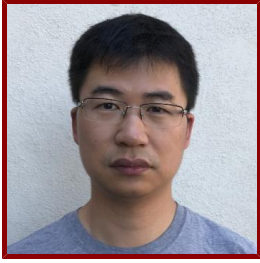



Stanford



Xinming Tong

Instructor, Orthopaedic Surgery

 NIH Biosketch available Online

Bio

ACADEMIC APPOINTMENTS

- Instructor, Orthopaedic Surgery

PROFESSIONAL EDUCATION

- Postdoc, Stanford University , Biomaterials (2016)
- Postdoc, Tsinghua University , Biomaterials (2011)
- PhD, Beijing Institute of Technology , Material Science and Engineering (2009)

Publications

PUBLICATIONS

- **Biochemical Ligand Density Regulates Yes-Associated Protein Translocation in Stem Cells through Cytoskeletal Tension and Integrins** *ACS APPLIED MATERIALS & INTERFACES*
Stanton, A. E., Tong, X., Lee, S., Yang, F.
2019; 11 (9): 8849–57
- **Hydrogels with enhanced protein conjugation efficiency reveal stiffness-induced YAP localization in stem cells depends on biochemical cues.** *Biomaterials*
Lee, S., Stanton, A. E., Tong, X., Yang, F.
2019; 202: 26–34
- **Recent Progress in Developing Injectable Matrices for Enhancing Cell Delivery and Tissue Regeneration** *ADVANCED HEALTHCARE MATERIALS*
Tong, X., Yang, F.
2018; 7 (7): e1701065
- **Contractile force generation by 3D hiPSC-derived cardiac tissues is enhanced by rapid establishment of cellular interconnection in matrix with muscle-mimicking stiffness** *BIOMATERIALS*
Lee, S., Serpooshan, V., Tong, X., Venkatraman, S., Lee, M., Lee, J., Chirikian, O., Wu, J. C., Wu, S. M., Yang, F.
2017; 131: 111-120
- **Mimicking Cartilage Tissue Zonal Organization by Engineering Tissue-scale Gradient Hydrogels as 3D Cell Niche.** *Tissue engineering. Part A*
Zhu, D., Tong, X., Trinh, P., Yang, F.
2017
- **Effect of matrix metalloproteinase-mediated matrix degradation on glioblastoma cell behavior in 3D PEG-based hydrogels** *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A*
Wang, C., Tong, X., Jiang, X., Yang, F.
2017; 105 (3): 770-778
- **Pharmacological rescue of diabetic skeletal stem cell niches.** *Science translational medicine*
Tevlin, R., Seo, E. Y., Marecic, O., McArdle, A., Tong, X., Zimdahl, B., Malkovskiy, A., Sinha, R., Gulati, G., Li, X., Wearda, T., Morganti, R., Lopez, et al

2017; 9 (372)

- **Modulating stem cell-chondrocyte interactions for cartilage repair using combinatorial extracellular matrix-containing hydrogels** *JOURNAL OF MATERIALS CHEMISTRY B*
Wang, T., Lai, J. H., Han, L., Tong, X., Yang, F.
2016; 4 (47): 7641-7650
- **Effect of Matrix Metalloproteinase-Mediated Matrix Degradation on Glioblastoma Cell Behavior in 3D PEG-based Hydrogels.** *Journal of biomedical materials research. Part A*
Wang, C., Tong, X., Jiang, X., Yang, F.
2016
- **Sliding Hydrogels with Mobile Molecular Ligands and Crosslinks as 3D Stem Cell Niche.** *Advanced materials*
Tong, X., Yang, F.
2016; 28 (33): 7257-7263
- **Winner of the Young Investigator Award of the Society for Biomaterials (USA) for 2016, 10th World Biomaterials Congress, May 17-22, 2016, Montreal QC, Canada: Aligned microribbon-like hydrogels for guiding three-dimensional smooth muscle tissue regeneration** *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A*
Lee, S., Tong, X., Han, L., Behn, A., Yang, F.
2016; 104 (5): 1064-1071
- **Hydrogels with Dual Gradients of Mechanical and Biochemical Cues for Deciphering Cell-Niche Interactions** *ACS BIOMATERIALS-SCIENCE & ENGINEERING*
Tong, X., Jiang, J., Zhu, D., Yang, F.
2016; 2 (5): 845-852
- **Effects of the poly(ethylene glycol) hydrogel crosslinking mechanism on protein release.** *Biomaterials science*
Lee, S., Tong, X., Yang, F.
2016; 4 (3): 405-411
- **Long-Term Controlled Protein Release from Poly(Ethylene Glycol) Hydrogels by Modulating Mesh Size and Degradation** *MACROMOLECULAR BIOSCIENCE*
Tong, X., Lee, S., Bararpour, L., Yang, F.
2015; 15 (12): 1679-1686
- **Improved Approach for Chondrogenic Differentiation of Human Induced Pluripotent Stem Cells** *STEM CELL REVIEWS AND REPORTS*
Nejadnik, H., Diecke, S., Lenkov, O. D., Chapelin, F., Donig, J., Tong, X., Derugin, N., Chan, R. C., Gaur, A., Yang, F., Wu, J. C., Daldrup-Link, H. E.
2015; 11 (2): 242-253
- **Microfluidic Synthesis of Biodegradable Polyethylene-Glycol Microspheres for Controlled Delivery of Proteins and DNA Nanoparticles** *ACS BIOMATERIALS-SCIENCE & ENGINEERING*
Deveza, L., Ashoken, J., Castaneda, G., Tong, X., Keeney, M., Han, L., Yang, F.
2015; 1 (3): 157-165
- **The effects of varying poly(ethylene glycol) hydrogel crosslinking density and the crosslinking mechanism on protein accumulation in three-dimensional hydrogels** *ACTA BIOMATERIALIA*
Lee, S., Tong, X., Yang, F.
2014; 10 (10): 4167-4174
- **The effects of varying poly(ethylene glycol) hydrogel crosslinking density and the crosslinking mechanism on protein accumulation in three-dimensional hydrogels.** *Acta biomaterialia*
Lee, S., Tong, X., Yang, F.
2014; 10 (10): 4167-4174
- **Chondrogenic differentiation of adipose-derived stromal cells in combinatorial hydrogels containing cartilage matrix proteins with decoupled mechanical stiffness.** *Tissue engineering. Part A*
Wang, T., Lai, J. H., Han, L., Tong, X., Yang, F.
2014; 20 (15-16): 2131-2139
- **Bioengineered 3D Brain Tumor Model To Elucidate the Effects of Matrix Stiffness on Glioblastoma Cell Behavior Using PEG-Based Hydrogels.** *Molecular pharmaceutics*

