



# St Vincent's Clinical School 2015 Annual Report

Never Stand Still

Faculty of Medicine

St Vincent's Clinical School



The Clinical School would like to acknowledge and honour the Aboriginal Elders of the Gadigal People of the Eora Nation, those who once lived here and first walked this land and to their descendants who maintain these spiritual connections and traditions. We acknowledge that the Gadigal people occupied and cared for this land over countless generations and we celebrate their continuing contribution to the life of this region.

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**Cover Images:** Dr Natalie Caristo with  
Phase 1 students (top); Dr Russell Clark  
with Phase 3 students.

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# INTRODUCTION

Professor Allan Spigelman  
Clinical Associate Dean, St Vincent's  
Clinical School (UNSW)

Welcome to the 2015 Annual report for our Clinical School. The year just passed has seen significant change within our own University. With a new Vice Chancellor & President and a new Dean for Medicine, who both graced our 2015 annual conjoint dinner in a first for any of our Clinical Schools, UNSW and the Faculty embarked on an ambitious agenda of improvement, starting with a bold 10 year UNSW Strategic Plan. I encourage you to access and read the UNSW Strategic Plan via <http://www.2025.unsw.edu.au/> A copy of the Plan will be attached for those to whom the Clinical School emails this report.

UNSW commissioned Deloitte Access Economics to quantify the economic benefit to Australia of Australian Universities in general and of UNSW in particular. Every \$1 invested in university research was estimated to produce a \$5-\$10 return to the economy, with 10% of GDP attributed to the impact of University research. Around 11,700 full time jobs were created by UNSW operations and student and visitor spending in 2014, \$15 billion was added to GDP from the impact of UNSW research, with \$1.76 billion contributed to the national economy.

At the local level we remain grateful to our conjoint appointees who give their expertise and time to help train the nation's future doctors. If you are reading this in that capacity, then thank you again on behalf of our patients and our students. I acknowledge that without the close collaboration that exists between UNSW and St Vincent's Hospital Sydney, St Vincent's Clinic and St Vincent's Private Hospital Sydney, all as part of St Vincent's Health Australia, we would not be able to do this. Several thousand UNSW medical students have passed through our doors since an Act of Parliament established St Vincent's as a teaching hospital for UNSW medical students in 1968, and many have returned to work here in both junior and senior capacities. Of those who have not, many refer patients back to this, their alma mater, remembering the values that underpin our work.

It was thus appropriate that we were able to seat the UNSW Vice Chancellor & President, the UNSW Operations Director & International and External Liaison to the President and Vice Chancellor, the UNSW Chief of Staff and Vice President, the Dean and the Deputy Dean of Medicine, and the Chief Executive Officers of St Vincent's Health Australia, St Vincent's Hospital Sydney, St Vincent's Clinic and St Vincent's Private Hospital Sydney, as well as the head of the St Vincent's Clinical School, at the same table for our annual dinner.



Dr Darren Gold

## FROM THE DIRECTOR OF MEDICAL STUDENT EDUCATION

It almost seems like only yesterday that I was writing the end of year report for 2014 and no sooner is that volume consigned to the historical bookshelves I am writing the report for 2015. It has been another busy but accomplished year for us at St. Vincent's Clinical School, having welcomed another year of brand-new students into Phase 1, and successfully seeing our current Phase 3 students through their final year exams and into internship. The school itself had another set of excellent results from its own Phase 3 students, with all of them successfully achieving their degree and the entitlement to call themselves a doctor. I wish them all well with their future careers.

This year the school further extended its community projects and welcomed some of the senior boys at Sydney Grammar School from College Street into the Medical School and hospital to provide some experience to those considering medicine as a career. We received very positive feedback, and many of those boys will have now completed their HSC and perhaps we will see some of them in the corridors of our hospital as soon as next year. We wish them all success.

Fortunately, this year the medical students had one singular failure, in that they were unable to overcome the doctors in the annual Students vs. Doctors football match held at Weigall Playing fields, the Doctors winning by a score of 2-1.

There are however some changes to the administrative set up within the medical school for 2016 with the announcement that Naomi will be leaving for Maternity leave. She and her husband are currently expecting their first baby and I am sure I speak on behalf of everyone at the medical school, along with students past and present; all who have had the good fortune to be associated with Naomi over her 10+ years at St Vincent's Clinical School, in wishing her a safe delivery and all health and happiness in her new role as a mother. The baby may not yet have a name, but I am in no doubt that Naomi has its timetable accurately set out for at least the next five years! My thanks also goes to Julee Pope, Melinda Gamulin and Cassie Shearer for their ongoing support in each of their own roles within the Medical School

After two years in the role as Director of Medical School Education I am handing over the responsibility of this important position to Dr Rohan Gett and I wish him all success as he continues to help shape the future of St Vincent's Clinical School.

Wishing everybody a rewarding 2016.



# FACULTY & UNIVERSITY NEWS

Professor Terry Campbell  
Senior Associate Dean

2015 has been a year of major change within both the Medical Faculty and the broader University. In February Professor Fred Hilmer retired after two terms as Vice-Chancellor and the reins were taken up by Professor Ian Jacobs. Professor Jacobs is a medical graduate from Cambridge and Oxford, an internationally distinguished researcher in gynaecological oncology, and more recently has been the Director of the Manchester Academic Health Sciences Centre. He previously worked in University College London Academic Health Science Centre (UCL Partners), and is very keen on models of Universities and Health Services working more closely together. He also understands how medical research works and is funded. He has brought some new team members with him and, together with others from Chancellery, and wide collaboration and consultation across the broader University has developed a strategy for UNSW going forward to 2025 and beyond, which is available for download from <https://www.2025.unsw.edu.au/>. I encourage you to look up this document and read it. You will see that Professor Jacobs is very ambitious to build UNSW into a “top 50” world-ranking University and to do so as quickly as possible. He understands that this will involve major changes and major expenditure of funds and has already set in train the development of a strategic fundraising campaign to cover some of the costs of this.

Closer to home, as of mid-2015 we have a new Dean of Medicine. Before that, we farewell Professor Peter Smith, who gave nearly 10 years of devoted service as Dean and contributed mightily to building our research income within the faculty. The new Dean is Professor Rodney Phillips, a graduate from Melbourne University who spent nearly all his professional career as a physician and clinical researcher in the United Kingdom, mostly at the University of Oxford, where his most recent appointment was as Vice Dean of Medicine. He is internationally known for his research into HIV and the ways in which it avoids the usual immune surveillance systems. Professor Phillips has hit the ground running and is well into a process of developing a clear strategic plan for the Faculty of Medicine across both teaching and research. The existing medical curriculum is unlikely to be changed significantly, but the way in which we go about our research may well look quite different after this process is complete. Professor Phillips has flagged that he will work towards identifying what are being referred to as research themes. These will be very broad and inclusive, but may well change some of the ways in which we go about our research enterprise across a geographically very widely spread faculty.

Finally I should flag the fact that one of the enterprises being worked on by both the new Vice Chancellor and the new Dean is the establishment of a formal academic health science partnership incorporating UNSW Medicine, a number of other Universities, particularly UTS and WSU, the Local Health Districts with which we interact traditionally, particularly in the metropolitan areas in the first instance, and the various affiliated Medical Research Institutes affiliated with UNSW. This builds on work that has been going on for a number of years and about which I have written in the past, but is likely to take this whole concept to a new level.

2016 is therefore shaping up as an exciting and potentially momentous year for the Faculty and UNSW. I wish you all the best for the coming holiday season and for 2016 and thank you all for your efforts over the present year.



Melinda Gamulin  
Clinical School Manager

# ADMINISTRATION UPDATE

2015 has been quite a busy year for the St Vincent's Clinical School and I would like to thank my administrative team on another successful year together.

Ms Linda Dowell, Administrative Assistant, Department of Medicine left the School and was replaced by Ms Susan Pye in June. Susan has worked previously as an Administration Assistant and Marketing Officer, Faculty of Engineering & Information Technologies, The University of Sydney.

Thanks to funds from Health Workforce Australia for clinical training, we were able to refurbish our Skills Lab on Level 5, deLacy Building. This funding has allowed us to purchase chairs, a lectern, 55" TV, TV Stand, cupboards and a Welch Allyn Wall Set for our designated teaching space.

The School could not function without the support of Conjoint staff members, St Vincents Hospital, the Faculty of Medicine, UNSW, the local community and the patient population and, of course, our student body. We value the contribution of these individuals and groups and seek their ongoing support next year.

I look forward to working with you all again in 2016!



# AWARDS & ACKNOWLEDGEMENTS

## 2015 QUEEN'S BIRTHDAY HONOURS

The important contribution to the community and the nation made by two of our UNSW Medicine staff has been recognised in the 2015 Queen's Birthday Honours List as Member (AM) in the General Division of the Order of Australia:

Professor Bruce BREW AM, Director, Conjoint Professor of Medicine at St Vincent's Clinical School  
For significant service to medicine, particularly the neurological impacts of HIV/AIDS, as a clinician and researcher, and to medical education.

Dr Russell CLARK AM, Senior Lecturer, St Vincent's Clinical School  
For significant service to geriatric and rehabilitation medicine, and to international relations, as a clinician and educator in Asia and Africa.

## 2015 CLINICAL SCHOOL TUTORS OF THE YEAR

**JMO Tutors of the Year:** Dr Samantha Saling & Dr Jonathan O'Donnell

**RMO Tutor of the Year:** Dr Ben Tassie

**Registrar Tutor of the Year:** Dr Fiona Kilpatrick

**Consultant Tutor of the Year (SVH):** Dr Graham Jones

**Consultant Tutor of the Year (SVPH/SVC):** Dr Rohan Gett

## 2015 STUDENT AWARDS

**St Vincent's Clinical School Prize** - Best performance in the Phase 3 Integrated Clinical Examination in clinical disciplines (Medicine, Surgery and Emergency) for students based at St Vincent's Clinical School: Daniel Smith

**Doug Tracy Prize for Surgery** - Best performance in Surgery based on course results and the Phase 3 Integrated Clinical Examination: Jian Eu Tai

**John Hickie Prize for Medicine** - Best performance in Medicine based on course results and the Phase 3 Integrated Clinical Examination: Andrew Casey

**Independent Learning Project/Honours Grand Rounds Presentation** - Best presentation at the 2015 ILP/Honours Grand Rounds: Erika Strazdins & Ananya Chakravorty

**Independent Learning Project Prize** – Based on the 2015 Projects: Ashleigh Xie & Sarinder Chahal

**Student Researcher of the Year Award:** Matthew Lennon



Jian Eu Tai with Prof Spigelman



Andrew Casey



Daniel Smith



## 2015 CLINICAL SCHOOL STAFF AWARDS

**Publication Prize:** Prof Ric Day

**Research Prize:** Prof Ric Day

**Community Service Prize:** Dr Anthony Chambers

## 2015 GIFT OF LIFE AWARD - TERRY CONNOLLY AWARD FOR HEALTHCARE LEADERSHIP & INNOVATION

The 2015 Terry Connolly Award for Healthcare Leadership and Innovation was awarded to Professor Peter Macdonald and A/Professor Kumud Dhital. The award was in appreciation for their respective leading roles through research efforts over two decades at St Vincent's Hospital and the Victor Chang Institute in pioneering and carrying out in 2014 the world's first successful 'dead heart' transplant operation - involving distant procurement of hearts donated after circulatory death.

