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The University of Manchester

# Faculty of Life Sciences

## Science for Life

The newsletter for alumni and friends of the Faculty of Life Sciences

Issue 5, 2015

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## Connect with the Faculty of Life Sciences

**Our alumni are a very valuable element of the FLS community and we need your help to ensure that we can continue to provide and improve support and opportunities to current and prospective students. We greatly value the time and knowledge that you can give back to the Faculty.**

**Here are some ways that you can get involved:**

### Write a graduate profile

Your profile will be used to inspire and inform applicants and current students, highlighting the range of careers to which FLS graduates have progressed. It may be displayed online or used in the Faculty newsletter. To submit your profile, please complete this survey. See page 9 of this newsletter for examples of graduate profiles.

### Take part in a 'Meet the Professionals' Event

The FLS 'Meet the Professionals' event is an opportunity for you to share your experiences since graduation with current final year students. Alumni speak to small groups of students for ten minutes telling them about your career and answering their questions. You can find out more about this year's 'Meet the Professionals' event on page 11 of this newsletter. Please **email** our Employability Intern if you are interested in taking part in the next 'Meet the Professionals' Event.

### Take part in an 'Alumni Panel Event'

The FLS alumni Panel event normally takes place annually in February. This event allows you to speak to a large group of undergraduate students about your career. Students value the opportunity to hear from alumni about the range of careers that a Life Science degree could lead to. Alumni give short talks which are followed by a Q&A session. You can find out more about this year's 'Alumni Panel Event' on page 11 of this newsletter. Please **email** our Employability Intern if you are interested in attending the next 'Alumni Panel Event' Event.

### Offer work placements to current students

We are always looking for new placement partners in Life Science-related areas. More information about our undergraduate placement scheme can be found on page 7 of this newsletter. If you are interested in employing a placement student, please **email** our Placement office.

For further ideas about how alumni can get involved with the Faculty and University, please see the **Alumni website**.



Meet the Professionals Event - November 2014



Alumni Panel Event - February 2015

## Message from the Dean — Martin Humphries

Welcome to this latest issue of the Faculty of Life Sciences (FLS) magazine for alumni and friends. The magazine contains a range of articles that exemplify the breath of activity in the Faculty. As in previous issues, the articles cover the two main aspects of our mission, namely to generate new knowledge through research and to pass knowledge on to students and society through education. In this introduction, I will briefly overview some of the progress the Faculty has made in these two areas and give a brief snapshot of next year's priorities.

### Research

Securing the funding that Faculty staff need to carry out their research is becoming ever more difficult, principally because the budgets of most funding bodies are flat and being eroded by inflation. However, I am delighted to say that our research awards have increased significantly for the fourth successive year. The level of awards in the current year is actually double that of three years ago, which implies our staff are competing exceptionally well. Maintaining this upwards trend and hitting our stretching targets for income is a priority, which we plan to facilitate by greater differentiation of staff roles and investing in collaborative enterprises.

A key plank of this strategy is to identify areas, composed of a critical mass of excellent staff, in which to prioritise investment. Three of these 'Beacons' are now in place, in the areas of Industrial Biotechnology (which is centred on the Manchester Institute of Biotechnology, and which involves the use of engineered biological systems to generate chemicals, pharmaceuticals and fuels), Biological Timing (which focuses on the dynamics of biological processes and spans signalling oscillations in single cells to circadian rhythms in organisms) and Inflammation (which is centred on the AstraZeneca/GSK-supported Manchester Collaborative Centre for Inflammation Research, and which incorporates many aspects of immune function and inflammatory disease). We have ambitious plans for further recruitment into the Beacon areas and to secure substantial levels of research funding.

In the Research Excellence Framework 2014, the Government's national research assessment exercise that drives both reputation and core funding, FLS ranked 4th on research power (quality x volume) in the UK. This is an excellent validation of the quality of the Faculty's work, which therefore bolsters our reputation as one of the best Biology groupings in Europe. The result, however, was achieved by returning fewer people than were submitted to the corresponding exercise in 2008, and this will inevitably reduce the amount of funding we receive from the Government.



### Teaching and Learning

All aspects of teaching continue to excel in the Faculty. The number of home/EU students is now approaching 2000, and we recruit at an average of AAA at A-level. Recruitment of overseas students is much more challenging because of the relatively small markets in Biology, but we are putting enormous effort across a number of countries in the Far East and Europe.

The attractiveness of FLS courses will hopefully be increased further by the addition of a 4-year Integrated Masters option later this year, which aims to improve student employability.

We are delighted with our 2014 National Student Survey results. The overall satisfaction of FLS students stands at 93%, which is the 5th consecutive year above 90%. All programme areas scored above 90% and all were higher than the sector average.

Our focus on employability continues, with a rollout of CV and interview tutorials to all second year students. The next major development is the initiation of a five-year plan to convert much of our teaching from

a didactic mode, which various studies tell us is among the least effective ways of passing on knowledge, to an active learning mode. Here, students use online resources to acquire information and then come to campus for their learning to be placed in context. Peer interactions and group work have key reinforcing roles. When we succeed in making this transition, FLS will be highly distinctive nationally in its undergraduate provision.

