

REPORT OF JAMES THE IV TRAVELLING FELLOWSHIP OF ARNOLD HILL

My traveling fellowship was devised into two components. In the first section I traveled to the United States during 3 weeks in October and the beginning of November 2005.

In the second component of my traveling fellowship I traveled to Australia for 2 weeks at the end of November 2005.

I commenced my travelling fellowship on the 15th of October where by I traveled to the American College of Surgeons Clinical Congress in San Francisco. During that meeting, apart from attending the clinical and research sessions at the surgical forum I met with Dr David Cole who has been a previous research collaborator of mine. Dr David Cole is chairman at the Dept of Surgery in Charleston South Carolina. During that meeting we discussed potential collaborations with respect to our common area of interest in molecular staging of breast cancer. I also attended James the IV reception on the Tuesday evening in the San Francisco Hilton Hotel.

VISIT TO JOHN WAYNE CANCER INSTITUTE

Following the American College of Surgeons meeting I traveled to the John Wayne Cancer Institute in Santa Monica. My visit there was coordinated by Dr Anton Bilchik Chief of the division of Gastrointestinal Surgery.

My visit commenced on Thursday October 20th 2005 whereby I met with Dr Bilchik and had a most entertaining dinner with Dr Bilchik and one of his colleagues from the institute, Dr Helen Mabry who is an assistant director in the breast cancer in the John Wayne Cancer Institute.

On Friday October 21st 2005 my visit to the John Wayne Cancer Institute commenced at 7.30am with a pre-operative clinical conference. At this all the cases planned for the following week were discussed and a lively discussion was held with all the surgical oncology fellows and the attendings.

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This meeting was chaired by Dr Donald Morton who is the chairman of the Division of Surgery at the John Wayne Cancer Institute. This meeting was followed by a meeting with the research fellows and their research was presented and discussed. Fascinating work was presented on an area of interest to the John Wayne Cancer Institute particularly focusing on molecular diagnostics in the field of melanoma. I was then brought on a tour of the institute by Dr Rishab Gupta who has been with Dr Morton since his time at UCLA and has worked alongside him for the last 30 years in the research laboratory. Dr Gupta provided fascinating insights into the extraordinary success story of Dr Morton in American Surgery and how his focus on melanoma and his extraordinary diligence at maintaining tissue and serum. Data banks have provided a major resource for research in enhancing our understanding of the disease of melanoma.

At 11.30am I met Dr Morton personally for a discussion in his office. The discussion I had with him over the following ½ hour was probably one of the most valuable meetings I have had in my career with regard to advice on how to develop a department of surgery. He gave me one piece of advice which I will never forget. In running a department of surgery which I am due to commence in January 2006 he gave me three words of advice and they were, "Follow the Buck". He elaborated on this term in that he felt that the key to success would be to draw in money and once you had money you would be able to control what people you wanted in your department and make it attractive for them to be there. In the Irish context he appreciated that I had no control over the income derived from a surgeons clinical practice but he did suggest that philanthropy would be a way forward and that at the John Wayne Cancer Institute of 20 million dollars a year income, 8 million of this came from philanthropic sources. He also gave very useful advice about how to deal with members in your department who clearly did not support you as the chairman of the department. He also discussed the initial period as a chairman and how one had a honeymoon period in which one had to prove oneself as being successful. This insight from a leader of American surgery who has clearly faced all these problems in the past and dealt with them with such success was a most valuable experience for me.

At 12.00pm I presented at a special research seminar. My presentation for one hour entitled "Breast Cancer - Insights into Endocrine Resistance". This was well received judging from the comments of an audience of 40 people including medical oncologists, all the attending research fellows and the staff of the John Wayne Cancer Institute.

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Following this presentation I was brought to lunch in a pleasant restaurant across the road from the institute with the surgical oncology fellows.

