Cutting-edge coverage of stem cell biology and applications

Featuring contributions from leading global experts, this authoritative volume addresses all major areas of stem cell biology and their potential therapeutic applications. The first part of the book covers embryonic stem cells and contains details on the emerging field of embryonic stem cell–based drug screening platforms. The second part deals with multipotent adult stem cells from different tissue types, and covers unique concepts such as cancer stem cells and tissue engineering–based approaches for designing microenvironments for tissue regeneration. Eighty pages of inserts with 113 color figures are included in this pioneering work.

Coverage includes:

- *Zebrafish, medaka, chicken embryonic, and mouse embryonic stem cells*
- *Derivation of human embryonic stem cells (hESCs) from blastocysts*
- *Treating diabetes with hESCs*
- *hESCs as a model system to study human genetics*
- *Application of hESCs in drug discovery*
- *Adult stem cells for regenerative medicine and cancer therapies*
- *Mesenchymal stem cells for neurodegenerative disease therapies*
- *Dental pulp, hematopoietic, and spermatogonial stem cells*
- *Epigenetic regulators of stem cell pluripotency*
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Biomedical Engineering
Cover Design: Jeff Weeks

ISBN 978-0-07-163572-1
MHID 0-07-163572-6
59999>
9 780071 635721