from economic need, marginalisation and/or vulnerability is avoidable and unjust. Righting inequity requires a focus on avoidable differences in care and outcomes for people we care for across St Vincent's Health Australia (SVHA).

SVHA aims to provide fairness in opportunity for all people we care for to obtain their full health potential, to access and utilise services and to participate fully in their health care. Under SVHA's five-year strategic plan (enVision 2025) we are specifically focusing on improving health outcomes for five vulnerable groups including:

- People with mental health concerns
- People with drug and alcohol addiction
- People with health concerns who are homeless
- Aboriginal and Torres Strait Islander People
- People with health concerns who are prisoners

Social Justice Enquiry requires breadth to research that is different to the traditionally dominant bio-medical focus of health care research. The theoretical bases of social justice enquiry include sociology, psychology, public health, political science, lived experience and rigorous quantitative methodology.

It involves both Mission and Research Directorates working together and activities that include broad reviews from services across the organisation to individual patient outcome reviews in service initiatives. This complex undertaking involves vertical and horizontal depth and input across many services – this challenge will also be the strength of the work as we begin to understand not only the flow of care but the experience of vulnerable people interacting with that care. As a result, it is expected that we will be better able to articulate vulnerability and begin to change it.

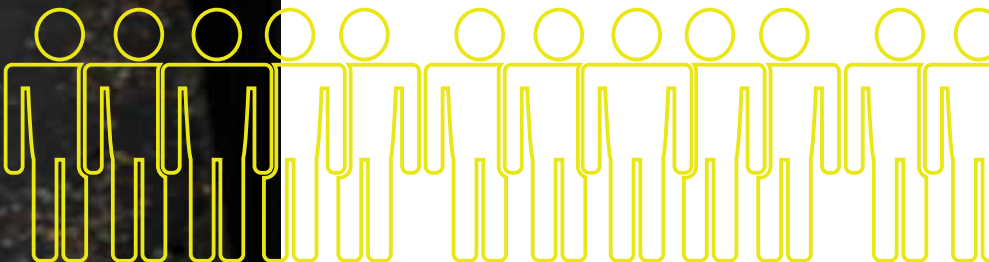
An important enabler to achieving this is SVHA's Inclusive Health Innovation Fund (IHIF). This fund provides resources to engage and support clinician driven projects for SVHA staff passionate about improving outcomes for the poor and vulnerable.



All IHIF projects must include:

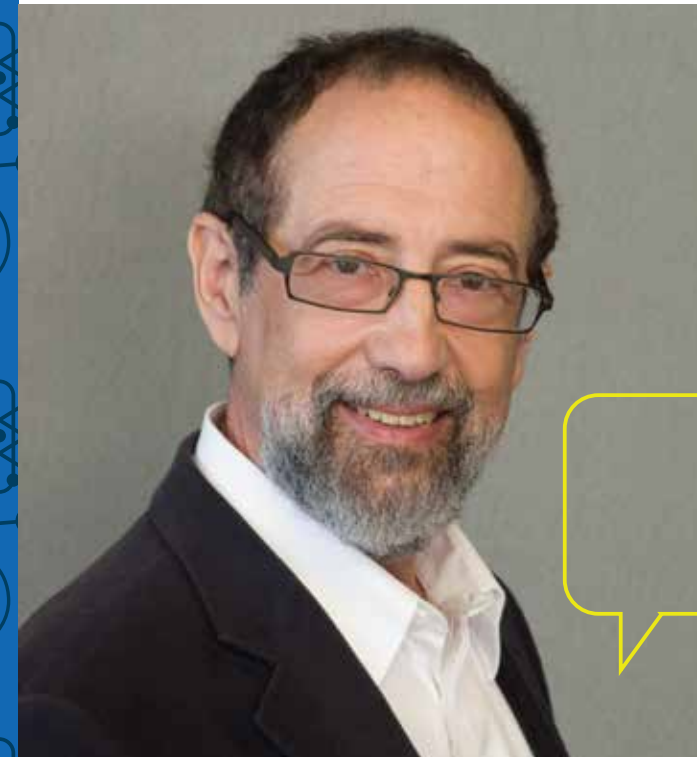
- At least one of the five vulnerable groups
- At least one of the outcome measures
- An advocacy component

It is important that smaller clinician lead research projects are supported as well as larger research. Funding will be received over 3 years to support local research and projects grants process already in place but specifically targeted to SJH proposals or aspects to proposals. These grants would provide opportunities such as clinician buy-out time to undertake projects and research projects in their area of expertise. Oversight of the selection and approval process will be conducted in partnership between Mission and the Research Directorate.



