STUDENT PLACEMENTS, PROJECTS & POSTGRADUATE INTERNSHIPS

CASE STUDIES

Corporate Patron:

University Sponsors:

Student placements and projects

Our Northern Universities embody world class strengths in research and teaching in the biomedical sciences, chemistry, physics, engineering, IT, mathematics and statistics. Bionow works closely with our University Sponsors and a core strand of our support is the facilitation of student placements within our sector companies and organisations.

Benefit to Students:	Gaining valuable work experience and insights
Benefit to Business:	Complete a project that needs extra dedicated resource Talent spotting – an opportunity to 'try before you buy'
How it works:	We reach out to the sector to identify placement opportunities – and capture the details in a brief Role Description We pass each opportunity to key contacts at our University Sponsors who advertise the role and shortlist some suitable candidates for your consideration. The recruiting company makes the final selection. We also ask for a brief case study at the end of the placement.
Eligibility:	Your company does not need to be a Member of Bionow to use the Bionow Student Placement Service – although we hope you will see the value in what we are doing and consider the benefits of company membership.

There are many ways to get involved including several funded opportunities to share the cost, especially for SMEs.

Student Projects – in Science or Business

Most of our sponsoring Universities offer the opportunity to engage a student to work on a defined project, typically in the window April to August. There are opportunities across scientific departments and faculties and also the Business Schools. The project may involve remote working at the company's premises or be carried out within the University. Projects are usually deemed to be part of the course so there is no salary to pay, but there will usually be some necessary travel expenses to pay for.
A student project is a great way to establish an initial relationship with a University department or Business School and can lead to further collaboration.

Summer Student Placements (undergraduates)

Can your business offer a paid summer placement to an undergraduate student? Bionow is keen to find summer placements for students studying degrees in biomedical science, chemistry, natural sciences and engineering or any other technical or business discipline of relevance to our sector companies. We see this as vital to the next generation of scientists who wish to enter the sector and who need to gain relevant work experience. It is also very helpful to the companies - a successful summer placement may well lead to successful future employment.
Summer placements are typically 8-10 weeks duration on a paid employment basis.
Think ahead – all companies have projects that they would like to complete if only they had the resource available for 2-3 months.

Professional Internships for Postgraduate Students

The new Doctoral Training PhD programs require PhD students to complete a 3 month placement in an area of work not directly related to their area of research. Students are encouraged to find internships that broaden their experience and give them a real insight into industry and a chance to experience life outside the laboratory.

The relevant Doctoral Training Partnerships that operate in the North of England are

- Liverpool, Durham and Newcastle DTP
- Manchester
- Leeds, York, Sheffield (White Rose DTP)

The aim of postgraduate internships is to ensure students have the opportunity to carry out a non-academic work experience internship during their PhD. Such experience is important both to help early career researchers understand the context of their research and to expose them to the range of opportunities available to them after they graduate.
The postgraduates bring a deeper knowledge and experience and the flexibility around the timing of the placement often makes it easier for the companies involved. The postgraduate internships are fully-funded so the only expense is any extra costs such as travelling or support with accommodation.

Industrial Placements / Sandwich Year in Industry

Universities who offer degrees with a compulsory year in industry usually have relationships in place to deliver these 12 month placements. Increasingly however, University degree course are offering the flexibility to take an optional year out in industry and Bionow is keen to bring this opportunity to the attention of companies in the sector who may be able to support and benefit in this way.
Industrial placements are on a salaried basis and the student maintains contact with their academic department throughout the placement. Many lead to permanent job offers.

Next Steps

Through our relationships with our University Sponsors Bionow can fast-track the recruitment of students with the appropriate skills and ambitions to suit your business. The possibilities are summarised in the table opposite.

The case studies illustrate the breadth and depth of the placements undertaken and underline the credibility and value of Bionow's Student Placement service.

