1. Record Nr. UNINA9910409699603321

Titolo	Biomaterials- and Microfluidics-Based Tissue Engineered 3D Models / / edited by J. Miguel Oliveira, Rui L. Reis
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-36588-3
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (VII, 175 p. 42 illus., 40 illus. in color.)
Collana	Advances in Experimental Medicine and Biology, , 2214-8019 ; ; 1230
Disciplina	610.28
Soggetti	Medicine - Research Biology - Research Regenerative medicine Biomedical engineering Biomaterials Biomedical Research Regenerative Medicine and Tissue Engineering Biomedical Engineering and Bioengineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Microfluidic devices and three dimensional-printing strategies for in vitro models of bone -- Microfluidics for Processing of biomaterials -- Organ-on-a-chip -- Body-on-a-chip: Current challenges -- Biomaterials and microfluidics for liver models -- Microfluidics for CNS research -- Biomaterials and microfluidics for angiogenesis research -- Biomaterials and microfluidics for drug discovery and development -- Microfluidics for diagnostics -- Nanoparticles and Microfluidic devices in cancer research.
Sommario/riassunto	This contributed volume reviews the latest advances on relevant 3D tissue engineered in vitro models of disease making use of biomaterials and microfluidics. The main focus of this book is on advanced biomaterials and microfluidics technologies that have been used in in vitro mimetic 3D models of human diseases and show great promise in revolutionizing personalized medicine. Readers will discover important topics involving biomaterials and microfluidics design, advanced

processing techniques, and development and validation of organ- and body-on-a-chip models for bone, liver, and cancer research. An in depth discussion of microfabrication methods for microfluidics development is also provided. This work is edited by two truly multidisciplinary scientists and includes important contributions from well-known experts in their fields. The work is written for both early stage and experienced researchers, and well-established scientists enrolled in the fields of biomaterials, microfluidics, and tissue engineering, and is especially suited to those who wish to become acquainted with the principles and latest developments of in vitro models of diseases, such as professionals working in pharma, medicine, and engineering.