

CURRICULUM VITAE

NAME: Yang Xia, M.D., Ph.D.

Date: 05/17/18

PRESENT TITLE: Professor, McGovern Scholar

ADDRESS: Department of Biochemistry & Molecular Biology
University of Texas McGovern Medical School at Houston
6431 Fannin, Suite 6.206, Houston, Texas 77030

BIRTHDATE: November 6, 1968

CITIZENSHIP: United States

UNDERGRADUATE EDUCATION (for MD):

1986-1992 Medicine (English-Medicine),
Hunan Medical University (renamed Xiangya Medical School of Central South
University)
China

GRADUATE EDUCATION (for PhD):

1993 - 1998 Molecular Pathology Program
Graduate School of Biomedical Science
The University of Texas Health Science Center at Houston
Houston, TX, USA

POSTGRADUATE TRAINING:

1998 - 2001 Biochemistry and Molecular Biology
University of Texas McGovern Medical School at Houston

ACADEMIC APPOINTMENTS:

2013-present Professor (Tenured), Graduate School of Biomedical Science
The University of Texas-Health Science Center, Houston, TX

2013-present Professor (Tenured)
Biochemistry and Molecular Biology,
The University of Texas McGovern Medical School at Houston

2009-2013 Associate Professor (Tenured), Graduate School of Biomedical Science
The University of Texas Health Science Center, Houston, TX

- 2009-2013 Associate Professor (Tenured)
Biochemistry and Molecular Biology,
The University of Texas McGovern Medical School at Houston
- 2004-2009 Assistant Professor, Graduate School of Biomedical Science
The University of Texas-Health Science Center, Houston, TX
- 2004-2009 Assistant Professor (Tenure-track)
Biochemistry and Molecular Biology
The University of Texas McGovern Medical School at Houston
- 2001-2004 Research Assistant Professor
Biochemistry and Molecular Biology
The University of Texas McGovern Medical School at Houston

PROFESSIONAL ORGANIZATIONS:

LOCAL Society of Chinese Bioscientists in America (Houston Chapter)

NATIONAL American Heart Association
Council on High Blood Pressure Research
Council on Basic Cardiovascular Research
American Society of Hematology
American Society of Biochemistry and Molecular Biology

HONORS AND AWARDS:

- 2013-2018 Dean's Teaching Excellence Award, University of Texas McGovern Medical School at Houston
- 2016 McGovern Scholar, University of Texas McGovern Medical School at Houston
- 2016 Basic Science Excellence Award, Women Faculty Forum, University of Texas McGovern Medical School at Houston
- 2012 Excellent Academic Achievement Award, XiangYa Overseas Alumni, USA
- 2005 Outstanding Early Career Development Award, 2nd Annual Symposium of the American Heart Association Council on Basic Cardiovascular Science
- 2005 Finalist, Young Investigator Award, 27th Annual Meeting of the International Society for Heart Research
- 2005 Travel Award, Outstanding Young Investigator, 78th Annual Meeting of American Heart Association
- 2004 Young Investigator Presentation Award, Placenta Association of America Conference
- 2004 Y W. (Charlie) Loke Award, Placenta Association of America Conference
- 2003 Lyndon Baines Johnson Research Award (for top ranked research application), American Heart Association (Texas Affiliate)
- 2002 Young Investigator Award, 13th World Congress, International Society for the Study of Hypertension in Pregnancy

2002	Young Investigator Award, 8 th International Conference of the Federation of Placental Associations
2000	Young Investigator Award, 14 th Rochester Trophoblast Conference
1999	Outstanding Poster Award, Annual Research Retreat, Department of Biochemistry and Molecular Biology, University of Texas McGovern Medical School at Houston
1998	Presidential Fellowship Award, University of Texas-Houston, Graduate School of Biomedical Science
1997	Travel Award, 70 th Annual Meeting of the American Heart Association
1996	Travel Award, 69 th Annual Meeting of the American Heart Association
1992	Outstanding Intern Doctor Scholarship, Hunan Medical University, Hunan, China
1988	Excellent Student Scholarship, Hunan Medical University, Hunan, China

EDITORIAL POSITIONS:

Reviewed manuscripts for the following journals (to present)