Striving for
SOMETHING GREATER

GROUND BREAKING RESEARCH STORIES



THE TGFB FAMILY CYTOKINE MIC-1/GDF15 FROM BENCH TO BEDSIDE *Sam Breit*

A blood protein called MIC-1/GDF15 has been under intensive study by Professor Breit's research group, following its discovery by them more than 15 years ago.

Their studies indicate that it is present in blood and tissue in small amounts, but these increase substantially under the influence of stimuli such as injury, inflammation or cancer. They have discovered that MIC-1/ GDF15 is involved in the pathogenesis of several groups of diseases, including chronic inflammatory diseases such as rheumatoid arthritis and vascular disease leading to heart attacks and strokes where it is thought to play a role in dampening down the chronic inflammation. MIC-1/GDF15 is also overproduced by most cancers, where it helps suppress the growth of early tumors. However, when made in large amounts in late stage cancer, it can cause an anorexia/cachexia syndrome, which limits therapy and greatly speeds the demise of many cancer patients. It does this because of its powerful actions as an appetite suppressant.

This recognition of its role in anorexia cachexia of cancer and several other chronic diseases has suggested that it could have a clinical application: the MIC-1/GDF15 protein might be used to treat severe obesity and antibodies to MIC-1/ GDF15 might be used to treat the currently intractable cancer anorexia/cachexia syndrome by mopping up excess circulating protein. These two applications discovered in Professor Breit's lab have

been licensed by St Vincent's Hospital to two large multi-national pharmaceutical companies, who are expected to start undertaking clinical trials to treat obesity and anorexia/cachexia, in the near future.

Professor Breit's group first discovered that serum levels of MIC-1/GDF15 rise in many disease processes, including cancer, cardiovascular disease, rheumatoid arthritis, chronic renal failure and diabetes. These studies, confirmed and expanded by many other groups, have suggested that its measurement in blood may have significant clinical utility in predicting disease or disease outcome. These discoveries have been licensed by St Vincent's Hospital to Roche Diagnostics, one of the world's largest diagnostic assay providers. St Vincent's Hospital licensed assays to measure MIC-1/GDF15, have just started to be used for clinical diagnostic purposes in Europe and will be available in Australia and other countries in the near future.

MIC-1/GDF15 is a biologically important protein with therapeutic and diagnostic applications. Discoveries from basic research at St Vincent's Hospital have allowed these applications to progress down a clinical pathway, which already has or will see them being used in the clinic in the near future.

DCD ORGAN CARE SYSTEM “HEART IN A BOX”

Peter Macdonald, Kumud Dhital



The St Vincent's Hospital Heart Lung Transplant Unit has carried out the world's first distant procurement of hearts donated after circulatory death (DCD). These hearts were subsequently resuscitated and then successfully transplanted into patients with end-stage heart failure.

Transplant Units until now have relied solely on donor hearts from brain-dead patients whose hearts are still beating. The use of DCD hearts, where the heart is no longer beating, represents a paradigm shift in organ donation and will herald a major increase in the pool of available hearts for transplantation.

St Vincent's has recently transplanted two patients using DCD hearts both of whom have recovered extremely well. The DCD transplants were carried out following pioneering basic and translational research undertaken by the Victor Chang Cardiac Research Institute and St Vincent's Hospital, who have jointly developed a special preservation solution that together with the use of a novel portable console to house, resuscitate and transport donor hearts; has made this milestone achievable.

The ex vivo Organ Care System (OCS – Transmedics™) involves the Transplant retrieval team connecting the donor heart to a sterile circuit where it is kept beating and warm thereby limiting the detrimental effects of cold ischaemia (a period where the heart is dormant without oxygen and nutrients) that occurs with the standard organ preservation mode of packing the heart on ice in an Esky. Once housed inside the portable device, the heart is reanimated, preserved and able to be functionally assessed until it is ready to be placed inside the recipient.

Coined the “Heart in a Box”, for the past several months the OCS has provided the transplant surgeons greater versatility with regard to both organ preservation and resuscitation. This has enabled the St Vincent's Transplant Unit to conduct several regular heart transplants this year through more long distance organ retrievals and most importantly, retrieval of “marginal hearts”, that is, brain death hearts previously regarded as being unsuitable for transplantation.

