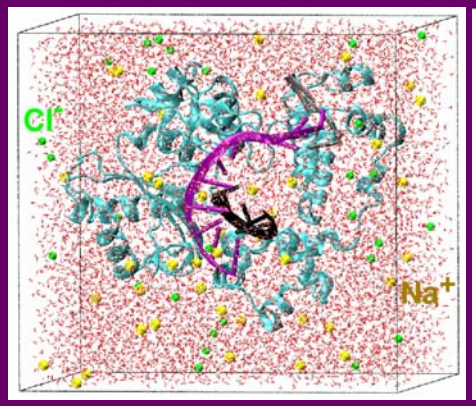
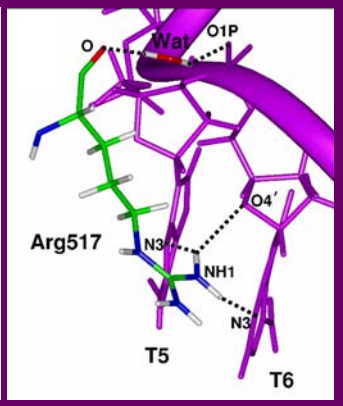
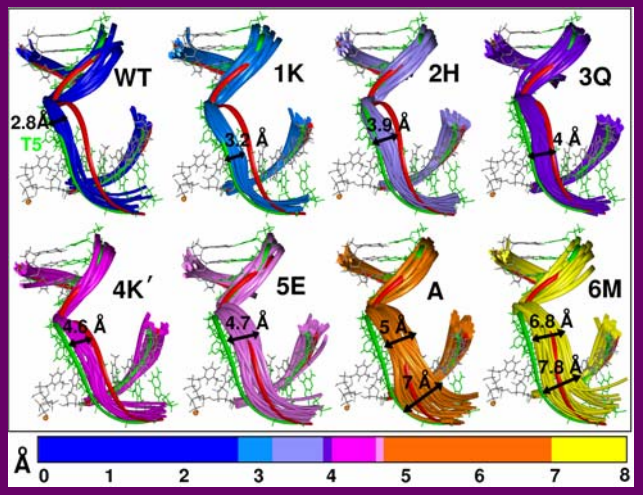
DNA Polymerase Function and Fidelity Depend on Specific Active-site Interactions and Geometry

In Pol λ,

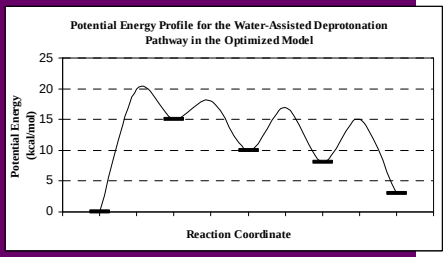


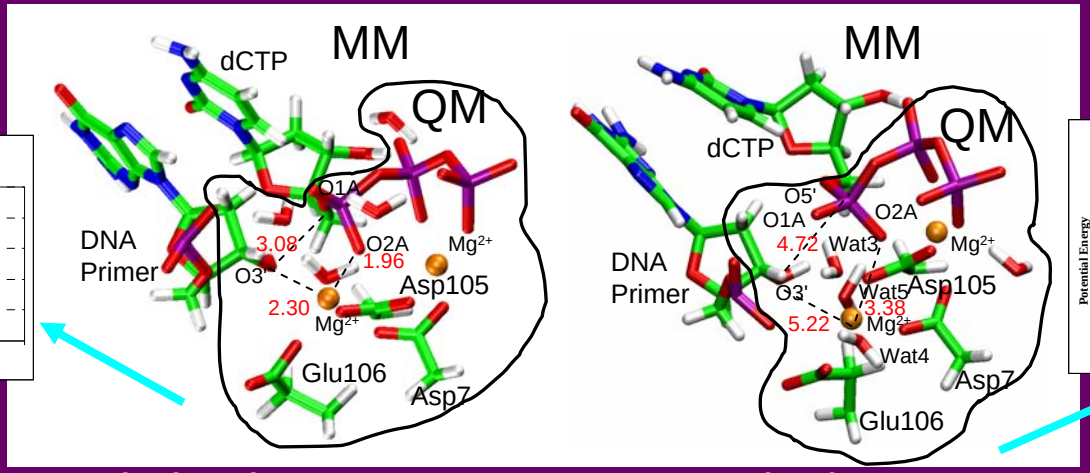


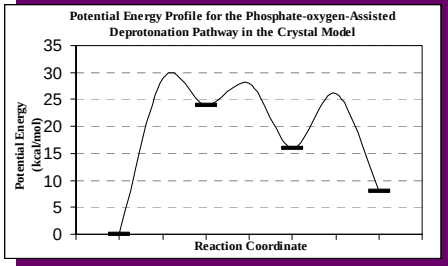


Mutating Arg517 leads to increased DNA motion and higher deletion error rates

In Dpo4,







Optimized Geometry Less Ideal Geometry

Active site organization affects chemical reaction pathways and associated energy barriers