If your company is in a position to offer industrial experience via any of these routes

Please contact
stella.james@bionow.co.uk or call 07545 207896

Student placements and projects - summary

Type of placement	Host Application window	Placement Availability Window	Cost	Students	Type of work
Summer Placement	Request summer placements via Bionow from ***January onwards***	***8 -12 weeks July to Sept***	***Student is employed by the host company on a temporary/contract basis and paid a salary in line with UK employment law.*** In some cases part-funding is available for SMEs.	Undergraduates in each long vacation	***Focus is on gaining paid work experience to enhance employability.*** Role may be related to degree study – or a new area using and developing transferable skills.
Masters Project	Request upcoming projects via Bionow from ***Sept – Nov*** Projects are allocated at the start of the academic year but some flexibility	***8-10 weeks May to July***	***As the project is part of the course there is generally no salary to be paid***. However there will be some necessary expense for travel etc.	Postgraduates (Masters students)	***Project must be relevant to the Masters degree and meet the criteria for the course*** e.g addressing a research question. Project may be carried out at the University, on company premises or both.
Professional Internships for Postgraduate Students	***Available throughout the Year***, but request in good time	3 months in one block or split up. ***Throughout the Year***	***As the project is part of the course there is no salary to be paid.*** However travel and/or accommodation will be payable.	Postgraduates are working on a 4 year PhD programme. A 3 month internship is a mandatory part of the course.	***Focus is on broadening perceptions and gaining work experience.*** Role can be related to the PhD but should not be a like for like laboratory role/environment.
Business Projects	Request all Business Projects via Bionow from ***Sept - December***	MBA Project 2-6 weeks ***April - August***	***As these projects are part of the course there is no salary to be paid.*** However travel and/or accommodation will be payable.	Postgraduates working on MBA/Masters program	***MBA/Masters student can undertake complex business projects with a strategic focus.***
		Undergraduate Projects 2-20 weeks ***Jan - August***		Undergraduate Projects address specific topics	Undergraduate Projects vary in length from two to twenty weeks, and in most cases students work in small teams of 2 – 7 students.
Sandwich Year in Industry	Request sandwich placements via Bionow from ***Sept – December*** for the following year	***12 months from August***	***Industrial placements are on a full-time salaried basis***.	Undergraduates typically third years. ***A growing need in technical courses which often leads to permanent recruitment.***	Placement is in a role directly relevant to the degree subject and the student maintains contact with their academic department throughout.

Postgraduate Intern
Kieran Hand

working with ELANCO in Technical Services Manufacturing Support

Elanco, a division of Eli Lilly and Company Limited, is a global, innovation-driven company that develops and markets products to improve animal health and protein production in more than 75 countries. For over sixty years, Elanco has helped shape the animal healthcare industry around the world, developing and manufacturing products to support companion animal health, food safety and protein production.

Speke Operations is a key manufacturing site for Elanco. The Technical Services Manufacturing Support (TSMS) biotech group have the responsibility for the development and commercialisation of robust processes for production of microbial derived biopharmaceutical products. As a long-standing Bionow member company, we were delighted to present at a postgraduate Bionow conference in Newcastle in January 2015. As a result of that conference, we appointed Kieran Hand on a three month placement from the University of Liverpool which began in September.

Throughout his placement, Kieran has had the opportunity to work within a motivated team of people, developing a purification process for a new product. Kieran has been highly engaged, quickly becoming a valuable member of the team contributing technically and practically to the development work. He has also been given exposure to how we run processes at full scale allowing an opportunity to apply science 'thinking' into the needs of manufacturing.

Speaking about the process, Dr Deborah Hogg, TSMS Team Leader for Process Development said: *"This has been a great experience for us, and a fantastic way of identifying strong, talented individuals for future potential hire. Our collaborations with the University have also been enhanced through this link. We've had more applications and another intern will start in January 2016."*

Kieran had this to say about his three month placement:

"Working for Elanco as a TSMS and protein scientist role as part of the BBSRC doctoral training programme has presented me with a completely new perspective on science and its application outside of academia. Acquiring the experience of working within an industrial laboratory on multiple projects has been invaluable. I not only became familiar with a wide variety of chromatographic techniques and their applications, current good manufacturing practices, and the process of scaling up protein production from laboratory size and pilot plant to full production, but I was also given the opportunity to apply my existing knowledge of protein chemistry into a completely different collaborative and encouraging environment."

Summer Student Technologist Caroline Walsh Gains permanent position with Advanced Medical Solutions

AMS is a world-leading independent developer and manufacturer of innovative and technologically advanced products for the global surgical, wound care and wound closure markets, focused on quality outcomes for patients and value for payors. AMS has a wide range of products that include silver alginates, alginates, foams, tissue adhesives, sutures and haemostats, which it markets under its brands ActivHeal®, LiquiBand® and RESORBA® as well as supplying under white label. AMS's products, manufactured at two sites in the UK, one in the Netherlands, two in Germany and one in the Czech Republic, are sold in 65 countries via a network of multinational or regional partners and distributors, as well as via AMS's own direct sales forces in the UK, Germany, the Czech Republic and Russia. Established in 1991, the Group has approximately 470 employees. For more information please see www.admedsol.com

The summer placement role was to support the Project Scientists and Technologists in the development and launch of new and novel medical devices including testing, evaluating and reporting results on a range of medical device prototypes. This extended to undertaking manufacturing trials within the factory environment on production equipment with the Project Technologist, presenting findings to the Project Scientist and senior teams and supporting the Sales team in the supply of evaluation samples for new and existing commercial partners. Of course the role also demanded working to high standards of Good Laboratory Practice, compliance with all Health and Safety requirements and making a positive contribution to continuous improvement at AMS.

