

BIOGRAPHICAL SKETCH

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NAME: **Hong Wang**

eRA COMMONS USER NAME (credential, e.g., agency login): **hongw1**

POSITION TITLE: **Professor of Pharmacology**

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Nanchang University Sch. of Medicine, China	M.D.	12/1979	Clinical Medicine
Peking Union Medical College, Tsinghua University, Beijing, China	M.S.	06/1985	Immunology
University of Montreal, Canada	Ph.D.	1988-94	Biochemistry
Harvard School of Public Health, USA	Fellowship	1994-97	Cardiovascular Biology
The Fox Business School, Temple University, USA	EMBA	2007-09	Executive Business Administration

A. Personal Statement

I am a physician scientist and have more than 20 years of experience in cardiovascular research. I have extensive expertise in the areas of cardiovascular inflammation, atherosclerosis, lipoprotein metabolism, vascular function, molecular mechanism, and signal transduction. My laboratory has dynamic model systems for fundamental mechanistic study, viral particle constriction, and cell biological research, and animal models for pathological and physiological functional assessment of cardiovascular system.

My research focuses on identifying biochemical mechanisms responsible for hyperhomocysteinemia (HHcy)–induced cardiovascular disease, and discovering therapeutic targets and novel therapeutic strategies. My major contribution to the field includes 1) established the causative role of HHcy in atherosclerosis, 2) systemically investigated the role and mechanism of HHcy on vascular pathology, HDL metabolism and inflammatory monocyte differentiation, and 3) established hypomethylation as a key biochemical mechanism for selective endothelium injury in hyperhomocysteinemia.

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

- 1978–79 **Intern in Medicine**, Second Hospital of JiangXi Medical School, Nanchang, China
- 1979–82 **Resident in Internal Medicine**, Center Farm Hospital of JiangXi Province, China
- 1983–89 **Research Associate**, Institute of Med Bio, Chinese National Acad of Med Sci, Kunming
- 1994–97 **Research Fellow**, Cardiovascular Biology Lab, Harvard School of Public Health, Boston
- 1997–99 **Research Associate**, Division of Biological Sci, Harvard School of Public Health, Boston
- 1999–05 **Assistant Professor**, Department of Medicine, Baylor College of Medicine, Houston
- 2005-07 **Associate Professor**, Department of Pharmacology, Temple Uni Sch of Med, Philadelphia
- 2006- **Adjunct Associate Professor**, Department of Medicine, Baylor College of Med, Houston
- 2006-09 **Adjunct Associate Professor**, Depart of Medicine, Uni of Penn Sch Med. Philadelphia
- 2007- **Professor**, Depart of Pharmacology, Temple Uni School of Medicine (TUSM), Philadelphia
- 2009- **Chair**, TUSM Committee on the Status of Women Faculty
- 2010-12 **Assistant Dean for Research**, TUSM
- 2012- **Associate Dean for Research**, TUSM
- 2013- **Director, Center for Metabolic Disease Research**, TUSM
- 2015- **Laura H. Carnell Professor**, Temple University
- 2017- **Intriem Chair**, Department Microbiology and Immunology, TUSM

Other Experience and Professional Memberships

- 1998- **Member**, Amer Soci for Bioch & Mol Bio (ASBMB) of Federation of American Societies for Experi Bio (FASEB)
- 1995- **Member**, FAHA (2007-), American Heart Association (AHA), ATVB & BCVS Councils
- 2001- **Member**, American Society of Hematology (ASH)
- 2010- **Member**, American Diabetes Association (ADA)
- 2011-13 **Member**, AHA BCVS Committee of Scientific Sessions Program (CSSP)
- 2012-, **Member/Research President**, Chinese American Academy of Cardiology (CAAC)
- 2012-14 **Member**, AHA Atherosclerosis, ATVB council, Spring Program Committee
- 2014-15, **Vice-chair**, AHA BCVS CSSP Committee
- 2015- **Member**, Microcirculation Society Programing Committee
- 2015- **Member**, AHA FGTB Leadership Committee
- 2015-16 **Member**, AHA ATVB CSSP Committee
- 2015- **Member**, AHA ATVB Nominating & Awards Committee and Women Leadership Committee

