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B pathway for skeletal dysplasia -- 16. Clarity and Challenges in Tissue Fibrosis -- 17. TRP Channels: Their Function and Potentiality as Drug Targets -- 18. Autophagic Cell Death and Cancer Chemotherapeutics -- 19. Adrenomedullin as a Potential Therapeutic Agent for Refractory Ulcerative Colitis -- 20. RNA activation -- Part III New Technology for Innovative Medicine -- 21. Cardiac Reprogramming for Heart Repair -- 22. Development of a new in vivo optical probe for biological diagnosis and therapy -- 23. Introduction of mesenchymal stem cells for liver surgery (hepatectomy and transplantation) -- 24. Synaptic and axonal plasticity induction in the human cerebral cortex -- 25. TIM-3 is a novel therapeutic target for eradicating acute myelogenous leukemia stem cells -- 26. TGF-beta LAP degradation products, a novel biomarker and promising therapeutic target for liver fibrogenesis -- 27. Cell-based regenerative therapy for liver disease.

Sommario/riassunto

This book is devoted to innovative medicine, comprising the proceedings of the Uehara Memorial Foundation Symposium 2014. It remains extremely rare for the findings of basic research to be developed into clinical applications, and it takes a long time for the process to be achieved. The task of advancing the development of basic research into clinical reality lies with translational science, yet the field seems to struggle to find a way to move forward. To create innovative medical technology, many steps need to be taken: development and analysis of optimal animal models of human diseases, elucidation of genomic and epidemiological data, and establishment of “proof of concept”. There is also considerable demand for progress in drug research, new surgical procedures, and new clinical devices and equipment. While the original research target may be rare diseases, it is also important to apply those findings more broadly to common diseases. The book covers a wide range of topics and is organized into three complementary parts. The first part is basic research for innovative medicine, the second is translational research for innovative medicine, and the third is new technology for innovative medicine. This book helps to understand innovative medicine and to make progress in its realization.