Evolutionary Modes

Positive Selection (Diversifying)	$dS < dN$ or $\omega := dN/dS > 1$
Negative Selection	$dS > dN$ or $\omega < 1$
Neutral Evolution	$dS \simeq dN$ or $\omega \simeq 1$

Estimating dS and dN

Consider two **aligned homologous** sequences

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
DNA	ACA	ATA	A**T**C	TTT	AA**T**	CAA
AA	T	I	**I**	F	N	Q
DNA	ACA	ATA	A**C**C	TTT	AA**C**	CAA
AA	T	I	**T**	F	N	Q