As always this is where all the truths came out about who does what and the running of the institute which was a most valuable insight. During the afternoon I had various meetings with members of the faculty of the John Wayne Cancer Institute. These included Dr Armando Guiliano who provided fascinating insights into his view on the future of sentinel lymph node mapping for breast cancer. Dr Guiliano who is the father of lymphatic mapping for breast cancer felt that this was a procedure that may well disappear in the coming number of years. However I was not in complete agreement with him on this point but we had several valuable discussions regarding the future clinical trials which should be held in breast cancer management. I also met with his associate Dr Helen Mabry who has just recently joined Dr Guiliano practice in breast cancer at the institute and this was a most enlightening meeting given that Dr Mabry was new to the institute and her opinions on the various personal within it.

My day finished with an extraordinary meeting with Dr David Hoon who is Director of the Molecular Oncology laboratory at the John Wayne cancer institute. This is a laboratory that is dedicated to molecular diagnostics in cancer patients. It has been built up over the previous 14 years and was a most impressive facility. What I found extraordinary was the way that he has specific research staff who are technical experts in specific areas such as DNA extraction as well as in proteomics. Within the DNA section of his laboratory there are specific people with expertise in mutations, and loss of heterozygosity. Such a focused structure I felt was very impressive and certainly an example of the type of laboratory I might develop in my own department in the coming years. He talked about how to develop this and the areas that the NIH was interested in funding. He described the area of cancer biomarkers as an important area of research for surgeons to be involved in. Lasting memories of the John Wayne Cancer Institute were seeing the storage facilities of all the tissue specimens over the last 30 years. There were a total of fifty seven to "80" freezers in one room. All were stored in a large room with over 1.2 million samples stored in these 57 freezers. The majority of these patients were melanoma patients. This is clearly the most comprehensive storage facility for melanoma patients in the world, representing 30 years of Dr Morton's professional life in treating this disease. My visit to the John Wayne Cancer Institute was complete on the Saturday where I joined Dr Bilchik and we went cycling along the beach at Santa Monica to flavor the Californian lifestyle.

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VISIT TO WASHINGTON UNIVERSITY SCHOOL OF MEDICINE ST LOUIS

On Sunday the 23rd of October I flew to St Louis where I was hosted by Dr David Linehan.

On Monday the 24th of October 2005 my itinerary began with a meeting at 9am with the Surgery Research residents.

This was a most enlightening session where there were presentations from a variety of groups within the departments of surgery including the cardiothoracic group and the breast cancer research group as well as the pancreatic cancer group. There were 6 presentations in all and gave me a good outline of the broad diversity of research within this very large institution. In the afternoon I met a number of individual attendings. I met with Dr Imran Zuberi who is a radiation oncologist and he gave me a very interesting insight into the American perspective of the use of whole field breast radiation –v- the use of newer technologies such as mammosite.

I then met with Dr Geoffrey Moley who is an expert in endocrine surgery and has taken over the substantial practice that Dr Sam Wells developed over 20 years. Dr Moley has a very interesting insight into new developments in thyroid cancer and has a very focused effort on developing clinical trials in this context. He gave an interesting insight into the difficulties in performing clinical trials in such a group of patients.

I then met Dr William Gillanders. William and I have collaborated in the past on various breast cancer clinical trials and it was most informative to have a discussion with him regarding what we felt were the future developments in breast cancer research. Dr Gillanders has a particularly interesting proposal where by he is looking at the potential for a mamoglobin vaccine in breast cancer treatment. It was also useful to discuss with him potential collaborations between my research group in Dublin and his research group at St Louis.

I then met Dr Peter Goedegebuure, who is a PHD immunologist in the department of surgery research group. He gave me interesting insights into the issues involved in having surgical research fellows within a laboratory where there are basic scientists and how they are addressing those issues within Washington University.

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I then met Dr Gergorio Sicard. Dr Sicard has been present on the staff of Barnes Jewish Hospital for the last 25 years and has a vast experience of seeing chairman come and go. He gave a very interesting perspective on how to manage a new department. Interestingly his advice was to always have good humor in your dealings with people.

He was a larger than life character who understands all aspects of the workings of Barnes Jewish Hospital. I finished my series of meetings with a meeting with Dr Richard Battafarano, this was most useful to discuss the difficulties that a new member of the attending staff faced in terms of establishing a laboratory based research programme. He has a particular interest in thoracic surgery and works on lung cancer and oesophageal cancer.

