

Abstract Submitted  
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**Exploring the fitness landscape of poliovirus** SIMONE BIANCO, ASHELY ACEVEDO, RAUL ANDINO, CHAO TANG, University of California San Francisco — RNA viruses are known to display extraordinary adaptation capabilities to different environments, due to high mutation rates. Their very dynamical evolution is captured by the quasispecies concept, according to which the viral population forms a swarm of genetic variants linked through mutation, which cooperatively interact at a functional level and collectively contribute to the characteristics of the population. The description of the viral fitness landscape becomes paramount towards a more thorough understanding of the virus evolution and spread. The high mutation rate, together with the cooperative nature of the quasispecies, makes it particularly challenging to explore its fitness landscape. I will present an investigation of the dynamical properties of poliovirus fitness landscape, through both the adoption of new experimental techniques and theoretical models.

Simone Bianco  
University of California San Francisco

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