

Experimental evolution to uncover biological functions, essential genomic sequences, intramolecular partners and virus-host interactions.

Marco Vignuzzi

1. Abstract

Experimental evolution of RNA viruses using genetically tractable model systems allow us to manipulate the genome as we wish, and to measure and monitor the impact on virus evolution and virus fitness. In doing so, we can uncover previously unknown functions for given proteins or genomic regions, identify the sequences required for virus replication and assembly, and test hypotheses by introducing mutations to specific areas of interest. In this talk, I will highlight how we've used experimental evolution in the past with these aims in mind, and hope to illustrate how we could collaborate with you to answer new questions and build new tools in both basic and applied virology.