In the evening I was brought to dinner by the residents in the programme. This was a most entertaining event and I was brought to what they believed was an Irish bar for this meal but in fact it turned out to be a Welsh bar. I explained the difference politely!

On Tuesday October 25th, this day commenced with a meeting with Tim Fleming who is one of the senior scientific researchers within the department of surgery. He has this distinguished record of having discovered mammoglobin in breast cancer and is currently working with Dr Gillanders on designing a vaccine trial whereby mammoglobin may be used as a vaccine to prevent breast cancer. He provided many useful insights into maintaining an academic research programme as he has many years of experience in this area as a senior scientist.

I then joined Dr Will Galanders in the operating room and observed him doing a segmental mastectomy with a sentinel lymph node biopsy. It was most useful to see another surgeon practicing a procedure that we commonly do and to learn the various ways of doing this procedure.

Following this I was brought to lunch by Dr Deirdre Duke who is returning in July next year to join me as a consultant colleague in Beaumont Hospital. Deirdre is a consultant radiologist and this was a most enjoyable lunch. It is probably worth noting at this stage that I felt I would be probably 10lbs heavier after this traveling fellowship given the extensive amount of eating I was doing, taking 3 meals a day, something I am not used to!

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In the afternoon of Tuesday October 25th I met with Dr Barbara Monsees. She is the director of the breast imaging facility in Barnes Jewish Hospital. She is an informative woman who has strong views on the role of breast imagers in the role of breast cancer management. She was very helpful in giving me a tour of their extraordinarily well resourced facility. As always in America this was in a glamorous new building that had just been erected in the last number of years.

The afternoon finished off with a most entertaining series of case presentations by the residents where they discussed the management of various cases of breast cancer. It was reassuring to realize that our management strategies at home are not vastly different. As usual they discussed a sense of complex and difficult cases with no clear cut answer but this provided a lively discussion among the residents, fellows and Dr Monsees.

At 5pm that evening I attended the morbidity and mortality conference of the whole department and this was very enlightening. One of the facts that I learned from this conference was that it was mandatory for the residents and fellows to attend this conference as well as the attendings. This was a rule and rather than being a review of the errors that had occurred in the previous week it turned out to be a very educational hour where by residents presented their cases with an educational background in a teaching format for the other residents and I felt this was to be a very useful way to address an important issue of morbidity and mortality and something that we could adopt at home in our own institution. We routinely have audit meetings which tend to be dull and dreary with no educational benefit and this was an interesting way in which morbidity and mortality for our surgery department could be turned into a very useful educational format.

I was then brought to dinner at a very elegant restaurant by the chairman Dr Tim Eberline. Before this he met me in his office. Here we had a very useful discussion regarding how one should manage a dept of surgery when one starts ones position as professor of surgery. Dr Eberline had a clear understanding of the differences between American and Irish surgery and he gave some very helpful advice regarding the management of difficult colleagues and he advised me that much of his work was dealing with interpersonal difficulties. These issues related to the percentage of his total administrative work load. He highlighted the point that attracting in young faculty members who had research as their fundamental goal was the key to success. Dr Eberline was extraordinarily generous in the time he gave to advising me in potential issues in my career. He also welcomed me to call him for advice during my new position which I felt was a most valuable asset to have.

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He also invited me onto the International Editorial Board of the Journal of the American College of Surgeons of which he is the editor. I felt particularly honored by this invitation. There followed a very pleasant dinner with members of faculty and their wives, followed by a retreat to Dr Eberlines home for after dinner drinks!

Wednesday 26th of October 2005, I delivered my presentation entitled: Endocrine Resistance in Breast Cancer. It generated a lively discussion which was most encouraging.

Following this I had the morning off for rest and relaxation and I had a most entertaining visit to the Budweiser Factory in St Louis. I returned in the afternoon and was shown around the medical education centre in the Washington University School of Medicine. This is a brand new facility with wonderful educational resources for the medical students. Most of this educational programme is modeled on the use of actors but in very real world clinical scenarios where they have designed an outpatient's facility whereby the students are evaluated using a significant amount of computerized support. It is a very impressive facility and clearly very expensive. My visit to St Louis finished that day and I flew to Baltimore that evening to be hosted by Dr Richard Schulick for my visit to Johns Hopkins Hospital.

