Reflections on Year 1 of a PhD

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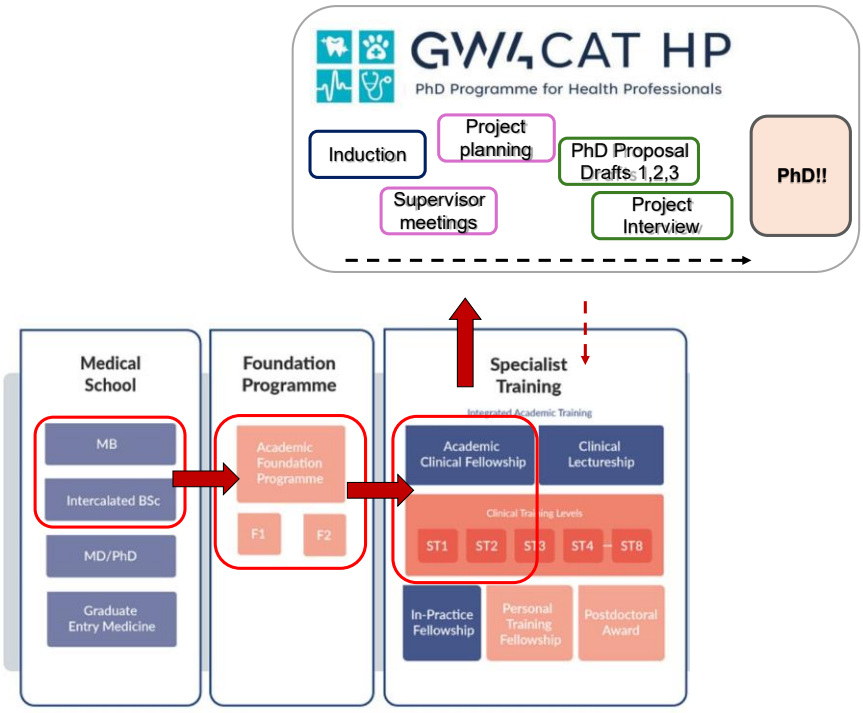
Introduction

This time last year I paused my clinical training (at ST6 level in Neurology) and started as a GW4-CAT HP PhD Fellow, based in Exeter. I got here after completing some of the 'Integrated Academic Training' stages for doctors (Figure 1) and after being appointed to the GW4-CAT HP scheme I was part of a small cohort who had an initial induction week, regular mentor meetings and deadlines for our PhD proposal drafts, all culminating in a project interview before being given the green light to start. Despite the quite literal years of planning, it was strange to step off that very structured process into something more unknown and flexible and individualised. There was less information on what to expect at the start of a PhD for healthcare professionals – understandably given the variety of projects, places and people – and so I thought it would be helpful to highlight some of my experiences of my first PhD year.



Outline of 'Integrated Academic Training' for doctors and my route to the GW4-CAT HP scheme.

Figure 1

A brief overview of what I'm doing

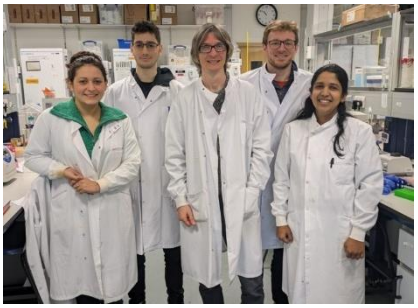
Briefly, my PhD focusses on the genetic and molecular causes of the disease hereditary spastic paraplegia (HSP). I examine genetic data from people with HSP to try and find the genetic cause (some of which I'd done before) and use cell models to better understand the role of HSP genes/proteins (none of which I'd done before). My primary/senior supervisors are predominantly genetics researchers, and I have two co-supervisors, one a cell biologist in Exeter, the other a lipid biochemist in Cardiff. So, my PhD work involves a range of scientific techniques across 3 departments and 2 universities. I have continued a small amount of clinical work, around 1 shift/month.

