Magnetic Resonance Imaging in Tissue Engineering
Mrignayani Kotecha (Editor), Richard L. Magin (Editor), Jeremy J. Mao (Editor)


DESCRIPTION

*Magnetic Resonance Imaging in Tissue Engineering* provides a unique overview of the field of non-invasive MRI assessment of tissue engineering and regenerative medicine

- Establish a dialogue between the tissue-engineering scientists and imaging experts and serves as a guide for tissue engineers and biomaterial developers alike
- Provides comprehensive details of magnetic resonance imaging (MRI) techniques used to assess a variety of engineered and regenerating tissues and organs
- Covers cell-based therapies, engineered cartilage, bone, meniscus, tendon, ligaments, cardiovascular, liver and bladder tissue engineering and regeneration assessed by MRI
- Includes a chapter on oxygen imaging method that predominantly is used for assessing hypoxia in solid tumors for improving radiation therapy but has the ability to provide information on design strategies and cellular viability in tissue engineering regenerative medicine
ABOUT THE AUTHOR

MRIGNAYANI KOTECHA is currently a research professor of bioengineering at University of Illinois at Chicago and directs the Biomolecular Magnetic Resonance Spectroscopy and Imaging Laboratory (BMRSI). In this position, she is developing proton and sodium magnetic resonance spectroscopy (MRS) and magnetic resonance imaging (MRI) techniques for monitoring the growth of musculoskeletal engineered tissues. Her broad research interests include the application of MRI-based techniques to cell and tissue-based regenerative medicine.

RICHARD L. MAGIN is currently a professor of bioengineering at University of Illinois at Chicago and directs the Diagnostic NMR Systems Laboratory, USA. Professor Magin is a fellow of the IEEE and AIMBE and a former editor of Critical Reviews in Biomedical Engineering. In 2012 he was designated a "Distinguished" Professor of Bioengineering at UIC. His research interests focus on the applications of magnetic resonance imaging (MRI) in science and engineering.

JEREMY J. MAO is currently professor at Columbia University, USA, and also Edwin S. Robinson Endowed Chair. Dr. Mao's research team has been at Columbia for the past 7 years and made several important discoveries including a cover article in The Lancet. In addition, Dr. Mao's work has been published in Nature Medicine, The Lancet, Cell Stem Cell, JCI, and so on. Altogether Dr. Mao has published over 260 scientific papers and proceedings and written 2 books. Dr. Mao's research has led to over 70 patents and establishment of 2 biotechnology companies. Dr. Mao has received a number of prestigious awards including Yasuda Award and Spanadel Award.

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