

Fig. 1: The Sequence Diversity of HIV Dwarfs that of Influenza

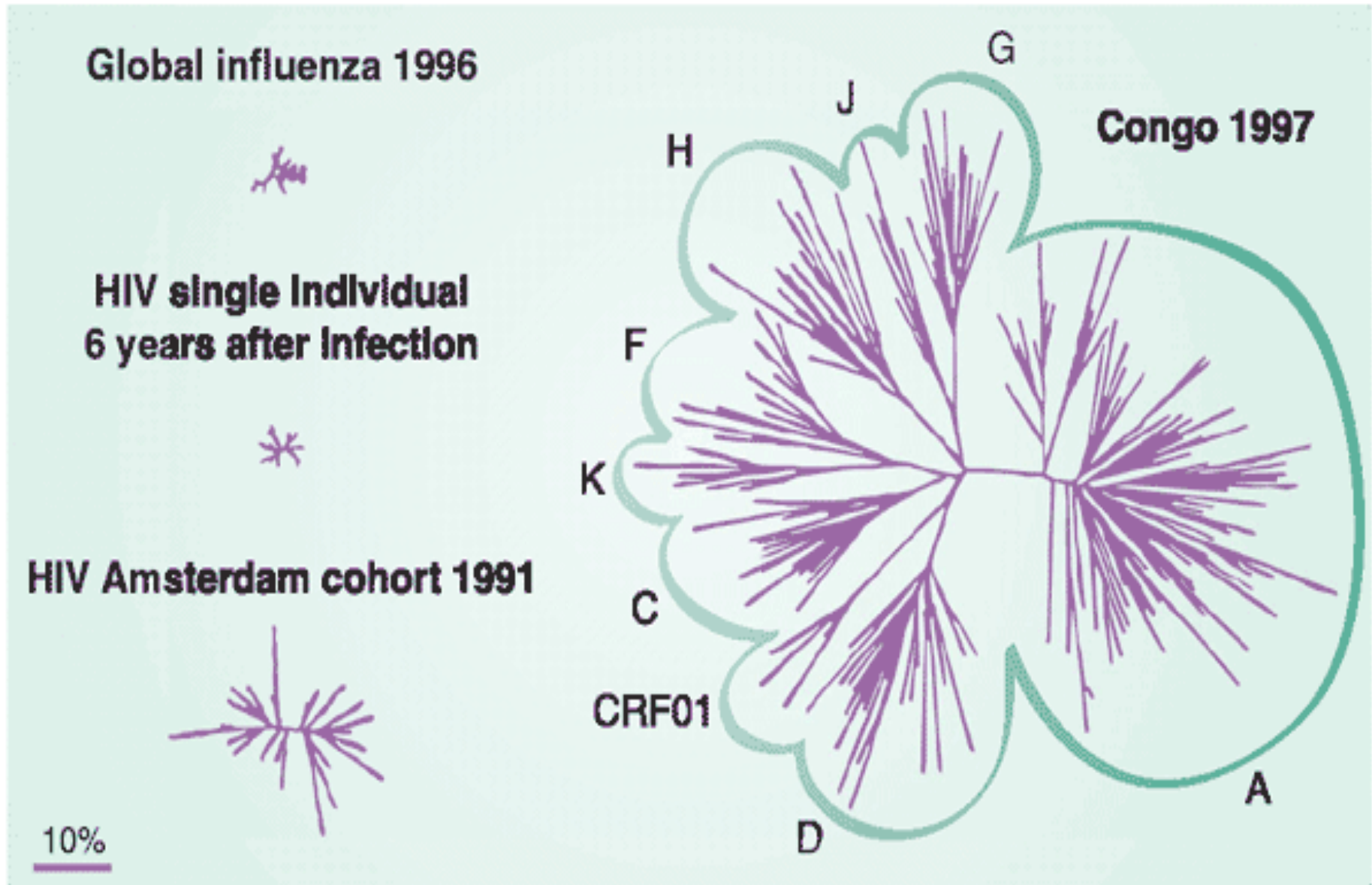


Fig. 2: HIV IS AN ENVELOPED RETROVIRUS

- HIV has a RNA genome (2 copies)
- Reverse transcriptase copies RNA to DNA
- Integrase then integrates the DNA in to host genome
- Protease that cuts up synthesized polyproteins.

