



BBSRC Doctoral
Training Partnerships



Durham
University



UNIVERSITY OF
LIVERPOOL



Newcastle
University

Professional Internships for PhD Students

AN INTRODUCTION

PIPS Engagement Event

Newcastle / Liverpool / Durham

The Minister for Universities and Science, David Willetts, announced the Biotechnology and Biological Sciences Research Council's (BBSRC's) £67 million investment in postgraduate training and development in the biosciences in January 2012.

The investment includes support for 14 Doctoral Training Partnerships (DTPs), which includes a total of 44 research organisations, across the UK as well as a number of industrial CASE (iCASE) studentship awards. Over the next three years, the DTPs will support 660 four-year PhD students; the programme will provide highly skilled scientists for academia, policy and industry and support the BBSRC mission to further scientific knowledge for economic growth, wealth and job creation - improving the quality of life in the UK and beyond. An innovative and integral element of the DTP programme, built in to enhance the employability of the DTP students, is the requirement for students to undertake a non-academic three-month professional internship (PIPS) outside of the lab to widen their experience of the areas of work in which they can apply their PhD skills and training. PIPS will provide students with experiences in a wide range of workplaces including policymaking, media, teaching and industry.



Dr Celia Caulcott,

BBSRC Director of Innovation and Skills said,

“Investing in the training of PhD students is one of the most important things that BBSRC does. We have a serious responsibility to ensure that we are supporting training that produces bioscientists with the specific research expertise and skills that industry and academia require, but we also must make sure that students are getting the best broad-based training possible.”

“I strongly believe that the decision to include Professional Internships for PhD Students (PIPS) within the Doctoral Training Partnership programme will provide students with an opportunity for professional skills development and will enable them to develop a broader understanding of how their research training can have an impact in the wider economy and society, which will result in real benefits for the student, RO and host organisation.”

“To demonstrate our commitment to PIPS we [BBSRC] will offer a number of internships at our Swindon Office.”



Our Partnership's Vision for Internships

Opportunities to broaden personal experiences are to be valued and eagerly grasped. They lead to a wider understanding and enhance abilities to approach new challenges from differing perspectives. For example many PhD students take on opportunities such as teaching and demonstrating duties within their host universities and may also contribute to supervising undergraduate project students. These opportunities should lead to additional experiences and skills, outside those directly related to the PhD research project. However, they are still within the relatively proscribed limits of academia. The BBSRC PIPS scheme allows for a much wider scope of experiences to be entertained. Such a wider canvas requires a different approach for them to be enabled. The Newcastle, Liverpool and Durham approach is to support you in developing meaningful internship opportunities that further your development, while ensuring effective follow-up through self-reflection on the outcomes.

I am confident the internship you engage with will provide an exciting challenge that will lead to some interesting discoveries about yourself. The programme overall is being led by Dr Richy Hetherington, Research Student Skills Development in the Faculty of Medical Sciences at Newcastle University. Richy is ably supported by other experts in this area, including local Liverpool and Durham support. I hope you enjoy the event.

Professor Barry Hirst

DTP Director:
Newcastle, Liverpool, Durham BBSRC DTP

PIPS: The Newcastle, Liverpool and Durham Partnership Approach

Professional Internships for PhD students (PIPS) offers a fantastic opportunity for your professional development. The experience of a novel working environment and the demands of a different role can give a new perspective that can improve working practices and inform your career goals.

To maximise the potential of an internship you should recognise the part such an opportunity can play in your own development. The partnership does not want to be prescriptive in the timing or in the nature of your internship, as this would devalue the decision making that is an essential part of the professionalism we hope to engender. With support systems in place at each institution we hope to offer you the advice and the contacts to make an informed decision about your internship. We hope you will work with your supervisors and the contacts provided to find an internship project that will give you an experience you are able to positively reflect on. In this initial meeting we hope that you will discover a little about yourself, the ways you like to work and how you operate within a team. Armed with this information, we hope that you can start to consider the sort of roles and host organisations that would provide the most valuable experience for you. Following the completion of your internship we would like you to consider what you have achieved and how this experience has influenced you. The time spent in preparation and in reflection is a vital part of the PIPS process and should be considered within the timing of an internship.

Ultimately a positive experience in broadening your horizons is of much greater significance than meeting any rigid criteria we could set. Over the coming year, we hope to hear from you regarding exactly what you want from your internship. We aim to do all we can to support you.

