

Molecular Secrets of DNA Replication, Repair and Recombination

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The processes and chief players in DNA replication, repair and recombination (the DNA 3Rs) have been identified for many years. Because of tight regulation of replication and sparse occurrence of repair and recombination events, macromolecular machineries involved in the DNA 3Rs are often assembled based on need and dynamic. To structurally elucidate how these dynamic and sometime rare events occur, tricks to enrich low population and stabilizing transient states are essential in addition to the cutting-edge techniques in cryogenic electron microscopy. In this talk, I will present examples of how we overcome roadblocks and share salient lessons we have learnt.