

# Stanford

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## Huaxiao Yang

Postdoctoral Research Fellow, Cardiovascular Institute

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#### HONORS AND AWARDS

- Postdoctoral Fellowship Award, AHA (2018-2020)

#### PROFESSIONAL EDUCATION

- Bachelor of Engineering, Huazhong University Of Science & Technology (2007)
- Bachelor of Science, Wuhan University , Biological Science (2007)
- Master of Science, Fudan University , Macromolecular Science (2010)
- Doctor of Philosophy, Clemson University (2015)

#### STANFORD ADVISORS

- Joseph Wu, Postdoctoral Faculty Sponsor

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Cardiac tissue engineering with iPSC derived cardiovascular cells

### Publications

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#### PUBLICATIONS

- **Modelling diastolic dysfunction in induced pluripotent stem cell-derived cardiomyocytes from hypertrophic cardiomyopathy patients.** *European heart journal*  
Wu, H., Yang, H., Rhee, J. W., Zhang, J. Z., Lam, C. K., Sallam, K., Chang, A. C., Ma, N., Lee, J., Zhang, H., Blau, H. M., Bers, D. M., Wu, et al  
2019
- **An in Vivo miRNA Delivery System for Restoring Infarcted Myocardium.** *ACS nano*  
Yang, H., Qin, X., Wang, H., Zhao, X., Liu, Y., Wo, H. T., Liu, C., Nishiga, M., Chen, H., Ge, J., Sayed, N., Abilez, O. J., Ding, et al  
2019
- **A Premature Termination Codon Mutation in MYBPC3 Causes Hypertrophic Cardiomyopathy via Chronic Activation of Nonsense-Mediated Decay.** *Circulation*  
Seeger, T., Shrestha, R., Lam, C. K., Chen, C., McKeithan, W. L., Lau, E., Wnorowski, A., McMullen, G., Greenhaw, M., Lee, J., Oikonomopoulos, A., Lee, S., Yang, et al  
2018
- **Progress, obstacles, and limitations in the use of stem cells in organ-on-a-chip models.** *Advanced drug delivery reviews*  
Wnorowski, A., Yang, H., Wu, J. C.  
2018
- **Ferumoxylol-based Dual-modality Imaging Probe for Detection of Stem Cell Transplant Rejection.** *Nanotheranostics*  
Li, K., Chan, C. T., Nejadnik, H., Lenkov, O. D., Wolterman, C., Paulmurugan, R., Yang, H., Gambhir, S. S., Daldrup-Link, H. E.  
2018; 2 (4): 306–19