I hope you will find the articles in this magazine interesting and, if there is a specific area of activity that interests you and you would like to hear more about, please do get in touch. We are very keen to hear from our alumni and involve you in Faculty events.



Martin Humphries  
Vice-President and Dean

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### Discovery could lead to better treatment for Chronic Kidney Disease patients



Faculty scientist Dr Donald Ward has discovered that small changes in blood acidity levels could have detrimental impacts on the health of kidney disease patients.

Chronic Kidney Disease (CKD) affects roughly one in five men and one in four women between the ages of 65 and 74 in the UK. Dr Ward's research, published in the Journal of the American Society of Nephrology, suggests that very small changes in the blood's pH level prevent the body from accurately monitoring calcium levels. This causes too much of the hormone PTH to be released, which leads to a greater risk of artery damage when the body releases calcium and phosphate from the bones. This often proves fatal to CKD patients. Dr Ward explains:

"The diseased kidneys prevent the body from getting rid of both excess phosphate and excess acidity. So if that acidity also causes the body to release more PTH then this could compound the problem by releasing further phosphate from the bone.

This vicious circle might accelerate the potentially fatal calcification of the arteries. What is so important about this research is that we have demonstrated that changes in PTH release can be prompted by very small changes in blood pH level. Before, it was assumed that only a larger change in acidity would cause problems for patients."

The research was funded by Kidney Research UK. Elaine Davies, Director of Research Operations from the charity, says:

"Donald's work has used novel pharmacological and molecular tools in generating these new findings which increase our knowledge about the complex balance that clinicians need to consider when treating patients with CKD."



### Research could improve breeding of endangered sea creature



"This approach has never been used to aid captive breeding in rays before. It's exciting to be working on a project with such a worthwhile practical application and strong scientific value."

Marine biologist Jean-Denis Hibbitt has been managing the UK population since 2010 and is now monitoring the breeding programme across Europe. There have been 29 successful births in the UK since the programme was launched. Jean-Denis says:

"The first objective of the breeding programme is to provide undulate rays for public display to help raise awareness of their plight. This added awareness, and the ability for people to identify the species, will subsequently allow them to question whether illegally landed rays are on sale in their local fishmongers. If numbers in the wild fall to a critical level, it is feasible that we could help with a reintroduction programme."

Faculty student Iulia Darolti has taken DNA swabs from all 45 of the rays in British aquariums. She also accompanied Jean-Denis to swab two wild rays for comparison. Iulia says:

"It has been a challenging assignment. To expose the rays to as little stress as possible we developed non-invasive sampling techniques that allowed us to collect DNA from the skin. Travelling the country working with rays is something I never imagined myself doing, but it has been a very rewarding experience."

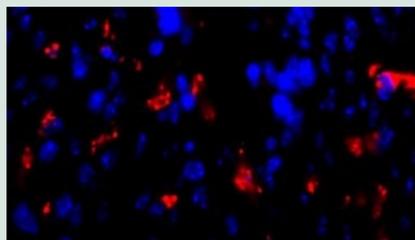
PhD student Graeme Fox has been doing much of the laboratory work. He says:

"We developed a set of genetic markers to help discover whether the rays are related or not. After screening the DNA, we were able to identify regions that were likely to be highly variable. Our hope is that this data will enable Sea Life to plan the optimum management strategy to secure the genetic health of this beautiful and increasingly scarce species."

Faculty scientists are attempting to map the genes of the endangered undulate ray, a protected British species which has declined sharply in the last few decades. Their data will be used to check the heritage of around 120 undulate rays in European aquariums, helping to pair up breeding adults and produce healthy offspring.

The team is investigating the diversity of the rays' DNA to infer how inbred individuals are. Inbreeding causes frequent still-births and shortens the lifespans of offspring. Dr John Fitzpatrick, lead researcher on the project, says:

### Discovery could lead to better melanoma treatment



A Faculty led research team has discovered that immune cells may be responsible for drug resistance in melanoma patients.

Along with colleagues at the Cancer Research UK Manchester Institute, Dr Claudia Wellbrock found that chemical signals produced by immune cells known as macrophages also act as a 'survival signal' for melanoma cells. When the researchers blocked this signal - called TNF alpha - melanoma tumours were smaller and easier to treat. The research suggests that targeting this 'survival signal' could lead to new treatments. Dr Wellbrock says:

"This discovery shows that immune cells can actually help melanoma to survive. Particularly when patients are receiving treatment, the immune cells produce more of the 'survival signal', which makes treatment less effective. So combining standard treatment with immunotherapy could provide more long-lasting and effective treatments to increase survival."

Melanoma is the most deadly form of skin cancer with around 13,300 people diagnosed in the UK each year. Rates of the disease have increased more than fivefold since the 1970s. Professor Richard Marais, Director of the Cancer Research UK Manchester Institute, said:

"Melanoma is particularly difficult to treat as many patients develop resistance to standard treatment within a few years. This research provides a key insight into why this is the case. Drugs which block this 'survival signal' have already been developed; using these along with standard treatment may be a promising new approach for melanoma patients."

### New test could identify infants with rare insulin disease



Faculty research has led to a new test which could help to identify congenital hyperinsulinism at an earlier stage. This rare but devastating disease causes low blood sugar levels in babies and infants and can lead to lifelong brain damage and permanent disability. The condition occurs when cells in the pancreas release too much insulin and cause frequent low blood sugar episodes. In the most serious cases, the pancreas may need to be removed.