"*As a growing company AMS is keen to explore new ways to recruit excellent staff and the Bionow student placement service is ideal in terms of both meeting short term project resourcing requirements while evaluating long term potential.*" **Mel Hartley, HR/Training Manager**

"Completing a summer student placement at AMS was an extremely beneficial experience, allowing an insight into a real working environment and allowing utilisation of skills learnt in university such as laboratory and analytical skills. It also helped me to understand the variation in career paths that I may choose to follow and gaining practical experience has helped me make a more informed choice of what I would like to pursue. I was given responsibility from the beginning in completing laboratory testing and being responsible for my time management in order to meet deadlines. I was able to learn about the wound care industry and how an industrial R&D department goes about the process of product development."

"I was fortunate to be offered a permanent position as an R&D Technologist upon completion of my placement which had given me an extended opportunity to demonstrate my suitability for the role. I have since been given further opportunities such as attending external conferences, leading meetings with external suppliers and being involved in laboratory demonstrations to nurses who visit the site."

Caroline Walsh - Summer Student

Three Postgraduate Interns: NMR data mining with

C4X Discovery

Neil Smith

Letitia Burgess
Natasha Eccles

C4X Discovery has very much enjoyed supporting 3 students undertaking PhDs in complementary subjects through Bionow's Student Placement service and it has not only been a great opportunity to assist the students in their growth as scientists but has also enabled the company to undertake a research project that we would not otherwise have been able to do. We recently engaged 3 PhD students on a 13 week PIPs placement through Bionow to perform the measurement of a large body of data for the parameterization of an equation related to our core activity of solving dynamic 3D-solution structures from NMR data. The students measured a range of NMR parameters from pre-recorded NMR spectra, compiling what we believe is one of the largest and most comprehensive tables of carbon-proton coupling data ever assembled. The work involved data measurement, tabulation and fitting as well as writing reports and contributing to the writing of peer-reviewed publications arising from the work.

Bionow reached out to Manchester and Liverpool Universities and we attracted a number of applications within just a few days. We appointed three students who have made a substantial contribution to C4X Discovery's NMR database and have through the data they measured provided the wider company team with new information for structure determination.

"The project has been a great success and C4X Discovery have greatly benefited from the students' support while the students have all grown as scientists and are better prepared for the modern workplace. Bionow's Student Placement service helped us to find three ideal student interns and we recommend the service to any life science company in the North. We are looking forward to receiving and supporting more placement students next year!" **Dr Charles Blundell Chief Scientific Officer, C4X Discovery**

Left to right:

Neil Smith
University of Liverpool

Letitia Burgess
University of Manchester

Natasha Eccles
University of Manchester

"I have greatly enjoyed the project and have come away with a broader skillset for the modern scientific workplace." **Neil Smith University of Liverpool PhD student**

"It has been really valuable to experience and contribute to science in the different setting of a fast-paced and energetic small business." **Letitia Burgess, University of Manchester PhD student**

"My new skills in high-level practical NMR developed through this project makes me more capable and confident as a synthetic chemist." **Natasha Eccles University of Manchester PhD student**