- **Comparison of Non-human Primate versus Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes for Treatment of Myocardial Infarction.** *Stem cell reports*  
Zhao, X., Chen, H., Xiao, D., Yang, H., Itzhaki, I., Qin, X., Chour, T., Aguirre, A., Lehmann, K., Kim, Y., Shukla, P., Holmström, A., Zhang, et al  
2018; 10 (2): 422–35
- **Passive Stretch Induces Structural and Functional Maturation of Engineered Heart Muscle as Predicted by Computational Modeling.** *Stem cells (Dayton, Ohio)*  
Abilez, O. J., Tzatzalos, E., Yang, H., Zhao, M. T., Jung, G., Zöllner, A. M., Tiburcy, M., Riegler, J., Matsa, E., Shukla, P., Zhuge, Y., Chour, T., Chen, et al  
2017
- **Molecular and functional resemblance of differentiated cells derived from isogenic human iPSCs and SCNT-derived ESCs.** *Proceedings of the National Academy of Sciences of the United States of America*  
Zhao, M. T., Chen, H., Liu, Q., Shao, N. Y., Sayed, N., Wo, H. T., Zhang, J. Z., Ong, S. G., Liu, C., Kim, Y., Yang, H., Chour, T., Ma, et al  
2017
- **Photoacoustic Imaging of Embryonic Stem Cell-Derived Cardiomyocytes in Living Hearts with Ultrasensitive Semiconducting Polymer Nanoparticles** *Advanced Functional Materials*  
Qin, X., Chen, H., Yang, H., Wu, H., Zhao, X., Wang, H., Chour, T., Neofytou, E., Ding, D., Daldrup-Link, H., Heilshorn, S. C., Li, K., Wu, et al  
2017
- **Biochip-based study of unidirectional mitochondrial transfer from stem cells to myocytes via tunneling nanotubes** *BIOFABRICATION*  
Yang, H., Borg, T. K., Ma, Z., Xu, M., Wetzel, G., Saraf, L. V., Markwald, R., Runyan, R. B., Gao, B. Z.  
2016; 8 (1)
- **Dynamic Myofibrillar Remodeling in Live Cardiomyocytes under Static Stretch** *SCIENTIFIC REPORTS*  
Yang, H., Schmidt, L. P., Wang, Z., Yang, X., Shao, Y., Borg, T. K., Markwald, R., Runyan, R., Gao, B. Z.  
2016; 6
- **Interactive relationship between basement-membrane development and sarcomerogenesis in single cardiomyocytes** *EXPERIMENTAL CELL RESEARCH*  
Yang, H., Borg, T. K., Liu, H., Gao, B. Z.  
2015; 330 (1): 222-232
- **Laser cell-micropatterned pair of cardiomyocytes: the relationship between basement membrane development and gap junction maturation** *BIOFABRICATION*  
Yang, H., Borg, T. K., Schmidt, L. P., Gao, B. Z.  
2014; 6 (4)
- **Role of the Basement Membrane in Regulation of Cardiac Electrical Properties** *ANNALS OF BIOMEDICAL ENGINEERING*  
Yang, H., Borg, T. K., Wang, Z., Ma, Z., Gao, B. Z.  
2014; 42 (6): 1148-1157
- **Enzyme-etching technique to fabricate micropatterns of aligned collagen fibrils** *BIOTECHNOLOGY LETTERS*  
Liu, H., Chen, R., Yang, H., Qin, W., Borg, T. K., Dean, D., Xu, M., Gao, B. Z.  
2014; 36 (6): 1245–52
- **Laser patterning for the study of MSC cardiogenic differentiation at the single-cell level** *LIGHT-SCIENCE & APPLICATIONS*  
Ma, Z., Liu, Q., Yang, H., Runyan, R. B., Eisenberg, C. A., Xu, M., Borg, T. K., Markwald, R., Wang, Y., Gao, B. Z.  
2013; 2
- **Mesenchymal Stem Cell-Cardiomyocyte Interactions under Defined Contact Modes on Laser-Patterned Biochips** *PLOS ONE*  
Ma, Z., Yang, H., Liu, H., Xu, M., Runyan, R. B., Eisenberg, C. A., Markwald, R. R., Borg, T. K., Gao, B. Z.  
2013; 8 (2)
- **Disassembly of Myofibrils in Adult Cardiomyocytes during Dedifferentiation**  
Liu, H., Qin, W., Shao, Y., Wang, Z., Yang, H., Runyan, R. B., Borg, T. K., Gao, B. Z., Farkas, D. L., Nicolau, D. V., Leif, R. C.  
SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Microsystem for Stem Cell-Based Cardiovascular Research** *BIONANOSCIENCE*  
Yang, H., Ma, Z.  
2012; 2 (4): 305–15

- **Cardiogenic Regulation of Stem-Cell Electrical Properties in a Laser-Patterned Biochip** *CELLULAR AND MOLECULAR BIOENGINEERING*  
Ma, Z., Liu, Q., Liu, H., Yang, H., Yun, J. X., Xu, M., Eisenberg, C. A., Borg, T. K., Markwald, R., Gao, B. Z.  
2012; 5 (3): 327–36
- **Laser-patterned stem-cell bridges in a cardiac muscle model for on-chip electrical conductivity analyses** *LAB ON A CHIP*  
Ma, Z., Liu, Q., Liu, H., Yang, H., Yun, J. X., Eisenberg, C., Borg, T. K., Xu, M., Gao, B. Z.  
2012; 12 (3): 566-573
- **Enhanced cell affinity of the silk fibroin- modified PHBHHx material** *JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE*  
Sun, M., Zhou, P., Pan, L., Liu, S., Yang, H.  
2009; 20 (8): 1743–51
- **Investigation of water diffusion in poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) by generalized two-dimensional correlation ATR-FTIR spectroscopy** *POLYMER*  
Yang, H., Sun, M., Zhou, P.  
2009; 50 (6): 1533-1540