In more than two thirds of infants who suffer from congenital hyperinsulinism, the genetic causes are unknown. After analysing the genes and hormones of thirteen infants with the disease at Manchester Children's Hospital, Dr Karen Cosgrove and her team discovered the new way of testing.

Their test measures a pair of hormones called incretins, which tell the cells in the pancreas to release more insulin to regulate sugar levels in our blood. When a child's body releases more incretin hormones than is normal, the pancreas will release too much insulin. This will cause dangerously low blood sugar levels. Dr Cosgrove (pictured below) explained:



"This is the first step to understanding what causes the disease in these particular patients (with unknown genetic causes). In future, the test may influence how these children are treated medically, perhaps even avoiding the need to have their pancreas removed. Although we are the first researchers to report high incretin hormone levels in patients with congenital hyperinsulinism, further studies are needed to see if our test works on a larger group of patients."

### Computer model explains how the brain selects actions with rewarding outcomes

Faculty research conducted in conjunction with The University of Sheffield has developed a computer model which charts what happens in the brain when an action leads to a reward. The model could provide insights into the mechanisms behind motor disorders such as Parkinson's disease and conditions involving abnormal learning, such as addiction. Faculty researcher Dr Mark Humphries explains:

"We wanted to look at how we learn from feedback - particularly how we learn to associate actions to new unexpected outcomes. To do this we created a series of computational models to show how the firing of dopamine neurons caused by receiving reward ultimately translates into selecting the causative action more frequently in the future."

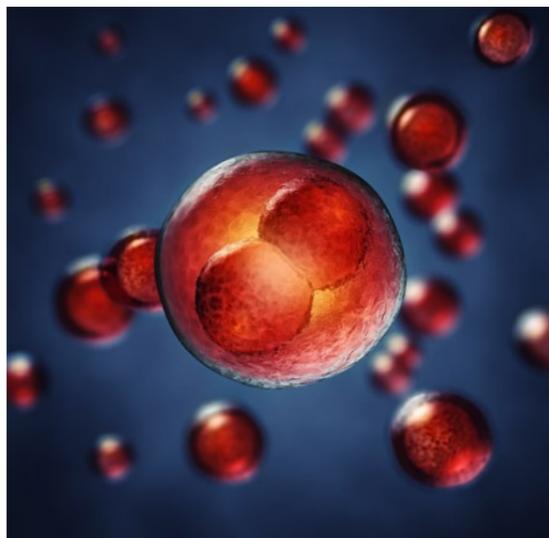
Research had already shown that actions are represented in the brain's outer layer of neural tissue (the cortex) and that rewards activate neurons that release dopamine. The dopamine signals are then sent to the striatum, which plays an important role in how we select which action to take. Together, this evidence suggested that dopamine signals change the strength of connections between cortical and striatal neurons, determining which action is appropriate in a specific circumstance. Until now, though, no model had tested these strands together.

Dr Humphries explains why they created the model:

"Essentially, within this area of research, we are tackling a puzzle in which we have an unknown number of pieces and no picture to guide us. Some pieces have been studied individually, so the questions were: could we put the pieces of the puzzle together and prove that they made a coherent picture? And could we guess at the missing pieces? The only way was through using a computational model, which allows us to do things impossible in experiments - provide solutions and guesses for the missing pieces. The fact that the pieces of our puzzle all fitted together to produce a single coherent picture is evidence that we (as a field) are converging on a complete theory for how the brain learns from reward."



## Funding for new Manchester Single Cell Research Centre



The University has been successful in securing funding from the Medical Research Council (MRC) for a new Single Cell Research Centre (SCRC). The £5 million award was led by Professor Cay Kielty from the Faculty of Life Sciences and involved collaborations with colleagues in both the Faculties of Life Sciences and Medical and Human Sciences.

The human body contains trillions of cells of many different types and functions, yet all are descended from the same embryo. The lack of detailed understanding about the similarities and differences in the cells is a huge barrier to the design of all therapies that need to target particular cells within the body. The MRC award will put in place a pipeline from sample collection, through to identification

and characterisation of single target cells within each sample, to the design of treatments that target these specific cells.

Researchers in the SCRC will focus on characterising a group of rare cells (called circulating tumour cells, or CTCs) that give rise to drug-resistant cancers such as certain lung cancers, and specific stem cells that can enable the regeneration of damaged tissues such as muscle, joints, skin and blood vessels.

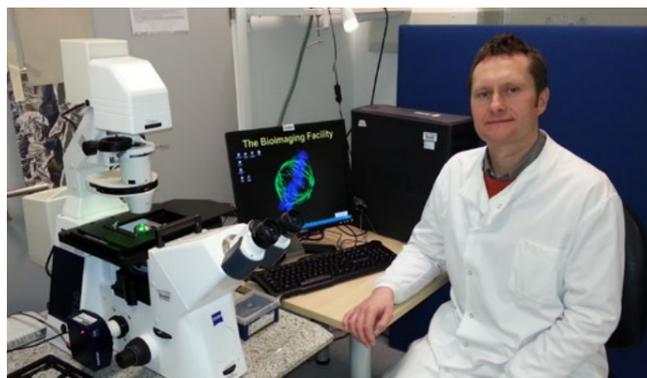
More details about MRC funding for clinical research infrastructure can be found [here](#).