Thomas Thorpe, Chemical Engineering undergraduate student at

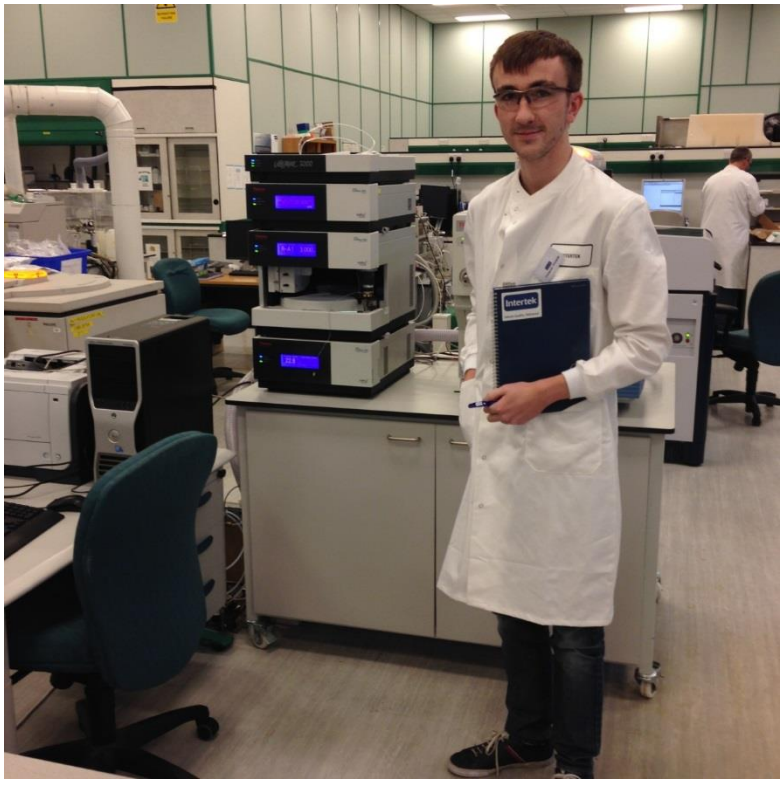
Lancaster University

Assists with audit of lab-based IT systems in line with current Regulatory Authority guidance

Intertek ASG

Intertek is the leading quality solutions provider to industries worldwide. The global network of GLP or GMP compliant pharmaceutical laboratories in Europe and the United States provides expert pharmaceutical development and manufacturing support services spanning analysis, bioanalysis, formulation development, regulatory consultancy, auditing and supply chain management solutions. Intertek Pharmaceutical Services Manchester (IPSM) is a GLP, GCP and GMP compliant facility providing contract analytical services to the pharma and Biotech industries. Visit www.intertek.com

The business requirement was for an eight week student placement to assist in an ongoing audit of laboratory based IT systems in line with current Regulatory Authority (USA FDA and the UK MHRA) guidance. Due to circumstances the requirement for a placement student was identified in May 2015 with a proposed start date of July 2015. Bionow reached out to nine universities with our urgent request. We received eleven applications and we interviewed two candidates. Considering the short advertising period, we were extremely happy with the number of applicants. Thomas Thorpe (University of Lancaster) started with Intertek Pharmaceutical Services Manchester on 6th July 2015.



Thomas fitted into the team dynamic very easily and quickly gained an understanding of our laboratory IT systems and the relevant regulations (FDA and MHRA).

He worked within a multidisciplinary team, to review each instrument and its associated IT and assess for compliance. Thomas completed about 70% of our instrument audit and generated the relevant remediation and instrument access forms as necessary.

Thomas also assisted very ably with general IT support re network and printer connections.

"The student placement was a great success for both the company and individual, and would not have been possible without the assistance of Bionow, which allowed IPSM to advertise, receive applications, interview and commence the placement within a period of six weeks. "

Dr. Neil Ashcroft, Systems Compliance Manager, Intertek

Eight Year in Industry students recruited for major capital project in 2016 by

Seqirus™ A CSL Company

Durham University

MANCHESTER 1824 The University of Manchester

UNIVERSITY OF LEEDS

Newcastle University

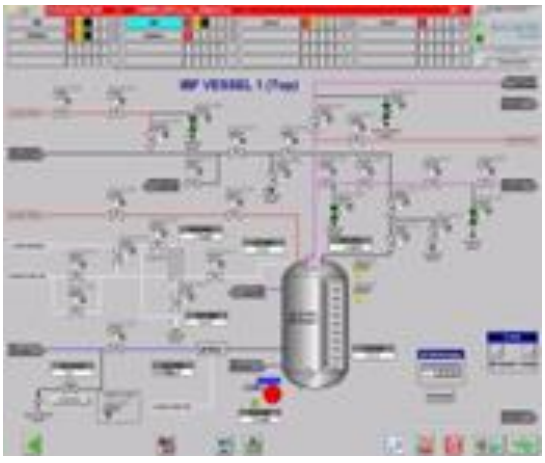
Teesside University

Background

Seqirus was formed in 2015 by the Joining of the bioCSL business with the Novartis Vaccines Influenza business. The business has operating sites in the UK, US & Australia; with a new global Head office soon to open in Maidenhead, UK.