This portable OCS technology will help significantly in mitigating the significant disparity that remains between the increasing number of patients with

end-stage heart failure on the transplant waiting list and the number of suitable donor-hearts that are available. Whilst the use of DCD organs has already made an enormous positive impact on liver, kidney and lung transplantation, it has to date not been possible to use DCD hearts. This is the first time internationally that human heart transplantation has been achieved with hearts donated following circulatory death and procured at a distance with portable organ preservation technology.

In acknowledging the significance of this milestone for his Unit, Professor Peter MacDonald, Medical Director of the St Vincent's Heart Transplant Unit, Head of the Transplantation Research Laboratory at the Victor Chang Institute and Professor of Medicine at UNSW said, “In many respects this breakthrough represents a major inroad to reducing the shortage of donor organs. As we mark the 30th anniversary of the St Vincent's Heart Lung Transplant Unit and the 20th anniversary of the Victor Chang Institute this year, this is a timely breakthrough. In all our years, our biggest hindrance has been the limited availability of donor organs.”

According to St Vincent's Heart/Lung Transplant surgeon and Victor Chang Institute researcher, A/ Professor Kumud Dhital, who performed both transplants, “It is interesting to note that DCD hearts were utilised for the first wave of human heart transplants in the 1960's with the donor and recipient in adjacent operating theatres. This co-location of donor and recipient is extremely rare in the current era leading us to rely solely on brain dead donors – until now.”



DRUG & ALCOHOL *Nadine Ezard*

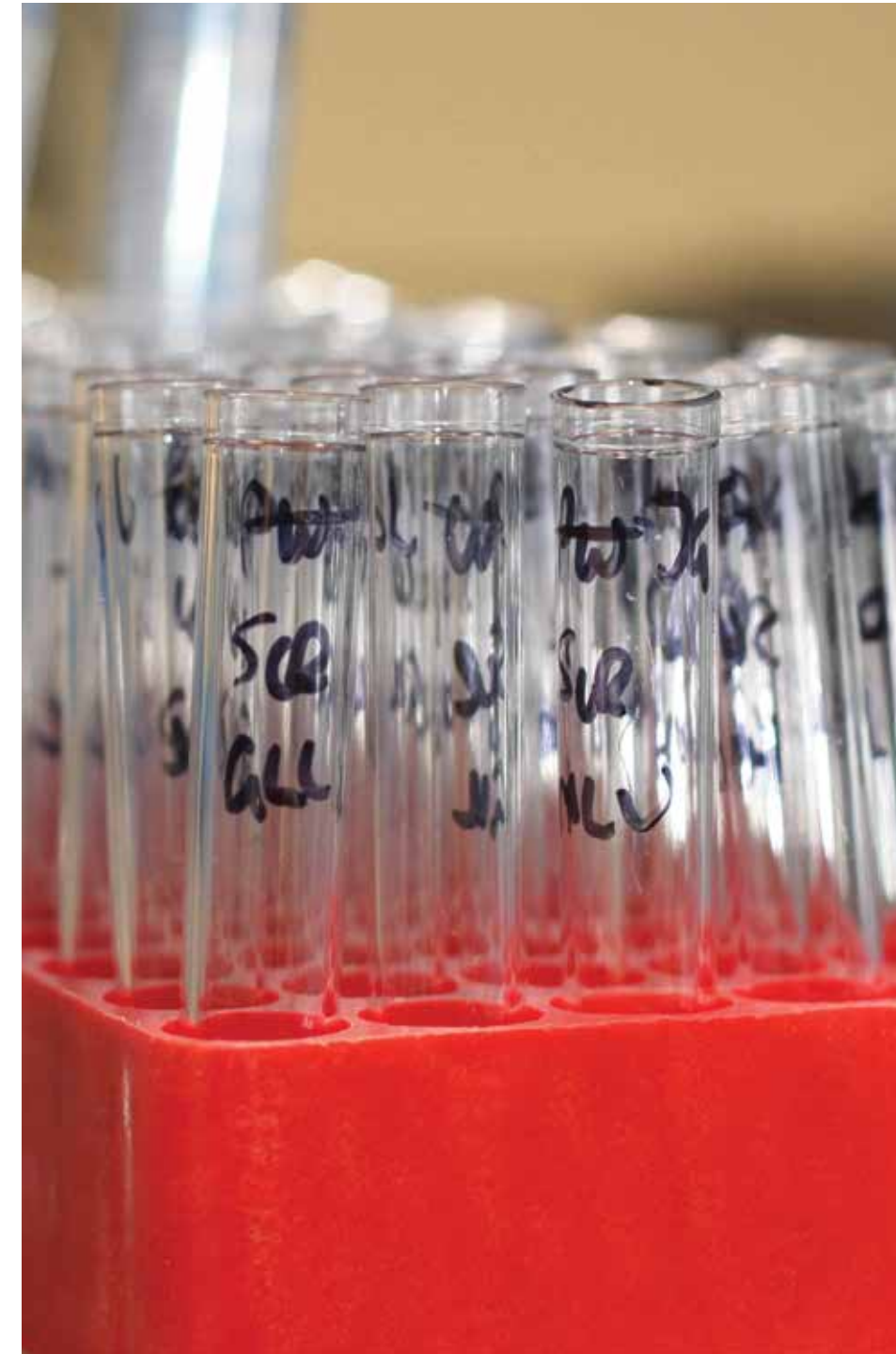
St Vincent's Hospital Alcohol and Drug Service (SVH ADS) provides hospital liaison, an opioid treatment program, a stimulant treatment program, an alcohol and drug information service and a newly refurbished medicated inpatient alcohol and drug treatment unit. The SVH ADS aims to advance knowledge through conducting world leading treatment research.

