Welcome to the October 2016 edition of the Faculty and Research Update, which covers the research stories, events and latest teaching and staff news from the Faculty of Health and Life Sciences. In this first edition of the new academic year, we reflect on the activities of the Faculty over recent months and the various projects which are continuing in 2016. Our lead story celebrates HLS on the move (page 4). We celebrate the launch of the new Swindon Campus on page 5, which will be home to state of the art teaching facilities for Nursing and Operating Department Practice. The Bioimaging Unit has also moved into the new Sinclair Annex and our OxINAHR colleagues now reside in the new offices of the JHB collonade.

In other news, we also look at recent projects that have been awarded funding. This includes a look at Patrick Esser’s project which will focus on driving assessments for the ageing population (opposite). We celebrate student success with a look at Amy Bridges’ successful internship at Ipsen (page 13). We hear from OxINAHR (Oxford Institute for Nursing and Allied Health Research) about their recent progress and successes in the research community (page 10). Furthermore we share BMS staff and students’ recent experience of being involved in a global social media campaign highlighting the global presence of science (page 12).

In further staff news, our Faculty Research Grants Officer, Tudor Georgescu, recently met with new Senior Lecturer in Social Work, Dr Louise Bunce, to welcome her to the Faculty and hear about the research projects she’ll be pursuing while in post at Brookes (page 15).

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

David Evans, Associate Dean, Research and Knowledge Exchange
Determining the need for an on-road driving assessment for the elderly

Dr Patrick Esser and Prof Helen Dawes from the Movement Science Group in the Department of Sport and Health Sciences have recently been awarded a £50,000 research grant from the Dunhill Medical Trust to assess driving ability in the elderly.

The Oxford Brookes Movement Science Group (MSG) is a team of interdisciplinary sport scientists who study the role of movement and physical activity in health and rehabilitation. The work of the MSG team is heavily reliant on the input of their user steering group, which is now an essential feature of modern health research in the form of Patient and Public Involvement (PPI). A new study into driving ability has been instigated by the MSG as a result of consultation with this patient user group and has recently received funding from the Dunhill Medical Trust.

Through existing links with the Regional Driving Assessment Centre (RDAC) in Birmingham, Dr Patrick Esser will soon begin capturing data from other RDACs around the UK. These centres are charities (part of ‘Driving Mobility’) which work to provide support for elderly and disabled drivers, or those seeking reassessment following a degenerative disease such as stroke, dementia or Parkinson’s.

Patrick’s work will assess between 4-5,000 people attending these UK wide centres over the next 12 months, capturing information on an individual’s cognitive, physical and visual abilities outside of the car. The large data sets will be processed in collaboration with the data storage company Exprodo, based in Oxfordshire. This data will provide multiple benefits. Most significantly it will relieve pressure on the assessment centres through identifying individuals of high priority, who require more immediate tuition and identify the key areas an individual may be likely to fail a driving reassessment. Patrick explains that the possibility of losing a driving license for those who are less mobile is extremely daunting and can have a major effect on quality of life. This project will therefore seek to identify what necessary motor or visual skills may need improving and the necessary interventions that can be provided to support that person in becoming a safer driver and staying on the road.

“A lot of people struggle at roundabouts because of the overload of information. Dual tasking is something that doesn’t come naturally to everyone and can often be difficult for dementia patients, but that’s not to say all people with dementia need to stop driving. You can in theory train people to be more aware of this and how to divide their cognitive attention. We are exploring technologies that can assist in these instances and actually interact with the driver to help steer them off the roundabout, for example, or provide cognitive therapy to help people to dual task.”

Patrick Esser

The 12 month funded project will begin in September with the initial phase of developing an appropriate database and determining what data should be collected and how. Tests will then be trialled at the RDAC in Birmingham, culminating in 6 months of data collection across the UK centres. Although currently a 12 month grant, the findings from the research look set to impact the way we reassess driving in the UK for many years to come; enabling the test centres to provide the best service and support for those who need it most.

Milly Farrell
Dr Joe Mckenna, Post-doctoral researcher in the bioimaging unit, Dept. of Biological and Medical Sciences, reports on the success of the unit’s recent move into a new state-of-art microscopy suit in the newly built Sinclair Annex:

In July we moved into the new home of bioimaging at Brookes, the Sinclair Annex. It felt like this day would never come; we had been involved in the planning stages and had a number of site visits but the big move was finally happening. Even when filled with moving crates it was hard not to be impressed by the space the new building provides. High ceilings and large open plan spaces made me feel more like I was in an episode of grand designs than a modern research facility.

We now have a large shared molecular biology lab, ancillary technical hubs and tissue culture facilities which house all of our equipment and research groups. Having gone from temporarily being based in a teaching lab this seemed like Christmas to us! With the University’s recent investment in a state of the art Zeiss 880 confocal system with Airyscan super resolution imaging and another Zeiss 800 system coming soon, the new confocal microscope room is a significant improvement on the last, with space for these advanced systems and room to grow in the future if required. Our light microscopy facilities are matched by our advanced electron microscopes which are now housed in purpose built laboratories. This supports our role as a Zeiss labs in location partner, an honour given to only two labs in the UK. The most surprising aspect of the move for me was the open plan office. I was initially hesitant about moving into it but I have genuinely found it to be a positive experience, with people being highly focused when at their computers and respectful of others who are working.

