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Titolo	Xenopus : from basic biology to disease models in the genomic era // edited by Abraham Fainsod, Sally A. Moody
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Descrizione fisica	1 online resource (360 pages)
Disciplina	597.8654
Soggetti	Xenopus
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Section I. -- 1. A quick history of Xenopus. -- 2. The study of cell division control and DNA replication in Xenopus egg extracts. -- 3. Maternal gene control of embryogenesis: germ cell determination and germ layer formation. -- 4. Signaling components in dorsal-ventral patterning and the Organizer. -- 5. Signaling pathways in anterior-posterior patterning. -- 6. Wnt signaling in tissue differentiation and morphogenesis. -- 7. Multiple functions of Notch signaling during early embryogenesis. -- 8. The development and evolution of the vertebrate neural crest: Insights from Xenopus. -- 9. The use of Xenopus oocytes to study the biophysics and pharmacological properties of receptors and channels. -- Section II. -- 10. The continuing evolution of the Xenopus genome. -- 11. Dynamics of chromatin remodeling during Xenopus development. -- 12. Gene regulatory networks controlling Xenopus embryogenesis. -- 13. The development of high-resolution proteomic analyses in Xenopus. -- 14. Advances in genome editing tools. -- Section III. -- 15. Formation of the left-right axis: insights from the Xenopus model. -- 16. Discovering the function of congenital heart disease genes. -- 17. Craniofacial development and disorders - contributions of Xenopus. -- 18. Modeling digestive and respiratory system development and disease in Xenopus. -- 19. Functional neurobiology and insights into human disease. -- 20. Leaping towards the understanding of spinal cord regeneration. -- 21. Studying tumor formation and regulation in Xenopus. -- 22. Xenopus: a model to study

natural genetic variation and its disease implications. -- 23. Using Xenopus to understand pluripotency and reprogram cells for therapeutic use. Maternal gene control of embryogenesis. -- Chapter 8: Sex determination in Xenopus. -- Section II: Gene Discovery and Disease. -- Chapter 9: Xenopus and the discovery of developmental genes. -- Chapter 10: Systems Biology of Xenopus Embryogenesis. -- Chapter 11: Gene regulatory networks in craniofacial development. -- Chapter 12: Using Xenopus to discover regulation of GI development and disease. -- Chapter 13: Using Xenopus to discover the function of congenital heart disease genes. -- Chapter 14: Using Xenopus to discover the function of congenital kidney disease genes. -- Chapter 15: Using Xenopus to study genes involved in cancers. -- Section III: Evolution. Chapter 16: Evolution of amphibians. Chapter 17: Evolution of Xenopus communication. Chapter 18: Evolution of the immune system . -- Chapter 19: Evolution of the left-right axis. -- Chapter 20: Evolution of the Xenopus genome.

Sommario/riassunto

"Xenopus is unique among the model animals used in the biology. Several books of protocols used Xenopus. Missing is a book taking an historical perspective documenting cell and developmental discoveries and illustrating how Xenopus contributes to the understanding of genes. These topics will be covered in the proposed book"-- Provided by publisher.