- Wang, C., Tong, X., Yang, F.
2014; 11 (7): 2115-2125
- **Photo-crosslinkable PEG-Based Microribbons for Forming 3D Macroporous Scaffolds with Decoupled Niche Properties.** *Advanced materials*
Han, L., Tong, X., Yang, F.
2014; 26 (11): 1757-1762
 - **Engineering interpenetrating network hydrogels as biomimetic cell niche with independently tunable biochemical and mechanical properties.** *Biomaterials*
Tong, X., Yang, F.
2014; 35 (6): 1807-1815
 - **A Facile Method to Fabricate Hydrogels with Microchannel-Like Porosity for Tissue Engineering** *TISSUE ENGINEERING PART C-METHODS*
Hammer, J., Han, L., Tong, X., Yang, F.
2014; 20 (2): 169-176
 - **Modulating polymer chemistry to enhance non-viral gene delivery inside hydrogels with tunable matrix stiffness.** *Biomaterials*
Keeney, M., Onyiah, S., Zhang, Z., Tong, X., Han, L., Yang, F.
2013; 34 (37): 9657-9665
 - **Effects of Polymer End-Group Chemistry and Order of Deposition on Controlled Protein Delivery from Layer-by-Layer Assembly** *BIOMACROMOLECULES*
Keeney, M., Mathur, M., Cheng, E., Tong, X., Yang, F.
2013; 14 (3): 794-800
 - **Evaluation of an in situ chemically crosslinked hydrogel as a long-term vitreous substitute material** *ACTA BIOMATERIALIA*
Tao, Y., Tong, X., Zhang, Y., Lai, J., Huang, Y., Jiang, Y., Guo, B.
2013; 9 (2): 5022-5030
 - **A New End Group Structure of Poly(ethylene glycol) for Hydrolysis-Resistant Biomaterials** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*
Tong, X., Lai, J., Guo, B., Huang, Y.
2011; 49 (6): 1513-1516
 - **Toward the synthesis of sequence-controlled vinyl copolymers** *CHEMICAL COMMUNICATIONS*
Tong, X., Guo, B., Huang, Y.
2011; 47 (5): 1455-1457
 - **End-capping double-chain stranded polypseudorotaxanes using lengthily tunable poly(2-hydroxyethyl methacrylate) blocks via atom transfer radical polymerization** *POLYMER INTERNATIONAL*
Tong, X., Gao, P., Zhang, X., Ye, L., Zhang, A., Feng, Z.
2010; 59 (7): 917-922
 - **Synthesis and characterization of block copolymers comprising a polyrotaxane middle block flanked by two brush-like PCL blocks** *SOFT MATTER*
Tong, X., Zhang, X., Ye, L., Zhang, A., Feng, Z.
2009; 5 (9): 1848-1855
 - **Novel main-chain polyrotaxanes synthesized via ATRP of HEMA initiated with polypseudorotaxanes comprising BriB-PEG-iBBr and alpha-CDs** *POLYMER*
Tong, X., Zhang, X., Ye, L., Zhang, A., Feng, Z.
2008; 49 (21): 4489-4493
 - **Novel main-chain polyrotaxanes synthesized via ATRP of HPMA in aqueous media** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*
Zhang, X., Zhu, X., Tong, X., Ye, L., Zhang, A., Feng, Z.
2008; 46 (15): 5283-5293
 - **A kind of novel biodegradable hydrogel made from copolymerization of gelatin with polypseudorotaxanes based on alpha-CDs** *4th Korea-China Symposium on Biomaterials and Nano-Biotechnology*
Hou, D., Tong, X., Yu, H., Zhang, A., Feng, Z.
IOP PUBLISHING LTD.2007: S147-S152