It’s been an exciting time for two of our departments this summer! The department of Biological and Medical Sciences bioimaging unit, as well as The Department of Applied Health and Professional Development have both moved into brand new facilities. Overall the move is a fantastic opportunity for us and all users of the bioimaging unit. A number of national and international external visitors have been extremely impressed with our facilities and we are equally proud of them. This investment by the University in a world-class research facility will ensure we have a prominent place in bioimaging in the UK and internationally in the coming decades. I look forward to seeing the on-going development of Sinclair and the new facilities this will provide. After the building dust settles we all have a bright future ahead of us.

Joe McKenna
The former Ferndale Campus in Swindon has also moved to a new, larger campus at the Swindon Delta Business Park, as part of a £10 million investment over the next decade.

The new campus features a new library, high quality teaching spaces, skills labs, catering facilities and spaces to further support collaboration, research and support for students.

The building is named the Joel Joffe Building after long-time Swindon resident and former human rights lawyer Lord Joel Joffe.

Professor June Girvin, Pro Vice-Chancellor and Dean for the Faculty of Health and Life Sciences said: “We are very excited to open our brand new campus in Swindon ready for the new academic year. Oxford Brookes has enjoyed a home in Swindon since 1999, teaching adult nursing degree and diploma courses at Ferndale with the majority of those graduates going on to work in the local NHS.

I am also very excited to be naming the building after Lord Joel Joffe, whom I know from when I myself worked in Swindon many years ago. Joel has had an inspirational career campaigning for human rights and social justice and supporting charitable efforts both in Africa and closer to home. These are strong values which are closely aligned with those of the University.”

Lord Joel Joffe said: “I am honoured that Oxford Brookes has chosen to name its new Swindon Campus building after me and am very pleased to offer my support to the University. The University already has a strong presence in the town, particularly providing a steady flow of nurses to the Great Western Hospital which provides such excellent care to its patients. This investment by Oxford Brookes demonstrates their continuing commitment to growing and enhancing higher education opportunities for the Swindon community.”

AHPD academics Clair Merriman and Nigel Conway introduce Lord Joffe to one of the sim-patients in the new training theatre.

The building officially opened to students on the 22 August and will be a great learning space for everyone studying there.

Sophia Khan

Lord Joel Joffe and Head of Nursing Liz Westcott

AHPD academics Clair Merriman and Nigel Conway introduce Lord Joffe to one of the sim-patients in the new training theatre.
Managing the Epidemic of Chronic Disease

On Monday 20 June, Dr Shakeeb Moosavi from HLS hosted a seminar at Oxford Brookes covering Theme 4 ‘Managing the Epidemic of Chronic Disease’ in the Oxford Academic Health Science Centre (OxAHSC).

This is a partnership between Oxford Brookes University (OBU), Oxford Health NHS Foundation Trust (OH), Oxford University Hospitals NHS Trust (OUH) and University of Oxford (UO). Theme 4 recognises the growing burden of chronic diseases and the demand for new radical approaches to care that lead to better patient outcomes at lower cost. The afternoon started with a short welcome introduction by Dr Shakeeb Moosavi from the Cardiorespiratory Research Group at OBU. This was followed by two presentations by Prof Kazem Rahimi who is the joint lead for OxAHSC Theme 4 and works at OU in the George Institute.

His first talk set the scene for what Theme 4 involves, and his second talk informed us of the work that he is doing involving innovative technology utilising Android-based tablet computers for heart failure patients to monitor their condition and communicate with researchers from their own home. This technology allows them to record readings wirelessly via Bluetooth through a blood pressure and heart rate monitor and electronic weighing scale. It is hoped that the use of this digital technology will help patients manage their heart failure and reduce the need for GP and hospital visits, cutting NHS costs.

Dr Joanna Grogono from the Cardiorespiratory Research Group at OBU in collaboration with OU gave the next talk focusing on breathlessness, which is a common symptom in those suffering with chronic disease such as lung disease, heart disease and advanced stage cancers.

This was followed by Dr Kyle Pattinson from OU in the Nuffield Department in Anaesthesia giving a fascinating talk on breathlessness with a focus on Chronic Obstructive Lung disease and the importance of emotions and symptom cues using advanced imaging techniques to advance our understanding of the neurobiology of breathlessness.

Dr Alex Green from OU in the Nuffield Department of Neurosurgery then presented some interesting data collected in his department by Mr Emmanuel Debrah, an Oxford Brookes PhD student in the Cardiorespiratory Research Group at OBU involving the use of deep brain stimulation. He showed an impressive video clip of patients whose tremor and breathlessness seemed to disappear with deep brain stimulation.

These presentations were followed by a closing panel which fostered discussions regarding the other research that is happening at OBU and how to form further collaboration between OBU and the AHSC partners to deal with the challenges of Theme 4 – managing chronic diseases.

Since the seminar, Dr Moosavi has been working with the new Chief Operating Officer of the AHSC (Glenn Wells) on strengthening the partnership. With regard to Theme 4, further workshops and annual events will be organised with Glenn’s oversight.

