Reflections

My pathway to a career in neuropathology

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I grew up in Balgowlah Heights in Sydney. My father was a physicist at CSIRO but was also involved with the National Standards Commission. In 1970 he was appointed Executive Member of the Metric Conversion Board that was established to oversee the metric conversion process in Australia. It has been said that the reason that this proceeded so smoothly over the next ten years was due to his remarkable management skills. He was awarded an Australian honour (AO) for this contribution.

I attended the local primary school and, for my secondary education, the Manly Boys High School. I won a Commonwealth Scholarship to Sydney University and commenced Dentistry in 1961. After the successful completion of my first year I applied to transfer from Dentistry to Medicine and was accepted. I completed my Medical degree in 1966 and began working as a Resident Medical Officer at the Royal North Shore Hospital (RNSH) in 1967. After two years I commenced another five years of Postgraduate training in Pathology. The course included separate years in Histopathology, Microbiology, Haematology and Biochemistry. Towards the end of this Pathology training all I could think of was travelling overseas. I think that my father's travels and connections with overseas friends had caused my 'travel bug'. I had no idea what I wanted to do or where I wanted to go.

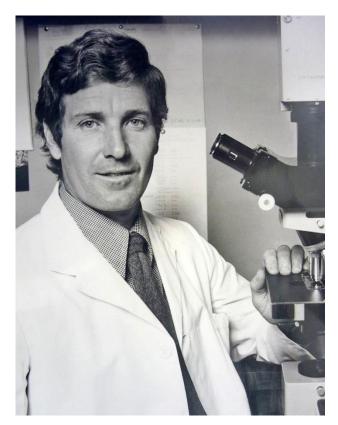


Figure 1: Clive sits at his microscope in Neuropathology at Royal Perth Hospital in 1984.



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However, at a dinner party one evening I met a pathologist from Glasgow who mentioned that one of his colleagues was looking for a locum pathologist. I immediately wrote (no emails or faxes in those days) and waited patiently to hear from Professor Hume Adams, Head of the Department of Neuropathology at the University of Glasgow/Southern General Hospital. I remember how excited I was when I received a letter from him offering me a job as Lecturer in Neuropathology in Glasgow, beginning September 1972. Hume even organised accommodation for us and it was all go. I was married with two children aged five and two.

At that time Australia was actively repatriating mentally disturbed immigrants. The Government always sent a doctor along with the patients. I requested such a position and was invited to meet Stephan in Ryde Psychiatric Hospital. He was to return to Zagreb in Yugoslavia (now Croatia). He was only about 21 years old and the nurses said that he could not speak English. A Government car picked me up in the morning and we drove to the hospital to pick up Stephan. Then on to Mascot to take the Qantas flight to Rome and then Zagreb. I had bought my onward ticket to London. Jann and the kids travelled on the same flight, direct to London. Stephan and I were seated in a separate zone with no one close by and I had my medical case with drugs and syringes to keep Stephan quiet, if necessary. As we took off Stephan turned to me and said, "why don't we have a drink". He had been foxing about his English the whole time just to get a free trip home. I was able to wander about and keep an eye on the kids. Stephan and I had to change planes in Rome while my wife and kids went straight on to London. When we arrived in Zagreb Stephan's family were there to meet him. He had lost a lot of weight, grown a beard and his hair was very long so they did not recognise him! Immigration immediately picked up on this and I was dragged off by security and interrogated as to his true identity. In those days Yugoslavia was totally communist and everyone seemed to be carrying guns. I was terrified and the Australian Embassy official who was meant to meet us had not turned up (surprise, surprise!). Finally, Stephan's sister and uncle arrived and they immediately hugged him and everything settled down. I was very pleased to get back on the next flight and get out of my first communist country.



Figure 2: Professor Hume Adams and Clive enjoy a moment in Neuropathology at the Southern General Hospital (University of Glasgow) in 1973.

Arrival in Glasgow, Scotland

Hume Adams had organised accommodation for us and we were able to move straight into our new home in White Inch, about three miles from the Southern General Hospital. It was a 2-story tenement with three bedrooms and was very comfortable but pretty cold, even for summer. The owner even offered to babysit for us – what a bonus. We organised a local school for our son Dal and I went to the Hospital to meet my new colleagues. I found Hume to be a delightful chap, about 45 years old. The Department seemed to be 'buzzing'. The hospital was a new innovative 'one-stop shop' for the neurosciences. It combined Neurology, Neurosurgery, Neuroradiology and Neuropathology in the one building and the clinical groups met every week to ensure the smooth running of the Institute.

Getting back to work was a bit of a challenge. I had not done any anatomical pathology for three years so was pretty rusty. I had been training in Biochemistry, Microbiology and Haematology. Moreover, neurosciences had always been a bit lost on me so it was a sharp learning curve! Fortunately, Hume believed in a long training/apprentice period and so I spent a lot of time observing the techniques of brain dissection. My main role was doing the autopsies. We moved about a lot each week working in different hospitals all over Glasgow and in some of the major country hospitals.



Soon after I started work the Hospital/Institute had an official opening. On the first evening, there was a huge formal dinner at the University Refectory. The invited guest for the official opening was Wilder Penfield, Director of the Montreal Neurosciences Institute in Canada. His neurosurgical fame related to in-vivo electrical stimulation of the brain to identify specific regions that control motor function. He would buzz the brain with electrodes during his operations and watch to see which muscle contracted! Sounds primitive but this work was at the forefront of neuroscience at the time. I found his speech inspiring and felt an almost 'religious conversion'. This really was the beginning of my major interest in Neuropathology.

A few weeks after we arrived in Glasgow, Hume had a dinner party and we met a number of other pathologists. Several became famous pathologists in later life – Alistair Cochrane and Roddy McSween. There was also an ophthalmological pathologist who asked me to be involved in a research project involving the electronmicroscopic study of optic nerves from a group of baboons who had been subjected to 'toxic amblyopia'. This was my first real taste of neuropathological research and probably set the direction of my future career.

Hume's hospitality was extraordinary. In the first four months he had invited us to his home twice, took us to a dinner party and a wine tasting and paid for all of this – so different to the Australian work scene.

Holiday in Europe May 1973

In May 1973 the weather was warming and my parents arrived to visit. I organised to take my annual holidays and we all drove in our camper to Europe. I had taken the opportunity of organising several job interviews in Europe. Hume had asked me to stay in Glasgow but the weather drove us all mad and we were keen to experience life in a 'foreign' country and to master a second language. I had done a lot of school French and, during our time in Glasgow, I had done private French lessons with a friend. He said "I don't need any payment, just give me as much whisky as I want during the lessons"! It cost a fortune but my French did improve. I had interviews for jobs in Neuropathology in Paris and in Geneva and Lausanne in Switzerland. I was offered all three jobs and chose Lausanne. We moved in September 1973. Hume had a farewell party for us and I was very sad to leave. I still consider Hume to be my mentor. We remained friends for life and visited him in 2012 in Glasgow. This was 40 years after we first met. He was then 84 years old. As most of you know Hume passed away in 2020 aged 90 years.

Lausanne, Switzerland 1973-74

We drove down through London, crossed the Channel and drove on to Lausanne. It took about two weeks to find an apartment. It was a six-story block in the hills behind Lausanne, overlooking the town and across the lake to the Alps.

