

Life Sciences Newsletter

Department of Life Sciences

July 2014

Talks

Simon Dures (PhD student) gave a series of interview style public presentations on his lion research at a Zoological Society of London pop up shop on Carnaby street.

Jacob Baum gave a talk at the HFSP 25th Anniversary Meeting and 14th Awardees Meeting on "Single molecule, structural and biochemical insights into actin regulation in the malaria parasite"

Richard Gill presented at IUSI International conference in Cairns, Australia, giving a talk about the risk of pesticide exposure to the pollination service of bees.

Anne Dell was a plenary speaker at the Australian Society for Microbiology Annual Conference in Melbourne.

Pietro Spanu presented a poster - *the "ralph" effector bec1054 interacts with nucleic acids* at the "XVI International Congress on Molecular Plant-Microbe Interactions" in Rhodes.

Helen Pennington presented a poster - *RNASE like effectors and their putative interactors* at the "XVI International Congress on Molecular Plant-Microbe Interactions" in Rhodes.

Appointments

Martin Buck is on the panel for judging the winners of this year's [Phillip Leverhulme Prizes](#) in the Biological Sciences.

Anne Dell was appointed as the Treasurer of the Academy of Medical Sciences starting Dec 2014.

Athena Swan

Thank you to everyone for completing the Athena surveys, were happy with the response rate: Staff – 41.3%; PhD Students - 34% and UG/MA students – 39.3%! Results are being analysed...

It has been agreed that the Chair of the AOC, Professor Anne Dell, **will review the panels** (including composition of the panel developing the job description and person specification, shortlisting panel and interview panel) **for all Academic positions with immediate effect.**

Events

Prof Michael Levitt from Sanford (Recipient of the 2013 Nobel Prize for Chemistry) will be giving the annual [Sir Ernst Chain Lecture](#) at Imperial on the 13 November 2014.

GCEE are hosting a [family day of citizen science](#) at Silwood Park on **Saturday 27th September**. There will be a host of exciting field-based activities such as pond dipping, bug hunts or bird walks, as well as interactive displays and computer-based demonstrations. Visitors will learn about how they can play their part locally and globally in monitoring biodiversity, through engagement with local wildlife trusts, international NGOs and research organisations. If anyone is interested in exhibiting, giving a demonstration, or would like to attend please contact gcee.admin@imperial.ac.uk.

Healthy Oceans in the 21st Century, co-hosted with the Grantham Institute and with Prof Ben Halpern as keynote and an exciting panel took place on 1 July 2014 and was very well attended!

Women of Imperial events: The Provost's Board approved a proposal by the Provost's Envoy for Gender Equality for a series of events to celebrate women at Imperial, to coincide with International Women's Day in **Spring 2015**. Further details will be available closer to the time!

Prizes and Awards

Simon Dures (PhD Student) won a bottle of whiskey for second place poster at the British Ecological Society / DICE Joint symposium on 'Considering the Future of Conservation'.

Helen Pennington was awarded £800 by the Gregory fund, to help cover the costs of the "XVI International Congress on Molecular Plant-Microbe Interactions" conference.

Publications

Xu Y, Plechanovová A, Simpson P, Marchant J, Leidecker O, Kraatz S, Hay RT, **Matthews SJ** (2014) Structural insight into SUMO chain recognition and manipulation by the ubiquitin ligase RNF4. *Nat Commun* 5 (<http://dx.doi.org/10.1038/ncomms5217>)

Wilson Wong, Xiao-chen Bai, Alan Brown, Israel S Fernandez, Eric Hanssen, Melanie Condron, Yan Hong Tan, **Sjors HW Scheres** & **Jake Baum** (2014) Cryo-EM structure of the Plasmodium falciparum 80S ribosome bound to the anti-protozoan drug emetine. *eLIFE* 10.7554/eLife.03080. Published 8th July 2014.

[Agrobacterium tumefaciens Deploys a Superfamily of Type VI Secretion DNase Effectors as Weapons for Interbacterial Competition In Planta.](#) Ma LS, Hachani A, Lin JS, **Filloux A**, Lai EM. *Cell Host Microbe*. 2014 Jun 25. pii: S1931-3128(14)00192-9. doi: 10.1016/j.chom.2014.06.002.

Richard Gill & Nigel Raine 2014 *Functional Ecology* (online) Chronic impairment of bumblebee natural foraging behaviour induced by sublethal pesticide exposure. http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/newssummary/news_9-7-2014-14-31-56

G. Aquino, L. Tweedy, D. Heinrich, **R.G. Endres**. Memory improves precision of cell sensing in fluctuating environments. Accepted for publication in *Scientific Reports*.

S. Fan, **R.G. Endres**. A minimal model for metabolism-dependent chemotaxis in *Rhodobacter sphaeroides*. Accepted for publication in *J Roy Soc Interface*.

Zhang H, Zhu F, Yang T, Ding L, Zhou M, Li J, **Haslam SM, Dell A**, Erlandsen H, Wu H. paper - The highly conserved domain of unknown function 1792 has a distinct glycosyltransferase fold - was published in *Nat Commun*. 2014 Jul 15;5:4339. doi: 10.1038/ncomms5339.

Media/outreach activities

Steve Matthews *et al* paper, Structural insight into SUMO chain recognition and manipulation by the ubiquitin ligase RNF4, was published at [Imperial College News](#).

