Essentials of 3D Biofabrication and Translation

Anthony Atala, James J Yoo
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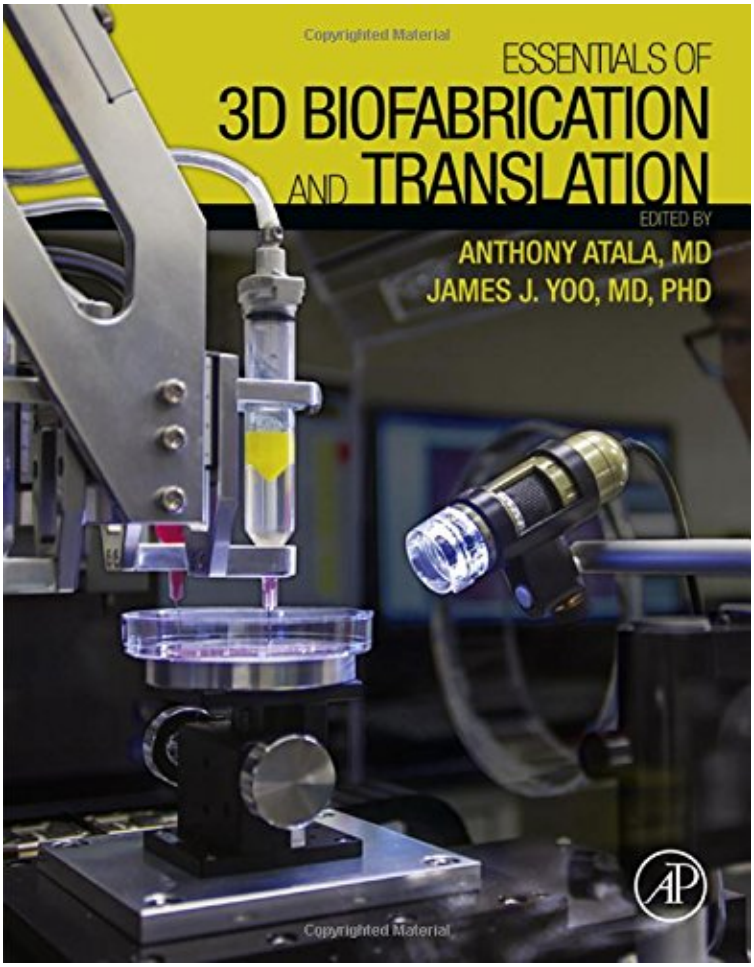

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Anthony Atala, James J Yoo : Essentials of 3D Biofabrication and Translation before purchasing it in order to gage whether or not it would be worth my time, and all praised Essentials of 3D Biofabrication and Translation:

Essentials of 3D Biofabrication and Translation discusses the techniques that are making bioprinting a viable alternative in regenerative medicine. The book runs the gamut of topics related to the subject, including hydrogels and polymers, nanotechnology, toxicity testing, and drug screening platforms, also introducing current applications in the cardiac, skeletal, and nervous systems, and organ construction. Leaders in clinical medicine and translational science provide a global perspective of the transformative nature of this field, including the use of cells, biomaterials, and macromolecules to create basic building blocks of tissues and organs, all of which are driving the field of biofabrication to transform regenerative medicine.Provides a new and versatile method to fabricating living

tissueDiscusses future applications for 3D bioprinting technologies, including use in the cardiac, skeletal, and nervous systems, and organ constructionDescribes current approaches and future challenges for translational scienceRuns the gamut of topics related to the subject, from hydrogels and polymers to nanotechnology, toxicity testing, and drug screening platforms

From the Back CoverBuilt on the essentials of cell and protein biology, Essentials of 3D Biofabtication and Translation discusses the techniques that are making bioprinting a viable alternative in regenerative medicine. The use of cells, biomaterials, and macromolecules to create basic building blocks of tissues and organs is allowing researchers to study and better understand the relationship between controlled material and cell placement and the formation of tissues in three-dimensions (3D). Where current tissue engineering strategies can repair patches or parts of single tissues, biofabrication holds the potential to form complex engineered tissues, formed of different and multiple tissues, and organs. These developments are driving the field of biofabrication to transform the field of regenerative medicine. In Essentials of 3D Biofabtication and Translation, leaders in clinical medicine and translational science provide a global perspective of the transformative nature of this field. Topics range from hydrogels and polymers to nanotechnology, toxicity testing and drug screening platforms to introduce the current applications in the cardiac, skeletal, and nervous systems as well as organ construction. A crucial resource for biomedical and bioengineering researchers, researchers in regenerative medicine and tissue engineering, as well as scientific administrators, this book is also a great text for graduate students in biotechnology as well. About the AuthorThe Wake Forest Institute for Regenerative Medicine was the first in the world to engineer and successfully implant an engineered organ in the lab -- bladders. As Director of the Institute, Dr. Atala oversees scientists working on therapies for more than 30 areas of the body, from heart valves and muscle tissue to livers and kidneys. Atala has received the Christopher Columbus Foundation Award, given to a living American who is currently working on a discovery that will significantly affect society. He is listed in Best Doctors in America.Professor, Wake Forest Institute for Regenerative Medicine, Winston-Salem, NC