

1. Record Nr.	UNINA9910583082303321
Autore	Rosenberg Eugene
Titolo	It's in your DNA : from discovery to structure, function and role in evolution, cancer, and aging // Dr. Eugene Rosenberg, Department of Molecular Microbiology and Biotechnology, Tel Aviv University, Tel Aviv, Israel ; with drawings by Avshalom Falk
Pubbl/distr/stampa	London : , : Academic Press, an imprint of Elsevier, , [2017] 2017
ISBN	0-12-812568-3
Descrizione fisica	1 online resource (xvii, 199 pages) : illustrations (some color)
Collana	Gale eBooks
Disciplina	614.1
Soggetti	DNA fingerprinting DNA - Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. The beginning -- 2. Chemistry of DNA -- 3. DNA is the genetic material -- 4. DNA in three dimensions : the double-helix -- 5. Duplicating DNA -- 6. From genes to enzymes -- 7. Cracking the genetic code -- 8. DNA sequencing and PCR -- 9. Jumping genes -- 10. Genetic engineering -- 11. The human genome -- 12. Human microbiome : we are not alone -- 13. Contribution of microbes to the health of humans, animals, and plants -- 14. Origin of nucleic acids and the first cells -- 15. Evolution : from Darwin to the hologenome concept -- 16. DNA and cancer -- 17. DNA, aging, and death.
Sommario/riassunto	It's in Your DNA: From Discovery to Structure, Function and Role in Evolution, Cancer and Aging describes, in a clear, approachable manner, the progression of the experiments that eventually led to our current understanding of DNA. This fascinating work tells the whole story from the discovery of DNA and its structure, how it replicates, codes for proteins, and our current ability to analyze and manipulate it in genetic engineering to begin to understand the central role of DNA in evolution, cancer, and aging. While telling the scientific story of DNA, this captivating treatise is further enhanced by brief sketches of the colorful lives and personalities of the key scientists and pioneers of

DNA research. Major discoveries by Meischer, Darwin, and Mendel and their impacts are discussed, including the merging of the disciplines of genetics, evolutionary biology, and nucleic acid biochemistry, giving rise to molecular genetics. After tracing development of the gene concept, critical experiments are described and a new biological paradigm, the hologenome concept of evolution, is introduced and described. The final two chapters of the work focus on DNA as it relates to cancer and gerontology.--
