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Faculty of Life Sciences Newsletter

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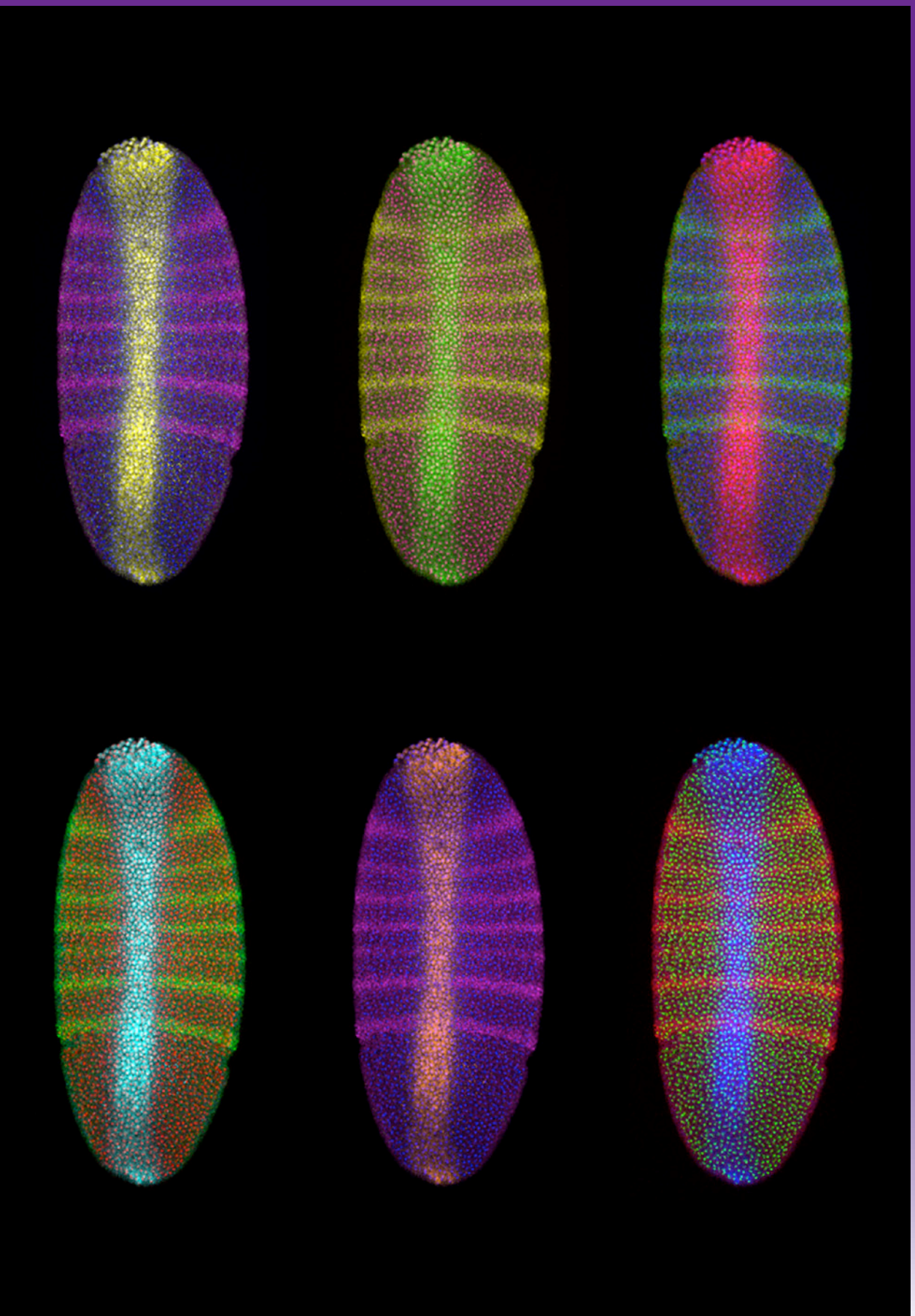


In this issue

Academic recruitment

Over the last year, the University has been engaged in a wave of recruitment of leading academics from around the world. The Faculty of Life Sciences is proud to welcome these new staff members, who will be making a major contribution to our research profile and our teaching portfolio.