VISIT TO JOHNS HOPKINS HOSPITAL

My visit to Johns Hopkins hospital commenced by attending surgical rounds at 7am. This was a presentation by Dr James McCarthy from New York University on cranio-facial abnormalities. Following this I went to the operating room with Dr Theodore Tsangaris who is chief of the Breast Service at Johns Hopkins Hospital. It was interesting to see him do a skin sparing mastectomy with a sentinel node biopsy. The patient also underwent an immediate reconstruction.

During the afternoon a most exciting research forum was presented to me. All the research fellows within the dept of surgery presented their research.

Dr Michael House presented his talk on epi-genetic changes associated with gall bladder cancer. Dr Peter Attia presented his work entitled "Auto-immunity Correlates with Tumour Aggression in Patients with Metastatic Melanoma treated with CTLA-4".

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Vincent Daniel presented his work entitled "Therapeutic Implications of Hedgehog Pathway Inhibition in a Novel Model of Small Cell Lung Cancer". Jordan Winter presented his work entitled "A Scoring System for Reporting Genetic Changes". Brendan Collins reported on "Musashi 1+2 in Lung Development and Lung Cancer". Chris Barreiro presented his work entitled "Magnetic Resonance Spectroscopy Provides a Non-Invasive Assessment of Neuro-Cognitive Dysfunction and the Effects of Neuro-protective Agents following Hypothermic Circulatory Arrest". This was a most enjoyable research session which lasted 4 hours. I had a long discussion with the residents about their aims and aspirations in undertaking full time research. It was very reassuring to see such committed individuals to the cause of surgical research.

I commenced this day by giving a presentation to the division of surgical oncology entitled sentinel lymph node mapping past/present and future.

I was very pleased with the discussion that followed this presentation. I was then given a 1 hour break, from 8 o'clock to 9 o'clock and during this time I visited the William Welsh Library which has the world famous picture of William Osler and William Halsted discussing a clinical case.

At 9 o'clock I had a 1 hour discussion with Dr Julie Lange regarding the clinical practice of breast surgery within Johns Hopkins Hospital.

At 10.30am I had the privilege of meeting the new chair of the dept of surgery Dr Julie Freischlag. This was a most enlightening discussion. Clearly her promotion to becoming chair of one of the most famous medical institutions in the world had been controversial and this was something she admitted frankly. I had a very interesting discussion and learnt an awful lot from meeting her. Her advice to me regarding starting a new department of surgery was not to implement change to any great extent in the New Year but to focus on developing a good educational programme for the trainees. This she said could not be faulted by anyone so if I made as a focus a strong educational programme for the first year that would be advantageous. She also suggested collaboration with the Johns Hopkins Group whereby they have a very strong internet based programme for the residents. She also advised that she meets the residents once a week at 6.30am on a Monday morning just to identify what their problems are and she finds this very useful. She also recommended that when I start, that the people you believe may support you may not. One should wait 6 months and make a decision as to who your supporters are.

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She appeared a very confident lady who had dealt with major challenges within her department in a very successful manner. She discussed how at first it was very difficult to work in a department where the previous chair was still working. However the subtle move of appointing Dr Cameron's son to the transplant service was rather ingenious I felt and certainly attracted Dr Cameron's full support for her position. Her open and frank discussion regarding how she dealt with issues such as this were enlightening. She also discussed future developments in the strong links between Beaumont Hospital and the Johns Hopkins residency programme.

Following this I met Dr Lisa Jacobs who is an attending on the breast service and then discussed the issues pertaining to the delivery of breast care within the Johns Hopkins Campus.

Following this I had a very valuable meeting with Lillie Shockney. Lillie is a registered nurse and a breast cancer survivor but also the senior administrator within the breast unit which is known as the Johns Hopkins Avon Foundation Breast Centre.

Lillie has legendary qualifications in that she has been the energy and drive behind the whole development at the breast centre. She has implemented some extraordinary measures whereby breast cancer survivors meet patients prior to going into the operating room and when they recover in the recovery unit. This was something I felt was very important and could be matched within the Irish context. She also gave significant insights into the extraordinary fund raising activities that she does for the centre.

