

# NANSIG neuroscience intercalated degree review

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University	University of Liverpool
Degree	Master of Research (MRes) in Biomedical Science and Translational Medicine
Time frame	1 year, full time
How I found it	<p>Having not entered a laboratory since I took my A-levels 5 years ago, I knew that going into a university laboratory would be difficult, however I severely underestimated how difficult it would be. On my first day of being in the labs I was expected to have the competence of a biomedical sciences graduate and therefore the learning curve was steep. My first “lessons” included simple pipetting and diluting skills, but beyond that I was left to my own devices to conduct experiments and produce results. At first this was a huge shock and I really struggled with both the technical and theoretical aspects of the lab work, however within a few weeks I could plan experiments and conduct them with only a few errors.</p> <p>The MRes was split into three ten-week research projects and given the subject was translational medicine (translational meaning anywhere from bench to bedside), I could undertake research in several fields ranging from “core” science in the university, to clinical research at specialist trusts in the region. I fancied a challenge and something new from the clinical research I have previously undertaken and therefore chose to complete my first two placements in the university labs.</p> <p>My first two projects involved researching the role of certain potassium channels in neuroblastoma. It is quite a niche and novel field and therefore when undertaking an initial literature review I found quite little to work with, however this did make me feel like something of a pioneer and when I found some positive results it was a great feeling.</p> <p>However, this did come at a price. The amount of time I spent in the lab was substantial. Given the need to conduct so many experiments within 10 weeks, my days would usually last from 9am-9:30pm and with my neuroblastoma cells multiplying at a rapid rate; I would frequently need to go in at weekends to split them. This, combined with the frequent deadlines for other assignments, would lead to my social life suffering over the year.</p> <p>It was for this reason that after undertaking my second project I chose to do something a bit more clinical and moved to a fantastic clinical laboratory in the Walton Centre, Liverpool. Here I bridged the gap between pre-clinical and clinical research by taking part in a project in the clinical laboratory and linked it to a series of patients. This placement allowed me to use the lab skills I had learnt in the university to perform experiments and also conduct clinical research in the form of a case series, all while learning the ins and outs of a clinical laboratory which is such a vital part of any hospital. Although the pre-clinical side of this project constituted the bulk of the work, the case series is likely to be published.</p> <p>Seeing the relative ease at how some clinical research can be published does make me feel slightly embarrassed. When you look in medical journals and see literature reviews, questionnaires and case reports being published, these works take days or weeks to complete and pale in comparison to the years of collaborative research undertaken to get a publication in a respected science journal. Therefore, if you are looking to get published from intercalating I highly recommend you stick to something clinical.</p>

	<p>In summary, I found this degree to be extremely difficult and I had to sacrifice a lot of personal time and hobbies. Since January, there was a deadline every 3-4 weeks and so from the 1<sup>st</sup> September to the 18<sup>th</sup> of August the course is relentless and stressful. I also feel quite rusty going back into clinical placement. However, despite all of the downsides I have absolutely no regrets about choosing to intercalate with this degree. Not only have I learnt an immense amount about biomedical sciences, this course has really improved my ability to undertake research and work independently. I have also met some fantastic people and contacts who I am confident I can undertake research with in the future. I have had the chance to present work locally and will likely get a publication within the next few months (albeit not in time for FPAS), therefore if you are willing to persevere and work hard this course is certainly worth it!</p>
Course structure	<p>This course has three components:</p> <ul style="list-style-type: none"> <li>• Research projects: Three 12-week modules, with 10 weeks research/lab time and 2 weeks to write up and present your work. This is accompanied by weekly lectures on a Wednesday afternoon. Each report is 4000 words in length.</li> <li>• Techniques and Frontiers: This module is based around the lectures you receive over the course of the year. It is assessed through two “short reviews” of around 3000 words each on a lecture topic, for example I wrote mine on the CRISPR/Cas9 system and fMRI. The remainder of this module consists of a few journal clubs which really help you to critically analyse a paper and is assessed in the form of a referee’s report.</li> <li>• Transferable skills: The final module involves two assessed pieces of work. The first is a PhD grant application, which is more applicable for other non-medics on the course, however is still a useful exercise. The other piece of work is a dragon’s den exercise where a product is designed in a group and pitched to the whole year.</li> </ul>
Grades/markings	<p>Pass- 50-60%  Merit- 60-70%  Distinction- &gt;70%  To achieve a distinction, you need to average &gt;70% in the three research projects as well as average 70% in all of the other assessed work.</p>
Peers	130 in the year, 30 other medics
Faculty support	<p>The PhD student support was invaluable in teaching me basic laboratory skills and experiment planning. However, having spoken to several others of my peers the support from staff is varied, with some students having one to one support including help with writing reports, whilst others have seen their project supervisors two to three times over 10 weeks. The course is very well organized for the most part and most of your placements and activities are coordinated by the strand convener, who is only responsible for around 8 students.</p>
CV potential	<ul style="list-style-type: none"> <li>• Presentations and posters: Over the course of the year you will be given several opportunities to present your research locally. Exceptional work can be presented nationally.</li> <li>• Publications: As I mentioned earlier, if you want to get something published then pick something related to clinical research.</li> <li>• FPAS: 4 points.</li> <li>• Academic Foundation Programme and ST1/CT1: The main reason I did the MRes rather than a BSc was with these applications in mind. 4 points on FPAS will not make a massive difference considering the impact of the SJT, however when you want to stand out at applying to posts later on, I believe completing an MRes is such a fantastic thing to have on your CV.</li> <li>• Further study: Acts as a great basis for undertaking a PhD in the future.</li> </ul>