1. Record Nr. UNINA9910298276503321 Autore Zhang Huidong Titolo DNA Replication - Damage from Environmental Carcinogens / / by **Huidong Zhang** Dordrecht:,: Springer Netherlands:,: Imprint: Springer,, 2015 Pubbl/distr/stampa **ISBN** 9789401772129 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (51 p.) Collana SpringerBriefs in Biochemistry and Molecular Biology, , 2211-9353;; 17 571.87836 Disciplina Soggetti Nucleic acids Cell biology Pharmacology **Nucleic Acid Chemistry** Cell Biology Pharmacology/Toxicology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references at the end of each chapters. Nota di contenuto DNA replication -- Disturbances of the DNA replication system -- Fate of DNA replisome upon encountering DNA damage -- External Causes for DNA Damage -- Effect of environmental carcinogens on cellular physiology -- Protocols for studies of bypass of DNA damage by DNA polymerase. Sommario/riassunto This book reviews the main concepts concerning DNA damage due to environmental carcinogens, the effects of DNA damage on DNA replication using a single DNA polymerase or DNA replisome, and the effects of carcinogens on various cell activities. It also introduces the detailed protocols for bypassing DNA damage. As we know, various environmental carcinogens are produced as a result of industry, agriculture, chemical engineering and vehicle exhaust in our daily life. It has been reported that the environmental carcinogens can be connected to tumors and cancer, directly threatening human health. In this regard, DNA replication is highly susceptible to damage. This book

provides graduate students and researchers with an overview of the effects of environmental carcinogens on DNA replication and biological

activities in cells. It offers important information for research in the areas of biochemistry, cell biology, medicine, toxicology and public health.