In the afternoon I met with Dr Antonio Wolfe who is one of the medical oncologists in the breast unit in Johns Hopkins. He gave very useful insights into the grant support that was available within the unit and how the focus was on academic breast oncology.

I then met with Dr Nita Ahuja. She has a very strong interest in breast cancer research and in particular DNA methylation and we had a long discussion about possible areas of collaboration. How she may be able to take a research fellow and that we could develop a strong collaboration with our existing clinical data bases. We had a long discussion about very interesting developments which could proceed between the two institutions and this I found very useful.

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Following this meeting I went to the operating room where I saw a breast reconstruction procedure being performed by Dr Gedge Rosson. This was a deep inferior epigastric perforator being used to provide the donor tissue. This procedure is very common in the Johns Hopkins breast unit and in fact is a procedure for which they have a large referral base. It was interesting to see how this procedure is used with such a routine in this institution. Perhaps this is something that we could adapt in Ireland.

I then went to the operating room with Dr Tsangaris who is head of the division of breast surgical oncology. He demonstrated a very interesting technique with regard to sentinel node biopsy, where by he takes a portion of the sentinel node, leaves the remainder in-situ and this allows the potential correlative tissue studies following neo-adjuvant chemotherapy.

I then had a meeting with Dr Charles Balch former CEO of the American Society of Clinical Oncology and former chairman of the Dept of Surgery at the MD Anderson Cancer Centre. Dr Balch has been a leader in cancer in the United States for many decades and he provided interesting insights as to how one might develop clinical research in my new position.

Following this I was brought to the Centre Club in downtown Baltimore. This is a very exclusive restaurant and I had a very pleasant evening there which was hosted by Dr Freischlag In attendance was Dr Cameron and members of the faculty. It was a most enjoyable evening at which we all agreed to promote and maintain the long established links between Johns Hopkins and Beaumont Hospital.

Following this on Saturday 29th of October I had a day at leisure during which I was able to explore the inner harbor area of Baltimore and its shopping district. In the evening I was in attendance at another social function in Dr Richard Schulicks house. The following morning I departed for Toronto.

VISIT TO THE UNIVERSITY OF TORONTO CANADA
HOST: DR RICHARD REZNICK CHAIR OF THE DEPT OF SURGERY AT THE
UNIVERSITY OF TORONTO.

I arrived in Toronto and met up with my host and the chairman of the Dept of Surgery Dr Richard Reznick in the Bantina institute in the University of Toronto. He explained to me the structure of the dept and how his 230 faculty members were allocated between the various hospital structures within Toronto.

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We discussed how the Canadian health system was more similar to the Irish system in that Dr Reznick did not control the salaries of his faculty members but he did have the responsibility for education of his residents and medical students. Dr Reznick is famous for his surgical skills lab which is undergoing a process of doubling in size. He was extremely welcoming and organized a very useful 3 day programme for me in Toronto.

At 11.30 I met with Dr Robin McCloud who is head the General Surgery at Mount Sinai Hospital. She has a strong interest in clinical epidemiology and we discussed how one could encourage surgical faculty members to take an interest in this area. This is certainly an area of expertise that is deficient within the Irish Surgical training system.

At 12.30 I met with Dr David Backstein who is director of a Surgical Clerkship within the dept of Surgery.

What was of particular interest in there curriculum design was that all medical students get exposed to the surgical skills lab at an early stage which both of us felt was an important stimulus for medical students to choose a career in surgery and this is something that we should consider implementing in Ireland.

Of particular interest is that Dr Backstein is an orthopeadic surgeon and this is something that I noted throughout the faculty in the University of Toronto that many of the orthopeadic surgeons were not only strong under educational aspects of their career but many of them were very strong in their basic science expertise. This is something that is not duplicated in the Irish context in Ireland.

In the afternoon I visited the Wilson Centre which is the centre for research and education at the Toronto General Hospital. This is a unique institute in that it hosts office space for those with a particular interest in education within the university but it is not exclusively those from the surgical faculty, it is faculty members from the university coming from all departments. This highlights the strong mission within the university to put education and research into education as one of their missions. Again one was struck by the very relaxed atmosphere within the centre for research and education.