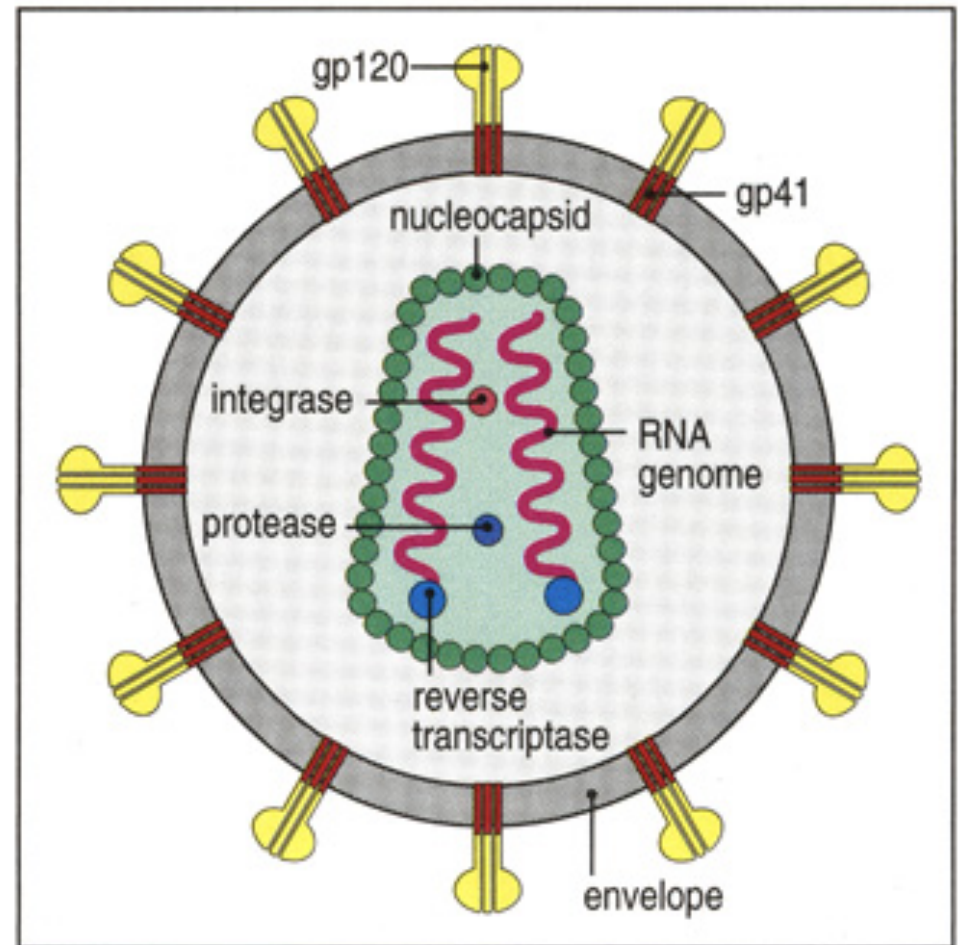


Fig. 3: Life cycle of HIV

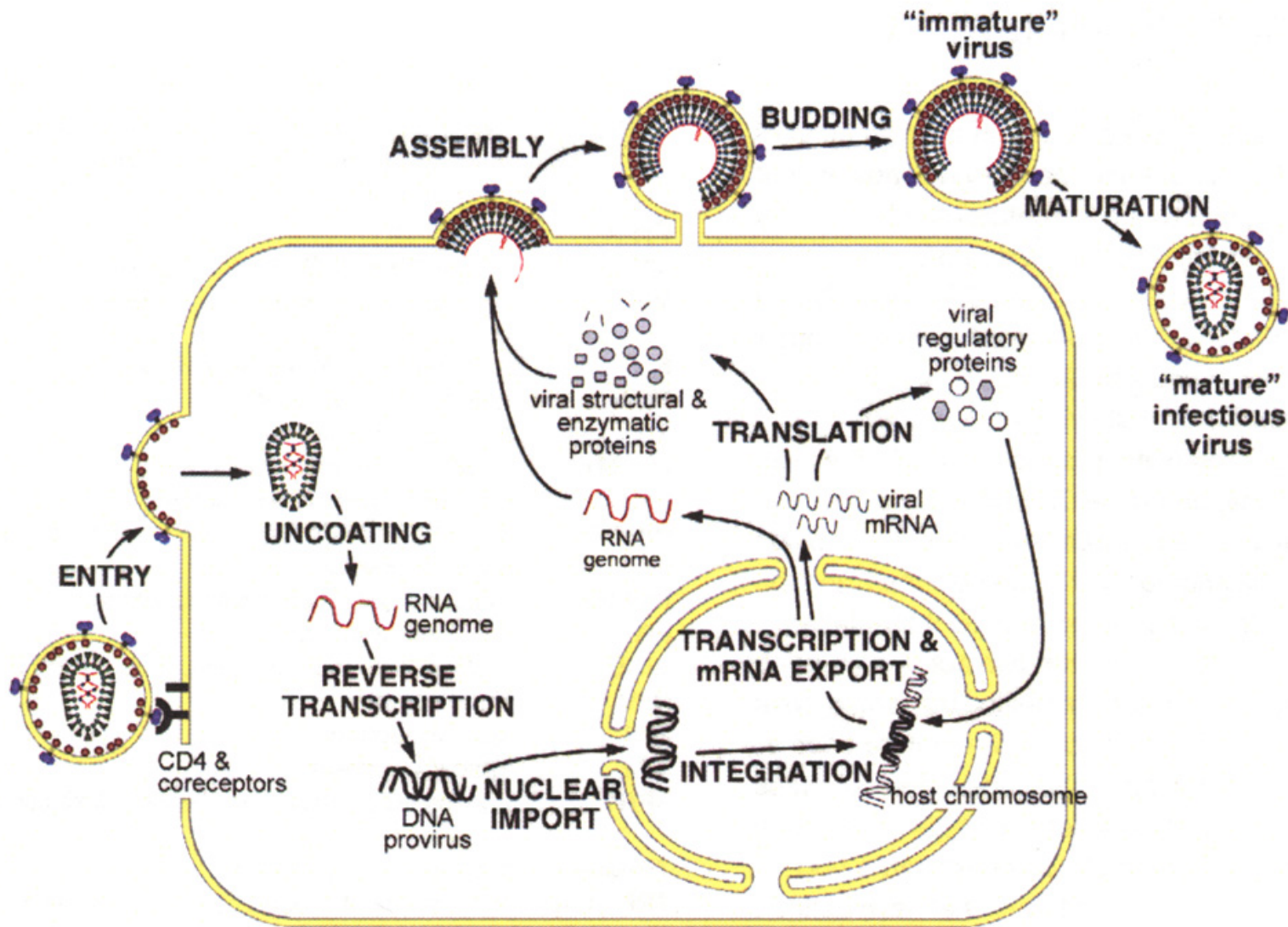


