Visit from Laurie Kazan-Allen and Peter Tighe

We appear to have something of an unwritten rule in the NCARD newsletter to include global ban asbestos campaigner Laurie Kazan-Allen in every issue, and I’m happy to say that this one is no exception.

Laurie kindly agreed to give a presentation at NCARD while on a family visit to Perth, and also encouraged Peter Tighe, head of the Asbestos Safety and Eradication Agency to visit Western Australia. Peter enjoyed a full day with the Asbestos Diseases Society of Australia, then on Friday 24 April joined Laurie at the Harry Perkins Institute to meet the research team at NCARD, as well as other local collaborators and colleagues involved in epidemiological, environmental and clinical treatment aspects of asbestos management and research.

Laurie’s presentation, The Global Mesothelioma Landscape 2015, commenced with an iteration of Donald Rumsfeld’s famous “unknown unknowns”, given that reliable data on mesothelioma for 70% of the world’s population does not exist. Consumption of asbestos products in a number of Asian countries has exploded since the year 2000 – a 163% increase in India, 175% increase in Viet Nam, 251% in Sri Lanka and 300% increase in Indonesia – with few, or no, safeguards. The unfolding tragedy of the consequences to millions of vulnerable people is poignantly highlighted in the World Health Organisation film “Victims of chrysotile asbestos – voices from South East Asia” which Laurie screened with her talk.

Laurie’s accounts of her brushes with the Russian mafia, who are involved in the chrysotile (white asbestos) trade are entertaining, but nevertheless seriously chilling. Her talk provided great insights into the machinations of the Rotterdam Convention.

We thank both Peter Tighe and Laurie Kazan-Allen for meeting with us, and for sharing their time and invaluable perspectives.

More than 300,000 people in India are employed by companies producing or processing asbestos-containing materials, mostly corrugated roofing sheets and water pipes, and millions of construction workers handle these products on building sites with little or no protection. Photo courtesy Laurie Kazan-Allen; photographer unknown.
Vale Douglas Swift

13 April 1962 – 18 April 2015

At the end of April several of us paid our respects at the funeral of Douglas Swift. We were surrounded by people whose lives had clearly been touched by a big hearted man, and many had travelled a long way to attend.

Among those who got up to say a few words were Doug’s friend Ty from Exmouth; a friend who’d grown up “down the lane” from the Swifts in Wittenoom; and a friend he’d made during hospital stays. They all spoke of a kind and tolerant man, funny, witty, who “roared into lives” and loved to make up a good nickname. We saw photos of a North West life of fishing, camping, swimming at Millstream, the Wittenoom Ranges, Doug’s army days, a constant four-legged companion, family get togethers, laughter and fun. There was a palpable sense of loss as we watched, and truly not a dry eye anywhere.

Doug’s friend Craig Marshall, who had placed a beautiful notice in the paper (“They all love Swifty, clever, generous and always late”) read Banjo Paterson’s poem “The Daylight Is Dying”.

Stephanie Austin, a dear friend of Doug’s and a Research Officer at St John of God Hospital, has said:

Doug was born interested, and took great delight in all things ‘clever’. He had enormous respect for the medical staff that cared for him and often expressed admiration and wonder at the innovation, persistence and dedication of medical researchers. Doug actually spoke to me with great enthusiasm about a ‘brilliant young student’ he had met on a day that he had been visiting the facilities at Harry Perkins Institute. He was very excited at the prospect of ‘sponsoring’ this impressive young man’s PhD studies and the thought of what might he might be able to accomplish. [Doug was referring to NCARD researcher Shaokang Ma].

Steph has supplied this photo, noting “I was holding off for a better photo, but one hasn’t come along. The only one I do have is of Doug (left) with another good friend of his, Tim Bailey (right) at our wedding on 28 December 2013. I do love the photo, mostly because it shows Dougie the way I always like to remember him - listening, thoughtful, focussed”.