Editorial Responsibilities

Reviewer for Journals:

Circulation (2001-present), Arteriosclerosis, Thrombosis and Vascular Biology (2000-present), Circulation Research (2001-present), Blood (2003-present), Atherosclerosis (2004-present) J Cellular and Molecular Medicine (2005-present), Am J Physiology (2002-present), Mutation Research (2005-present), Coronary Artery Disease (2006-present), Helicobacter (2006-present), Heart and Vessels (2006-present) Life Sciences (2006-present), Clinical Chemis.& Lab. Medic (2007-present), J Mol. & Cellu. Cardi. (2007-present), PNAS (2011-present), J American College of Cardiology (2011-present)

Editorial Board Member of Journals:

- 2012- **Co-Editor in Chief**, Biomarker Research,
- 2012- **Editorial Board Member**, J Clinical Investigation,
- 2012- **Editorial Board Member**, Arterioscler. Thromb. Vasc. Biol
- 2008- **Editorial Board Member**, Clinical Medicine: Pathology
- 2009- **Editorial Board Member**, J Mol. & Cellu. Cardi
- 2009-14 **Editorial Board Member**, Circulation,
- 2012-14 **Editorial Board Member**, Circulation Res,
- 2013- **Editorial Board Member**, Frontiers in Integrative and Regenerative Pharmacology

Grant Review Committees

- 2002-03 Ad hoc, NIH Experimental Cardiovascular Sciences (ECS) Study Section
- 2002-06 Member of American Heart Association (AHA) Western States Affiliate Research Peer Review Committee
- 2004-08 Add hoc, NIH Vascular Cell and Molecular Biology (VCMB) Study Section (SS)
- 2006-07 Add hoc, NIH Neurological Disorders and Stroke (NINDS) Neurological Sciences/Disorders A SS
- 2007 Add hoc, NIH Cardiac Repair and Vascular Cell Signaling Special Emphasis Panel
- 2007 Member of Grant Review Panel, Philip Morris External Research Program
- 2008 Member of AHA national Peer Review Vascular Biology & Blood Pressure 2 Study Group, Region 4
- 2008-2012 Member of NIH VCMB Study Section
- 2012, Nov, Member, ZHL1 CCT-J (F2) Agenda Seq Num – 255295, NIH Vascular Interventions/Innovations and Therapeutic Advances (VITA) Stage-A (Concept to Proof and Principle) and Stage B (Proof of Principle to IND or IDE) BAA-NHLBI-CSV-HV-2013-02-JS
- 2012, International Reviewer for Translational Clinical Research Partnership Grant for Duke-NUS/Singhealth Aca Cli Prog, Biom Res Council, Agency for Science, Tech & Res, <http://www.a-star.edu.sg>
- 2013, Feb, Add hoc, NIH Atherosclerosis and Inflammation in Cardiovascular Systems Study Section (AICS)
- 2013, Mar, member, PPG Special Emphasis Panel, ZHD1 DSR-Z (LK), Nat Ins Child Health and Hu Dev
- 2014, Feb 4th, member, PPG Special Emphasis Panel, HLBP 02 1 Workgroup 019
- 2014, Mar 18th, RO1 Special Emphasis Panel, ZRG1 BCMB-A (51)
- 2014, Jul 1st, NIH SEP ZGM1 TWD-6 (P20)
- 2014, Jul 16th, NIH ZRG1 EMNR-K (02) M
- 2014, Aug 26th, NIH SEP ZRG1 CVRS-P (02) M
- 2014, Nov 13th, NIH SEP Lasker Clinical Research Scholars Program
- 2015, April 10th, 2015, AHA Vasc Endo3 Peer Review Study Group,
- 2015, Jun 6th, Add hoc, NIH VCMB Study Section

