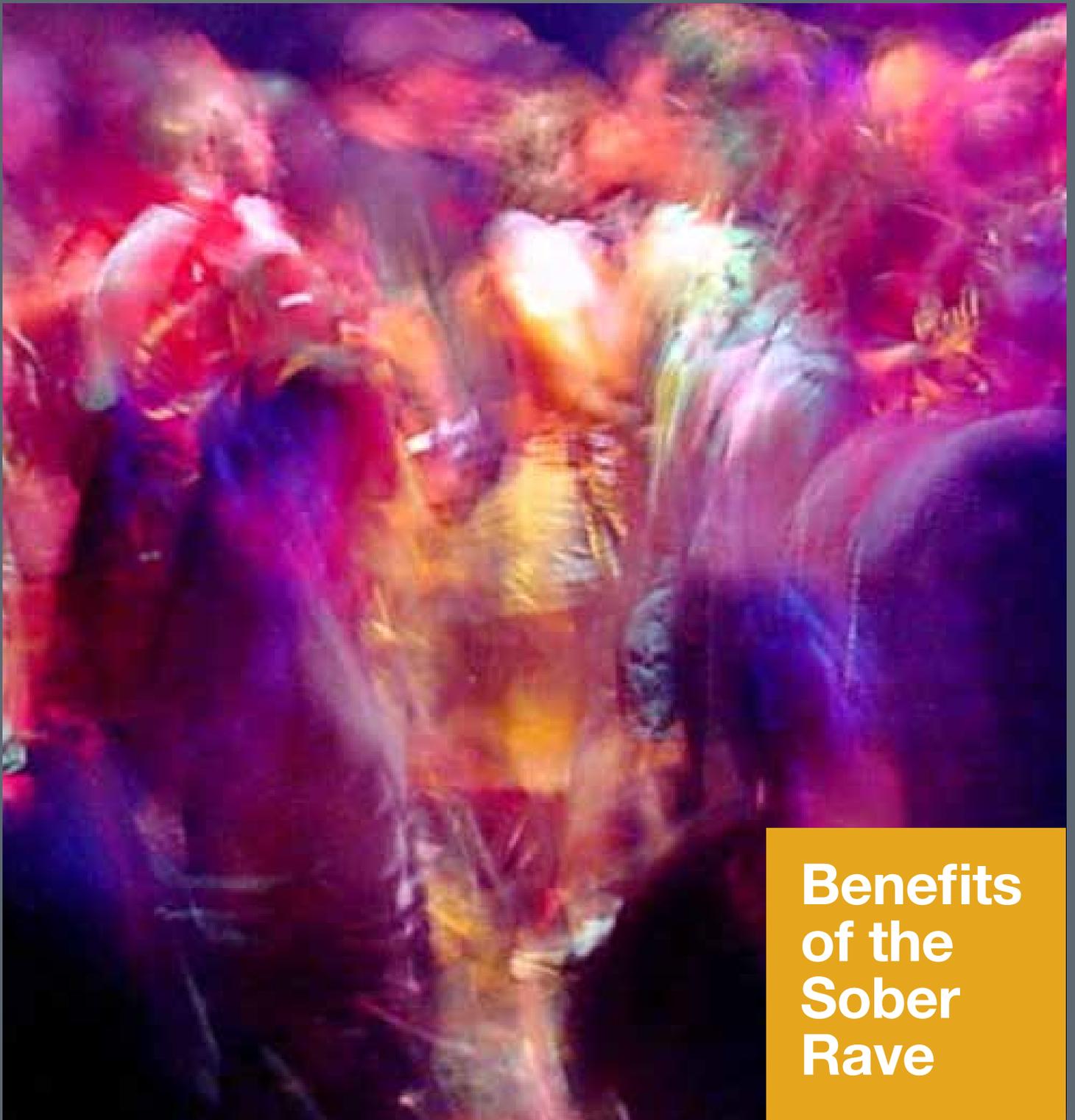


# FACULTY AND RESEARCH UPDATE

Faculty of Health & Life Sciences February 2017



**Benefits  
of the  
Sober  
Rave**

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Welcome to the first edition of the Faculty and Research Update for 2017. This newsletter covers the research stories, events, latest teaching and staff news from the Faculty of Health and Life Sciences. Semester two is now upon us and we look forward to guiding some of our students to the end of their studies and graduation in June.

As a quick introduction to the guest editor - I am the Course Leader for the BSc (Hons.) Equine Science and Equine Science and Thoroughbred Management degrees, run in partnership with Abingdon and Witney College. I have been involved with equine research since 2006, and my interests mainly lie in learning theory, behaviour and rider road safety. I moved from Cornwall in October 2015, bringing with me horses, cats, chickens and a husband.

## Welcome

Before I started in the position, I did not even know Oxford Brookes ran equine degrees, so we are now concentrating on spreading the good news further afield into the South West, where I was born and bred.

In this issue the lead story is an interesting introduction to a collaborative investigation into sober raving. Dr Emma Davies, a lecturer in Psychology, is working with five other institutions examining the attitudes and perceptions of alcohol-free music events. As attending music events is part of the life of most students, I feel this will be a very exciting and informative piece of work. Also included is an update on the University's involvement in international diabetes research, and the latest details of this year's ever popular Science Bazaar.

You can also read about forthcoming changes to the organisation of the Faculty resulting from exciting new developments in partnership with Oxford University Hospitals NHS Foundation Trust and Oxford Health NHS Foundation Trust to create a new School of Nursing and Midwifery.

To keep future editions interesting and relevant we require a constant supply of news stories, so please keep sending them to:

**[fhls-news@brookes.ac.uk](mailto:fhls-news@brookes.ac.uk)** . You can also keep up to date with the latest HLS news on our web page: **[www.hls.brookes.ac.uk/news](http://www.hls.brookes.ac.uk/news)**

**Rose Scofield, Course Leader BSc Equine Science/Equine Science and Thoroughbred Management**

Cover photo: Rick Noble - Sober Raving

# Join the sober-raving revolution!

Lecturer in Psychology, **Dr Emma Davies**, has recently tested the realm of sober-raving and has embarked on a collaborative investigation into its benefits. Emma and colleagues from five other institutions will be researching attitudes and perceptions of alcohol free music events, as a means of reducing alcohol consumption in young people.

Prevention programmes that warn young people of the harmful consequences of drinking have been shown to be largely ineffective. Although they can impact attitudes and knowledge about alcohol, they often do not have an impact on behaviour. Young people are generally aware of the risks, but see drinking as a pleasurable part of their social lives and may even actively ignore health messages.

A further problem is the lack of credible alternative socialising opportunities not involving alcohol, meaning that people may 'default' to drinking. Non-drinkers, for example, often feel stigmatised, and may adopt strategies including pretending to drink when attending social events. In a recent interview study, university students told us that they wanted the option of alternative, credible non-drinking socialising experiences, where they don't feel pressured into drink.



