École Polytechnique Fédérale de Lausanne
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Xiaokang Li

Education

Sep 2014 – Now **École Polytechnique Fédérale de Lausanne**
Doctor of Philosophy, Nanoplasmonic biosensors
Lausanne, Switzerland

Aug 2011 – Jul 2014 **Tsinghua University**
Master of Engineering (Research based), Biomedical Engineering
Beijing, China

Aug 2007 – Jul 2011 **Tsinghua University**
Bachelor of Engineering, Biomedical Engineering
Beijing, China

Research Experience

Sep 2014 – present **Doctoral Research Assistant**
École Polytechnique Fédérale de Lausanne, Institute of Bioengineering
Lausanne, Switzerland

Aug 2010 – Jul 2014 **Research Assistant**
Tsinghua University, Department of Biomedical Engineering
Beijing, China

Primary & Stem cell culture; ESCs' hepatic and cardiac differentiation; Biomaterial; Rheological characterization; Microfabrication by photo-/soft-lithography and laser ablation

Jun 2010 – Aug 2010 **Visiting student**
Johns Hopkins University, Department of Biomedical Engineering
Baltimore, United States

Human bone marrow stromal cell culture, chondrogenic differentiation and characterization; Bioreactor set up

Sep 2009 – Jun 2010 **Undergraduate researcher**
Tsinghua University, Department of Biomedical Engineering
Beijing, China

Mouse breast cancer xenograft generation; Whole-body hyperthermia therapy for mouse breast cancer

Awards & Grants

Jan 2017	SPIE-MKS Research Excellence Award, San Francisco, USA
Jan 2016	Award: Best Poster Prize, 51st Winter Seminar, Klosters, Switzerland
Oct 2013	Scholarship: Xinjiang Economic and Technological Development Zone of Urumqi, Tsinghua University
Oct 2012	Scholarship: The GuangHua Educational Scholarship, Tsinghua University
Oct 2010	Scholarship: The Widjaya Scholarship for Tsinghua University
Oct 2009	Scholarship: Freudenberg German language competition, Tsinghua University

Skills & Activities

Skills	Lable-free biosensor, cytokine secretion analysis, single-cell analysis, Biomaterials, 3D Cell Culture, Tissue Engineering
Languages	Chinese (Native), English (Working proficiency), French (daily communication)

Publications

Peer-reviewed journal articles

1. **Li, X.**, Soler, M., Szydzik, C., Khoshmanesh, K., Schmidt, J., Coukos, G., Mitchell, A., and Altug, H. (2018). Label-Free Optofluidic Nanobiosensor Enables Real-Time Analysis of Single-Cell Cytokine Secretion. **Small** 14, 1800698.
2. **Li, X.**, Soler, M., Özdemir, C.I., Belushkin, A., Yesilköy, F., and Altug, H. (2017). Plasmonic nanohole array biosensor for label-free and real-time analysis of live cell secretion. **Lab Chip** 17, 2208–2217.
3. **Li, X.**, Zhao, H., Qi, C., Zeng, Y., Xu, F., and Du, Y. (2015). Direct intercellular communications dominate the interaction between adipose-derived MSCs and myofibroblasts against cardiac fibrosis. **Protein Cell** 6, 735–745.
4. Zeng, Y., Chen, C., Liu, W., Fu, Q., Han, Z., Li, Y., Feng, S., **Li, X.**, Qi, C., Wu, J., et al. (2015). Injectable microcryogels reinforced alginate encapsulation of mesenchymal stromal cells for leak-proof delivery and alleviation of canine disc degeneration. **Biomaterials** 59, 53–65.
5. Zhao, H., **Li, X.***, Zhao, S., Zeng, Y., Zhao, L., Ding, H., Sun, W., and Du, Y. (2014). Microengineered in vitro model of cardiac fibrosis through modulating myofibroblast mechanotransduction. **Biofabrication** 6, 045009. (*Equal contribution)
6. Liu, W., Li, Y., Zeng, Y., Zhang, X., Wang, J., Xie, L., **Li, X.**, and Du, Y. (2014). Microcryogels as injectable 3-D cellular microniches for site-directed and augmented cell delivery. **Acta Biomaterialia** 10, 1864–1875.
7. Yao, R., Wang, J., **Li, X.**, Jung Jung, D., Qi, H., Kee, K.K., and Du, Y. (2014). Hepatic Differentiation of Human Embryonic Stem Cells as Microscaled Multilayered Colonies Leading to Enhanced Homogeneity and Maturation. **Small** 10, 4311–4323.

8. Zhao, S., Shen, Z., Wang, J., **Li, X.**, Zeng, Y., Wang, B., He, Y., and Du, Y. (2014). Glycerol-Mediated Nanostructure Modification Leading to Improved Transparency of Porous Polymeric Scaffolds for High Performance 3D Cell Imaging. **Biomacromolecules** 15, 2521–2531.
9. **Li, X.**, Zhang, X., Zhao, S., Wang, J., Liu, G., and Du, Y. (2014). Micro-scaffold array chip for upgrading cell-based high-throughput drug testing to 3D using benchtop equipment. **Lab Chip** 14, 471–481.
10. Jin, C., Zhang, J., **Li, X.**, Yang, X., Li, J., and Liu, J. (2013). Injectable 3-D Fabrication of Medical Electronics at the Target Biological Tissues. **Scientific Reports** 3, srep03442.

Conference Paper

1. **Li, X.**, Soler, M., Belushkin, A., Yesilköy, F., and Altug, H. (2018). Optofluidic nanoplasmonic biosensor for label-free live cell analysis in real time. In **Plasmonics in Biology and Medicine XV**, (International Society for Optics and Photonics), p. 105090E.
2. Soler, M., **Li, X.**, Belushkin, A., Yesilkoy, F., and Altug, H. (2018). Towards a point-of-care nanoplasmonic biosensor for rapid and multiplexed detection of pathogenic infections. In **Plasmonics in Biology and Medicine XV**, (International Society for Optics and Photonics), p. 105090I.

Book Chapters

1. Chen, H., **Li, X.** and Du, Y. (2012) 1D~3D Nano-engineered Biomaterials for Biomedical Applications, in Integrated Biomaterials for Biomedical Technology (eds M. Ramalingam, A. Tiwari, S. Ramakrishna and H. Kobayashi), **John Wiley & Sons, Inc.**, Hoboken, NJ, USA. doi: 10.1002/9781118482513.ch1
2. **Li, X.**, Wittkowske C., Yao R., Du, Y. (2012). Hydrogel as Stem Cell Niche for In Vivo Applications in Regenerative Medicine. In Biomaterials and Stem Cells in Regenerative Medicine, M. Ramalingam, S. Ramakrishna, and S. Best, eds. (**CRC Press.**), ISBN: 978-1439879252