Nature Medicine
 Nature Genetics
 Journal of Immunology
 Circulation
 Circulation Research
 Hypertension
 Placenta
 Cardiology
 Experiment Cell Research
 Biology of Reproduction
 Journal of Cellular Physiology
 Journal of Clinical Medicine
 Journal of Sexual Medicine
 Journal of Urology
 Journal of Andrology
 American Journal of Hypertension
 Molecular and Cellular Biology
 Pharmacological Research
 International Journal of Biochemistry and Cellular Biology
 Journal of Biological Chemistry
 World Journal of Biological Chemistry

SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES

Grant Review Panels

2018-2023	Appointed as a Regular Member, Molecular and Cellular Hematology Study Section, National Institutes of Health
2016-2018	Ad Hoc member, Molecular and Cellular Hematology Study Section, National Institutes of Health

- 2012 Ad Hoc member, Pregnancy and Neonatology Study Section, National Institutes of Health
- 2011 National Institutes of Health, National Heart Lung and Blood Institute, Special Study Section Anchoring Metabolomic Changes to Phenotype (P20)
- 2009 National Institutes of Health, National Heart Lung Blood Institute, Challenge Fund Study Section on Next Steps in Gene Discovery: Building upon Genome Wide Association Studies
- 2009 National Institutes of Health, National Heart Lung Blood Institute Challenge Fund Study Section on Testing of Mechanistic Hypotheses Generated by Findings from Genetic and Genomic Studies of Heart, Vascular, Lung, and Blood Disorders
- 2005-2009 American Heart Association, Western Review Consortium, Peer Review Committee

Committees

- 2018 Member, Organizing Committee, NIH Tri-Institutes Workshop on Beyond Transcriptomics: Understanding Maturation of Erythrocytes
- 2012-16 National Institutes of Health, National Heart, Lung and Blood Institute Advisory Committee on Sickle Cell Disease

SERVICE ON THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON COMMITTEES

- 2014-2015 Secretary, Society of Chinese Bioscientists in America at Texas.
- 2011-Present Director, XiangYa Outstanding Young Scholar Program
A cooperative student and faculty exchange agreement between Central South University (Changsha, Hunan, China) and University of Texas Health Science Center at Houston

SERVICE ON THE UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON COMMITTEES

- 2012-2015 Faculty Senate
University of Texas Medical School at Houston
- 2011-2015 Faculty Recruitment Committee
Department of Neurobiology and Anatomy

SERVICE ON GRADUATE SCHOOL COMMITTEES

- 2011-Present Member, Academic Standards Committee, Graduate School of Biomedical Science
- 2010-Present Member, Admission Committee
Biochemistry and Molecular Biology Graduate Program

2009-2015 Director, Graduate Student and Postdoctoral Fellow Research Workshop Program
Biochemistry and Molecular Biology Graduate Program

2007-2009 Member, Candidacy Exam Committee
Biochemistry and Molecular Biology Graduate Program

Advisory Committee member

2018-Present Megan Livingston
2017-present Xiexie Ting (Chair)
2016-present *Jeanne M. Malano (Chair)*
2015-present Yifan Wang
2015-present Collum, Scott
2014-present Adebiyi, Morayo (Chair)
2014-2017 Huang, Aji (Chair)
2014-2017 Philip, Kemly
2013-2017 Liu, Hong (Chair)
2012-present Peng, David
2012-2015 Hu, Xia (Chair)
2012-2015 Zhao, Shushan (Chair)
2012-2015 Renna, Lua (Chair)
2011-2016 Parchim, Nick (Chair)
2011-2017 Sun, Kaiqi (Chair)
2010-2013 Wang, Wei (Chair)
2010-2013 Ning, Chen (Chair)
2010-2016 Le, T. Thuy
2010-2016 Luis, Acero
2010-present Villamizar, A. Carlos
2006-2010 Irani, Roxanna A (Chair)
2007-2010 Phatarpekar, Prasad (Chair)
2008-2010 Wen, Jiaming (Chair)
2008-2010 Huang, Le
2005-2007 Gu, Dong Ming
2005-2007 Wang, Rong

Supervisory Committee member

2016-Present Scott Collums
2016-present Ping Zhou
2016-present Adebiyi, Morayo (Chair)
2015-present Yifan, Wang
2013-2017 Sun, Kaiqi (Chair)
2013-present Dorta-Estremera, Stephanie
2013-present Goverdhan, Arathi
2013-2016 Parchim, Nick(Chair)
2012-present Ungewiss, Christin
2011-2016 Le, T. Thuy