Rainer Breitling,
Professor of Systems Biology
Computational and Evolutionary Biology Research Group

Rainer recently joined the Faculty as a Professor of Systems Biology in the Manchester Institute for Biotechnology (MIB). Rainer's previous role was SULSA Professor in Systems Biology at the University of Glasgow and Honorary Professor of Computational Systems Biology for the Groningen Bioinformatics Centre at the University of Groningen.

His work covers a broad range of Systems Biology topics, including the development of innovative computational approaches for post-genomic systems biology, statistical methods for high-throughput biological experimentation and the dynamic modelling of cellular systems to guide synthetic biology design strategies.

Andrew Chamberlain,
Professor of Bioarchaeology
Environmental Research Group

Andrew has recently taken up the position of Professor of Bioarchaeology in the Faculty, having moved from the University of Sheffield where he was Professor in Biological Anthropology.

His main research interests include biological and evolutionary aspects of anthropology and demographic methods in archaeology, where he is working to develop and apply new methods for use on archaeological skeletal assemblages. He also has a research interest in microscopic and molecular processes in bone degradation and the factors that influence the preservation of ancient human remains. He aspires to develop the Faculty's research at the interface of biology, archaeology and anthropology.

Daniel Davis,
Professor of Immunology and MCCIR Director of Research

Dan has recently taken up the position of Professor of Immunology. Prior to this, Dan was Professor of Molecular Immunology and Head of the Immunology and Infection Section at Imperial College London. He previously completed an Irvington Institute Postdoctoral Fellowship with Professor Jack Strominger at Harvard University after earning a PhD in Physics at Strathclyde University, Glasgow, UK, and a BSc in Physics at the University of Manchester.

Dan pioneered the use of novel imaging techniques to help visualize key molecular components of the immune response. His work helped establish a new concept of how immune cells communicate with each other and how they recognize disease. In 1999, he published the first images showing protein reorganisation at the interface between human Natural Killer (NK) cells and tumour cells. He also recently described long membrane tethers or 'nanotubes' as a new class of physical connectors between immune cells. Such membrane nanotubes aid immune cell activity and present a novel direct route for HIV-1 to efficiently spread between T cells.

Magnus Rattray,
Professor of Computational and Systems Biology
Computational and Evolutionary Biology Research Group

Magnus joined the Faculty in August as a Professor of Computational and Systems Biology. Magnus previously co-led a Computational Biology research group located in the Sheffield Institute for Translation Neuroscience. He works on the development and application of statistical inference methodology for computational systems biology and high-throughput data analysis. Magnus previously worked at the University of Manchester in the School of Computer Science.

He is leading two new projects concerning the analysis of high-throughput sequencing data; an EU consortium project, RADIANT (rapid development and distribution of statistical tools for high-throughput sequencing data) and a BBSRC-project on transcript-level inference from RNA-Seq data (with the University of Liverpool). Other projects include ITERATIVE (An iterative pipeline of computational modelling and experimental design for uncovering gene regulatory networks in vertebrates, with Nicoletta Bobola at Manchester), SYNERGY (systems approach to gene regulation biology through nuclear receptors, an EraSysBio+ consortium project) and TIGRE (transcription factor inference through Gaussian process reconstruction of expression).

Eriko Takano,
Professor of Synthetic Biology
Structural and Functional Systems Research Group

Eriko joined the Faculty in September as Professor of Synthetic Biology in the MIB. Eriko moved from the University of Groningen in the Netherlands, where she was an Associate Professor in Synthetic Microbiology in the Department of Microbial Physiology. Eriko was previously a Rosalind Franklin Fellow in the Microbial Physiology research group at the University of Groningen.

Eriko has an internationally leading position in the field of small signalling molecules in *Streptomyces coelicolor*, the model organism used by the major group of commercial antibiotic producers. Eriko's main field of interest is the synthetic biology of antibiotic production, including novel antibiotic discovery by post genomics, noncoding RNA in *Streptomyces*, the systems biology of the metabolic switch from primary to secondary metabolism, and the regulation of antibiotic production through signalling molecules. She sees applied synthetic biology as a highly collaborative enterprise, requiring interdisciplinary interactions between biologists, engineers, chemists and computational scientists, creating an opportunity to drive the next industrial revolution in biotechnology.