Recently, there has been an emerging interest in alcohol free music and dancing events within the UK. One example is 'Morning Gloryville', which began in London in 2013, and claims to be the first to bring 'conscious clubbing' to the masses. Their events are held in nightclubs during the mornings, and they attract world renowned artists to play. All the elements of traditional clubbing are present, other than alcohol and other drugs. Events often include yoga, smoothies, coffee and glitter face painting. In 2016, 'Morning Gloryville' received an award from Alcohol Concern at the Zero Alcohol Awards for 'Best Zero Alcohol Initiative'. While there has been an amount of media coverage, there is a clear lack of academic research on this topic.

Together with colleagues from across the UK, and in Sweden and Slovenia, I have recently embarked upon a new project to explore whether these kinds

of events could be incorporated into university social calendars, such as during Freshers' Week. We plan to conduct a survey of people who have been to such events to find out what they get out of the experience. We will also find out the views of those who have not attended them before, incorporating descriptions and video clips from example events into the survey. Of particular interest will be to determine if they offer a credible alternative socialising experience by exploring attitudes and perceptions. Furthermore, they may be seen as safer for women, and acceptable to those who don't drink for cultural reasons. It is also important to determine whether people may use alternative substances at such events, or bring their own alcohol. This evidence will make a novel contribution to the literature, and will be used to inform subsequent interventions. In future research we will be exploring whether attending alcohol free music events has the potential to reduce total alcohol consumption over a period of time, including during other socialising occasions, perhaps by allowing individuals to see themselves as able to have fun without excessive drinking.

There are a number of unanswered questions in this respect at present, but we hope to shed some light on this interesting research area during the course of 2017.

**Emma Davies**

We are happy to hear from anyone else who would like to join the project or to find out more: [edavies@brookes.ac.uk](mailto:edavies@brookes.ac.uk)

 [@I\\_am\\_emma](https://twitter.com/I_am_emma)

## Key collaborators:

**Emma Davies**,

Oxford Brookes University, UK

**Kyle Brown**,

Birmingham City University, UK

**Kimberly Hill**,

University of Northampton, UK

**Mattias Johansson**,

Örebro University, Sweden

**Joanne Smith**,

Northumbria University, UK

**Sanela Talič**,

Institute for Research and Development UTRIP, Slovenia

# Public Engagement in Practice

Last semester Senior Lecturer in Midwifery, **Ethel Burns**, was awarded an internal University bursary to attend the Public Engagement in Practice training day run by the Royal Society in London. Here Ethel reflects on the event and what in particular she gained from the training.

The purpose of this one day course, held at the Royal Society in London on a crisp November day, was to develop skills when engaging with a lay audience, namely the public, about one's research. I was an eager beaver to learn new tips as not being a raving, or even a moderate extrovert by nature, I find it difficult to grasp that moment of eye contact with strangers in a public setting, and draw them into conversation. It somehow feels intrusive; I think why they should be interested in what I have to say, and fret that I may not pitch it at the right level

for people to engage with me. I was also interested to learn more about the key drivers and milestones around the thrust for researchers to actively engage with the public about our work.

The course was ably facilitated by two dynamic and experienced professionals, **Dee-Ann Johnson**, a communications consultant who runs a training company, and **Ceri Harrop**, a freelance biochemist. We were a fairly mixed group but most were scientists. Activities were varied and interspersed with short, pithy presentations. After a delicious lunch, each of us had to sketch an outline for a public engagement event that we had either been involved in and would like to improve upon, or might be planning to do, and present to two peers and one facilitator. The feedback from this activity was insightful and helpful.



The day did not disappoint! Key tips were: passion, preparation, pace, pitch, and just seize that first moment of opportunity.

**Ethel Burns**

## Brookes Biologist wins National Science Communication Award



Bio-Imaging Unit Researcher **Dr Louise Hughes** MRSB won a national Science Communication Award at the annual Royal Society of Biology's Science Communication Award Ceremony (October 2016), which is to celebrate science engagement work carried out by bioscience researchers from UK universities and institutes in order to inform and inspire the public.

Louise often brings science and art together in an effort to stimulate public interest in the biosciences, for instance she curated **Zoom: Worlds through the microscope**, an exhibition on display in the University's Glass Tank in 2015, which focused on using microscopes to view objects invisible to the naked eye.

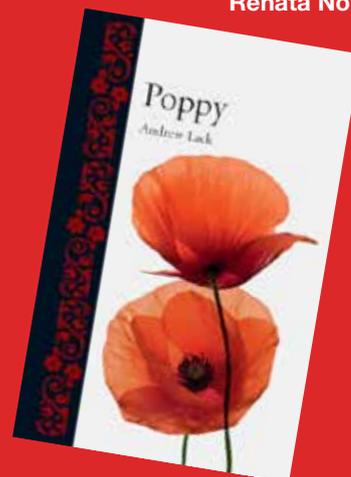
Louise said: "I feel overwhelmed, humbled and enormously enthused by winning the Royal Society of Biology Science Communication Award. Communicating our science and research, whether it is to peers, supervisors, students, schools or the general public, is a fundamental part of what and who we are as scientists."

Judge **Dr Steve Cross**, Wellcome Trust Engagement Fellow said: "Louise was a great example of thinking outside of everyday ways of doing engagement, and of going to meet new and underserved public audiences where they live, rather than expecting people to come to you." Dr Steve Cross continued: "The overall standard of the entries this year was higher than ever. It is great to see so many biologists taking their work out and engaging with public audiences about it. Our winners impressed by reaching audiences who don't normally get to meet biologists face-to-face, and by using their creativity and drive to make fantastic engagement happen."

**Renáta Novák**

**Congratulations to Dr Andrew Lack** who launched his new book, **Poppy**, at the end of November last year in conjunction with The War Beyond the Western Front exhibition in the Glass Tank. In his book Andrew Lack explores all aspects of one of our most familiar but declining flowers, combining history and biology with symbolic associations and connections with the arts. He describes why the poppy is so intimately associated with war and remembrance, and tells remarkable stories about the different varieties.

**Renáta Novák**



# Brookes' Annual **SCIENCE BAZAAR** is back!



Fascinated by physics? Captivated by chemistry? Besotted with biology? Whatever it is about science that you love most, you can learn and discover new things at the Brookes Science Bazaar – a free fun day for your family.

We love to show children the amazing research we are currently doing by inviting our visitors to get involved throughout the day. We aim to have something for everyone and hopefully spark a few new interests along the way.

**We have mixed together some old favourites with some brand new activities, aimed at grabbing the attention of children of 5-12 years (and adults too!):**

### **We Will, We Will Plant You:**

Think plants aren't cool? Our Botanical Society begs to differ! Humans need plants more than plants need them. The OBU Botanical Society presents these little wonders, and takes you into the magnificent and diverse world of plants.

### **Selfies to Save Endangered Species:**

Social media can be a source for good, but many cute species are sadly paraded as pets. Help to change that by taking a selfie with our slow loris mascot to help save them in the wild!