2010-2013	Wang, Wei (Chair)
2010-2013	Ning, Chen (Chair)
2010-2011	Roybal, D. Jonathan
2009-2010	Wen, Jiaming (Chair)
2008-2010	Irani, Roxanna (Chair)

Examination Committee member

2016	Padhye, Aparna
2015	Tan, Yuxin
2014	Zhou, Ping
2013	Peng, David
2012	Ungewiss, Christin
2011	Le, T. Thuy
2010	Roybal, D. Jonathan
2010	Bowser, Jessica
2009	Ying, Wang
2009	Jordan, Jonathan
2008	Mo, Xi
2008	Zheng, Dinghai
2007	Srinivasan, S

SPONSORSHIP OF CANDIDATES FOR POSTGRADUATE DEGREE:

University of Texas Health Science Center

2016-present *Jeanne M. Manalo (PhD); Second place of Oral presentation in Biochemistry and Molecular Biology department Retreat (2018); The Antje Wuelfrath Gee and Harry Gee, Jr. Family Legacy Award for 2017-2018; First place at 32nd Annual Symposium of Society of Chinese Bioscientists in America;*

2013-2018 *Morayo Adebisi (PhD); NIH- National Heart, Lung and Blood Diversity Supplement Award, 2015-2018; Received 2015 & 2016 ASH Outstanding Minority Achievement Award; Received the Third place of oral presentation in 2016 Biochemistry and Molecular Biology department retreat; Sam Taub & Beatrice Burton Vison and Sensory Award 2017*

2012-2017 *Liu, Hong (Ph.D) Received the Second place of Oral presentation in Biochemistry and Molecular Biology department Retreat (2014); received the Second Place at the recent 27th Annual Symposium of Society of Chinese Bioscientists in America; Received the Third place of poster presentation in Biochemistry and Molecular Biology department Retreat (2015); Received The Antje Wuelfrath Gee and Harry Gee, Jr. Family Legacy Award for 2014-2015; Received 2015 Cameron Foundation Fellowship; Received the third place of 2016 30th Annual Symposium of Society of Chinese Bioscientists in America; Dean's research award 2016; Received the highest award as Alexander Wang Fellowship (Best in Show) at the 31st Annual Symposium of Society of Chinese Bioscientists in America; Presidential*

Research Award 2017. Currently Assistant Professor in Dermatology Dept., Xiangya Hospital, Changsha, China

- 2011-2017 *Sun, Kaiqi (Ph.D): Received the Third place of poster presentation in Biochemistry and Molecular Biology department Retreat (2012); Received the highest award as Alexander Wang Fellowship (Best in Show) at the recent 26th Annual Symposium of Society of Chinese Bioscientists in America; Received the Second place of oral presentation in 2013 Biochemistry and Molecular Biology department retreat; received the third place at the recent 28th Annual Symposium of Society of Chinese Bioscientists in America; Received 2015 Cameron Foundation Fellowship; Received 2015 Dean's Research Award of UTHSC-Medical School; Received the First place of oral presentation of 2016 Biochemistry and Molecular Biology department retreat; Received the highest award as Alexander Wang Fellowship (Best in Show) at the recent 30th Annual Symposium of Society of Chinese Bioscientists in America; Presidential Research Award 2016. Currently Associate in McKinsey Consulting firm.*
- 2011-2016 *Parchim, Nick (MD/PhD): Received Roche Diagnostic Award from 18th World Congress of International Society for Study Hypertension in Pregnancy (2012, Switzerland); received the second place at the recent 25th Annual Symposium of Society of Chinese Bioscientists in America; Received the Second place of poster presentation in 2012 University of Texas Medical School Faculty retreat; Training grant of CCTS; R.W. Butcher Achievement award for Academic Excellence & Community Service; George Stancel Award; Received the Second place of poster presentation in Biochemistry and Molecular Biology department Retreat (2015); Received the first place at the recent 28th Annual Symposium of Society of Chinese Bioscientists in America (2015); Currently in the Emergency Medicine Residency Program at University of New Mexico.*
- 2006-2010 *Irani, Roxanna (completed PhD): Received numerous awards for her thesis studies including: Dean's Research Award, Harry S. and Isabel C. Cameron Fellowship for research in hypertension and the prestigious inaugural UT System Jess Hay Chancellor's Fellowship, awarded to only one graduate student at the UT-GSBS. Following graduation she completed Ob/Gyn residency at Drexel University, a maternal-fetal fellowship at Yale University. She is currently a faculty member in the Department of Obstetrics and Gynecology at the University of California San Francisco.*