Fig. 4: TEMPORAL EVOLUTION OF HIV

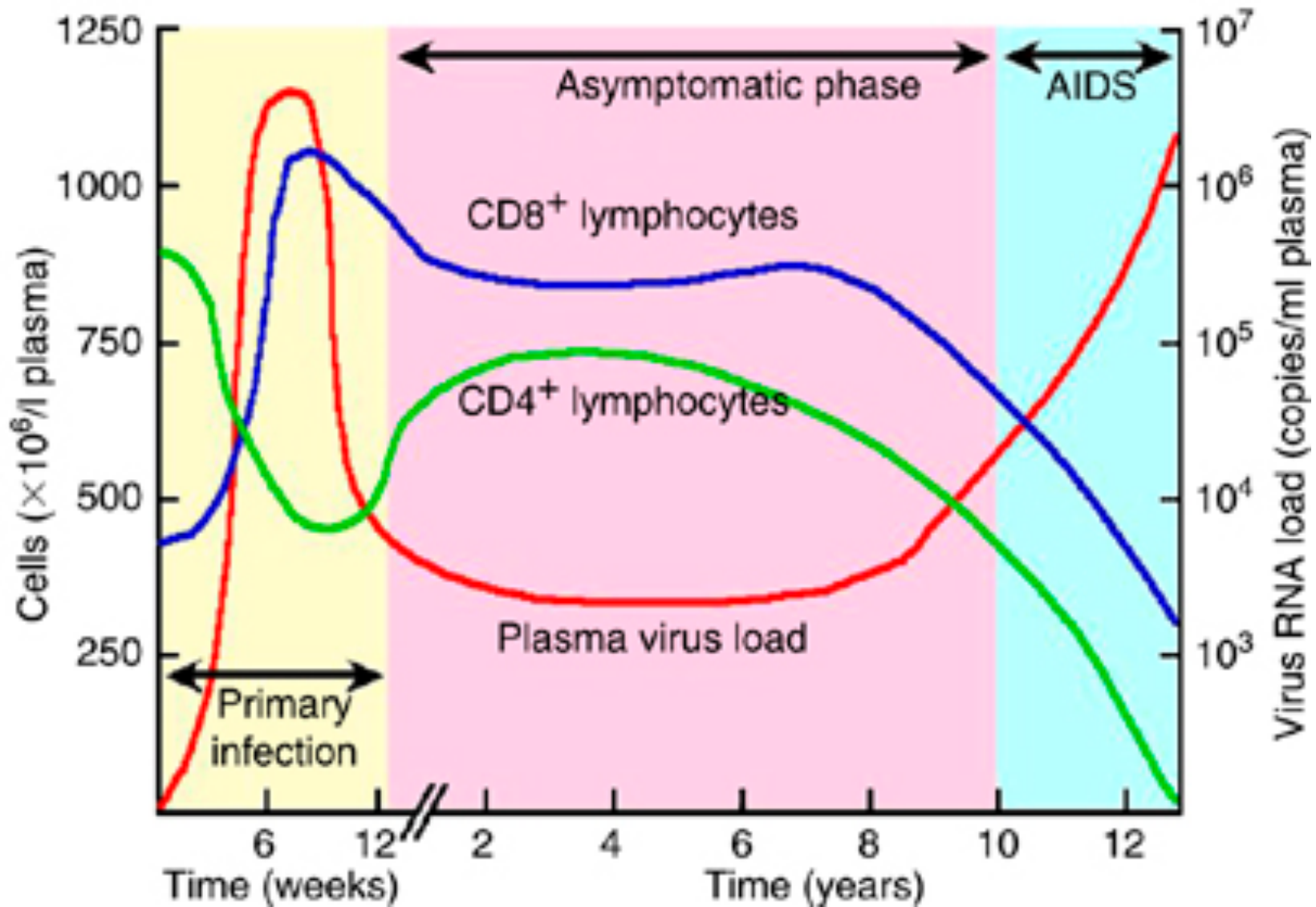


Fig. 5: Viral Fitness Landscapes define