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Novel Research from the Cardiorespiratory Research Group

Dr Joanna Grogono, PhD student of Dr Shakeeb Moosavi and Clinical Research Fellow in the Department of Health and Life Sciences, has completed a university central research funded study (Central Research Fund 2012, awarded to Dr SH Moosavi and Dr H. Walthall) assessing a potential new treatment option for patients with breathlessness. She was assisted by Ms Clare Butler from the Department of Applied Health and Professional Development and Dr Hooshang Izadi from the Department of Mechanical Engineering and Mathematical Sciences. This study looked at the mechanism of inhaled furosemide and whether it relieved different types of breathlessness. A double-blind, placebo-controlled trial was conducted in 16 healthy volunteers. The research verified that inhaled furosemide relieves breathlessness in healthy volunteers but beyond this it showed that it specifically relieves ‘air hunger’, which is described as an uncomfortable urge to breathe and not the sense of breathing work or effort (see Figure).

This novel information suggests that the patients that will gain the most benefit in dyspnoea relief from inhaled furosemide are those with the ‘air hunger’ type of breathlessness which is reported to be the most unpleasant type. An abstract of this data has been submitted for presentation at the Winter Meeting of the British Thoracic Society in London.

Dr Joanna Grogono
Sun, Sea and Science at the Society for Experimental Biology Conference

Sun, sea and science were to be had at the SEB meeting in Brighton last July. This annual four-day meeting is split into four large programs – the plant, cell, animal and educational outreach sessions. Scientists from the Plant Cell Biology group, Dept. of Biological and Medical Sciences, represented Oxford Brookes at three of these sessions:

- **Dr Anne Osterrieder** presented tips and tools for researchers to communicate science through cartoons in the educational outreach session.

- **Prof Chris Hawes, Dr Maike Kittelmann** and **Dr Verena Kriechbaumer** organised a two day session on the plant endoplasmic reticulum (ER), together with **Prof Lorenzo Frigerio, Dr Patrick Schaefer** and **Dr Emily Breeze** from Warwick University.

- Finally **Professor David Evans, Dr Katja Graumann** and visiting **Prof Iris Meier** ran a three day session on dynamic organisation of the nucleus.

### The Plant Endoplasmic Reticulum (ER)

The ER is a network-forming organelle present in every cell and every organism from plant to humans and has important roles in protein production, protein folding, quality control etc. The plant ER is responsible for the production and storage of a great proportion of our edible proteins and lipids. **Prof Eija Jokitalo** from the University of Helsinki kick-started the first part of the conference session on the ER structure, with her keynote lecture and 3-D microscopy pictures of the structure of the ER in mammalian cells. This was followed by outstanding talks from our invited speakers **Prof Birger Lindberg Moller, Prof Barbara Halkier, Dr Nozomu Koizumi**, and **Prof Eva Stöger**. The last session of the afternoon was reserved for two workshops; one on ‘Membrane lipid analysis’ led by **Dr Patrick Moreau** and the other on ‘Computational analysis of cellular structures’ by **Dr Mark Fricker**.

### Dynamic Organisation of the Nucleus

**Prof David Evans, Dr Katja Graumann** and **Oxford Brookes visiting fellow Prof Iris Meier** (Ohio State University) organised a three day session on dynamic organisation of the nucleus, as part of the cell biology programme.

The session brought together scientists from various model organism backgrounds (plants, yeast, animals), to discuss the latest developments in this field. This marked the inaugural meeting of the SEB Nuclear Dynamics special interest group, which is convened by Katja. Participants from all over the world, including Europe, Japan and the US, used the opportunity to not just present their research, but also forge new collaborations and networks.

In addition to the fruitful networking and resulting collaborations, the participants could enjoy sun, beach, vast amounts of coffee, the infamous SEB “wine trail” and a late night Mexican feast.

**Verena Kriechbaumer and Katja Graumann**

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**The 125 years of Nurse Education in Oxford celebrations have continued all through the year. The highlights of the summer events have been our Tea party in the week of the Queen’s 90th birthday, awarding of our first Honorary Doctorates in Nursing to Dame Julie Moore and Prof Judith Ellis, the Cowley Carnival and continuation of our prestigious lecture series. Coming up in the autumn is an exhibition in the Town Hall and the St Frideswide Civic Service in Christchurch Cathedral both on 18 October. The final event on 5 December will be a panel discussion of national nursing leaders on the future of nursing. For more information see: nursing.brookes.ac.uk/125-years **Liz Westcott**
In June this year Oxford Brookes research student Axel Poulet successfully defended his thesis at the Université Blaise Pascal in Clermont Ferrand, France. Under a co-tutelle arrangement Axel has been supervised by Prof David Evans and Dr Katja Graumann from the Faculty of Health and Life Sciences at Oxford Brookes and by Prof Christophe Tatout for the Université Blaise Pascal, working for extended periods in both laboratories.

The study is part of a long term collaboration sharing expertise in plant science, bioinformatics and computing aimed at better understanding the key role of the nuclear envelope in the field of epigenetics and has significance in the production of crops that are better adapted to climate change. It is an example of collaboration made possible by the freedom of movement within the European Union.

