1. Record Nr. UNINA9910815449103321 Autore Peter Isabelle S. **Titolo** Genomic control process: development and evolution / / Isabelle S. Peter, Eric H. Davidson Pubbl/distr/stampa London, England:,: Elsevier:,: AP,, 2015 ©2015 0-12-404746-7 **ISBN** Descrizione fisica 1 online resource (461 p.) Disciplina 572.86 Soggetti Genomics Genes **Embryology** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "Academic Press is an imprint of Elsevier"--T.p. Includes bibliographical references at the end of each chapters and Nota di bibliografia index. Nota di contenuto Front Cover: IFC: GENOMIC CONTROL PROCESS: Copyright: About the Authors; Contents; Preface; Dedications; Chapter 1 - The Genome in Development: 1. Views of Development: 2. Levels of Control of Gene Expression: Transcriptional Regulation; 3. Levels of Control of Gene Expression: Noncoding RNAs; 4. Levels of Control of Gene Expression: Histone Modifications; 5. The Regulatory Genome; REFERENCES; Chapter 2 - Gene Regulatory Networks; 1. Introductory Overview of Developmental GRNs; 2. Boolean Spatial Output; 3. Regulatory States; 4. Regulation in Cis; 5. Module Choice; 6. Transcriptional Dynamics 7. Historical Origins and Antecedents of GRN TheoryREFERENCES; Chapter 3 - Genomic Strategies for Embryonic Development; 1. Common Principles of Embryonic Development: 2. Phylogenetic Framework; 3. Genomic Strategies of Control in Mode 1 Embryonic Processes; 4. Genomic Strategies of Control in Mode 2 Embryonic Processes: 5. Global Aspects of A/P Spatial Regulatory Patterning in the Syncytial Drosophila Blastoderm; REFERENCES; Chapter 4 - Genomic Control Processes in Adult Body Part Formation; 1. Common Principles

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## Sommario/riassunto

Genomic Control Process explores the biological phenomena around genomic regulatory systems that control and shape animal development processes, and which determine the nature of evolutionary processes that affect body plan. Unifying and simplifying the descriptions of development and evolution by focusing on the causality in these processes, it provides a comprehensive method of considering genomic control across diverse biological processes. This book is essential for graduate researchers in genomics, systems biology and molecular biology seeking to understand deep biological processes w