mutational vulnerabilities

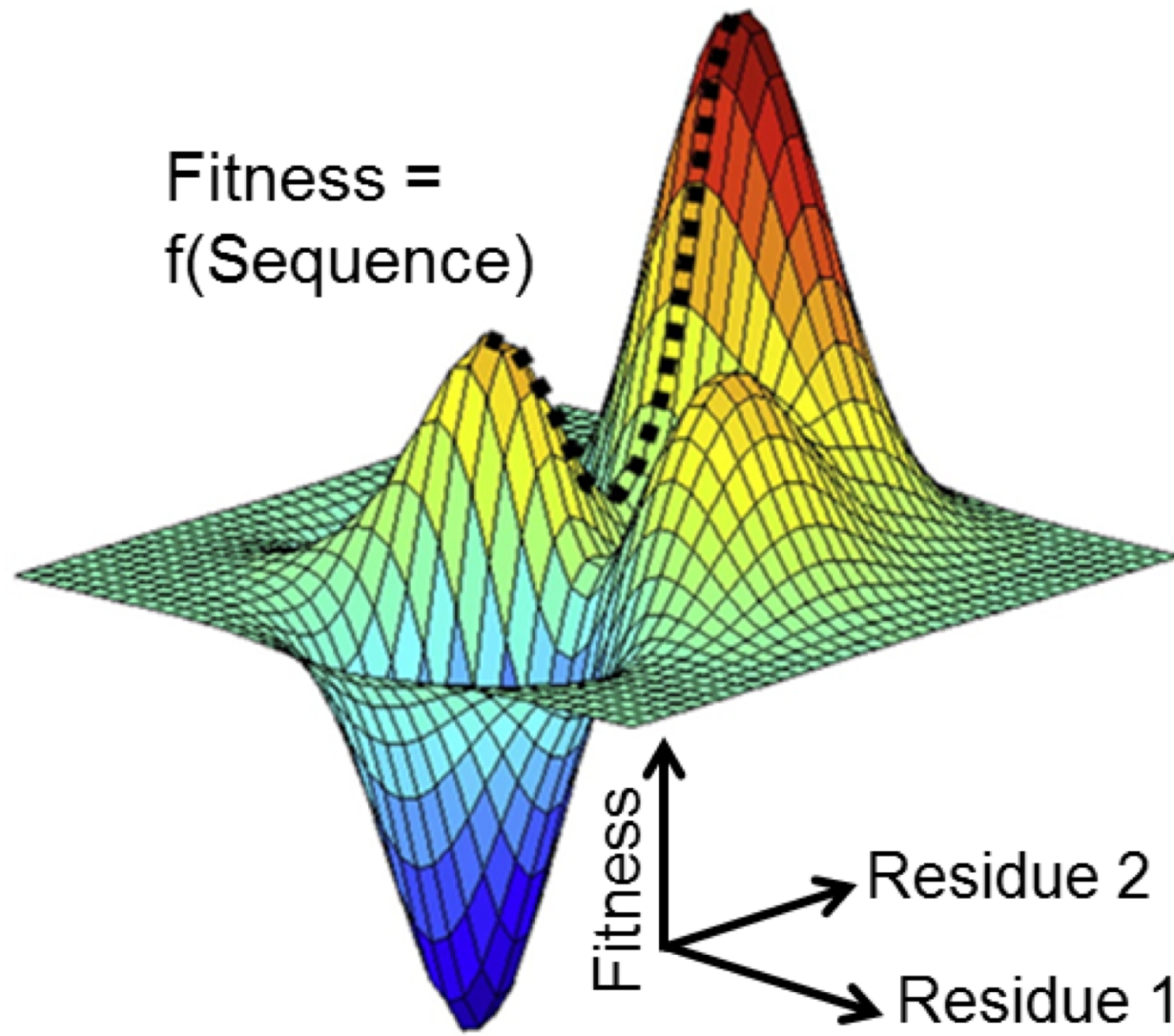


Fig. 6a: Model fits for 1-pt mutational correlations

