

EDITORIALS

Engineering in vitro human tissue models through bio-design and manufacturing

Y.S. Zhang · A. Khademhosseini 155

Why choose 3D bioprinting? Part III: printing in vitro 3D models for drug screening

Y. He · J. Nie · M.J. Xie · Q. Gao 160

RESEARCH ARTICLES

3D bioprinted hyaluronic acid-based cell-laden scaffold for brain microenvironment simulation

L. Ma · Y.T. Li · Y.T. Wu · M.F. Yu · A. Aazmi · L. Gao · Q. Xue · Y.C. Luo · H.Z. Zhou · B. Zhang · H.Y. Yang 164

Bioprinting of novel 3D tumor array chip for drug screening

M.J. Xie · Q. Gao · J.Z. Fu · Z.C. Chen · Y. He 175

A hepatocellular carcinoma–bone metastasis-on-a-chip model for studying thymoquinone-loaded anticancer nanoparticles

F. Sharifi · O. Yesil-Celiktas · A. Kazan · S. Maharjan · S. Saghazadeh · K. Firoozbakhsh · B. Firoozabadi · Y.S. Zhang 189

REVIEWS

Engineered hydrogels for brain tumor culture and therapy

J. Thakor · S. Ahadian · A. Niakan · E. Banton · F. Nasrollahi · M.M. Hasani-Sadrabadi · A. Khademhosseini 203

The construction of in vitro tumor models based on 3D bioprinting

L. Ma · Y.T. Li · Y.T. Wu · A. Aazmi · B. Zhang · H.Z. Zhou · H.Y. Yang 227

Bioengineering models of female reproduction

M.E. Zubizarreta · S. Xiao 237

Fabrication of paper-based devices for in vitro tissue modeling

H.B. Li · F. Cheng · J.A. Robledo-Lara · J.L. Liao · Z.X. Wang · Y.S. Zhang 252

Heart-on-chips screening based on photonic crystals

Y.X. Shang · Z.Y. Chen · Z.H. Zhang · Y.Z. Yang · Y.J. Zhao 266

Impact factor: 4.095 (2019)

Further articles can be found at link.springer.com

Indexed/abstracted in *Chemical Abstracts Service (CAS)*, *Current Contents/Engineering, Computing and Technology*, *EBSCO Discovery Service*, *Google Scholar*, *INSPEC*, *Institute of Scientific and Technical Information of China*, *Naver*, *OCLC WorldCat Discovery Service*, *ProQuest-ExLibris Primo*, *ProQuest-ExLibris Summon*, *SCOPUS*, *Science Citation Index Expanded (SciSearch)*, *Ulrich's Periodicals Directory*, *WTI Frankfurt eG*

Instructions for Authors for *Bio-des. Manuf.* are available at www.springer.com/42242

BIO-DESIGN AND MANUFACTURING

生物设计与制造

Editors-in-Chief:
H.Y. Yang · Z.F. Cui



 **ZHEJIANG**
UNIVERSITY PRESS