2015, Oct 9-10, Add hoc, NIH INMP Study Section
2015, Dec 8-9, NIH SEP ZRG1 VH-D (02)
2016, April 10th, member, AHA Vasc Endo1 Peer Review Study Group
2016, June 6, Add hoc, Hypertension and Microcirculation (HM) Study Section
2016, June 7, NIH ZRG1 HM-A (2) S SS
2016, July 11, NIH ZRG1 EMNR-V (55) R PAR-13-375, Nutrigenetics/Nutrigenomics Approaches for Nutrition
2016, July 12, NIH ZRG1 EMNR-A (07) R PAR-13-375, Nutrigenetics/Nutrigenomics Approaches for Nutrition
2016, Nov 12-16, AHA Vasc Endo1 Peer Review Study Group
2016, Oct 10 NIH ZRG1 EMNR-A (07) R
2016, Nov 9-10, NIH ZGM1 RCB-6 (SC)
2017 0226 NIH VCMB
2017, April 22th, AHA Vasc Endo1 Peer Review Study Group
2017 0727 NIH ZRG1 VH-C (80) A
2017 0718 PPG 10 NIH ZDK1 GRB-G (O4)
2017-2022, Member of NIH Integrative Nutrition and Metabolic Process (INMP) Study Section

Other service:

- 1) 2011-2013, Member of AHA BCVS Committee of Scientific Sessions Program (CSSP)
- 2) 2012-present, Member, AHA ATVB council Spring Program Committee
- 3) 2014-present, Member, AHA ATVB CSSP
- 4) 2011 and 2012, Chair for the Annual Cardiovascular Research Symposium committee of The Academy of Cardiovascular Research Excellence (ACRE) and the Chinese American Heart Association (CnAHA)
- 5) 2013-2015, Chair of Young Investigator Award & Abstract Review committee of Great Wall International Cong Cardiology and CnAHA.
- 6) 2013-present, Chair for “China-USA Cardiovascular Symposium” and “China Night” of ACF and CAAC @ AHA SS
- 7) 2014-present, Chair for “China-USA Cardiovascular Symposium” and “China Night” of CAAC & MPVB @ ATVB SS
- 8) 2013-present, President for Research, *Chinese American Academy of Cardiology (CAAC)*
- 9) 2013-present, BCVS Committee for AHA Scientific Sessions Planning (CSSP) Committee
- 10) 2012-present, President for Research, CAAC (*Chinese American Academy of Cardiology*)
- 11) 2016-, Member of nomination committee, AHA ATVB council
- 12) 2016-, Member of Women leadership committee, AHA ATVB council
- 13) 2016-, Member of leadership committee, AHA FGTVB council
- 14) 2016-, Chair of Young Investigator Award & Abstract Review committee of Great Wall International Cong Cardiology and CAAC
- 15) 2012- Chair of Cardiovascular Symposium and China Night @ AHA ATVB spring SS
- 16) 2012- Chair of Cardiovascular Symposium and China Night @ AHA Fall SS

Academic Committees at Universities and Affiliated Hospitals

2000–2005, Member of Basic Science Committee for VA Merit, VA Medical Center, Houston, TX
2003–2005, Member of Biohazard Subcommittee, VA Medical Center, Houston, TX
2006-08, Member of Student Promotion, Appeal and Grievance Committee, Temple Uni. Sch. of Med (TUSM)
2006-07, Searcher Committee for Chairman of Department of Microbiology & Immunology, TUSM
2006-2012, Research Committee, Department of Pharmacology, TUSM
2007, Member, Service Center Oversight Committee, TUSM
2009-2010, Chair, Committee on the Status of Women Faculty, TUSM
2010, Member, Searcher Committee for the Director of the Fels Institute, TUSM
2010-2012, Chair, Research Committee, TUSM
2010-2012, Chair, Committee on the Status of Women Faculty, TUSM
2008-2014, Member, Faculty Appointments and Promotions Committee, TUSM

Honors

1976-79, President of 1976-8 class, JiangXi Medical University, China,
1984, International Award for Young Scientist, 4th International Cell Biology Congress, Tokyo,
1987–89, Young Scientist Research Award, Peking Union Medical College
1989–94, Predoctoral Fellowship, Cancer Research Society of Canada
1996–97, Co-Chair, Research Fellows’ Association, Division of Bio. Sciences, Harvard Sch of Public Health

2001-03, American Society of Hematology Junior Faculty Scholar Award

2001, Second place in Faculty competition in Annual AstraZeneca Cardiovascular Young Investigators Forum

