

# Contents

## Part I General Biological Aspects

|                                                                                     |           |
|-------------------------------------------------------------------------------------|-----------|
| <b>Ecology and Physiology of Root Canal Microbial Biofilm Communities . . . . .</b> | <b>3</b>  |
| Luis E. Chávez de Paz and Philip D. Marsh                                           |           |
| <b>Molecular Principles of Adhesion and Biofilm Formation . . . . .</b>             | <b>23</b> |
| Jens Kreth and Mark C. Herzberg                                                     |           |
| <b>Antimicrobial Resistance in Biofilm Communities . . . . .</b>                    | <b>55</b> |
| Christine Sedgley and Gary Dunny                                                    |           |

## Part II Observational and Experimental Evidence

|                                                                                                            |            |
|------------------------------------------------------------------------------------------------------------|------------|
| <b>The Use of Scanning Electron Microscopy (SEM) in Visualizing the Root Canal Biofilm . . . . .</b>       | <b>87</b>  |
| Linda B. Peters, Brandon Peterson, David E. Jaramillo, and Luc van der Sluis                               |            |
| <b>Bacterial Biofilms and Endodontic Disease: Histobacteriological and Molecular Exploration . . . . .</b> | <b>103</b> |
| José F. Siqueira Jr., Domenico Ricucci, and Isabela N. Roças                                               |            |
| <b>Laboratory Models of Biofilms: Development and Assessment . . . . .</b>                                 | <b>127</b> |
| Anil Kishen and Markus Haapasalo                                                                           |            |
| <b>Root Canal Anatomy: Implications in Biofilm Disinfection . . . . .</b>                                  | <b>155</b> |
| Marco A. Versiani and Ronald Ordinola-Zapata                                                               |            |

## Part III Outcome and Strategies of Treatment

|                                                                                       |            |
|---------------------------------------------------------------------------------------|------------|
| <b>Biofilm-Associated Infections in Root Canals: Treatment and Outcomes . . . . .</b> | <b>191</b> |
| Kishor Gulabivala and Yuan-Ling Ng                                                    |            |

|                                                                                                                 |            |
|-----------------------------------------------------------------------------------------------------------------|------------|
| <b>Root Canal Irrigation . . . . .</b>                                                                          | <b>259</b> |
| Luc van der Sluis, Christos Boutsoukis, Lei-Meng Jiang, Ricardo Macedo,<br>Bram Verhaagen, and Michel Versluis  |            |
| <b>Inter-appointment Medication with Calcium Hydroxide in Routine<br/>Cases of Root Canal Therapy . . . . .</b> | <b>303</b> |
| Gunnar Bergenholtz, Calvin Torneck, and Anil Kishen                                                             |            |
| <b>Advanced Therapeutic Options to Disinfect Root Canals . . . . .</b>                                          | <b>327</b> |
| Anil Kishen                                                                                                     |            |
| <b>Index . . . . .</b>                                                                                          | <b>357</b> |

The Root Canal Biofilm

Chávez de Paz, L.E.; Sedgley, C.M.; Kishen, A. (Eds.)

2015, XII, 366 p., Hardcover

ISBN: 978-3-662-47414-3