## Faculty researcher receives grant for pancreatic cancer project

Faculty researcher Dr Jason Bruce has been awarded a grant of around £180,000 by The Pancreatic Cancer Research Fund (PCRF).

PCRF have awarded a total of £1.2 million to ambitious projects tackling the UK's deadliest cancer. It is the second year that they have invested over £1 million in a single funding round, enabling innovative research that could lead to new treatments for this aggressive and complex disease.

Dr Bruce's work focuses on pancreatic cancer cells and the unique way that they extract energy from the nutrients which help them to survive and grow. The cancer cells use this energy source to pump calcium out of the cell. As high levels of calcium can be fatal to such cells, Dr Bruce's project will aim to utilise new drugs and cut off the supply of energy to the calcium pumps. This would kill cancer cells whilst leaving healthy ones unharmed.



## £3 million for cutting edge biotechnology

University scientists have been awarded nearly £3 million to develop new sustainable ways of manufacturing the chemicals used in thousands of our everyday products.

Professor Nigel Scrutton and his team at the Manchester Institute of Biotechnology are one of five beneficiaries of the BBSRC's Strategic Longer and Larger Grants (sLoLaS) scheme which funds high-value, long-term research projects.

Fossil fuels currently provide the raw material for the manufacture of many everyday products that we take for granted including pharmaceuticals, food and drink, plastics and personal care. The combined effect of fossil carbon depletion and climate change are forcing us to replace fossil fuels with cleaner, more sustainable forms of energy.

In total £15.8 million is being handed to five research teams as part of the sLoLa scheme, which aims to provide world-leading teams long-term funding and resources to address major challenges.

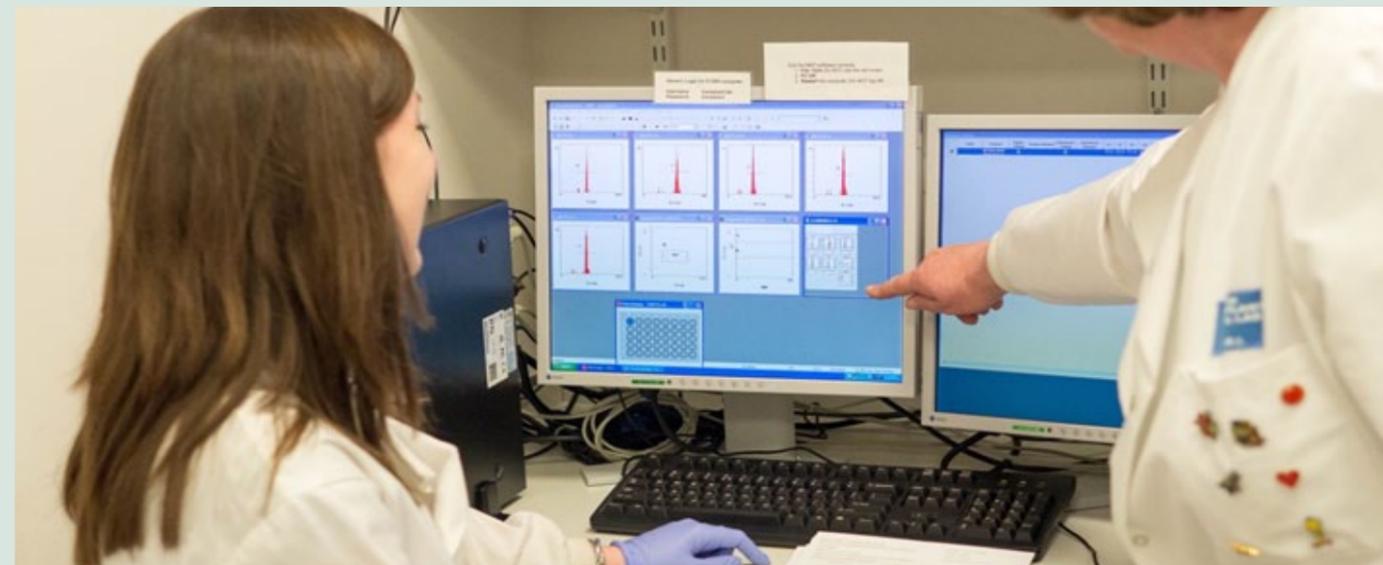
Professor Scrutton's five-year research programme is at the heart of this agenda. His team will design bespoke biological parts and assemble them in novel ways to create a bio-based production pipeline within a synthetic, engineered microbial biofactory. By adopting a production pipeline that embraces the 'design-build-test-deploy' life-cycle they will turn knowledge assets into innovative chemicals production solutions to support industrial and academic drug discovery programmes.

Professor Scrutton says the grant is a substantial boost for Manchester: "Our

vision is to harness the power of synthetic biology to propel chemicals and natural products production towards 'green' and sustainable manufacturing processes."