Manchester Surgical Skills and Simulation Centre

Over the summer the University and the Faculty invested over £3M to fully refurbish the cadaveric anatomy facility in the Stopford Building. The existing facility, much of which dated back to the 1970s, was no longer fit for purpose and the space was poorly arranged. Manchester is one of a decreasing number of Universities to use cadavers in its teaching, and we wanted our undergraduate medical, dental, nursing and anatomical science students to be taught in the most modern facility in the UK. Fitting such an ambitious project into the summer holidays posed major logistical challenges and the project would not have been possible without the considerable support of the facility staff, Stephen Lindsay-Smith, Kevin Hayes, Christine Yarwood and Linda Berry.

This project also saw the existing facility expand in order to provide dedicated space for the provision of training in surgical and para-medical skills to health service professionals. Under the banner of the Manchester Surgical Skills and Simulation Centre, this new development is being led by Mr Rajiv Bhalla (Consultant ENT/Head & Neck Surgeon & Rhinologist), Dr Simon Merrywest (Head of Faculty Administration, Life Sciences) and Dr Ingrid Gouldsborough (Senior Lecturer in Anatomy).

The centre consists of a large classroom, a changing room and a teaching laboratory. The laboratory is fitted with nine work stations, each with operating lights, integrated camera and monitors, recording capabilities and support equipment and services (e.g. suction, x-ray viewers, headlamps, soft tissue dissection sets etc.). More specialist equipment will also be available for use on a course-by-course basis. The centre also boasts a video-conference link to the operating theatres in the Manchester Royal Infirmary. The facility can comfortably accommodate up to forty trainees at a time and it is ideally located in the heart of the University campus and next to the Central Manchester NHS site.

Clinicians of any speciality who wish to deliver training will be able to hire the centre, which will also run a number of its own courses; from time to time these will be delivered in conjunction with major surgical instrument or device suppliers.

Manchester Collaborative Centre for Inflammation Research

The MCCIR is a unique collaboration between the University of Manchester, GlaxoSmithKine and AstraZeneca and will become a world-leading centre for basic and translational research into inflammation and inflammatory diseases.

Professor Tracy Hussell, formerly Professor of Inflammatory Disease at the National Heart and Lung Institute at Imperial College London, is Director of the centre. Professor Hussell says: "This new centre provides a unique opportunity to translate cutting edge hypotheses in inflammation research into critical patient cohorts working not only with the academic and medical resources of the University of Manchester, but also with pharmaceutical industry. We have been working hard to build the centre by recruiting the best investigative scientists at all levels, forging links with our translational and industrial colleagues and gathering interest from other potential partners in the future. I am hugely excited by the prospect of guiding it into a world-leading centre for translational research and innovation".

Professor Hussell's research examines the molecular mechanisms that restrain innate immunity in health, how it becomes perturbed in inflammatory disease and the consequences of returning to an altered equilibrium following its resolution. Her group has identified pathways responsible for disease exacerbation following lung viral infection and asthma, novel immune therapeutics that target more restricted aspects of inflammation and the concept of a dialogue between innate immunity and the epithelium. Understanding how the immune response is modulated at the tissue specific level will allow the development of novel methods to treat inflammatory disorders.

In addition to Professor Hussell, Professor Daniel Davis will become the MCCIR Director of Research. Professor Davis' research focuses on cellular communication via the immune synapse and novel nanotubes using state-of-the-art imaging techniques. Professors Hussell and Davis will be joined by Professor Andrew MacDonald, whose work focuses on environmental imprinting of antigen-presenting cells and Professor Mark Exley who examines the therapeutic potential of unique immune cells in different environmental niches. Dr Mark Travis and Dr James Fildes will also join the centre as Principal Investigators. Dr Travis is interested in immune regulation in the gut, in particular how self-harmful immune responses are prevented. Dr Fildes uses organ models and in vivo systems to investigate tissue-immune cell interactions, particularly in normal and diseased lungs.

With the arrival of such a strong contingent of investigators and the support of the University of Manchester, GSK and AstraZeneca, the MCCIR aims to operate at the cutting edge of inflammation research and to make a substantial impact on our understanding of inflammatory disease processes that can be translated effectively into the identification and exploitation of novel therapeutic targets.