The Neuropathology laboratory was beside the Hôpital Cantonal de Lausanne. It was in an office block and we were housed in the basement. There was a nice café on the ground floor and we often went upstairs at morning tea for a coffee and 'Pomme de Vie' liqueur. There were five other medical staff in Neuropathology – Professor Rabinowicz (Swiss), Dr. Alphonse Probst (Swiss), Deraux (German), and two young Portuguese trainees (cousins, Manuel and Juan Sanches). It was an excellent setup with lots of technical staff and lots of specialised equipment (EM included).

The Department specialised in developmental neuropathology with lots of quantitative analyses. Quantitation later became my speciality in the alcohol cases we studied in Perth and Sydney. One of my responsibilities was to do most of the autopsies. The other trainees did not have autopsy experience. The Department provided a service for the whole canton (State) so I was often sent off with a technician to do autopsies in country towns, usually high up in the mountains. In wintertime I sometimes packed my skis in the van and, after finishing work, would go for a ski. The French language came slowly. I was challenged after six weeks by having to present a case report to an evening conference. I practiced for ages and did a reasonable job until question time. I had no idea what they were asking in their rapid French.

Future directions

Should I try to take a clinical job next year? Neurology is the obvious choice if I wish to proceed in Neuropathology. The idea of a University appointment is still in the back of my mind. Teaching would



give me a lot of satisfaction but I must remember what a small fraction of teaching occurs in Neuropathology – hours per year. The idea of having to do a PhD or MD is not very appealing. Perhaps these things will become clearer in time? Despite all of this self-analysis I have not made any decisions. If only I could do clinical medicine without having to work on nights and weekends – that would be hard to take again!

I have been reading my old Swiss diaries and I constantly refer to my lack of direction and confusion about my career pathway. Correspondence with the Clinical Superintendent in my previous Sydney hospital (RNSH - Peter Williamson) led me to believe that I should not return to Australia until I had done at least one year in the USA.

One week later I wrote in my diary:

"Here I am with a letter half written to apply for a job as Assistant Neuropathologist in Perth. It is not really like going home so I don't have the anxieties re arriving home dissatisfied with lack of travel". I am still waiting for a reply from the Cornell Medical School in New York but can't really see it matching up to the Perth job with Byron Kakulas. In fact, as we walked around the Lausanne lakefront on Sunday, looking at the boats on the lake, we began talking about getting a boat in Western Australia. The idea was very appealing.

Anyway, it is just as well that the Perth job came up because the New York job did not come through. I guess I should set my sights on my career for a while and try to achieve something really great by the time I am 35-40 years. A Professorship would suit me fine but a lot of water under the bridge before then! It's the idea of publishing papers that really upsets me – they are just not my scene. No one reads them so what's the point? I wish I could develop some original thought pattern. Currently, I am fully occupied trying to learn the basics of neuropathology!"

Whilst working in Lausanne I attended Neuropathology conferences in Innsbruck, Austria and in Budapest, Hungary (International Society of Neuropathology). At the latter conference I met Byron Kakalus from Perth, Australia. We had never met and he seemed delighted to meet another Australian training in neuropathology. He immediately invited me to join his Department in Perth after I finished working in Lausanne. I told him that I was waiting to hear about a position in Boston but he said that the Perth position was only available if I came immediately. Since the family had already planned a threemonth trip in Italy, Yugoslavia and Greece after leaving Lausanne we compromised and I arranged to commence in Perth after this holiday.

Perth 1975

We flew into Perth from Switzerland via the UK and were met by my new boss, Professor Byron Kakulas. I started work at the Royal Perth Hospital immediately. Byron had set up the biggest and best Neuropathology Department in Australia. It was big even by international standards. He had trained in Boston at the Massachusetts General Hospital with two world famous neurologists/neuropathologists, Raymond Adams and Pearson Richardson.

There were excellent facilities and large numbers of secretarial and technical staff. There were even two Registrars and several supplementary overseas trainees. The Registrars, Peter Blumbergs and Tony Tannenberg and I worked closely together for several years until they took up senior Neuropathology positions in Adelaide and Brisbane, respectively. They are good friends to this day and we often laugh about that first week and the tough time that they gave me!

I really loved my work – a mixture of clinical neuropathology, teaching and small clinical research projects. Byron loved having international visitors and we ran an annual neuropathology course for trainee registrars as well as undergraduates. I met Henry Urich (London University), Raymond Adams, Pearson Richardson (Mass General) again and many others. There was an excellent clinical program for all of the neuroscience groups in Perth. The group met weekly, on a rotation basis, in the four main hospitals (Royal Perth, Fremantle, Sir Charles Gardiner and the Children's Hospital). This created a harmonious working relationship between Neurology, Neurosurgery, Neuroradiology and Neuropathology.



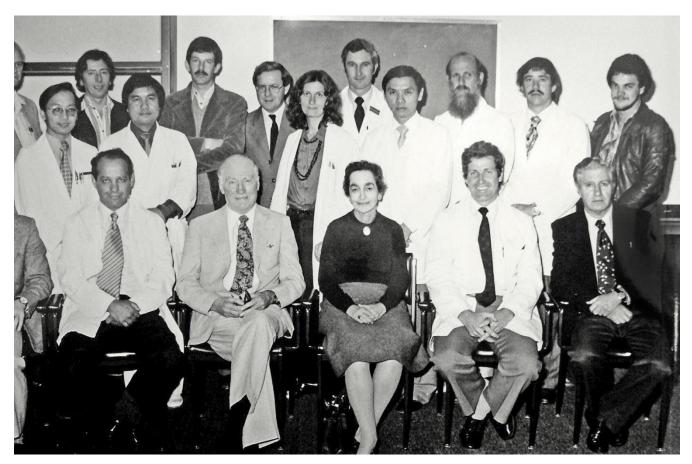


Figure 3: Staff and visitors to Neuropathology at Royal Perth Hospital in about 1981. Byron Kakulas (front row left), had a wide group of international colleagues including the famous Neurologist/Neuropathologist Raymond Adams, Bullard Professor of Neuropathology at Harvard Medical School and chief of neurology at Massachusetts General Hospital. Professor Adams is sitting next to Byron.

One of the enjoyable and challenging weekly clinical programs was the Clinico-Pathological Conference. We (the neuropathologists) would prepare a case as an unknown and ask one of the Neurologists to discuss the case. Some of these cases were so good that I decided to write them up and publish them in the Medical Journal of Australia (MJA) following the example in the NEJM . This was a great way to start getting publications together. I negotiated directly with the Editor of the Medical Journal of Australia and sent him two cases each year (see below):

Harper CG. Progressive difficulty in walking and speech. Med J Aust 1977, 2:370-3.

Harper CG. Recurrent subarachnoid haemorrhage and obesity. Med J Aust 1977, 2:865-7.

Harper CG. Multisystem febrile illness. Med J Aust 1978, 1:205-8.

The Department had a huge workload of cases, mostly from the Department of Forensic Medicine (Coroners). Every forensic autopsy brain was sent to us for examination. In addition, we did many of the autopsies for Royal Perth Hospital and did the brain examinations on all of the cases. The total number of brains examined each year was more than 1000. Each week we had a 'brain review'. The most interesting cases were selected and demonstrated to pathology, neurology and neurosurgery trainees. Some medical students also attended and it was run as a question and answer session. I replicated these sessions when I moved to Sydney.