Central South University

2017-Present Ying Cui (MD/PhD)

2017-Present Tingting Xie (MD/PhD)

2014-2017 Aji Huang (PhD) *Received the third place of 2016 30th Annual Symposium of*

Society of Chinese Bioscientists in America. International Young Investigator Award of 2017 American Heart Association Annual Meeting; Currently general surgery resident, Xiangya Hospital, Changsha, PRC

- 2012-2015 Zhao, Cheng (MD/PhD); *Currently Assistant Professor in Urology Dept., Xiangya Hospital, Changsha, PRC*
- 2012-2015 Zhao, Shushan (MD/PhD); *Currently Assistant Professor in Orthopedic surgery, Xiangya Hospital, Changsha, PRC*
- 2012-2015 Hu, Xia (MD/PhD); *Currently Assistant Professor in Anesthesiology Dept., Xiangya Hospital, Changsha, PRC*
- 2012-2015 Luo, Renna (MD/PhD); *Received the third place at the 27th Annual Symposium of Society of Chinese Bioscientists in America; Received the Third place of poster presentation in 2013 Biochemistry and Molecular Biology department retreat; received Outstanding Trainee Award in 2014 American Heart Association High Blood Pressure Research Annual Meeting; Currently Assistant Professor in Nephrology Dept, Dalian Hospital, Dalian Medical School, China*
- 2010-2013 Wang, Wei (Current MD/PhD); *received Outstanding Trainee Award in 2012 American Heart Association High Blood Pressure Research Annual Meeting and the highest award as Alexander Wang Fellowship (Best in Show) at the 26th Annual Symposium of Society of Chinese Bioscientists in America (2012); Received the Second place of oral presentation in 2012 Biochemistry and Molecular Biology department retreat. Currently Assistant Professor, Xiangya Hospital, Changsha, China.*
- 2010-2012 Ning, Chen (completed PhD); *Received the Best Poster Podium Presentation Award in World Meeting on Sexual Medicine 2012; Received the Third place of 26th Annual Symposium of Society of Chinese Bioscientists in America; Received the Second place of poster presentation in 2012 Biochemistry and Molecular Biology department retreat; Currently Assistant Professor, Capital Hospital, Beijing, China)*
- 2009-2010 Wen, Jiaming (completed PhD); *National Awarded Thesis. Currently an Associate Professor, ZhengXiang second Hospital, Zhengxiang University, China.*

SPONSORSHIP OF POSTDOCTORAL FELLOWS:

- 2017-present Xiudong Yang (PhD, Postdoctoral Fellow)
- 2017-present RongRong Liu (MD, Junior Faculty)
- 2016-present Seisuke Sayama (MD, PhD, Junior Faculty)