Recruitment: Environmental Research Group

The food we eat, the water we drink and the fuel that powers our industries are all dwindling resources that we harvest from the world around us. As human populations expand and natural areas are converted to farmland and cities, we lose the services that nature provided for free. Our expanding cities have become ecosystems in their own right with their own unique urban ecology. Global changes in climate alter species ranges causing the loss of some species and allowing pathogens and parasites to colonize new areas and new host populations.
To address these challenges, the Faculty has created a new Environmental Research Group. This group brings together our current expertise on environmental issues, and has also been the impetus for an expansion of environmental research, through a programme of recruitment.

We are delighted to welcome new staff in both Environmental Research and Evolutionary Biology. This expansion of Environmental and Evolutionary research represents a significant investment by the Faculty of Life Sciences that will allow us to address the global challenges of the 21st century, both by focusing our research and by providing novel and exciting teaching to our undergraduates.

Through our new recruits, and our new research group, which will extend our cross-disciplinary work with other parts of the University, the Faculty will make Manchester the place to come to study and do research in environmental biology.

Prof Richard Bardgett,
Professor of Ecology

Richard will be moving from his current role as Professor of Ecology at Lancaster University to become Professor of Ecology in the Faculty of Life Sciences. Richard previously worked at the University of Manchester as a Lecturer in Environmental Biology until 1999.
Richard's research is broadly concerned with understanding the role that plant-soil interactions play in regulating the structure and function of terrestrial ecosystems, and their response to global change. Much of his research is currently focused on understanding how interactions between plant and soil microbial communities influence soil carbon sequestration and nutrient cycling, and how such understanding can be integrated into sustainable land management. Most of this research is field-based and is carried out in a range of terrestrial ecosystems around the world. At Manchester, he is keen to develop new approaches to understanding how changes in taxonomic and functional diversity of soil microbial communities influence carbon and nutrient cycles under global change.

Dr John Fitzpatrick,
Lecturer in Animal Evolution

John will soon be joining the Faculty as a Lecturer in Animal Evolution. Previously, John was an ARC Postdoctoral Research Fellow in the Centre for Evolutionary Biology at the University of Western Australia.
John is interested in how sexual selection operates in a range of organisms, including fishes and marine invertebrates. Much of his work has focused on how sexual selection influences the evolution of reproductive behaviours and traits (e.g. genitals, sperm). He has studied species with a range of mating behaviours, including species that exhibit strict genetic monogamy, flexible mating tactics, and discrete alternative reproductive tactics. Increasingly, he applies comparative techniques to disentangle the selective forces that drive trait evolution and to assess the rate of reproductive trait evolution in marine and freshwater organisms. In the coming years, John's research aim is to arrive at a better understanding of how selection acts on reproductive traits in marine invertebrates (sea urchins, mussels and clams) and elasmobranchs (sharks, skates and rays).

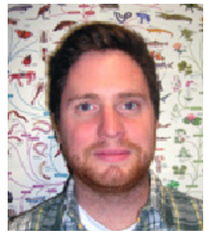
Dr R. 'Tucker' Gilman,
Lecturer in Environmental Biology

Tucker earned his PhD in Zoology working with Tony Ives at the University of Wisconsin in Madison, and was a postdoctoral fellow at the US National Institute for Mathematical and Biological Synthesis (NIMBioS) in Knoxville, Tennessee. His fundamental research interest is in understanding how species evolve in response to changes in their environments, including evolutionary changes in the species with which they interact, and how that evolution can affect community structure. His published work includes studies of host-parasite coevolution, processes of speciation and species collapse, and the evolution and ecology of plant-pollinator mutualisms during climate change. In addition to continuing work in these areas, he is currently working on models to understand the evolution of maternal investment and sexual imprinting strategies, and to understand how evolutionary change in these strategies may impact ecological systems

Dr Jennifer Rowntree,
Independent Research Fellow

Jenny moved from the University of York to join the Faculty earlier this year. After completing a PhD in Manchester, Jenny worked as a conservation officer at The Royal Botanic Gardens, Kew. She returned to Manchester as a postdoctoral researcher before starting a research fellowship in York.
Jenny is a plant evolutionary ecologist interested in the genetics of species interactions, the value of genetic diversity in ecological communities and in the provision of ecosystem services. She maintains a broader interest in conservation biology from her time at Kew. Her work, which is funded by NERC, is currently focused on the ecological consequences of genetic variation primarily using a parasitic plant – host plant system. She is also interested in plant-pollinator interactions.

