



### Message from Francois

I wish to thank you all for your many successes and resilience in the face of considerable adversity over the last two years.

The last two years have indeed been a difficult time for many of us, with our former professional routines and frequent interactions largely on hold.

The world is healing, and 'normality' will be returning in time as our post-pandemic hangover wanes.

I look forward to us soon bringing back UGI to its pre-pandemic vibrance, energy and joyfulness.

### Welcome

**Dr Helen Curley** Post Doc Researcher – Maria Secrier's Group

My research is focused in translational cancer genomics. I am working with Maria Secrier investigating the underlying characteristics of quiescence in oesophageal cancers, glioblastomas and sarcomas and its potential role in treatment response.

### News

UCL Cancer Domain Symposium is taking place on **May 11<sup>th</sup>**: <https://www.ucl.ac.uk/cancer/events/2022/may/ucl-cancer-domain-symposium-2022>

In addition to her role at UCL, **Karoline Kuchenbaecker** has been appointed as Scientific Lead of Diverse Data at Genomics England <https://www.genomicsengland.co.uk/initiatives/diverse-data>.

Genomics England have sequenced over 100,000 Genomes and will now extend this work to advance genomic medicine and ensure benefits for diverse communities.

Congratulations to **Lucy van Dorp** on the birth of her baby boy Rowan who was born December 2021. We are looking forward to welcoming Lucy back from her Maternity Leave in June.

### Upcoming UGI Seminars

**11 May - Sarah Tishkoff**  
University of Pennsylvania

**18 May - Lingzhao Fang**  
Edinburgh University

**25 May - Leilei Cui** UCL

**8 June - Iain Mathieson** University of Pennsylvania

**15 June - Xiangrui Meng** UCL

**22 June - Julia Zolner** UCL

**29 June - Shai Carmi**  
The Hebrew University

**6 July - Ziming Zhong** UCL

### PhD Success

**Dr Mislav Acman** (BBSRC LiDO DTP) "Role of mobile genetic elements in the global network of bacterial horizontal gene transfer."

**Dr Sam Morris** (BBSRC LiDO DTP) "Harnessing haplotype sharing information from low coverage sequencing and sparsely genotyped data."

**Dr Chris Owen** (NERC DTP) "Global genomic diversity of a major wildlife pathogen: Ranavirus, past and present"

**Harrison Ostridge** from Aida Andrés' UGI group has been awarded the prize for the "Best Twitter Flash Presentation" at the PopGroup meeting (55th edition). This is the largest population genetics meeting in the UK, a huge achievement and the first time this prize has been awarded.

## Education/Science Communication

Researchers often struggle to explain their work in plain language, especially if it involves technical details. To address this issue, [Alvina Lai](#) launched the Zero to Data Science YouTube channel to share data science tutorials and research findings. Zero to Data Science isn't your typical channel. It harnesses the power of storytelling, animations and popular culture (e.g., Squid Game, Disney Encanto and Harry Potter) to communicate data science techniques and research in a manner that is palatable to a lay audience. Analysis scripts and datasets for the videos are free to access on GitHub. Whether you're new to data science or an experienced researcher, visit [Zero to Data Science](#) for short educational and entertaining videos.



## Grants

Lucy van Dorp and Francois Balloux are investigators on a large **Horizon Europe 'END-VoC'** (End SARS-CoV-2 Variants of Concerns) consortium. Which was awarded €10,000,000. The primary objective of the project is to predict the emergence of SARS-CoV-2 variants of concern using a large number of cohorts throughout the world.

Leo Speidel and Garrett Hellenthal were awarded £12K from **The Royal Society** on the project "Pooling large-scale datasets from Japan and the UK for studying the role of natural selection in shaping human genetic diversity". This funding will pay for two-way visits over two years with collaborators at the National Center for Global Health and Medicine in Tokyo, Japan, enabling joint analyses of UK BioBank and BioBank Japan data.

Garrett Hellenthal was awarded a **Wellcome Trust** Senior Research Fellowship worth £1,092,568 over five years on the project "Leveraging large-scale genetic and epigenetic data to infer genomic responses to environmental pressures in humans". This will fund work to understand how our genomes have enabled humans to adapt and thrive in the face of fluctuating environmental and disease pressures.

## Recent Publications

Acman, M., Wang, R., van Dorp, L., (...), & Balloux, F. (2022) **Role of mobile genetic elements in the global dissemination of the carbapenem resistance gene *bla<sub>NDM</sub>***. *Nature Communications*. **13**: 1131.

<https://www.nature.com/articles/s41467-022-28819-2>

Swaddling, L., Diniz, M. O., (...) Tan, C., (...), van Dorp, L., Balloux, F. (...), & Maini, M. (2022) **Pre-existing polymerase-specific T cells expand in abortive seronegative SARS-CoV-2**. *Nature*. **13**: 1131.

<https://www.nature.com/articles/s41467-022-28819-2>

Brown, A.-L., Wilkins, O. G., Keuss, M. J., (...), Secrier, M., (...), Fratta, P. (2022). **TDP-43 loss and ALS-risk SNPs drive mis-splicing and depletion of UNC13A.** *Nature*, **603**, 131-137.

<https://www.nature.com/articles/s41586-022-04436-3>

Curtis D. (2022) **Identification of specific genes involved in schizophrenia aetiology – what difference does it make?** *The British Journal of Psychiatry* (early view)

<https://doi.org/10.1192/bjp.2021.153>

Further summary of three recent Nature / Nature Genetics papers co-authored by David Curtis.

<https://tinyurl.com/mr43tztc>

Fatumo, S., Chikowore, T., Choudhury, A., Ayub, M., Martin, A. R., & Kuchenbaecker, K. (2022). **A roadmap to increase diversity in genomic studies.** *Nature Medicine*, **28**(2), 243–250.

<https://www.nature.com/articles/s41591-021-01672-4>

Javidnia, S., Cranwell, S., Mueller, S. H., Selman, C., Tullet, J. M. A., Kuchenbaecker, K., Alic, N. (2022). **Mendelian randomization analyses implicate biogenesis of translation machinery in human aging.** *Genome Research*, **32**(2), 258–265.

<https://genome.cshlp.org/content/32/2/258.long>

Former PhD student Javier Mendoza-Revilla is lead author on a paper published in *Molecular Biology and Evolution* entitled "**Disentangling signatures of selection before and after European colonization in Latin Americans**". The work was led by Javier, Garrett Hellenthal and Andres Ruiz-Linares, with major contributions from former PhD students Juan Camilo Chacon-Duque and Macarena Fuentes-Guajardo and former post-doc Louise Ormond.

## Podcasts

Harrison Ostridge <https://twitter.com/HeredityJournal/status/1486666996741771267>

## Tweets

Harrison Ostridge <https://play.acast.com/s/heredity-podcast-naturecom-science-feeds/popgroup-55-special>