### **Outbreak:**

See how viruses spread and learn how they can help us to make vaccines!

### **The Handy Family Tree:**

Would you like to learn more about your family? Make a crafty family tree out of your own handprint, and add fun facts along the way!

### **Science Rocks:**

Fancy yourself as a musician? Come test out our drum kit and learn all about music therapy from our Sports department!

### **Your Skeleton:**

Your skeleton is amazing! Come and learn about all the different bones in your body and how they fit together to make you so strong!



Along with many, many other exciting activities (including rocket cars!), you can delve into all the realms of science. Tick off the stalls as you go around with our interactive brochure, to make sure you don't miss anything.

**Jessica Wragg**

**So come along and enjoy a free fantastic day out for the whole family. There's no need to book, just pop along anytime!**

# All Together Better Health

## Brookes co-hosted seminal international conference on healthcare

Between the 6-9 September 2016, Oxford Brookes jointly hosted the 8th international conference on Interprofessional Practice and Education (IPE); the first time in 10 years it has been hosted in Europe.

The conference, **All Together Better Health (ATBH)**, is the leading global IPE conference, bringing together healthcare providers and industry leaders, educators, students and policymakers to advance interprofessionalism locally, regionally and worldwide.

Oxford Brookes hosted the conference together with the University of Oxford and The Centre for the Advancement of Interprofessional Education (CAIPE). The event built on the content of previous ATBH conferences, reflecting the contemporary focus on improving healthcare for the population.



The conference brought together over 10 influential guest speakers for sessions on interprofessional practice, including Dame Sue Bailey, Consultant Child and Adolescent Forensic Psychiatrist and former President of the Royal College of Psychiatrists, Julia Samuel MBE, founder patron and trustee of Child Bereavement UK, and Lord Victor Adebowale CBE, Chief Executive of the social care enterprise Turning Point.

Students attended and had the opportunity to take part in a Health and

Social Care Team Challenge with others from around the world, presenting a patient case scenario to a panel of experts.

**Liz Westcott**

Organising committee in photo above:

**Dr Ann Ewens** (Oxford Brookes).  
**Professor Bill Fulford** (University of Oxford).  
**Dr Lucy Fulford Smith** (University of Oxford).  
**Dr Richard Gray** (CAIPE Chair and Chair of organising committee).  
**Professor Ashok Handa** (University of Oxford)  
**Elizabeth Howkins** (CAIPE & conference treasurer).  
**Helena Low** ( Past CAIPE Vice Chair).  
**Professor Ed Peile** (Emeritus Professor of Medical Education, University of Warwick).  
**Dr Liz Westcott** (Oxford Brookes University and Vice Chair of organising committee).

# Special Effects Make-up to Enhance Student Experience

In November, **Justin Cule and Mairead O'Neill from the Clinical Skills and Simulation Team at Marston Road Site attended a Casualty Simulation Course at the Academy of Professional Development, a centre of excellence for medical, military and corporate education in Loudwater.**

The 2 day course was run by Trauma FX, who specialize in the field of special effects make-up and casualty simulation retaining clinical accuracy, resulting in credible and

believable mock-ups of various injuries and medical conditions. Justin and Mairead learnt moulage skills ranging from minor burns, rashes, cuts and bruises, progressing to full body trauma, which included severe burns, lacerations and open fractures.

Justin said: "This has added an extra edge to our simulations, as we were then able to take the skills learnt and put them to use soon



after the training at the Fire Service College in Moreton in Marsh. We added moulage to live actors as well as simobodies to ensure that the scenarios and the incident scene created for the paramedics and firefighters looked more realistic. We are also using this new



skill within the lab setting on campus. Our first major incident occurred with a simulated explosion in Skill Lab 3 at Marston, where we used not only moulage but also added scene-specific sounds to create an even more realistic environment. As a result, we received great feedback from the students; they all commented on how lifelike and convincing everything was, and how this put them in a completely different mind-set in comparison to normal practicals. Mairead and I believe that combining this new trauma make-up skill with the creation of scenarios will help us deliver vital realism along with modern, accurate and convincing simulated injuries in order to better prepare our students for a variety of roles in health care. This will take our teaching to the next level and greatly enhance student experience."

**Justin Cule & Renáta Novák**



# OxINMAHR update



## M for Midwifery

Formerly known as OxINAHR, the institute has since changed its name to include Midwifery and is now called the 'Oxford Institute of Nursing, Midwifery and Allied Health Research' (OxINMAHR).

OxINMAHR hosted events for both 'Stop the Pressure' Day on Thursday 17 November and 'World Aids' Day on Thursday 1 December. We will continue to hold such events for each of the major world and national health days.

The first INTALECA (Incubating Nursing Talent and Leadership: Early Career Approach) interns have been recruited and undertook their orientations in December. They have since been matched to high performing researchers.

## What is INTALECA?

INTALECA represents an aspirational new approach to identifying and developing outstanding talent in nursing and allied health. It takes a proactive stance in seeking out nursing and therapy students demonstrating high academic potential very early in their career, with the aim of producing a class of doctorally qualified graduates within 5-6 years of initial registration as health professionals.

Students invited to join the programme will enter into an exciting clinical academic pathway, and be supported to obtain the required leadership and research skills to meet the challenges that lie ahead for the NHS, and for the wider healthcare context. They will gain primary research experience, potentially to the doctoral level alongside at least five years of clinical experience. Furthermore, students will be involved in the valuable establishment of peer-reviewed publications and leadership portfolios throughout the duration of their programme.

INTALECA is proudly supported by Health Education England Thames Valley and OxINMAHR.

Tracy McAteer

In November we hosted **Dr William Padula**, from the Bloomberg School of Public Health/John Hopkins University. He is working with **Professor Debra Jackson**, director of OxINMAHR, and the PIPOx team on developing a strong impact case study around pressure injuries. **Dr Graeme Smith** of Napier University also visited to work on the PIPOx projects.

**Professor Kim Usher** from the University of New England, Australia, visited in December to collaborate with **Professor Jackson** on a number of Projects. Whilst visiting **Professor Usher** ran a two-day writing retreat for the OxINMAHR PhD Students.



## National Vote Congratulations

After a national vote **Dr Verna Lavender** was elected to the Board of the UK Oncology Nursing Society (UKONS) at their annual conference in Brighton last November. In addition to contributing to the function of UKONS

(contributing to national cancer policy documents and organising national conferences and masterclasses), Verna has been appointed as a member of the UKONS Research Committee and will be leading the UKONS Haemato-oncology Members Interest Group.

Verna was also invited to represent the European Oncology Nursing Society (EONS) to work with the European CanCer Organisation (ECCO) to produce European Quality Care Guidelines for people with sarcoma. These guidelines are one of two guideline documents produced by ECCO making recommendations about the essential requirements for quality cancer care across Europe; this activity is currently one of EONS main workstreams. The guideline document was submitted for publication in the European Journal of Cancer, and Verna joined the ECCO team to launch the guidelines at ECCO Congress in Amsterdam last month.