- 2012-present Song, Anren - *Received an Abstract Achievement Award, 54th American Society of Hematology Annual meeting, Atlanta; Received the First place of poster presentation in 2016 Biochemistry and Molecular Biology department retreat; Currently Instructor of Biochemistry and Molecular Biology Dept, UTHSC-McGovern Medical School*
- 2011-present Chen, Liu - *Received Zuspan Award, the highest award for a New Investigator, 18th World Congress of International Society for Study Hypertension in Pregnancy; Currently Postdoctoral Fellow*
- 2016-2017 Zhangzhe Peng (MD, Junior Faculty), International Young Investigator Award of 2017 American Heart Annunal Meeting; currently a nephrology resident at Xiangya Hospital, Central South University, Changsha, Hunan, PRC.
- 2015-2017 ShenXian Liu (MD, Junior Faculty), currently Assistant Professor of Obstetrics, Gynecology and Reproductive sciences, McGovern Medical School
- 2013-2016 Monica Longo (MD, Junior Faculty), currently Assistant Professor of Obstetrics, Gynecology and Reproductive sciences, McGovern Medical School
- 2013-2016 Oladi Abbasi (MD, Fellow), Currently Fellow of Obstetrics, Gynecology and Reproductive Sciences, McGovern Medical School of UT Houston.
- 2013-2016 Laura A. Hart (MD, fellow), currently Assistant Professor of Obstetrics and Gynecology at Drexel University.
- 2012-2016 Wu, HongYu (MD/PhD): *Received the Second place of Oral presentation in Biochemistry and Molecular Biology department Retreat (2014); Received the First place of poster presentation in 2015 Biochemistry and Molecular Biology department Retreat; Received 2015 ASH Outstanding Achievement Award; Received the Third place of poster presentation in 2016 Biochemistry and Molecular Biology department retreat; Currently Research Associate in University of Texas-Medical School*
- 2012-2014 Iriyama, Takayuki (MD/PhD), currently Associate professor of Obstetrics and Gynecology Department, University of Tokyo
- 2010-2012 Zhang, Jun - *received the highly competitive CRTI fellowship from American Society of Hematology, currently an Assistant Professor, Hematology and oncology, Baylor College of Medicine, Houston, TX*
- 2010-2012 Liu, Haixiong - Currently a director, Central Disease Control, Shanghai, China
- 2008-2010 Zhou, C. Cissy- *Received Zuspan Award, the highest award for a New Investigator,*

16th World Congress of International Society for Study Hypertension in Pregnancy.
Currently an Assistant Professor in Texas Children Hospital, Baylor College of Medicine, Houston, TX

- 2009-2011 Zhang, Weiru- *Received Renal Council New Investigator Award in 2012 American Heart Association High Blood Pressure Research Annual Meeting*
Currently Professor and Vice Chair of Internal Medicine in XiangYa Hospital, Central South University, China
- 2008-2010 Dai, Yingbo- Currently Professor and Vice Chair of Surgery, Third XiangYa Hospital, Central South University, China
- 2008-2010 Siddiqui, Athar- Currently Professor, Department of pharmacology, Aligarh Muslim University, India
- 2006-2010 Zhang, Yujin- Currently Research Associate at MD Anderson Cancer Center

CURRENT TEACHING RESPONSIBILITIES

Medical School:

- 2006-2013 Medical School Biochemistry, Block III conference leader; 32 hrs of Conference

Graduate School:

- 2014-Present Course Director for Emerging Fields in Biochemistry and Molecular Biology: Translational Science and Molecular Medicine
- 2012-Present Course Director for Current Methods in Biomedical Science
- 2011-present Advanced Topics in Biochemistry, 6 hours
G Protein coupled receptors and disease
- 2004-present Tutorials in Biomedical Sciences
- 2004-present Research in Biomedical Sciences
- 2004-present Current Methods in Biomedical Science, 1 hour,
Transfection of genes to mammalian cells

CURRENT GRANT SUPPORT:

- | | | |
|---|-------------------|----------|
| <u>R01 HL137990</u> (Impact Score 19, Ranked 2%) | 7/01/17-6/31/2022 | |
| NIH NIHBL | \$1,800,000 | PI (15%) |
| Molecular insight of erythrocyte hypoxic metabolic reprogramming in chronic kidney disease | | |
| <u>1R01HL136969</u> | 2/01/17-1/31/2021 | |
| NIH NIHBL | \$1,800,000 | PI (15%) |
| Erythrocyte metabolomic profiling reveals new insight and approaches to promote oxygen delivery | | |

Rice University and McGovern Medical School Joint Seed Grant Program on Women's and Children's Health 01/01/2017-12/31/2018

Gene Editing in sickle cell disease

MPI Gang Bao & Yang Xia

UTHealth Pulmonary Center of Excellence 01/01/2016-12/31/2018 PI (5%)
Discovery Award Program \$300,000
Metabolomic profiling reveals new insight, sensitive biomarkers and innovative approaches for pulmonary hypertension

P01HL114457-01 (impact score 10, Ranked 1%) 04/01/13-3/31/18
NIH NIHBL \$6,673,000
Hypoxic adenosine response
Project 3: Novel role of erythrocyte in hypoxia adenosine response PI (20%)

1R01HL119549 (impact score 10, ranked 1%) 2/01/13-01/30/18
NIH NIHBL \$1,800,000
Metabolites, sickle cell disease and novel therapeutics PI (15%)