Nick Franks was interviewed in a [BBC Frontiers program](#) on Radio 4 on Anaesthesia.

For your Information

[National and Local Pay Award 2014 - 15](#) agreed!

Senate has approved a new MRes course in Tropical Forest Ecology (wef October 2015).

As 30 June 2014, the **right to request flexible working** has been extended to all employees with 26 weeks' continuous employment! Click [here](#) to access the Flexible Working Policy.

[Babies and Bumps](#) - new dates at SK Campus.

[Confidential Care](#) - Advice and Counselling for Staff.

Colin Prentice was included in the Thomson Reuters list of The World's Most Influential Scientific Minds 2014.

Kostas Beis' recent work has featured on the BBSRC Business Magazine. This was after the press release of my Nature Chemical Biology paper that you featured in your news letter earlier this year. I am attaching a copy of the business magazine pdf (see page 23).

Ben Halpern made the list for the 'world's most influential scientific minds' for 2014 under the Environment/Ecology category.

Austin Burt was quoted in an news article "[Harvard scientists want gene-manipulation debate](#)" by The Boston Globe.

Daniel Davis' popular science book 'The Compatibility Gene' written while at Imperial College London, has been long-listed for the prestigious [Royal Society Winton Book Prize](#).

Windbichler N & Crisanti A et al (Galizi R, Doyle LA, Menichelli M, Bernardini F, Deredec A, Burt A, Stoddard BL) paper "A synthetic sex ratio distortion system for the control of the human malaria mosquito" received a huge amount of media interest, both in the UK and internationally. Highlights included BBC news online, The Guardian, The Telegraph, The Daily Mail, The Times, and the Times of India, which is the world's largest circulation English-language broadsheet. The story featured on the front page of BBC News website, and appeared in print in both The Guardian and The Times. The story was also broadcast on BBC London news, Sky News and Al Jazeera news. An interview with Professor Austin Burt was broadcast on Cameroon radio.

The story has received 2,688 views on the Imperial's website and it was also the main feature on Imperial's homepage From Friday 13th June to Monday 16th June (see www.imperial.ac.uk/aboutthissite/homepage). There were more than 68,460 page views on the homepage over that period. The story was widely shared on social media, with nearly 100 Facebook posts and 85 Tweets directly from the page on the Imperial News website. The story also received a wide variety of comments by members of the public.

Research Grants and Fellowships

Mike Sternberg together with Prof Richard Houlston (Institute of Cancer Research) have been awarded a Wellcome Trust Biomedical resources grant for £800K for 5 years supporting 2.25 RAs (at Imperial) to develop a bioinformatics resource providing a structure-based annotation of proteins in disease networks.

Steve Matthews et al received Wellcome Trust Multi-user equipment grant awarded to support £1M+ upgrade to the cross-faculty NMR Centre (<http://www3.imperial.ac.uk/nmrcentre>)

Imperial College London Confidence in Concept (ICiC) (2014). **J Baum** (CIA) K. Willison (CIB). Towards an in vitro high-throughput translation-inhibition discovery platform for the malaria parasite *Plasmodium falciparum*. Value: £56,446.

Ben Raymond was awarded a Leverhulme Trust grant: "Directing the evolution of bacterial virulence to overcome resistance to biological pesticides". £233,233. RPG-2014-252.

Tony Southall – Wellcome Trust (New Investigator Award) - £1.04m - Reprogramming neurons for nervous system repair.

Giovanni Sena – BBSRC (New Investigator Research Grant) – £431k - A Complexity Science Approach to Plant Tissue Regeneration.

Giorgio Gilestro - BBSRC (New Investigator Research Grant) – £476k - Genetics of sleep regulation and function: the AKR genes in *Drosophila*.

John Heap - BBSRC (New Investigator Research Grant) – £449k - A synthetic biology approach to enhancing chemical production by anaerobic bacteria (SynBio-AnOx).

Tolga Bozkurt - BBSRC (New Investigator Research Grant) - £475k - *Phytophthora infestans* effector PexRD54 associates with host Rab GTPase Rab8-1 to reprogram endomembrane transport.

Andrew Knight received Climate-KiC funding by the European Institute of Innovation and Technology (EIT)

Health & Safety



New College Policy and Code of Practice on Lone Working!

The full Policy and detailed Code of Practice explaining the issues below went live in June 2014 and are accessible on the Safety Department website along with an online consent form.

<http://www3.imperial.ac.uk/safety/subjects/loneworking>

Why is this needed?

Working alone at any time of the day or night increases the inherent risks of an activity as there is no one to help should a hazardous situation arise. Also there are some specific activities where the law prohibits lone working.

What does the new Policy and Code of Practice do?

1. Lays down a minimum standard for lone working requirements across the College.
2. Outlines activities in the College that are prohibited from lone working, and others that need careful assessment.
3. Introduces the concept of 'benign' and 'intrinsically hazardous' environments and the recognition that lone working in hazardous environments requires a greater degree of control.
4. Provide a central electronic system for obtaining lone working consent in situations where this has been deemed necessary in the risk assessment or in accordance with local policy.

What activities are 'prohibited' from lone working?

More detail is available in the Code of Practice, but in summary:

- Working with cryogenics
- Working at height
- Using unguarded workshop machinery
- Working on or near live uninsulated electrical conductors
- Working in confined spaces as defined by the Regulations

If you have any questions about lone working please contact Stefan Hoyle (s.hoyle@imperial.ac.uk)