

Preface

Tissue engineering and gene therapy are both perceived important milestones of scientific achievements over the past two decades and both disciplines have converged for over 10 years. The past decade has witnessed rapid progresses in the gene delivery-based tissue engineering, especially for the repair of cartilage and bone defects. However, to date there still exist roadblocks to the translation of scientific findings in the laboratory to the clinical setting, because of the concerns regarding the use of gene therapy vectors for the treatment of non-lethal diseases/disorders such as bone/cartilage defects. This book briefly summaries the current status of bone/cartilage tissue engineering, gene therapy concepts and vectors, and the combined use of tissue engineering/gene therapy for the treatment of bone and cartilage defects. This book also provides brief summaries regarding the hurdles for clinical applications and future perspectives. For this book, I would like to express my sincere gratitude to all the diligent laboratory members and my family for their full support.

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