p24

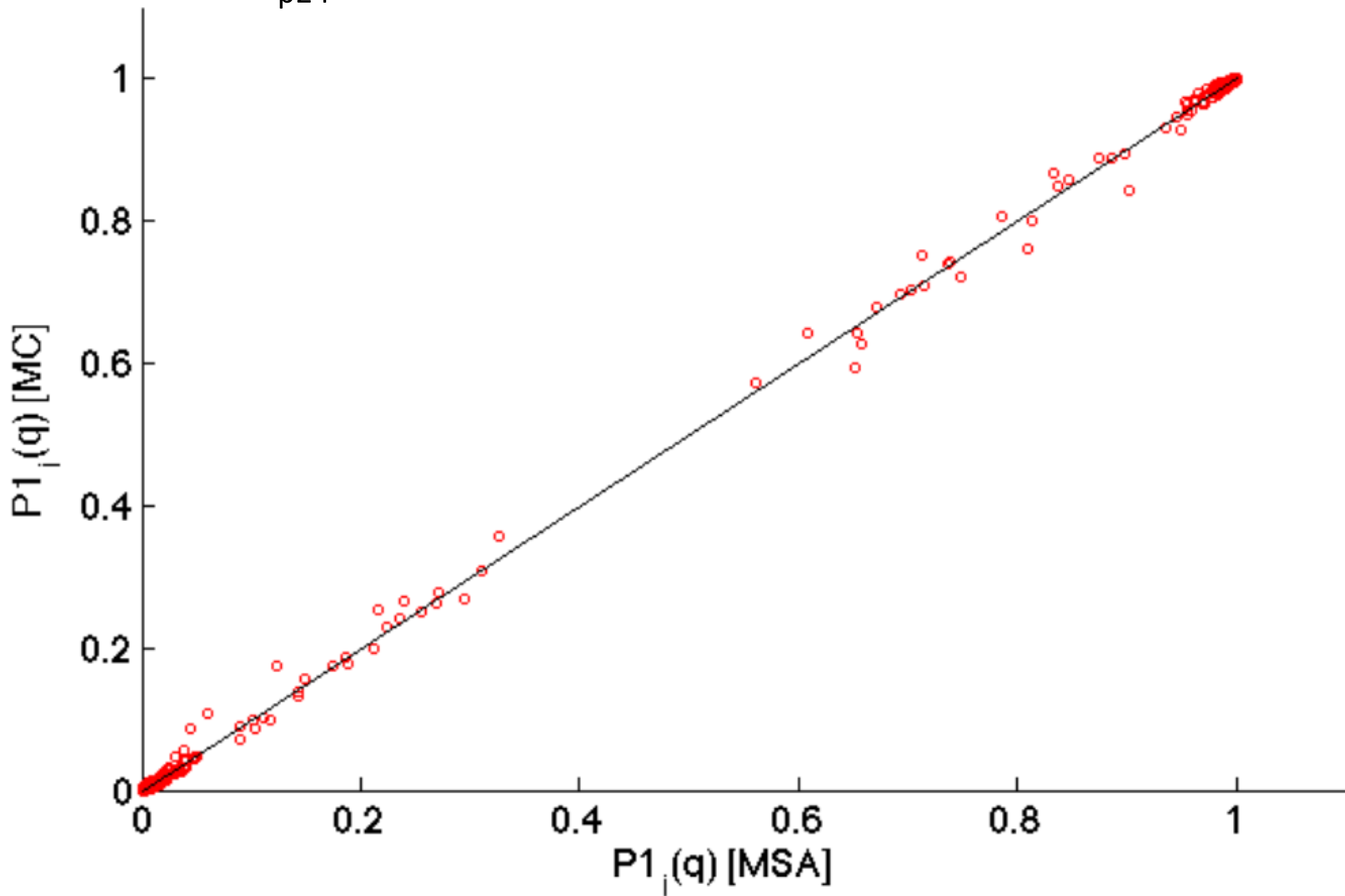


Fig. 6b: Model fits for 2-point mutational correlations.