As time went by I became aware that some additional training in neuropathology in the USA would enhance my career. I asked Byron what he would recommend and he helped me obtain a fellowship (paid by US grant money) in Philadelphia with a



Greek/American colleague, Nicholas Gonatas. I applied for leave without pay for 12 months and the Hospital supported my application and even paid for my travel. A locum was appointed to my position - Victor Ojeda was from South America but had been working in New Zealand.

Travel to Philadelphia via Europe – 1977-78

It was blizzarding when we arrived in New York. We stayed in a hotel that night and then took the Amtrak train to Philadelphia. We were met at Penn station by my father's friend, Bill Zeiter. He and his wife had offered us accommodation until we found a house.

The hospital work was very stimulating. I was responsible for some of the brain biopsy reporting with the Head of Department, Nick Gonatas and several other trainees - Tomahiko Mizutani and Stavros Balloyannis. They were both neurologists from Japan and Greece, respectively and were in the USA to get some neuropathology experience. We have kept in touch from time to time. The three of us were responsible for the hospital autopsies and for preparing the clinico-pathological cases each week, as we did in Perth. We were working with and meeting many famous Neurologists, Neurosurgeons and Neuropathologists every week. There were regular meetings and conferences and Nick Gonatas travelled constantly in the USA and to Europe. It was very stimulating. Nick was the elected President of the American Neuropathology Association which meant that we had even more interaction with American and international neuropathologists. By chance, there was also a link with my old Glasgow colleagues. David Graham (I was his locum in Glasgow while he worked in Philadelphia) had been working with the Neurosurgeons in Philadelphia on an animal model (monkeys) of head injuries.

Each of the Fellows was allocated a research project and our main laboratory supervisor was Nick's wife, Jackie. She had meticulous laboratory habits and trained us well. We were working with animal models of neurotoxicity using toxic ricin.

We were studying the effects of toxic ricin on animal nervous tissues using electron microscopy and immunohistochemistry. I was able to publish three papers in the first year. Even more importantly, the personal interactions in the Department were invaluable to my research education and intellectual development.

Gonatas NK, Harper CG, Mizutani T, Gonatas J. Superior sensitivity of conjugates of horseradish peroxidase with wheat germ agglutinin for studies of retrograde transport. J Histochem Cytochem 1979, 27:723-34.

Harper CG, Gonatas JO, Steiber A, Gonatas NK. In vivo uptake of wheat germ agglutinin - horseradish peroxidase conjugates into neuronal GERL and lysosomes. Brain Res 1980, 188:465-72.

Harper CG, Gonatas JO, Mizutani T, Gonatas NK. Retrograde transport and effects of toxic ricin in the autonomic nervous system. Lab Investigations 1980, 42:396-404.

My first significant clinico-pathological manuscript was published while I was in the USA in 1979. The work had been done in Perth using forensic autopsy material. This was really the beginning of my lifetime interest in the primary and secondary effects of alcohol on the human brain. Wernicke's encephalopathy is caused by thiamine (Vitamin B1) deficiency and is very common in alcoholics.

Harper CG. Wernicke's encephalopathy - a more common disease than realised. J Neurol Neurosurg Psychiatry 1979, 42:226-31.

By chance, the Editor of this Journal was Prof. Ian Simpson from Glasgow where I worked in 1973. I do not like to admit it but I think that this helped significantly in getting the paper published. I was not just a name without a face! This was the beginning of an important realisation that interpersonal relationships are critical to one's career. I would go so far as to say that it was one of the main factors that contributed to the success of my career.

During spring and summer our family travelled almost every weekend in our camper van. We had medical friends in Washington DC (Colin and Helen Masters), Connecticut (Michael and Heather Greenaway) and in Boston (Chris and Stephanie Burke). Colin was working with Dr. Carlton Gajdusek, who discovered the cause of prion disorders like Kuru and Creutzfeldt-Jacob disease. He was awarded the Nobel Prize for this work. Both Hume Adams and Henry Urich visited and stayed with us in Philadelphia.

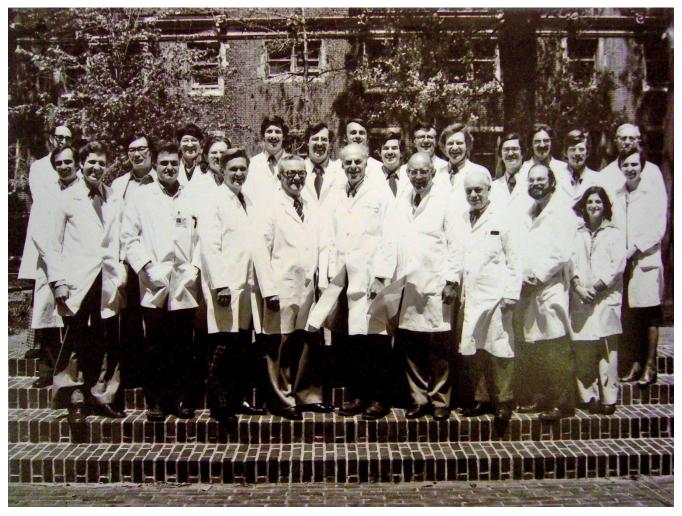


Figure 4: Staff from the Departments of Neuropathology and Neurology at the Hospital of the University of Pennsylvania. Nick Gonatas, Head of Neuropathology, is on the left of the front row next to Clive.

After finishing my 18 months work in Philadelphia, we took a well-earned break of three months and went camping in Mexico and Guatemala. En route, I attended the annual conference of the American Association of Neuropathology (AANP) in Kansas City. This was where I first met Jim Powers. He was working at Einstein, NY, with Bob Terry and Cedric Reine. Jim and I have been friends ever since.

In 2013 Jim and I arranged to meet with Bob Terry in California. Therese and I had invited Jim and Cedric Raine to travel with us through Arizona in our hired RV. We were all taking Bob Terry out to dinner in the RV. We stopped to pick up another person, Dik Horoupian. When he stepped into the RV Bob nearly fell over – they had worked together for many years. Jim had coordinated all these arrangements without anyone knowing.

At the AANP conference in 1985 Jim introduced me to Paul Garren. Paul came to work with me in Sydney as Assistant Neuropathologist in 1986 for one year. Jim has now retired as Neuropathologist from Rochester, New York, and is living in North Carolina. In 2013 my wife and I travelled with Jim Powers and Cedric Raine in a hired RV (motorhome) through Arizona – we had a ball!

Royal Perth Hospital - 1980

I returned to Perth in 1980 full of enthusiasm for research, teaching and clinical work. The weekly program and Thursday 'brain cut' demonstration



Figure 5: Special get together in 2013 in San Diego to meet Robert (Bob) Terry. Left to right: Cedric Raine. Bob Terry, Dik Horoupian, and Jim Powers.

was always popular with the hospital clinicians and trainees. I was keen to bring the Western Australian neuroscientists together and, along with Serge Bajada, decided to start an 'Annual Neurosciences Colloquium'. I organised a venue (Perth Railway Station – where the Indian Pacific arrives) and funding from several pharmaceutical companies. We invited an interstate guest and called for papers. The meeting was a great success and we ran it for about five years. It generated a number of collaborations between groups like Veterinary Science and Medicine in Perth. I did some work with the Vet School at Murdock University on 'Staggers', a nutritional disease of sheep and cattle that damages the brain (rye grass toxicity).

