

Life Sciences Newsletter

Imperial College London

Oct 2016

[DoLS Committees and Initiatives](#)

[Health & Wellbeing](#)

[DoLS Newsletter Archive](#)

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WELCOME TO ALL NEW STAFF

Research Assistants: **Mathieu Bousquet** (Patrik Jones); **Joseph Barritt** (Alfonso De Simone); **Ellen Bowler**, **Leonie Gough** and **Michael Schmutzer** (Robert Ewers). *Research Technicians:* **Sara Gonzalez Anton** (Cristina Lo Celso); **Linda Makhoulouf** (Jake Baum).

APPOINTMENTS

Martin Buck has been appointed an elector at the University of Cambridge

Bill Wisden has been appointed as an External Examiner for UCL's undergraduate courses in neuroscience (Dept of Cell Biology & Anatomy)

USEFUL INFORMATION:

- ▶ [College's EU referendum webpage](#)
- ▶ [Working at Imperial](#)
- ▶ [Organisational and Staff Development](#)
- ▶ [Equality, Diversity and Inclusion Centre](#)
- ▶ [Occupational Health Service](#)
- ▶ [Postdoc Development Centre](#)

GRANTS

Staff at Silwood Park were awarded a NERC CDT in Quantitative skills and Modelling in Ecology and Evolution - £2 million paying for 24 PhD students, led by Life Sciences at Silwood, also 12 Imperial Departments, University of Reading, and 3 non-academic hosting partners: NERC Centre for Ecology and Hydrology, Centre for Environment Fisheries and Aquaculture Science (Cefas); Zoological Society of London (ZSL)

Mike Sternberg was awarded £572K 3-year BBSRC grant in collaboration with a group in Kansas as part of the BBSRC-NSF initiative. They will work on mapping mutational variants to protein structures and complexes

George K. Christophides was awarded together with Dr Jean Langhorne (The Crick Institute) a joint Crick-Imperial PhD fellowship grant to investigate the role of the mosquito immune system in selecting and resetting malaria parasites before they infect the vertebrate host. The deadline for applications is 14 November 2016: <https://www.crick.ac.uk/about-us/jobs-and-study/phd-programme/phd-student-recruitment/>

Steve Matthews was awarded a £322k industrial award with Oxford Nanopore Technology Ltd to study the application and development of amyloid secretion pores in DNA/RNA sequencing applications

EPSRC GCRF Research Fund Scheme (2016). P. Georgiou (PI), C. Toumazou (Co-I), A. Holmes (Co-I), **J. BAUM** (Co-I), C. Costello (Co-I), J. Rodriguez Manzano (Co-I). Engineering Rapid And Sensitive Electronic Diagnostics for Infectious Diseases (ERASED- ID). September 2016 to March 2017. Value £169,262

TALKS

Vincent Savolainen gave a keynote 'Ecological speciation in sympatric palms' at the UK Plant Evolutionary Biology Conference at the Cambridge University Botanic Gardens in conjunction with the new Sainsbury Lab on the 15th and 16th of September 2016

Stephen Curry gave a keynote talk (“How innovative are you? Let me count the ways”) at the [OECD Blue Sky III meeting](#) on Indicators of Innovation, which was held in Ghent, Belgium in September

George K. Christophides gave an invited talk on Innate immune response and parasite evasion in malaria vector mosquitoes in the International Congress of Entomology (ICE2016) held in Orlando Florida between 25 to 30 September

Nadia Guerra was an invited speaker at the international conference on Natural Immunity NK2016 which gathered over 450 immunologists in Taormina, Sicily on October 3rd. She presented her latest findings describing the paradoxical role of NKG2D in Cancer Immunity (*Sheppard, Guedes et al. Nat. Commun. in press*)

Jake Baum gave two invited talks:

- IRI Life Sciences Mechano-biology Series. Humbolt University, Berlin, Germany. Title: “**Dissecting the mechanics of malaria parasite gliding and host-cell invasion**” October 2016
- First Actin in Action meeting, EMBL, Heidelberg, Germany. Title: “**Making it, retaining it and breaking it: the evolutionarily divergent actin regulatory system of the malaria parasite**” September 2016

PUBLICATIONS

Ciezarek AG, Dunning LT, Jones CS, Noble LR, Humble E, Stefanni S, **Savolainen V**, 2016, [Substitutions in the glycogenin-1 gene are associated with the evolution of endothermy in sharks and tunas.](#), in press in *Genome Biol Evol* - see news item '[Great white sharks and tuna share genetics that makes them super predators](#)'

Tang CQ, Orme CDL, Bunnefeld L, Jones FA, Powell S, Chase MW, **Barraclough TG, Savolainen V**, Global monocot diversification: geography better explains variation in species richness than environment or biology, in press in *Botanical Journal of the Linnean Society*

I. Tardieux and **J. Baum** (2016) *Reassessing the mechanics of parasite motility and host-cell invasion*. *Journal of Cell Biology*. 214:507-15.