Dr Rob Sansom,
Independent Research Fellow



Rob completed his postdoctoral research at the University of Leicester and gained his PhD from the University of Bristol and the Natural History Museum.
Rob's research, which is funded by NERC, covers three main areas; phylogeny and the fossil record, experimental decomposition and fossil formation ('taphonomy') and the origin and early evolution of vertebrates. The unifying theme is investigating how the limitations of the fossil record affect our ability to reconstruct phylogeny, and subsequently, infer how and when major groups of organisms evolved. Rob uses a combination of experimental, theoretical and specimen-based analyses to study the fundamental taphonomic processes of death, decay and preservation involved in fossil formation. The data provided can transform our interpretation of the anatomy and evolutionary significance of key fossils and subsequently reshape our understanding of evolutionary events.

Dr Susanne Shultz,
Independent Senior Research Fellow

Susanne recently joined the faculty as a Royal Society Dorothy Hodgkin Research Fellow. From January 2013 she will hold a Royal Society University Research Fellowship. Her fellowship was previously based at Oxford University and prior to this, she was a lecturer in Biological Sciences at the University of Liverpool. Her thesis work at the University of Liverpool investigated the relationship between prey investment in anti-predator defences and predator foraging behaviour.

Susanne's current research, which is funded by the Royal Society, focuses on the evolution of cooperative sociality and behavioural flexibility and linking behavioural evolution with cognitive architecture. The objective of the research is to understand what makes primate sociality distinct from other taxa and why and how humans have been able to develop large complex societies. To do this, Susanne is investigating evolutionary trends in brain size and architecture, developing network theory to evaluate social complexity and also using Bayesian statistics to identify macroevolutionary trends in behavioural evolution.

MIB rebrands as Manchester Institute of Biotechnology

The Manchester Institute of Biotechnology celebrated its rebranding through a series of events held during the first week in November. The MIB's Director, Nigel Scrutton, commented: "Our research strategy is focused on emerging areas of excellence in the wider biotechnology field. The establishment of multi-skilled interdisciplinary teams has generated unique capabilities that have placed us in a strong position to translate this knowledge towards biotechnological application. The Manchester Institute of Biotechnology reflects our leading research activity in many areas of biotechnology, including medical biotechnology and therapeutics, and industrial biotechnology whilst making a bold statement about the research focus and future of the Institute".

Researchers in the MIB work across a broad spectrum of disciplines, from fundamental through translational to discovery, Research is geared towards understanding the basic principles of biology, chemistry and bioengineering to ensure advances in biotechnology that will have an impact in areas such as human health, the energy economy, food security, industrial transformations and the environment.

The new MIB was presented to colleagues from across the campus, and to representatives from RCUK and academic and industrial collaborators. Professor Dame Nancy Rothwell initiated proceedings, which included a talk on 'Biotechnology in context', by Professor Douglas Kell, Chief Executive of BBSRC and resident of the MIB. This was followed by a series of talks on "Perspectives – pipelines from discovery through innovation" highlighting the societal and economic impact of their research.
A research conference was also held highlighting some of the big science stories that have appeared recently together with seminars introducing new Chair appointees Professor Eriko Takano (Chair of Biotechnology, FLS) and Professor Rainer Breitling (Chair of Systems Biology).
In November the MIB opened its doors to 200 A-level students from 12 schools/colleges from across the North of England providing them with a unique opportunity to visit a world class interdisciplinary research institute.

Students witnessed and participated in a number of activities throughout the day including interactive research stands followed by guided tours of the research laboratories with an opportunity to talk with researchers about their work. MIB postdocs and research students developed a number of laboratory demonstrations that covered topics as diverse as NMR, protein expression and robotics.

A variety of interactive stands were also prepared that showcased the rich array of MIB research from the developing enabling technologies (including micro fluidics, nanotechnology and spectrometry/ spectroscopy), protein science and genomics through to systems and computational biology.

Rosalind Le Feuvre, MIB's Research and Planning Manager commented "A distinctive feature of the University is its commitment to a social responsibility agenda. This ethos is embedded in our outreach activity at the MIB and we are committed to engaging with our wider community with the aim of increasing awareness, interest, and understanding of science and hopefully inspiring the next generation of scientific leaders".