Many famous visitors came to visit our Department. Byron had worked in Boston during the 1960s and had many international connections. They included Raymond Adams who I had already met because he held a position at l'hôpital Cantonal in Lausanne, Switzerland where I worked in 1973. He was a very modest man. He wrote the classic text on Wernicke-Korsakoff disease (caused by Vitamin B1 deficiency). I studied the prevalence of this disease in Perth and Australia in the 1970s and 1980s and our data was used by the Federal Department of Health to mandate the addition of vitamin B1 (thiamine) to bread to help improve everyone's B1 levels in Australia.

Harper CG. The incidence of Wernicke's encephalopathy in Australia - A neuropathological study of 131 cases. J Neurol Neurosurg Psychiatry 1983, 46:593-8.

Raymond Adams worked closely with another delightful fellow – Pearson Richardson. Sir John Walton, senior Neurologist at Queens Square in London also visited the Department. I was delighted when my mentor from Glasgow, Hume Adams decided to visit Perth. It was fabulous to catch up with Hume and Eileen again.

My time in the USA had given me a real taste for research and I now had a feel for how to move ahead. I decided to begin an active research program and to apply for research funds to support the work. We had a very close working relationship with the Department of Forensic Medicine in Perth (Cor-

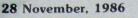
oners) and studied most of the brains from the Coroner's autopsies (about 3,000 per year). This was a unique source of cases and allowed us to carry out high quality epidemiologic studies. John Hilton was the Head of Department and we became good friends. Later, I encouraged him to move to Sydney to join the University of Sydney and he became Head of Department of Forensic Medicine in Glebe. My research began with the simple aim of establishing whether or not people who drank alcohol had smaller brains than those who were non- or social drinkers. This work was published in two articles and was the beginning of my life-long thematic research on the effects of alcohol on the brain:

Harper CG, Blumbergs PC. Brain weights in alcoholics. J Neurol Neurosurg Psychiatry 1982, 45:383-40.

Harper CG. Neuropathology of brain damage caused by alcohol. Med J Aust 1982, 2:277-82.

The Neurosciences in Perth was very strong and a new initiative was started in the early 1980s -'The Australian Brain Foundation'. This was an Australia wide Foundation but Western Australia was one of the leading States and raised most of the start-up funds. I was the Medical Director of the State Foundation for a period. Later, through the Foundation, I put together a proposal to the WA Lotteries Commission for funds to purchase an electronic counting machine for brain nerve cells in autopsy material. In June 1982 I did a reconnaissance trip around the world to check out different systems for automated cell counting.

Next, I flew to New York to meet Ralph Holloway, an anthropologist at Columbia University. He was interested in our work on Aboriginal brains. Ralph and I worked together for a number of years and published several papers. This was the beginning of a whole new area of research for our group.



If you drink, your brain will shrin

Peter Tuck reports

AS PART of the continuing debate over alcohol and its long term effects on the brain, a group at the Sydney University Medical School has produced figures on neuronal cell loss among alcoholics.

Professor of neuropathology, Professor Clive Harper, and two researchers previously associated with his work in Western Australia, have been measuring brain volume and

weight, based on autopsy finds.

From some 50 cases, divided into controls and confirmed alcoholics, Professor Harper's team found a significant difference in brain volume between the two groups using a foam cast technique to assess inside skull volume.

While the broad thrust of these findings has been repeated elsewhere, the Sydney University group has narrowed the alcohol-brain relationship further by finding a significant difference in the number of frontal lobe cortex neurones in the control and alcoholic samples - 29,000 cells per cubic millimetre for the controls, compared with 22,000 for the alcoholic cases

"This is the first time this has been ratio c shown," Professor Harper told a recent pharmacology seminar audience. "Despite the difficulty in separating neurones from glial cells in this sort of histological work, we can still conclude that there were reduced neurones in the frontal lobes." By contrast the difference in the parietal lobes was indistinct.

Professor Harper's topic was: "If you drink, your brain will shrink" but sis b he was careful to exclude a range of

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Figure 6: The local media were entranced with our research and came up with some clever headlines.



The staff at Royal Perth Hospital

By 1984 I was developing an active research program and was looking for honours and PhD students. I put out a leaflet to the science and medical students inviting them to apply for an honours year at the Hospital and had an application from Jillian Kril. I think she was 17 years old at the time! Jill is now Professor of Neuropathology at the University of Sydney. She completed her honours year on the project 'Brain shrinkage in alcoholics'. We made foam casts of the inside of the skulls of hundreds of autopsy cases so that we could estimate the intracranial volume and compare it with the brain volume (estimated by Archimedes principle). This enabled us to calculate how much the brain had shrunk during life. The catchphrase was: "Too much drink and your brain will shrink". The media loved the work and we had lots of publicity. Several important manuscripts arose from this research in Perth.

Harper CG, Kril JJ, Backhouse A. Measuring brain atrophy. Neurology 1986, 36:1147

Harper C, Kril J, Daly J. Are we drinking our neurones away? Brit Med J 1987, 294:534-6.

In June 1985 I visited my first 'Brain Bank' in Boston – the beginning of another important part of my professional life. Our decision to move back to Sydney at the end of 1985 and leave our idyllic lifestyle in Perth was not an easy one. My principal motivator was Professor Jim McLeod, Head of Neurology at Royal Prince Alfred Hospital (RPAH). Neuropathology in Sydney was pretty weak compared to the strength of all of the fabulous clinical and experimental neurosciences.

It was quite a task to convince my family that this was the right thing to do. Personally, I was very anxious that I was moving beyond my level of competence and thought that I might not cope with the challenge. However, Jim McLeod convinced me that 'all of the stars were aligned' and promised his personal help and advice. One of the main players was the Dean of Medicine, Professor Richard Guy. He was a senior neurosurgeon and was still working at RPAH. In those days the Dean of Medicine was able to handle both the clinical and administrative jobs. Another important player was John Allsop, a senior Neurologist and Chairman of the RPAH Board. In retrospect, it was the best thing I could ever have done. I was getting into a 'semi-retirement' mode in Perth at the age of 42 years – far too young. A major challenge was just what I needed. Since that time, I have not met anyone who has made a similar major change in direction in their professional career who has regretted his/her decision and I encourage others to do the same – go for it!!

I reflected back to a statement I wrote while I was in Switzerland in 1974: "I guess I should set my sights on my career for a while and try to achieve something really great by the time I am 35-40 years. A Professorship would suit me fine but a lot of water under the bridge before then!"

Mind you, it was not all that straightforward. The position was advertised and then interviews were arranged in Sydney. I think I was the only applicant but, even so, it was a harrowing experience. There were 10 on the interview panel including the Head of Medicine, Professor Bickerton Blackburn. I remember him asking, "what is all this nerve cell counting about, is that real research?"

I had known Prof. Blackburn as a medical student and he always seemed totally unapproachable – my interview did not change this opinion.

Ironically, in 1994, I rented Prof. Blackburn's apartment in Paris for 6 weeks when I was working with Jean-Jacques Hauw at l'Hôpital Salpetriere. The Blackburn family were a medical force to behold. Sir Charles Blackburn, the father of Bickerton Blackburn, was a pioneer of Clinical Research at the University of Sydney. In the 1960s he forged strong links between researchers and clinical practitioners at RPAH and within the Faculty of Medicine. He was responsible for establishing key academic and research posts and for appointing highly competent staff like John Allsop and Jim McLeod to fill these positions.