Patricia Shaw

Eco-Evo-Devo Summer School at Brookes

Prof Alistair McGregor and Drs Sebastian Kittleman and Casper Breuker working with James Watkins from Centre for Ecology, Environment and Conservation (CEEC) delivered the third, one-week-long, intensive Eco-Evo-Devo (Ecological, Evolutionary Developmental Biology) course for postgraduate students between 8-12 August 2016.

In November the FFC will exhibit at Food Matters Live for the third consecutive year. This 3-day event takes place at the ExCel, London and brings together the food and drink industry (including retailers, foodservice providers, government, and those working in marketing, manufacturing, policy, health and nutrition). The event is an invaluable opportunity to discuss our commercial and academic research and to promote the FFC and Oxford Brookes University to potential new clients, collaborators and students.

Patricia Shaw
The challenges facing the UK energy sector are many. With Hinkley Point Nuclear Plant described as ‘the most expensive object on Earth’, with the amalgamation of the Department for Energy and Climate Change into the Department for Business Innovation & Skills, and July 2016 being the hottest month ever recorded, you might be justified in thinking a career in the energy sector could prove unsustainable.

Despite the UK’s recent policy confusion, from a global perspective, transformation to low carbon energy is well underway. Renewables such as solar and wind power are set to be the largest source of energy growth in the next 4 years. In 2015 147 Gigawatts of renewable energy came online globally, that’s as much as Africa’s total annual energy generation. In the UK, smart meters that record and report energy use in great detail are being installed as part of an upgrade programme. The National Grid is finding incentives for users to reduce energy during periods of peak demand. Batteries are being tested in buildings to allow energy storage, reducing the need to build more power stations.

There is still much work needed to improve energy performance in buildings, and not just insulation but improving management of equipment and processes as well as the role everyday users play. The work of the Environmental Information Exchange (EiE) has been supported by over 12 volunteers in the last few years directly engaging local organisations in energy reduction. EiE’s volunteers, who often are current and future Oxford Brookes students, play an important role as they follow a programme designed to build consultancy skills whilst helping advise organisations with practical (and often low cost) energy saving actions. With a proven record of helping volunteers into long term employment, EiE sees great opportunities in developing professional energy advisors in the immediate future.

For more information on EiE’s volunteer programme contact us at eie@brookes.ac.uk

Michael Esvelt
OxINAHR update

OxINAHR continues to develop and grow with participation from all of our partners. This includes the development of a new group – The Oxford Centre for Spirituality and Wellbeing (OCSW) which brings together health professionals to explore this dimension of patient care. The UK Magnet Alliance has continued to meet and share best practice whilst also exploring possible research opportunities that can be undertaken alongside the Magnet accreditation process that many UK hospitals are now exploring. OxINAHR has also worked in collaboration with a range of visiting scholars. This has included members of the International Learning Collaborative and Prof Patricia Davidson, Dean of the John Hopkins School of Nursing in Baltimore.

Our PhD students have taken an active role in public engagement through stands at the International Nurses day conference at the Oxford University Hospital NHS Foundation Trust (OUHNSFT) and the Brookes Science Bazaar. OxBUMP also held their inaugural Student Midwifery Conference in July along with the Brookes Midwifery Society.

OxINAHR is proud to welcome a number of new members of staff, including Dr Cathy Henshall (Senior Nursing Research Fellow joint appointment with Oxford Health), and Dr Joanne Brooke (Reader in Older Adult Complex Care) three new nurse researchers in dementia, and our Intaleca programme Administrator Susannah Cronin.

Finally, OxINAHR is moving into its new HQ on the Headington Campus at the end of September. Level 2 of the Colonnades has been renovated to provide state of the art accommodation for some of our researchers and PhD students.

More information about OxINAHR can be found at www.oxinahr.com, by following us on twitter - @oxinahr or by contacting Tracy Mcateer: t.mcateer@brookes.ac.uk

RCNi Excellence in Cancer Research Award 2016 winner Dr Verna Lavender featured on cover of prestigious Journal

Last month Dr Verna was awarded the 2016 RCNi Excellence in Cancer Research Award. This excellent achievement has now gained wide recognition and has been featured on the cover of Cancer Nursing Practice. The Journal featured a three page spread covering Dr Verna and her team’s research project. The research conducted by the Bone Cancer Research Trust Patients and Professionals Perceptions about Participation in Clinical Trials (BCRTPoPP) study team worked with teenagers and young adults with bone cancer. As lead author of the publication of this study, Verna represented the team for the award by submitting the application, attending an interview with the judging panel in London on 24 March, and attending the award ceremony on 6 May. Verna and the BCRT PoPP team are delighted to have won this award, and would like to thank the teenagers, young adults and health professionals that participated in, and contributed to, this research. Congratulations Verna!!

Oxford staff travel to Bournemouth for Phi Mu Chapter Induction event

On 26 May Oxford staff travelled to Bournemouth to take part in the largest induction of new members in the Phi Mu Chapter of Sigma Theta Tau International ever held.

