# Declan Bennett

# Curriculum vitae

## Education

2016 BSc. Biotechnology, NUI Galway, Galway, 2.1.

Modules: Biochemistry, Microbiology, Industrial Processes, French, Genetics, Pharmacology and Business

2017 MSc. Biomedical Genomics, NUI Galway, Galway, 1.1.

NGS data analysis, Bioinformatics, Programming, Statistical Computing in R, Medical Genomics and Probabilistic Models

# Research Experience

#### Master Thesis

Title Inferring the somatic mutation rate from population NGS data

Supervisor Prof. Cathal Seoighe

Description The somatic mutation rate was estimated using overlapping paired-end exome

sequencing data. This estimated rate was then treated as a quantitative trait and used as the basis of an association study, in order to uncover genetic loci associated with an elevated somatic mutation rate in multiple human populations

## BSc Final Year Project

Title A neurocognitive analysis of genes that are both associated with memory formation and schizophrenia

Supervisor Dr. Derek Morris

#### Achievements

2017 Winner of the inaugural Roche prize for best MSc Biomedical Genomics research project.

## Experience

October 2017 **Bioinformatics Internship**, Supervisor: Prof Cathal Seoighe, NUI Galway, Investigation of genes in cancer under selection for downregulation via NMD. Investigation of transcription-associated strand asymmetry in highly expressed ASE haplotypes..

April 2015 – Research Assistant, Laboratoire de Biotechnologie et Chimie Marines, Vannes,

July 2015 France.

Performing biochemical analysis of highly proliferative red seaweed, Solieria Chordalis.

May 2013 - Electrical trade assistant, Electrical Energy, Sydney, NSW, Australia.

Apr 2014 Installation of high-voltage insulated switch gear Managing cable installation

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### Skills

- o In depth knowledge of Next Generation Sequencing technologies
- Extensive experience in statistical programming languages and genome association analysis toolsets mainly R and plink
- o Familiar with shell scripting and working at the command line
- o Experience in Python scripting language
- Comfortable working with unix based operating systems
- o Significant report writing and presentation experience
- Strong data analysis and visualisation skills developed through taught modules and research
- Strong collaboration and team working skills demonstrated throughout my studies and at work
- o Adaptable and flexible individual who is highly motivated and excited by new opportunities/challenges happily applied myself in a variety of distinct roles
- o Active decision maker and strong attention to detail
- o Excellent work ethic and commitment to quality
- Ability to take own initiative when necessary

# Computer skills

category 1 R, Python

category 2 Microsoft office

category 3 Bash scripting

category 4 Unix environment

category 5 High performance computing

category 6 Plink

#### Interests

Cycling Avid road cyclist

Music Amateur guitar and piano

#### References

## **Prof Cathal Seoighe**

Established Professor of Bioinformatics School of Mathematics, Statistics and Applied Mathematics

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# Dr Pilib Ó Broin

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