## EVENTS



Professor Ian Jacobs, Vice Chancellor UNSW

### ANNUAL CONJOINT APPOINTEE & CLINICAL SCHOOL DINNER

This year's venue was The Pavilion, 1 Art Gallery Road, The Domain, Sydney on Monday 17th August.

Guests enjoyed drinks and canapés on arrival, then a lovely 2 course meal.

Special guest speakers for the night were Professor Ian Jacobs, President and Vice Chancellor, UNSW, Professor Rodney Phillips, Dean, Faculty of Medicine, UNSW and A/Professor Kumud Dhital (Cardiothoracic Surgeon speaking on the "heart in a box" research project) and Dr Amy Liu (SVH Intern).



A/Professor Anthony Schembri, Professor Jock Harkness, Professor Jane Ingham and Professor Ric Day



Professor Rodney Phillips, Dean of Medicine

## SCHOOL SPONSORSHIP

The School sponsored a table for the dinner held on the occasion of the NSW Aboriginal Rugby League Knockout competition, as hosted in Dubbo by the Barwon Aboriginal Corporation Walgett.

The event included competitions for men, women and youth over 100 teams participating.

The event attracted 25,000 to 30,000 Aboriginal and non-Aboriginal people across 4 days. It is one of the largest Rugby League carnivals in the world as well as one of the largest gatherings of Aboriginal and Torres Strait Islander people in the country.

This year was the first time in 45 years that it was a smoke free event.

On Wednesday 30th September the hosting team held a gala dinner in Dubbo, which was open to the whole community and nominated team members. Our School sponsored a table to allow the local community to be able to attend.



## ANNUAL DOCTORS VS STUDENTS SOCCER MATCH - ANOTHER HISTORIC WIN FOR THE DOCTORS!

It was a gloriously picture perfect winter sunny day on Friday 31st July for the annual Staff v Students soccer match, held at Weigall Oval, Sydney Grammar's sporting field – courtesy of the School, for which we are grateful.

The Doctors were keen to make amends for last year's resounding defeat. The display of talent for the students this year was evident with some excellent displays of skill; however, the Doctors had recruited well during the off season. The play went from one end of the park to the other with some tight defence and outstanding saves by both goalkeepers, who were determined not to let a goal past them.

The first goal was scored by the doctors in the 15th minute of the game with a great pass from the midfield



Julee Lavery and Polly



Professor Spigelman and A/Professor Mark Danta

and then a brilliant cross from a break down the right side of the field. The student keeper had little chance of saving it.

Not long afterwards, referee A/Professor Steven Faux awarded a penalty to the students for a challenging tackle. It was saved by the doctor's keeper. Soon after this there was a hand ball in the box by the doctors. No mistake was made this time and the students scored to level the score 1-1.

Captain courageous (Mark Danta) injured his hamstring and moved (with some limitation) to act as goalkeeper for the rest of the match.

With 20 mins of play remaining both sides had plenty of chances, some going over the bar and others smashing against the post. When the staff team were awarded a free kick just outside the 18 yard box Nick Ingham stepped up and literally “bent it like Beckham”, with the ball curving beautifully over the defensive wall and into the top right hand corner of the goal, despite the despairing lunge of the student keeper. With 5 minutes remaining the students were also given an indirect free kick, but Mark Danta dived (not a word to be used lightly when writing about soccer) for the save of the day!

The doctors ran out winners 2-1 to record a win for only the second time since the inception of the annual challenge. A delighted Mark Danta accepted the trophy from Head of School Professor Spigelman, who initiated the fixture in 2010.

A big thank you to Sydney Grammar School for the use of their Oval again this year and also their BBQ facilities. Staff and students appreciated the efforts of the School Administrative staff in preparing the after match nourishment and for some (students) the after match conviviality continued at the Old Fitzroy in Woolloomooloo.

Special mention goes to Bob Morris from SVH Transport Department with no major assistance being needed this year. Also special thanks to A/Professor Steven Faux for refereeing the match. Pollyana our Clinical School dog mascot made an appearance again as did UBU (Rohan Gett’s dog).

Scorers: Staff - James Cotterell & Nick Ingham; Students: Amin Amer

*Cassie Shearer, Soccer Coordinator*



Students

Doctors



# ST VINCENTS HOSPITAL

Conjoint A/Professor Anthony Schembri  
Chief Executive Officer

As CEO of St Vincent's Health Network Sydney and Conjoint Appointee of UNSW Clinical School, it is a privilege to reflect on all that has been achieved in the past twelve months and acknowledge just how pivotal our relationship with UNSW is in driving many of these achievements.

Across all our major areas of clinical endeavours, the St Vincent's Campus is embracing innovation and achieving unparalleled patient outcomes. This is timely given that we have embarked upon a major Campus master planning exercise for the St Vincent's Integrated Healthcare and Research Campus, which explores not only our building needs for the coming decades, but examines where we want to concentrate our clinical expertise and centres of excellence. Central to this decision-making is the potential to further grow our mission of service of the poor and vulnerable, teaching and research endeavours.

2015 was a year which marked several major historical milestones for the Campus at the same time as proving a watershed period of significant medical breakthroughs – virtually all of which were driven by conjoint St Vincent's/ UNSW appointees.

The St Vincent's Lung Transplant team performed their first successful transplant internationally using OCS (organ care system) or 'lungs in a box' to transplant lungs from a marginal donor. This new technology allows previously unusable organs to be safely resuscitated post retrieval and revitalised in an external environment before transplantation.

As part of an international trial, our cardiology team also successfully performed one of the world's first implants of the MVAD Pump, a miniature artificial device which is a third of the size of the currently available device, resulting in a reduction in surgical trauma and improved quality of life for our patients.

The transplant team also pioneered a procedure to bring better patient outcomes to those with cardiovascular conditions, whereby they no longer need to stop a patient's heart from beating in order to repair or replace defective aortic valves. This new method is a much less invasive, far better tolerated procedure for patients who are particularly unwell, thereby increasing the number of patients who are now eligible for this kind of surgery.

We also celebrated the 125th anniversary of the establishment of Sacred Heart Hospice, Australia's first hospice. Having been opened by the Sisters of Charity, who identified a need in the community for dignified end-of-life care, the Hospice grew from an initial 12 beds in the late 1800's to a 100 bed unit in the 1980's. With continual medical breakthroughs and with palliative care in the home a focus, Sacred Heart has been remodelled and today includes state-of-the-art rehabilitation. We are forever grateful to the Sisters for their foresight and tenacity in responding to community need.

Continuing that very same tradition, St Vincent's Drug and Alcohol Unit last year began a clinical trial for patients with methamphetamine addiction using replacement Lysine Dexamphetamine, commonly used for ADHD. To date



the trial has seen promising results, and is enabling users to withdraw safely, without experiencing some of the withdrawal symptoms and controlling cravings that can impede a full recovery.

St Vincent's also launched a five year cancer plan detailing our strategic direction for cancer services over the next five years. Officially launched on campus by Health Minister Skinner, the plan outlines how we intend on improving cancer prevention, diagnosis and treatment, ensuring equitable access to treatment for patients from disadvantaged backgrounds, achieving breakthroughs in treatment, improving quality of life and survival rates. Thanks go to Professor Allan Spigelman, Clinical Associate Dean, for his role in developing the plan while he was our Director of Cancer Services.

As I mentioned earlier, St Vincent's is embarking upon a major Campus master planning project capped off with the NSW Government granting St Vincent's with \$5 million in seed funding to undertake comprehensive planning for the St Vincent's Integrated Healthcare and Research Campus. The plans will address how we will meet growth in service needs in a more effective way through integrating our services, providing better treatment of chronic diseases and promoting campus-wide research and teaching.

The funding will enable St Vincent's and our research partners to work up plans around five key priority areas - the creation of an Integrated Care Centre; establishing Australia's first Heart Lung Vascular Institute; strengthening services for vulnerable populations in inner Sydney; expanding translational research and education; and increasing service capabilities within the campus. In announcing the planning funding Health Minister Skinner poignantly noted, "this seed funding will kick start planning on how to future-proof this iconic campus, to ensure its excellence for decades to come."

As you will know, St Vincent's has been at the forefront of HIV care for over 30 years and during this time, has worked closely with researchers from UNSW's Kirby Institute as world leaders in clinical research into HIV AIDS, as well as other infectious diseases. To that end, toward the end of the year we proudly opened the new Translational Research Centre. The Centre will serve as a translational research centre where Kirby Institute staff will interface with St Vincent's clinicians, including specialty HIV inpatient and ambulatory services and the NSW State Reference Laboratory for HIV and conduct several multi-centred clinical research projects in clinical specialities such as HIV infection, viral hepatitis, anal cancer, immunology, rehabilitation medicine and neurology.

On World AIDS Day, St Vincent's announced an agreement with Sydney Local Health District, to safeguard the long-term survival of the state-wide short-term supported accommodation service for people living with HIV who have complex health needs such as homelessness, drug and alcohol, and mental health issues. Following its closure in Stanmore, Stanford House will be re-opened here at St Vincent's with increased capacity and outreach services for clients and past residents.

As we look forward to the next twelve months, one of the big highlights in the near future will be the establishment of the world's second Clinical Genomics Centre as a joint venture between St Vincent's Hospital and the Garvan Institute, located in the Kinghorn Cancer Centre. The Centre will use whole genome sequencing to diagnose rare, undiagnosed and misdiagnosed disease and in doing so make a huge difference to tackling the burden of disease in the Australian community.

Again, such an exciting project for the Campus and indeed for the community as a whole, and again, a project that wouldn't be possible without the vital role of the UNSW Clinical School in driving our teaching and research endeavours.

While this report highlights a diverse range of achievements and strategies, it is demonstrative of our approach to responding to community need, and how we strive for best patient outcomes every day, in every way we can. We carry this commitment forward as our founders, the Sisters of Charity did before us – seeing, serving and striving for something greater. As our students step into the spotlight and we pass on the baton to our new recruits, we know they will continue the Sister's legacy of compassion, excellence and integrity in their daily endeavours.

Finally, may I thank my fellow conjoint appointees for all the work that you in the teaching, mentoring and support of Clinical School student. I also acknowledge and thank the Clinical School staff and Clinical Associate Dean Allan Spigelman for their contribution to the health service and the teaching of our students. I welcome the Vice Chancellor Ian Jacobs and new Dean of Medicine, Rodney Phillips to our Clinical School, we look forward to working closely with you to continue to foster our longstanding partnership.



Ms Anne Fallon, Manager, Education Training & Development

# ST VINCENT'S CLINIC & ST VINCENT'S PRIVATE HOSPITAL



Ms Michelle Wilson  
St Vincent's Clinic Executive Director

St Vincent's Private Hospital and St Vincent's Clinic are proud to continue their long standing involvement the UNSW Clinical School by providing an opportunity for medical students to gain experience in the private sector.