Renáta Novák

# Canada Collaboration

## Commercialising our Research

Oxford Brookes is working with the Entrepreneurship Practice and Innovation Centre at the Odette School of Business, University of Windsor (UW) in Canada, on an international educational collaboration to increase staff and students' academic experience with international, multidisciplinary and experiential learning.



The Canadian students were offered the opportunity to apply their skills and knowledge in real life business situations. The OBU Bioscience research staff and students gained an understanding of how to translate their research

This initiative is a unique opportunity to respond to the demand of increasing globalisation with the development of communications technology, making it possible to interact with business partners and clients worldwide. Additionally, it responds to an increased need for multidisciplinary experiences that will give students an advantage when trying to enter employment.

Our researchers working in partnership with bioscience students from several programmes came up with a wide range of entrepreneurial ideas, such as: personalised medicine, a virus-like particle vaccine, monetizing pMMO in plants, and developing and selling a Canadian Ecological Toolkit for mapping habitats. The ideas with the potential for commercialisation came from **James Watkins, Noah Mesfin, Verena Kriechbaumer** and **Bob Possee**. These researchers and their BSc student partners worked with MBA students, as well as law and nursing students from Canada supervised by **Professor Francine Schlosser**. The Odette School of Business students provided commercialisation advice for the Brookes discoveries and entrepreneurial ideas.

into business. Our bioscience staff and students not only gained experience on how to best explain their ideas to non-scientists, but also an understanding of market competition, product positioning, potential partners/suppliers, scale-up issues, and intellectual property and contracting issues related to their ideas. Students developed entrepreneurial skills which we know are of particular interest to employers, and a better understanding of creativity and innovation within the international business environment.

We welcomed the Canadian students to Brookes for a week last November. Their visit culminated in a presentation event introduced by Linda King. The evening provided the opportunity for a 'mid-term' joint presentation between the OBU and UW students. We hope to benefit the business

community through seeing the value in international, multidisciplinary and experiential learning and work with academia to facilitate this type of educational experience for students.

A memorandum of understanding has been signed for the collaboration between the two universities, which includes the possibility of exchange of scholars and professional staff members; the exchange of students for study and research at both universities; the promotion of joint research projects in the fields of interest; the exchange of research materials and information; and the promotion of Articulation programs. We hope to find ways to continue this innovative collaboration and to take our students to Canada.

This project was run as an Independent Study (Hons) module this year and the department will be running it again the same way next year. You can read more about the students' experience on the From Bio to Business blog. Also, if you are interested in getting involved with this exciting collaboration, please contact **Deborah Pearce** or **Anne Osterrieder**.

**Deborah Pearce**



Students from Canada arrive at Oxford Brookes. Front Sara Grace Donally, University of Windsor, Canada and Taha Nazir, Oxford Brookes

Photo: Richard Cave

# TRANSDIA:

Brookes researchers working at the forefront of international diabetes research



It has been estimated that over 700 people are diagnosed with diabetes every single day in the UK. Diabetes is a serious lifelong health condition affecting more than 415 million people worldwide. There is currently no known cure. Oxford Brookes University is a key collaborator in an international project known as TRANSDIA to tackle type 1 diabetes and benefit the increasing numbers of diabetic patients world-wide.

## TRANSDIA

Oxford Brookes University is a key collaborator in an international project known as TRANSDIA, which aims to establish an islet transplant programme in Mexico and to improve the programme's success in Mexico and the UK. This type of transplantation can reverse diabetes in selected adults, thus providing a dramatic improvement in their quality of life. In the long term, this innovative pre-clinical research project aims to evaluate the role of gene therapy in improving the outcome of islet transplantation by reducing immune responses. It will also investigate the use of co-culture with stem cells to increase the number of insulin-secreting cells within the islets. Advances made will benefit the increasing numbers of type 1 diabetes patients in Mexico, the UK and world-wide.

This collaboration involves Oxford Expression Technologies Ltd, Oxford Brookes University, the Centre for Molecular and Cell-based Therapeutics, the Oxford Islet Facility Consortium, TEC de Monterrey and the Organ Donor Network of the National Institutes of Health (NIH) in Mexico City. This project is one of four founded by the Newton Fund, which is part of the UK's aim to help with science and innovation partnerships in targeted developing countries. Professor Linda King, Oxford Brookes' Pro Vice-Chancellor for Research and Global Partnerships and lead for this project at Oxford Brookes, visited Mexico in October 2016 to meet with the partners and be part of the official launch of TRANSDIA.

For more information, please visit the official TRANSDIA website: [transdia.net](http://transdia.net)

"I was delighted to be able to visit Mexico City to take part in a symposium to launch this exciting international collaboration. The provision of quality human islets will also give us opportunities to increase research and innovation capacities in both the UK and Mexico to help overcome current challenges and improve transplantation success in the future."

**Professor Linda King,**  
Oxford Brookes' Pro Vice-Chancellor  
for Research and Global Partnerships



From the left, participants were **Fernanda Murgui-Meca** (CMCBT), **Dr Adam Chambers** (OET), **Professor Robert Possee** (OET), **Professor Linda King** (Oxford Brookes University), **Professor Paul Johnson** (University of Oxford), **Dr Stephen Hughes** (University of Oxford), **Mine Aksular** (OET), **Dr Juan Jose Plata-Munoz** (CMCBT).

**Sofia D'Abrantes**

## DIABETES

Diabetes is a debilitating, lifelong condition which causes a person's blood sugar level to become too high. There are two main types, type 1 and type 2 diabetes. The former occurs when the pancreas does not produce any insulin, while the latter occurs when the pancreas does not produce enough insulin, or the body's cells don't react to insulin.



Type 1 diabetes has been estimated to affect more than 35 million patients worldwide and is now the most frequent metabolic disorder affecting infants in Mexico. It can develop at any age, but usually appears before the age of 40, and especially in childhood. This disorder is thought to be caused by auto-immune destruction of the pancreatic islet cells that make insulin. Pancreas or pancreatic islet transplantation can reverse the diabetes soon after diagnosis, and annul the need for insulin to maintain a normal glucose concentration in the blood. This is the only option for those patients who do not respond to insulin treatment. Currently, Mexico does not have an islet transplant programme.

**Sofia D'Abrantes**

# Centres and Consultancy Update

## News from the Functional Food Centre

### Food Matters Live

For the third year running the Functional Food Centre (FFC) exhibited at 'Food Matters Live' at London's ExCeL Arena in November. This three-day event brings together professionals from across the food, health and nutrition sectors to address relationships between these sectors and also connections with the environment,



Helen Lightowler and Miriam Clegg at Food Matters Live

population health and wellbeing. This year the event was much busier with over 13,500 visitors flocking to hear about the latest research and attending the seminar sessions.

The FFC was one of over 600 organisations exhibiting at the event. Our stand was in the Research Pavilion alongside other UK Universities and research institutions.

