1. Record Nr. UNINA9910254474003321

Titolo	Salivary Gland Development and Regeneration [[electronic resource]] : Advances in Research and Clinical Approaches to Functional Restoration / / edited by Seunghee Cha
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	9783319435138
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XIII, 263 p. 52 illus., 47 illus. in color.)
Disciplina	617.6
Soggetti	Dentistry Oral surgery Maxillofacial surgery Biomedical engineering Stem cells Oral and Maxillofacial Surgery Biomedical Engineering/Biotechnology Stem Cells
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Updates on Salivary Gland Development: Salivary Gland Development -- Systems Analysis of Salivary Gland Development and Disease -- The Roles of Mucins in Salivary Gland Development and Regeneration. Glandular Damage and Cell Replacement Therapy: Salivary Gland Resident Stem Cells -- Adult Stem Cells with Special Emphasis on Mesenchymal Stem Cells -- Cellular and Nuclear Reprogramming of Mesenchymal Stem Cells. Bioengineering of Salivary Glands: Current Cell Models for Bioengineering Salivary Glands -- 3D Organ Culture and Matrix Biology -- Clinical Application of 3D Printing Technology in Craniofacial Plastic Surgery and Salivary Gland Regeneration -- Functional Salivary Gland Regeneration by Organ Replacement Therapy -- Therapeutic Considerations for Functional Salivary Gland Restorations: Regulation of Salivary Secretion -- Gene Therapy in Experimental and Clinical Trials -- Surgical Approaches to Functional

Restoration of Saliva Secretion.

Sommario/riassunto

This book provides a comprehensive update on the latest information and knowledge which emerged from translational and basic science research endeavors, targeting the regeneration of salivary glands. The coverage includes salivary gland growth and development, stem cell therapy, bioengineering of salivary glands, and perspectives on and practical approaches to restoration of secretory function. More specifically, among the individual topics addressed are the various types of stem cell of value for cell replacement therapy, technological advances with respect to 3D printing, gene therapy, organ culture of salivary glands, and surgical aspects of the feasibility and practicality of transplantation. Readers will find helpful practical guidance on functional restorations of damaged salivary glands and stimulating insights into potential future directions in salivary gland regeneration research. The authors are all acknowledged experts from a range of academic and clinical backgrounds. Accordingly, the book will be of interest not only to clinicians, such as general dental practitioners, oral medicine specialists, and surgeons who manage dry mouth patients, but also to biomedical engineers, stem cell researchers, and transplant surgeons.