2004-08, NIH Independent Scientist Award

2005, Baylor College of medicine, faculty on the spotlight, <http://www.bcm.edu/medicine/research/?PMID=2786>

2009 Temple University Women's Hall of Fame, http://www.temple.edu/medicine/spotlight/news_briefs.htm

2009- Fellow of the American Heart Association and the Council on Basic Cardiovas. Sci. (FAHA)

2012, Senior Research Excellence Award, Temple Uni. Sch. of Med

2012, 49th Rehfuess Lecturer, Thomas Jefferson University

C. Peer-Reviewed Publications

(Selected from 170 peer-reviewed publications in CVD research)

1. **Wang H**, Yoshizumi M, Lai K-H, Tsai J-C, Haber E, Lee M-E Inhibition of growth and p21^{ras} methylation in vascular endothelial cells by homocysteine but not cysteine. *J Biol Chem* (1997) 272:25380-25385 [PMID: 9312159](#)
2. Lee M-E, **Wang H**, Homocysteine and hypomethylation: a novel link to vascular disease. *Trends Cardiovasc Med.* (1999) 9:49-54. [PMID: 10189967](#)
3. **Wang H**[‡], Jiang XH, Yang F, Chapman GB, Durante W, Sibinga NES, Schafer AI, Cyclin A transcriptional suppression is the major mechanism mediating homocysteine-induced endothelial cell growth inhibition, *Blood*, (2002) 99:939-945, [‡] **Corresponding author**, [PMID: 11806997](#) [PMCID: pending](#)
4. **Wang H**[‡], Jiang XH, Yang F, Gaubatz JW, Ma L, Magera MJ, Yang XF, Berger PB, Durante W, Pownall HJ, Schafer AI, Hyperhomocysteinemia accelerates atherosclerosis in cystathionine β-synthase and apolipoprotein E double knockout mice with and without dietary perturbation, *Blood*, (2003) 101:3901-3907, [‡] **Corresponding author**, [PMID: 12506016](#) [PMCID: pending](#)
5. Jiang XH, Yang F, Tan HM, Liao D, Bryan RM Jr., Randhawa JK, Rumbaut RE, Durante W, Schafer AI, Yang XF, **Wang H**, Hyperhomocysteinemia impairs endothelial function and eNOS activity via protein kinase C activation, *Arterioscler Thromb Vasc Bio*, (2005) 25:2515-2521, [PMID: 16210565](#) [PMCID: PMC4400833](#)
6. Liu XM, Peyton KJ, Ensenat D, **Wang H**, Schafer AI, Alam J, Durante W. Endoplasmic reticulum stress stimulates heme oxygenase-1 gene expression in vascular smooth muscle: Role in cell survival. *J. Biol. Chem.* (2005) 280:872-877, [PMID: 15546873](#)
7. **Wang H**, Tan HM, Yang F, Mechanisms in homocysteine-induced vascular disease. *Drug Discovery Today (Disease mechanisms)*. (2005) 2:25-31,
8. Yang F, Tan HM, **Wang H**, , Hyperhomocysteinemia and atherosclerosis, *Acta Physiologica Sinica, (Sheng Li Xue Bao)* (2005) 57:103-14, [PMID: 15830093](#)
9. Yang Y, Yang F, Xiong Z, Yan Y, Wang X, Nishino M, Mirkovic D, Nguyen J, **Wang H**, Yang XF. A N-terminal region of translationally controlled tumor protein is required for its anti-apoptotic activity. *Oncogene (Nature Publishing Group)* (2005) 24, 4778-4788. [PMID 15870695](#) [PMCID: PMC3901995](#)
10. Yang Y, Xiong Z, Zhang S, Yan Y, Nguyen J, Ng B, Lu H, Brendese J, Yang F, **Wang H**, Yang X-F. Bcl-xL inhibits T cell apoptosis induced by expression of SARS coronavirus E protein in the absence of growth factors. *Biochem J*, (2005) 392(1), 135-143. [PMID: 16048439](#) [PMCID: PMC1317672](#)
11. Granada JF, Ensenat D, Keswani AN, Kaluza GL, Liu X, Peyton KJ, Azam MA, **Wang H**, Durante W. Single perivascular delivery of mitomycin C stimulates p21 expression and inhibits neointima formation in rat arteries. *Arterioscler. Thromb. Vasc. Biol.* (2005) 25:2343-2348, [PMID: 16141400](#)
12. Tulis DA, Keswani AN, Peyton KJ, **Wang H**, Schafer AI, Durante W, (2005) Local administration of carbon monoxide inhibits neointima formation in balloon injured rat carotid arteries. *Cell Mol Biol (Noisy-le-grand)* 51(5):441-6, [PMID:16309565](#) [PMCID: PMC3658132](#)
13. Liu XM, Peyton KJ, Ensenat D, **Wang H**, Schafer AI, Alam J, Durante, (2005) Endoplasmic reticulum stress stimulates heme oxygenase-1 gene expression in vascular smooth muscle. Role in cell survival, *J Biol Chem.* 280(2):872-7, [PMID: 15546873](#)
14. Liao D, Tan HM, Hui RT, Li ZH, Jiang XH, Yang F, Gaubatz JW, Durante W, Chan L, Schafer AI, Pownall HJ, Yang XF, **Wang H**. Hyperhomocysteinemia Decreases Circulating High-Density Lipoprotein by Inhibiting Apolipoprotein A-I Protein Synthesis and Enhancing HDL Cholesterol Clearance. *Circ. Res.* (2006) 99:598-606, [PMID: 16931800](#) [PMCID: PMC4400841](#) [Accompanied by an Editorial: *Circ. Res.* 99:565-566] [PMID: 16931800](#)
15. Tan HM, Jiang XH, Yang F, Li ZH, Liao D, Trial J, Magera M, Durante W, Yang XF, **Wang H**, Hyperhomocysteinemia inhibits post injury re-endothelialization in mice, *Cardiovascular Res*, (2006)