Edwin D Hawkins* & **Delfim Duarte*** et al (**Olufolake Akinduro, Reema A Khorshed, Nicola Ruivo and Cristina Lo Celso**). T cell acute leukaemia exhibits dynamic interactions with bone marrow microenvironments.” *Nature* 2016 *in press*. doi:10.1038/nature19801. Using intravital microscopy, the authors show that leukaemia cells are incredibly motile and do not hide within specific cellular structures of the bone marrow.

Adam L MacLean, Cristina Lo Celso and Michael PH Stumpf Stem Cell Population Biology: Insights from Haematopoiesis. *Stem Cells*, online: September 2016 DOI: 10.1002/stem.2508 <http://onlinelibrary.wiley.com/doi/10.1002/stem.2508/full>

MEDIA/OUTREACH ACTIVITIES/EVENTS BEING HOSTED

Mike Sternberg, Suhail Islam, Alessia David and Eman Alhuzimi, together with their collaborators at Goldsmiths, presented their serious computer game for crowd-sourced protein docking (BioBlox) at the New Scientist Live Exhibition, London over 22-25 September 2016.

PRIZES AND AWARDS

Robert Endres been elected Fellow of the American Physical Society (APS) upon the recommendation of the Division of Biological Physics “[for outstanding contributions to the understanding of the physical principles underlying sensing and signaling in biological cells.](#)”

Inma Perez-Dorado (PDRA in **Ernesto Cota's** group) was awarded the "FEBS Open Bio Poster Prize" for her work "Unravelling the molecular basis of adhesion to the host via Als1, a major virulence factor from *Candida albicans*"

Jasmine Bickel (PhD student in **Doryen Bubeck's** lab) won the prize for Top Researcher in her ICB MRes course in Chemical Biology

Courtney Boyd won £400 travel grant to present her work at the 14th Euro Fed Lipid Congress held in Ghent, Belgium as part of the Young Lipid Scientist of the Year award. Her talk took place on 19th September and was titled 'Examining the Mechanism of Pore Formation by a Human-Specific Bacterial Toxin'

Luisa Rona Damazio Pitaluga was awarded a 2-year Newton International Fellowship to work on "Evolutionary genomics profiling of the Anopheles-Plasmodium interactions" in the laboratory of **George K. Christophides**

Joe Greener from **Mike Sternberg's group** was awarded the "Warren DeLano Structural Bioinformatics and Computational Biophysics Award" for the best presentation on modelling protein allostery at the 3DSIG satellite meeting at Intelligent Systems for Molecular Biology (Orlando, July 2016)

PERSONAL NEWS

Many congratulations to **Doryen Bubeck and her family** on the birth of beautiful baby boy **Alden** - born on the 19th September!



USEFUL INFORMATION

Staff Supporters Scheme - a brand new initiative that will help all staff access the support and guidance they need - is now 'live'! [Find out more](#)

[Equality, Diversity and Inclusion Centre](#) (EDIC) are hosting a 'Cultural Photo Competition' for the 2017 Diversity Calendar and are inviting staff/students to submit photos depicting culture traditions & celebrations either from your own cultures or from your travels or from anything that you have celebrated. The deadline is 5pm on Friday **11th November 2016**. Please email your photos to equality@imperial.ac.uk. This year's calendar can be viewed [here](#)

IMPACT

Iain Colin Prentice reports that a contract has been awarded by the European Space Agency to a consortium led by VITO (Belgium) and including Imperial College and the University of Antwerp. The title of the contract is "Development and validation of a global GPP/NPP model using MERIS and Sentinel-3 data (TerrA-P) and its purpose is to develop satellite-based monitoring of primary production on a 10-day time step across the global land surface, making use of recent developments in primary production modelling by my group and advances in the analysis of land carbon cycling by our collaborators in Antwerp. VITO provides well-established capabilities in satellite data processing. This is an exciting opportunity to provide a more up-to-date and soundly based monitoring algorithm than the widely used (but much-criticized) products offered by NASA, and potentially a springboard for many future applications.