I then met with Dr Nicole Woods who is a clinical psychologist working within the department of surgery and she had just commenced and explained to me her research proposals. I also met with Sarah Woodrow who is a neurosurgical trainee and who had done some fascinating work looking at sleep deprivation in surgical trainees and its affect on motor function.

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Also she participated in applying EEG leads to surgical residents and observed that they on many occasions had slept during part of the day without actually being aware of this. This is a focus of research within the dept and certainly something that has revealed very interesting data.

That evening I had a very enjoyable dinner that was hosted by Dr Reznick and had the privilege of meeting Dr Bernie Langer who was a previous chair of the department and one of the well known legends in Canadian Surgery. One of Dr Langer's contributions was the development of the surgeons scientist programme at the University of Toronto and this still remains and is an interesting model which we should reflect on duplicating in Ireland whereby surgeons are encouraged to do not 3 but up to 5 years in laboratory research and then when they come on staff they are given protected time to spend up to 75% of their time in the lab. This is a model which is just not practiced in either Ireland or the UK and certainly is an excellent example to consider over the coming decades in Ireland.

On Tuesday 1st of November I spent the morning in the Surgical Skills lab in the University of Toronto within Mount Sinai Hospital. This is a wonderful resource.

In fact the Irish College of Surgeons is in effect duplicating this surgical skill lab within the Royal College and thus it was a great excitement for me to see how this surgical skills lab was run. Of particular interest on the morning I attended all the first year residents were in attendance for 2 hours practicing suturing and knot tying. This is something that is mandatory every Tuesday morning for 2 hours no matter what issues pertain within the hospital that they attend. This is across all disciplines not just within general surgery and there were 43 1st year residents training that morning. Also of note there were at least 7 faculty members there to teach them and this is something that we have not managed to reproduce in Ireland or within the UK. The issue for us would be how to encourage faculty to attend and also how to make it mandatory that attendance at these training sessions is required. There were many issues that required careful consideration for Irish surgical trainees but overall it was an excellent example of how to prepare young surgical residents for their operating experience when they arrive in the operating theatre.

I met with Dr Helen McVeigh who is the director of the Surgical Skills Centre and she had some interesting insights as to the future of the Surgical Skills Centre.

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There is no question that this is an economically very viable entity. It brings in a lot of outside funding both from industry and also by course work and indeed I felt that laparoscopic colorectal surgery courses is an ideal model that could be reproduced in Ireland in the coming number of years.

I also met with Adam Dubrowski who is a Kinesiologist. It was extraordinary how a man with such focused discipline had been attracted to a surgical skills lab but clearly his background knowledge in Kinesiology was fascinating to see how this could be applied to hand movement within a surgical skills lab. Clearly this is a dramatic change in surgical research from following various signaling pathways within a cell.

At lunch time I presented to the Surgical Oncology conference. My talk entitled lymphatic mapping in breast cancer. This was well received and generated a lively discussion. In particular the technical aspects of lymphatic mapping were discussed in detail.

I then met with Dr Ben Alman who is vice chair of research in the dept of Surgery.

Dr Alman is an orthopedic surgeon who has a laboratory interest in molecular biology. It was particularly fascinating to note this ongoing team of orthopedic surgeons with an interest in cell biology. His laboratory space has recently been placed in a building where there are start up bio tech companies. A concept that has been mirrored in Dublin in the Conway Institute. Clearly this is an ongoing theme in biomedical research to expose basic scientists to clinical scientists as well as industry. I was particularly interested to see what motivated Dr Alman to pursue his basis science research and clearly the different health care system whereby there is no private practice health care. It is significant influential factor that allows clinicians to pursue their interest in basic science without any effect on their remuneration. Clearly this is a far more difficult issue in the United States and in Ireland and the United Kingdom to address.

That evening I had dinner with Dr David McCready and the members of the breast group.

On Wednesday the 2nd of November I spent time in the outpatients clinics with Dr May Lynn Quan who works at Sunnybrook and Womens College. It was particularly interesting again to see the way they organized their breast practice.

