Employment

Honorary Lecturer
Lecturer
Department of Biological Sciences
Macquarie University
30 Jan 2020 → present

Research output

The peril and promise of integrons: beyond antibiotic resistance

High diversity and rapid spatial turnover of integron gene cassettes in soil

Evolutionary virology at 40

Evolution of human respiratory syncytial virus (RSV) over multiple seasons in New South Wales, Australia

Hidden diversity and evolution of viruses in market fish

Inferring demographic parameters in bacterial genomic data using Bayesian and hybrid phylogenetic methods

Virological sampling of inaccessible wildlife with drones

A comparison of methods for estimating substitution rates from ancient DNA sequence data

Continental synchronicity of human influenza virus epidemics despite climactic variation
The phylogenomics of evolving virus virulence

Predicting virus emergence amid evolutionary noise

Comparative analysis estimates the relative frequencies of co-divergence and cross-species transmission within viral families

Estimating evolutionary rates using time-structured data: a general comparison of phylogenetic methods

Pathogen population bottlenecks and adaptive landscapes: Overcoming the barriers to disease emergence

Virological factors that increase the transmissibility of emerging human viruses

Fluid spatial dynamics of West Nile virus in the United States: rapid spread in a permissive host environment

Cross-validation to select Bayesian hierarchical models in phylogenetics

A generic assay for whole-genome amplification and deep sequencing of enterovirus A71

Phylogeny of enterovirus A71-associated hand, foot, and mouth disease in Viet Nam

Contact heterogeneity, rather than transmission efficiency, limits the emergence and spread of canine influenza virus

Inheritance of epigenome variants across generations and its implications on the emergence of phenotypic novelties during evolution

Molecular evolution and antigenic variation of European brown hare syndrome virus (EBHSV)
Seasonal drivers of the epidemiology of arthropod-borne viruses in Australia

The adaptive invasion of epialleles in a heterogeneous environment

The evolutionary potential of paramutation: A population-epigenetic model

Exploring epiallele stability in a population-epigenetic model

Population-epigenetic models of selection

Prizes
Genetics Society of Australasia Alan Wilton Prize
Jemma Geoghegan (Recipient), 1 Jul 2017

Macquarie University Faculty of Science and Engineering Excellence in Early Career Research
Jemma Geoghegan (Recipient), 2017

NSW Young Tall Poppy
Jemma Geoghegan (Recipient), 1 Aug 2017