Compelling evidence that brain parts evolve independently

Dr Reinmar Hager from the Faculty of Life Sciences, working with scientists in the United States, has found compelling evidence that parts of the brain can evolve independently from each other. It's hoped the findings will significantly advance our understanding of the brain.

The unique 15-year study with researchers at the University of Tennessee and Harvard Medical School also identified several genetic loci that control the size of different brain parts.

The aim of the research was to find out if different parts of the brain can respond independently of each other to evolutionary stimuli or whether the brain responds as a whole. Unlike previous studies, the researchers compared the brain measurements within just one species. The brains of approximately 10,000 mice were analysed. Seven individual parts of each brain were measured by volume and weight. The entire genome, except the Y chromosome, was scanned for each animal and the gene set for each brain part identified.

Dr Hager compared variation in the size of the brain parts to variation in the genes. He found that the variation in the size of brain parts is controlled by the specific gene set for that brain part and not a shared set of genes. He also compared the measurements for each mouse to the overall size of its brain. Surprisingly he found very little correlation between the sizes of the brain parts and the overall size of the brain.

Dr Hager said "If all the different brain parts evolved as a whole we would expect that the same set of genes influences size in all parts. However, we found many gene variations for each different part of the brain supporting a mosaic scenario of brain evolution. We also found very little correlation between the size of the brain parts and the overall size of the brain. This again supports the mosaic evolutionary hypothesis."

Using the data collected from the mice, Dr Hager and colleagues analysed the genes that influence the size of the brain to the genes that control the size of the body. They wanted to find out how independent size regulation of the brain is to that of the body. They found evidence that the size of the brain is governed by an independent gene set to the one that controls the size of the body. Again they found vey little correlation between variations in the size of the body and the brain. The evidence means that overall brain size can evolve independently of body size.

Following this research more work will be carried out to identify the specific genes that underlie the size of different parts in the brain Dr Hager said: "If we can identify the specific genes that cause variations in the size of brain parts then there will be big implications for researchers looking at neuronal disease and brain development. We hope this research will significantly advance our understanding of the brain."

A paper entitled "Genetic architecture supports mosaic brain evolution and independent brain-body size regulation" was published in Nature Communications in September 2012.

Faculty Research Symposium

September saw the annual Faculty Research Symposium. As always, the symposium showcased scientific excellence and provided the opportunity to welcome new post-graduate students to the Faculty. Over 800 participants from the Faculty and the University as well as some special guests attended.

Outstanding oral presentations were given by the short-listed post-doctoral and post-graduate researchers as well as by the FLS Researcher of the Year, Hilary Ashe, who spoke about her work on "Cell fate specification in Drosophila". The coffee and lunch breaks offered the opportunity to enjoy the impressive range and quality of the science displayed in over 90 posters presented by the second year postgraduates.

The Symposium was rounded off by awards for the best presentations of post-doctoral and post-graduate publications. The prizes went to Chris Pudney (post-doc) and Nigel Hammond (post-grad), while the prize for best poster went to Nicholas Zoulias and Beatriz Rodriguez Grande won the prize for the best physiology. Four runner-up poster prizes were awarded to: Thomas Wood, Katie Murray, Heather Davies and Daniel Ng.

Another highlight of the Symposium was this year's University of Manchester Intellectual Property (UMIP) awards, which were

selected by Ian Kimber, (Associate Dean for Business Development), Rich Ferrie (UMIP), Arnaud Garcon (UMIP) and the FLS Business Development team (Vicky Hand and Zoher Kapacee).

The prize for 'best industrial collaboration' was awarded to Kathy Hentges. This was based on the enthusiastic support from the company partner (Syngenta) due to Kathy's positive approach and on-time delivery. The 'most promising new innovation' prize was awarded to David Brough. His selection was based on a commercialisation programme that is most likely to succeed and generate impact. Other factors included the topic selection and David's enthusiastic attitude towards commercialising his idea.