We recognise the importance of building clinical capacity and in 2015

- the 85 Phase 3 students of which 65 had surgical attachments including Operating Suite, Day Surgery, the Patient Care Areas
- 38 students attended a 1.5 day placement in the Pre Admission Centre
- In the Pre admission centre the students complete a medical and patient history as well as sitting in with the anaesthetist for the pre hospital admission anaesthetic assessment Students also experience the documentation process using the deLacy system.

- students gained experience in the private rooms of the VMOs in St Vincent's Clinic.

In 2015 the case presentations were of a high standard and well attended. The presentations covered a full range of topics – plastic surgery, lower GI, upper GI, surgical oncology, urology, vascular surgery, orthopaedics, cardiothoracic ENT, Hand and Neurosurgery.

Interprofessional teaching and learning in 2015 was successful for the UNSW Medical students and their fellow medical and nursing student colleagues from Notre Dame University and other partner universities, participated in many shared teaching and learning activities on offer in St Vincent's Private Hospital Sydney, St Vincent's Clinic and UNSW Clinical School.

The St Vincent's Clinic Foundation awarded \$500 for the best student's Independent Learning Project. 2015 ILP/ Honours Prize Winners Ashleigh Xie and Sarinder Chahal. St Vincent's Private Hospital Sydney and St Vincent's Clinic 2015 Tutor of the Year was awarded to Dr Rohan Gett.

We continue to explore strategies to increase teaching opportunities within St Vincent's Private Hospital Sydney and St Vincent's Clinic to complement student teaching and learning in public facilities.

St Vincent's Private Hospital Sydney and St Vincent's Clinic are proud to be actively involved with UNSW Faculty of Medicine and will continue to develop a leadership role in medical student teaching and learning in the private sector.

# COMMUNITY PROJECTS

## SYDNEY GRAMMAR VISIT

On the 28th August, 10 intrepid Grammar boys interested in studying medicine next year were given an opportunity to experience the profession in practice first hand. In a programme organised by Ms. Fin, we walked over to St. Vincent's Hospital, one of the most active emergency wards in the country, to learn a bit more about what exactly the job of a doctor entailed.

We were greeted by Professor Spigelman and three final-year students from the UNSW who talked to us about the 6 year course that awaited us should we be accepted. It was a great opportunity to have some of our more pressing questions answered by those undertaking the course itself. Afterwards, we were taken on a tour of the infamous emergency ward by Dr Gordion Fulde, head of the department, who elucidated for us the finer aspects of operating in such a high pressure situation. This was quite a confronting, yet informative experience, as we were lead past patients in the process of being treated, confirming the saying, "the hospital never sleeps." The final part of the workshop involved practicing some of the common diagnostic tests employed by Doctors on a usual basis, including blood pressure measurement, ear examination and even urine analysis. After a quick brush up on how to perform CPR and operate a defibrillator, we were given a chance to ask any further questions before finishing up and scrubbing out.

It was truly an informative experience, and I strongly recommend that anyone interested in studying medicine take full advantage of any similar opportunities offered in the future. A big thanks to Andrew, Amer, Charlotte, Professor Spigelman, A/Professor Fulde, and especially Ms Fin for having organised such a great day.

*Jacob, Sydney Grammar Student*

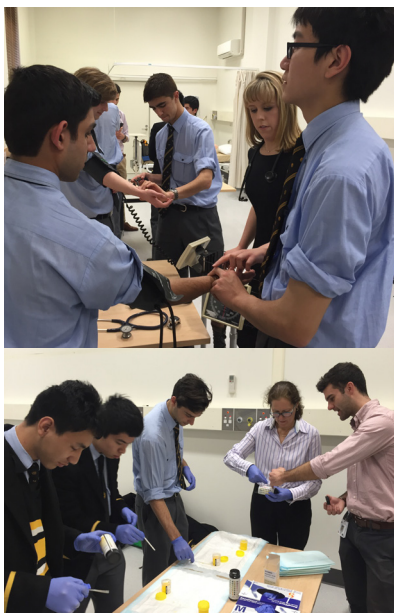
## GORMAN & TIERNEY HOUSES

Several students this year took up the opportunity to spend time with the clients of both Gorman and Tierney Houses.

Although this project is still in its infancy we look forward to continuing to build and further develop the relationship between the Houses and the Clinical School in order to offer students further opportunities to be engaged with the community.

## LIVING WITH PARAPLEGIA PROJECT

The Living with Paraplegia project was quiescent in 2015 and we aim to restart it again in 2016 with some fresh ideas. Students will be encouraged to get on board to further develop the relationship between Friends of Paraplegia (Tanzania), ParaQuad NSW and St Vincent's Clinical School.





# PHASE 3 (YEAR 6)

## STUDENTS

2015 started with our return from our elective adventures from all around the world. Students returning from their time in hospitals all over Europe, the US, Canada, South America, the Caribbean, Africa and from all parts of Australia meant we made good use of our new beanbags (thanks 6th years, 2014) in the common room to hear many exciting stories.

The year took no time to get started and we were all back in to our various terms and teams. While it was still early, exams were on the (distant) horizon and we began to slowly get irrationally nervous and form our tight little study group from whom we would get very sick of over the coming months. We have to thank all the Doctors who donated their time for bedside tutorials, Viva practice and OSCE advice over the course of the year. We could not have survived without you.

Semester 1 saw growing anticipation for the annual Staff vs Students soccer match, and after a rain cancellation, we were keen to go. Unfortunately, we students were no match for the 'experience' of the Doctors, with thanks in particular from a wonder-strike from Dr Nick 'bend it like' Ingham, we went down 2-1. Special mention to Amer for slotting one past a diving Dr Danta and making the score slightly less embarrassing. Still, it was nice of us to give the



Doctors only their 2nd win to date.

Exams grew closer and we had some exciting events coming up. Many of us offered to, and greatly enjoyed helping out with tutorials for younger students and gave us a taste of the joys (and sometimes frustrations) of what it means to be a tutor, helping us to appreciate the help from those above us even more!

A visit from some year 12 students from Sydney Grammar gave us some insight into the bright-eyed, excited young students we once were. Chatting with them about life as a medical student, as well as helping with some clinical skills (which were also good for us to make sure we hadn't forgotten) was a lovely experience and hopefully helped start a long tradition of helping high school students decide whether or not medical school is for them.

Exams came and exams went and we all made it through (relatively) unscathed, but it was not the end just yet. Many of us took on CTC students and helped them with their transition back from the joys of ILP into coursework for the next two years. Mock biomed tutorials for the 5th years became a staple for every Friday afternoon, and were often concluded with trips to Messina or Darlo Bar for a well earned 'debrief'.

PRINT saw us finally winding down our time as students. We were fortunate enough to be treated to several lunches from Insurers and Banks who were 'just looking out for us', for which we need to thank Michael Liu for organizing!

The year concluded with a fantastic leaving dinner and drinks held at the Old Fitzroy Hotel. Much merriment was had, and there were several deserving award winners, including our favourite, for the cutest couple (congratulations to Maro and Giles.) It was a great opportunity for us to share some fun not just with each other, but with the members of the clinical school who dedicated so much time to helping us to get through the last two years of study.

A review of the year could not be complete without giving thanks the two members of the clinical school who were on the front lines, dealing with countless complaints, requests and irrational fears of failure on a daily basis. Naomi and Julee were more like our surrogate mothers than anything else, helping us get through the trials and tribulations of the final years of student life. As they are both moving on next year, with exciting times ahead, we would like to extend our warmest thanks for everything that they have done for us. It is a huge loss to the clinical school and to future students who are lucky enough to finish their studies at St Vincent's.

All the best to all the younger students for the coming years. Don't worry, it all makes sense in the end. Please enjoy your new coffee machine in the common room; it will be useful in the coming years.

*Andrew and Amer (Med VI 2015)*



# PHASE 3 (YEAR 5) STUDENTS

In the summer of 2015 we put our beach gear into storage and dusted off the stethoscopes to return to St Vincent's hospital for an exciting year ahead. The group was relatively unfamiliar with each other but after many trips to Messina and Friday lunches in Surry Hills a tight bond was formed, essential in traversing the challenges of Phase 3 Medicine.

This was the first year that we have had monthly attachments to hospital teams. For many students this was a new prospect that at first would appear daunting but has proven to be a favourite approach to learning in the degree so far. We gained experience in disciplines including medicine, surgery, emergency/critical care and psychiatry.

Medical terms involved ward rounds in the morning, followed by coffee with the team, well and truly establishing caffeine addiction in our next generation of medicos. The rest of the day involved clinics, clerking patients, helping out JMOs with procedural tasks and a great deal of stairs. Mixed into these days were high yield tutorials on biochemistry, haematopathology and immunology. Many thanks to Prof Jones, Dr Joseph and Prof Sewell for running these tutorials. Other organised teaching included procedural skills sessions, bed-side tutorials and oral presentations. It was particularly useful to learn from cases that our peers had encountered on their rotations.

Surgical terms involved the dreaded early starts but also the excitement of being asked to scrub in and get your hands dirty (or gloves if you had scrubbed in properly). Feeling the pulsations of a fem-pop bypass in my hand was definitely the highlight of my vascular surgery term. Special mention to the scrub nurses for their patience with us students, it certainly made the experience a lot easier and I'm sure at times, entertaining for them.

In preparation for our Biomedical Viva Examination we received weekly case-based tutorials from various doctors. This was an opportunity to consolidate knowledge of pathophysiology and anatomy. Special thanks to Prof Sewell for his continuing role in ensuring quality in these core tutorials. More recently the 6th years held a number of mock viva sessions that proved to be a very helpful and just one example of the peer mentoring culture here at St Vincent's. We will ensure the tradition continues in the future.

Finally I'd like to thank Naomi and Julee for their hard work throughout this year. They were always the first point of call when any problem arose and happy to facilitate anything to aid in our learning at St Vincent's. We look forward to another year!

*Rupert Higgins*

## PHASE 2 STUDENTS

It was with great excitement that the coursework students of 2015 commenced their clinical studies at St Vincent's this year. Hitting the wards for days on end was a new and thrilling experience for us, and something we had all been eagerly anticipating. No longer confined to the short tutorial sessions we had in earlier years, we were now required to independently visit patients to fine-tune our history taking and examination skills. This allowed us to connect the dots between the various lectures, textbooks and information absorbed in Phase 1, as well as the content delivered on-campus throughout the year. At times we all felt particularly challenged when attempting to understand the clinical picture of the person in front of us, but with the guidance of our patient tutors and skilled seniors, exciting moments of clarity and understanding became more and more frequent as the year went by.

We are immensely grateful to all the patients we met over the year who very generously and cheerfully gave us their time, and stories, in order for us to practice our skills. Many of us will cherish these interactions, where we learnt about love, courage and the human spirit, along with the mechanics of medical management.