## FLS Undergraduate Placement Scheme



Every year, around 120 undergraduate FLS students undertake a placement year as part of a degree 'with industrial professional experience' or 'with a modern language'. Students complete 9-12 month placements in a variety of settings, including pharmaceutical and biotech companies, hospitals, research institutes, museums and zoos. Students are required to complete an in-depth research project during their placement year but may also have a significant 'service' element to their role. Companies describe the placement programme as a 'win-win' situation, with

students gaining experience and skills and companies benefitting from enthusiastic and fresh-thinking students. Peter Brown, CEO for Notch Communication UK said:

"We've taken on placement students every year for the past three years and have been consistently impressed by the students' enthusiasm, dedication and hard-working attitudes. Their scientific backgrounds and willingness to learn makes it easy for them to grasp our clients' industries, so that every student has quickly become an integral part of our agency. The students

add immense value across many areas of our business and bring a fresh perspective to our work. We are always sorry to see them leave at the end of the year."

We are always looking to expand our range of placements.

**If you would like to explore the idea of employing a placement student, we would love to hear from you. Please email the FLS Placement Office for further information.**

## Life Sciences and the Weizmann Institute

Exactly 100 years after the first President of Israel, Chaim Weizmann, made his vital discovery about acetone at The University of Manchester, a group of life scientists have been meeting with colleagues at the Weizmann Institute of Science in Israel to extend and deepen ongoing scientific collaborations between the two institutions.

A generous donation from the Alliance Family Foundation in 2012 provided seed-corn grant funding to eight pairs of scientists who have since undertaken collaborative research in the fields of dementia, cancer and food security amongst others. This recent visit was an opportunity to celebrate the remarkable success of one of these collaborations, that of Professor Werner Muller (Manchester) and Professor Steffen Jung (Weizmann Institute). Steffen and Werner (pictured) were presented with "The Lord Alliance Prize", a £100,000 grant to continue their research into the biology of the immune system, by Britain's Ambassador to Israel, Matthew Gould.

Speaking about the link, Professor Martin Humphries, Vice-President and Dean of Life Sciences said "The Get Connected programme is a shining example of what can be achieved when researchers are given the freedom and resources to join forces with other like-minded teams. Put simply, what is achieved is progress at an accelerated rate."

The scientists who travelled spent a further two days at a research symposium building connections with those at the Weizmann Institute and were accompanied by colleagues from the Division of Development and Alumni relations who also hosted a special reception for alumni in Tel Aviv.



## Worm Wagon at the Great British Bioscience Festival

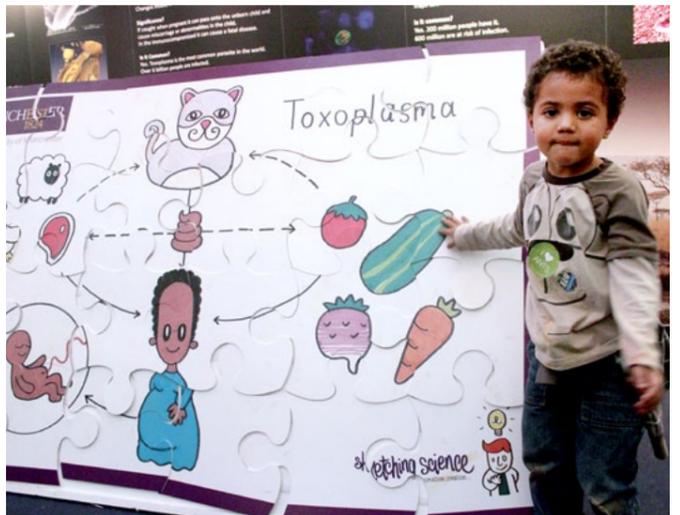
Scientists from the Faculty took The Worm Wagon to East London for the Great British Bioscience Festival this November. Led by Dr Sheena Cruickshank and Professor Kathryn Else, they were part of just twenty groups selected to take part in this 20th anniversary celebration of the Biotechnology and Biological Sciences Research Council (BBSRC).

By combining eye-catching activities with real parasite samples, The Worm Wagon's exhibition aimed to educate people about the dangers of infection. Both children and adults made the most of the chance to handle tapeworms while others posed as parasites at the 'schistosome selfie stand'. The exhibition also featured giant jigsaws and Top Trump cards, all of which proved very popular with the many children at the festival. The jigsaw, once completed, highlighted the key role that washing your hands plays in avoiding infections. The Top Trumps taught their users about the many different parasites and diseases around the world. They even featured topical information about the Ebola virus.

Despite the fact that The Worm Wagon's exhibition was fun for all who attended, there is a very serious message behind the concept. The idea grew out of the work the team have been doing with recent migrants to the country, teaching them how to prevent the spread of parasite infection. These infections affect approximately two billion across the globe and are the biggest killer of people under 50 worldwide. In countries where infections that are caused by gut worms are still very common, it is the

main reason why children don't get an education. Dr Cruickshank discussed the event:

"It was great to see the local community get so involved and I learnt a lot from the visitors. A favourite moment was seeing one young boy (just six) turn to another visitor and explain how worm infection was contracted and what the impact of infection was - a future scientist in the making."





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Want an insight into the work carried out in the Faculty of Life Sciences?