The Service has worked closely with NSW Health to identify and respond to the growing number of methamphetamine (MA)-related presentations. In 2015, it received additional funding to expand its services it had been providing as one of only two specialist treatment programs in the State. It receives additional funding from the Australian Government Department of Health for an innovative early intervention program. This intervention is now being adapted for trialling as an electronic smartphone application. In partnership with Hunter New England/Newcastle University SVH ADS has been undertaking research into agonist replacement-type therapies which includes one of the world's first safety trials of a new ADHD medication (lisdexamfetamine) for the treatment of MA dependence. SVH ADS has received \$1.3 million NHRMC funding for a randomised double-blind placebo-controlled study of lisdexamfetamine for the treatment of methamphetamine dependence.

SVH ADS leads a range of other research projects including in alcohol (a Managed Alcohol Program (MAP) for Sydney's Homeless) and tobacco (HosQuit: Universal support to help inpatients quit smoking) and is involved in collaborative research around Australia such as opioid overdose prevention, hepatitis C treatment, and an NRMHC funded project on methamphetamine use in Aboriginal Communities lead by A/Prof James Ward at the University of South Australia.

The Service receives research funds from NHMRC, the foundation for alcohol research and education (FARE), the Curran Foundation, and NSW Health, and supervises higher degree students (Masters and PhD) from UNSW.

In 2015 SVHS was chosen as the site for launching the Australian Government's National Ice Task Force Report.



OPENING OF THE CLINICAL GENOMICS UNIT

The St Vincent's Clinical Genomics Unit, which has been established by the Garvan Institute of Medical Research and St Vincent's Hospital was opened by the Hon. Pru Goward MP, NSW Minister for Medical Research, in October 2016.

According to Professor Jerry Greenfield, Founder of the St Vincent's Clinical Genomics Unit, "For the first time, we will be able to access genomic information about our patients that will shine new light on their disease, enabling far more informed diagnoses and treatments. In some instances we may find other diseases present, in other cases we might revise the diagnosis and in the majority of cases we will be more enlightened about the patient's individual disease to enable us to provide more precise and tailored treatment."

The St Vincent's Clinical Genomics Unit provides a clinical-laboratory interface, a bridge for genomic medicine to be integrated into the mainstream of Australian healthcare. Patients referred to the Unit will be offered comprehensive genetic counselling and genomic

testing on the same campus for the first time in Australia in order to advance personalised care and obtain better outcomes.

"Today is a very significant day for the St Vincent's Campus. The new Unit embodies everything about translational research and is exactly what was envisaged when the Garvan was first conceived in the late 1950's. What we are witnessing here are diagnostic and prognostic breakthroughs on a scale that no-one would have anticipated only a decade ago, being rapidly applied to the patient to provide far more precise treatment," said A/Prof Anthony Schembri, CEO of St Vincent's Hospital.

"This will be the portal to the future of medicine," said Professor John Mattick, Executive Director of the Garvan Institute of Medical Research.

