Record Nr.	UNINA9910821323603321
Autore	Rosenberg Alexander <1946->
Titolo	Darwinian reductionism, or, How to stop worrying and love molecular biology / / Alex Rosenberg
Pubbl/distr/stampa	Chicago, : University of Chicago Press, 2006
ISBN	1-281-96637-1 9786611966379
	0-226-72731-9
Descrizione fisica	1 online resource (275 p.)
Classificazione	CC 3700
Disciplina	572.8
Soggetti	Molecular biology - Philosophy
	Biology - Philosophy
	Reductionism
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 (p. [239]-247) and index.
Nota di contenuto	Preface Introduction. Biology's Untenable Dualism 1. What Was Reductionism? 2. Reductionism and Developmental Molecular Biology 3. Are There Really Informational Genes and Developmental Programs? 4. Dobzhansky's Dictum and the Nature of Biological Explanation 5. Central Tendencies and Individual Organisms 6. Making Natural Selection Safe for Reductionists 7. Genomics, Human History, and Cooperation 8. How Darwinian Reductionism Refutes Genetic Determinism References- Index
Sommario/riassunto	After the discovery of the structure of DNA in 1953, scientists working in molecular biology embraced reductionism-the theory that all complex systems can be understood in terms of their components. Reductionism, however, has been widely resisted by both nonmolecular biologists and scientists working outside the field of biology. Many of these antireductionists, nevertheless, embrace the notion of physicalism-the idea that all biological processes are physical in nature. How, Alexander Rosenberg asks, can these self-proclaimed physicalists also be antireductionists? With clarity and wit, Darwinian Reductionism navigates this difficult and seemingly intractable dualism with convincing analysis and timely evidence. In the spirit of the few

1.

distinguished biologists who accept reductionism-E. O. Wilson, Francis Crick, Jacques Monod, James Watson, and Richard Dawkins-Rosenberg provides a philosophically sophisticated defense of reductionism and applies it to molecular developmental biology and the theory of natural selection, ultimately proving that the physicalist must also be a reductionist.