At Speke, Liverpool there are over 500 people employed manufacturing sterile seasonal and Pandemic Influenza Vaccines for a diverse customer base across the globe. The site is now benefiting from significant investment in key Strategic projects, including the construction of a new highly automated Sterile Formulation Facility for the manufacture of Vaccines.

The Purpose of the Roles is to support the capital investment project to construct, commission, licence and start-up a new Biotechnology sterile Vaccine Formulation Facility commencing in July 2016.



Main Duties and Responsibilities:

- Receive the Facility and Plant Unit operations from the Engineering Design & Construction Contractor on completion of construction activities.
- Checking of plant and equipment against design specifications and drawings. Timely implementation of any modifications required post snagging inspections.
- Commissioning & validation of plant including cleanroom utilities and process equipment according to Safety and Good Manufacturing Practice requirements, including:

Sterile Mixing Tanks, Pumps, Pipework & valves, Instrumentation, Control systems, Filtration skids and single-use sterile rigs, Autoclave & cGMP equipment washer, Clean-in-Place, Steam-in Place, Water for Injection, Clean Steam, Clean Compressed Air, Cleanrooms & HVAC

- Plant automation software development, simulation and testing.
- Run equipment trials to demonstrate that the process is in-control and can operate according to the defined Process Description
- Electronic Batch Record (paperless) system testing, Qualification and start-up.
- Start-up and demonstrate the successful aseptic operation of the facility before the manufacture of Product Regulatory and launch batches.
- Completion of Engineering & Quality documentation of all steps required to reach manufacturing Licensure (Safety, Quality, Technology Transfer and Manufacturing).
- Licensure (Safety, Quality, Technology Transfer and Manufacturing).

Relevant degree disciplines include:
Biochemical Engineering, Chemical Engineering, Mechanical Engineering, Biotechnology, Microbiology, Industrial Biochemistry

Person Specification:
The roles call for a confident, positive attitude together with a curious, adaptable and tenacious approach with strong attention to detail. While full training will be provided the ability to apply technical understanding in a practical, industrial setting working within a multidisciplinary team will be key. Most importantly the candidates must be responsible and trustworthy and be good team players.

Bionow reached out its seven University Sponsors and extended to other University Members to ensure a sufficiently large pool of applicants with the broad cross section of skills that Seqirus need to deliver this exciting project.

73 applications were received and 24 were shortlisted for an onsite selection day. Following an in-depth assessment, 8 students from 5 Universities (Manchester, Leeds, Newcastle, Durham and Teesside) have now accepted formal offers of employment to commence from July 2016.

"The sterile Vaccine Formulation Facility is a critical investment at Seqirus, Liverpool. When we got the go-ahead for this project in August 2015 Bionow was our immediate port of call to help us recruit the year in industry students. Bionow's expertise and contacts at the Universities ensured an excellent response to an exacting brief and tight timescale. We recommend the Bionow service to any company who is seeking high quality student placements, whether short or long term."

Andrew Stevenson, Head of Engineering, Seqirus **Emma McCarthy, HR Business Partner, Seqirus**

BUSINESS PROJECTS

Alliance Manchester Business School Students
Lu Chen and Yun Xu

Deliver Market Analysis for High Force Research

High Force Research, based near Durham offers a confidential, high quality, chemical synthesis and R&D service to the pharmaceutical, agrochemical, fine chemical, diagnostic and electronics industries, which are increasingly seeking to outsource non-core activities.

The company is working on an expansion of its business in the US and Australia and we also wish to open up new markets in Germany and Japan. There was therefore a need to understand the pharmaceutical and biotechnology markets within these countries. As Bionow Members we were aware of the Bionow Student Placement Scheme and from registering our interest in the scheme to finalising the project details with respective students took just 4 weeks. We received 6 applications from Manchester Business School of which 2 were appointed after interview - Lu Chen and Yun Xu to work on a Business and Market Analysis Report - Japan, Australia, USA and Germany.