- 69:253-62 , IF:5.8, [PMID: 16226235](#) [PMCID: PMC4400842](#)
16. Xiong ZY, Shaibani A, Li YP, Yan Y, Zhang S, Yang Y, Yang F, **Wang H** and Yang XF, Alternative splicing factor ASF/SF2 is downregulated in inflamed muscle, *J Clin Pathol.* (2006) 59:855-61, [PMID: 16574722](#) [PMCID: PMC1860460](#)
 17. Xiong Z, Liu E, Yan Y, Silver RT, Yang F, Chen IH, Chen Y, Verstovsek S, **Wang H**, Prchal J, Yang X-F. An unconventional antigen translated by a novel internal ribosome entry site elicits anti-tumor humoral immune reactions. *J Immunol.* (2006) 177:4907-4916, [PMID: 16982933](#) [PMCID: PMC3902139](#)
 18. Yang XF, Mirkovic ID, Zhang S, Zhang QE, Yan Y, Xiong Z, Yang F, Chen IH, Li L, and **Wang H**, Processing sites are different in the generation of HLA-A2.1-restricted, T cell reactive tumor antigen epitopes and viral epitopes, *Int J Immunopathol Pharmacol* (2006) 19:853-70, [PMID: 17166407](#), [PMCID: PMC2888035](#)
 19. Yang F, Chen IH, Xiong Z, Yan Y, **Wang H**, Yang XF. Model of stimulation-responsive splicing and strategies in identification of immunogenic isoforms of tumor antigens and autoantigens. *Clin Immunol.* (2006) 121:121-33, [PMID: 16890493](#)
 20. Jiang XH, Yang F, Brailoiu E, Jakubowski H, Dun NJ, Schafer AI, Yang XF, Durante W and **Wang H**, Differential regulation of homocysteine transport in vascular endothelial and smooth muscle cells, *Arterioscler. Thromb. Vasc. Biol.* (2007) 27:1976-83, PMID: 17715404 [PMCID: pending](#)
 21. Jamaluddin SM, Chen I, Yang F, Jiang XH, Jan M, Liu XM, Schafer AI, Durante W, Yang XF, and **Wang H**, Homocysteine inhibits endothelial cell growth via DNA hypomethylation of the cyclin A gene. *Blood* (2007) 110:3648-3655, [*Accompanied by an Editorial: Blood, 110:3495-3496*] [PMID: 17698632](#) [PMCID: PMC2077313](#)
 22. Liao D, Yang X, **Wang H**. Hyperhomocysteinemia and high-density lipoprotein metabolism in cardiovascular disease. *Clin Chem Lab Med.* (2007) 45(12):1652-9, [PMID: 18020970](#)
 23. Jamaluddin MS, Yang X, **Wang H**. Hyperhomocysteinemia, DNA methylation and vascular disease. *Clin Chem Lab Med.* (2007) 45(12):1660-6, [PMID: 18067449](#)
 24. Yan Y, Chen Y, Yang F, Chen IH, Xiong Z, Wang J, Lachman LB, **Wang H**, Yang XF. HLA-A2.1-restricted T cells are reacted to SEREX-defined tumor antigen CML66L and suppressed by CD4+CD25+ regulatory T cells. *Intl J Immunopathol and Pharmacol* (2007) 20:75-89, [PMID: 17346430](#) [PMCID: PMC2919235](#)
 25. Liu, XM, Peyton KJ, Ensenat D, **Wang H**, Hannink M, Alam J, Durante W. Nitric oxide stimulates heme oxygenase-1 gene transcription via the Nrf2/ARE complex to promote vascular smooth muscle cell survival. *Cardiovasc. Res.* (2007) 75:381-389, [PMID: 17408602](#) [PMCID: PMC1994113](#)
 26. Liu, XM, Mohammed A. Azam, Peyton KJ, Ensenat D, Keswani AN, **Wang H**, Durante W. Butylated hydroxyanisole stimulates heme oxygenase-1 gene expression and inhibits neointima formation in rat arteries. *Cardiovasc. Res.* (2007) 74:169-179, [PMID: 17320844](#) [PMCID: PMC1890008](#)
 27. Xiong Z, Liu E, Yan Y, Silver RT, Yang F, Chen IH, Hodge I, Verstovsek S, Segura FJ, **Wang H**, Prchal J, Yang XF. A novel unconventional antigen MPD5 elicits anti-tumor humoral immune responses in a subset of patients with polycythemia vera. *Int J Immunopathol Pharmacol.* (2007) 20:373-80, [PMID: 17624250](#) [PMCID: PMC2892688](#)
 28. Xiong Z, Yan Y, Liu E, Silver RT, Yang F, **Wang H**, Prchal J, Yang X-F. Novel tumor antigens elicit anti-tumor humoral reactions in a subset of patients with polycythemia vera. *Clin. Immunol.* (2007) 122:279-287, [PMID: 17113348](#) [PMCID: PMC2637448](#)
 29. Yang, XF, Yin, Y, **Wang, H**, Vascular inflammation and atherosclerosis are activated via receptors for PAMPs and suppressed by regulatory T cells. *Drug Discovery Today*, (2008)5:125-142, [PMID: 19578482](#) [PMCID: PMC2632857](#)
 30. Lin CC, Liu X, Peytond K, **Wang H**, Yanga W, Linb S, Duranted W, Far infrared therapy inhibits vascular endothelial inflammation via the induction of Heme Oxygenase-1, *Arterioscler Thromb Vasc Biol.* (2008) 28:739-45, [PMID: 18202320](#) [PMCID: PMC2748062](#)
 31. Brailoiu E, Jiang X, Brailoiu GC, Yang J, Chang JK, **Wang H**, Dun NJ. State-dependent calcium mobilization by urotensin-II in cultured human endothelial cells. *Peptides.* (2008) 29:721-6. [PMID: 18314227](#) [PMCID: PMC2387077](#)
 32. Ke X, Wang J, Li L, Chen IH, **Wang H**, Yang XF. Three targets of CD4+CD25+FOXP3+ Tregs in lymphomas and tumors make the treatment more complicated. *Front Biosci.* (2008) 13:3986-4001. [PMID: 18508492](#)
 33. Xiong Z, Song J, Yan Y, Huang YJ, Cowan A, **Wang H**, Yang XF, Higher expression of Bax in regulatory T cells lowers the striking threshold of vascular inflammation. *Front Biosci.* (2008) 13, 7143-7155. [PMID: 18508723](#) [PMCID: PMC2915779](#)