Sigma Theta Tau International is an Honour Society of Nursing and represents a global community of nurses leading the use of knowledge and scholarship for practice to improve the health of the world’s people. It was founded in 1922 and now there are approx. 135,000 members of 400 US and international Chapters in 90 countries. There are Chapters all over the world and The Phi Mu Chapter is the only Chapter in England and was established in 2011. http://phimu.nursingsociety.org/home

As a member of both the central organisation based in Indianapolis, US and our all-England chapter, membership offers numerous opportunities to engage in global development programmes, access to on-line resources, work with the Leadership Academy as well as being able to apply for small grants to support your own research and collaborative projects. The Chapter has an identical governance structure to all other Chapters and its current President is Prof Elizabeth Rosser and new President Elect is Dr Janet Scammell from Bournemouth University with Dr Liz Westcott from Oxford Brookes University being the Vice President.

The AGM and induction was held in the Miramar Hotel, East Overcliff Drive, Bournemouth and we were really delighted that so many leads of nursing from Oxford staff were inducted. Prof Debra Jackson, OxINAHR, gave insightful key note address on the key importance of patient safety and Prof Elizabeth Rosser oversaw proceedings.

Oxford Brookes were proud to host the previous Chapter meeting in January and a number of staff presented their research projects.
Cancer Nursing Masterclass
Oxford Brookes University, Oxford University Hospitals NHS Foundation Trust (OUHFT), Macmillan Cancer Support and the Thames Valley Led Chemotherapy Nurses Group, held a specialist Masterclass ‘Managing Patients Receiving Systemic Anti-Cancer Treatments (SACTs)’ at Oxford Brookes University (OBU) on Thursday 16 June 2016. The masterclass was organised by Dr Verna Lavender, Senior Lecturer in Cancer Care and member of Ox(NA)HR, with help from Michael Mawhinney, Irmgard Huppe, Kate Davis, Afrodita Baldry and Lynne Nally.

Dr Simon Lord, Consultant Medical Oncologist, OUHFT, and Dr Catherine Oakley, President of UK Oncology Nursing Society, were keynote speakers. Dr Lord brought delegates up-to-date with current SACTs and in particular cancer immunotherapies. His presentation highlighted the urgent need for education of oncologists, pharmacists and nurses in caring for patients receiving cancer immunotherapies, as the side effect profile varies from that of classic cytotoxic chemotherapy drugs, some of which are life-threatening.

Dr Oakley shared recommendations published in the National Chemotherapy Board Good Practice Guidelines, which she has authored with the NCB. She referred to her own research highlighting the importance of relational care between nurses and patients to ensure safe practice.

Eighty-one percent of the delegates rated the masterclass overall as excellent, and 19% rated it as good. Lecture capture of the masterclass will be shared on both Oxford Brookes University and Macmillan Cancer Support Learnzone webpages.

Dr Verna Lavender said that she thought it was a thoroughly enjoyable, insightful and informative day, and is very grateful to all the speakers. She hopes that the delegates apply what they learned to their practice to improve the safe care of people receiving systemic anti-cancer treatments.

Crossing Continents;
A Brazil-UK Science Collaboration

In May this year beautiful Campos do Jordão, in the state of São Paulo in Brazil, played host to an International workshop, co-organised by Dr Dave Carter (Oxford Brookes University) and Professor Emmanuel Dias-Neto (AC Camargo Cancer Centre, São Paulo). The workshop was generously funded by The Newton Fund (British Council) and the Brazilian Research Foundation FAPESP.

The 5 day meeting was entitled: ‘Extracellular vesicles in health and disease: A Brazil-UK cross-disciplinary workshop’. Extracellular Vesicles (EVs) are small fatty molecules released by all cells. They act as little bags, allowing one cell to transfer material to another cell. This transfer of material via EVs is emerging as a very important biological process; it helps to regulate normal functions in the body (such as the immune response) and goes wrong in diseases like cancer. EVs in the blood could be used as a diagnostic for diseases before other symptoms ever appear, and the fact they carry molecules between cells could be harnessed to allow better delivery of drugs into patients’ cells. Understanding EVs is therefore really important and could have a big impact on medicine.

The funding allowed us to take a total of 40 people to the workshop; 20 from Brazil and 20 from the UK. The majority of the attendees were early career researchers, as one of the key themes of the workshop was to help develop their careers through a number of training sessions, as well as through the presence of senior ‘Mentors’.

Campos do Jordão is the highest city in Brazil and the wonderful Orotour Garden Hotel, set in the Mantiqueira Mountains provided the ideal setting for the meeting. All delegates gave talks outlining their work and shared ideas and knowledge, allowing new collaborations to be formed by scientists and clinicians within and between Brazil and the UK.

Of particular focus was the potential of EV research to help us understand cancer and also neglected tropical diseases. The latter is a particular problem in Brazil where there is a major unmet research need. The new inter-disciplinary collaborations forged will hopefully lead to a long term impact in the UK and Brazil, with potential new treatments for these diseases resulting from the joint projects seeded at the meeting.

We are now planning a series of activities to help disseminate the results of the workshop more widely. This includes some collaborative journal article publications, which will describe the outcomes of the meeting and the technical challenges of working with EVs.

The meeting was a great success and we would like thank all of the attendees for making the workshop, the funders for their generous support along with Brookes and the AC Camargo. I would like to extend my heartfelt thanks to Prof Dias-Neto for his help in organising the workshop and his gracious hospitality to me and all the UK delegates.