My wife and I flew to Sydney in November 1985 to look for houses before we moved from Perth. She had already decided that we would live on the northern beaches. After about three days of house hunting we walked into the house in Bayview and we both said: this is it!

There were lots of farewell parties but the final party was held in the Qantas lounge at the airport



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on the 7th December 1985. My parents were delighted that we were finally returning to Sydney after 13 years away. Dad wrote me a letter congratulating me – I am still touched when I read it today. Dad was not an 'expressive' person! I never remember him telling me that he loved me.

While still working in Perth we (myself and the University design team) had put together plans for the new Neuropathology laboratories - \$250,000 had been donated by the Ramaciotti Foundation. I based the plans on the Neuropathology laboratories in Perth that worked very well. I discussed my appointment with Roger Pamphlett who was about to head off to London for more Neuropathology training and he said he would love to come to work with me as Senior Lecturer in Neuropathology once he completed his training and examinations. It all seemed to be falling into place. I also asked Jillian Kril if she would be interested in coming to the new department in Sydney. She was keen to do a PhD and I was able to offer her a job as a research assistant. She joined our group in 1986.

Building works on our labs did not commence until I had been in Sydney for many months. I was given tremendous support by my colleagues at the University Department of Pathology. David Cameron was the Head of Department but Sue Dorsch, a dynamic immunologist/pathologist also played a key role. By choice, Sue later became involved in University Administration and finally became the Deputy Vice Chancellor. For many years she actively supported the development of Neuropathology.

There were many professorial staff who liked the old style of University life. You taught a few students and played about with a bit of 'hobby' research. Some disappeared for months at a time without explanation and there was little that the administration seemed to be able to do!

Finally, the laboratories were finished. Professor Guy officiated at the formal opening of the Neuropathology Labs on 26th November 1986. The Minister for Health attended as well as many dignitaries from the University and RPAH. The NSW Minister for Health, the Hon. Peter Anderson, gave his welcoming address and declared the Neuropathology Laboratories open.

When I commenced work at the University, I was invited by the Vice Chancellor to a luncheon. He held these lunches regularly to meet his new senior staff. It was delightful to meet Professor Ward. He was very receptive to the needs of our new department and, in no time, I had significant additional funding. Today, one is lucky to ever meet the Vice Chancellor in your entire career! At the luncheon I sat next to the Head of Telecom. He asked me if I was familiar with faxes. I had to declare my ignorance but, after he described the efficiency of faxes, I returned to my office and called the University Telecommunications Office. I explained the situation and said that I would like an additional telephone connection in my office for a Fax machine. The Director said, "who do you think you are - what if every professor calls and asks for an additional phone connection?" I made some enquiries and found out that I could simply buy a 'line splitter' and plug it into my existing phone outlet. I could then use the second line for my new fax machine!

One of the delightful things about coming "home to Sydney" was that there were staff in the University, Hospital and State Government who were fellow University Medical students. When I called to make an appointment with the New South Wales (NSW) Dept. of Health I found that I would be talking with Sue Morey. She and I had been good friends at Uni and, over the next couple of years, she opened doors and provided support that would otherwise have been impossible to achieve. Its 'who you know not what you know'! Here, the Vice Chancellor is opening our new-look Pathology Museum.

My relationships with my pathology colleagues in RPAH were far less cordial. The Head of the Department wanted me to go onto the regular general pathology reporting roster for skin, breasts, bowels etc. I explained that my training was exclusively in Neuropathology. After some tense discussions it was agreed that I would take on the responsibility of the hospital autopsies and I did not have to go onto the general roster. Frankly, it would have been dangerous and the risk of errors in diagnosis would have been significant. There were several of the hospital pathologists who I knew very well – Peter Russell and Stan McCarthy. They were very supportive. Many years later Peter became Head of the Department and things ran much more smoothly. I had

studied with Stan when we did our pathology training. I also played against him in the inter-hospital Rugby – these were ferocious games. We used to train 2-3 times each week and then play a 'round robin' against all of the teaching hospitals attached to the University of Sydney. I had to stop playing in about 1970 when I broke two lateral spines on my lumbar vertebrae in one of the games. Our coach was Max Elliott, an ex-Wallaby representative for Australia and Respiratory Physician.

The history of the Department of Pathology at the University of Sydney

In October 1850 Australia's first institution of tertiary education was established in Sydney. The Faculty of Medicine at Sydney University formally came into being on 13 June 1856 and thus is the oldest Faculty of Medicine in Australia and New Zealand. Provision for teaching of Pathology was made in 1883 after funds were made available in 1882 for the establishment of a Chair of Anatomy and Physiology, and for lectureships in subjects including Pathology.

A significant event in the history of the Department of Pathology was the <u>opening of the Neuropa-</u> <u>thology Unit</u> in 1986. The establishment of this new facility resulted from the combined efforts of the NSW Department of Health, through the Royal Prince Alfred Hospital and the University of Sydney. The refurbishment of the laboratories was made possible by generous funding to the University of Sydney from the Nathan Roberts and Phyllis Henderson Bequests and the Ramaciotti Foundation. The Neuropathology Unit also has responsibilities for medical undergraduate and postgraduate teaching, together with instruction groups which include nurses, physiotherapists and speech pathologists.

International Travel and Research Staff

I had told Sydney University and RPAH before I accepted my appointment that I had already planned a big round-the-world scientific trip in September 1986. They had agreed that this would be OK. The Hospitals funded three weeks of conference travel for Staff Specialists annually. First I flew to London where I had arranged to meet up with Roger Pamphlett and to meet the staff at Queens Square. Roger had worked with us in Neuropathology in Perth for a year of his post-graduate Neurology training. He enjoyed the Neuropathology so much that he decided to make it his career. When I was invited to take the Sydney Chair in 1985 we made a pact that he would come and join me when he returned from Queens Square, London. We had a fabulous working relationship for 24 years at USyd.

I next visited Cambridge and gave a lecture at the Maudsley Hospital. I met Peter Lantos and Prof. Lishmann who were very interested in our research. Peter Lantos invited me to his "London Club" for lunch. We remained friends for many years.

International Fellows

Jörg Klekamp, a German Medical student visited me when I was in Perth in 1980. He came as part of an optional clinical term in his German Medical curriculum. This was the beginning of a long working collaboration with the Hannover Medical School. His mentor, Prof. Kretschmann, had been doing volumetric and morphometric studies for many years and had established normal numbers during brain development. I visited Hannover in 1982 and 1984 for this collaboration. One of the high points of the 1984 visit was a night of jazz in an underground cellar – I got so involved that I almost missed my early morning flight!

Jörg and his partner Aggie met me again in London in 1985 to discuss if they could come to Sydney to work for a year or so (they stayed three years). They wanted to come to Sydney to do more work on brain volumes in Aboriginal cases. Prof. Kretschmann organised a Fellowship to help support their visit to Sydney. Jörg and Aggie arrived in Sydney in May 1986. They were a lovely couple and worked incredibly hard on their project (comparative neuroanatomy between Caucasian and Aboriginal brains). We published four manuscripts together. Sadly, the work was seen as 'racist' by some international colleagues and my abstract submitted to the American Neuropathology Association (AANP) meeting was rejected. This was my only rejection (of a paper) in my career!

