

BIOGRAPHICAL SKETCH

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NAME Yadong Wang		POSITION TITLE William Kepler Whiteford Professor of Bioengineering, Chemical Engineering, Surgery, and Mechanical Engineering and Materials Science	
eRA COMMONS USER NAME (credential, e.g., agency login) YADONGWANG			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Kansas State University	M.S.	1995	Chemistry
Stanford University	Ph.D.	1999	Chemistry
Massachusetts Institute of Technology	Postdoctoral	2002	Biomedical Engineering

A. Personal Statement

My passion is rational design of biomaterials and applying biomaterials for in situ tissue regeneration. Our scholarly productivity is represented by >70 peer-reviewed publications generating >2300 citations in the last 5 years, >100 conference presentations, advising of 7 postdoctoral fellows and 11 Ph.D. students, and 10 issued and pending patents. My lab enjoys collaborating with other scientists and clinicians who share the same passion in translational research.

B. Positions and Honors**Positions and Employment**

- 2002-2003 Research Associate, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA
- 2003-2008 Assistant Professor, Department of Biomedical Engineering, Georgia Institute of Technology/Emory University, Atlanta, GA
- 2008- Associate Professor, Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA
- 2011- Associate Professor, Department of Surgery, University of Pittsburgh School of Medicine, Pittsburgh, PA
- 2012- Associate Professor, Department of Chemical and Petroleum Engineering, University of Pittsburgh, Pittsburgh, PA
- 2013- Professor, Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA
- 2013- William Kepler Whiteford Professor, Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA

Awards and Other Professional Experiences

- 1998-1999 Franklin Veatch Memorial Scholarship, Stanford University
- 2005 Finalist, the INDEX: Award, Copenhagen, Denmark
- 2007 American Heart Association Scientist Development Award
- 2007 Hunter Chair Lecture, Clemson University
- 2007 SAIC Outstanding Research Paper Award
- 2007- Member, Advisory Board, Lifeboat Foundation

- 2012 American Heart Association Established Investigator Award
- 2012 Randall Family Big Idea Competition, 1st Place Winner (Mentor)
- 2012 CMU Summit New Venture Competition, 1st Place Winner (Mentor)
- 2013 Dutch Heart Foundation Lecture, International Symposium on Vascular Tissue Engineering, Leiden, The Netherlands
- 2014 Grand Prize, Pittsburgh Innovation Challenge
- 2014 Fellow, AIMBE
- 2003- Reviewer for: *Advanced Functional Materials*, *Advanced Materials*, *Angewandte Chemie International Edition in English*, *Annals of Biomedical Engineering*, *Bioconjugate Chemistry*, *Biomacromolecules*, *Biomaterials*, *Biotechnology Progress*, *Chemistry-A European Journal*, *Expert Opinion on Biological Therapy*, *Expert Opinion on Drug Delivery*, *International Journal of Cancer*, *Journal of Biomaterials Science: Polymer Edition*, *Journal of Biomedical Materials Research: Part A*, *Langmuir*, *Nanotechnology*, *Nature Protocols*, *Polymer Reviews*, *Proceedings of the National Academy of Sciences of the USA*, *Tissue Engineering*, and *Trends in Biotechnology*.
- 2007- Reviewer for: *National Institutes of Health*, *National Science Foundation*, *Canada Foundation of Innovation*, *Technology Foundation (STW, NWO)*, *the Netherlands*, *National Research Foundation*, *South Africa*, and *Hong Kong Research Grants Council*.

C. Peer-reviewed Publications (selected from 73 papers)

1. **Wang Y**, DuBois JL, Hedman B, Hodgson KO, and Stack TDP. Catalytic Galactose Oxidase Models: Biomimetic Cu(II)-Phenoxy-Radical Reactivity. *Science*, 279: 537-540, 1998.
2. **Wang Y**, Ameer GA, Sheppard BJ, and Langer R. A Tough Biodegradable Elastomer. *Nat. Biotechnol.*, 20: 602-606, 2002.
3. Gao J, Kim YM, Coe H, Zern B, Sheppard B, and **Wang Y**. A Neuro-inductive Biodegradable Material Based on Dopamine. *Proc. Natl. Acad. Sci. U.S.A.*, 103: 16681-16686, 2006. PMC1636515
4. Gumer C and **Wang Y**. Modulating neuronal responses by controlled integration of acetylcholine-like functionalities in biomimetic polymers. *Adv. Mater.* 19: 4404-4409, 2007.
5. Crapo, P.; **Wang, Y**. Physiologic Compliance In Engineered Small-Diameter Arterial Constructs Based On An Elastomeric Substrate. *Biomaterials*, 31, 1626-1635, 2010. PMC2813924
6. You, Z.; Cao, H.; Gao, J.; Shin, P.H.; Day, B.W.; **Wang, Y**. A functionalizable polyester with free hydroxyl groups and tunable physiochemical and biological properties. *Biomaterials*, 31, 3129-3138, 2010. PMC2827675
7. Chu H, Johnson NR, Mason NS, and **Wang Y**. A [polycation:heparin] complex releases growth factors with enhanced bioactivity. *J. Control. Release*, 150, 157-163, 2011.
8. Park D, Wu W, and **Wang Y**: A functionalizable reverse thermal gel based on a polyurethane / PEG block copolymer. *Biomaterials*, 32:777-86, 2011. PMC2991555
9. Zern BJ, Chu H, Osunkoya AO, Gao J, and **Wang Y**. A Biocompatible Arginine-based Polycation. *Adv. Func. Mater.*, 21: 434-440, 2011.
10. Chu H, Gao J, Chen C-W, Huard J, and **Wang Y**. An injectable FGF2 coacervate for persistent angiogenesis. *Proc. Natl. Acad. Sci. U.S.A.* 108, 13444-13449, 2011.
11. Lee K-W, Stolz DB, and **Wang Y**. Substantial Expression of Mature Elastin in Arterial Constructs. *Proc. Natl. Acad. Sci. U.S.A.*, 108:2705-10, 2011. PMID: 21282618
12. You Z and **Wang Y**. A Versatile Synthetic Platform for a Wide Range of Functionalized Biomaterials. *Adv. Func. Mater.* 22, 2812-20, 2012.
13. Wu W, Allen R, and **Wang Y**. Fast degrading elastomer enables rapid remodeling of a cell-free synthetic graft into a neo-artery. *Nat. Med.* 18, 1148-1153, 2012. (Featured in **Editors' Choice** in *Science Translational Medicine* and *Nature Medicine Podcast*.)
14. Li H, Johnson NR, Usas A, Lu A, **Wang Y**, and Huard J. Sustained Release of BMP2 via Coacervate Improves the Osteogenic Potential of Muscle-Derived Stem Cells. *Stem Cells Translational Medicine*. 2(9):667-77, 2013.

Program Director/Principal Investigator (Last, First, Middle):

15. Lee K-W, Johnson N, Gao J, and **Wang Y**. Human Progenitor Cell Recruitment via SDF-1alpha Coacervate-laden PGS Vascular Grafts. *Biomaterials*. 34 (38): 9877-9885, 2013.