Throughout the three days we experienced an increase in the number of visitors to the stand from last year, including both current clients and prospective ones enquiring about our services.

A big thank you to all the staff and research students who did a fantastic job manning the stand, showcasing the research we undertake and promoting the range of commercial services that we provide.

We are looking forward to going back next year!

**Helen Lightowler & Lis Ahlström**

### Nutrition Society Winter Conference, Royal Society of Medicine 6-7 December 2016

Staff and students attended the annual Nutrition Society Winter Conference titled 'Diet, Mental Health and Wellbeing' with presentations from the FFC by **Shelly Coe, Ameerah Almaski and Tyler Mayher**.

### New Staff for the FFC

We would like to welcome our new Post Graduate Research Assistant **Ify**



**Achebe** who started mid December and will be working alongside **Patricia Shaw** to deliver our commercial contracts.

## ENVIRONMENT INFORMATION EXCHANGE UPDATE

### Helping Improve Energy Efficiency in Community Buildings

EiE's final report on a four year project of energy advice and support to Oxfordshire community buildings demonstrated very large savings. The project named 'Enrich' ran from 2011 to 2016 engaging over 200 communities and providing over 130 energy assessments for village halls, churches, and sports pavilions. The project, funded by Oxfordshire's Trust for the Environment and the Patsy Wood Trust aimed to help reduce energy spend whilst also advising on improving comfort in community spaces. Challenges included prioritising improvements on limited budgets, estimating expected use by community members, and balancing management of the building with automated controls.

Their report found that 53.5% of recommended energy actions had been implemented within 7 to 18 months. From 2012 to 2016 the estimated carbon saving from supporting 132 community buildings was 1,218 tonnes of CO<sub>2</sub> and in monetary terms over £262,000 in energy cost reduction. Many of these energy actions were calculated at a low or nil cost, and the success of the project was aided by energy assessments being a requirement for access to TOE2 funding for more expensive building improvements.

EiE continues to work with community buildings in England advising on cost effective and sustainable improvements.



The community spaces are used for activities of all ages, from pre-school to over 80s table tennis

**Michael Esvelt**

# New Faculty Departments and Oxford School of Nursing & Midwifery

The departmental structure of the Faculty of Health & Life Sciences will be changing from 1 August 2017 as we launch our new School of Nursing & Midwifery.

Many colleagues will be aware of the changes in nursing, midwifery and allied health profession funding models, as well as the launch of new pathways for nursing education and other challenges facing the NHS. More than ever, we need to work closely with our NHS partners to successfully navigate these challenging times. Three years ago the Department of Health awarded Academic Health Science Centre status to the Oxford AHSC, one of only six in the UK. Oxford Brookes, represented by the Faculty, is the only modern university to be part of an AHSC. Brookes has played an increasingly important role within the Oxford AHSC and health ecosystem; just over a year ago we launched the Oxford Institute for Nursing, Midwifery and Allied Health Research (OxINMAHR) to strengthen and grow collaborative research with the AHSC partners; the University of Oxford, the Oxford University Hospitals NHS Foundation Trust (OUHFT) and Oxford Health (OH) NHS Foundation Trust.

Over the last few months, discussions have taken place with OUHFT and OHFT

about working to establish Oxford as one of the best places in the UK to study nursing and midwifery at all levels, to undertake world-leading research with impact on clinical practice and patient outcomes, and provide an excellent post-qualifying environment to help attract and retain staff within the local NHS Trusts. Out of these discussions arose the idea of the **Oxford School of Nursing & Midwifery (OSNM)**. The University Senior Management Team (SMT) and Governors have given their full support to establishing the School, as have both Trusts and the Oxford AHSC.

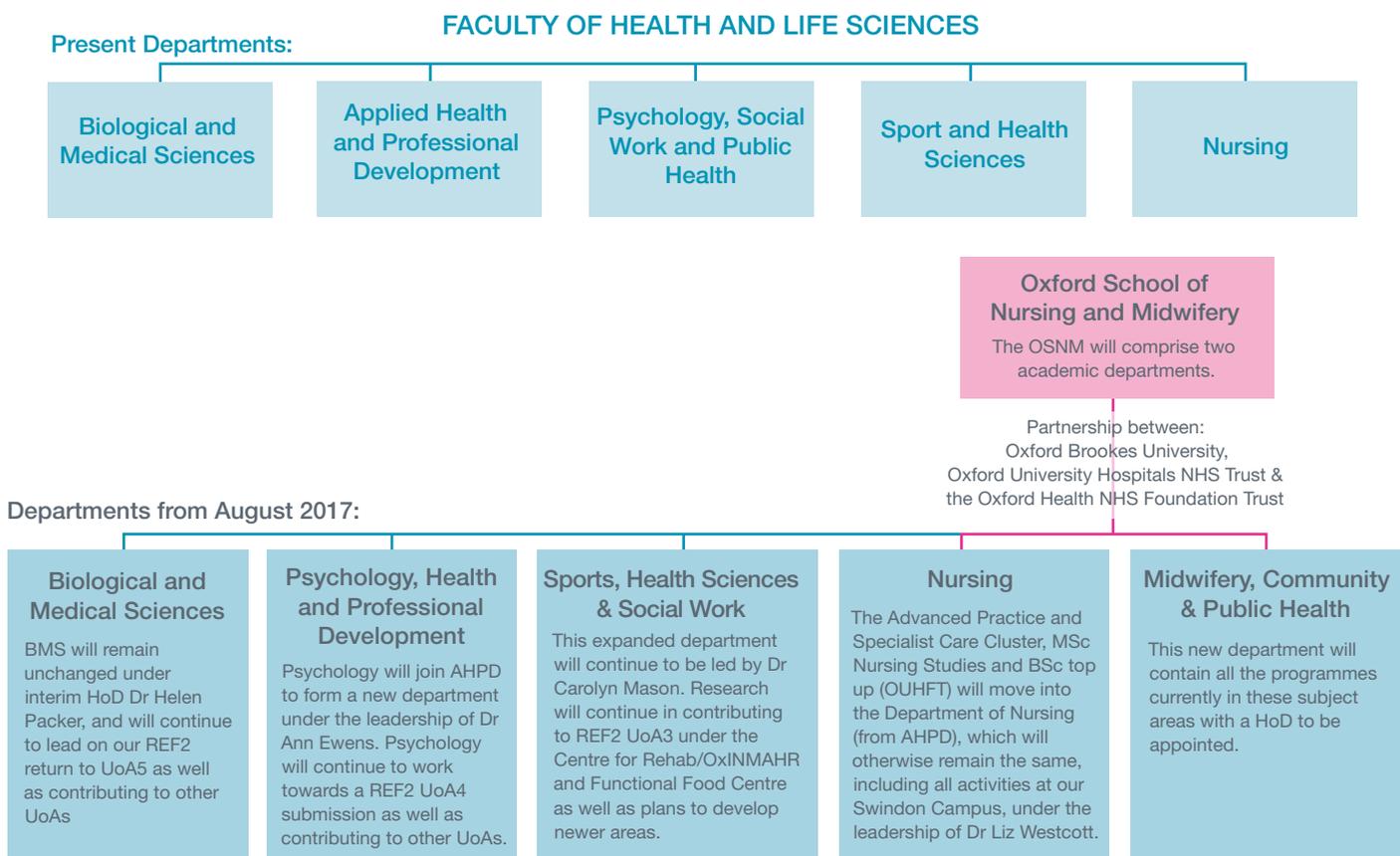
The benefits of establishing the School include: helping to address the challenges we all face; raising the external profile of midwifery, community and public health; and the opportunity to bring all our nursing and midwifery disciplines together. We were also mindful of the impact on other departments using the necessary changes as an opportunity to ensure that **all Faculty disciplines are well supported to thrive and be successful**. The result of those deliberations is the new departmental structure shown below.