Klekamp J, Riedel A, Harper C, Kretschmann HJ. Morphometric study on the postnatal growth of non-cortical brain regions in Australian Aborigines and Caucasians. Brain Res 1989

Riedel A, Klekamp J, Harper C, Kretschmann HJ.



Morphometric study on the postnatal growth of the cerebellum of Australian Aborigines and Caucasians. Brain Res 1989

Klekamp J, Riedel A, Harper C, Kretschmann HJ. Quantitative changes during the postnatal maturation of the human visual cortex. J Neurol Sci 1991

Riedel A, Klekamp J, Harper C, Kretschmann HJ. Morphometric study on the postnatal growth of the hippocampus in Australian Aborigines and Caucasians. Brain Res 1991

The interesting results of this research were picked up in the 1990s and were used in a film entitled 'The Difference', a BBC documentary, produced and directed by Mike Smith (1999).

This film highlighted the difference between Aboriginal and Caucasian children in their abilities to use either visual or auditory memory. The Aboriginal children did extraordinarily well when they were challenged using visual memory compared with the Caucasian kids. The opposite was seen when the children used auditory memory. This supported our research findings that Aboriginal brains have larger, and presumably better organised visual cortices than Caucasians. The implications of these scientific findings for educating Aboriginal children are selfevident. Jörg is now Professor of Neurosurgery in Germany and we still keep in touch.

It always creates a great sense of satisfaction to see students and colleagues who you have trained and worked with succeed in their chosen professional pathways.

Media presentations on alcohol

Our biomedical scientific alcohol story had a great attraction for the media and, over the years, I think I became quite adept at dealing with interviews. Below are some of the projects that we were involved with. I was invited back to Perth in 1987 by the WA Department of Health to launch a 'healthy drinking program.' In 1992 I 'starred' in a documentary made by the ABC. I had a dreadful time trying to remember my lines and finally the director said "just ad-lib please Clive". I am now far more respectful of actors!

Alcohol and brain damage – Produced by Barbara Edwards, Dept. of Health, WA 1987

Choose your poison! Documentary by ABC 1988

Film on addiction produced by Robyn Davidson – "This time next time", 1992

Research and international friends

International interest in our research really began to take off after I visited Peter Carlen in Toronto, Canada in 1989. Peter worked at the Addiction Research Foundation. I had an introduction through an Aussie (Jim Rankin) who had worked with Peter. He was a leader in 'reversibility of alcohol related brain damage' and was very interested in our quantitative work on the autopsy cases.

Partially reversible cerebral atrophy and functional improvement in recently abstinent alcoholics.

Carlen PL, Wilkinson DA, Wortzman G, Holgate R. Can J Neurol Sci. 1984

A fascinating area of research. Commenting on a previous editorial by Clive G. Harper.

Carlen PL. Br J Addict. 1988

Peter opened the door on international alcohol research for me. Peter invited me to the next combined conference for the International Society for Biomedical Research on Alcohol (ISBRA) and the Research Society of Alcoholism (RSA). There are very close ties between the international (ISBRA) and the US societies (RSA) for alcohol research.

This was really the beginning of our research becoming recognised internationally. For the rest of my career the RSA and ISBRA conferences became the main focus of my international conference travel. Previously, I had been attending Pathological, Neuropathological and Neurological conferences but the more specialised meetings were much more relevant. Two ISBRA conferences have been held in Australia – 1994 and 2006. I was heavily involved in the organisation of both of these meetings.

The first RSA meeting that I attended was on Marco Island in Florida. I was welcomed into the society by a group with whom I just clicked. They included John Littleton and Susan Baron, David Lovinger, Dennis Twombly, Rubin and Kathy Gonzales, Fulton Crews, and the Society CEO, Deb Sharp. Most of this group were basic neuroscientists so they welcomed someone with a clinical background. It was a revelation – so many people working on alcohol related organ damage. Deb Sharp ran/runs the conferences brilliantly and was always able to help and support our Australian research group. Deb encouraged Therese and I to attend the RSA conference in

Denver, Colorado in 2017 even though we had retired.

One of the more senior RSA members was Oscar Parsons, a Clinical Psychologist. Oscar recognised the importance of the structural brain changes we had described in alcoholic cases. We really clicked at the dinner dance each year because he also loved to dance. Oscar appreciated my unorthodox style - not everyone does! I also met most of the more senior members who played an important role in my subsequent research and in helping me obtain grants from NIAAA (National Institute for Alcohol Addiction and Alcoholism) in the USA (Director TK Lee). I met Matz Berglund, a Psychiatrist from Malmö, Sweden. He was keen for us to study the autopsy brains of alcoholics from Sweden. He suggested that we could transfer the brains to the New South Wales Tissue Resource Centre (TRC). Every person in Sweden has a centralised medical record that includes data on general health, eating and drinking habits. This information is invaluable when correlated with the harvested brains. I visited Matz in Malmö in 1989 to discuss this possibility. I recall being in the hotel room when CNN announced the huge earthquake that had struck San Francisco. I watched in horror as they showed the motorways, bridges and buildings that had collapsed. Unfortunately, the Swedish Government would not let the brains leave the country so that our collaboration was cut short.

There was a lot of serious science at these conferences and a lot of wonderful collaborations were developed. For many years we worked closely with Edie Sullivan and Dolf Pfefferbaum at the SRI in Palo Alto, California. They invited us to their labs at SRI in Palo Alto for six weeks to complete a study using MRI on formalin fixed brains. We had intended to camp in a friend's VW camper but there were no camping areas close by. Edie booked us into a downtown motel called 'The Mermaid Inn'. It became obvious on the first night with all the movement about the corridors and banging of doors that this was a brothel. Edie was horrified at her mistake and she invited us to stay in their beautiful home. Most recently we stayed at Edie and Kevin's home in Palo Alto when we were in the USA in 2017.

In 1992 I attended the ISBRA conference in Bristol, in the UK. I met another Australian who was big in the alcohol field - John Saunders. He and I ran two subsequent ISBRA conferences in Australia (Gold Coast in 1994 and Sydney in 2006). I also met many of the key European alcohol research workers like Karl Mann from Heidelberg.



Figure 7: Professors Edie Sullivan (left) and Dolf Pfefferbaum (right) from Stanford University joined my wife (Therese Garrick) and me at the ISBRA Conference dinner in Sydney in 2006.

Neuropathology Training and Courses

I saw training of staff in Neuropathology as one of our critical roles. This included not just pathologists but also neurologists, neurosurgeons and radiologists. As a result, I began negotiations soon after I arrived in Sydney with these medical groups. Senior Neurology and Neurosurgery staff realised the enormous benefits of adding Neuropathology to their trainee programs. We soon had regular rotating appointments with trainees from Neurology, Neurosurgery and Pathology. Two of the rotating Neurosurgical Registrars are still good friends David McDowell, a Senior Neurosurgeon in Canberra and Charlie Teo, a well-known Neurosurgeon in Sydney. Charlie was awarded the prestigious Australian of the Year Award in 2016. One of my Pathology rotating Registrars was Michael Buckland.

