
Oral Biochemistry

Byung-Moo Min

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Byung-Moo Min
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To my teachers and my students

Preface

I am very pleased to publish *Oral Biochemistry* and hope it will help students understand oral biochemistry, which is the study of the molecular basis of life specific to the oral and maxillofacial areas. *Oral Biochemistry* covers the basic structures and metabolic processes of the hard and soft tissues that comprise the oral and maxillofacial areas, and how metabolic abnormalities are related to the development of oral diseases.

In writing the first edition of *Oral Biochemistry*, I have balanced the desire to present the latest advances with the need to make oral biochemistry as clear and engaging as possible for students studying this subject for the first time. To this end, I have tried to clarify concepts for students, in addition to introducing new discoveries.

Dental education has changed rapidly. In particular, integrated courses have been developed and implemented, and problem-based learning has been introduced, giving students more opportunities to study on their own. *Oral Biochemistry* is designed to help students study efficiently by themselves. It is expected to be a good textbook and reference book for students. I hope this book will provide students and dental workers with an easy means to access oral biochemistry and will facilitate student education and dental advancements.

I especially thank the contributors to this book. Their contributions, thoughtful comments, suggestions, and encouragement have been a great help. I also owe a great debt of gratitude to Yong-Won Choi, President of Daehan Narae Publishing, Inc. His vision for dental books makes working with Daehan Narae Publishing, Inc. truly pleasurable. I also deeply appreciate Springer Nature Singapore Pte Ltd. and the enthusiastic support provided by the production staff of the publishing companies. Finally, I owe a debt of gratitude to my family, including my wife Ok-Joo, Seung-Ki, Hong-Ki, Chae-Yoon, Hyoeun, and Seo-Yul. Without their support, comfort, and understanding, this endeavor could never have been undertaken, let alone successfully completed.

Seoul, Korea (Republic of)

Byung-Moo Min

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Author and Contributors

About the Author

Byung-Moo Min is Professor of Oral Biochemistry, Emeritus, in the School of Dentistry at Seoul National University (SNU), where he has been on the faculty since 1986. He received his D.D.S. from SNU School of Dentistry in 1980. He received his M.S. and Ph.D. degrees (1989) from SNU College of Medicine, where he performed research with Seung-Won Kimm. In addition, he conducted research with Dong-Kyun Cheong at SNU School of Dentistry. He then completed a postdoctoral fellowship with No-Hee Park at UCLA School of Dentistry. His research focused on oral carcinogenesis, keratinocyte biology, and peptidomics for tissue engineering. He served as the Chair of the Department of Oral Biochemistry (1991–2009), the Program in Maxillofacial Regenerative Medicine (2003–2009), and the Program in Cancer and Developmental Biology (2009–2013). He also showed outstanding leadership as a Director of the SNU Dental Research Institute (2011–2013) and the Brain Korea 21 Craniomaxillofacial Life Sciences Research Program (2008–2013), and as the Department Chair of Life Sciences in Dental Medicine (2012–2015). He was a member of the SNU Senate from 2011 to 2019 and served as the Senate Vice-Chair from 2014 to 2015. He has been a lifetime member of the Korean Academy of Science and Technology since 2006. He served the International Association for Dental Research (IADR), including as the Councilor (2007–2012), and represented the Asia/Pacific Region as the Regional Board Member of the IADR (2012–2015). He has received numerous awards, including the Hatton Award in the IADR Korean Division (1989), an Award for Outstanding Professor of the Year from SNU (2003), an award for outstanding achievement at the 8th World Congress on Advances in Oncology and 6th International Symposium on Molecular Medicine (Greece, 2003), the Korean Dental Association Award of Merit (2005), an Outstanding Research Award from SNU (2008), and Korean Dental Association Grand Prize (Academic Award, 2022). Professor Min was awarded the Order of Science and Technology Merit (2018) and the Order of Service Merit (2020) from the government of the Republic of Korea.

Contributors

Je Yoel Cho Department of Veterinary Biochemistry, College of Veterinary Medicine, Seoul National University, Seoul, Republic of Korea

Je-Yong Choi Department of Biochemistry and Cell Biology, School of Medicine, Kyungpook National University, Daegu, Republic of Korea

Won-Yoon Chung Department of Oral Biology, College of Dentistry, Yonsei University, Seoul, Republic of Korea

Young-Joo Jang Department of Nanobiomedical Science, College of Dentistry, Dankook University, Cheonan, Republic of Korea

Jung Sook Kang Department of Oral Biochemistry and Molecular Biology, College of Dentistry (past), Pusan National University, Pusan, Republic of Korea

Jeong Hee Kim Department of Oral Biochemistry, College of Dentistry, Kyung Hee University, Seoul, Republic of Korea

Joong-Ki Kook Department of Oral Biochemistry, College of Dentistry, Chosun University, Gwangju, Republic of Korea

Seon-Yle Ko Department of Oral Biochemistry, College of Dentistry, Dankook University, Cheonan, Republic of Korea

Gene Lee Department of Oral Biochemistry, School of Dentistry, Seoul National University, Seoul, Republic of Korea

Tae-Hoon Lee Department of Oral Biochemistry, School of Dentistry, Chonnam National University, Gwangju, Republic of Korea

Byung-Ju Park Department of Oral Biochemistry, School of Dentistry, Chonnam National University, Gwangju, Republic of Korea

Kwang-Kyun Park Department of Oral Biology, College of Dentistry (past), Yonsei University, Seoul, Republic of Korea

Soon-Ho Park Department of Biochemistry and Molecular Biology, College of Dentistry, Gangneung-Wonju National University, Gangneung, Republic of Korea

Fyo-Jae Rhie Department of Oral Physiology, School of Dentistry (past), Jeonbuk National University, Jeonju, Republic of Korea

Hyun-Mo Ryoo Department of Pharmacology and Dental Therapeutics, School of Dentistry, Seoul National University, Seoul, Republic of Korea

Yong-Ouk You Department of Oral Biochemistry, College of Dentistry, Wonkwang University, Iksan, Republic of Korea