Welcome to the 4th edition of Spotlight, the newsletter for staff and students within Oxford University's Nuffield Department of Clinical Medicine. There are four newsletters published each year, one each quarter, which carry news items and updates from the Department. An electronic version is also publicly available via the NDM website. If you have any comments or news items, please contact the Athena SWAN Coordinator via e-mail on athena.swan@ndm.ox.ac.uk.

Celebrating Success

In August, the Royal Society announced that the 2014 Royal Society Pfizer prize was to be awarded to KEMRI Wellcome Trust Research Programme scientist Dr Faith Osier, for her research on understanding the mechanisms of immunity to malaria infection in humans. The Royal Society Pfizer prize is one of the most prestigious prizes for African Science. It is awarded annually to an early career scientist based in Africa, and recognises research scientists making innovative contributions to the biological sciences, including basic medical science.

SET for BRITAIN

SET for BRITAIN is an annual poster competition which aims to raise the profile of Britain's early-stage researchers at Westminster by engaging Members of both Houses of Parliament with current science, engineering and mathematics research being undertaken in the UK, especially that of their local constituents and in their local Universities.

Early career researchers (DPhil students and post-docs) are invited to apply online for the competition, providing an abstract and a reference from their current supervisor. The deadline for applications is 5pm on 5th December 2014.

This is an excellent opportunity for early career researchers to take part in public engagement as well as a chance to win up to £3000. If you apply to this event, please let NDM Strategic know by emailing public@ndm.ox.ac.uk. We would like to provide coverage of the event, should any NDM researchers be selected to have their posters displayed at Westminster.

Professor Derrick Crook appointed Director of Public Health England

Professor Derrick Crook joins Public Health England (PHE) as Director of Microbiology on the 1st of January 2015. In his new role as PHE’s Director of Microbiology, his particular focus will be to lead the translation of genomic technologies to transform microbiology practice across England in full partnership between PHE and Universities hosting NIHR health protection units.

Last year Dr Dianne Newbury and Dr Min Lu were shortlisted and presented their posters to MPs in Westminster.
New Professors for NDM

We would like to take this opportunity to offer congratulations to all those who have received well-deserved recognition from the University through the award of new professorial titles.

The title of Professor has been awarded to: Alison Simmons, Benedikt Kessler, Bridget Wills, Christopher Conlon, Eleanor Barnes, Guy Thwaites, Kevin Baird, Julian Knight, Paul Newton, Philip Bejon, Philippe Guerin, Ray Owens, Rose McGready, Sarah Walker, Tao Dong and Trudie Lang.

The title of Associate Professor has been awarded to: Angela Brueggemann, Ben Cooper, Sassy Molyneux, Cecilia Lindgren, Christian Siebold, Christopher Winearls, Daniel Paris, David Mole, Elizabeth Carpenter, Erika Mancini, Gerton Lunter, Holm Uhlig, Heiman Wertheim, James Berkley, Jeremy Day, John Frater, Jonathan Grimes, Katja Simon, Krina Zondervan, Ling-Pei Ho, Lisa White, Lucy Dorrell, Maciej Boni, Margaret Mackinnon, Peter Bull, Peter Horby, Radu Aricescu, Robert Gilbert, Simon Draper and Stephen Baker.

Congratulations!

Investigational Ebola treatments

Investigational Ebola treatments are to be tested in West Africa for the first time as part of an international initiative to fast-track trials of the most promising drugs for a disease that has already led to over 4,000 deaths. A £3.2 million grant from the Wellcome Trust will enable multiple partners around the world to quickly establish clinical trials at existing Ebola treatment centres. The unprecedented outbreak of the virus, one of the most virulent infectious agents known to humans, has been declared a threat to international peace and security by the UN Security Council and prompted demands for an urgent response.

Led by Associate Professor Peter Horby of the Centre for Tropical Medicine and Global Health at the University of Oxford and ISARIC, this initiative will now allow candidate Ebola treatments to be assessed rapidly in patients, so that those proving safe and effective may be adopted for use as soon as possible.

Ebola vaccine

The first person out of 60 volunteers to participate in a trial to test whether a new Ebola vaccine produces a good immune response and with few side effects was vaccinated on 17th September 2014. The Jenner Institute team, led by Professor Adrian Hill, has been funded with a £2.8 million grant from the Wellcome Trust, the Medical Research Council (MRC) and the UK Department for International Development (DFID). The money will allow the team to start safety tests of the vaccine alongside similar trials in the US run by the National Institute of Allergy and Infectious Diseases (NIAID, a part of the NIH).