34. Yan Y, Zhang S, Xiong Z, Song J, Huang YJ, Thornton A, **Wang H**, Yang XF, CD25high T cells with a prolonged survival inhibit development of diabetes, *Int J Immunopathol Pharmacol* (2008) 21:767-780, [PMID: 19144262](#) [PMCID: PMC3050009](#)
35. Zhang, D, Jiang, X, Fang, P, Yan Y, Song, J, Gupta, S, Schafer, AI, Durante, W, Kruger, W, Yang, XF and **Wang, H.**, Hyperhomocysteinemia promotes inflammatory monocyte generation and accelerates atherosclerosis in transgenic CBS deficient mice. *Circulation* (2009) 120:1893-1902, [PMID: 19858416](#) [PMCID: PMC2783582](#)
36. Xiong Z, Yan Y, Song J, Fang Pu, Yin, Y, Yang, Y, Cowan A, **Wang H**, and Yang XF, Expression of TCTP antisense in CD25high regulatory T cells aggravates cuff-injured vascular inflammation. *Atherosclerosis* (2009)203:401-408., IF;4.6, [PMID: 18789801](#) [PMCID: PMC2695670](#)
37. Liu XM, Peyton KJ, Mendeleev NN, **Wang H**, Tulis DA, and Durante W, YC-1 stimulates the expression of gaseous monoxide-generating enzymes in vascular smooth muscle cells, *Mol Pharmacol*,(2009) 75:208-17, [PMID: 18923065](#) [PMCID: PMC2606927](#)
38. Peyton KJ, Ensenat D, Azam MA, Keswani AN, Kannan S, Liu XM, **Wang H**, Tulis DA, Durante W. Arginase promotes neointima formation in rat injured carotid arteries. *Arterioscler Thromb Vasc Biol.* (2009) 29:488-94, [PMID: 19164802](#) [PMCID: PMC2662760](#)
39. Jakubowski H, Perla-Kajan J, Finnell RH, Cabrera RM, **Wang H**, Gupta S, Kruger WD, Kraus JP, Shih DM, Genetic or nutritional disorders in homocysteine metabolism increase protein *n*-homocysteinylation in mice, *The FASEB Journal*, (2009) 23:1721-7, [PMID: 19204075](#) [PMCID: PMC3221610](#)
40. Wu H, Gower RM, **Wang H**, Perrard XY, Ma R, Bullard DC, Burns AR, Paul A, Smith CW, Simon SI, Ballantyne CM. Functional role of CD11c+ monocytes in atherogenesis associated with hypercholesterolemia. *Circulation.* (2009) 26;119:2708-17, [PMID: 19433759](#) [PMCID: PMC2716173](#)
41. Yang, XF, Fang, P, Meng, S, Jan, M, Xiong, X, Yin, Y, **Wang, H.** The FOX transcription factors regulate vascular pathology, diabetes and Tregs. *Front Biosci.* (2009) 1:420-36, [PMID: 19482711](#) [PMCID: PMC2847886](#)
42. Yin, Y, Yan, Y, Jiang, X, Mai, J, Chen, NC, **Wang, H**, Yang, XF. Inflammasomes are differentially expressed in cardiovascular and other issues. *Intl. J. Immunopathol. Pharmacol.* (2009) 22:311-22, IF; 3.5, [PMID: 19505385](#) [PMCID: PMC2847797](#)