Dr Richy Hetherington

Postgraduate Development,
Faculty of Medical Sciences, Newcastle

Our Experience of Internships

Pilot schemes at Newcastle University indicated that research students prefer to be involved in the organisation of their own internships. By offering support for students they were able to find internship positions in Australia, California and in a variety of organisations in the UK.

Students have also taken advantage of organised national internship schemes.

Richard Tomsett, a final year PhD student at Newcastle, undertook a three month Policy Placement at the Centre for Science and Policy (CSaP), funded by the BBSRC. Richard aided the analysis of the unstructured information from CSaP policy fellows' interactions, and written feedback as well as helping to redesign CSaP's feedback systems and run events.

Students from the first cohort of the DTP have now started engaging in internships.

Declan Gray (Newcastle University) has completed an internship with SCM Pharma, a contract manufacturing organisation specialising in the development and manufacture of clinical and commercial medicines, particularly novel, difficult and dangerous drugs. SCM is a growing company with over 100 employees across two sites in the North East of England. Interns have played very important roles in SCM, from a technical support function in our development services group to more recently in other support functions such as Quality Control. Interns have taken very important roles in SCM, including technical support in the development services group and support functions in Quality Control. Interns have performed testing of components such as the microbiological testing of raw materials, intermediates and finished products for bioburden analysis and detection of specified microorganisms. Interns have also been involved in Environmental Monitoring, which is another important aspect of our microbiology support function. Interns can have a critical role with developing new projects. When a new facility required its water system to be tested for bacterial contamination, an intern managed this water testing project and protocol requirements from conception to completion. It was a great partnership with the intern gaining excellent experience in a pharmaceutical company and SCM was able to fulfil its testing and regulatory commitments.

scmpharma

Pippa Harvey (Newcastle University) was able to organise her own internship with global pharmaceutical giant Pfizer in their laboratories in Boston, USA. This was partially funded by Pfizer with travel supported by the partnership's bursary scheme. Pippa gained a lot from her experience both of working in an industrial laboratory environment but also for travelling abroad to complete an internship.



Kate Earl (University of Liverpool) has completed a five week internship with the NNEdPro (Need for Nutrition Education / Innovation Programme). This internship aligned with Kate's research but offered the opportunity to work outside of the academic research environment. The internship involved a broad range of activity including administration, data analysis and education. This is a great example of how much can be achieved in a relatively short time.

Natasha Curley (Newcastle University) took part in a five-week internship with the Bio-imaging unit at Newcastle Biomedicine. This short internship provided some insights into the operation of a university based service operation. Having completed a shorter internship, there will be an opportunity for Natasha to investigate other internship options to complete within the studentship period.

Lisa Hindmarsh (Newcastle University) has used her research work as a basis to become involved in public engagement. Lisa's internship involved working with a small team developing an exhibit for the British Science Association's National Science Festival that took place in Newcastle in September 2013. Lisa gained excellent hands-on experience of working with the public and was able to demonstrate the research ideas she has been working with.



Funding and Reporting

The partnership is keen that you can get the internship experience that works well for you. The only stipulation is that the internship is outside of academic research and your supervisor agrees to you taking part so anything should be possible. Since internships are scheduled to take place within the period of your studentship normal living expenses should be covered by your stipend. Where an internship involves travel and accommodation costs bursaries are available to help students cover these costs. Initially an approach should be made to the host organisation to assist with these expenses. You will be operating at a high level and should be of value to the host organisation. It is only reasonable that they should expect to reimburse your expenses. If the host will cover all of the costs, then the only paperwork needed is that of the host organisation. If the host cannot cover these expenses or will only cover part of the cost, bursaries will be awarded on a competitive basis.

To apply for a bursary go to:
<http://www.ncl.ac.uk/fms/dtp/pips/PIPsBursary.htm>



Once you have completed an internship, the BBSRC and the local DTP management team will want to know how it went. We would like to know how you chose your internship, what the process of getting it was like and how it met with your expectations. Ideally, we would suggest you log your activities either through an ePortfolio, a blog or a diary to help you recount what went well and any problems you may have encountered.