This year we also learnt many new clinical skills, providing us with the practical skills required for successful integration into Phase 3. This included learning life support and airway management, preparing and administering injections, interpreting radiology and ECGs, as well as making a

mess on each other with plaster casts under the watchful eye of orthopaedic veteran Dr Courtenay. Many of us also had the opportunity to insert cannulas, draw blood and give the flu vaccine to real patients for the first time. This was equally nerve-wrecking and rewarding, and made us feel we were one step closer to becoming a practising doctor. We also got to step inside the operating theatres for the first time, to discover the exciting world of surgery. This left us both inspired, and somewhat grateful that we didn't pass-out and compromise the ever-important sterile field!



We would not have made it through the year without the assistance of our tutors, who served as both teachers in the classroom and role models in the wards and clinics. To name just a few, Dr Gett and Dr McCrohon's logical breakdown of many concepts in Adult Health 1 assisted us in connecting science to the clinical setting. Prof Sewell's discussions and lab visit helped us untangle the different (and often confusing), haematological malignancies, and Dr Clark's extensive notes and interactive demonstrations made the intensive Adult Health 2 course more accessible and enjoyable. His lunch-time anecdotes of exotic parasitic diseases and time in Africa was both fascinating and enlightening, and a reminder of how extensive and varied the world of medicine is.

Another highlight of the year was the camaraderie of our classmates and the friendly and welcoming atmosphere of the clinical school. Navigating the labyrinth-like de Lacy building, as well as online hospital databases, clinical teaching areas, and the various protocols for lockers, clinical teaching areas and even the student common room, were all new experiences and were made much easier with the assistance of Naomi and Julee who were always on-hand to answer our many queries. Many of the students set out to find the most cost efficient way to eat in the hospital precinct, and thanks to Matt Smith and Ian Paver we discovered the Indian Home Diner and the delicious \$6 Bandstand paninis (dubbed the "Ian Special" by sequence 3) from across the road, all of which added to our experience. Pizzas, Messina parties and birthday celebration cakes for sequence members also boosted our culinary experience (and blood sugar levels).

We are sure all phase 2 students leave with fond memories of their time at St Vincent's this year. Many of us look forward to returning next year for research projects or Phase 3, whilst others hope to return for future learning opportunities. We welcome all new students in 2016 and hope their experience is as full and satisfying as ours.

*Mary Sarvaas and Belinda Watson, Phase 2 Students*

## PHASE 1

What a privilege it has been to be involved with the UNSW Phase 1 medical students. Whilst I was only able to spend a few hours every fortnight with these soon-to-be doctors, it was amazing to see how quickly they've developed over the course of the year.

Many students often feel apprehensive when approaching a patient, thinking that they perhaps have nothing to offer as a "beginner". However, the Phase I students who I had the pleasure of teaching were gentle, compassionate, attentive, comforting, and polite. They put patients at ease despite having only limited medical heuristics. The basic, yet fundamental, communicative skills they are learning and applying are far more important than knowing what question should be asked next in a cardiac history. In fact these students, fresh from lecture theatres, often know far more than they think, and I urge them to continue to contribute at every stage of their medical education. These teaching sessions undoubtedly served not only as an opportunity for me to teach students, but also for me to learn from them.

What a great achievement for these phase I students to be progressing towards the next stage of their medical careers. The journey is long and arduous, but the rewards are surely more than any other career. No other profession offers so much gratitude and pride in the responsibility we shoulder.

*Dr Alex Holmes*

# INDEPENDENT LEARNING PROJECTS

**Student: Lucy Manuel**

**Project: Review of the use of temporary pacing wires post-cardiac surgery**

**Supervisor: A/Prof Kumud Dhital**

There are no evidence-based guidelines on the requirement of temporary pacing wires post-cardiac surgery, although it is accepted that some procedures, and/or certain peri-operative conditions, should dictate their placement. Often post-operatively the temporary wires are never required for use and only serve as a back-up modality. In other situations, the same pacing wires may obviate or reduce the need for intravenous inotropic support.

This retrospective project aims to review the use of temporary pacing wires post cardiac surgery in the last 100 aortic valve replacements, 100 coronary artery bypass grafts and 100 heart transplant patients at St Vincent's Hospital, Sydney. This is to ascertain whether the procedure, in particular, the transplant process affects the outcomes of pacing wires. The overall aim is to create robust guidelines for the use of pacing wires, particularly given the significant variation between individual surgeons at St Vincent's Hospital. This will be achieved by investigating: indications for placement of wires, patient risk factors, peri-operative events, patient outcomes, differences in heart transplant vs. other cardiothoracic patients, the placement of wires (atrial vs. ventricular vs. atrio-ventricular), complications with removal and post-operative inotrope use.

**Student: Simone Chin**

**Project: Minimally invasive mitral valve surgery - early and late outcomes and echocardiographic follow-up in 161 patients.**

**Supervisor: Dr Paul Jansz**

Minimally invasive mitral valve surgery (MIMVS) is now standard practice at many centres around the world. The evidence for this

widespread implementation is however limited by a paucity of long-term outcome data, and results from large multi-centre studies and registry information are often difficult to interpret given the heterogeneity in surgical techniques used at various institutions. To address these deficiencies, we studied the short- and long-term outcomes of MIMVS through a retrospective review of the eight-year experience of a single surgeon. Echocardiographic follow-up was also assessed.

**Student:** Lily Tian

**Project:** Investigating the role of microRNA in acute myeloid leukaemia

**Supervisor:** Dr Thi Thanh Vu

Acute myeloid leukaemia (AML) is characterised by a block in differentiation and over-proliferation of the myeloid lineage. It is a notoriously heterogeneous disease, and responses to chemotherapy targeting proliferation is varied. Recently, differentiation therapy for one subtype of AML has proven successful, achieving >95% five year disease free survival. Other differentiation agents have been tested in vitro but have not translated to the clinic. MicroRNAs, or miRs, are post-transcriptional regulators of protein synthesis and are involved in a variety of physiological and pathological processes, including AML. miR-10a is of particular interest, as it is expressed >70 fold higher in the largest subgroup of AML and therefore in a large proportion of patients. It has also been previously shown to affect proliferation of AML cell lines, however, its effect on differentiation is unknown.

During this project, I found that miR-10a reduces the clonogenic potential of haematopoietic stem cells by 6.5 fold ( $p=0.01$ ) and skews differentiation towards erythrocytes instead of myeloid cells. In AML cell lines, high miR-10a prevents expression of the common myeloid marker, CD11b, upon induction of differentiation ( $p<0.05$ ), showing that miR-10a has an anti-differentiation effect. With miR-based therapies already in clinical trials, research of key miRs would prove essential to capitalising on this new avenue of therapy. While the effect size found in this study was small, an anti-miR-10a therapy may be useful when used in combination with other differentiating agents for the treatment of AML.

**Student:** Dulani Goonawardhana

**Project:** Assessing platelet adhesion to collagen and endothelial cells following exposure to detergent sclerosants under flow conditions

**Supervisor:** A/Prof Kurosh Parsi

Detergent sclerosants, sodium tetradecyl sulphate (STS) and polidocanol (POL) are used as a treatment method for varicose veins and other venous malformations through sclerotherapy. These agents have notable effects, such as activation and lysis, on platelets and endothelial cells (ECs). Despite previous studies establishing the effects of detergent sclerosants on both platelets and ECs, the mechanical shearing effect generated by flowing blood on the actions of detergent sclerosants has not been investigated.

Collagen I and cultured human umbilical vein endothelial cells (HUVECs) were grown and incubated on Ibidi VIO.4 and VIO.1 flow chambers, to model veins in vitro. Whole blood and platelet rich plasma samples incubated with different concentrations of STS and POL were flowed over collagen and HUVECs at varying physiological shear rates. Both platelet adhesion and aggregation were progressively inhibited with increasing sclerosant concentration under flow conditions, with almost complete inhibition at a concentration of 0.1%. Flow of neat sclerosants over HUVECs affected the attachment and morphology of cells at a concentration of 0.1%.

**Student:** Shahin Kazemzadeh

**Project:** Surgical management of distal radius fractures: Locked Volar Plating Vs Closed Reduction and Percutaneous Pinning

**Supervisors:** A/Prof Brett Courtenay, and Dr Andrew Higgs

To compare the long-term functional outcome and complication rate of patients treated with (1) closed reduction and percutaneous pin-fixation and (2) open reduction and internal fixation using locked volar plates for a distal radius fracture. A retrospective comparative study of 39 consecutive patients with dorsally



displaced, extra-articular or simple articular fracture of the distal radius was performed.

Outcome was assessed using the Disabilities of the Arm, Shoulder and Hand (DASH) score, grip strength and wrist range of motion. Four complications were recorded, three in the plating group and one in the pinning group. Despite statistically significant DASH scores favouring the volar plating group ( $n=39$ ,  $p=0.036$ ), our findings failed to show a clinically relevant difference between the two methods of fixation.

**Student: Babitha Selvananthan**

**Project: Vascular Complications following Peripheral Extra-Corporeal Membrane Oxygenation (ECMO)**

**Supervisors: Dr. Kumud Dhital, Dr. Emily Granger**

Peripheral veno-arterial extra-corporeal membrane oxygenation (VA ECMO) is a resuscitative therapy which has become the pinnacle of survival for patients during acute cardio-respiratory decompensation. This study retrospectively analysed the frequency and predictive factors of vascular complications arising from femoro-femoral cannulations due to ECMO therapy at St Vincent's hospital, and compared this with existing literature. 147 patients from January 2008 to August 2015 underwent VA ECMO therapy at St Vincent's Hospital, Sydney, NSW. Patient demographics and ECMO technical factors were collected from patient medical records and the cardiothoracic departmental database. Following this, univariate analysis and logistic regression were conducted. 82% patients on VA-ECMO suffered at least one vascular complication, with distal limb ischaemia in 25%, compartment syndrome in 10% and amputation in 4% of all patients who were offered this therapy. Groin haematoma, wound infection, bleeding from insertion site, vessel dissection and false aneurysm were also observed. Age ( $P=0.042$ , OR 0.544, CI 0.303-0.977), diabetes ( $P=0.031$ , OR 3.331, CI 1.113-9.970) and dialysis ( $P=0.048$ , OR 2.650, CI 1.008-6.970) were strong predictors of distal limb ischaemia, and peripheral vascular disease was significantly associated with compartment syndrome ( $p=0.014$ ) and amputation ( $p=0.007$ ) incidence. 30-day mortality was 41% in those with distal limb ischaemia. Compartment syndrome, groin infection and vessel dissection were significantly associated with 30-day mortality. The vascular burden of VA ECMO is considerable, owing to technical difficulties and patient demographics. Diagnostic criteria for distal limb ischaemia, improvements in surgical technique and patient selection are therefore necessary to improve outcomes.