For more on these news items please see: www.ndm.ox.ac.uk/latest-news/1 and for more outbreak information, advice and support please see http://www.ox.ac.uk/current-medical-alerts

A night at the museum

Up to 1,000 people visited the WTCHG stand at 'Science Uncovered', the annual free event marking European Researchers' Night at the Natural History Museum in London on Friday 26 September. Group Head Professor Julian Knight, post-docs Dr Kat Plant and Dr Peter Humburg, and DPhil student Anna Sanniti were busy from 3.00-10.00 pm, answering questions about genetics and helping children and adults to enjoy practical activities.

University Reward & Recognition Scheme

Congratulations to all those who received awards in the annual University Reward & Recognition Scheme run in April 2014.

Under the Award for Excellence, non-recurrent increments were awarded to 14 employees, and recurrent increments were awarded to 24 employees across the Department.

In addition, monthly recognition awards have been awarded to 43 employees across NDM, 14 of whom were male and 29 were female.

Thank you all for your hard work, and congratulations on your recent awards!
Athena SWAN: Going for Silver!

What is Athena SWAN? The Athena SWAN Charter recognises and celebrates good practice on recruiting, retaining and promoting women in science, technology, engineering, maths and medicine (STEMM) in higher education. The Charter was launched in June 2005, and aims to address gender imbalance within STEMM, recognising the importance of the role that all members of the science community play in the progression and advancement of the field.

Why is it important? The Athena SWAN application process enables departments to reflect on, and celebrate, current organisational and cultural practices that promote gender equality. Athena SWAN also offers a valuable framework for introducing cultural changes that create a better working environment for both men and women. By 2015, Athena Swan accreditation at Silver award level will be necessary when making funding applications to the NIHR, and it is expected other funding bodies will follow suit.

Going for silver! NDM were formally presented with a Bronze Athena SWAN Award in a ceremony on 7th November 2013. To demonstrate our continued commitment to our staff it is our intention to submit for an Athena SWAN Silver Award in November 2014.

NDM researchers as ‘highly cited’

Researchers from the Nuffield Department of Medicine appear in the 2014 highly cited researchers’ list published by Thompson Reuters. This prestigious list includes those scientific researchers whose publications have been cited most often in academic journals over the past decade and rank among the top 1% most cited for their subject field and year of publication. Authors and researchers included in the list are identified as being among the world’s leading and most influential experts in their field, along with the universities and institutions which employ them.

The University of Oxford has 33 highly-cited researchers across all areas of science. NDM researchers Prof. Peter Donnelly and Assoc. Prof. Cecilia Lindgren were both included in the list for the field of Molecular Biology and Genetics.

“In her footsteps” podcasts

“In her footsteps” is a new podcast series that allows leading women in the Department to share their passion for research and balancing the demands of life outside work with successful research careers. Please see www.ndm.ox.ac.uk/in-her-footsteps

Good luck to Professor Fiona Powrie

We would like to wish Professor Powrie all the very best in her new role as Director of the Kennedy Institute and good luck in her new endeavours.

We will shortly be advertising the Sidney Truelove Professorship of Gastroenterology on the University and Department websites.

International Year of Crystallography

2014 is the International Year of Crystallography and to celebrate this event NDM has produced a series of short films - ‘Revolutionary Biology’. Revolutionary Biology shows how the field of structural biology has developed over the past 100 years, Oxford’s involvement in that development, and where we go from here.

The videos will be released on Tuesdays over the coming weeks, with the first video in this series available to watch from now:

Revolutionary Biology: The building blocks of life: 21st October

We hope that you enjoy watching how NDM and Oxford scientists have had a major role in revolutionizing drug discovery.

Revolutionary Biology Series:
Part 1: The building blocks of life
Part 2: The history of structural biology - release date 28th October 2014
Part 3: Advanced technology - release date 4th November 2014
Public Speaking and Research Communication Masterclass for Women in Science

The NDM hosted a Public Speaking and Research Communication Masterclass for Women in Science in June in the NDM Research Building. This specialised training was delivered to 15 scientists across the Department by Dr Aderin-Pocock MBE, as well as an international voice coach and award-winning space TV producers. They focused on using their production and journalism expertise to help women present themselves and their work.

The evening played to host to over 300 students and their families. 87 participating Oxfordshire secondary schools, including state and independent schools, nominated their top students in Physics, Chemistry and Biology for an award.