43. Yang, XF, Yin, Y, **Wang, H**, Vascular inflammation and atherosclerosis are activated via receptors for PAMPs and suppressed by regulatory T cells. *Drug Discovery Today*, (2008)5:125-142, [PMID: 19578482](#) [PMCID: PMC2632857](#)
44. Wei Y, Liu XM, Peyton KJ, **Wang H**, Johnson FK, Johnson RA, Durante W. Hypochlorous acid-induced heme oxygenase-1 gene expression promotes human endothelial cell survival. *Am J Physiol Cell Physiol.* (2009) 297(4):C907-15. [PMID: 19625608](#) [PMCID: PMC2770746](#)
45. Cheng ZJ, Yang XF, and **Wang H.** Homocysteine and Endothelial Dysfunction, *Current Hypert. Rev*, (2009) 5:158-165, [PMID: 20495681](#) [PMCID:PMC2873778](#)
46. Chen NC, Yang F, Capecci LM, Gu ZY, Schafer AI, Durante W, Yang XF, **Wang H**, Regulation of homocysteine metabolism and methylation in human and mouse tissues, *The FASEB Journal*, (2010) 24(8):2804-17 [PMID: 20305127](#) [PMCID:PMC2909276](#)
47. Zhuo JM, Portugal GS, Kruger WD, **Wang H**, Gould TJ, Pratico D. Diet-Induced Hyperhomocysteinemia Increases Amyloid-beta Formation and Deposition in a Mouse Model of Alzheimer's Disease. *Curr Alzheimer Res.* (2010) 7(2):140-9. [PMID: 19939226](#) [PMCID:PMC3880573](#)
48. Yang XF, Fang P, Meng S, Jan M, Xiong X, Yin Y, **Wang H.** The forkhead transcription factors play important roles in vascular pathology and immunology. *Adv Exp Med Biol.* (2010) 665:90-105, [PMID: 20429418](#)
49. Shen J., Yin Y, Mai J, Xiong XY, Pansuria M, Liu J, Maley E, Saqib NUS, **Wang H**, Yang XF. Caspase-1 recognizes extended cleavage sites in its natural substrates. *Atherosclerosis*, (2010) 210:422-429. [PMID: 20060974](#) [PMCID: PMC2917068](#)
50. Jan M, Meng S, Chen NC, Mai JT, **Wang H**[#], Yang XF[#]. Inflammatory and autoimmune reactions in atherosclerosis and vaccine design informatics. *J Biomed Biotechnol.* 2010; 2010: 459798. **#corresponding authors**, [PMID: 20414374](#) [PMCID: PMC2858284](#)
51. Mai JT, **Wang H** and Yang XF. T helper 17 cells interplay with CD4⁺CD25^{high}Foxp3⁺ Tregs in regulation of inflammations and autoimmune diseases. *Front Biosci (Landmark Ed).* 2010 Jun 1;15:986-1006.. [PMID: 20515737](#) [PMCID: PMC2880832](#)
52. Cheng ZJ, Jiang XH, Kruger WD, Praticò D, Gupta S, Mallilankaran K, Muniswamy M, Schafer AI, Durante W, Yang XF, **Wang H**, Hyperhomocysteinemia impairs endothelium-derived hyperpolarizing factor-