**Student: Yu Feng Nie**

**Project: Surgery and age as predictive factors for outcomes of open rhinoplasty and reconstructive surgery.**

**Supervisor: Professor Richard Harvey**

**Co-supervisor: Dr George Marcells**

Loss of nasal skin and cartilage elasticity is known to occur with both surgery and age. However, little data exists to demonstrate the impact of these factors on nasal function at baseline and post-operatively. Using validated outcome measurements, a cross-sectional study and case-control study of patients attending a nasal airway assessment for nasal obstruction was performed. Outcome questionnaires included the Visual Analogue Scale of nasal obstruction, Nasal Obstruction Symptom Evaluation and Sino nasal Outcome Test. This was supplemented by data gathered from airway analyses – nasal peak inspiratory flow, nasal airway resistance and minimum cross-sectional area.

Age and prior surgical history data was then used for statistical analysis to compare patient nasal function at presentation as well as the change after surgery. We found that older age and prior surgical history were major contributors to poorer nasal function in patients presenting with nasal breathing problems. However, prior surgery or age did not appear to influence nasal function after rhinoplasty surgery.

**Student Name:** Jessie Zhou  
**Project name:** Skeletal muscle and satellite cells  
**Supervisor:** Prof Jenny Gunton

Skeletal muscle is frequently characterised as an 'endocrine' organ due to its complex interactions with myriad hormones and cellular factors. Of much recent concern is the increasing incidence of age-related muscle pathologies such as sarcopaenia and myalgia. Vitamin D deficiency is strongly implicated in these conditions, and based on current literature, is believed play a key role in muscle growth, function and regeneration. However, myogenesis is a complex process, and the mechanisms through which vitamin D interacts with muscle at its different stages of development are yet to be characterised. This study uses both cell and mice models to investigate the influence of vitamin D on early myogenesis and regeneration. This is the first study to utilise crossbred Pax7- Cre and floxed-vitamin D receptor mice, which allows targeted vitamin D receptor (VDR) deletion in muscle stem cells, known as satellite cells. Satellite cells are normally quiescent in resting muscle but are integral in repair following injury. Although satellite cell VDR knockout (sVDR KO) mice were phenotypically similar to their floxed (WT) controls, they exhibited decreased muscle function with age, and following injury, demonstrated less effective healing. Quantitative real-time PCR (qPCR) revealed increased expression of some atrophy-related genes as well as markers of early myogenesis in resting sVDR KO mice, suggesting a compensatory effort for a later defect in myogenesis. Following injury, histological and qPCR analysis revealed poorer healing in sVDR mice. Taken together, these findings strongly suggest a role for VDR in early myogenesis.

**Student Name:** Anna Fernon  
**Project Name:** Improving the management of gout in the community.  
**Supervisor:** Prof Ric Day

The project was a qualitative study that aimed to involve patients in the design of an electronic tool (eTool) (a website and mobile application) to support gout self-management by collecting end-user opinions of potential eTools in focus group. Four semi-structured focus group sessions were held at St Vincent's Hospital and the University of Western Sydney, Campbelltown. 13 gout patients participated (age range 39-79 years). Focus group transcripts were analysed to identify themes.

We identified that patients' experience of gout falls into three consecutive stages: initial diagnosis, a stage of active management, and a final stage that only some patients reach where gout is controlled. Participants were open to the idea of using an eTool to support gout management and identified a number of potential eTool features they believed would be helpful. These included education, SUA monitoring, medication reminder alerts, contacts, and updates on gout research.

## OTHER INDEPENDANT LEARNING PROJECTS

**Student:** Alexandra Bissaker  
**Lisdexamfetamine** for the treatment of methamphetamine dependence  
**Supervisor:** A/Prof Nadine Ezard

**Student:** Alex Cheng  
**Metformin** in liver disease  
**Supervisor:** Prof Ric Day

**Student:** An-Ning Chew  
**Assessment** of apoptosis in haemangioma cells using sirolimus and detergents  
**Supervisor:** A/Prof Kurosh Parsi

Student: Mayy Mohamed Hamde

Does parental history of violent, non-violent, or no offending impact on early childhood developmental outcomes (age 5 years)?

Supervisor: Dr Kristin Laurens

Student: Jiahua Huang

Long term outcomes of patients with primary graft failure post heart transplantation

Supervisor: Dr Emily Granger

Student: Nicole Khor

Beiging human fat

Supervisor: Prof Jenny Gunton

Student: Naomi Niles

The Feasibility of Maastricht Category II DCD Donation in Australia

Supervisor: Dr Emily Granger

Student: Jennifer Preddy

Correlation of physical findings of knee and ankle injuries with radiographic abnormalities

Supervisor: Prof Gordian Fulde

Student: Dawen Shi

Fast track in colorectal surgery

Supervisor: Dr Rohan Gett

Student: Alwin So

Size and mutation profile of free circulating DNA in cancer patients versus healthy controls

Supervisor: Dr Goli Samimi

Student: Benjamin So

Vitamin D and gene regulation in muscle

Supervisor: Prof Jenny Gunton

Student: Ahmad Sulaiman

Mapping arterio-venous malformations using conventional and new technologies

# HONOURS PROJECTS

Supervisor: A/Prof Kurosh Parsi

Student: Marlene Wijaya

Induction of apoptosis in skin cancer cells following exposure to detergents

Supervisor: A/Prof Kurosh Parsi

**Student: Erika Strazdins**

**Project: The impact of mental health on functional outcomes of rhinoplasty**

**Supervisor: A/Prof Richard Harvey**

Mental health is known to impact patient satisfaction with rhinoplasty. However, the impact of mental health on patient perception of nasal function and functional outcomes of rhinoplasty is poorly understood. This study assessed baseline and post-rhinoplasty functional outcomes of patients presenting for a nasal airway assessment. Patients were defined pre-operatively using validated assessments of mental health in domains of mental wellbeing, self-esteem, and dysmorphic concerns. Validated patient reported outcomes pertaining to nasal function were collected, as well as objective measures of nasal function.

Impaired mental status predicted poor self-perception of nasal function at baseline compared to those of normal mental health. However, there was no difference between the groups in objective nasal outcomes. Hence, clinicians should be aware that patients with impaired mental health complaining of poor airflow may require further assessment prior to surgery. Interestingly, rhinoplasty imparts similar benefits for nasal function measured by changes in patient perception of nasal function and objective airflow measures regardless of mental health status. This is suggestive that mental health does detrimentally impact patient satisfaction with rhinoplasty functional outcomes.

**Student: Matt Lennon**

**Project: The role of Bcl11b in Motor Neuron Disease**

**Supervisor: Prof Bruce Brew**

Motor Neuron Disease (MND) is an idiopathic, fatal, neurodegenerative disease of the human motor system. This study explores the involvement of a novel protein, B cell lymphoma/leukaemia 11b (Bcl11b) in MND. Bcl11b is a multifunctional zinc finger protein transcription factor. It functions as both a trans activator and genetic suppressor, acting both directly, binding to promoter regions, and indirectly, binding to promoter bound transcription factors. It has essential roles in the differentiation and growth of various cells in the

central nervous system (CNS), immune system, integumentary system and cardiovascular system, to the extent that Bcl11b knockout mice are incompatible with extra-uterine life. It is involved in keeping HIV and possibly other retroviruses in a latent state. Consequently, the following hypotheses were tested: Bcl11b is elevated in MND because of immune involvement (inflammation), compensatory up regulation in response to neuronal death, or an underlying, possibly causative retrovirus.

Bcl11b was found to be significantly elevated ( $p < 0.0001$ ) compared to healthy and inflammatory controls, in particular it was found to be elevated in a subset of patients. There was no association with measured markers of inflammation or cellularity but there was some association with neurofilament light chain ( $p = 0.03$ ) and ALS functional rating score ( $p = 0.022$ ). Reverse transcriptase activity was present in 1 of 34 MND samples and thus associations with Bcl11b could not be analysed.

The project provides interesting insights into the possibility of Bcl11b acting as a biomarker for MND and may provide further insights into the pathogenesis of the disease.

**Student: Jesse Ende**

**Project: Environmental responses of virally infected respiratory epithelial cells**

**Supervisor: Prof Richard Harvey and A/Prof Janet Rimmer**

The epithelial cells lining the airway play an important role in defending our bodies against the multitude of environmental pollution and allergens we inhale daily. However, viral infection and chronic airway disease can impair the ability of these cells to respond, potentially leading to worsened clinical symptoms or disease exacerbations. This project has utilised a novel in vitro technique of culturing airway epithelial cells to characterise their altered responses to these environmental challenges when underlying viral infection or chronic disease is present.

The study found that viral infection does in fact impair the ability of our cells to respond to these environmental challenges, and this defective response shares similarities with the pathology seen in chronic rhino sinusitis (a chronic airway disease of the nose and sinuses). This could help explain the apparent link between viral infection and disease exacerbations seen clinically. Furthermore, the challenges had different effects on the airway cells, pointing to the importance of different environmental exposures combining synergistically with viral infection and airway disease.

**Student: Gerald Mak**

**Project: Investigation into the role of the gastrointestinal mucosal barrier in HIV pathogenesis**

**Supervisors: A/Prof Mark Danta, A/Prof Mark Boyd**

Chronic HIV infection is implicated in increased morbidity and mortality despite treatment with antiretroviral therapy (ART). A paradigm explaining this phenomenon is pathological microbial translocation across the gastrointestinal barrier, causing increased systemic inflammation and early immunosenescence. However, the specific changes in various layers of the gastrointestinal barrier that allow bacterial translocation, and their persistence or recovery with antiretroviral therapy, are unclear. We conducted a cross-sectional pilot study of the gastrointestinal barrier, aiming to assess the inflammatory markers TNF- $\alpha$  and IL-6 and the microbial translocation marker sCD14 in plasma, the immunophenotype of gastrointestinal and circulating lymphocytes, the gut microbiome and in vivo imaging using confocal endomicroscopy.

Confocal endomicroscopy is a novel technology available at St Vincent's Hospital that integrates a laser confocal microscope into a conventional endoscope. This can be used to directly examine evidence of gastrointestinal epithelial permeability microscopically. We hypothesized that intestinal epithelial permeability is increased in patients treated during chronic HIV infection, and is associated with decreased gastrointestinal lymphocyte count, increased microbial translocation and systemic immune activation.

A cohort of HIV-positive patients who initiated ART during early (primary HIV infection (PHI),  $n = 5$ ) and late (chronic HIV infection (CHI),  $n = 7$ ) infection were evaluated for the differential effects of the stage of ART initiation on study outcomes. We enrolled a cohort of HIV-negative participants ( $n = 6$ ) as controls. Although

there was a significant decrease in the CD4 T-cell count of CHI patients in the left colon and a trend to a decrease in the terminal ileum, we did not find evidence of increased epithelial permeability. No significant differences were found in microbial translocation and inflammatory markers in the plasma, or in gut microbiome variation. In total, this data suggests that microbial translocation as a primary cause of HIV pathogenesis may not be an important mechanism in well-controlled HIV-positive patients on long-term antiretroviral therapy.

