**Huan (Sharon) Wang**

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**TRAINING & EDUCATION**

**2014 ~ 2016: Harvard University, Medical School**

Postdoctoral Associate in Systems Biology

Advisor: Peter Sorger

**2006 ~ 2014: University of Colorado at Boulder**

Ph.D. in Molecular, Cellular and Developmental Biology

Postdoctoral Associate in Chemical and Biological Engineering

Advisors: Leslie A. Leinwand and Kristi S. Anseth

**2002 ~ 2006: Zhejiang University**

B.S. in Biotechnology

**2004 ~ 2005: Chinese University of Hong Kong**

Exchange student in Biology

**RESEARCH DIRECTIONS**

* Molecular mechanisms of calcific aortic stenosis and tissue regeneration
* Molecular mechanisms of cancer drugs induced cardiotoxicity
* Signaling mechanisms and crosstalk between biophysical and biochemical cues in cardiac cells
* Human cardiac tissue engineering using induced pluoripotent stem cells and hydrogels
* Heterogeneity of drug response in single cells

**GRANTS**

1. American Heart Association Postdoctoral Fellowship entitled “Single cell network modeling of drug-induced cardiotoxicity”, **Priority score: 1.3, Percentile: 4.55%, Funded 2015 ~ 2017.**
2. Lead author on a NIH R21 grant entitled “Mechanical dosing effects on mesenchymal stem cells”, with Dr. Kristi Anseth. **Impact score: 20, Percentile: 2.0%, Funded 2014 ~ 2016.**
3. Author in a NIH R01 grant entitled “Reversible and irreversible cell fate of myofibroblasts in response to matrix stiffness”, with Dr. Kristi Anseth. Submitted but not funded, 2014.

**JOURNAL PUBLICATIONS**

1. **Wang H**, Tibbitt MW, Langer SJ, Leinwand LA and Anseth KS. Hydrogels preserve inactivated fibroblast phenotype of valvular interstitial cells through an elasticity-regulated PI3K/AKT pathway. *Proceedings of the National Academy of Sciences USA,* 110 (48): 19336-19341 (2013)*.*
2. **Wang H**, Leinwand LA and Anseth KS. Cardiac valve cells and their microenvironment—insights from *in vitro* studies, *Nature Reviews Cardiology.* doi:10.1038/nrcardio.2014.162 (2014)*.*
3. **Wang H**, Leinwand LA and Anseth KS. Roles of TGF-β1 and OB-cadherin in cardiac valve myofibroblast differentiation, *The FASEB Journal.* 28:4551-4562 (2014).
4. **Wang H**, Haeger SM, Kloxin AK, Leinwand LA and Anseth KS. Redirecting valvular myofibroblasts into dormant fibroblasts through light-mediated reduction in substrate modulus. *PLoS ONE.* 7(7):e39969 (2012).
5. **Wang H**, Sridhar B, Leinwand LA, Anseth KS. Characterization of cell subpopulations expressing progenitor cell markers in porcine cardiac valves. *PLoS ONE*. 8(7): e69667 (2013).

**TEACHING & MENTORING**

**2015/10 – present**: Mentored Connor Jacobson on the project: “Differential response of cardiac muscle cells and cancer cells to chemotherapeutic drugs”.

**2009/06 – 2011/07:** Mentored Sarah Haeger and published a paper together:

Wang H, Haeger SM, Kloxin AK, Leinwand LA and Anseth KS. “Redirecting valvular myofibroblasts into dormant fibroblasts through light-mediated reduction in substrate modulus. PLoS ONE. 7(7):e39969 (2012)”.

**2008/11 – 2010/05:** Mentored Tyler Menge on the project “Roles of OB-cadherin in cardiac valve myofibroblast differentiation**”**

**2007/01 – 2007/06:** Teaching Assistant (20 students), Genetics Laboratory, Department of Molecular, Cellular and Developmental Biology, University of Colorado at Boulder

**2006/09 – 2007/03:** Teaching Assistant (25 students), Introduction to Molecular and Cellular Biology Laboratory, Department of Molecular, Cellular and Developmental Biology, University of Colorado at Boulder

**CONFERENCE PRESENTATIONS**

1. **Wang H,** Sorger PK. “Molecular signatures of cardiotoxicity induced by tyrosine kinase inhibitors ⎯ from *in vitro* cell culture”, August 18-19 2016, FDA workshop in Building Systems Pharmacology Model for Adverse Events. White Oak Campus, Silver Spring, MD 20993 (Podium Presentation).
2. **Wang H,** Palmer A, Boswell S, Everley R, Ron-Harel N, Jenney A, Sorger PK. “Molecular network modeling of drug-induced cardiotoxicity in space of dose and time”, Gordon Research Conference on Cardiac Regulatory Mechanisms, June 5-10 2016, New London, NH USA (Poster)
3. **Wang H,** Lin JR, Sorger PK **“**Single cell network modeling of drug-induced cardiotoxicity”, Keystone Symposium on Cell Biology of the Heart: Beyond the Myocyte-Centric View, March 1-6 2015, Copper Mountain, CO USA (Poster)
4. **Wang H**, Tibbitt MW, Langer SJ, Leinwand LA and Anseth KS. “Hydrogels preserve native phenotypes of valvular fibroblasts through an elasticity-regulated PI3K/AKT pathway”, Annual meeting of Society For Biomaterials, April 2014, Denver, CO USA (Podium Presentation)
5. **Wang H**, Leinwand LA and Anseth KS, “Lowering Substrate Stiffness *in situ* through Photodegradable Hydrogels Promotes Quiescence of Cardiac Valvular Fibroblast”, 9th World Biomaterial Congress, June 2012, Chengdu, China (Podium Presentation).
6. **Wang H**, Leinwand LA and Anseth KS, “Global Effects of TGF-β1 on Porcine Valvular Interstitial Cells (VICs)”, [4th Biennial Heart Valve Biology and Tissue Engineering Meeting](http://hiltonhead.gatech.edu/), March 2010, Hilton Head Island, SC USA (Podium Presentation).

**SCHOLARSHIPS & HONORS**

**2004 – 2005: Fellowship for exchange student to the Chinese University of Hong Kong.** This fellowship was awarded to 2 persons in the College of Life Sciences in Zhejiang University.

**2002 – 2004: First-class fellowship for excellent student awarded by Zhejiang University for two consecutive years, 2002~2004.** This honor is awarded annually to the students ranked top 3% in the department (~150 students).

**2002 – 2003: Excellent student cadre honor awarded by Zhejiang University.**

**2002 – 2003: One-star volunteer prize awarded by College of Life Sciences.** I was awarded for being a volunteer interpreter at the Natural Museum of Zhejiang Province.

**2001: National Grade 10 Certificate on playing Pipa (Lute) awarded by Chinese Music Association.** The national certificate on Pipa ranges from Grade 1 to 10, with 10 as the highest level.

**REFERENCES**

Leslie Leinwand

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University of Colorado Boulder

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Rui Yi

Assistant professor

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Kristi Anseth

Distinguished Professor and HHMI Investigator

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Peter Sorger

Otto Krayer Professor of Systems Pharmacology

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