

So you want to go on a fellowship – part II: the research year

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This article is the second in a three-part series which follows directly on from the first part which concentrated on the rationale for going on a fellowship, as well as some of the administrative hurdles you might face in planning your own fellowships [1]. It will aim to share some of the experiences I have had so that others may benefit from both understanding what may be available in terms of research as well as learning from some of the mistakes I have made along the way. I will attempt to share some of the professional and personal highs and lows that I have experienced.

Research fellowships

It is common in North America for residents at the end of their training to look for fellowship opportunities. Many of these will take the form of a two-year fellowship with the first year committed to research and the second to the clinic. Unlike some of the research posts I have heard about in the UK, these, including my own, have no clinical component whatsoever, except for the expected attendance at departmental clinical meetings. Furthermore, again unlike my previous perceptions, these one-year research posts are not usually associated with the attainment of higher degrees. Although it is likely to be possible for the fellow to focus research projects into one particular area to potentially submit a thesis for either an MS, MD or PhD. However, given that doctors in North America already leave medical school with an MD, with PhDs in general taking longer to achieve than in the UK, this is

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not a formal part of most research posts. Nevertheless, these research posts do offer considerable value to those who that undertake them, in terms of both knowledge and skills gained. They further allow the post-doctoral fellow to focus on an area of research that interests them, giving them time to explore potential novel and important research questions. They also offer an unfettered opportunity to write and publish manuscripts and, perhaps most importantly, make valuable contacts and relationships with key opinion leaders in their chosen research field. Their input in both helping you to pose a research question, investigate it and subsequently present it in a manuscript is invaluable. It is therefore important, when choosing one of these fellowships, to try and align yourself with an established institution with a proven track-record of producing good quality research. It is also important to choose an institution that is active in your particular area of interest. For these reasons I chose to do my research fellowship at the Vancouver Prostate Centre (VPC).

My research experiences

One of the hardest things I have had to adjust to, as a surgeon, over the past year is the absolute and complete loss

of operating. What, therefore, you may ask have I been doing? I am incredibly fortunate to have been able to undertake my research year at the VPC. It has been described by its Executive Director, Dr Martin Gleave, as a ‘plug and play’ institution. This means that any fellow visiting for a period of time can directly join any of the ongoing projects at the centre or bring their own research ideas and start to work them out almost straight away. As usual there are compulsory safety courses that need completing before one can be let loose in the lab but after that, with a tremendously supportive and skilled faculty, the centre offers all sorts of research opportunities, ranging from in silico drug design to development of patient derived xenografts to bioinformatics and advanced genomics. The opportunities are seemingly endless. As the name somewhat gives away, the vast majority of the research ongoing at the VPC is related to prostate cancer; however, there is also a wealth of productivity in bladder and kidney cancer, as well as the development of true precision oncology. There is certainly an ethos within the centre on translational medicine and many of the projects have almost immediate and tangible benefits visible within the clinic. Furthermore,



The lab team wearing 'Plaid for Dad' for Prostate Cancer Canada - a prostate cancer charity in Canada - to raise funds and awareness for prostate cancer research.

as there are multiple ongoing projects that have ongoing funding streams there is not the same urgent need to secure funding before starting your research, as one might find in the UK. However, as your own project ideas develop you are encouraged to apply for funding wherever possible to support it.

With all of this information to hand, and with a somewhat limited experience in the research laboratory, I spent my year focusing on two main projects with a number of spin-off projects on the side. Given my lack of skill in pipetting and tissue culturing, my basic research was focused on the tertiary analysis of genomic data, with an emphasis on evaluating clinical correlates within various datasets. This certainly required some intensive reading within the first few weeks and months of the fellowship in order to get up to speed with terms such as 'sequencing depth and coverage.' Nevertheless, the research scientists in the lab found it useful, at least as far as I was told, to have a clinician's opinion on their work. My first major project in this sphere is currently in the latter stages of manuscript production. This has also allowed me to start a new project, which is continuing in my clinical year, again centred around advanced genomics which will hopefully result in a further publication.

My other main research project is a clinical project, running in collaboration with the anaesthetic department. The first few months of the fellowship were spent designing a trial protocol and gaining ethics approval for the study which compares two different postoperative pain management strategies in patients undergoing radical cystectomy. This in itself was no mean feat. We were fortunate to be able to randomise our first patient after about three months and recruitment is still ongoing. This has certainly been a challenging endeavour requiring close attention to detail and good team communication. As with all clinical trials

Embracing Canada's outdoor lifestyle.



there have been some frustrations along the way and certainly recruitment to the trial has not been without its challenges. Nevertheless we are making good progress with the trial and it will hopefully read out before my two-year fellowship is finished.

The fact that, for the past year all of my time has been dedicated to research, has certainly allowed me to keep more up-to-date with the current literature. Furthermore, by working in a department that is constantly producing high quality research the opportunities to add to the literature have been significant. I have had the chance to work on a number of review articles, contribute to a book chapter and write commentaries on recently published articles. This is over and above work that will ultimately come from data that my research projects will hopefully generate. It has certainly been a fruitful and productive year, giving me an exponential increase in my number of publications.

Over and above the excellent potential for research there have also been excellent opportunities for furthering my urological knowledge. In particular, I have been fortunate enough to have been given complimentary registration to a number of regional, national and international conferences – BCUS AGM 2015 (British Columbia Urological Society) and ICUC 2016 (Issues and Controversies in Urological Cancer). Furthermore I was also delighted enough to win the CUA-AUA Fellowship Award, a prize of \$2,000(CAD) which enabled to me attend the 2016 AUA Annual Meeting in San Diego. A summary of this experience is available here [2].

Personal benefits and challenges

Whilst on a professional level this fellowship thus far has been incredibly rewarding, it has not been without both personal benefits and challenges. There are the obvious challenges of being away from family and friends for an extended period of time, which was somewhat exacerbated by having our first child whilst we were away. Additionally, my wife and I have also been away during a time of some of the most interesting and challenging political landscapes that has existed for some time with both Brexit and the junior doctor contract negotiations ongoing. Arguably, however, it has been a bonus to be away during this time!

The benefits have far outweighed the drawbacks. Welcoming our first child to the world, who incidentally will have dual-nationality, has been a great personal triumph. We have also tried to



Playing ice hockey – Canada's national sport.

throw ourselves fully into the Vancouver lifestyle. I have learnt to play ice hockey and my wife has taken up yoga – a popular local pastime. During the winter months, with the closest skiing mountain only a half hour drive away and with the famous Whistler resort only a short two-hour drive away, we have made good use of these opportunities and will continue to do so this year.

Conclusion

All-in-all, I think this has been a very productive year and I am glad I have taken this time to focus purely on research. I would recommend, for those trainees interested in taking time out for research, to look at all potential opportunities available to them. Certainly, if my experiences are anything to go by, there is a wide variety of differing opportunities both at home and abroad, which is important to consider before committing to the time out of training. As I am entering my clinical year, my research projects are ongoing and by having a longer period of time spent in one institution I am certain this allows for more meaningful research to be performed.

References:

1. Chedgy ECP. So you want to go on a fellowship – part I. *Urology News* 2016;**20(2)**:16-17.
2. Chedgy ECP. CUA-AUA International Fellows Program: San Diego 2016. *Canadian Urological Association Journal* 2016;**10(7-8)**:279.



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