**Student: Theresa Nguyen**

**Project: Expression of PD-1 and its ligands in haematological malignancy**

**Supervisor: A/Prof William Sewell**

Programmed cell death-1 (PD-1) and its ligands, PD-L1 and PD-L2, have been shown to play an important role in tumour immune escape in a number of solid malignancies. Interaction of PD-1 on T-cells with PD-L1 on neoplastic cells results in down regulation of T-cell mediated immunity. PD-1's role in haematological malignancy has been less researched, despite the prominence of immunoincompetence in these malignancies.

This study aimed to contribute data on PD-1 axis expression in haematological malignancy. It was hypothesised that, similarly to solid malignancies, monoclonal cells in haematological malignancy would express PD-L1/PD-L2, with a corresponding up regulation of PD-1 on T-cells. Flow cytometry was used to investigate the expression of PD-1 and its ligands on neoplastic and normal cells, from both patients with haematological malignancies and normal controls. Expression of PD-L1 and PD-L2 were found most prominently in multiple myeloma (MM), with some expression in certain B non-Hodgkin lymphomas (BNHL) and in chronic lymphocytic leukaemia's (CLL). Furthermore, a subset neoplastic cells in CLL and MM expressed PD-1, which was not characteristic of normal cells. Increased PD-1 was associated with an expansion of the Tregulatory cell population. There was marked heterogeneity in the expression of the samples tested, even within the same type of malignancy, suggesting that the PD-1 axis plays a role in some, but not all, haematological malignancy cases, and may act through differing mechanisms. These findings suggest the possibility of using PD-1/PD-L1 immune checkpoint blockade as therapy in susceptible cases, guided by cellular expression.

**Student: Ananya Chakravorty**

**Project: The accuracy of PSR and rCBV derived from DSC MR imaging in the preoperative diagnosis of cerebral tumours: a dual-centred prospective pilot study**

**Supervisor: Dr Timothy Steel**

**Co supervisor: Dr Joga Chaganti**

Common contrast-enhancing lesions such as glioblastoma (GBM) and solitary cerebral metastasis are often impossible to differentiate using conventional MRI. Similarly, post-treatment changes such as radiation necrosis may imitate tumour recurrence following radiotherapy for high-grade glioma or cerebral metastasis. Percentage of signal intensity recovery (PSR) and relative cerebral blood volume (rCBV) derived from dynamic susceptibility-weighted contrast-enhanced (DSC) MRI provide information on capillary permeability and microvascular density. The purpose of this prospective pilot study was to evaluate the accuracy of PSR and rCBV in differentiating between (1) glioblastoma and solitary metastasis and (2) tumour recurrence and radiation necrosis. **METHODS:** Forty-five patients underwent DSC MRI for presumed or confirmed contrast-enhancing cerebral tumours. rCBV and PSR values were calculated from the contrast-enhancing and perienhancing regions of each tumour. The optimum threshold values of PSR and rCBV for diagnosis were calculated using Youden's index. **RESULTS:** Fourteen patients were diagnosed with GBM, 9 with metastasis, 13 with tumour recurrence and 9 with radiation necrosis. Significantly higher contrast-enhancing rCBV and perienhancing PSR was found in GBM compared to metastasis ( $p < 0.05$ ). Significantly higher rCBV and lower PSR values were found in tumour recurrence compared to radiation necrosis in both the contrast-enhancing and perienhancing regions ( $p < 0.05$ ). The optimum thresholds for differentiating metastasis from GBM in the contrast-enhancing region were PSR  $> 60\%$  and rCBV  $> 5$ , and in the perienhancing region, PSR  $< 80\%$  and rCBV  $< 0.75$ . The optimum threshold for differentiating tumour recurrence from radiation necrosis in the contrast-enhancing region were PSR  $< 85\%$  and rCBV  $> 2.5$ , and in the perienhancing region, PSR  $< 85\%$  and rCBV  $> 1.05$ . **CONCLUSION:** PSR and rCBV are useful parameters for differentiation of GBM versus

# CLINICAL PHARMACOLOGY UPDATE



## OVERVIEW

The Department of Clinical Pharmacology and Toxicology (CPT) is part of St Vincent's Clinical School and the School of Medical Sciences, UNSW Medicine and St Vincent's Hospital Sydney, St Vincent's Health Australia.

The core activities of the CPT Department focus on promoting the safe and effective use of medicine as well as patient safety at St Vincent's Hospital and in the

community. This includes:

- Inpatient service for the management and assessment of overdoses and poisoning,
- Consulting on therapeutic problems,
- Guidance on the usage of electronic medication management and decision support tools,
- Research and teaching on medicines.

The Department provides leadership in the areas of therapeutics and quality use of medicines locally, nationally and internationally through its advisory roles, collaborations, memberships and associations.

This year has been a busy and successful year for Professor Ric Day and his team.

After more than 35 years working at St Vincent's Hospital, Visiting Professor Ken Williams is now officially retired from his position as the Deputy Director of the department, although continues to volunteer his time to assist with student research projects. Ken had maintained a high standard of management, research and teaching to undergraduates at UNSW (Medicine and Pharmacology), St Vincent's Hospital (Medicine IV), and post-graduate education (FRACP candidates, research students). Ken has published over 150 peer-reviewed



publications and continues his great work in retirement. We wish Ken all the best and a happy, healthy, well-deserved retirement.

We were delighted to announce the appointment of Dr Sophie L Stocker as the Senior Hospital Scientist of the department. Sophie has broad experience in research and practice of clinical pharmacology and toxicology in the academic, hospital and industry setting. Most recently, she was a Senior Ethnopharmacology Scientist at GlaxoSmithKline Research & Development.

Prof Ric Day was the recipient of the 'St Vincent's Clinical School Publication of the Year Award' for 2015. Dr Mark Hicks, Senior Hospital Scientist, was the recipient of the '2015 Clinical Excellence Award – Scientist' by the St Vincent's Clinic Foundation. Dr Robin Butterfield, Clinical Pharmacology Registrar and Conjoint Associate Lecturer, St. Vincent's Clinical School, UNSW Medicine, was the recipient of the 'JMO of the Year 2015 (Registrar) Award', St Vincent's Hospital Sydney.

Prof Ric Day and colleagues were successful in several large NH&MRC research grants for the 2015 round which will allow him and his team to continue their translational research.

We would also like to acknowledge and say thank you to Honorary Professor Garry Graham for his continuing volunteer work, research and assistance with student research projects. Professor Graham has been associated with the Department of Clinical Pharmacology and Toxicology at St Vincent's Hospital since 1973. He retired officially 18 years ago and is now an Honorary Professor at the University of New South Wales. He has published 194 peer reviewed research papers and reviews.

Lastly, farewell to Shaun Kumar and Diluk Kannangara (BMedSci Hons, PhD Candidates) who have been students with the department for the last 5 years. They have made significant contributions to the department's research and have assisted in mentoring more junior members. We wish them both success in their future endeavours.

*Thuy Huynh*



Dr Robin Butterfield receiving his award

## CLINICAL PHARMACOLOGY - RESEARCH SUCCESSSES

### NH&MRC RESEARCH FUNDING

AppID	Title	Funding Type & Grant Type	Role & % P/W	First Year	No of Years	Total Amount (\$AUD)
1059732	Addressing conflicts of interest in public health and biomedicine: enhancing professional integrity and safeguarding the public's health. (Lipworth W, Kerridge I, Komersaroff P, Stewart C, Olver I)	Project Grant	AI; 5%	2014	3	564,553
1082480	The first placebo-controlled trial of opioid analgesics for acute spinal pain. (Lin C, Maher C, McLachlan A, Latimer J, Billot L, Koes B)	Project Grant	AI; 5%	2015	3	996,237
1080673	Improving decisions about the funding of high cost cancer medicines in Australia. (Lipworth W, Kerridge I, Salkeld G, Olver I, Isaacs D, Pearson S)	Project Grant	AI; 5%	2015	3	549,492
1094708	Patient-centred eHealth approach to improving outcomes for gout sufferers. (Day R, Zwar N, Reath J, Westbrook J, Lau A, Baysari M, Laba T, McLachlan A, Runciman W)	Partnership Project Grant	CIA	2015	5	NHMRC: 660,656.85; Partners: 661,000; Total: 1,321,656.80
1094878	Delivering safe and effective care for children in hospital with eHealth systems. (Westbrook J, Georgiou A, Day R, O'Brien T, Karnon J, Dalla-Pozza L, Cowell C, Li L, Baysari M, Ambler G)	Partnership Project Grant	CIC	2015	5	NHMRC: 632,806; Partners: 450,000; Total: 1,082,806

### OTHER RESEARCH FUNDING

Funding Organisation		Funding Source	Peer	Role & % P/W	First Year Funded	No. of Yrs	Total Amount (\$AUD)
St Vincent's Health Network (SVHN) Sydney, Lexy Davies Estate Trust Fund (T/Fund 869753)	Domestic	Government	yes	PI		5	450,000
St Vincent's Clinic Foundation. Annual Research Grant 2016. Implementation of drug-drug interaction alerts: An investigation of burden of prescribers (Baysari M, Sandhu A, Richardson K, Li L, Day R)	Domestic	NGO's (non-profit)	yes	AI	2016	1	30,000



A/Professor Mark Danta

## POST GRADUATE REPORT

UNSW, under the leadership of the Vice Chancellor Prof Ian Jacobs, has now published its strategic plan with ambitious aims for the next decade ([https://www.2025.unsw.edu.au/sites/default/files/uploads/unsw\\_2025strategy\\_201015.pdf](https://www.2025.unsw.edu.au/sites/default/files/uploads/unsw_2025strategy_201015.pdf)). The process has identified the three key areas of academic excellence, social engagement and global impact to make UNSW a truly global university. The postgraduate community will be pivotal in fulfilling these ambitions. The strategic plan also outlines ten key commitments. The St Vincent's campus, which includes the Victor Chang Cardiac Research Institute, the Garvan Institute and St Vincent's Applied Medical Research is already contributing to world leading research with significant research impact. This is particularly in the fields of cardiac disease, cancer, immunology, genomics and metabolic disease such as diabetes. Through this research the campus is providing valuable graduates and thought leaders with significant national and international collaborations, which are all commitments as part of UNSW future. In this capacity, St Vincent's campus is ahead of the field with regard to the strategic white paper.

UNSW received a total of \$58 million in National Health and Medical Research Council (NHMRC) funding to commence in 2016, which is about the same level of funding as previous year. Obviously there are areas that could improve. However, many of these grants are affiliated with the St Vincent's Clinical School, particularly through the Garvan Institute and Victor Chang Cardiac Research Institute. No doubt as the Kinghorn Cancer Centre increases the links between clinical care and basic research in a 'bench to bedside' approach in the field of cancer and genomics more grant funding success will follow.

The support for postgraduate students and supervisors will also improve as the online IT systems improve. The annual progress reviews (APRs) are now all online through the Graduate Research School. The aim is to have the whole postgraduate academic pathway online in the next 1-2 years, again streamlining the processes that at times have been quite cumbersome. With regard to UNSW funding, there has also been an increase in the number of Tuition Free Scholarships (TFS) on offer by UNSW. These scholarships for international students provide a waiver of UNSW fees, however, the living stipend for the student must be provided by their supervisor. This is timely as the number of successful APAs and IAPA has fallen with the increase in high calibre student applicants.

