

1. Record Nr.	UNINA9910789448103321
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Titolo	Fundamentals of Radiobiology [[electronic resource] ] : International Series of Monographs in Pure and Applied Biology: Modern Trends in Physiological Sciences
Pubbl/distr/stampa	Burlington, : Elsevier Science, 1961
ISBN	1-4831-8452-8
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (601 p.)
Altri autori (Persone)	AlexanderPeter
Disciplina	574.19
Soggetti	Biology Physiology Radiobiology -- Physiological effect Radiobiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Front Cover; Fundamentals of Radiobiology; Copyright Page; Dedication; Table of Contents; Foreword; INTRODUCTION The Stepwise Development of Radiation Injury; THE ESSENTIAL ROLE OF METABOLISM IN THE DEVELOPMENT OF THE LESIONS; REFERENCES; CHAPTER 1. Interaction of Ionizing Radiations with Matter; COMPARISON OF THE DIFFERENT RADIATIONS; MECHANISM OF ENERGY LOSS BY x- AND - RADIATIONS; ENERGY LOSS BY PARTICULATE RADIATIONS; UNITS OF RADIATION DOSE AND RADIOACTIVITY; MEASUREMENT OF DOSE; IONIZATION DENSITY; EXCITATIONS PRODUCED BY IONIZING RADIATIONS CHAPTER 2. Direct and Indirect Action in Biological SystemsMETHODS FOR DISTINGUISHING BETWEEN DIRECT AND INDIRECT ACTION; RELATIVE EFFECTIVENESS OF DIRECT AND INDIRECT ACTION IN VITRO; RELATIVE EFFECTIVENESS OF DIRECT AND INDIRECT ACTION IN CELLS; CHAPTER 3. Dose-Response Relationships in Chemical and Biological Systems; THE D37 DOSE AND ""SINGLE-HIT"" CONCEPT; ""MULTI-HIT"" EFFECTS; THRESHOLD - A PROBLEM OF MAMMALIAN RADIOBIOLOGY; CHAPTER 4. The Nature of the Initial Chemical Lesion in Cellular Radiobiology; THE TARGET THEORY

APPLICATION OF TARGET THEORY TO RADIATION EFFECTS PRODUCED IN VIVO; THE RELATIVE BIOLOGICAL EFFECTIVENESS OF DIFFERENT IONIZING RADIATIONS; THE POISON THEORY; CONCLUSIONS; CHAPTER 5. General Radiation Chemistry; ROLE OF EXCITATION; DIFFERENCE BETWEEN THE REACTIONS IN GASES AND THOSE IN LIQUIDS AND SOLIDS; PROTECTION AND ENERGY TRANSFER; FATE OF FREE RADICALS PRODUCED; CHAPTER 6. The Radiation Chemistry of Aqueous Systems; INTRODUCTION; HISTORICAL DEVELOPMENT; PRIMARY PRODUCTS IN THE RADIOLYSIS OF WATER; REACTIONS OF FREE RADICALS; REACTIONS OF ORGANIC SUBSTANCES DISSOLVED IN WATER  
CHAPTER 7. Effect of Radiation on Macromolecules; RADIATION CHANGES IN SYNTHETIC POLYMERS PRODUCED BY INDIRECT ACTION; RADIATION CHANGES IN SYNTHETIC POLYMERS PRODUCED BY DIRECT ACTION; PROTECTION OF POLYMERS; PHYSICAL AND CHEMICAL CHANGES PRODUCED IN PROTEINS BY DIRECT ACTION; PHYSICAL AND CHEMICAL CHANGES IN PROTEINS PRODUCED BY INDIRECT ACTION; CROSSLINKING AND DEGRADATION OF DEOXYRIBONUCLEIC ACID; CHANGES PRODUCED IN DNA FOLLOWING IRRADIATION IN VIVO; THE USE OF RADIATION AS AN ANALYTICAL TOOL; CHAPTER 8. Chemicals which Simulate the Biological Effects of Ionizing Radiations  
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CHROMOSOME "BREAKAGE"

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Sommario/riassunto

Fundamentals of Radiobiology presents a clear picture of the effects of radiation to living organisms. It discusses the steps leading from the absorption of energy to death or final injury. The focus of study is the changes induced at the molecular level by absorbing energy. Some of the topics covered in the book are the methods for determining the direct and indirect action in biological systems, the nature of the initial chemical lesion in cellular radiobiology, the definition of target theory and the meaning of poison theory. The subjects on general radiation chemistry are also covered. The

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