Reporting forms and information:
<http://www.ncl.ac.uk/fms/dtp/pips/>





Detailed Programme

Monday 10th February

Jury's Inn Hotel, Scotswood Road, Newcastle

- 13:00 - 14:00** Lunch
- 14:00 - 15:15** Five previous interns talk about their experience
- 14:00 - 14:15** **Pippa Harvey** - Pfizer, Boston, USA
- 14:15 - 14:30** **Natasha Curley** - Bio-Imaging Unit, Newcastle Biomedicine
- 14:30 - 14:45** **Richard Tomsett** - Centre for Science and Policy, Cambridge
- 14:45 - 15:00** **Lisa Hindmarsh** - Science Festival, British Science Association, Newcastle
- 15:00 - 15:15** **Kate Earl** - Need for Nutrition Education Project (NNEdPro), Cambridge
- 15:15 - 15:30** Q&A with previous interns
- 15:30 - 15:45** Tea
- Cohort 1 (current 1st year PhD students) arrive
- 15:45 - 17:30** Talks by prospective internship hosts or their representatives
- 15:45 - 16:00** **Professor Elena Lurie-luke** - P&G
- 16:00 - 16:15** **Mr Colin Tristram** - HistoCyte
- 16:15 - 16:30** **Dr Shaheda Ahmed** - Alcyomics
- 16:30 - 16:45** **Mr Paddy Stevenson** - Newcastle Biomedicine
- 16:45 - 17:00** **Dr Linda Wainwright** - Unilever
- 17:00 - 17:15** **Professor Chris Tapsell** - KWS
- 17:15 - 17:30** **Dr Diane Cresswell** - Bionow
- 17:30 - 18:00** Q&A with guest speakers
- 18:00 - 20:00** Downtime
- 20:00 - 21:30** Dinner

Tuesday 11th February

Grainger Suite, International Centre for Life

- 08:00 - 09:00** Breakfast at Jury's Inn Hotel for those who stayed overnight
- 09:00 - 09:30** Introduction (**Richy Hetherington, Newcastle University**)
PIPS expectations and professional development opportunities
- 09:30 - 10:00** Scene Setting (**Rosie Doyle, Fistral Training & Consultancy Ltd**)
Professional attributes in Biotechnology and Biological Sciences (using Vitae Researcher Development Framework)
Professional development objectives for internship
- 10:00 - 10:30** Introduction to DiSC Behavioural Profiling Framework (**RD**)
Understanding the DiSC model
Self-assessment of personal behavioural profile
- 10:30 - 11:00** Coffee-break
- 11:00 - 12:30** Implications of DiSC Behavioural Profile (**RD**)
Behavioural preferences, strengths and weaknesses
Working with others: communication; pace; decision-making; collaboration
Identifying appropriate Internships: strengths and development objectives
- 12:30 - 13:30** Lunch
- 13:30 - 14:30** Developing and Mobilising your Networks (**RD**)
Networking to secure and capitalise on PIPS internship
Personal presentation (elevator pitch)
- 14:30 - 15:00** Review and Action-planning (**RD**)
- 15:00** Close (**RD** and **RH**)
- 15:00** Depart
Participants are welcome to visit the Centre for Life including the 4D motion ride



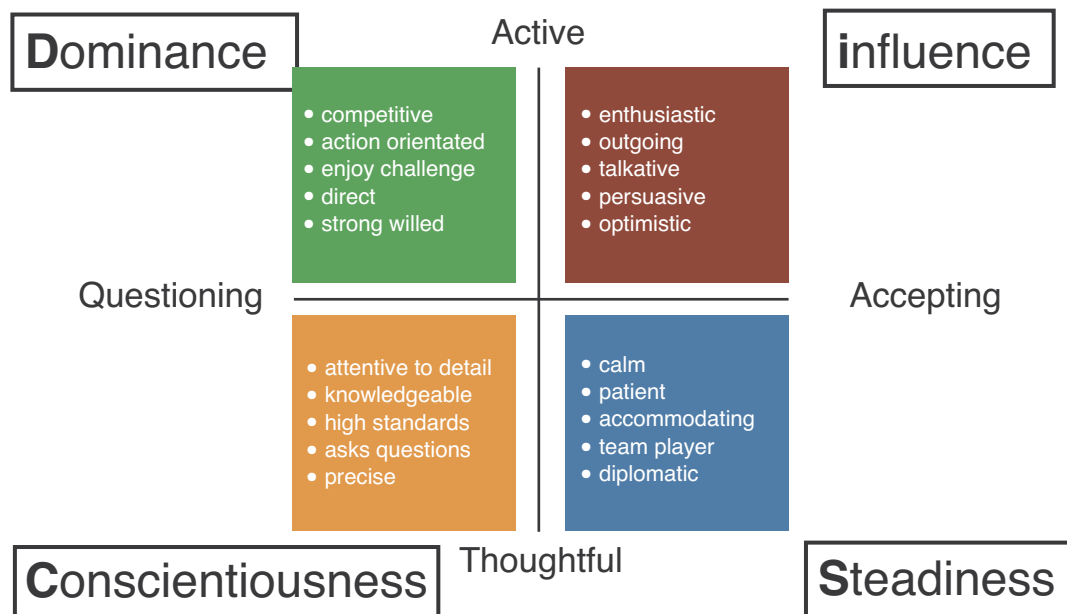
Consideration of Professional Attributes for Internships and Beyond

