



PRESIDENT'S LECTURE

On the Malleability of Genomes

Dr Mary J. O'Connell, FLS

University Academic Fellow in Biology at University of Leeds

6.00pm Wednesday 29th November 2017, The Linnean Society of London,
Burlington House, Piccadilly, London W1J 0BF

The relationship between sequence and function has proven difficult to fully elucidate but it is key to understanding what makes a species unique. Large-scale studies can help to bridge the gap in our understanding by revealing major patterns in the data that correlate genotype with function or phenotype. We take two complementary approaches to identifying the evolution of species-specific proteins/protein functions using genome-scale data and computational evolutionary models. I will present some work we have undertaken, using a phylogenetic approach, on the link between genotype, phenotype, fitness and indeed behaviour. In particular I will describe how taking an applied evolutionary approach to modelling the mammal innate immune system may provide us with an increased understanding of species-specific response to disease/drugs at the molecular level. To finish, I will present some snapshots from our ongoing work into the identification of "new genes" - some of which are species-specific.

The meeting is open to visitors and wine will be served after the lecture to members and guests