Contents

Preface ---- V

List of contributors ---- IX

Humera Bibi, Waseeq Ur Rehman, Shah Hussain, Kausar Shaheen, Zarbad Shah, Muhammad Asim, Shahid Ali Khan

Chapter 1

Miscellaneous applications of hydrogels — 1

Laiba Maryam, Asma Gulzar, Mudassir Iqbal

Chapter 2

An overview of the mechanical behavior of hydrogels — 17

Tahseen Arshad, Muhammad Pervaiz, Zhiduan Cai, Guibin Xu, Shahid Ali Khan **Chapter 3**

Nanoengineering hydrogels with improved antimicrobial characteristics — 35

Saurabh Shekhar, Shailendra Bhatt, Rohit Dutt, Manish Kumar, Rupesh K. Gautam Chapter 4

Stimulus-responsive hydrogel for tissue engineering —— 49

Shehla Khan, Abdur Rauf, Zubair Ahmad, Hassan A. Hemeg

Chapter 5

Hydrogel in wound dressing and burn dressing products with antibacterial potential —— 67

Farzana Nazir, Khadija Munawar

Chapter 6

Emerging fabrication strategies of hydrogel and its use as a drug delivery vehicle —— 79

Zubair Ahmad, Tahseen Arshad, Hassan Zeb, Shahid Ali Khan

Chapter 7

Hydrogels for personal care products —— 103

Shahid Ali Khan, Zubair Ahmad, Zhiduan Cai, Guibin Xu

Chapter 8

Hydrogels for kidney carcinoma — 119

Index —— 133