He now holds my position as Head of Neuropathology at Royal Prince Alfred Hospital. One of his main interest is the molecular biology of brain tumours. Michael has also been instrumental in starting a brain bank for sports head injuries. The Australian Sports Brain Bank is located at the Brain and



Mind Centre and is partnered with the Concussion Legacy Foundation in the USA.

In addition, I decided to start an <u>annual post-</u> <u>graduate Neuropathology training course</u>. This was a huge undertaking. I was able to convince my Australian Neuropathology colleagues (and friends) to contribute to this enterprise. Initially, the main support group were Peter Blumbergs (Adelaide), Tony Tannenberg (Brisbane) and Colin Masters, Catriona McLean and Michael Gonzales from Melbourne. My own staff were also involved – Roger Pamphlett, Michael Rodriguez, Roger Stankovic, Therese Garrick, Steve Kumjew, Donna Sheedy and Jillian Kril. We limited the number of students to about 20 initially because each student needed a microscope and set of histological slides. There was a big emphasis on practical aspects of Neuropathology and each student dissected a brain. The first year was a huge amount of work for our technicians but, after that, it became easier. The program was a huge success and, over the years, there were others who visited and contributed including our mate Jim Powers from Rochester, New York. The students paid to attend so travel, accommodation and social event costs were covered for our teaching staff. Each January they would fly into Sydney for the four-day course over a weekend. We had a lot of fun together and I still receive thanks from many of those clinicians who attended. We even had international participants from New Zealand and Jordan.

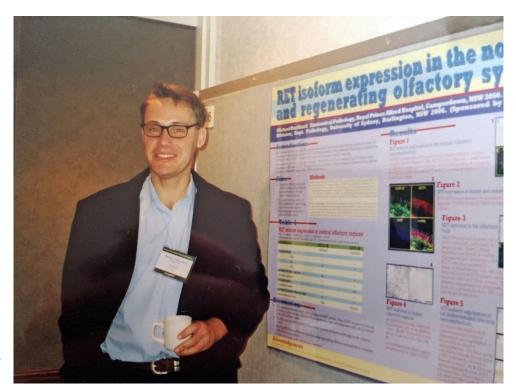


Figure 8: Michael Buckland, then Registrar in Neuropathology, attended and presented at the 2001 American Association of Neuropathologists.



Figure 9: Official dinner at the 2001 American Association of Neuropathologists. From the left, Gavin Dixon, Michael Buckland, Maria Sarris, Therese Garrick and Clive Harper. We were all working in Neuropathology at the University of Sydney.

It was about this time (1993) that I met Therese Garrick. She had been appointed to a research position with the Biological Schizophrenia Research Team (BSRT). Her role was to attend the Department of Forensic Medicine each morning to review the cases of the day to see if any were suitable for inclusion in our new Brain Bank (NSW Tissue Resource Centre). On her first day she was told by Stan Catts (Director of the BSRT) "meet Professor Harper at the Forensic Institute and he will show you around". The meeting went something like: "Hello Professor Harper, my name is Therese Garrick". I responded with "Hello Therese (incorrect pronunciation) please call me Clive". She responded with the correct pronunciation of her first name and I repeated it incorrectly again. I am not sure why I did not get it but, to this day, I still pronounce it incorrectly! This was the beginning of a wonderful friendship/relationship and we have been married for 20 years. Jim Powers flew out from Rochester to join us for the celebrations in 2000.

Fern Yang was another of my favourite staff members. She and her husband migrated to Australia in 1990 and both had Medical degrees from China. These degrees could not be registered in Australia so they decided to do Master's/PhD degrees at the University of Sydney. Fern came to work with me in Neuropathology and her husband found a position in Physiology. She had a delightful buoyant personality and was a pleasure to work with. After completing her Master's degree she became our muscle/nerve biopsy technician. Sadly, in about 2000 she developed a cancer of the bile duct and died after a 4-year battle.

Jordan and Syria – April 1992

Bashar Anabtawi, a Jordanian/Palestinian pathologist had come to our Annual Postgraduate Neuropathology course in Sydney in 1990. He wanted to develop his skills in muscle and nerve pathology. We got on very well and, as he left Sydney he asked me if I would be prepared to come to Jordan to help him develop a nerve and muscle laboratory for the Middle East. At the time, most of the biopsies from Jordan were sent to London. I jumped at the opportunity. Bashar was good friends with the Australian ambassador in Jordan and the next thing we knew we were invited to stay at the Consulate in Jordan – what an opportunity. This adventure was amazing. Apart from the work we visited Damascus, and the carved city and temples in Petra. In addition, we visited Pella, with its ancient Greek ruins. We climbed Mount Sinai to see the sun rise in the morning and then, in the afternoon, went for a swim in the 'Dead Sea'. The Ambassador was Bob Bowker we are still friends with Bob and his wife Jenny. We share our love of camping around Australia and own identical camping rigs (Active Campers).

Working in Paris - 1993

In 1993 I was invited to work in Paris for six weeks with Jean-Jacques Hauw at the Hôpital Universitaire Pitié Salpêtrière. My aim was to review all of their cases of the Wernicke Korsakoff Syndrome and determine the prevalence of that disease in their Paris forensic population. We published the data in 1995.

Harper C, Fornes P, Duyckaerts C, Lecomte D, Hauw J-J. An international perspective on the prevalence of the Wernicke-Korsakoff syndrome. Metabolic Brain Disease, 1995.

NISAD

In 1994 I negotiated to work with the NISAD (Neuroscience Institute for Schizophrenia and Allied Disorders) group of researchers and to take on some new staff to help with the brain bank. I went to Forensic Medicine each morning looking for donor cases for the brain bank. If there were any cases that had a history of Schizophrenia or alcoholism that



Figure 10: Students at our annual Postgraduate Neuropathology Course at the University of Sydney studying the histopathology slides for the course in 2004.

might be suitable for the brain bank the NISAD staff called the relatives of the deceased to ask if they would consider donating their loved ones brain to the brain bank – a tough job!

Research Grants

The Neuropathology lab was going gangbusters with good financial support from the NH&MRC and NISAD and various other smaller funding bodies. In 1990 I had given a lecture in Washington, DC, to the NIAAA. In discussions with the Director, Enoch Gordis, he asked if I had ever considered submitting a grant application to the NIAAA to support the Australian brain bank. When Dr. Glenda Halliday joined our research group we put together a research grant application to NIAAA in the USA. The NIAAA is one subsection within the huge US National Institutes of Health (NIH). We were successful with this application in 1993 and were awarded \$750,000. This allowed us to appoint several new staff members for the brain bank and Therese Garrick was reappointed as Clinical Manager. As part of the grant I was expected to travel to the USA each year to attend the Research Society of Alcoholism. I formed many wonderful working relationships and friendships with members of the RSA over the next 20 years. The grant was a great honour – only one or two other Australian research groups received grants from the NIH. The funding has continued to this day (2020).

'Using our Brains' – a new initiative at the University of Sydney

In the early 2000s we realised that we needed to obtain more 'normal brains' to allow our brain bank research to prosper. We came up with the idea of asking the public to consider donating their brains



Figure 11: Lecturers at the Annual Postgraduate Neuropathology Course at the University of Sydney in 2004. From the left: Jillian Kril (Sydney), Clive Harper (Sydney), Judith Fryer (Sydney), Renata Kalnins (Melbourne), Roger Pamphlett (Sydney), Tony Tannenberg (Brisbane) and Peter Blumbergs (Adelaide).

while they were alive. Here is the documentation of the huge public program that we launched in 2002. I was blessed by having a young friend, James Pegum, assist with the six-month lead-up and launch in the NSW Parliament House. He ably assisted with all of the subsequent Media activity. I think that I was on every Sydney television and radio station during the launch week. One of the main reasons for the success of this initiative was that Gough Whitlam agreed to become a donor and help launch the program. James went on to a career in IT and is now a part-owner of Privia. He is married to Ria and they are living in Orange. They have two boys, William and Charlie and we see each other regularly.