EMERGING AREAS OF INTEREST



HIV MALIGNANCIES *Mark Polizzotto*

Dr Mark Polizzotto, a leading researcher from the Kirby Institute at UNSW and St Vincent's Hospital has been awarded a prestigious five year Future Research Leaders Fellowship from the Cancer Institute NSW. The goal of the program is to develop new therapies to improve outcomes for people with HIV and cancer.

"People living with HIV remain at a substantially elevated risk of cancer, with cancer now being the leading cause of death in this group," said Dr Polizzotto. "As people with HIV live longer, cancers are becoming increasingly important causes of morbidity and mortality, however people living with HIV are excluded from standard clinical trials of new cancer therapies, partly due to the complexity of their medical condition. It is therefore essential that dedicated trials are available to enable them to reap the benefits of rapid and ongoing advances in cancer therapy."

As part of this new clinical research program, and supported by the new grant, Dr Polizzotto has led the development of a new collaboration with the U.S. National Cancer Institute AIDS Malignancy Consortium, the peak clinical trial group for HIV-associated malignancies globally. This has enabled the establishment of an AIDS

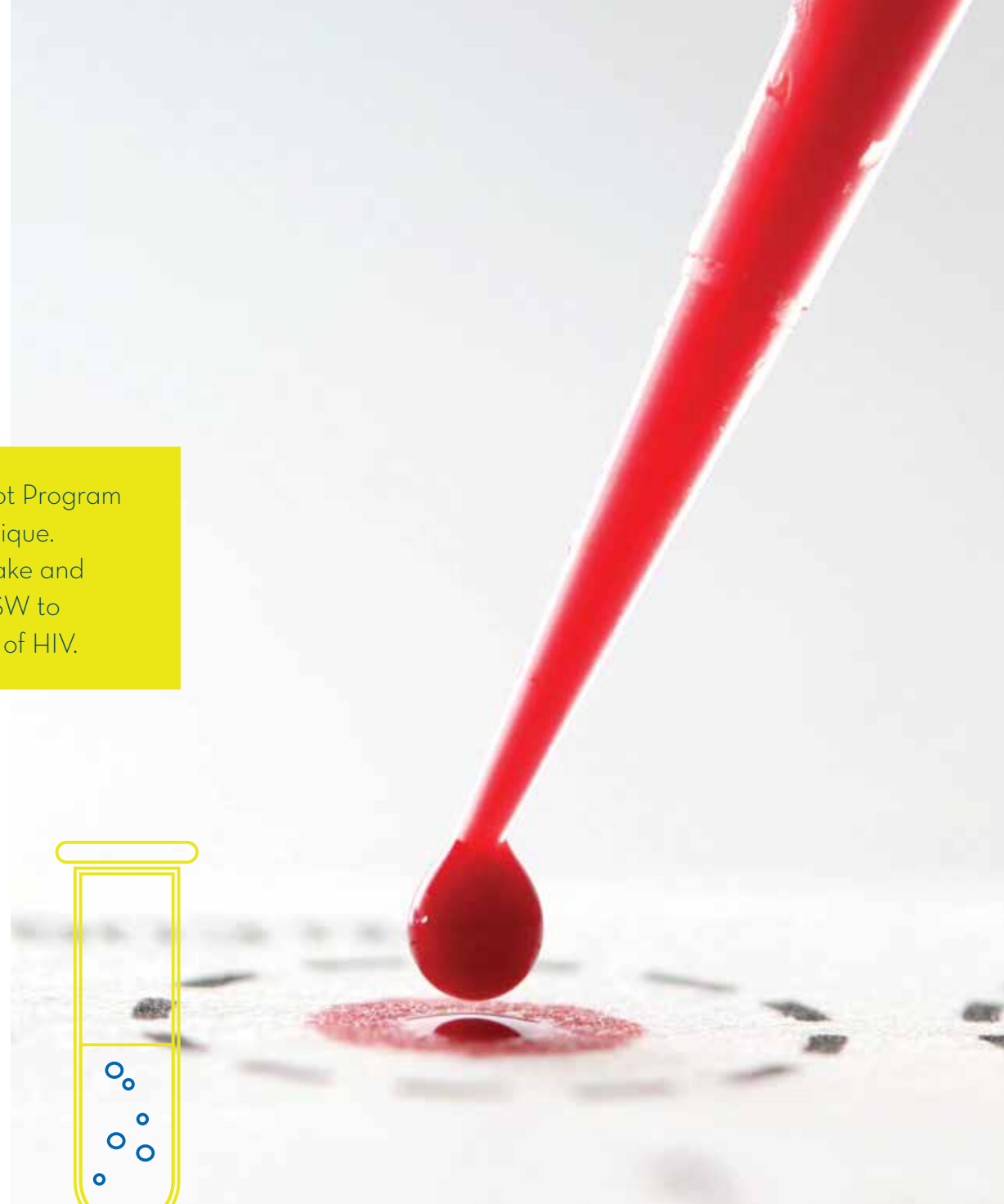
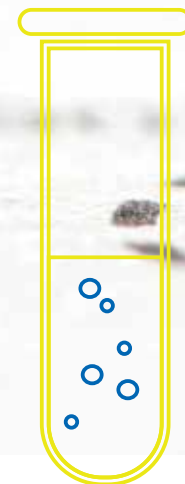
Malignancy Consortium clinical trial site at the Kirby Institute and St Vincent's Hospital, their first core site outside the United States. Through this collaboration, Australian patients with HIV-associated cancers will be able to access these innovative trials of new therapies for the first time. The grant also includes support for trials in the prevention of certain HIV-associated cancers and the establishment of a clinical biobank to support future basic and translational research in the field.

