

Gillian P. McHugo

COMPUTATIONAL BIOLOGIST

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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.

Research Experience

PhD in Infection Biology

UNIVERSITY COLLEGE DUBLIN

2018 - present

Dublin, Ireland

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

Research Assistant

ANIMAL GENOMICS LABORATORY, UNIVERSITY COLLEGE DUBLIN

April - July, 2018

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

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

April - June, 2017

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.

Education

MSc in Evolutionary Biology

UNIVERSITY COLLEGE DUBLIN

2015 - 2016

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)

TRINITY COLLEGE DUBLIN

2011 - 2015

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.

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.