Fistral Training will lead day two exercises that will aim to relate your skills and attributes to your internship choices and the objectives you set for your internship. The activities will use the DiSC profile system to enhance communication and team-working skills



DiSC

DiSC is a model of human behaviour that has been developed and refined for 80 years and used by more than 30 million individuals worldwide. The system works by mapping an individual's behavioural preferences across four primary dimensions: Dominance; Influence; Steadiness; Conscientiousness.



By identifying their behavioural preferences according to this framework, individuals can develop a better understanding of themselves and the people around them and use this insight to work more productively. Each of the dimensions expresses itself in distinct drivers and behaviours such as: motivation; communication; pace; response to conflict; response to change; collaboration style. By identifying their behavioural preferences according to this framework, individuals can develop a better understanding of themselves and the people around them and use this insight to work more productively by:

- identifying and capitalising on strengths
- valuing the strengths of others
- managing self and others more effectively
- improving communication skills
- reducing unproductive conflict
- identifying satisfying work roles and environments

DiSC framework provided by Inscape Publishing.

Local teams to provide support



Dr Richy Hetherington is responsible for postgraduate development in Newcastle's Faculty of Medical Sciences. Richy will be a key contact for Newcastle students as they consider internship positions and is the co-ordinator for the PIPS event. After completing a doctorate in Evolutionary Genetics at Imperial College London Richy worked in the NHS and spent several years working in industrial bioscience.



Dr Lorna Dargan is a Careers Adviser at Newcastle University, and predominantly works with PhD students and contract research staff. She previously worked as a Research Associate in the School of Architecture, Planning and Landscape at Newcastle University, analysing urban and rural regeneration policy. Lorna will be a key contact for students wanting to consider their options for both their internships and future careers.



Ms Rachael Collins is a key contact at University of Liverpool's Careers Service and Institute of Integrative Biology. Rachael will be the first point of contact for Liverpool students when they are considering their internship options.



Dr Mal Horsburgh is a Senior Lecturer in Bacterial Pathogenesis at the Institute of Integrative Biology and is the academic contact for the Liverpool DTP students. The administrative contact for Liverpool students is Mr Mark Claridge.



Dr Lowry McComb is the Director of Researcher Development at Durham University where he is responsible for the generic skills training for all postgraduate research students within the University. He continues to work one day per week in the Physics Department, teaching and researching in very high energy gamma ray astronomy. He is a member of a large European collaboration which operates an array of gamma ray telescopes in Namibia in south west Africa and is involved in a global consortium (of approximately 1000 scientists) to build the next generation of gamma ray telescopes.



Dr Rosemary Doyle has been working in training and personal development for 20 years. After a career in arts and theatre marketing she qualified as a Person-centred counsellor in 1988 and obtained an MA in Human Resource and Knowledge Management in 2003. In 2008 she was awarded her Doctorate in Management from St Andrew's University. Specialising in teambuilding, communication skills and coaching work to develop the potential of individuals. Rosie has been using DiSC behavioural profiling in group and individual coaching since 1997 and is an accredited trainer for Inscape Publishing's DiSC behavioural profiling system Everything DiSC.

Internship Event Guests

Guests from a range of organisations have been invited so doctoral researchers can discuss working environment and the types of roles an intern might play with those organisations. There are no expectations that specific internships would be agreed but there will be some time set aside for one to one discussions.



Professor Elena Lurie-luke is the Director of Global Bioscience Business Development and leads the P&G Open Innovation Programmes in bioscience areas. **Proctor and Gamble** are a world leading company providing a spectacular range of products and services to over 180 countries. With a continuing commitment to innovation there are always potential opportunities for research students to make an impact within their ranks.