The School itself will be a partnership with OUHFT and OHFT and we will be shortly advertising for an inaugural Director. OxINMAHR will form the research hub for the School but will also continue to engage researchers across the Faculty as a focus for a REF2 return to UoA3.

The new developments and revised departmental structures **provide real opportunities to develop our teaching, research and knowledge exchange**, including innovation, CPD and consultancy activities, and may provide impetus to consider **synergies and potential for collaboration** that may not have been apparent before.

We do believe that these exciting developments will provide us with the foundations to enable all members of the Faculty, its disciplines and cross-disciplinary activities to thrive and excel in future.

**Astrid Schloerscheidt & Linda King**



# EPIC

The Movement Science Group in the department of Sport and Health Sciences has recently started the second phase of the Engagement; a participation, inclusion and confidence in physical activities study (EPIC2) across three schools in Oxfordshire.

## Engagement • participation • inclusion • confidence

The study aspires to increase physical activity and participation in children who may neglect exercise and sport due to reduced levels of motor coordination. Many areas of research show how low levels of physical activity reduce health, and children with poor coordination are more likely to adopt sedentary lifestyles compared to normally developed peers. Therefore, the aims of the study are to increase exercise participation of children with poor coordination; to understand the motor learning processes of this population and to recognise which interventions can clearly affect their overall health, fitness and coordination levels.

The study involves three parts; screening, training, and testing. The screening part involved the movement science team travelling to schools to test and measure children's health, fitness and coordination levels. Once this has been completed a selected group of children with poor fitness and coordination measures will be asked to attend a training session that will be held twice a week. Over a 7-8 week period each child will be trained using cardiovascular and resistance machines. Prior to the training starting and after the training has finished, each child will be invited to attend a testing day where fMRI, NIRs, questionnaires, and

further movement tests will be carried out to assess the changes to this specific population from the training phase. Over 600 children were assessed in three schools, with an average of 50 taking part in the fitness and coordination tests within a school PE lesson. The biggest challenge from the screening days involved testing a whole year group in one day. This consisted of 250 children all taking part in 8 different measures of health, fitness, and coordination such as the bleep test, gait analysis and balance tasks. However, staff from the movement science department along with Brookes students studying in Sport Science, Physiotherapy and Nutrition all made the day run smoothly.

Once the screening was completed each year 9 student was given an individual performance feedback form, which indicated their scores on each test. This increased engagement and enabled the children to compare results with their friends. The feedback forms were such a success that the Head of PE from one of the schools made a copy of each form to help her pick sports teams and also to encourage children to try a sport more suited to their personal performance scores.

Overall the screening process was a success and we cannot thank the schools

enough for their help with organisation before and during the screening days. One of the schools asked if some of their Sport Science A Level Sixth Form students could come to Brookes and experience maximal exercise tests on our fitness bikes. We were able to take them through a standardised VO2 max fitness test connected to one of our breath by breath analysers to give them a better understanding of what happens to different fitness parameters as they reach maximal exercise intensities hopefully helping them with their studies.



Coming up in the 2017 are the training and testing phases across the three schools, which we are very much looking forward to.

**Ben Weedon**

### Super Science Saturday!

On 27 November 2016 **Professor Alistair McGregor** and members of his research group in BMS, took part in a public event at the Oxford University Museum of Natural History. This Super Science Saturday was a free family day at the museum, where researchers from across Oxford produced a variety of engaging and interactive stalls to teach the public about their work. Alistair and team used pieces of Duplo to encourage children to build their own arthropods and learn about insect body development.

**Professor Anna Nekaris** from the Faculty of Humanities and Social Sciences also took part, to raise awareness of the illegal slow loris pet trade. Anna even managed to persuade one of her dedicated research students



PhD students **Claudia Mendes** (L) and **Alex Buffry** showing visitors how the building blocks of insects are formed

to dress up as a giant slow loris mascot (right).

The event was a huge success and welcomed over 2450 visitors. The next SSS

will be on March 11 and our Faculty will be represented once again- so make sure to save the date!



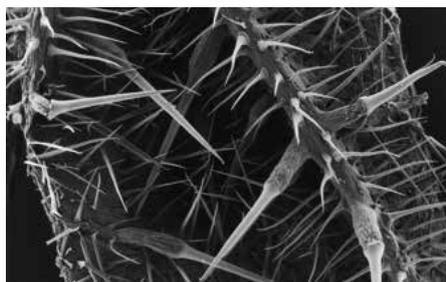
**Milly Farrell**

# Great Gatsby

The 21st century has been dubbed “the century of the biosciences”. Advances in biomedical sciences mean that people will live longer so one of the grand challenges the world faces is to feed our ever growing population.

Over the next decade food production will have to double if we are to avoid extensive global famines exacerbated by the effects of climate change on the availability of agricultural land and a shift towards increasing meat consumption. To address this problem will require intensive research into agriculture, plant pathology and the plant sciences. **The Gatsby Charitable Foundation**, a private charity financed by former Science Minister Lord David Sainsbury (of the supermarket chain) was in part established to promote the teaching of plant sciences in schools and universities, and to support plant science research through funding two research institutes and a number of prestigious PhD studentships. Gatsby realised a number of years ago that there was a serious decline in plant science education in the UK both in the quality of A-level teaching and the loss of plant science teaching in the university sector - there are now only 9 universities offering plant sciences degrees in the UK! To counteract this worsening situation, Gatsby have established a number of initiatives to promote plant sciences in the UK, and at Brookes we have been fortunate to be involved in a number of these.

