**Articles**:

**DNA Replication and Causes of Mutation** - Leslie A. Pray, Ph.D.

**DNA Damage & Repair: Mechanisms for Maintaining DNA Integrity** - Suzanne Clancy, Ph.D.

**Write a short (1 page) summary of the cellular damage caused by UV light, including how DNA replication errors are sensed and one mechanism that can repair them, either in humans or bacteria.**

Among the 3 solar types of UV radiations that can penetrate Earth’s atmosphere, UV-A and UV-B radiations are the most important environmental factors involved in skin cancer. Such UV light can cause crosslinks within the same strand or between opposite strands of double-stranded DNA. These mutations interfere with DNA replication or transcription. Two common UV by products are cyclobutene pyrimidine dimers (CPDs) and 6-4 photoproducts resulting of crosslinks within a strand of DNA between two pyrimidine residues , generally two thymine residues causing kinks in the double helix DNA structure.