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Autore	Hime Gary
Titolo	Transcriptional and translational regulation of stem cells / / Gary Hime
Pubbl/distr/stampa	Dordrecht [Germany] ; ; New York, : Springer, 2013
ISBN	94-007-6621-1
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (370 p.)
Collana	Advances in experimental medicine and biology, , 0065-2598 ; ; v. 786
Disciplina	616.027
Soggetti	Stem cells Cells - Growth - Regulation
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 and index.
Nota di contenuto	pt. 1. Model stem cell systems -- pt. 2. Model stem cell systems -- pt. 3. Molecular families implicated in stem cell regulation.
Sommario/riassunto	Stem cells are central to the development and homeostasis of metazoan tissues and play roles at multiple times within a diversity of organs during the lifetime of an animal. A key goal of regenerative medicine is the in vivo repair of organs damaged by disease or injury. In order to facilitate this goal we need to understand how stem cells are generated, what factors maintain them in their respective tissues and how their differentiation is regulated. In this volume, leading researchers discuss the nature of stem cells and pluripotency and how this state can be experimentally induced. Stem cell maintenance, proliferation and differentiation is under tight regulation as excess stem cell proliferation could facilitate tumour formation and conversely loss of stem cells or failure of differentiation could disrupt tissue homeostasis or repair. Hence, stem cells are regulated by multiple layers of molecular control and this volume discusses transcriptional, translational, epigenetic, cell signalling and microRNA modalities that affect stem cell behaviour. Many of the underlying key principles of stem cell biology were discovered by genetic analysis of invertebrate systems and chapters in this volume describe regulation of the germline in C. elegans and in the digestive system, central nervous system and germline of Drosophila. The molecular processes that regulate regenerative organ systems from all three of the vertebrate

	germ layers are described with emphasis on the male germline, nervous system, epidermis, intestine, haematopoietic system and derivatives of the mesoderm. Several chapters also focus on molecular families that have been implicated in controlling a range of stem cell types including the JAK-STAT, Wnt and Notch signalling pathways; Myc, Myb and nuclear receptor transcriptional regulators; the Musashi family of RNA-binding proteins; microRNAs and epigenetic regulators. This volume will provide access to the current state of research in these rapidly evolving areas of stem cell biology to the student, educator or researcher.

2.

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Titolo	Plant breeding reviews . Volume 8 / / edited by Jules Janick
Pubbl/distr/stampa	Portland, OR, : Timber Press, 1990
ISBN	1-118-06105-5
Descrizione fisica	1 online resource (402 p.)
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Altri autori (Persone)	JanickJules <1931->
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Nota di contenuto	PLANT BREEDING REVIEWS Volume 8; Contents; Contributors; 1 Dedication: Jack R. Harlan-Crop Evolutionist, Scholar; 2 Species Relation in Vigna subgenus Ceratotropis and Its Implication in Breeding; I. Introduction; II. The Subgenus Ceratotropis; III. Interspecific Hybridization; IV. Species Relationship; V. Relation with Other Subgenera and Genera; VI. Origin and Domestication of Mung and Urd; VII. Implications in Plant Breeding; VIII. Conclusions; Literature Cited; 3 Advances in Spring Triticale Breeding; I. Introduction; II. Historical Review III. Nomenclature, Taxonomy, Botany and Classification of TriticalesIV. Cytogenetics; V. Germplasm Development; VI. Adaptation; VII. Uses of Triticale; VIII. Conclusion; Literature Cited; 4 Anthocyanin Pigmentation

and Transposable Elements in Maize Aleurone; I. Introduction; II. The Aleurone; III. Anthocyanins and Related Flavonoid Pigments; IV. Genetic Control of Anthocyanin Biosynthesis in Maize; V. Gene-action Sequence; VI. Transposable Elements and Anthocyanin Biosynthesis; VII. Anthocyanins and Plant Breeding; Literature Cited; 5 Quantitative Genetics of Forest Trees; I. Introduction
II. Population Genetics of Forest TreesIII. Genetic Effects and Breeding Techniques; IV. Selection Effects; V. Matching Genotypes with Environments; VI. Conclusions; Literature Cited; 6 Mushroom Genetics and Breeding; I. The Mushroom Industry; II. Genetic Information; III. Mushroom Improvement; IV. Conclusions; Literature Cited; 7 Rutabaga Breeding; I. Introduction; II. Reproduction; III. Cultivars and Germplasm; IV. Breeding and Testing Systems; V. Breeding Objectives; VI. Future Considerations; Literature Cited; 8 Blackberry Breeding; I. Introduction
II. Germplasm Resources, Exploration and MaintenanceIII. Breeding Techniques; IV. Breeding Systems; V. Breeding for Specific Characteristics; VI. Prospects for the Future; Literature Cited; 9 Breeding Self-Compatible Almonds; I. Introduction; II. Floral Biology of Almond; III. Self-compatibility and Almond Breeding; IV. Genetics of Self-compatibility; V. Breeding Programs; VI. Concluding Remarks; Literature Cited; 10 Protoplast Fusion and Citrus Improvement; I. Introduction; II. Impediments to Genetic Improvement of Citrus; III. Citrus Rootstock Breeding Objectives
IV. Citrus Scion Breeding ObjectivesV. Protoplast Fusion in Citrus; VI. Applications of Protoplast Fusion; VII. Summary and Concluding Remarks; Literature Cited; Subject Index; Cumulative Subject Index; Cumulative Contributor Index

Sommario/riassunto

Plant Breeding Reviews is an ongoing series presenting state-of-the art review articles on research in plant genetics, especially the breeding of commercially important crops. Articles perform the valuable function of collecting, comparing, and contrasting the primary journal literature in order to form an overview of the topic. This detailed analysis bridges the gap between the specialized researcher and the broader community of plant scientists.