Challenges and surprises

- **Starting in August**. It sounds simple, but starting before the standard intake of students meant that many of the university introductory events weren't available until ~2 months after I'd started. Add in August annual leave for many people working at the university and I think it's fair to say that things weren't properly up and running until university term time began. However, that did mean I had time to conquer the mountain of inductions:

- **Inductions**. Although I am used to regular inductions when rotating between hospitals it was still something of a shock to have to complete overlapping inductions/e-learning for 3 university departments, 2 hospitals and 1 locum agency. My advice would be to just get it done at the start – yes it takes ages but it's better than having it hanging over you and preventing you from doing what you need to

- **Wet lab work**. There were several times during my first PhD year that were reminiscent of my first FY1 year as a doctor: I'd done the bookwork, passed the exams, roughly knew what was coming but hadn't actually put things into practice.



Me in a lab coat, with my co-supervisor's lab team.

This has been my experience of learning wet lab work. Like FY1, there is no substitution for getting stuck in, accepting the mistakes, and slowly gaining confidence in your ability. That said, I underestimated the length of time this would take and the variety of different techniques I need to get familiar with.

- **Breadth**. Whilst I'm hoping this will ultimately be a strength of my PhD, the breadth of different work across different research groups has made it challenging to become proficient in individual techniques quickly. It is also easy to get distracted by a potentially exciting separate avenue before you've finished the one you are working on.

- **Other commitments**. The naïve idea that I would have endless time to pursue all areas of academic / clinical work and family life now I was no longer tied to hospital shifts quickly evaporated after starting! I signed up to a creative writing group only to realise I couldn't make any of the sessions! Doing a PhD is clearly more flexible, which has big advantages, but you should definitely not underestimate its time commitment, particularly if factoring in some things that other PhD students may not need to, such as commuting and school drop-offs.

- **Doing more than 'just' a PhD**: by this I mean all those things you don't technically need for your PhD thesis but which are essential for a clinical-academic: networking, leadership, keeping clinical skills up to date, interacting with patient groups, publishing papers, the list goes on!

Addressing these challenges

I am still learning the best way to address some of the challenges of a clinical PhD but some strategies have clearly been of benefit already include:

1. **Supervisors**: they've seen it all before and have a direct stake in your progress. Regular meetings and discussions with them, particularly about which areas of work and training to focus on and which to set aside, have been invaluable.

2. **Wider team**: whether it's people in your immediate lab, your GW4-CAT cohort, GW4-CAT HP directors, or the wider university, just ask. Someone will have done what you want to do before, or can point you towards someone else who has. It is much more time-efficient to use a technique that has been troubleshooted already, rather than developing your own from scratch.

3. **Short-term aims**: for my PhD proposal I did a 'Gantt chart' timetabling my whole PhD, but regularly focussing on what I want to achieve in the next 3 months has also been very helpful. This was a suggestion at a 'Project Management' workshop at one of the GW4-CAT cohort days.

4. **Twitter/X**: I set up a Twitter account and although I don't post much it is great for keeping abreast of relevant publications / events by following groups in your field.

5. **Postgraduate training events**: each university has a programme of postgraduate training available to you. There are lots of options and you can't go to all but I did several that looked useful at the start of my first year. "Your brain is good for having ideas but not keeping them" was a useful nugget in the 'Getting Stuff Done' webinar which has changed the way I use 'To Do' lists for the better. GW4 Cohort Days provide training specifically for clinical PhD students – as well as things like the project management workshop mentioned before, we've also done formal networking/presentation days and teambuilding sessions:

GW4-CAT team building day: highest crate tower wins.

What I've got from this first year

Looking back, this first year has been a steep learning curve. I've learned some fundamentals of cell assays and genetics research, as well as the practicalities of working with different groups and supervisors, in addition to some time management and organisational skills I probably should have honed before now. It has also been something of a reality check in understanding the length of time good science takes and the need to think about long-term plans over a timescale of perhaps 5 years (plus). I have been lucky to have ample support throughout, from the university and the GW4 CAT HP networks, and the opportunity to do all of this with a funded clinical salary can't be understated.