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**EDUCATION (教育)**

**University of Colorado, Boulder CO（科罗拉多大学波尔德分校 博士） 8/2006—5/2013**

Ph.D., Department of Molecular, Cellular and Developmental Biology

Cumulative GPA: 3.9/4.0

**Zhejiang University, Hang Zhou ZJ（浙江大学 本科） 9/2002—7/2006**

Bachelor of Science, Department of Biotechnology

Cumulative GPA: 3.7/4.0 Rank (年级排名) 1st/150

**Chinese University of Hong Kong, Shatin HK（香港中文大学 本科交流学习） 9/2004—7/2005**

Exchange student, Department of Biology

Cumulative GPA: 3.5/4.0

**RESEARCH INTEREST（研究兴趣）**

* Molecular mechanisms of calcific aortic stenosis and tissue regeneration

(心脏瓣膜碳化与再生的分子机理)

* Reconstruct human heart using induced pluoripotent stem cells and tissue engineering

（利用诱导性多功能干细胞进行人类心脏的组织再生）

* Cardiotoxicity of cancer drugs

(癌症药物对心脏的毒害)

* Quantitative and systems biology in revealing universal mechanisms

(利用量化和系统生物学方法探寻普适的原理)

**RESEARCH EXPERIENCE（科研经历）**

**Postdoctoral Research Assistant, Department of Systems Biology, Harvard Medical School**

**（博士后 系统生物学系 哈佛医学院) 9/2014—present**

Advisor: Prof. Peter Sorger

Project: Single cell network modeling of cancer drug-induced cardiotoxicity

**Postdoctoral Research Assistant, Department of Chemical and Biological Engineering, University of**

**Colorado at Boulder （博士后 生物与化学工程学院 科罗拉多大学波尔德分校） 5/2013—9/2014**

Advisor: Prof. Kristi S. Anseth（美国工程院和科学院两院院士）

Project: Design and regulation of poly(ethylene glycol) based hydrogels as cells culture substrates for induced pluripotent stem cells

**Graduate Research Assistant, Department of Molecular, Cellular and Developmental Biology, University**

**of Colorado at Boulder （博士 分子细胞和发育生物学系 科罗拉多大学波尔德分校）** **5/2007—5/2013**

Advisors: Prof. Leslie A. Leinwand（美国科学院院士） and Prof. Kristi S. Anseth（美国工程院和科学院两

院院士）

Ph.D. dissertation: Signaling from matrix elasticity and TGF-β1 to cells of the cardiac valve

**Undergraduate Research Volunteer, Department of Biotechnology, Zhejiang University**

**（本科 生物技术系 浙江大学） 6/2003—6/2004 and 8/2005—2/2006**

Advisors: Dr. Bingyang Ding and Dr. Xiaofeng Jin

Project: Phylogenetic analysis and protective measures proposed for an endangered plant species, *Platycrater arguta* var. *sinensis*

**Undergraduate Research Volunteer, Department of Biology, Chinese University of Hong Kong**

**(本科 生物系 香港中文大学) 12/2004—5/2005**

Advisor: Dr. Wei Ge

Project: Functional assays of Activin Receptor TypeIb in goldfish

**PUBLICATIONS (期刊文章)**

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,* (影响因子9.674) 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* (影响因子 9.183) 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* (影响因子5.043)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* (影响因子3.234)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* (影响因子3.234)8(7): e69667 (2013).

**GRANTS （基金）**

1. American Heart Association Postdoctoral Fellowship entitled “Single cell network modeling of drug-induced cardiotoxicity”, **Priority score: 1.3, Percentile: 4.55%, Funded on 7/1/2015 for two years.**
2. Lead author on a NIH R21 grant entitled “Mechanical dosing effects on mesenchymal stem cells” when working as a postdoc under the adviser-ship of Dr. Kristi Anseth. **Impact score: 20, Percentile: 2.0%, Funded in 2014.**
3. Author in a NIH R01 grant entitled “Reversible and irreversible cell fate of myofibroblasts in response to matrix stiffness” when working as a postdoc under the adviser-ship of Dr. Kristi Anseth. Submitted 10/2014.

**CONFERENCE PAPERS: (会议文章)**

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”, Systems Biology of Human Disease, June 14-16 2016, Broad Institute, Cambridge USA (Poster)
3. **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)
4. **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)
5. **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)
6. **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”, HHMI Scientific Meeting, September 2013, Janelia Farm Research Campus**,** Ashburn, VA USA (Poster)
7. **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).
8. **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).
9. **Wang H**, Leinwand LA and Anseth KS, “OB-Cadherin, A Novel Cell Surface Marker for Valvular Myofibroblasts”, 5th Biennial Meeting of the Society for Heart Valve Disease (SHVD), June 2009, Berlin, Germany (Podium Presentation).

**AWARDS （奖项）**

1. **Fellowship for exchange student to the Chinese University of Hong Kong, 2004—2005.** This fellowship was awarded to 2 persons in the College of Life Sciences in Zhejiang University.
2. **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).
3. **Excellent student cadre honor awarded by Zhejiang University, 2002—2003.**
4. **One-star volunteer prize awarded by College of Life Sciences, 2002—2003.** I was awarded for being a volunteer interpreter at the Natural Museum of Zhejiang Province.
5. **National Grade 10 Certificate on playing Pipa(Lute) awarded by Chinese Music Association, 2001.** The national certificate on Pipa ranges from Grade 1 to 10, with 10 as the highest level.

**PROFESSIONAL SKILLS (实验技术)**

**Cell Culture**: mammalian primary cell and cell line culture, fluorescence activated cell sorting, transient transfection and stable lentiviral-mediated infection, retrovirus production and infection

**Molecular Techniques:** molecular cloning, real-time PCR, luciferase reporter assays, protein expression, Western blot, immunofluorescence

***In vivo* Techniques:** mouse colony maintenance and breeding, subcutaneous implantation of biomaterials in mice, small animal surgery

**Data Analysis**: microarray/RNAseq analysis, gene ontology analysis, signaling pathway analysis, python language, matlab, R

**Chemistry**: peptide synthesis, poly(ethylene glycol) functionalization, hydrogel manufacture for cell culture

**Microscopy**: Bright field, epifluorescence and confocal microscopy

**TEACHING EXPERIENCE（教书背景）**

Teaching Assistant, Introduction to Molecular and Cellular Biology Lab (25 students) 2006 fall

Teaching Assistant, Genetics Lab (20 students) 2007 spring

**REFERENCES**

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