Figure 12: Official launch of the 'Using our Brains' donor program in the New South Wales State Parliament House in 2002. Clive Harper is talking with Retired Prime Minister Gough Whitlam (centre) who volunteered as our first donor.



Sri Lanka – 2002, 2007 and 2008

Throughout the 2000s Forensic Medicine at Glebe had been inviting Postgraduate Pathology students from Sri Lanka to Sydney for an additional one year's training. This was supported strongly by the University of Colombo. In fact, it was a requirement that each student spend one year in another country to complete their training in Pathology. I spoke to John Hilton (Director of Forensic Medicine) and he put me in touch with the Coordinator of the Colombo Program. Subsequently, a number of students came and worked with us in Pathology at RPAH. The first student was Geethika Jayaweera we are still good friends. Geethika is now one of the most senior pathologists in the Sri Lankan Army. There were many other trainees who visited Sydney for 12 months and this helped to build strong links between our countries. As a result of this program I was invited to visit Colombo as their External Examiner in Postgraduate Anatomical Pathology in 2002, 2006 and 2007. On each occasion, after we had completed the examinations with the Postgraduate students, we spent two weeks travelling around their beautiful country. Back in Colombo we met up with Geethika and her family and went to the local cricket club. We met Arjuna Ranatunga, the captain of the Sri Lanka team when they won the 1996 Cricket World Cup. He was nicknamed Captain Cool and is regarded as the pioneer who helped to lift Sri Lankan cricket from underdog status. After retirement, he worked in many posts of Sri Lankan Cricket administration and then entered politics in 2005. Ranatunga became the Cabinet Minister of Transport and Civil Aviation. He was very charming. The Sri Lankan cricketers have a soft spot for Australia as Shane Warne raised funds to rebuild the Galle cricket ground after the 2004 tsunami.

Muscat, Oman – 2008 and 2009

In 2008 I was invited to run a Neuropathology Course in Muscat, Oman. It ran very smoothly and was well accepted. Following this, the Dean of Medicine at the Sultan Qaboos University approached me to ask if I would be interested in coming to work at the University/Hospital in the future. I was very attracted to the idea and thought that it might fit in well with our plans for retirement. I negotiated with my staff and the University and RPAH and changed my role to part-time. I was responsible for doing the Neuropathology reports for the brain bank cases - a 20 hour per week appointment. The pathology sides of the cases could be sent to me anywhere in the world – including Oman. Our Neuropathology team was now 26 people. Our five months term in 2009 in Oman was fantastic. We enjoyed the enthusiasm of our students and the atmosphere of both the Hospital and University. We lived on campus but took the opportunity of exploring Oman at every opportunity in our borrowed tent and sleeping bags. On many occasions, as we camped on the beaches and in the deserts, we were offered food and drinks by passing locals. The Omani's hospitality was amazing.

This was the perfect 'exit plan' and we moved into retirement smoothly and easily. I have no regrets about retiring and have enjoyed every moment. One of the main activities has been travel and catching up with our world-wide network of friends from both our work and social lives. We are also doing volunteer work with a local Toy Recycle Group, catering to the NSW Rural Fire Services and on our extended travels, working with Blazeaid. They are another volunteer group who help Aussie farmers after fires and floods to refence their properties.

Awards

Royal Prince Alfred Research Foundation Medal for Excellence in Research

I was encouraged to put my name 'in the ring' for the prestigious Royal Prince Alfred (RPA) Research Foundation Medal for Excellence in Research. I was one of two doctors selected by the Committee and we were invited to present our research in lecture format so that the Committee could select the winner. My younger son, Rye, was able to come along –this was the first time he has heard me speak in public. I won the RPA Foundation Medal for Excellence in Research in 2006. This was the press release:

"RPA Medal winner identifies approaches to repair alcohol related brain damage. Professor Clive Harper has won the prestigious RPA Foundation Medal for Excellence in Research for his groundbreaking research into alcohol-induced brain damage."





Figure 13: Farewell luncheon with all of the examiners at the University of Colombo after completion of the examinations for Postgraduate Anatomical Pathology in 2002.

Australia Day Honours award

In the following year (2007) I was delighted to be included in the Australia Day Honours List and was awarded an AM (Member of the Order of Australia). This is the citation:

Professor Clive Gordon HARPER

Department of Pathology, University of Sydney NSW 2006 For service to medicine in the field of neuroscience, particularly research into the neuropathological consequences of alcohol-related brain damage, and through contributions to public health policy.

The presentation of awards was at NSW Parliament House. Professor Marie Bashir was the Governor General and officiated. I had met her professionally when she was the Clinical Director of Mental Health Services for the Central Sydney Area Health Service. She was very charming and told me that she had been following my career and the development of the Brain Bank.

The Henri Begleiter Excellence in Research Award

In 2009 I received another award that I am very proud of: The Henri Begleiter Excellence in Research Award. Nominations for this award are accepted from Research Society of Alcoholism members. Recipients of this award receive a plaque and cash award at the annual meeting. This award is given to an individual demonstrating innovation or creativity and excellence in their research and/or someone whose work has a major impact on the field. Recipients of this award: Ting-Kai Li (2007), Adolf Pfefferbaum (2008), Clive Harper (2009), Jan Hoek (2010), Marlene Oscar Berman (2011), Linda Spear (2012), Kathleen Grant (2013), George Fein (2014), John Krystal (2015), Bernice Porjesz (2016), Raymond Anton (2017), Sarah Jo Nixon (2018). The award was made at the San Diego RSA Conference by the President, Peter Monti.

My personal philosophy has always been to find the best staff to work with regardless of whether or not they are smarter than you ... most have been smarter! Always be available to staff and



to look for opportunities to help staff in their personal development, such as encouraging attendance at conferences, even for junior staff. Always be on the lookout for new opportunities and do not be afraid of the extra work. Go the extra yard and don't be afraid to ask the hard questions. Be totally honest and up front with staff and colleagues. I have rarely been disappointed by my staff and consider that I have been blessed in my career.

I was awarded Emeritus status by the University of Sydney and give occasional consultative advice to my colleagues. In our retirement my wife and I have joined a number of volunteer groups including Blazeaid. The Peninsular Senior Citizens Toy Recycle Group and the local Rural Fire Service (Catering division). Blazeaid is particularly challenging. It is a volunteer-based organisation that works with families and individuals in rural Australia after natural disasters such as fires and floods. Working alongside the rural families, we help to rebuild fences and other structures that have been damaged or destroyed (https://blazeaid.com.au). In our spare time we swim, cycle, sail and travel in our 4x4 camper rig. Last year we were on the road, around Australia, for seven months! After Covid we hope to travel overseas again to meet up with our international colleagues and friends.



Figure 14: Camping in 2021 on Magnetic Island in Queensland with the local Koala.

