



Edition: 1st Edition 2022
pages: 244
Images: 298
Cover: Hardcover, 21 x 29,7 cm
ISBN: 978-1-78698-107-3
Published: March 2022

Quintessenza Edizioni S.r.l.

 Via C. Menotti 65
20017 Passirana di Rho (Milano)
Italy
 +39 (0)2 / 931 82 264
 +39 (0)2 / 931 86 159
 info@quintessenzaedizioni.it
 <http://www.quintessenzaedizioni.it>

Book information

Editor: Gruber, Reinhard / Stadlinger, Bernd / Terheyden, Hendrik
Title: Cell-to-Cell Communication: Cell-Atlas – Visual Biology in Oral Medicine
Series: Cell-to-Cell Communication

Short text:

The deepest understanding of the cells of the oral system will be found in decoding their communication and seeing how it is regulated. Once we have understood their language, clinicians might be able to talk to cells and control their action.

This book by 47 world-renowned experts – for each chapter at least one clinician and one basic scientist – highlights a reliable and actual state of research regarding this topic that quickly moves forward. Beyond the classic cell types addressed in the first part of the book, organ systems or model systems of cell-to-cell communication of a more generic type are presented in four additional chapters in the second part. A special feature are the colored scanning electron microscopic (SEM) images, created to eloquently illustrate and explain the function of the depicted cell types.

This book – accompanied by an augmented reality (AR) app that allows you to experience the process of bone resorption virtually – should help to open the vision of how we can regenerate tissues and heal diseases by controlling the language of the cells. The book also shows us the direction in which research and therapy will go in the future.

Contents

Part 1: Cell Atlas of the Oral System "A to Z"

- Ameloblasts (*R. J. Miron, A. Lussi*)
- B-Cells / T-Cells (*J. E. Konkel, I. L. C. Chapple*)
- Cementoblasts & Cementocytes (*B. L. Foster, M. Sanz*)
- Chondrocytes and Fibrochondrocytes (*D. S. Nedrelow, M. S. Detamore, M. E. Wong*)
- Dental Stem Cells: Developmental Aspects (*J. Krivanek, K. Fried*)
- Epithelial Cells (*V.-J. Uitto, U. K. Gürsoy*)
- Fibroblasts (*G. Pompermaier Garlet, D. S. Thoma*)
- Macrophages (*J. CW. Wang, W. V. Giannobile*)
- Microvascular Cells: Endothelium and Pericytes (*A. Banfi, S. Köhl*)
- Myocytes (*S. W. Herring, S. Kiliaridis*)
- Nerve Cells (*S. B. Oh, P. R. Lee, D. A. Ettlin*)
- Odontoblasts (*D. D. Bosshardt, P. R. Schmidlin*)
- Osteoblasts (*F. E. Weber, B. Lethaus*)
- Osteoclasts / Odontoclasts (*R. Nishimura, H. Terheyden*)
- Osteocytes (*R. Gruber, B. Stadlinger*)
- Polymorphonuclear Cells (Neutrophils) (*J. Deschner, S. Jepsen*)
- Salivary Acinar Cells (*G. B. Procter, A. Vissink*)

Part 2: Cellular Interactions—Insights and Outlooks

- Mesenchymal Stromal Cells: Therapeutic Aspects (*Q. Vallmajó-Martin, J. S. Marschall, E. Avilla-Royo, M. Ehrbar*)
- Model Systems for Investigation of Cell-to-Cell Communication (*P. Korn, M. Gelinsky*)
- Linking Molecular Function with Tissue Structure in the Oral Cavity (*C. Porcheri, C. T. Meisel, T. A. Mitsiades*)
- Oral Microbiota, Biofilms and Their Environment (*N. Bostanci, G. N. Belibasakis*)

Categories: General Dentistry, Human Medicine, Interdisciplinary