Doug had defied the odds with mesothelioma, having lived with it for five years. The Swift Family Trust is making a bequest to NCARD to further mesothelioma research, specifically through supporting Shaokang in his PhD studies, for which we are enormously grateful. It does not always happen that researchers get to meet the people who have donated to them, and it has been a genuine privilege.

We offer our sincere condolences to Doug’s brother Andrew and his sister-in-law Sabina, and to all who feel his loss.

SCIENCE LANDS IN PARLIAMENT

This year’s Science Lands in Parliament, organised by the Australian Society for Medical Research, was a resounding success. Held on the evening of Tuesday 5 May to coincide with the sitting of West Australian State parliament, the event was inspired by a similar event held in the UK a few years ago. A showcase of the depth and breadth of medical research in Western Australia, the organising committee, headed by Dr Ross Graham at Curtin University, included NCARD researchers Dr Scott Fisher and Dr Alistair Cook. Professor Anna Nowak also attended, representing NCARD.

Hosted by the State Minister for Health the Hon Dr Kim Hames MLA, the event was held in The Aboriginal People’s Gallery of Parliament House and attended by senior representative of all major universities and medical research institutes in Western Australia as well as the Department of Health, the Chief Scientist of WA, Professor Peter Klinken, and early career researchers representing the future of medical research in this State.

There was an excellent response, with about a third of sitting politicians from across all parties taking in the poster presentations and engaging in some genuinely interested and probing conversations about the mesothelioma research here at NCARD. The Hon Liz Behjat MLC acknowledged the success of the event later that evening, recorded in Hansard.
Six PhDs and a Respiratory Fellow

NCARD has a large group of PhD students - and a Respiratory Fellow - who have started in 2015. Here’s what they say about themselves (you may notice a definite theme emerging about one of the attractions of NCARD).

ANDREW MEWS

I completed my honours in Molecular Biology at Murdoch University in June 2011, in which I studied gene expression and treatment response in colorectal cancer. Since then I have worked with the research department at St John of God Hospital in Subiaco, where I combined my studies and considerable computer background and developed the research patient database, and worked on patient data collection methods and identifying patient cohorts for cancer research projects.

In late 2014 I was introduced to Joost (Lesterhuis) and Richard (Lake), who had an idea for a PhD project. It involved a challenging computational biology component, which I thought sounded very interesting. In March this year I started my PhD, investigating systems biology approaches to identifying networks of gene expression involved in mesothelioma progression. I work between the Telethon Kids Institute and NCARD.

I can now regularly be seen sitting at my computer, often with a strong coffee, writing and editing statistical programs.

ANTHONY BUZZAI aka BUZZ

At the end of high school I had the ambition to become a forensic scientist, so I enrolled at Murdoch University to study a Bachelor of Forensic Science and a Bachelor of Science (Biomedical Science).

It became apparent after three years of studying that forensics was not as cool as NCIS made it out to be, so I explored other career paths. An opportunity arose for me to do research at the Bone and Vascular Research Group led by Professor Richard Prince at UWA. Since I had learnt enough to commit a crime without leaving a trace of evidence, I decided to drop the forensics part of my degree and pursue Honours in Biomedical Science with Richard. I was awarded a First Class Honours and wanted to pursue more molecular biology based research, particularly in the immunology field.

After very strong recommendations, I approached Jason Waithman (at Telethon Kids Institute) to join his team as a PhD student. It was Jason’s enthusiasm for science and ideas that convinced me to do a PhD (also the fact that I would get the title “Doctor” at the end). He then introduced me to Bruce, who agreed to become a co-supervisor to share his expertise, and so that I could work more closely with the excellent team at NCARD.

My project is about improving current therapies to fight cancer. An evolving field of cancer therapies involves harnessing the patients’ own immune system to kill their cancer cells. One such approach which has shown promise is the administration of a protein that occurs naturally in the body to stimulate the immune system, named Interferon alpha. Although 13 variations of Interferon alpha exist, only one type has been investigated as a treatment for cancer. My research focuses on how these uninvestigated types of Interferon alpha proteins could be used to improve current cancer therapies.