First Prize winner in the Lay Summary Writing Competition, which recognizes and rewards the important skills of communication and disseminating current, topical and cutting edge science to a general audience, was Joseph Robertson for 'A New Weapon for Fat Fighters'. The three Runner-up prizes were awarded to Louise Kearney, Oliver Freeman and Natasha Bray. Last but not least, the Zeiss photography competition winner was Nigel Hammond, for his image of 'Successive waves of cell proliferation within the hair follicle bulb', which was also featured on the cover of September's issue of the Newsletter.

Showcasing the spectacular side of science

With nearly 2,000 visitors, 'Science Spectacular' sparked off this year's Manchester Science festival with a whole day of interactive family fun created by researchers and students at the University of Manchester.

Whitworth Hall and Manchester Museum were filled with activity as researchers from across four faculties came out of their labs to enthuse others about science. Visitors had the chance to get involved and talk to real scientists. One visitor commented: "I think it is one of the best things I have ever attended".

Scientists from the Faculty of Life Sciences had a huge presence within the 35 research stands, showcasing a wide variety of activities. At the 'Turtle Power' stand visitors met Tina and Trudy the yellow-bellied slider turtles and learned about their amazing breath-holding abilities and how this could help heart research.

Holding a real animal heart gave hands-on learning a whole new meaning at the 'Your Heart Matters' stall, while the 'Worm Wagon' brought visitors face-to-face with gut parasites and explained how they can affect our immune system. At the 'Creative Mind' stall visitors were invited to add their own colourful brain connections to an evolving brain model to visually represent the brain's complex nature, highlighting the importance of research into neurodegenerative diseases.

Visitors were spoilt for choice with many other exciting activities on offer including plants that bite, Frankenstein fruitflies and the fascinating world of the cell and its inner transport networks, to name just a few. Visitors could also extend the science fun by taking home some 'Biology in a Box' with goodie boxes explaining the use of animal models in science and an entertaining board game about the circulatory system.

The success of the day was a result of the hard work, time and effort given by all researchers, staff and volunteers who participated in this ambitious event. It was a huge reward for all to see children, teenagers, adults and scientists coming together to enjoy science.

World Heart Day

"It's extra awesome here!" was how one youngster described his visit to an event run by Clare Austin and Ann Canfield researchers from the Institute of Cardiovascular Sciences (Faculty of Medical and Human Sciences and Faculty of Life Sciences) to celebrate World Heart Day. The event, held at The Museum of Science and Industry in October, comprised a series of interactive and often messy activities designed to inform and enthuse both the young and old about the cardiovascular system in health and disease.

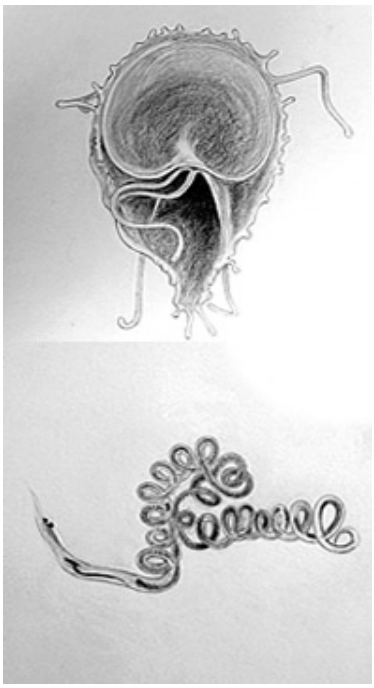
Participants began their tour of the cardiovascular system with a display of animal hearts where they were encouraged to don surgical gloves and touch real hearts. Despite the initial reactions of many, this was perhaps the most popular part of the event and was an excellent way of explaining cardiac anatomy and its relation to its function.

Heart rate and its modulation were demonstrated in both water fleas (where the beating heart can be seen down a microscope) and man (an exercising, and ultimately very tired, PhD student!).

The importance of a healthy vascular system was highlighted by models where participants were invited to push 'blood' through normal and diseased arteries; this preceded a demonstration by a consultant cardiologist of clinical treatment of arterial disease. A range of other interactive models, games, dressing up and colouring further engaged our younger visitors.

News in brief

The Beast Within



Sheffield based artist Paul Evans has just unveiled the results of a collaboration with Dr Sheena Cruickshank, Prof Kathryn Else and Prof Matthew Cobb, from the Faculty of Life Sciences. In consultation with the scientists he has created five large (1.5m x 0.5m) drawings, in graphite, of human parasites. These were exhibited as part of a special exhibition at Manchester Museum during the Manchester Science Festival, and four of the drawings will soon be appearing permanently inside the Faculty's buildings.