View engaging discussions between the scientific community and the rest of the world

Active across various digital media platforms

[www.ls.manchester.ac.uk/news/broadcast](http://www.ls.manchester.ac.uk/news/broadcast)

## Alumni Profile

### Wiesia Woodyatt

#### What degree did you do?

BSc Hons Biology, graduated 2004  
MRes Biological Sciences, graduated 2005

#### Career progression

After graduating in 2005, I built up my initial real-world work experience through a variety of temping roles. From there, I transitioned into a project management role within a Medical Communications agency (involved in the delivery of publication strategies, standalone meetings, satellite symposia, advisory boards, training materials, abstracts, posters, publications etc). I then moved into the public sector and have now built up more than 5 years of management experience working in a research setting, specifically within an oncology-specialised NHS Trust. I have worked across a variety of roles within cancer research including clinical trial coordination, quality and service improvement.

#### What attracted you to this career?

My degrees highlighted to me that I wasn't suited to a laboratory-based career. However, I did enjoy my subject and the associated project management elements, so I sought roles that matched this brief. Luckily, roles within clinical research have provided me with this combination to best suit my skill-set.

#### How do you think the knowledge and skills you gained as part of your degree helped you in securing this job?

A pre-requisite for many jobs within clinical research is a life sciences degree. Employers in this field are always looking for science graduates that have a solid medical/ science grounding, coupled with the IT, presentation, planning, communication and analytical skills that are usually consolidated as part of a degree programme.

#### What does the job entail in a typical day or a typical week?

My current role as a Service Improvement Manager within research is varied ranging from streamlining processes used in the Trust to support the smooth set-up and conduct of clinical research studies, working on the collation/coordination of the Trust's research performance metrics for the National Institute for Health Research reporting requirements, supporting teams with study audits and regulatory inspections, ad hoc projects such as preparing regulatory submissions for new studies and line management responsibilities.

#### What do you enjoy the most/find the most interesting about your job?

I really enjoy the breadth of my role and enabling change in the organisation to ensure we continue to deliver research efficiently and effectively.

#### Do you have any advice for people who might want to follow in your footsteps?

Clinical research is a really interesting path having completed a life sciences degree. It is definitely worth contacting NHS Trusts in your area with a research or teaching reputation (there are many in Greater Manchester) to see whether they can provide you with some work shadowing experience to get a taster of what roles are out there and the career paths you can take.



## Spotlight on Bhavika Patel

### Senior Scientist in Oncology Innovative Medicines, AstraZeneca

Bhavika Patel graduated in 2009 with a BSc in Biomedical Sciences and is now a Senior Scientist in Oncology Innovative Medicines at AstraZeneca. In September 2014, she returned to campus as an alumni panellist at an annual 'Career Options and Work Experience event', to discuss her exciting career with second year Life Science students thinking about their options after university.

Bhavika inspired students by describing how a degree from The University of Manchester has impacted on her career, particularly thanks to the international experience she gained through her placement in Virginia.

"One of the most important aspects of my degree was the summer placement I carried out in Virginia during second year, along with the third year research project at the Wellcome Trust. These experiences gave me a great foundation to the technical aspects

of being a scientist, as well as reassurance I would enjoy a career in research." After graduating, Bhavika moved to the USA where she worked for 7 months as a Research Scientist at the Massey Cancer Center, Virginia - researching the role of p53 mutants in chemotherapy resistance. In August 2010 she returned to the UK and began working in Oncology Bioscience at AstraZeneca pharmaceuticals. She is currently working on drug discovery projects ranging from target validation to first-time-in-man.

"One of the things that I really enjoy about my job is knowing that the work I do will impact the lives of cancer patients. I love the exploration and innovation involved in the drug discovery process. Working with multi-disciplines and experts in different areas of science provides you with a wealth of knowledge and notably develops you as a scientist."



## Your Manchester Insights Lecture, London: The Compatibility Gene



Professor Dan Davis, The Director of Research in the Manchester Collaborative Centre for Inflammation Research, delivered a very engaging lecture on genetics to an audience of over 100 alumni in February at The Law Society. His lecture was drawn from his recently published book, *The Compatibility Gene*, giving an insight into the genes which make us individual.

Professor Dan Davis is one of the field's rising research stars whose book has received rave reviews from a variety of sources including *The New Scientist*, *The Guardian* and *The New York Times*. The lecture explored what makes us unique and how the immune system works. He also explored the part that genetics play in the rules of attraction.

The fascinating lecture was followed by a question and answer session and then a drinks canapés reception where guests could personally speak to Professor Dan Davis.

## Outstanding Alumni Award Recipient, Lopa Patel (MBE)



This year's outstanding alumni award for the Faculty of Life Sciences will be presented to Lopa Patel MBE (Biochemistry, 1986). Lopa is a digital entrepreneur, and founder of the online South Asian lifestyle portal Redhotcurry.com, ecommerce site TheRedhotshop.com and equality and inclusion think tank Diversity UK.

Lopa is an experienced marketing consultant who previously set up the direct marketing services company DMS Direct Ltd, where she worked with international companies in a

broad range of industry sectors. In addition to Lopa's business interests, she has a lifelong love of science and technology and spends a great deal of time championing STEM and innovation to young people. Lopa was awarded an MBE in Queens Honours list of 2009 and this has been followed recently by a Queens award for enterprise promotion.

Lopa will be collecting her award and giving an inspiring speech to the graduates of 2015 at the Life Sciences graduation ceremony to be held on July 13th.

