CONTENTS

Chapter 1  General Introduction  9

Chapter 2  Suitability of dermis versus adipose tissue as adult stem cell source in one-step surgical procedure for cartilage tissue engineering
[Original title: Chemokine-Mediated Migration of Skin-Derived Stem Cells: Predominant Role for CCL5/RANTES]  33

Chapter 3  Effect of tissue-harvesting site on yield of stem cells derived from adipose tissue: implications for cell-based therapies  57

Chapter 4  Freshly isolated stromal cells from the infrapatellar fat pad are suitable for a one-step surgical procedure to regenerate cartilage tissue  77

Chapter 5  Hyperosmolarity and hypoxia induce chondrogenesis of adipose derived stem cells in a collagen type 2 hydrogel  97

Chapter 6  Rapid Attachment of Adipose Stromal Cells on Resorbable Polymeric Scaffolds Facilitates the One-Step Surgical Procedure for Cartilage and Bone Tissue Engineering Purposes  115

Chapter 7  One-step surgical procedure for the treatment of osteochondral defects with adipose-derived stem cells in a caprine knee defect: a pilot study  131

Chapter 8  General discussion  157

Chapter 9  Summary  168
Samenvatting  171
List of publications  175
Dankwoord  176