Paul explained his idea: "By drawing these parasites on a human scale, or at least on the scale of human children, I hope to create a visceral contrast between the strange beauty of these organisms and the horrific nature of their impact upon human beings. This beauty is especially apparent when seen from a safe distance through the medium of the electron microscope. Though there might be allusions, perhaps, to the imagery of science fiction and Hollywood body horror in these drawings, the actual experience of coming to terms with these organisms is significantly more challenging. When I visited the Faculty of Life Sciences at the University of Manchester I was shown a video of a whipworm infestation in a young girl's intestines. This image will live with me forever."

Further information on this project can be seen on the Manchester Immunology Group website: www.mig.ls.manchester.ac.uk/news

PhD student wins Society of Biology Award

Congratulations to Faculty of Life Sciences' PhD student Liz Granger who has won the Society of Biology & Wellcome Trust Science Communication Award 2012, in the 'New Researcher' category.

Liz was selected for the award as a result of her contribution to public engagement, as demonstrated through her projects during Science Week and Community Open Days and her aim to increase awareness through a range of on-line resources and social media.

The Society of Biology Science Communication Awards recognise and reward outreach work carried out by biologists to inform, enthuse and engage the wider community. Sue Thorn, Chair of the judging panel, said: "The standard of entries this year was extremely high, and we had applications from many talented communicators. What struck us about Liz's application were her innovative ideas and the variety of activities she was involved with. She had some great projects in which she understood how to tailor for different age groups, and went into depth about the science when this was appropriate to the audience."

Liz received her award in October at the Society of Biology Science Communication and Photography Awards Ceremony. She joins other Faculty of Life Sciences winners Emily Robinson (2011 winner) and Ceri Harrop (2009 winner).

Wellcome Trust's new appointment

Dr Erinma Ochu, who had an international impact by leading the mass sunflower planting as part of Manchester Museum's celebration of Alan Turing, has been awarded a Wellcome Trust Engagement Fellowship.

The fellowships are part of the Wellcome Trust's strategic vision of working with researchers and the creative industries to help societies explore and become involved with biomedical science, its future directions, its impacts on society and the ethical questions that it brings.

Erinma will explore innovative ways to embed biomedical science in people's everyday lives. She will investigate how 'citizen science' - science carried out by the public, for example in the mass planting for Turing's Sunflowers, which invited the public to grow sunflowers in order to analyse mathematical patterns in nature – can contribute to biomedical research challenges. Working with high profile mentors, researchers and the Wellcome Trust Arts Awards team, she will also explore the role that new technologies and interactive storytelling can play.

Erinma already holds an honorary research fellowship in the Faculty of Life Sciences. She will work in partnership with the Museum of Science and Industry (MOSI) and various festivals to test out new approaches.

Honours for two Faculty staff

Congratulations to Tony Day and Rob Lucas from the Faculty of Life Sciences who have recently been made members of the Academia Europaea. Academic Europaea is a European, non-governmental association acting as an Academy. Members are eminent, scholars from across Europe who collectively promote learning, education and research. Founded in 1988, with over 2,000 members, Academia Europaea includes leading experts from a wide variety of disciplines including, physical sciences and technology, biological sciences and medicine, mathematics, humanities, social and cognitive sciences, economics and law.

Membership is by invitation only, following a peer review selection process. It is an honour that recognises individual's international scholarship. Martin Humphries, Vice-President and Dean of the Faculty said: "Tony and Rob's achievement is recognition for the quality and impact their research has had over many years. Election to Academia Europaea is highly competitive, with only 300 candidates being selected each year from a pool that covers all academic disciplines. For two Faculty scientists to be elected in one year is therefore extremely impressive and this tells us a lot about the esteem in which they are held by their peers".

Editor's Note:

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

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Designed by the Faculty of Life Sciences PhotoGraphics Unit
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Front cover: *An early Drosophila embryo photographed by Annick Sawala, using six different colour patterns. The small dots are DNA; the vertical stripe represents the activity of the transcription factor MAD, while the seven horizontal stripes reveal the activity of the ftz gene, which is involved in the appearance of the insect's segments.*