## Meet the Professionals



On the evening of Thursday 27th November, we hosted our annual careers networking event; 'Meet the Professionals', which was attended by 55 final year students and recent graduates.

Life Sciences alumni with a range of different degrees, in a variety of professions, were invited back to share their experiences since graduation. They met with students and recent graduates to give them an idea of the range of career options available outside the traditional areas of academia and research.

Alumni present included Laura Solski, who completed an Anatomical Sciences degree and now works as a Software Test Engineer, and Andrew Jermy, a Biochemistry graduate, who is an editor for Nature Magazine. Waseem Khan, who graduated with a Pharmacology degree and is now the Quality and Patient Safety Lead for NHS England

said, "this was an enjoyable evening. I wish we had something similar when I was at University. The students had some fantastic questions and it was good to be able to share my experiences".

The evening began with a welcome talk from the Deputy Associate Dean for Teaching, Learning and Students, Professor Keith Brennan, and was followed by a brief introduction from each of the professionals.

In the speed networking format, students had the opportunity, in small groups, to speak to one professional at a time for ten minutes. After ten minutes, they moved on to the next professional. Students were able to ask questions and gain an insight into the professionals' career paths, their current roles and get advice about relevant skills and what to do to follow in their footsteps. An informal networking session followed afterwards, giving students the chance to speak individually with the professionals and form contacts for the future.

The event was a huge success, with many students leaving with new ideas about their career options.

Thank you to all of the alumni that took part in the event this year. If you would like to be involved in next year's event, please **email** our Employability Intern.

## Manchester Global Graduates 2015

In June 2015, 29 undergraduate students were lucky enough to take part in Global Graduates, an exclusive programme for students at The University of Manchester giving them the opportunity to meet with alumni in one of our host cities across the world.

Employers are increasingly seeking to recruit 'global graduates' – graduates who see the world through a wider lens and who have both global knowledge and cultural agility. In 2012 two students visited New York and a further two students visited Singapore for one week in August. Following the success of this pilot, and successful expansion of the programme in 2013 and 2014, this year we were once again able to send groups of undergraduate students to Dubai, Hong Kong, London and Paris, New York, San Francisco and Singapore.

Over the course of their visits, our selected students visited a range of host organisations, meeting with alumni and representatives to learn more about their businesses, roles, opportunities and their cities. They also considered the economic climate, working culture, business practices and areas for future growth. They were also expected to play an ambassadorial

role for The University of Manchester and share information about key developments for the institution.

Through the visits, the students had the opportunity to both practice and develop their existing skills, to start building their professional networks and to increase their understanding of their own employability.



Global Graduate students visiting Hong Kong in 2014

## Alumni Panel Event

On the evening of Tuesday 17th February, we hosted our annual Alumni Panel event. Undergraduate and postgraduate taught students attended to get an idea of the options available for them after graduation.

Five former FLS students with a range of different degrees in a variety of different positions were invited back to share their experiences.

The alumni all gave short presentations on their careers and the paths they had taken since graduation to secure their jobs. After a short question and answer session, students also had the chance to speak to the alumni individually.

Alumni included Natasha Brewer, who graduated in 2014 with a Biology with Industrial/Professional Experience degree and now works as a Business Systems and Integration Analyst, and Dr Georgina Drury, who completed a PhD in Plant Biology and is now a Programme Manager for the Medical Research Council. Matt Darlington, who graduated with a Biochemistry degree in 2013, and now works as a

Technical Sales Representative, said: "Not only was this a great opportunity to develop my public speaking, but talking with genuinely interested students and offering advice was a truly fulfilling experience".

The event was a huge success, with many students leaving with new ideas about their career options and feeling motivated to take action regarding their careers.

Thank you to all of the alumni that took part in the event this year. If you would like to be involved in next year's event, please **email** our Employability Intern.



## Philanthropy Spotlight – Professor John Hartley

John graduated with a BSc in Biochemistry in 1980 and followed this with an Oncology PhD in 1984. John continues to have a highly successful career in research and, with his wife Janet, has generously pledged to support a PhD scholarship at Manchester. Recently they visited the University to meet with the Hartley PhD scholar, Robert Pedley, and to take part in Manchester's inaugural Philanthropy Day celebrations. We asked John to give us an insight into his time at Manchester and the motivations behind the gift.

### What are your lasting memories of your time at Manchester?

I was born and raised in Manchester so already knew the city well. It was a really great environment to study and also to socialise. We all worked very hard but also had a huge amount of fun! I had a great time, met some amazing people (including my wife Janet!), and by the end had enough expertise and confidence to face the challenge of working in a highly competitive environment as a post-doctoral fellow in the USA.

### You support access scholarships as well as PhD research, what inspired you to do so?

There is absolutely no doubt that I would not have been able to study at University if it had not been fully paid for. I was the first member of my family to go into higher education and it was important to me that I would not be a financial burden on my family. Janet and I are passionate believers that education should be accessible to all, at every level.

### What have you found most enjoyable about supporting cancer research?

I have spent my whole career in cancer research. It is a highly challenging and complex subject increasingly requiring a multidisciplinary approach. Manchester has established a world-class reputation in the field and I feel that this is a particularly exciting time for the subject with many discoveries now starting to make a real impact for cancer patients.