I would like to thank the other PGCs on campus, specifically, Dr Alessandra Bray (Garvan Institute) who has now left the Garvan Institute, and welcome Dr Tracey Andreson, the new PGC at the Garvan Institute, Prof Boris Martinec (Victor Chang Cardiac Research Institute) all post-graduate students and supervisors for an excellent year. All the best for 2016.

# SUCCESSFUL GRANT APPLICATIONS

## UNSW

RG134719 - Go8 - Germany Joint Research Cooperation Scheme (DAAD) - \$10,000 awarded to Prof Boris Martinac for “Mechanotransduction in cardiac hypertrophy using a novel isotropic cell stretcher”.

RG140464 - Australian Research Council / Discovery Project - \$420,236 over 3 years awarded to Prof Jamie Vandenberg for “Assembly and stability of human voltage-gated potassium channels”.

RG140546 - Australian Research Council/Discovery Project - \$414,300 over 3 years awarded to Dr Roland Stocker for “How do cells regulate the synthesis and localisation of coenzyme Q?”.

RG142727 - Goldstar-ARC - \$40,000 awarded to Prof Sally Dunwoodie for “Studying the effects of hypoxia on mouse embryogenesis”.

RG142731 - Goldstar-ARC - \$40,000 awarded to Prof Robert Graham AO for “Cardiac alpha-adrenergic responses to survival of the fittest”.

RG142733 - Goldstar-ARC - \$40,000 awarded to Prof Richard Harvey for “Defining the ground-plan for heart development”.

RG142742 - Goldstar-ARC - \$40,000 awarded to Dr Ghassan Maghzal for “Quantifying reactive species by mass spectrometry & mathematical modelling”.

RG142764 - Goldstar-NHMRC - \$40,000 awarded to Prof Bruce Brew for “Modulating the kynurenine pathway to promote neural progenitor cell repair in multiple sclerosis”.

RG142768 - Goldstar-NHMRC - \$40,000 awarded to A/Prof David Brown for “MIC-1/GDF15 in autoimmune inflammatory disease”.

RG141908 - National Health & Medical Research Council/Postgraduate Scholarship - \$67,262 awarded to A/Prof Reginald RV Lord for “Biomarkers in Barrett’s Oesophagus and Oesophageal Adenocarcinoma (Postgraduate Scholarship for Dr Oliver Fisher)”.

RG141954 - National Health & Medical Research Council/Partnership Projects - \$660,656 awarded to Prof Ric Day for “Patient-centred eHealth approach to improving outcomes for gout sufferers”.

## ST VINCENT'S CLINIC FOUNDATION

### St Vincent's Clinic Foundation – 2015 Grant Recipients

SVPHS Ladies' Committee Sr Mary Bernice Research Grant – \$100,000 awarded to A/Prof Chris Hayward for "Apixaban in mechanical circulatory support - evaluation of potential".

Adult Stem Cell Research Grant – \$50,000 awarded to Dr Kazuo Suzuki for "Evaluation of macrophage differentiated from induced pluripotent stem cells (iPS cells) for HIV-1 infectious study".

Tancred Research Grant – \$50,000 awarded to Prof Roland Stocker for "Non-invasive molecular imaging for the identification of vulnerable atherosclerotic plaque".

K&A Collins Cancer Grant – \$50,000 awarded to Prof David Ma for "Adoption and sustainability of a telehealth treatment program to improve the health of cancer survivors after Hematopoietic Stem Cell Transplant".

Thelma Greig Cancer Grant – \$50,000 awarded to Prof Neil Watkins for "A translational discovery pipeline to improve treatment outcomes for patients with advanced lung cancer".

Di Boyd Cancer Grant – \$25,000 awarded to Prof Deborah Marriott for "Antimicrobial therapy in haematology patients: turning good into best".

Froulop Research Grant – \$30,000 awarded to Dr Matthew Perry for "Assessing gating phenotypes of long QT syndrome type 2 causing mutations".

Annual Grant 1 – \$30,000 awarded to Dr Kazuo Suzuki for "Development of a new quantitative HIV-1 RNA assay (spliced-tat) for the detection of active virus production within HIV-1 reservoir cells".

Annual Grant 2 – \$30,000 awarded to Dr Joanne Joseph for "Improving the risk assessment and management of bleeding in subjects with acquired thrombocytopenia".

Annual Grant 3 – \$30,000 awarded to Dr James Otton for "Structural simulation of transcatheter aortic valve implantation".

Annual Grant 4 – \$30,000 awarded to A/Prof David Brown for "Studies on the dendritic cell contribution to the regulation of anticeutral nervous system immunity".

Annual Grant 5 – \$30,000 awarded to A/Prof Mark Danta for "Confocal endomicroscopy optimisation research in HIV (CEMOR-HIV) Study - HIV GIT pathogenesis".

Annual Grant 6 – \$30,000 awarded to Dr John Moore for "Re-establishing Thymic T Cell self-tolerance following Haematopoietic Stem Cell transplantation in patients with Multiple Sclerosis and Systemic Sclerosis".

Annual Grant 7 – \$50,000 awarded to A/Prof Reginald V N Lord for "A whole genome sequencing study to discover biomarkers associated with survival for patients with oesophageal adenocarcinoma".

Multidisciplinary Patient Focused Research Grant 1 – \$25,000 awarded to Prof Jo-anne Brien for "Medication-related problems at transitions of care: the patient's perspective".

# 2016 DATES

## 2016 TERM DATES

### Phase 1

Teaching Period 1: 29 February - 29 April  
Recess: 25 March - 1 April  
Teaching Period 2: 2 May - 24 June  
Recess: 27 June - 15 July  
Teaching Period 3: 18 June - 15 July  
Teaching Period 4: 12 September - 11 November  
Recess: 26 September - 30 September

### Phase 3

Summer Teaching Period: 11 January - 4 March  
Teaching Period 1: 7 March - 6 May  
Recess: 4 April - 8 April  
Teaching Period 2: 9 May - 1 July  
Recess: 4 July - 8 July  
Teaching Period 3: 11 July - 2 September  
Recess: 5 September - 9 September  
Teaching Period 4: 12 September - 4 November  
PRINT: 10 October - 18 November

## EXAMINATIONS

### Phase 3

Clinical: 14 & 15 September  
Oral: 20 & 21 September  
Portfolio: 27 & 28 September

### Phase 2

Semester 1: 29 February - 24 June  
Recess: 25 March - 1 April  
Recess: 27 June - 15 July  
Semester 2: 18 July - 14 October  
Recess: 29 August - 2 September

### Phase 2

22 & 23 November

### Phase 1

30 November & 1 December

# UNSW CONJOINT STAFF APPOINTEES

AS OF 31 DECEMBER 2015

## PROFESSOR

Basten, Antony  
Biden, Trevor  
Breit, Samuel  
Brew, Bruce  
Brien, Jo-anne  
Brink, Robert  
Campbell, Lesley  
Carr, Andrew  
Center, Jackie  
Chisholm, Donald  
Clark, Susan

Cohen, Milton  
Cooney, Gregory  
Croucher, Peter  
Daly, Roger  
Dunwoodie, Sally  
Eisman, John  
Epstein, Richard  
Fatkin, Diane  
Febbraio, Mark  
Feneley, Michael  
Glanville, Allan

Goodnow, Christopher  
Hayward, Christopher  
Herzog, Herbert  
Ingham, Jane  
James, David  
Keogh, Anne  
Ma, David  
Macdonald, Peter  
Martinac, Boris  
Mattick, John  
Ormandy, Christopher

Petros, Peter  
Rogers, Michael  
Samaras, Katherine  
Shine, John  
Sprent, Jonathon  
Stocker, Roland  
Symonds, Geoffrey  
Tangye, Stuart  
Thomas, David  
Vandenberg, Jamie  
Watkins, Neil

## ASSOCIATE PROFESSOR

Bester, Lourens  
Brennan, Nick  
Bryant, David  
Chye, Richard  
Connolly, William Bruce  
Cooper, Antony  
Courtenay, Brett  
Dhital, Kumud  
Dinger, Marcel  
Dodds, Anthony  
Emmett, Louise  
Ezard, Nadine  
Faux, Steven  
Freund, Judith  
Fulde, Gordian  
Grabs, Anthony

Graham, Antony  
Geenfield, Jerry  
Grey, Shane  
Guntton, Jenny  
Harvey, Richard  
Haylen, Bernard  
Hillman, Richard  
Holloway, Cameron  
Horvath, Lisa  
Jabbour, Andrew  
Jones, Graham  
Joshua, Anthony  
Kennedy, Michael  
Kotlyar, Eugene  
Kuchar, Dennis  
Laybutt, Ross

Lim, Elgene  
Lord, Reginald  
Markus, Romesh  
Marriott, Deborah  
Moore, John  
Morey, Adrienne  
Muller, David  
Neil, Michael  
Norris, Ross  
Ortiz, Michael  
Parsi, Kurosh  
Pendlebury, Susan  
Plit, Marshall  
Pocock, Nicholas  
Raftos, John  
Roe, Justin

Schembri, Anthony  
Schmitz-peiffer, Carsten  
Sevastos, Jacob  
Simons, Leon  
Spratt, Phillip  
Stricker, Phillip  
Subbiah, Rajesh  
Suter, Catherine  
Tobin, Bernadette  
Viardot, Alexander  
Xia, Yu (Brandon)  
Yates, Deborah

## SENIOR LECTURER

Aldred, Russell  
Al-Soufi, Suhel  
Anderson, Tracy  
Baldock, Paul  
Banerjee, Dev  
Barry, Guy  
Batten, Marcel  
Baysari, Melissa  
Berry, Melinda  
Beveridge, Sandy  
Biggs, Nigel  
Birzniece, Vita  
Blackburn, James  
Brenner, Phillip  
Burgess, Andrew  
Buscher, Hergen  
Caldon, Catherine Elizabeth  
Chaganti, Joga Rao  
Chan, Tyani  
Chan, Eva  
Chen, Wendy  
Christ, Daniel  
Chitanova, Tatyana  
Cipponi, Arcadi

Cowley, Mark  
Cox, Charles  
Croucher, David  
Darveniza, Paul  
Dear, Rachel  
Duffy, Martin  
Dunn, Louise  
Ende, David  
Fallon, Anne  
Feller, Robert  
Fenton-Lee, Douglas  
Field, Andrew  
Finch, Andrew  
Foltny, Peter  
Frommer, Donald  
Garrick, Ray  
Giannoulatos, Eleni  
Girgis, Lalia  
Groza, Tudor  
Hargreaves, Warren  
Harper, Elizabeth  
Harvey, Rhonda  
Havryk, Adrian  
Hesselson, Daniel