"The project was a success. We gained good insight into all markets and I was able to contact companies/new leads outlined in the report prior to a business trip to Australia which have since been qualified as potential future customers. I would recommend the service and High Force will be using the Bionow service again in 2016."
Dr Stella James, Head of Business Development, High Force Research

"The client facing project I worked on with High Force Research Project was very helpful for my personal development. I was able to apply much of what I have learned in the previous 9 months including analysing the business model and understanding the competitive position using SWOT and Porter's five forces. I also gained an insight into the regulatory requirements in the sector. Having completed the project I am now much stronger at desk research, information handling and business analysis."
Yun Xu, MSc Student - Business Analysis and Strategic Management
Alliance Manchester Business School

Liverpool postgraduate intern
Lisa Luu

Scanning the funding horizon with North west Coast Academic Health Science Network

NWC AHSN support NHS partners and local SMEs to bid for funding opportunities to support development of innovations and transform services for the benefit of patients and the public. The funding landscape is broad and often confusing and more often than not we find ourselves reacting to calls and being opportunistic, rather than proactively planning bid submissions. We needed to undertake a horizon scanning project to identify the majority of funding sources and map what, how and when the various funding bodies issue funding calls, who is eligible to apply and the criteria for bids.

Bionow reached out to four Northern Universities and whilst we only attracted 1 application within 3 weeks the candidate has proven to be excellent. We appointed Lisa Luu from the University of Liverpool via the Professional Internship for Postgraduates (PIPS) scheme. Lisa has made a substantial contribution to our understanding of funding opportunities, contacting many of the funding organisations to seek clarification and further information. She fitted right into the team and has helped with SME workshops on funding opportunities and went above and beyond the initial brief to also deliver in-house training to our team on bid writing, to critique previous bids we have been involved with and she produced a checklist for successful bid writing.

The project has been a great success, we now have a much better understanding of the funding landscape and a comprehensive resource in place which we simply need to update and review monthly. It should enable us, our partners and the SMEs we support to pre-empt calls and pro-actively develop and target funding.

"Bionow's Student placement service helped us to find an ideal student intern and we recommend the service to any life science company in the North."
Lorna Green Commercial Director, North West Coast Academic Health Science Network

"Through the NWC AHSN, I have learnt a lot about the processes involved with product development and the adoption of innovative technologies into first line healthcare organisations, which to academics may be a bit of a mystery.
During this placement I have become familiar with the technological strengths within the North West and I have also participated in breakfast meetings, to network with innovation organisations and local SMEs to identify relevant funding sources within the region.
The NWC AHSN commercial team were very welcoming and supportive of both local universities and in particular the PIPs programme, with regular meetings to keep the project on track and providing support to myself in many aspects."
Lisa Luu
Postgraduate Intern, University of Liverpool

Masters ICT Student Neema Kotonya of UCL **Works with** Lancaster University

To deliver an Electronic Quality Management System for McBrideCQ

McBrideCQ is a micro SME serving other SMEs all of whom are involved in the development of Medical Devices that are entirely, or mainly, software. As developers of Medical Device software, the clients are required by regulation to maintain a Quality Management System that determines how their business operates, a Technical File, that details in precise terms the development history of their device, and clinical data, that supports their device, or indeed, is essential to the operation of their device.

To better meet the needs of its client base McBrideCQ wished to automate its service moving all major functions online. This required the development of a series of dashboards for client interface, a database to support the dashboards, workflows to progress documents and data through a Review and Approval process and some secure hosting for the data and documentation. In addition, the project involved the automation of the client engagement on-line, and a process whereby the initial generation of the content of the Quality Management System and Technical File could be achieved through the automated client engagement process.

As a University Sponsor of Bionow, Lancaster University's access to the ***Bionow Student Placement Scheme*** quickly led to a solution for the recruitment and employment of a high calibre student to help progress the development of the new platform for McBride CQ.

The Employment and Recruitment Service, working as part of Lancaster University Careers, is a leading national higher education student employment service. Lancaster's reputation for providing national businesses with student staff means it can reach students from other Universities well outside the boundaries of its own institution. An initial consultation with Lancaster led to a shortlist of 4 appropriately qualified students, who were interviewed on-campus within a week of initial contact. Neema Kotonya, a postgraduate student from University College London studying a Masters in Computer Science was selected. Lancaster University were also able to offer on-campus working space free of charge for Neema in its world-class ICT Centre of Excellence, InfoLab21. This led to opportunities to collaborate and gain advice from experts working in similar fields and was great experience for Neema to be exposed to the cutting edge of ICT research and development.

Result – for the Business

The entire process of progressing from initial engagement with a client through the company website, through the automated generation of the Quality Management System and Technical File, the creation of the client user base from the engagement, and the hosting of important clinical data and documentation, have all been successfully deployed and tested with actual clients.