Dave Carter

October 2016 11
#scienceisglobal

Dr. Victor Bolanos-Garcia encouraged his students to join a global campaign promoting science. The Royal Society (RS) along with national academies across the UK and Europe issued a joint statement about the importance of the international nature of research in July. Alongside the statement, they launched a social media campaign under the hashtag #ScienceIsGlobal to recognise and celebrate multinational research teams around the globe, thus uniting scientists in working for a better and brighter future.

“Science is global. Science is a beautiful gift to humanity, we should not distort it. Science does not differentiate between multiple races”

Dr APJ Abdul Kalam, Scientist & 11th president of India

Nanki Singh, a 2nd year BSc Biomedical Science student from the Netherlands, said “Thank you (Dr. Victor Bolanos-Garcia) once again for inspiring us as a group to promote #ScienceIsGlobal as well as motivating us to do our best in order for us to become successful scientists. I am truly grateful and I am absolutely thrilled to have participated.”

Alice Santonastaso, a visiting PhD student from the University of Pavia, Italy, added “To work with Dr. Victor Bolanos-Garcia’s lab-team in Oxford was one of the most enriching experiences of my PhD career and the internationality of its members is surely a strong point. I think that scientists should be encouraged to establish collaborations across the world to improve the quality of scientific research.”

Renáta Novák

Research Excellence Awards 2016/17

As part of Oxford Brookes’ commitment to supporting research-active academics, the University is introducing the Research Excellence Awards for 2016/17

Following a recent application period, the five winners of Research Excellence Awards from the Faculty of Health and Life Sciences are:

• Dr Casper Breuker, from the Dept. of Biological and Medical Sciences, who has been awarded £20,000 towards his research into the genetic regulation of the Speckled Wood Butterfly (Pararge aegeria).

• Dr Dianne Newbury, from the Dept. of Biological and Medical Sciences, who has been awarded £20,000 towards her research into the underlying genetics of language development and speech disorder.

• Professor Jane Appleton, from the Dept. of Psychology, Social Work and Public Health, who has been awarded £20,000 to further develop her innovative online learning resource ‘Think Baby’, which assists student health visitors in developing their skills in assessing mother-infant interaction.

• Prof Vince Connelly, from the Dept. of Psychology, Social Work and Public Health, has been awarded £20,000 to continue his novel research into the Ministry of Defence’s “Whole Force Approach”; assessing the best way to suitably integrate regular, reserve, civilian and contracted labour.

• Dr Miriam Clegg, from the Dept. of Sport and Health Sciences, has been awarded £20,000 towards her study into the effect of exercise on appetite and food intake in the elderly and the implications this has for improvements in cognition.

The scheme is funded through the Central Research Fund and is intended to provide enhanced support for research excellence. It complements Quality-Related Funding at Faculty and Department levels which supports research and knowledge exchange more broadly.

The intention is to continue the scheme annually as part of Oxford Brookes’ investment in research excellence and in supporting the aims of the recently revised Research and Knowledge Exchange Strategy 2016-2020.
Women in Science

One of our PhD research students, Alessandra Rochetti, reflects on some of her external activities of last year, including an inspirational ‘Women in Science’ event, which she was involved in.

My experience of doing a PhD is not solely focused on what I learn in the laboratory. The scientific community at Brookes also provides many opportunities for outreach, awareness and engagement with the public. This year I had the chance to take part in two exciting externally led projects. L’Oréal UK & Ireland in partnership with UNESCO and the Royal Society founded the ‘For Women in Science’ programme, to widen the participation of women in science. This year, for the first time, a poster competition for female PhD students was launched. Almost 500 applications were received and only 10 were shortlisted. They were chosen on the basis of scientific excellence and communication. Excitingly, my poster was one of the 10 chosen and I was invited to attend the awards ceremony and present my poster on 22 June at the Royal Society in London. My PhD project was about the movement of Golgi bodies in plant cells; motile organelles that synthetise complex sugars. It was a thrilling day, where I had the chance to meet female scientists and listen to an inspiring speech by Prof Dame Carol Robinson. Dame Carol is a pioneer in the use of mass spectrophotometry to study 3D structures of protein complexes. She is also the first female Professor in the Dept. of Chemistry at both the University of Cambridge and subsequently at the University of Oxford, where she is now based. The event was an opportunity to celebrate the contributions, significance, and progression of women in science and it was an honour to be involved.

In addition, for the last two years I have also contributed to the Google Science Fair as a regional judge. It is an international online competition open to young scientists aged 13-18 years old and sponsored by Google, Lego, Virgin Galactic, National Geographic and Scientific American.

These are only a few of the external activities I have been involved in during my PhD and they all contribute to my development as a scientist. They have encouraged me to step out of the lab, boosted my motivation and creativity and helped me to break the “language barrier” that lies between scientists and non-scientists.

Alessandra Rochetti

Summer placement with Ipsen Bioinnovation

Ipsen Bioinnovation was pleased to offer a 12 week summer placement, setting up a cell free protein expression system in Ipsen’s laboratories, to an Oxford Brookes University undergraduate.

“The placement offered hands-on work experience across a range of techniques, including: cell free protein expression, gel electrophoresis, Western blotting, polymerase chain reaction (PCR), and plasmid purification.