Robert Pedley, the recipient of the Hartley PhD Scholarship, started his PhD studies in September 2014. His research into how some breast cancers become resistant to certain treatments will be carried out under joint supervision of two experts in the area, Dr Andrew Gilmore and Dr Rob Clarke. Robert said:

"I'd like to say a huge thank you to John and Janet for supporting the University, without them I wouldn't have got the chance to pursue a career in cancer research. The research environment here is brilliant and with the opening of the new Manchester Cancer Research Centre this summer, it will only get better."

For more information on how giving to the University can have a long lasting impact on students and research, please **email** Paul Winter or phone him on 0161 275 7785 [www.manchester.ac.uk/collaborate/support/](http://www.manchester.ac.uk/collaborate/support/)

## Faculty student wins prestigious award

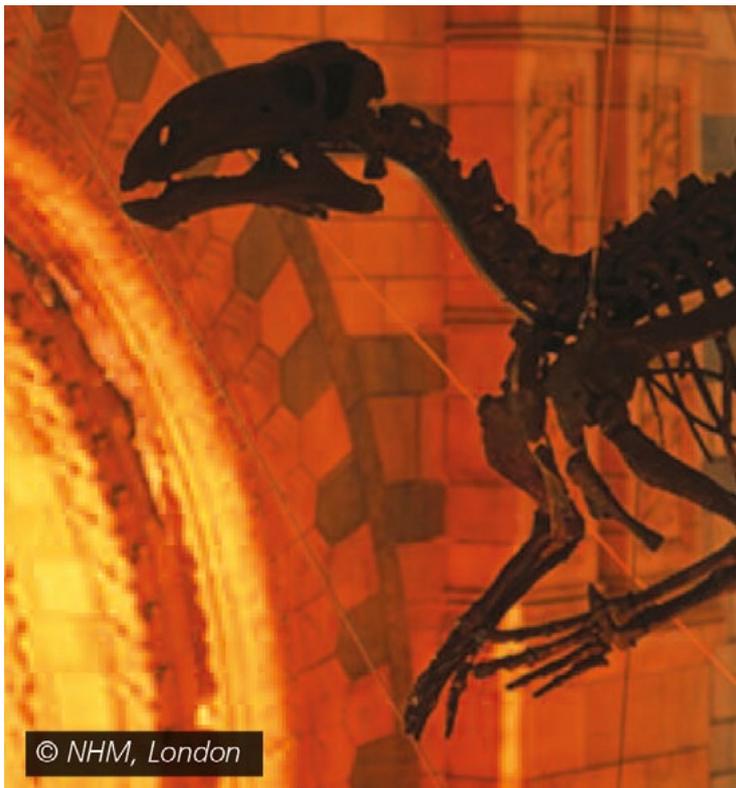


Faculty student Siddharth Krishnan has won the Life Sciences category of The Undergraduate Awards, a prestigious international programme that identifies leading creative thinkers through their undergraduate coursework. There were 4,792 entries from 206 universities across 27 countries. Another Faculty student, Eliot Haworth, was highly commended.

Siddharth entered his work from a placement at the Mayo Clinic in Florida, USA, in which he helped to characterise a novel gene linked to Alzheimer's disease. This was part of his degree in Pharmacology with Industrial Experience. He said:

"I gained a lot of great experience during my placement. The Mayo Clinic has a hospital, education wing, and research centre all on the same site, so I was able to work with researchers and patients for my genetic studies. This gave me a lot of confidence, as it meant I had good research experience already. It also helped me get onto my PhD in Neuroscience and I had a strong submission to the awards. Still, I was surprised and delighted to win!"

## Unique partnership in online learning



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The first ever set of online courses developed by a university and the Natural History Museum has opened for enrolment.

In a unique partnership, The University of Manchester and the Natural History Museum have created short, personalised online courses for the public. The courses bring together the world-leading knowledge and teaching expertise of both institutions, covering topics such as extinctions, forensics and the biology and classification of biodiversity.

The first series of courses, expected to start in Spring, focusses on extinction and ranges from ancient extinction events, including what happened to the dinosaurs, through to modern and potential future extinctions.

For more information or to enrol visit:  
[www.ls.manchester.ac.uk/distancelearning/nhmcourses](http://www.ls.manchester.ac.uk/distancelearning/nhmcourses)

## Editor's Note:

If you have any comments or contributions for future editions of the Alumni Newsletter, please contact:

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## Online courses in EGYPTOLOGY



The University of Manchester offers the UK's only accredited Egyptology courses delivered entirely online. Several short courses in Egyptology-related subjects are also available.

### Courses include:

#### Certificate in Egyptology programme:

A three year online course which provides an opportunity for the serious, academic study of Egyptology (120 credits)

#### Diploma in Egyptology programme:

A two year extension programme to the Certificate in Egyptology which provides for more in-depth, serious, academic study of Egyptology (120 credits)

#### Short Courses in Egyptology:

Six week, non-credit bearing courses in Egyptology-related topics, such as:

- Queens of Ancient Egypt
- Gods and Goddesses of Ancient Egypt
- Tutankhamen

**Course Tutors:** Dr Joyce Tyldesley & Dr Glenn Godenho

For further details please visit our website:

[www.manchester.ac.uk/egyptologyonline](http://www.manchester.ac.uk/egyptologyonline)