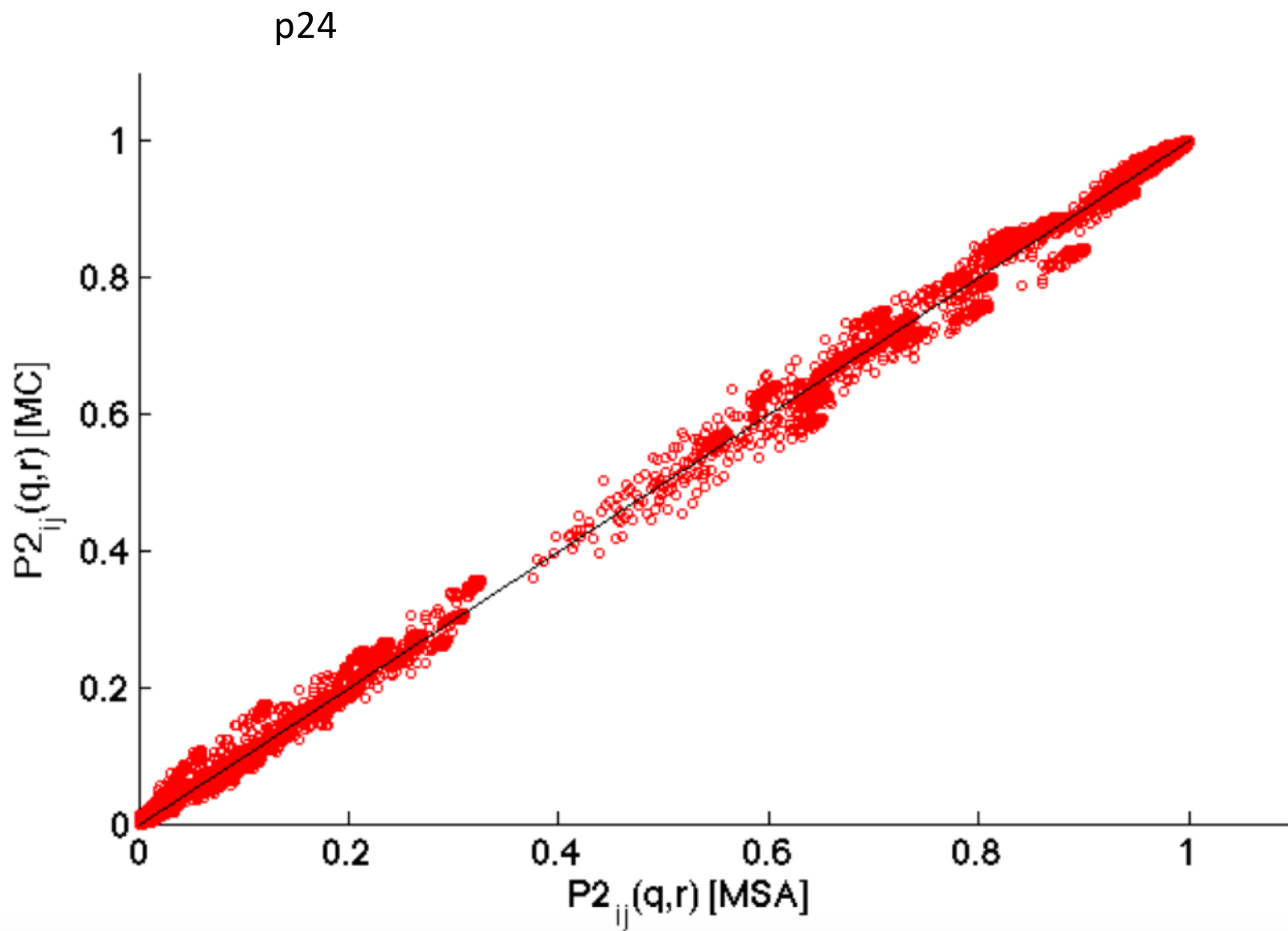


Fig. 6c: Higher order correlations for ENV polyprotein