Survey Results

Thank you to all of you who participated in the Survey at the end of 2013. The information gathered has been vital in highlighting the strengths of our Department, and also in identifying areas where further improvements can be made. The results have been used to underpin our Athena SWAN initiatives to improve the Department for everyone.

A summary of the results is available on the NDM website: [www.ndm.ox.ac.uk/athena-swan-survey-results](http://www.ndm.ox.ac.uk/athena-swan-survey-results)

Public Speaking and Research Communication Masterclass for Women in Science

The NDM book was launched on Thursday 9th October, and electronic copies will be available from November. The book provides an overview of the Department history, highlighting impact stories and scientific achievements.

Science Oxford’s Brian Mackenwells then introduced NDM's Professor Helen McShane as the evening’s keynote speaker, after proudly reading out testimonials from teachers praising the dedication and achievements of their students.

Professor McShane spoke about vaccines for old and new pathogens, including her research toward an improved vaccine for TB. Helen has received some wonderful comments about her inspiring keynote speech:

A parent says “My husband and I thoroughly enjoyed the event and were delighted to see our daughter’s reaction to the speeches. The talk about TB made her realise that she definitely wants to study biomedicine at university. Thank you for making her feel good about being a scientist. It was so lovely to hear her enthusiastic comments on the way home.”

A teacher present says “the female speakers were truly exceptional and my girls (and I) went home that evening inspired…Being spoken to by a lady at the cutting edge of medical research and one at the cutting edge of physics was both a humbling and invigorating experience.”

Another teacher says “My students and I were “blown away” by your talk last night and humbled by the work you are doing. I want to take this opportunity to thank you for giving your time to help inspire young scientists…You make an outstanding role model for young women to aspire to and…I commend you for what you have done so far.”
Following on from the success of previous events, this year's Old Road Campus Research Building NDM Units summer school-holiday outing was to Winchester Science Centre and Planetarium.

In August, scientists and their families travelled by coach to Winchester Science Centre and Planetarium. When the 24 adults and 21 children arrived at the Centre they were free to explore the wide variety of activities on offer over the two floors. With over 100 hands-on exhibits that explain the fundamental principles of science and technology, there was plenty of fun to be had by everyone. Highlights included the science behind some Olympic sports, parachuting toy soldiers, mirror drawing, moving a ball using only your mind and making bubbles in different liquids.

There were also interactive science shows including the science of the seaside and a hair-raising demonstration of a Van der Graaff generator. Workshops were available during the day to make weather vane headbands and UV bracelets that change colour in sunlight.

After a couple of hours of playing with the activities on offer, it was time to catch a show in the planetarium. Peering up at the projected stars, families were taken on a trip through our solar system with each of the eight planets visited. It was also explained why Pluto is no longer a planet and how to identify planets in the sky. The show was full of fun facts including that on some planets it rains diamonds and that Uranus is full of methane, or as the presenter put it, 'fart gas'.

After the planetarium there was more time to explore the Centre, catch a science show or visit the gift shop before taking the coach back to Oxford.

Eneida Parizotto, a research assistant in the Jenner Institute, said of the visit, "Our daughter Gabriela said it was the best 'science day' ever." John Minogue, Logistics Manager for CCVTM, said, "A great day, fun had by all." This thought was echoed by Yihua Wang, a post-doctoral researcher in the Ludwig Institute, who said that the day was "Lots of fun! My daughter and I really enjoyed it."
Oxford Open Doors 2014

NDM took part in the Oxford Open Doors event on 13th & 14th September 2014. This annual event, organised by Oxford Preservation Trust, is an opportunity to allow locals and visitors to discover more about places that they normally might not be able to explore. Over the weekend more than 200 people visited the NDM Research Building to find out more about the science happening within the Department. On the Saturday, a science fair took place in the basement between 10am and 4pm. Visitors to the fair were able to talk to scientists and discover more about their research through fun, interactive activities.

There was live DNA extraction, where children eagerly squished strawberries in sandwich bags before Ludwig volunteers added the necessary chemicals. The children then swirled up the clumpy string of DNA to many squeals of delight.

The STOP HCV consortium had a table where you could make a virus out of air dough and sequins or win one of several different sweets by completing a personalised medicine flowchart. The Structural Genomics Consortium had their impressive drug interaction models and Lego vehicles that showed how if you started with the same building blocks you could end up with a different function. Volunteers from the Wellcome Trust Centre for Human Genetics, the Target Discovery Institute and NDM Strategic made DNA bracelets, explained genetic variance using the ‘gene tree’, demonstrated a malaria mobile game and more.