In addition to new trials of treatments, the grant also includes support for trials of novel approaches to preventing certain HIV-associated cancers and the establishment of a clinical biobank to support future basic and translational research in the field. Dr Polizzotto is a member of the Translational Cancer Research Network, based at UNSW, which will support these collaborative projects.

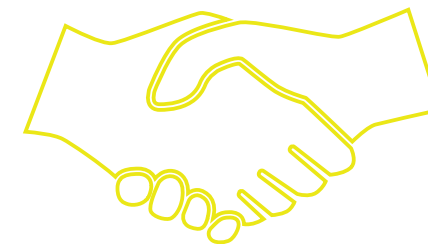


HEALTH IMPLEMENTATION RESEARCH

The NSW Dried Blood Spot Self-Sampling HIV Testing Pilot Program is a study to assess the feasibility of this new testing technique. If proven to be successful it will hopefully improve the uptake and frequency of HIV testing among priority populations in NSW to enable earlier diagnosis and reduce onward transmission of HIV.



PARTNERING WITH BIOTECH RESEARCH PARTNERS



GENE THERAPY PROGRAMS ARE OPERATED BY THE BIOTECHNOLOGY COMPANY CALIMMUNE.

Calimmune is a clinical-stage biotechnology company focused on developing novel gene therapies that have the potential to improve and protect the lives of patients. Its focus is on improving the patient experience for stem cell gene therapy by making it an outpatient procedure. The therapeutic candidates in development aim to increase efficacy, reduce toxicity, and make these treatments more accessible to patients worldwide.

Calimmune's lead development programs are novel outpatient ex vivo gene therapies for hematologic diseases. The majority of the work involves molecular and cell biology in two disease areas, HIV and hemoglobinopathies such as sickle cell disease and beta thalassemia. Calimmune is analysing the impact of anti-HIV gene constructs targeted to both HIV and cellular factors required for HIV infection and replication. This work has progressed to clinical trial and may allow reduced requirements for anti-retrovirals.

Monogenic diseases such as hemoglobinopathies are prime targets for gene therapy due to their high prevalence, significant morbidity and mortality, and the resulting high cost of medical care. Gene therapy has the potential to greatly improve patient outcomes and significantly reduce associated medical

costs. Calimmune's approach for the treatment of sickle cell disease involves introduction of a healthy globin gene into the patient's own hematopoietic stem cells (HSCs) via a viral vector. Following introduction of the globin gene, Calimmune is developing technology that can be used to positively select for the modified HSCs, thus increasing the population of modified versus unmodified cells in the patient's system. Patients will potentially be relieved of painful symptoms and have a reduced or ablated requirement for blood transfusions.

The work of this program at AMR is evidence of our linkage with the biotechnology industry and leveraging the core competencies of both organisations.

Contact Information and Acknowledgements

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St Vincent's Centre for Applied Medical Research extends its sincerest thanks to all staff, patients, volunteers and collaborators for their contribution to this publication.

St Vincent's Centre for Applied Medical Research Review 2014 & 2015

Editor: Anna Byrne

Design: Leading Hand Design

Images: Grant Turner, Mediakoo & Stock Photos