

Heath O'Brien, PhD

Bioinformatician

May 2022

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[Publications](#)

[genome-informatics](#)

About me

I have 20 years of experience analyzing genetic data, both in academia and the private sector. I've worked on functional genomics, high-throughput sequencing and genotyping data from plants, fungi, bacteria and humans. I enjoy working on interdisciplinary projects and leading teams with diverse skill sets. I also have strong communication skills, having co-authored over 25 publications and presented my research at conferences in 7 countries.

Skills

Functional genomics

Quantitative genetics

Microbiology

Data visualisation

Scientific communication

Project management

R

Python

BASH

AWS

SQL

Work History

- | | | |
|-----------|---|---------------------|
| 2022-2022 | Senior Bioinformatician
Sano Genetics | Cambridge UK |
| | <ul style="list-style-type: none">Developing pipelines to process generic data | |
| 2020-2022 | Bioinformatician
Theolytics | Oxford UK |
| | <ul style="list-style-type: none">Managing pipelines and compute architecture for genomic analyses of oncolytic virusesAdvising on research strategy and on the design and analysis of experimentsManaging partnerships with other companies and academic scientists | |
| 2018-2020 | Lead Bioinformatician
Living DNA | Frome, UK |
| | <ul style="list-style-type: none">Leading a team of 6 bioinformaticians and data scientists developing methods to derive ancestry and health insights from genotyping dataWorking to secure external funding to develop novel genomic prediction approachesCollaboration with the engineering team to deploy processing pipelines at scale | |
| 2016-2018 | Research Associate
MRC Centre for Neuropsychiatric Genetics and Genomics | Cardiff, UK |
| | <ul style="list-style-type: none">Differential gene expression and eQTL analyses on human brain samplesIntegration of functional genomic and large-scale population genetic datasets for schizophrenia and other neuropsychiatric disordersOrganization of training seminars on data science (Rstudio, MySQL), version control (Git), and pipeline development (Snakemake, Bash)Deployment of results on the web using R-Shiny | |
| 2013-2016 | Bioinformatician
University of Bristol | Bristol, UK |
| | <ul style="list-style-type: none">Comparative transcriptomics to determine the genetic basis of cell wall patterning responsible for colour-production in plant leavesActing group leader for nine months | |
| 2008-2013 | Postdoctoral Fellow
University of Toronto | Toronto, ON, Canada |
| | <ul style="list-style-type: none">Comparative analyses of bacterial genomesCloning of virulence factors and characterization using in-planta infection assays | |
| 2006-2008 | Lab Administrator
Duke University | Durham, NC, USA |
| | <ul style="list-style-type: none">Oversight of Microbiology teaching labsManaging lab technicians and teaching assistants | |

Education

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|-----------|--|----------------------|
| 2000-2006 | PhD, Molecular systematics of cyanobacteria
Duke University | Durham, NC, USA |
| 1994-1999 | Bachelors degree, Plant Science
University of Alberta | Edmonton, AB, Canada |

Training

Advanced Python for Biologists, PR Statistics, February, 2017.
Advancing in R, PR Statistics, April, 2015.
Genetic Data Analysis, Summer Institute in Statistical Genetics, June, 2003.

References

Available on request.