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| Nota di contenuto | 1 Understanding Retina Development Can Inform Future Regenerative Therapies -- 2 Mitochondria in retinal neurodegeneration and stem cell models -- 3 The regenerative potential of the vertebrate retina – lessons from the zebrafish -- 4 Stem Cells and Regeneration in the Xenopus Retina -- 5 Advances in Pluripotent and Adult Stem Cells for Eye Research -- 6 Stem cell strategies for optic nerve protection -- 7 Stem cell strategies for diseases of the outer retina -- 8 Potential of Müller cells and stem/progenitor cells to regenerate retinal tissue -- 9 Stem cells and the ocular lens: implications for cataract research and therapy -- 10 Trabecular Meshwork Stem Cells -- 11 Stem Cells of the Human Corneoscleral Niche -- 12 Advances on optic nerve regeneration and therapeutic strategies -- 13 Bionic Eyes: Vision Restoration through Electronic or Photovoltaic Stimulation -- 14 Stem Cell-Derived RPE Transplantation for Age-Related Macular Degeneration: Experimental Studies to Improve Transplant Survival and Differentiation -- 15 Seeing The Full Picture: The Hidden Cost Of The Stem Cell And Regenerative Medicine Revolution. |
| Sommario/riassunto | This volume covers visual regenerative biology from current knowledge |

through future directions and implications. Fifteen chapters discuss the topic thoroughly, from fundamental aspects of developmental biology of the eye through the potential of stem cells and bionic eyes to improve and restore vision. The book also explores the impact of stem cell treatments and regenerative medicine in society. The economic and public health burdens of blindness are immense, in addition to the psychological and social implications for patients. While current treatments for blindness are limited, regenerative medicine offers exciting prospects for vision improvement or restoration, instilling hope in patients suffering from vision loss. Authoritative and timely, this book is a key resource for scientists working in this expanding and dynamic field.