**The Gatsby Plants Summer School** is a one week, fully funded course run at the Government Emergency Planning College just north of York, where 80 top first-year biology students from 25 or so universities around the UK are invited for a week of lectures from internationally renowned plant scientists. These are combined with a series of tutorials, practical classes and other activities, such as career sessions. Brookes is the only post '92 university invited to be part of the Gatsby “club” and for the past nine years **John Runions**, **Chris Hawes** and the Plant Cell Biologists from BMS, along with colleagues from Warwick, have been helping to organise the course cell biology practical. Every year three of our biology students with an



Stinging nettle hair taken with a scanning electron microscope, Gatsby Plants Summer School, 2016

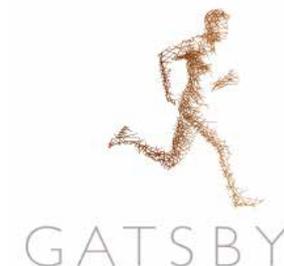
## Investigating plant proteins using the Central Laser Facility at Harwell

Plant pathogens can cause up to 30% loss of crops. With the ever increasing demand on food supply due to population growth and the reduced amount of land suitable for agriculture due to climate change, a reduction in plant loss due to pathogens would aid food security. In order to work towards minimising this problem, we need to understand how plants perceive and respond to pathogens.

The initial line of defence is called Pattern Triggered Immunity and is triggered by proteins located at the outside of the cell which perceive external pathogens; these are like lookouts watching out for pathogens. When a pathogen is perceived several other proteins then interact and activate each other, subsequently activating

defence responses. While these proteins and responses have been identified, little is known about how these proteins behave in the membrane at the single molecule level before and after pathogen detection.

I have been granted a direct access grant to use the facilities at the Central Laser Facility (CLF) located in Harwell. This gives access to state-of-the-art microscopes which allow me to perform single molecule imaging and tracking over time. This will allow me to track several different proteins at the same time and determine how they interact, when they interact and who they interact with. Using this I aim to better understand how these proteins behave in the membrane during pathogen perception. This single molecule imaging

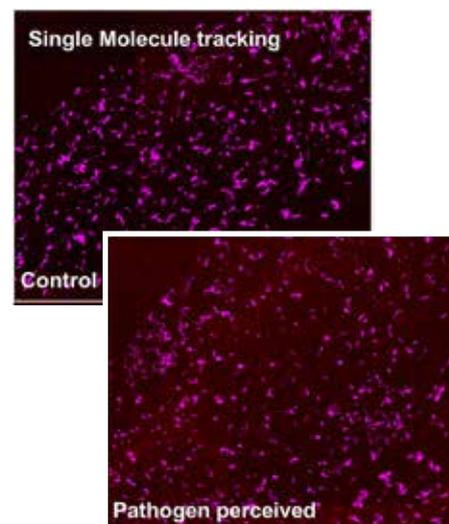


interest in the plant sciences have won fully funded places on the course.

Attendance at the course qualifies students to apply in their second year for a Gatsby funded summer research studentship and recipients of these can subsequently apply for a Gatsby four year PhD studentship. In 2016 **Jess Upson**, one of our top biology graduates, was the first Brookes student to win a Gatsby Studentship and she will be joining the group of **Dr Silke Robatzec**, at the Sainsbury Laboratory in Norwich, to study plant pathology. I am sure the whole Faculty would want to congratulate her on this tremendous achievement. Another of our students **Shamma Rattan** attended the 2015 summer school and was so inspired by plant science that she, along with some fellow students, have established a Brookes Plant Science Society and obtained the first ever grant from the Gatsby Foundation given to students to support such an activity.

Find out more about Gatsby at:  
[www.gatsby.org.uk/plant-science](http://www.gatsby.org.uk/plant-science)

**Chris Hawes**



approach can only be performed at the CLF due to their image acquisition and analysis capabilities. Being awarded this access will greatly benefit my work.

**Joe McKenna**

# Lab in Focus

For many, the ability to learn a language in infancy is considered an inherent skill and a basic stage of development. But the complex process of understanding and using language to communicate, is all too often taken for granted.

Around 5-10% of the population are affected by speech and language disorders in childhood and for those affected, this can often have a wider impact on the rest of their lives. Factors such as poor educational attainment at school and a poor development of essential key skills, can go on to have repercussions in later life that hinder various aspects of a person's social and professional sphere.



**Dr Dianne Newbury** has been researching speech and language disorders for several years now and is particularly interested

in identifying the genetic blueprint that contributes to a person's ability to assimilate these skills in childhood. Surprisingly little is known about the underlying cause of these disorders. Through her research group, now based at Oxford Brookes, Dianne hopes to continue exploring the genes responsible and revealing the codes in our own DNA that identify how humans develop the remarkable ability to learn language and to use it to communicate.

Following a PhD at Oxford University and a subsequent MRC five year funded research post, Dianne decided to apply for the opportunity of Senior Lecturer in the department of Biological and Medical Sciences (BMS), here at Oxford Brookes. The post was established by Brookes to initiate a new MSc in Genetics and Genomics; a natural fit for both the skills and research objectives of Dianne and her team.



One of the Newbury Lab researchers, **Hayley Mountford**, at work in the lab

Dianne started working at Brookes in October 2015, but it was only in November 2016 that members of her Oxford lab were moved across to Brookes and work began full time. The team have had a busy few months; winning a Central Research Fund award and continuing with their other research projects overseas.

### Central Research Fund (CRF) award:

The CRF award won by Dianne and team will help them to identify genetic contributions to speech and language development:

**“There are many factors that underlie successful speech and language acquisition. For example, there may be a problem with memory or absorbing speech sounds and partitioning them, so we look at the different combinations of genes and how these may put a child at risk of developing speech and language disorders. Each gene may have a very small contribution in itself, but it is in combination that they may cause problems. Some of those risk variants fall within different pathways, such as memory.”**

This award will enable the team to study a particular Serbian family who have exceptional short term working memory. Two members of this family (the father and one daughter) can even speak backwards fluently. Dianne has already sequenced the DNA from some individuals within

the family and has identified a very rare genetic mutation present in the father and daughter only; the same duo capable of conversing backwards. This rare mutation has not been seen or reported before, but as it is located in a gene that functions in acetylcholine receptor pathways, there is now a research overlap with the BMS group led by **Professor Isabel Bermudez-Diaz**, who has worked in this exact area. Dianne and Isabel's teams will collaborate to investigate what the mutation found does to the protein produced. The mutation may actually make that protein more efficient, which might then explain the exceptional working memory of the Serbian father and child. In the wider context, Dianne explains:

**“This research might inform us about what that protein or other proteins do to help memory processes. This may shed light on why some children have difficulties with speech and language. Then we'd like to look at the genes of speech and language deficient groups, to assess if the genes within these cohorts have a particular genetic signature that is more common in the genes of those with speech and language impediments.”**

Keep a look out for the upcoming research videos further explaining the work of Dianne's team, which will be available online later this semester.

**Milly Farrell**



**Dianne Newbury** (centre) and her research group in their new lab at Brookes. From L-R **Lidiya Nedevska, Carol Mesa-Guecha, Dianne, Hayley Mountford** and **Nuala Simpson**



# Who's New in HLS

## A Conversation with Dr Peter Wright

In December our Research Grants Officer **Tudor Georgescu** met the new SHS Programme Lead for UG Sports courses, **Dr Peter Wright**, who joins us from the University of Chemnitz, Germany. They met for coffee and conversation about research cultures, the virtues of interdisciplinarity, and plans for the future.