We welcomed Miss Amy Bridges to the placement and were delighted by her high level of dedication. The project was very successful and we thank Amy for her excellent work. We plan to offer similar opportunities in coming years and hope that staff and students at Oxford Brookes will be keen to continue working with us”.

Matthew Beard, Ipsen

“Carrying out research in Cell Free Protein Expression and working in a scientific research and development environment have given me invaluable experience and insight. Not only did I complete lab work and scientific write ups, but I also learnt other essential considerations involved in a research project; the health and safety aspect, the ordering of supplies and equipment required, and the theory behind the practical work. After working daily in a laboratory environment, basic lab skills (such as pipetting small volumes, using a microfuge and carrying out SDS PAGE and Western blot systems) have become second nature. I believe this experience will prove invaluable during my academic career. My confidence in a laboratory has grown greatly and it has been a very enjoyable experience.”

Amy Bridges, 2nd year BSc Biological Sciences student

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These are only a few of the external activities I have been involved in during my PhD and they all contribute to my development as a scientist. They have encouraged me to step out of the lab, boosted my motivation and creativity and helped me to break the “language barrier” that lies between scientists and non-scientists.

Alessandra Rochetti
Brookes Equine Students in France

Four BSc Equine Science students travelled to France with lecturer Rose Scofield to the 12th International Society for Equitation Science Conference in June.

Final year students Karolina Drewek and Sammy Cliffe had abstracts peer-reviewed and accepted as scientific posters. This included Karolina’s work ‘Training for a safer leisure horse: a pilot study investigating differences in heart rate between exposures to unknown stimuli’, and Sammy’s research entitled ‘Safety introducing horses to novel objects – a pilot investigation into presentation techniques’. Rose Scofield’s continuing work on horse and rider road safety was also accepted as a poster. Although Sammy could not attend, second year Brookes students Francesca Peruccio and Giorgia Guzman Lucatti, and first year Brookes student Claire Phippen, went along for experience.

The three day conference was based at the National Riding School in Saumur, home of the famous ‘Cadre Noir de Saumur’ - the French equivalent of the Spanish Riding School of Vienna. Where the Vienna school uses just one breed of horse, the white Lipizzaner, the Cadre Noir choose horses based on temperament; this made for very interesting discussion. The head of the Riding School Colonel P. Teisserenc invited the delegates to a public riding show and a display of the famous ‘airs above the ground’ (extravagant horse movements) training. Moreover, he unexpectedly allowed the 300 attendees to explore the entire site.

Famous equine scientists Paul McGreevy and Sue McDonnell presented at the conference, answering questions and discussing ideas with the students. This gave our group confidence and encouragement for their own studies; they made extensive notes throughout the presentations and have since cited the scientists in their assignments and dissertations.

Karolina, commenting post-conference, said it was very beneficial:

“I really enjoyed the experience. The conference was definitely far more interesting and fun than I thought it would be – especially the practical day where theory was put into practice. I would happily go again. It also made me think I would like to become a researcher! Amazing three days!”

On return to the UK, the students were thrilled to learn that their abstracts are to be published as part of an ISES paper in the Journal of Veterinary Behaviour-Clinical Applications and Research. This was the perfect news to compliment an already fantastic experience.

Renáta Novák and Jenna Hilsdon

PhDs Awarded

<table>
<thead>
<tr>
<th>Name</th>
<th>Director of Studies</th>
<th>Department</th>
<th>Awarded</th>
</tr>
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<tbody>
<tr>
<td>Jill Buckeldee</td>
<td>Helen Aveyard</td>
<td>Psychology, Social Work &amp; Public Health</td>
<td>Feb 2016</td>
</tr>
<tr>
<td>Jane Henderson</td>
<td>Lesley Smith</td>
<td>Psychology, Social Work &amp; Public Health</td>
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<td>Anish Senan</td>
<td>David Meredith</td>
<td>Biological and Medical Sciences</td>
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<tr>
<td>Marta Wanat</td>
<td>Mary Boulton</td>
<td>Applied Health and Professional Development</td>
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<tr>
<td>Lauren Matheson</td>
<td>Elia Watson</td>
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<tr>
<td>Dax Steins</td>
<td>Helen Dawes</td>
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<td>Laura Doughtly</td>
<td>Stewart Thompson</td>
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<td>Apr 2016</td>
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<tr>
<td>Laura Mulcahy</td>
<td>Dave Carter</td>
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<td>May 2016</td>
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<tr>
<td>Marta Campolier Bassaganyas</td>
<td>Helen Lightowler</td>
<td>Sport and Health Sciences</td>
<td>May 2016</td>
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<tr>
<td>Thomas O’Leary</td>
<td>Martin Morris and Johnny Collett</td>
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<td>May 2016</td>
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<tr>
<td>Alaadine El-Chab</td>
<td>Charlie Simpson</td>
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<td>June 2016</td>
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<tr>
<td>Carla Yarmenian-Haye</td>
<td>Helen Lightowler</td>
<td>Sport and Health Sciences</td>
<td>July 2016</td>
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Who’s New in HLS

A Conversation with Dr Louise Bunce

Last month our Research Grants Officer, Tudor Georgescu, caught up with new Senior Lecturer in Human Development in the Dept. of PSWPH, Louise Bunce, to discuss her journey beyond and back to Brookes. Louise completed her PhD in Developmental Psychology at Brookes in 2007, before working at the London Metropolitan University and the University of Winchester.