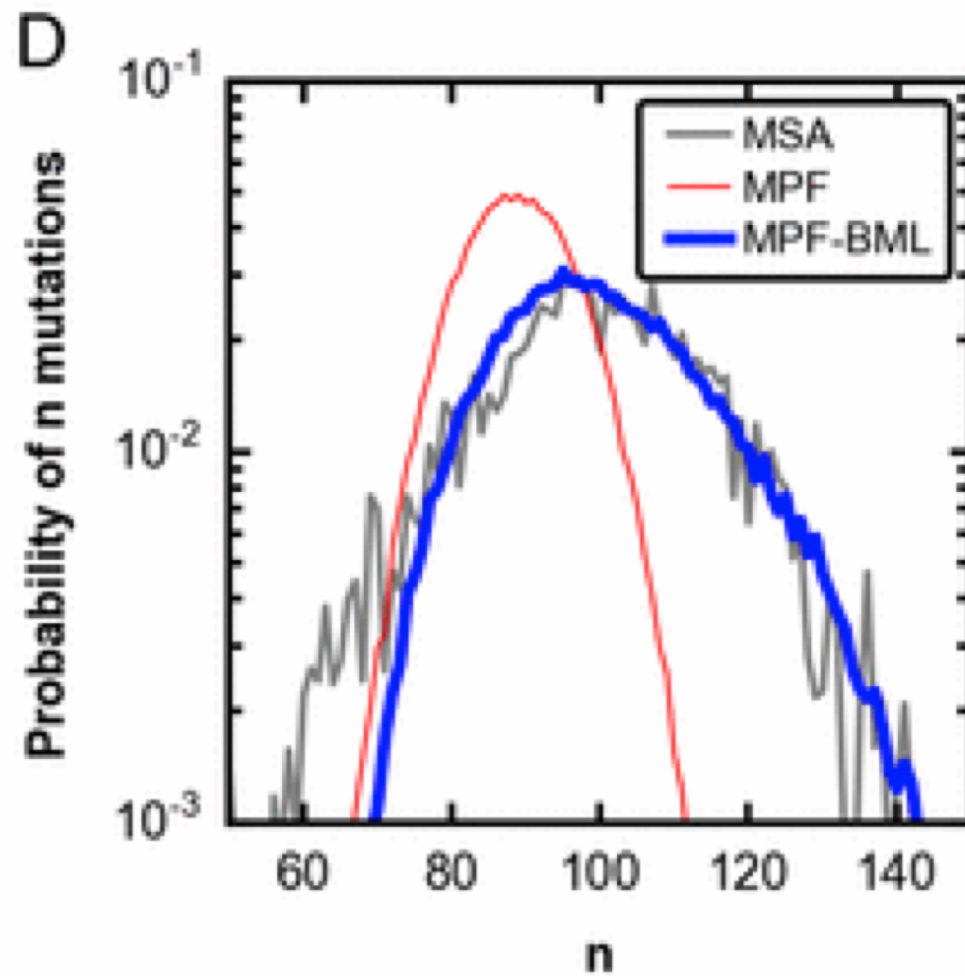


Fig. 7: Ising representation of an evolutionary trajectory