**TG:** Hi Peter! We'll start with the obvious; welcome to Brookes, what brought you here?

**PW:** I had my first taste of Brookes through links to the Movement Science Research Group, when I was looking for partners, and got to meet Professor Helen Dawes. We are currently looking to develop projects with a neuroscience link; one based on cancer and the other on soldiers with PTSD. At the time I was working in a similar role in the Sports Medicine department in Chemnitz, and before that I was with HEUER based at Hartpury Campus (UWE) near Gloucester – I set up their labs, it was more of a traditional sports science role. Before that I was a lecturer at the Ruhr University in Bochum where I also completed the studies I'd begun in Newcastle. Originally I am from Dorset, so after this Odyssey I thought it's about time I came back to England. I heard of the PL position, applied for it, and here we are, the story of my life in a nutshell!

**TG:** Now that is a life on the move, and brings us to another obvious question: how do the research cultures in Germany and the UK compare?

**PW:** They are quite different actually; the German research setting is less regulated.

**TG:** Less regulated...?

**PW:** I know, sounds contradictory, but because universities are government

funded you have a relatively constant stream of income and you can conduct your research without being quite so dependent on external funding. This doesn't promote the type of focused, world leading research found in the UK, but it gives you a little bit of extra liberty to develop your interests.

**TG:** Talking of research interests, yours are particularly broad, from drumming away depression to mice in mazes, and neuroscience, cancer – so what is the thread connecting all these?

**PW:** Chronic conditions basically. I started off with traditional sports and exercise science before working in space medicine - muscle wastage for the Mars mission for example- and I developed an interest in chronic diseases such as congestive heart failure, respiratory diseases and other systemic conditions. Sports medicine has a real role to play in treating and even reversing some of the effects, so can not only improve but save lives. Though these conditions also have an effect on the brain, and from this grew a further interest in neuroscience.

**TG:** Given this interdisciplinary mindset, is that where you see the kind of contribution you can make to research and Brookes?

**PW:** The way that things are going in the UK, they are even more interdisciplinary,

multidisciplinary and are developing rapidly. So you get the neuroscientist working with the exercise physiologist and the cell biologist working with the sports and exercise scientist, I think that's the beauty of it. I have worked with all sorts of populations; with Olympic sports, with very ill patients, with GPs and PE teachers - and the way I understand the Faculty strategic plan at Brookes is that it's very much about building links and bridges, so we can add to this and expand.

**TG:** How do you go about bringing together people with diverse backgrounds physically and conceptually?

**PW:** Physically, obviously, you need to have that shared space. At Brookes I need to get the split team together in one location long-term; that is a necessity. It is really important to have adequate space, and then beyond that you have to at all times keep an open mind and be happy to learn. That has worked really well for me, and what I have learned about psychology for instance is absolutely amazing. It still helps me understand the complex nature of the human being and condition. To not forget the holistic approach; that is what I learnt from multidisciplinary work. Then I think, I hope, I can apply that here as well.

**TG:** Thank you very much for your time Peter!

**Tudor Georgescu**

## PhDs awarded in HLS

confirmed in semester 1, 2016-17

Name	Director of Studies	Department	Awarded
Axel Poulet	David Evans	Biological and Medical Sciences	June 2016
Victoria Coathup	Lesley Smith/Mary Boulton	Psychology, Social Work & Public Health	July 2016
Marloes Fransenn	Helen Dawes	Sport and Health Sciences	July 2016
Naomi King	Mark Burgess/ Margaret Harris	Applied Health and Professional Development	Sept 2016
Anna Schonauer	Alistair McGregor	Biological and Medical Sciences	Sept 2016
Hannah Wickenden	Bruce Riddoch	Biological and Medical Sciences	Sept 2016
Sarah Hennelly	Lesley Smith/ David Foxcroft	Psychology, Social Work & Public Health	Dec 2016
Shelley Harris	David Meredith/ Alison Forehead	Biological and Medical Sciences	Dec 2016

# Research Awards

## Research Grant Awards September to December 2016

Department	Project Name	Funder	Principal Investigator	Award Value	Awarded Date
Biological & Medical Sciences	Pre-clinical study to test the efficacy and safety of a novel combined treatment for ovarian cancer	Cancer and Polio Research Fund	David Carter	£8,500	01/09/16
Biological & Medical Sciences	Pretransplant gene therapy of pancreatic islet tissue; to a therapy for Diabetes type 1 in Mexico	Technology Strategy Board (Innovate UK)	Linda King	£90,500	06/09/16
Biological & Medical Sciences	Cross modulation between stress responses: The role of exosomes	Dunhill Medical Trust	Munira Kadhim	£115,194	14/09/16
Biological & Medical Sciences	New anticancer therapies through inhibition of APC/C activation by Cdc20	Cancer Research UK	Victor Bolanos-Garcia	£13,500	30/09/16
Biological & Medical Sciences	Combining non-essential metabolic targets into suitable targets for control of uropathogenic Escherichia coli (UroColi)	University of Copenhagen	Mark Poolman	£27,628	03/10/16
AHPD	NIHR Research Capability Funds, 2015-16	Oxfordshire Clinical Commissioning Group	Mary Boulton	£9,818	31/10/16
<b>Awarded</b>				<b>£265,140</b>	



## Events

The following events can be booked online here, unless otherwise stated:

[www.brookes.ac.uk/events](http://www.brookes.ac.uk/events)

[www.brookes.ac.uk/openday](http://www.brookes.ac.uk/openday)

### THE OXFORD BROOKES SCIENCE BAZAAR

Saturday 25 February

10:30-16:00

John Henry Brookes Building,  
Headington Campus

### AND ALONG CAME A SPIDER (AND A FRUIT FLY): the genetic bases of animal development and evolution

**Professor Alistair McGregor**

Wednesday 22 March

18:00-19:00

JHB Lecture Theatre,  
John Henry Brookes Building,  
Headington Campus

### SAFEGUARDING CHILD

**WELLBEING: the public health role of health visitors**

**Professor Jane Appleton**

Wednesday 7 June

18:00-19:00

JHB Lecture Theatre,  
John Henry Brookes Building,  
Headington Campus

### HEALTH CARE OPEN EVENINGS

Tuesday 7 February

Monday 13 March

Thursday 6 April

Tuesday 9 May

17:00-19:00

Marston Road Site

### UNIVERSITY APPLICANT DAY

Saturday 4 March

9:00-16:00

Headington Campus

### POSTGRADUATE STUDY FAIR

Thursday 9 February

12:00-14:00

Forum,  
Headington Campus

### UNDERGRADUATE OPEN DAY

Saturday 3 June

9:00-16:00

Headington Campus,  
Harcourt Hill Campus,  
Wheatley Campus

### FACULTY APPLICANT DAY

Tuesday 4 April

9:00-16:00

Headington Campus