I am currently based at the Telethon Kids Institute, but I am looking forward to being more involved with the team at NCARD (especially because of the abundance of cake I hear about).
LAURA WAINMAN
Growing up I was always interested in science and knew I would pursue a career in this field. Having started my undergraduate degree in 2010 at the University of Huddersfield, UK, I took a gap year two years later to travel to Australia. I visited Perth and made the decision to emigrate here once I had completed my studies back in the UK. In early 2014, I graduated from university with a BSc (Hons) in Molecular and Cellular Biology and made the move from sunny Bradford to Perth later that year.

Following a string of PhD interviews, I finally commenced my postgraduate degree here at the Harry Perkins Institute. My project will look at low levels of oxygen, known as hypoxia, in mesothelioma and determine how we can modify this to promote better responses to chemotherapy and radiotherapy. My initial attraction to this project was the topic itself; throughout university I was fascinated by how cancer cells adapt to hypoxia, having said that, it was definitely the supervisors' impressive records and the lavish new facilities at Perkins sealed the deal for me.

My experience here so far has been wonderful. Whilst adapting to independent research has been challenging, adapting to the Perth climate has been a greater challenge altogether.

ANTONIUS STEVEN
Respiratory Fellow

Last year, before joining NCARD, I was completing my year of sleep training at the Pulmonary Physiology and Sleep Department at Sir Charles Gairdner Hospital. Now I am working with Bruce Robinson and Jenette Creaney as part of the Epitope Exome (EXEP) group, primarily in lung cancer immunotherapy. My role is to do in-silico analysis of our data and to help with clinical data collection for our study patients.

I have always had an interest in thoracic malignancy and the recent promise of immunotherapy as a viable and effective treatment of lung cancer, and possibly mesothelioma as well, has convinced me to work at NCARD. I know I will learn valuable lessons that will help me continue my work as a clinician in the field of respiratory medicine. The offer of cake and regular cook offs that this group is known for are also too difficult to resist, although my dietary plan is already suffering as a result.

RACHAEL ZEMEK

I have had a fairly straightforward journey so far. I grew up in Perth, went to school and university here, completed my Honours and worked as a research assistant at the Telethon Kids Institute on projects focusing on tumour immunology. I grew very interested in this field, and so naturally when I was on the hunt for PhDs, I had to check out the Tumour Immunology Group at NCARD. What was most attractive for me to do a PhD here was the amount of support available with such a large team of enthusiastic researchers.

My project is looking to identify markers that tell us which cancer patients are going to respond to immune therapy with checkpoint blocking antibodies. These checkpoints found on immune cells give a signal to weaken their immune function. Cancer can take advantage of this system to prevent immune cells from killing cancer cells. By blocking these checkpoints, immune function can be restored to destroy the cancer; however, only 10-15% of patients respond. We aim to identify markers that tell us which patients will respond to this treatment, and hopefully apply this knowledge to make more patients respond.

Overall, my experience here has been very positive thanks to everyone’s willingness to help me out, abundance of cake, and the sweet view from the fifth floor.
ROXANNE OTADOY

I did administrative work for the Department of Education in East Perth during my undergraduate Bachelor of Science degree at Curtin University. After graduating, I worked in the industry, at first as a Junior Technician and then as an Administrative Technician for an IT company. I travelled a little with my family through Europe, namely UK, France, Belgium, Italy, Monaco and Switzerland. Playing with snow in the Swiss Alps was the best. The weather was so different in these places from the Northern Territory where I grew up, where the temperature would be a constant 40°C and above.

When my family and friends were gradually touched by cancer of one form or another, I decided to change my life’s direction and enrolled in a Bachelor of Science (Biomedical Science) course at UVWA. To be able to shape the mechanisms for production of therapeutic medicine, I wanted to understand the disease at the phenotypic level. I therefore took on a project with Dr Cleo Robinson on growth and viability experiments in the MexTAg mouse model. I have since completed Honours with NCARD through Murdoch University, and worked at NCARD as a research assistant.

