

1. Record Nr.	UNINA9910380742503321
Autore	Torday John
Titolo	Cellular-Molecular Mechanisms in Epigenetic Evolutionary Biology // by John Torday, William Miller Jr
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-38133-1
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XV, 214 p. 10 illus., 7 illus. in color.)
Disciplina	574.87328
Soggetti	Evolutionary biology Biology—Philosophy Developmental biology Physiology Genetics Biochemistry Evolutionary Biology Philosophy of Biology Developmental Biology Genetics and Genomics Biochemistry, general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Darwin, the Modern Synthesis, and a New Biology -- Chapter 3. Cognition and the living condition -- Chapter 4. What is consciousness? An Evolutionary Perspective -- Chapter 5. Networking from the Cell to Quantum Mechanics as Consciousness -- Chapter 6. The Nature of information and its communication -- Chapter 7. The information cycle and biological information management -- Chapter 8. Communication and the accumulation of genetic information -- Chapter 9. Non-genic means of information reception and exchange -- Chapter 10. The primacy of the unicellular state -- Chapter 11. Phenotype, niche construction and natural cellular engineering -- Chapter 12. Holobionts -- Chapter 13. Four Domains: Cognition-based evolution -- Chapter 14. Reconciling

physics and biology -- Chapter 15. What does this mean for evolution?  
-- Chapter 16. Conclusion: Cellular-molecular evolution in the 21st century. .

---

Sommario/riassunto

There has been no mechanistic explanation for evolutionary change consistent with phylogeny in the 150 years since the publication of 'Origins'. As a result, progress in the field of evolutionary biology has stagnated, relying on descriptive observations and genetic associations rather testable scientific measures. This book illuminates the need for a larger evolutionary-based platform for biology. Like physics and chemistry, biology needs a central theory in order to frame the questions that arise, the way hypotheses are tested, and how to interpret the data in the context of a continuum. The reduction of biology to its self-referential, self-organized properties provides the opportunity to recognize the continuum from the Singularity/Big Bang to Consciousness based on cell-cell communication for homeostasis.

---