Over the weekend, researchers gave eight tours of the Target Discovery Institute. Visitors were shown around the stylish new building, which opened about 18 months ago. As well as interesting facts about the building and the research happening on the different floors, the tour guides included information about their own experiments and answered any questions that the guests had. This meant that each tour was tailored to the interests of that individual audience.

Thank you to everyone involved who made it such a great success.

Both the tours and the science fair had excellent feedback with comments from visitors such as:

“Very good interactive fair and interesting tour for all ages.”
“Really good for young children.”
“Very interesting day.”
“That was brilliant!”
A taster of the latest news from our units

For the latest news from across NDM, please see: [www.ndm.ox.ac.uk/latest-news](http://www.ndm.ox.ac.uk/latest-news)

**Tropical Medicine**
A programme led by Royal Botanic Gardens Kew and Oxford’s Department of Engineering Science, Malaria Atlas Project and the NDM Eijkman Oxford Clinical Research Unit (EOCRU) in Jakarta has recently won the [Google Impact Challenge 2014](http://www.googleimpactchallenge.com/). EOCRU is a subunit of the Wellcome-Oxford Major Overseas Programme based in Vietnam, which is part of [NDM Centre for Tropical Medicine and Global Health](http://www.tropicalmedicine.ox.ac.uk/). The prize is £500K to develop the project which will, over the next three years, create a smartphone app and a range of wearable acoustic detectors to detect the sound of mosquitoes. The group will then equip villagers in rural Indonesia with the novel technology. Further details and news from the units: [www.tropicalmedicine.ox.ac.uk/news](http://www.tropicalmedicine.ox.ac.uk/news).

**Experimental Medicine**
Scientists from Experimental Medicine ran an exhibit at the [Royal Society Summer exhibition](http://www.rssummerexhibition.com/) between the 1st and 6th July 2014. Their exhibit, ‘Immune-bacterial interactions’ explored the science behind the interactions between gut microbes and our immune system and how changes in their relationship can lead to illnesses such as inflammatory bowel disease. About 15,000 people attended the event in total with at least 2000 visitors to the stall over the course of the exhibition. This included a mix of organised school visits, families, university students and interested adults. Further details and news from the unit: [www.expmedndm.ox.ac.uk/news-seminars](http://www.expmedndm.ox.ac.uk/news-seminars).

**Old Road Campus Research Building**
On a recent visit to the Oxford Branch, the Ludwig Scientific Director Sir David Lane met with some early career researchers and fielded questions about Ludwig’s work in cancer genomics, immunotherapy and translational research, and the ways in which he suspects Ludwig’s contributions to cancer care will be most prominently felt in the next five years. There is a video, part of an ongoing series, which captures some of that conversation, available at [www.ludwig.ox.ac.uk/news-2](http://www.ludwig.ox.ac.uk/news-2). Further details and news from the units: [www.jenner.ac.uk](http://www.jenner.ac.uk), [www.ludwig.ox.ac.uk](http://www.ludwig.ox.ac.uk), [www.thesgc.org/scientists/groups/oxford](http://www.thesgc.org/scientists/groups/oxford).

**NDM Research Building**
The University of Oxford and Bayer HealthCare have entered into a strategic research alliance in the area of gynaecological therapies. The multi-target collaboration focuses on endometriosis and uterine fibroids with the goal of discovering and developing innovative treatment options for these diseases. The alliance is for an initial period of two years, but is open for extension up to five years. Both parties will contribute innovative drug targets and high quality technology infrastructures and will share responsibilities from basic research to early clinical trials in these two diseases. Further details and news from the unit: [www.ndmrb.ox.ac.uk/home](http://www.ndmrb.ox.ac.uk/home).

**Wellcome Trust Centre for Human Genetics**
A study of genetic variants associated with cases of severe malaria has successfully integrated data from almost 30,000 participants across multiple locations in Africa, Asia and Oceania. ‘In malaria it’s often not possible to replicate findings, because of heterogeneity in host and parasite populations’, says Dominic Kwiatkowski of the WTCHG and the Wellcome Trust Sanger Institute. ‘We’ve broken down that hurdle.’ The study has achieved insights into the evolutionary battle between the malaria parasite and human populations that could not have been achieved by smaller studies in each location. Further details and news from the units: [www.well.ox.ac.uk/latest-news](http://www.well.ox.ac.uk/latest-news).