TG: Hi Louise! Let’s start with the basics, what brought you back to Brookes?

LB: A novel opportunity in the department of PSWPH arose to teach the psychology of human development on the social work program, which is a combining of disciplines that has not been tried before at Brookes and it sounded like an interesting challenge!

TG: So tell me about your research in human development.

LB: My primary research is about how children learn the many different concepts of what is real, from toys to fictional characters. Children know from an early age that toys are not real on the basis of the distinction between what’s authentic versus fake. Their understanding of fictional characters is more complicated because of the lack of evidence for them that makes them non-existent. Children take much longer to grasp this knowledge.

TG: There is an interesting discussion to be had about this – is ‘real’ really binary or are there various nuances, a continuum of sorts?

LB: Yes, it is very nuanced. Father Christmas is a nice example of this because when kids ask ‘is Father Christmas real?’ they are actually asking whether a particular version is the ‘real’ one from the North Pole or a fake or person dressing up as him (Bunce & Harris, 2008), whereas adults might think kids are questioning his existence, so the fake Father Christmas sits somewhere on the continuum between real and not real.

TG: How does this reflect on the work you did in the Oxford University Museum of Natural History?

LB: I was visiting the museum one day and I kept hearing kids asking ‘is it real?’ about the taxidermied animals. This intrigued me as to what kids actually meant so I contacted the museum and we collaborated on a research project to find out. We found that young kids tend to think that taxidermied animals are not real because they’re not moving, but as they get older they begin to realise that they’ve got authentic properties such as real fur and that they used to be alive, so they’re real in that sense.

TG: Has this changed how the museum describes these objects to children?

LB: That is actually something we are working on now; how to help kids understand what they see at the museum. One of the experiments I tried was showing kids a toy version of the taxidermied animal alongside it, because we know from my previous research that kids understand that toys are not real (Bunce & Harris, 2013). And when we did this, younger children completely changed what they said from ‘not real’ to ‘real’ and the toy helped them to understand the authentic nature of taxidermy. This has implications for how they teach children about what taxidermy is (Bunce, 2016).

TG: So with reality contingent upon a frame of reference, where to next in your research?

LB: The exciting thing that appeals to me now is using my understanding of psychological research methods and human development, and to apply that to issues faced in teaching and research in Social Work. I am particularly interested in issues surrounding children, families and child well-being and I want to spend this next year learning more about the work that is going on at Brookes and where the gaps in knowledge are.

TG: What is your greatest achievement thus far, what are you most proud of?

LB: That’s a difficult question and depends on how you define achievement! There’s what I most enjoyed, there’s what had the most impact, and what had the most citations - and they are all different. The most citations I’ve received so far is for my research on electric vehicles (Bunce, Harris & Burgess, 2014) and the research that’s received the most media attention recently is the effect of students identifying as consumers on their university education.

TG: What did your project on students as consumers find?

LB: This project was a collaboration with one of my final year project students who was interested in student attitudes towards tuition fees. We conducted a survey of over 600 students in England and the findings showed that the more students identified as consumers, the less they identified as learners, which had a negative impact on their academic performance (Bunce, Baird & Jones, 2016).

TG: Fascinating findings and such diverse topics too. Thank you for your time Louise!!
The following events can be booked online here, unless otherwise stated:
www.brookes.ac.uk/events
www.brookes.ac.uk/openday

125 YEARS OF NURSE EDUCATION
THE ROLE OF NURSES IN RECOGNISING AND REDUCING VULNERABILITY
Prof Ruth Norway
Wednesday 26 October 2016, 17:00-18:00
Jane Ashley Lecture Theatre, Marston Road

THE FUTURE OF NURSING DEBATE
Monday 5 December, 18:00-19:00
John Henry Brookes Building, Headington Campus

For more information on the events programme please visit: Nursing.brookes.ac.uk/125-years/events

LABOURING AND GIVING BIRTH IN WATER: evidence, practice, and views
Dr Ethel Burns
Saturday 12 November,
Open conference
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 2017, 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 2017, 18:00-19:00,
JHB Lecture Theatre, John Henry Brookes Building, Headington Campus

Research Awards

<table>
<thead>
<tr>
<th>Department</th>
<th>Project Name</th>
<th>Funder</th>
<th>Principal Investigator</th>
<th>Award Value</th>
<th>Awarded Date</th>
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<tbody>
<tr>
<td>Biological &amp; Medical Sciences</td>
<td>Linking phylogeography to ecology: extracting rules for butterfly biodiver...</td>
<td>Daphne Jackson Trust</td>
<td>Tim Shreeves</td>
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<td>Centre for Rehabilitation</td>
<td>Exploration of the utility of standard physical, cognitive and visual functioning tests</td>
<td>Dunhill Medical Trust</td>
<td>Helen Dawes</td>
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<td>Psychology, Social Work &amp; Public Health</td>
<td>NIHR Research Capability Funds, 2015-16</td>
<td>Oxfordshire Clinical Commissioning Group</td>
<td>Jane Appleton</td>
<td>£5,034</td>
<td>03/08/16</td>
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Awarded £110,511