For a while there I got stuck behind the hood a lot and hadn’t seen the “face” of why we were conducting research so I began to think: are journal articles and experiments all there is, and will there be an end? But my first walk for the Asbestos Diseases Society of Australia renewed my gusto for research into cancer. I got to walk with the family of Rod Triplett for a short distance and it moved me so much to be around the people for whom our research would make the biggest difference. For me, a good end would be when we can give these people a little more time with their families and friends.

Dr Scott Fisher and Prof Richard Lake are now my PhD supervisors, along with Dr Joost Lesterhuis. I will be looking at the pattern of expression at the genomic level to discover a unique signature that identifies mesothelioma induction from exposure to asbestos.

Doing my PhD at NCARD feels like a natural follow on from my work here as a research assistant and the people I work with aren’t so bad either. Although cake was a pretty good motivator for staying too.

WAYNE ASTON

Originally from South Africa, I moved to Australia with my dad, mum and younger brother in 2006, when I was 16. I had always had an interest in the human body and how it works, particularly how it deals with disease. Once I finished high school I chose to do my Bachelor degree in Biomedical Science and Molecular Biology at Murdoch University. Cancer was a topic that came up quite a lot throughout the degree and it was something I definitely wanted to work on, both because it is such a serious and devastating disease but also because some people close to me had been diagnosed with cancer at some point: a friend in high school had leukaemia, my gran had melanoma and more recently my aunt was diagnosed with breast cancer. I also had an interest in immunology, and wanted to find a place where I could combine these two interests. This eventually led me to NCARD where I did my Honours project in 2013. I really enjoyed both the research itself as well as getting to work with the amazing team here and so decided to stay on and do my PhD with Dr Joost Lesterhuis and Prof Richard Lake as my primary supervisors.

My PhD project is largely focused on chemotherapy and how we can better understand how it works and use it in combination with other therapies to improve response to certain cancers. Chemotherapy is currently the “gold standard” of treatment for many cancers, but unfortunately is often not curative. Many cancers such as malignant mesothelioma are resistant to chemotherapy and other treatment regimes, and so new approaches need to be developed. My aim is to identify which chemotherapies have a positive effect on the immune system, and then combine them with what we call checkpoint blockade antibodies to boost the antitumour immune response. These antibodies are essentially molecules that are capable of improving an immune response to cancer cells by preventing the immune system from “turning off” too soon. This allows our bodies to fight these cancer cells both longer and more effectively.

By combining this with chemotherapy, we hope that we can identify a successful combination for the treatment of mesothelioma.

So far my PhD has been a good experience. Although busy, I’m enjoying what I’m working on and being able to work with the team at NCARD only helps with that. I’m excited about the journey ahead and although it won’t always be a good one, I hope that in some way I can make a difference and contribute to the field of cancer research.
Congratulations and Thanks

Shaokang Ma Scholarships

NCARD team member Shaokang Ma was successful in his application for a UWA international PhD scholarship, which will cover the cost of his university fees. The scholarships are extremely competitive, with just 25 being awarded from 372 applicants. Even more impressively, Shaokang, from Singapore, was recommended as the top candidate from the Faculty of Medicine, Dentistry and Health Sciences.

As noted elsewhere in this newsletter, the Swift Family Trust, in memory of Douglas Swift, will support Shaokang through his PhD project on mesothelioma. We thank the Swift family and congratulate Shaokang, who now has the opportunity to demonstrate the great promise he has shown.

100 most influential West Australians

Kudos to Bruce Robinson, who was named as one of the 100 Most Influential West Australians in an article in The West Weekend, 18-19 April. Listed in the category of Health, Bruce was in good company with health advocates, bureaucrats advisers and chairs; but notably, he and internationally renowned burns specialist Dr Fiona Wood, were the only current medical researchers included in the list.