Mr Colin Tristram and **Dr Ian Milton** are the managers of consultancy firm **Bioconnexions Ltd**, and the newly formed **HistoCyte Laboratories Ltd**. In this new venture they will be developing the HistoCyte™ range of cellular analyte controls for use in immunohistochemistry, in-situ hybridisation and other molecular techniques. Their aim is to develop protocols that allow high density cells to retain morphology and antigenicity



equal to processed histological or tissue samples. Whilst initially for “research use only” they will be validated for in-vitro diagnostic use (IVD). The cells will then be used on tests as an analyte controls. Additionally, HistoCyte Laboratories Ltd will be involved in contract development of assays. This will include characterisation of biomarkers and initial technical feasibility studies.



Mr Paddy Stevenson is the NIHR (National Institute for Health Research) Operations Manager who has responsibility for the management and delivery of clinical research within **Newcastle Biomedicine**; a partnership between Newcastle University and Newcastle upon Tyne Hospitals NHS Foundation Trust. A founding aim of Newcastle Biomedicine is to promote “bench to bedside translational research”. In order to achieve this the Clinical Research Facilities (Sir Bobby Robson Cancer Research Unit, Clinical Research Facility at the RVI and the Clinical Ageing Research Unit) work closely with the

laboratory based research facilities in the University including the Central Biobank, the cellular therapy facility and the Biomedical Research centres to bring new ideas and technologies through preclinical and clinical research into early phase and later phase in-patient studies. This work covers the entire patient pathway and requires the skills of a number of scientific, healthcare and allied professionals. Mr Stevenson will explain the internship opportunities available.



Dr Shaheda Ahmed is the Senior Scientific Officer at **Alcyomics**, a spin-out company from Newcastle University. Though they are a small company at present they have an enormous potential for their patented Skinmune™ explant system for drug and chemical testing. Internships in small spin-out companies such as Alcyomics offer a great opportunity for research students to see how academic research can be developed into outputs in the real world. The differences



from an academic research environment may be subtle but are clear.

www.alcyomics.com



Dr Linda Wainwright studied for her BSc and PhD at the University of Newcastle (1988-1994) and has an interest in cell biology and *in vitro* models of the skin and hair. Over the last 10 years Linda has worked as a Senior Biologist and Project Leader at **Unilever R&D** in the area of 'Beauty From Within' and is a great advocate of the benefits of the diet on health and appearance. On any given day, two billion people use Unilever products to look good, feel good and get more out of life. With more than



400 brands focused on health and wellbeing, no company touches so many people's lives. Unilever's portfolio ranges from nutritionally balanced foods to indulgent ice creams, affordable soaps, luxurious shampoos and everyday household care products. Unilever produces world-leading brands including Lipton, Knorr, Dove, Axe, Hellmann's and Omo, alongside trusted local names such as Blue Band, Pureit and Suave. Innovation is key to progress, and through cutting-edge science Unilever is constantly enhancing its brands. Unilever invests around €1 billion every year in R&D around the world.



Professor Chris Tapsell is the Technical Director of **KWS**, one of the world's four leading plant breeding companies. With headquarters in Einbeck (Germany) KWS has offices in over 70 countries and breeding locations throughout the main crop growing zones including the UK. Internships in various formats are available, in many countries offering opportunities across the spectrum of functions within the organisation, including breeding, research, commercial, HR etc. In addition KWS runs specific career entry programs including a Breeding Academy and Trainee positions.



Dr Diane Cresswell is the Executive Director for Business Development at **Bionow**, a specialist business development and services company focused on the biomedical sector across the North of England. Bionow provides innovative products and services that deliver tangible value, enabling our members to be the most productive and competitive in the world. Members include biotech, pharmaceutical, healthcare and medical device companies and the specialist supply chain. Bionow's remit



spans procurement, insurance, recruitment, training, specialist events and access into a vibrant network of businesses, Universities and NHS organisations. Bionow can offer an introduction for prospective interns to Bionow Member companies and has connections with many other companies in the wider network. www.bionow.co.uk

Our experience of the DTP internships has been that most students are interested in working within bioscience and R&D, our guests attending today reflect the interest in this area. However, we do have connections from outside of this sphere and we would be very happy to help you arrange an internship with these contacts or in any area that you are interested in..



Examples of other potential hosts include:

Specialists in training for those with disabilities such as dyslexia
www.e-qualitylearning.com

International firm of patent attorneys
www.murgitroyd.com



Newcastle based accountancy software giants
www.sage.co.uk



Market Research Agency
www.surveymarketing.co.uk



Charity concerned with the Health & Wellbeing of Children
www.thechildrensfoundation.co.uk



Experts in health economics, pricing and reimbursement
www.phmrassociates.com



Event Programme in brief

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Contact information

All Initial enquiries to:
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