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I also then joined Dr Claire Holloway in the operating room where she was performing a mastectomy and sentinel node biopsy. There were no major technical differences in the way this procedure was performed, however what was fascinating again and a significant difference to our clinical practice is that patients all go home within 24 hours after a mastectomy.

After the morning in the clinic and operating room I had lunch with Dr Michael Reedijk who works at the Princess Margaret Hospital in the Dept of Surgical Oncology. Again Dr Reedijk is a surgeon scientist and spends approximately 75% of his time in the laboratory doing basic science work. He also works as a breast surgeon. He has a fascinating area of scientific research which we discussed in great detail involving the notch signaling pathway in breast cancer. This I found particularly interesting and perhaps an area that our group could collaborate with in the future. We then discussed at length a data base that was available within Womans College in Toronto. This is a data base of 2200 patients with breast cancer under the direction of Dr Stephen Narod. The significant issue about this data base is that all patients are at more than 10 years follow up and they have good accurate clinical information as to who is alive and who is dead.

They have also developed a tissue micro array from 1100 of these breast cancer patients and clearly this is a very valuable resource.

I met with Dr Jaime Escallon at Mount Sinai Hospital during the afternoon. He brought me on a tour of the Marvelle Koffler Breast Centre. It seems to be a persistent theme throughout North America that all breast centers seem to be extremely glamorous with expensive furniture. This is a very luxurious facility and the background of the donation was explained to me by Dr Escallon and I also noted that there were significant fundraising efforts for breast cancer. In particular each individual hospital appears to have its own lottery that raises a significant amount of funds. Dr Escallon is originally from Columbia and we discussed the differences in health care delivery for breast care between Columbia, Canada and Ireland.

I then met with Dr Zane Cohen who is Surgeon and Chief at Mount Sinai Hospital. He had some very interesting insights into health care delivery and how the hospital were particularly interested in training surgeon scientist's who would stay within Canada and increase academic productivity.

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They had problems in trying to retain well trained academic staff were sometimes they were attracted to higher remuneration packages within North America.

However he also discussed how they were very interested in training surgeons from other countries so that it would put there hospital on the international map in surgery and we discussed future potential collaborations between Ireland and Toronto.

That evening I was hosted to a wonderful dinner in Dr Reznick's home with his wife Cheryl. The following day I returned to Ireland and will commence the 2nd part of my James the 4th Traveling Fellowship at the end of November when I travel to Sydney and Melbourne in Australia.

JAMES IV TRAVELLING FELLOWSHIP TO AUSTRALIA

On Monday 28th of November I visited the Sydney Melanoma Unit at the Royal Prince Alfred Hospital in Sydney. The host for my visit was Professor John Thompson. On my first day there I spent the day in the operating theatre with Professor Thompson. I was particularly pleased that I got the opportunity to see 2 isolated limb infusion procedures. I had carried out a small number of these myself and it was particularly satisfying to see the world expert on this procedure carry this out. There were many components of the procedure that I learnt about, in particular the warming of the limb with infrared light.

The opportunity to have many significant discussions on the current management of melanoma with Professor Thompson were most enlightening. In particular I found his approach to the use of radiation in melanoma of great interest.

The second day I spent with Professor Richard West of the Sydney Breast Unit in the Royal Prince Alfred Hospital. It was particularly interesting to see the workings of a major breast centre in this part of the world. Of particular interest was their fundraising unit known as the Sydney Breast Foundation. This entity appears to be particularly successful in raising funds for research and the development of breast facilities within the unit. I was also particularly interested I the way the unit collects data on their surgical procedures and submits it to a data base of the Australian College of Surgeons.

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On the evening of Tuesday the 29th Professor Richard West hosted a very pleasant evening which was attended by Irish surgical trainees within Sydney.

On Wednesday the 30th I spent a full day in the clinic of the Sydney Melanoma Unit at the Royal Prince Alfred Hospital. This unit is clearly the largest melanoma unit in the world and it was fascinating to look at the infrastructure. In particular the data manager, Marie Janik gave me a particularly interesting insight into an extraordinary data base of over 24,000 patients with melanoma. This is clearly an invaluable resource for knowledge on melanoma. I also was impressed with the fundraising infrastructure of the Melanoma Foundation which has huge resources to support melanoma research.