Award for Joost

Congratulations to Dr Joost Lesterhuis, who was one of seven researchers to share in $70,000 under the WA Department of Health New Independent Researcher Infrastructure Support (NIRIS) awards. The awards “recognise outstanding new independent medical and health researchers in Western Australia by helping them to meet the infrastructure costs of their research”. The awards are also intended to provide some tangible recognition of the researchers’ achievements. The funds may be used for travel costs, and Joost says he may use them to attend overseas conferences.

Lab tours

There have been several tours of the laboratory recently, with visits from Dale Alcock and the UWA Vice-Chancellor Professor Paul Johnson on 6 May; Robert and RoseMarie Vojakovic and Greg Deleuil from the Asbestos Diseases Society with the WA Department of Health’s Dave Peckitt on 12 May; and Barry Knowles and Jo Morris on 22 May. Our thanks to Professor Jenette Creaney for hosting Dale Alcock and the Vice-Chancellor, but a special acknowledgement to the “lovely” Justine Leon, Research Assistant in Jenette’s Biomarker Discovery group, who has really stepped up to the role of tour guide.

ASMR prize

The Australian Society for Medical Research (ASMR) Medical Research Week Symposium for WA was held on Saturday 30 May at Curtin University, attracting around 150 participants. The symposium is mainly orientated towards students, and provides a useful experience for the students to present their work in a formal setting. The day is also a forum for medical researchers to discuss their recent work, network with others in the field and find potential collaborators.

The 73 oral presenters were a mixture of Honours, Masters and PhD students, plus a scattering of postdocs. There were a range of prizes from various sponsors, and NCARD PhD student Sophie Sneddon was awarded a $1000 prize for the excellence of her presentation The mutational landscape of a murine model of malignant mesothelioma. All prize winners were invited to the ASMR dinner on Friday 5 June where they were presented with their awards. Congratulations Sophie!
Book Launch

The official launch of Reflections Through Reality, the story of Barry Knowles, was held at the Harry Perkins Institute of Medical Research on the evening of 27 May 2015.

Barry, a builder throughout his working life, had retired to an idyllic spot in Tasmania with his wife Renee, when he was diagnosed with mesothelioma. Despite being told the tragically brief life expectancy of someone with mesothelioma, Barry, is still with us more than five years later. And it turns out that it was on a thirsty night during the Asbestos Diseases Society fundraising and awareness raising walk from Kalgoorlie that Siri Siriwardene, the General Manager of Perth’s Slater and Gordon office, put it to Barry that he should write a book.

Former MP Larry Graham, whose touching article about Barry can be found on the WA Today website, provided the welcome. Dale Alcock, a household name in the home building industry in Western Australia (who quipped “it’s easy to be a household name when you build houses”) shared with us that his father, a builder and hardware store owner in Kellerberrin, lived for just four months after his mesothelioma diagnosis. Dale spoke of his concern that Western Australia is still exporting asbestos to the world every day within the iron ore that comes from the same parts of the Pilbara as the deadly crocidolite mined and exported decades ago.

Bruce Robinson acknowledged that there are those who believe that Barry’s more than five years with mesothelioma is a miracle. For his part as a scientist, he feels that it’s Barry’s immune system responding in a way that current medical research, including research at NCARD, is investigating so that all immune systems can be triggered to respond as successfully.

Siri Siriwardene officially launched Reflections Through Reality, and Barry asked for Renee and his daughters Jo and Aimee to join him, acknowledging their work and tirelessly support in the long and difficult task of producing the book.

Among the many guests who attended the launch were those who had been apprentices alongside Barry; and sadly, widows of some of those apprentices, taken too soon by mesothelioma.

The Knowles family have created the Reflections Through Reality Foundation. The book – by all accounts an excellent and engrossing read - can be purchased from http://www.reflections.org.au/ Every cent of funds raised from the sales of the book will be donated to medical research at NCARD.