Completed Research Support

National Blood Foundation 07/01/2016– 06/30/2017 Co-I (5%)
The role of adenosine signaling in the preservation of energy metabolism of stored erythrocytes
PI: Angelo D' Alessandro \$75,000

USSOCOM W81XWH-15-C-0095 07/01/2015 – 06/30/2017 Co-I (5%)
Department of Defensive
Three new ideas to protect special forces from the stress of high altitude.
PI: Robert Roach

1RC4HD067977 9/01/13 - 9/30/15 (20%)
National Institutes of Health \$1,844,558 (Multiple PI: Y Xia & RE Kellems)
Autoantibodies in Preeclampsia: Pre-symptomatic markers and therapeutic targets

12IRG9150001 01/01/12-01/01/14 PI (10%)
American Heart Association \$150,000
Innovative Research Program
Metabolites, vascular endothelial dysfunction and sickle cell disease

Grant-In-Aid 10GRNT3760081 07/01/10-06/30/12 PI (10%)
American Heart Association \$140,000
Autoantibody-induced Inflammatory Response Underlies Pathogenesis of Preeclampsia

<u>1R01DK083559</u> National Institute of Health Adenosine Signaling, Priapism and Sickle Cell Disease	5/01/09-4/31/14 \$1,355,472	PI (20%)
<u>2R01HD034130-12</u> National Institutes of Health Preeclampsia and Autoimmunity	3/31/08-3/31/13 \$1,432,702	Co-PI (15%)
<u>2 R56 HD34130-11A1</u> National Institutes of Health Preeclampsia and Autoimmunity	9/01/07-2/14/08 \$371,250	Co-PI (15%)
<u>5R21DK077748</u> National Institute of Health Adenosine Signalling and Priapism	4/01/07-10/31/10 \$404,663	PI (25%)
<u>ARP011618-0012-2006</u> Texas Higher Education Coordinating Board Preeclampsia: Diagnostic & Therapeutic Opportunities	9/01/06 – 01/31/09 \$100,000	Co-PI (5%)
#6-FY06-323 March of Dimes Angiotensin Receptor Agonistic Autoantibodies and Preeclampsia	6/01/06 – 11/30/09 \$217,800	Co-PI (5%)
<u>1R01 HL076558</u> National Institutes of Health AT1 Receptor Activating Autoantibodies and Preeclampsia	12/01/04-12/31/10 \$1,006,972	PI (25%)
<u>Grant-In-Aid 0365149Y</u> American Heart Association-Texas Affiliate The Role of mTOR Signalling in Cardiac Hypertrophic Gene Regulation	7/01/03-6/30/06 \$124,000	PI (25%)
<u>5 RO1 DK046207-20</u> National Institutes of Health Adenosine Deaminase, Adenosine Signalling and Disease	5/1/02-03/31/08 \$1,613,590	Co-PI (10%)
<u>5R01HD 34130-10</u> National Institutes of Health Purine Metabolism Maternal-Fetal Interface	7/15/00- 5/31/07 \$1,437,582	Co-PI (30%)

Sponsored Grants

Chinese National Science Foundation-Scholarship for Peng, Zhangzhe
7/1/17-7/1/19 \$38,000
Erythrocyte adenosine signalling in O2 delivery in chronic kidney disease

Chinese National Science Foundation-Scholarship for Peng, Changzhe
1/15/16-1/15/17 \$30,000
Erythrocyte adenosine signalling in O2 delivery in chronic kidney disease and sickle cell disease

Chinese National Science Foundation-Scholarship for Huang, Aji
10/15/14-10/15/16 \$38,000
Adenosine signalling in preeclampsia and novel therapies

Chinese National Science Foundation-Scholarship for Zhao, Chen
10/15/12-10/15/12 \$38,000
Adenosine signalling in priapism, erectile dysfunction and novel therapies

Chinese National Science Foundation-Scholarship for Zhao, ShuShan
10/15/12-10/15/12 \$38,000
Molecular basis of sphingosine 1 phosphate in sickle cell disease and novel therapies

Chinese National Science Foundation-Scholarship for Hu, Xia
10/15/12-10/15/12 \$38,000
Metabolites, chronic pain and sickle cell disease