"As a micro-SME it was of great benefit that Lancaster's Employment and Recruitment Service was able to deal with the employment and payment for Neema's work, with a simple monthly invoice to McBride CQ. Lancaster also provided access to a scheme to part-fund the placement making the whole process incredibly cost effective. Bionow's Student placement service helped us to find an ideal student intern and we recommend the service to any life science company in the North." ***Jeff McBride CEO McBride CQ***

Year in Industry student
Laura Darby

University of Sunderland

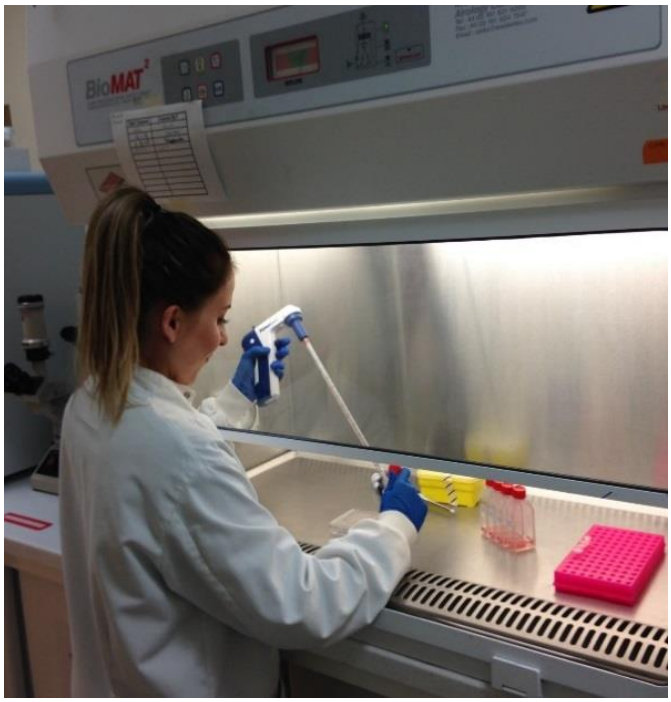
Helps develop assays for safety and efficacy testing to the pharma, cosmetic & chemical industries

Alcyomics

Alcyomics is a growing business in the healthcare sector and is funded by commercial contracts and grants. Alcyomics specialises in predicting adverse immune reactions/ skin sensitisation and potency to compounds and therapeutics e.g. chemicals, cosmetics, monoclonal antibodies, biobetters and biosimilars. Alcyomics assays can also assess efficacy of therapeutic immunomodulatory drugs. The company is developing new assays as well as being a service provider to clients. The recruit will aid in both of these aspects of company development and will be an asset in aiding the day to day running of the company

Bionow reached out on our behalf to four Universities and we attracted 7 applications within 2 weeks. We interviewed all seven and appointed Laura Darby, from the University of Sunderland. The vast majority were of a high standard and we could have employed than more than one student given further funding. Bionow has made a substantial contribution to aiding Alcyomics finding and recruiting able students within the northern region.

"The project has been a great success. Bionow's Student Placement service helped us to find an ideal student intern and we highly recommend the service to any life science company in the North. It has made us greatly appreciative of the local talent which exists within our Northern Universities."
Professor Anne Dickinson, CEO Alcyomics



"I was lucky enough to be chosen to do an internship for a year with Alcyomics. The opportunity has provided me with invaluable practical experience, allowing me to apply my existing knowledge and skills and to develop them further.

I was given the responsibility to work independently and plan experiments to meet client deadlines. Having direct experience in the industry has given me an insight into the options for my future, and the next steps to take to develop my career. I have really enjoyed learning lots of transferable skills and techniques in the laboratory, which will also help me in my final year at university."
Laura Darby, University of Sunderland

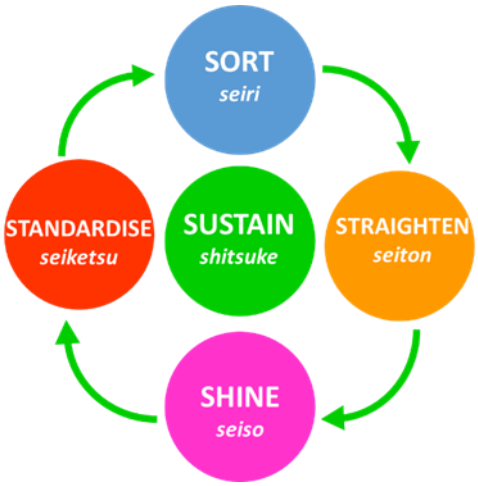
Elizabeth Miller, undergraduate student at Lancaster University

Implements 5S methodology in the laboratories at MSL SOLUTION PROVIDERS

MSL was founded in 2001 as a microbiological testing laboratory, primarily for the personal care and household cleansing markets and that is still at the core of our business. The company has grown year on year and we are expanding into new markets on a regular basis. We offer organisations an integrated approach resulting in products and services getting to market quickly and cost effectively, whilst still ensuring the highest standards of testing. Operating internationally with representation available in the US market, we firmly believe geographical boundaries offer no constraints and actually benefit all our clients, large or small, who are able to access our constantly increasing knowledge base.