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D. RESEARCH SUPPORT

Active

1. **R01** NIH/NHLBI HL110764-02 (PI: **Wang, Hong**), **NCE** 08/18/11-05/31/17
Title: NADPH Oxidase-mediated MC differentiation & Endothelial Dysfunction in HHcy
Goal: to assess the role of oxidative stress on HHcy-induced endothelial dysfunction.
2. **R01** NIH/NHLBI HL117654-03 (PI: **Wang, Hong**), 09/01/12-08/31/17
Title: HHcy and HDL Metabolism,
Goal: to examine the effect and mechanism of HHcy-related HDL metabolism
3. **R01** NIH/NHLBI HL131460-01 (mPI: **Hong Wang, XF Yang, E Choi**) 01/01/16-12/30/19
Title: Caspase-1 activation mediates chronic kidney disease-accelerated atherosclerosis
Goal: to identify mechanisms underlying CKD-atherosclerosis
4. **R01** NIH/NIDDK, DK104116-01 (PI: **Wang, Hong**), 07/01/15-06/30/20
Title: HHcy-induced Inflammatory Monocyte and Macrophage Differentiation in Diabetes
Goal: to identify mechanisms underlying MC differentiation in diabetes
5. **R01** R01HL130233-01A1 (mPI: **Xuebing Qin, Hong Wang**) 07/01/16-06/31/20
Title: Atherogenic roles of complement system
Goal: to identify Atherogenic roles of complement system
6. **R01**, NIH/DK113775-01, (PI: **Wang, Hong**), 04/01/17-3/31/22
Title: CD40 monocyte in chronic kidney disease
Goal: to identify mechanisms underlying CD40 monocyte differentiation