NIH T32 Training Grant for Clinical Translational Studies for Nick Parchim
09/01/2012-09/01/2014
C-reactive protein crosstalks with neurokinin B signalling in preeclampsia

Chinese National Science Foundation-Scholarship for Zhang, Weiru
04/01/10-3/31/11 \$21,000
Novel role of adenosine signalling in chronic kidney disease

Chinese National Science Foundation-Scholarship for Wen, Jiaming
10/01/08-05/01/10 \$38,000
Detrimental role of excess adenosine signalling in priapism and penile fibrosis

Graduate School
Harry S. and Isabel C. Cameron Foundation Fellowship for Irani, A Roxanna
09/01/08-04/31/10 \$60,460
Pathophysiological role of angiotensin receptor activating autoantibodies in preeclampsia

PUBLICATIONS

Abstracts

1. Sun, K.Q., Milburn, M.V., Zhang, Y.J., Berka, V., Song, A.R., Wu, H.Y., Idowu, I., Kellems, R.E., Juneja H.S., Molina, J.G., Blackburn, M.R. and Xia, Y.: Elevated Adenosine Signaling via Adenosine

A2B Receptor Induces Normal and Sickle Erythrocyte Sphingosine Kinase 1 Activity in Human and Mice, 55th American Society of Hematology Annual Meeting, San Francisco, 2014

2. Zhang, Y.J., Berka, V., Song, A.R., Sun, K.Q., Milburn, M.V., Idowu, I., Kellems, R.E., Zhang, J., Safo, M., Tsai, A.T., Juneja H.S., and Xia, Y.: Sphingosine-1-phosphate inducing polymerization and sickling. 55th American Society of Hematology Annual Meeting, San Francisco, 2014
3. Zhang, Y.J., Berka, V., Song, A.R., Wang, W., Zhang, W.R., Ning, C., Sun, K.Q., Milburn, M.V., Ahmed, M.H., Idowu, I., Kellems, R.E., Zhang, J., Safo, M., Tsai, A.T., Juneja H.S., and Xia, Y.: Sphingosine-1-phosphate signaling via its receptor contributes to pathophysiology of sickle cell disease. 55th American Society of Hematology Annual Meeting, San Francisco, 2014
4. Song, A.R., Zhang, Y., Ning, C., Grenz, A., Etlzschig, H., Kellems, R.E., J., Juneja H.S., and Xia, Y.: Essential role of erythrocyte equilibrative nucleoside transporter in acute hypoxia response; 55th American Society of Hematology Annual Meeting, San Francisco, 2014.
5. Iriyama, T., Parchim, N., Wang, W., Blackwell, S., Sibai, B., Kellems, R.E., and Xia, Y.: Excess adenosine contributes to pathophysiology of preeclampsia, 19th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), New Orleans, 2014.
6. Parchim, N., Wang, W., Blackwell, S., Sibai, B., Kellems, R.E., and Xia, Y.: Elevated C-reactive protein and neurokinin B signaling in pathophysiology of preeclampsia. 19th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), New Orleans, 2014.
7. Luo, Renna, Liu, Chen, Wang, W., Parchim, N., Zhang, Y.J., Blackwell, S., Sibai, B., Tao, L.J., Kellems, R.E., and Xia, Y.: HIF-1 α -dependent elevation of transglutaminase underlies AT1-AA production in preeclampsia. 19th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), New Orleans, 2014.
8. Luo, Renna, Zhang, W.R., Wang, W., Zhang, Y.J., Grenz, A., Tao, L.J., Blackburn, R.M., Etlzschig, H.K., Kellems, R.E., and Xia, Y.: RT-PCR profiling reveals the detrimental role of increased HIF-1 α in chronic hypertensive nephropathy. American Heart Association High Blood Pressure Research Conference, New Orleans, 2013
9. Zhang, W.R., Wang, W., Luo, Renna, Zhang, Y.J., Dai, Y., Grenz, A., Tao, L.J., Blackburn, R.M., Etlzschig, H.K., Kellems, R.E., and Xia, Y.: The detrimental role of increased renal adenosine in chronic hypertensive nephropathy. American Heart Association High Blood Pressure Research Conference, New Orleans, 2013
10. Iriyama, T., Parchim, N., Wang, W., Blackwell, S., Kellems, R.E., and Xia, Y.: Excess adenosine signaling in pathophysiology of preeclampsia. American Heart Association High Blood Pressure Research Conference, New Orleans, 2013
11. Parchim, N., Wang, W., Blackwell, S., Kellems, R.E., and Xia, Y.: Elevated C-reactive protein and neurokinin B signaling in pathophysiology of preeclampsia. American Heart Association High Blood Pressure Research Conference, New Orleans, 2013
12. Wang, W., Irani, R.A., Blackwell, S.C., Tao, L.J., Kellems, R.E., and Xia, Y.: Transcriptional and posttranscriptional regulation of Flt-1 gene expression in preeclampsia by HIF-1 α and U2F65A. American Heart Association High Blood Pressure Research Conference, New Orleans, 2013

