

Gillian P. McHugo

COMPUTATIONAL BIOLOGIST

School of Agriculture and Food Science, University College Dublin, Ireland

✉ gillian.mc-hugo@ucdconnect.ie | 🏠 gillianmchugo.github.io | ☎ 0000-0001-6920-0041 | 📧 gillianmchugo | 🌐 gillianmchugo

I am a PhD student at University College Dublin, working with Professor David E. MacHugh and Professor Stephen V. Gordon. I am currently studying integrative genomics of infectious diseases in cattle, focusing on trypanosomiasis in hybrid African cattle and bovine tuberculosis in Irish cattle.

Education

PhD in Infection Biology

2018 - present

UNIVERSITY COLLEGE DUBLIN

Dublin, Ireland

- Thesis: Integrative genomics of infectious diseases in cattle, supervised by Professor David E. MacHugh and Professor Stephen V. Gordon.

MSc in Evolutionary Biology

2015 - 2016

UNIVERSITY COLLEGE DUBLIN

Dublin, Ireland

- Thesis: A population genomic analysis of the endangered Galway sheep breed, supervised by Professor David E. MacHugh and published in *Frontiers in Genetics*.

BA (Hons) in Natural Sciences (Zoology)

2011 - 2015

TRINITY COLLEGE DUBLIN

Dublin, Ireland

- Thesis: *Mytilus edulis* as a bioindicator of water pollution: potential histopathology biomarkers in Dublin Bay and Newquay, Co. Clare, supervised by Professor James G. Wilson.

Research Experience

Research Assistant

April - July, 2018

ANIMAL GENOMICS LABORATORY, UNIVERSITY COLLEGE DUBLIN

Dublin, Ireland

- Assisted Professor David MacHugh with preparation of a review on ancient DNA and guiding an undergraduate research student. This resulted in the publication of a review in *BMC Biology* and presentations at the Society for Molecular Biology and Evolution Meeting 2019.

Volunteer Research Assistant

April - June, 2017

DEPARTMENT OF BEHAVIOURAL ECOLOGY AND EVOLUTIONARY GENETICS, MAX PLANCK INSTITUTE OF ORNITHOLOGY

Tenerife, Spain

- Assisted Dr. Luisana Carballo with data collection of parrot courtship behaviour at the breeding station of the Loro Parque Foundation in La Vera.

Teaching Experience

- I have demonstrated for modules in University College Dublin, including both wet lab and computational practicals. Modules I have demonstrated for include Applied Biotechnology (ANSC30100) and Bioinformatics (MEIN30240).
- Since September 2019 I have taken over running UCD_CodeClub, a bioinformatics group for PhD students at UCD. This involves teaching other students how to use R, following the R for Data Science book by Garrett Grolemund and Hadley Wickham.

Publications

1. McHugo, G, M Dover, and D MacHugh (2019). Unlocking the origins and biology of domestic animals using ancient DNA and paleogenomics. *BMC Biology*.
2. McHugo, G, S Browett, I Randhawa, D Howard, M Mullen, and ... (2019). A population genomics analysis of the native Irish Galway sheep breed. *Frontiers in Genetics*.
3. McHugo, G, G O’Gorman, E Hill, and D MacHugh (2019). Local ancestry and functional genomics of trypanotolerant and trypanosusceptible admixed African cattle breeds. *Human Heredity*.
4. Browett, S, G McHugo, I Richardson, D Magee, S Park, A Fahey, and ... (2018). Genomic characterisation of the indigenous Irish Kerry cattle breed. *Frontiers in genetics*.

- A full list can be found on ORCID, ResearchGate, or Google Scholar.