Hill, Adam  
Ho, Wing Kei (Joshua)  
Hughes, William  
Iismaa, Siri  
Imtiaz, Mohammad  
Joseph, Joanne  
Kikuchi, Kazu  
King, Cecile  
Kohonen-Corish, Maja  
Lamaro, Vincent  
Lee, Paul  
Lin, Yong  
Maghazal, Ghassan  
Malouf, Monique  
Martin, Gisela  
Matthews, Steve  
Mercer, Timothy  
Milliken, Samuel  
Mora, Fatima  
Mozer, Roslyn  
Nair, Priya  
Neely, Gregory  
Nicholls, Mark  
Nikolova-Krsteovski, Vesna

Oakes, Samantha  
O'Neill, John  
O'Sullivan, Gregory  
O'Toole, Sandra  
Owe-Young, Robert  
Parker, Shari  
Pell, Malcolm  
Perry, Matthew  
Petersen, Desiree  
Phan, Tri  
Preis, Paul  
Roy, David  
Samarasinghe, Iromi  
Sammel, Neville  
Saxena, Manvendra  
Schofield, Peter  
Silverstone, Elizabeth  
Simon, Neil  
Smith, Nicola  
Steel, Timothy  
Stirzaker, Clare  
Stock, Daniela  
Stone, Emily  
Sun, Clive



## SENIOR LECTURER CONTINUED

Sutton, Ian  
Suzuki, Kazuo  
Swarbrick, Alexander  
Taberlay, Phillipa  
Tao, Helen

Tao, Jiang  
Timpson, Paul  
Tisch, Stephen  
Tsai, Vicky Wang-Wei  
Vissel, Bryce

Walker, Bruce  
Watts, Colin/Charlie  
Webster, Kylie  
Whitfield, Margot  
Wilson, Stephanie

Wu, Jianmin  
Yuen, Carlo  
Zaunders, John

## LECTURER

Alford, Judy  
Al-Tebrineh, Jamal  
Asli, Naisana Seyed  
Baker, Matthew  
Balaji, Poornima  
Barnett, Yael  
Ben-Menachem, Erez  
Bosman, Alexis  
Bouveret, Romaric  
Brooke, Kathryn  
Buske, Fabian  
Cazet, Aurelie  
Chapman, Gavin  
Chaston, Jessica  
Chow, Fiona  
Crawford, Julia  
Connor, David  
Costin, Monique  
Cotterell, James  
Cruz, Monique  
Deenick, Elissa  
Doyle, Kharen  
Eaton, Sally  
Edwards, Emily  
Findeisen, Maria  
Flanagan, Sean  
Fulde, Sascha  
Gallejo-Ortega, David

Gatto, Dominique  
Gill, Anthony  
Gilroy, Nicole  
Giry-Laterriere, Marc  
Gloss, Brian  
Granger, Emily  
Guennegiw, Boris  
Hesselson, Stephanie  
Higgs, Andrew  
Hollway, Georgina  
Hsu, Eugene  
Humphreys, David  
Husaini, Yasmin  
Ibrahim, Karim  
Jahromi, Shahrzad  
Khoo, Oliver  
Khoo, Melissa  
Khuong, Thang Manh  
King, Michael  
Kumaradevan, Nirmala  
Lau, Man Tat  
Lee, Hong Ching  
Lee, Nicola  
Leow, Liang Joo  
Leung, Julie  
Liao, Bing  
Liew, Chu Kong  
Lin, Peijie Paul

Loi, To Ha  
Ma, Cindy  
Macaulay, Philip  
Mann, Stefan  
Maruno, Kevin  
McCabe, Mark  
McCormack, Anne  
McDonald, Michelle  
Milner, Brad  
Mohammad, Mohammad  
Mahon, Kate  
Molloy, Tim  
Muniak, Michael  
Munoz, Marcia  
Nair, Shalima Sasidharan  
Ng, Chai (Andy)  
Nguyen, Akira  
Nicholls, Gary  
Nikolic, Iva  
Omari, Abdullah  
Owen, Gareth  
Paddon, Vanessa  
Pajic, Marina  
Pal, Martin  
Palma, Catalina  
Pile, Alex  
Reed, Joanne  
Reibe-Pal, Saskia

Rodgers, Craig  
Rudham, Sam  
Schonrock, Nicole  
Scott, Sean  
Shi, Yanchuan  
Shi, Hongjun  
Singh, Reena  
Skalicky, David  
Smith, Martin  
Southwell-Keely, James  
Stone, Andrew  
Tefany, Frances  
Tran, Phuung Ngoc  
Tsang, Clement  
Vaquerinho de pinho, Andreia  
Vertzyas, Nick  
Vu, Thi Thanh  
Warton, Kristina  
Watanabe, Yuriko  
Whitham, Martin  
Williams, David  
Winder, Mark  
Woods, Nicola  
Wu, Jane  
Zotenko, Elena  
Zhang, Lei

## ASSOCIATE LECTURER

Achinger-Kawecka, Joanna  
Ambati, Chaitanya  
Andvik, Sarah  
Ariyanrathna, Dilshan  
Au, Kimberley  
Bart, Nicole  
Berger, Aaron  
Birch, Julia  
Blum, Nomi  
Bodnarchuk, Damien  
Bradley, Stephen  
Burne, Scott  
Butler, Margaret  
Butterfield, Robin  
Byrne, Niall  
Campos, Pedro  
Chauhan, Manisha  
Cheng, Yen Szu  
Cheung, Caran  
Chew, Hong  
Christie, Mary  
Chu, Kwan  
Chung, Jason  
Connellan, Mark  
Connolly, Elizabeth  
Dai, Eunice  
Danos, Isabelle  
Dantanarayana, Nandu

Deng, Niantao  
Dowling, Cameron  
Duckworth, Andrew  
Edwards, Gillian  
Farnham, Nell  
Fennessy, Niall  
Goh, Sean  
Goldstein, James  
Hannaford, Patricia  
Herrmann, David  
Holmes, Ryan  
Holmes, Alex  
Hoy, Elizabeth  
Junankar, Simon  
Kilpatrick, Fiona  
Kim, Ryan  
Kumarasinghe, Gayathri  
Lasschuit, Joel  
Lee, William  
Loh, Tze Ling  
Luong, Michael  
Ma, Chun (Kris)  
Markowsky, Lorie  
Mayson, Eleni  
Menon, Jennifer  
Meredith, Thomas  
McGrath-Cadell, Lucy  
McLean, Alison

Middlemiss, Christopher  
Milanovic, Mitchell  
Milliken, Eliza  
Mladenova, Dessislava  
Morris, Katrina  
Murambi, Ronald  
Namasivayam, Mayooraan  
Nee, Rory  
Ong, Lawrence  
O'Brien, Michael  
O'Donnell, Jonathan  
Ostrowski, Kevin  
Parthasarathi, Krishnan  
Patterson, Kate  
Phan, Justin  
Pokorny, Adrian  
Rendalls, Shane  
Rigby, Amy  
Roach, Timothy  
Rom, Darren  
Sachdev, Sonal  
Sacks, Peta  
Samadi, Behnoosh  
Shaw, Nicholas  
Shivam, Aruna  
Scheuer, Sarah  
Sheilds, Melissa  
Sido (nee Singh), Tanya

Siriwardana, Amila  
Skidmore, Sarah  
Small, Timothy  
Smith, Corey  
Song, Ning  
Stephenson, Rowan  
Sundaram, Gayathri  
Sundling, Christopher  
Sutherland, Emily  
Swart, Alexander  
Symons, James  
Tai, Patrick  
Tassie, Benjamin  
Terry, Rachael  
Ting, Francis  
Tonks, Katherine  
Tong, Winnie Wing Yin  
Tran, Minh  
Tran, Thach  
Tran, Chau  
Vijayan, Dipti  
Walker, Stephen  
Wang, Louis  
Wang, Qiaoping  
Watts, Jennifer  
Wilson, Brooke  
Wing-Lun, Edwina

# CLINICAL SCHOOL

## STAFF MEMBERS



### **Professor Allan Spigelman**

Head of School & Professor of Surgery

**Commenced:** 2006

**Specialty:** Surgical Oncology

**Research Interests:** Cancer Care; Clinical Governance/Patient Safety/Quality of Care/Risk Management; Surgery; Cancer Genetics



### **Professor Terry Campbell**

Senior Associate Dean, Faculty of Medicine & Professor of Medicine,

**Commenced:** 1998

**Specialty:** Cardiology

**Research Interests:** Cardiac ion channels; Antiarrhythmic drugs; Cardiac Arrhythmias; Cardiac pharmacology



### **Professor Ric Day**

Professor of Clinical Pharmacology

**Commenced:** 1990

**Specialties:** Clinical Pharmacology & Rheumatology

**Research Interests:** Inflammatory rheumatic diseases; adverse drug reactions



### **Professor Jane Ingham**

Professor of Palliative Care

Director, Cunningham Centre of Palliative Care

**Commenced:** 2007

**Specialty:** Palliative Care

**Research Interests:** Palliative Care



### **A/Professor Eva Segelov**

Associate Professor of Medicine

**Commenced:** 2004

**Specialty:** Medical Oncology

**Research Interests:** Oncology clinical trials; quality of life; medical education



### **A/Professor Jane McCrohon**

Associate Professor of Medicine

**Commenced:** 2008

**Specialty:** Cardiology & Medical Imaging

**Research Interests:** Cardiac imaging (MR, CT and ultrasound); detection of cardiotoxicity



### **A/Professor Bill Sewell**

Associate Professor of Immunology

**Commenced:** 1998

**Specialty:** Immunology

**Research Interests:** Allergic disease;  
Novel markers in leukaemia and  
lymphoma.



### **A/Professor Mark Danta**

Associate Professor of Medicine

**Commenced:** 2006

**Specialty:** Gastroenterology

**Research Interests:** Viral Hepatitis;  
Hepatitis HIV co-infection



### **Dr Anthony Chambers**

Senior Lecturer in Surgery

**Commenced:** 2010

**Specialty:** Surgical Oncology

**Research Interests:** Breasts, Thyroid  
Cancer, Endocrine Tumors



### **Dr Russell Clark**

Senior Lecturer in Medicine

**Commenced:** 2009

**Specialty:** Geriatrics



### **Dr Darren Gold**

Director of Medical Student Education;

Senior Lecturer in Surgery

**Commenced:** 2007

**Specialty:** Colorectal Surgery

**Research Interests:** Proctology;  
pelvic floor disorders



### **Dr Rohan Gett**

Lecturer in Surgery

**Commenced:** 2006

**Specialty:** Colorectal Surgery

**Research Interests:** Colorectal Surgery

## **ADMINISTRATIVE STAFF**



**Mrs Melinda**

**Gamulin**

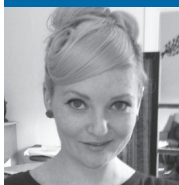
Clinical School  
Manager



**Ms Naomi**

**Esselbrugge**

Administrative  
Officer



**Ms Julee Pope**

Administrative  
Assistant



**Ms Thuy Huynh**

Administrative

Officer

(Clinical  
Pharmacology)



**Ms Cassie**

**Shearer**

Administrative

Assistant

(Surgical  
Professorial  
Unit)





**UNSW**  
AUSTRALIA

St Vincent's  
Clinical School  
Medicine

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St Vincent's Hospital  
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