Of particular interest was a meeting with Rachel Morton who is in charge of the clinical trials unit at the Sydney Melanoma Unit. There is a staff of 13 people with 10 clinical trials open. This type of academic enterprise is remarkable and a great credit to Professor Thompson's academic expertise. In the afternoon I met with David Chun who works with Professor Roger Uren, both of who are Nuclear Medicine Physicians. This department has led the world on lymphatic mapping for melanoma. They have an extraordinary unit where they do 12 lymphatic mapping cases for melanoma every day. It was interesting to see how this private practice facility was linked so closely with the Royal Prince Alfred Hospital.

Later on that afternoon I met with Mike Soloman who is a colorectal surgeon at the Royal Prince Alfred Hospital and he has developed a significant interest in patient outcomes research.

He has in fact developed his own research institute in this area and has been particularly successful at attracting research funding from the government for outcome based research. There is a very strong colorectal unit at the Royal Prince Alfred Hospital. It was very welcoming to see Mike Soloman being so successful as a graduate of the Royal College of Surgeons in Ireland.

VISIT TO MELBOURNE TO THE ROYAL MELBOURNE HOSPITAL

Later that week I travelled to Melbourne to the Royal Melbourne Hospital where I was hosted by Professor Bruce Mann of the Royal Melbourne Hospital. On the 1st day I visited the Multi Disciplinary Breast Meeting where several interesting cases were discussed.

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This was followed by a visit to the Breast Screening Clinic with Professor John Collins. The screening unit runs very similar to that set up in Ireland; however the screening process ends at the diagnosis of breast cancer. It was particularly interesting to note the technique of carbon localization which avoids the requirement for a radiologist to insert a wire on the morning of surgery. This technique I hope to bring back to Ireland to avoid the requirement for a radiologist to insert a wire on the morning of surgery. It was interesting to attend the registrar teaching session that had been developed by Professor Bruce Mann. It appears that the quality of the residents within the Melbourne Training Programme is extremely high.

In the afternoon I was fortunate to visit the laboratory research programme of Professor Ian Talyor in the Brockhoff Plastic Research Unit. Professor Taylor has an interest in the lymphatic system and has done extensive work on cadavers in tracking the lymphatic pathways of a human body. This research work is particularly relevant to the area of sentinel lymph node mapping. I joined the research fellows at their research meeting and met Jennifer O'Neill who has spent the last year carefully dissecting the lymphatic drainage of the breast and Ramin Shayan who has done molecular work, looking at VEGF-c in lymphangiogenesis.

During my visit later that week to the Royal Melbourne Hospital I also visited their tissue bank and was particularly impressed with the way this had been set up in recent years to develop a very large central resource throughout the Melbourne area for tissue banking. I also presented to the Melbourne Breast Group on the topic of sentinel lymph node mapping, past present and future. This was followed by a lively discussion as to the future of lymphatic mapping in breast cancer.

VISIT TO THE PETER MAC CALLUM CANCER CENTRE IN MELBOURNE.

The following week I went to visit the Peter Mac Callum Centre in Melbourne. Here I attended the melanoma multi disciplinary meeting and also attend the melanoma multi disciplinary clinic there. It was very interesting that in the one clinic they had surgeons, radiation oncologists, and medical oncologists all attending to the same patient. The Peter Mac Callum Cancer Centre is a comprehensive cancer centre within Melbourne which has a large research unit attached to it.

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The following day I met Geoff Linderman who is a medical oncologist as well as a clinical geneticist and a laboratory scientist. He runs a research group with a particular interest in clinical genetics and of interest they are the first group that I know of that do their own sequencing for BRCA 1 in breast cancer. We had a long discussion about all the challenges in funding, basic science, research groups as well as maintaining a clinical practice.

Before leaving Melbourne I met with Felix Busch who is a plastic surgeon who has an interesting technique known as the "Key stone technique" for covering defects following a wide excision in melanoma. This was a surgical technique that I hope to apply back in my practice in Dublin. Following my visit to Melbourne I returned home to Dublin and this concluded my James IV Travelling Fellowship.

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