We regard ourselves not as a group of individual scientists and technologists, but as a team of highly experienced experts collectively able to provide solutions to real life business problems and issues.
Having successfully participated in the Santander Internship programme in 2014 which resulted in MSL successfully recruiting an Intern working with us we were keen to offer an Intern opportunity in 2015 and we hosted two students for a total of 3 months over the summer. Bionow reached out to five Universities and one of our Interns, Beth Miller recruited from Lancaster University was involved in a project implementing 5S methodology into the laboratory resulting in longterm improvements in efficiency and hygiene standards.

During their time at MSL our interns were able to complete project work whilst gaining all round experience within the laboratory environment.



5S was developed in Japan and is one of the techniques that enabled Just in Time manufacturing.

5S is now being applied to a wide variety of industries including healthcare.

There are five 5S phases *seiri, seiton, seiso, seiketsu,* and *shitsuke which can* be translated from the Japanese as:

Sort, Straighten, Shine, Standardise & Sustain

"We have found the Bionow Student Internship programme to be a great success. We would recommend this opportunity to employers and look forward to continuing our participation in this scheme in 2016."
Kathy Walker, Human Resources Manager, MSL

Santander Universities SME Internship Programme
Small businesses are key to economic recovery and contribute significantly to UK employment, but a lot of these businesses fail to attract talented graduates and may need to pay substantial costs if they try to do so. Santander have created this programme with our UK partner universities to address both issues by providing funding for students and graduates who are keen to get relevant industry experience. Together with their UK partner universities, Santander are proud to be part-funding 2,000 internships in SMEs across the UK, donating half of the intern's salary (£1,000 a month) to the university, with the other half funded by the business or university.

Postgraduate Intern
Stephanie Caslin

MANCHESTER 1824
The University of Manchester

Structures company database for bionow®

Bionow is an award winning specialist business development and services company at the heart of the biomedical and life sciences sector in the North of England. Early in 2015 we embarked on an exercise to comprehensively keyword all 1000 businesses and organisations across the North when Stephanie Caslin joined the Bionow team as a Postgraduate Intern from the University of Manchester.

The keywording exercise required both deep technical knowledge and great attention to detail to devise a completely new tool for Bionow and its member organisations and was extended to all relevant organisations, not just Members of Bionow. The project proceeded stepwise as follows:

- Desk research on all 1000 companies
- Extensive desk research on each company and assigning up to three high level and 5 low level terms
- Building a taxonomy of 56 High Level terms and over 900 specific search terms
- Recording all the above in an Excel database and mindful of the need for consistency and data integrity in the data build and assignment of keywords.
- Uploading company profiles, logos and keywords intowww.bionowb2b.co.uk
- Validation of online searching and helping to define the website functionality from a user perspective

The resulting database encoded with a taxonomy of almost 1000 search terms makes it easy to find companies with very specific products and services, thus supplementing our published Directory and enabling online searching via Bionow's member networking site BionowB2B. The database enables both business partnering and business-university collaborations.

Stephanie also supported the origination of the published 2015 Bionow Directory in parallel with building and encoding the online version in BionowB2B and as a final task Stephanie used the database to perform detailed searches for a University Sponsor to match companies to research interests.

"BionowB2B is now a fully enabled searchable version of the Bionow Directory – Members can search across both Members and non-Members, while non-Members can only search across Members. In addition Bionow has a comprehensive Excel database which can be further developed to enable both business partnering and business-university collaborations. This could not have been achieved without Stephanie's knowledge, application, focus and determination and we are very grateful for her efforts while she was working with us. Stephanie fitted extremely well into the Bionow team working with us at the Manchester and Daresbury offices and also remote working from home."
Dr Diane Cresswell Executive Director, Business Development, Bionow

"I really enjoyed my time at Bionow and learned a lot about the biomedical sector and the opportunities which will be available to me." ***Stephanie Caslin, Postgraduate at the University of Manchester***

Interested?

Contact

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Notes & ideas: **Potential placements/projects at my company**

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