13. Liu, C., Wang, W., Parchim, N., Irani, Roxanna, Kellems, R.E., and Xia, Y.: The pathological role of transglutaminase in preeclampsia. American Heart Association High Blood Pressure Research Conference, New Orleans, 2013.
14. Ning, C., Wen, J., M. ., Zhang, Y.J., Qi, L., Blackburn, M.R., Kellems, R.E., and Xia, Y. “In vitro human and preclinical animal studies of adenosine-based therapies in sickle cell disease”- 7th Annual Symposium of Sickle Cell Disease, Miami, FL, 2013
15. Zhang, Y.J., Berka,V., Song, A.R., Wang, W., Zhang, W.R., Ning, C., Sun, K.Q., Alexander, D.C., Milburn, M.V., Ahmed, M.H., Idowu, I., Kellems, R.E., Zhang, J., Safo, M., Tsai, A.T., Juneja H.S., and Xia, Y.: Sphingosine-1-phosphate is an allosteric modulator of hemoglobin-oxygen affinity and contributes to pathophysiology of sickle cell disease”- 7th Annual Symposium of Sickle Cell Disease, Miami, FL, 2013.
16. Ning, C., Wen, J.M., Zhang, Y.J., Qi, L., Blackburn, M.R., Kellems, R.E., and Xia, Y.: Excess adenosine signaling in priapism and novel therapeutics. 54th American Society of Hematology Annual Meeting, Atlanta, 2012
17. Zhang, Y.J., Berka,V., Song, A.R., Wang, W., Zhang, W.R., Ning, C., Sun, K.Q., Alexander, D.C., Milburn, M.V., Ahmed, M.H., Idowu, I., Kellems, R.E., Zhang, J., Safo, M., Tsai, A.T., Juneja H.S., and Xia, Y.: Sphingosine-1-phosphate is an allosteric modulator of hemoglobin-oxygen affinity and contributes to pathophysiology of sickle cell disease. 54th American Society of Hematology Annual Meeting, Atlanta, 2012
18. Song, A.R., Zhang, Y., Ning, C., Grenz, A., Etlzschig, H., Kellems, R.E., J., Juneja H.S., and Xia, Y: Reduced erythrocyte equilibrative nucleoside transporter expression underlies increased circulating adenosine levels and contributes to pathophysiology of sickle cell disease; 54th American Society of Hematology Annual Meeting, Atlanta, 2012.
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Invited Articles (Reviews, Editorials, etc.) in Journals

84. Sun, K.Q., Liu, H., Song, A.R., Manalo, J.M., D'Alessandro, A., Hansen, K.C., Kellems, R.E., Eltzschig, H.K., Blackburn, M.R., Roach, R.C., and **Xia, Y.**: Erythrocyte Purinergic Signaling Components Underlie Hypoxia Adaptation, *J Appl Physiol* (1985), 2017 Jun 1:jap.00155.2017.doi: 10.1152/jap.00155.2017. [Epub ahead of print] [PMID: 28572494]
85. Sun, K.Q., D'Alessandro, A., and **Xia, Y.**: Purinergic control of red blood cell metabolism: novel strategies to improve red cell storage quality, In press, 2017. *Blood Transfus* DOI 10.2450/2017.0366-16

86. Liu, C., Kellems, R.E. and **Xia, Y.**: Inflammation, Autoimmunity, and Hypertension: The Essential Role of Tissue Transglutaminase, *Am J Hypertension*. 2017 Mar 13. doi: 10.1093/ajh/hpx027. [Epub ahead of print] [PMID: 28338973]
87. Liu, C., D'Alessandro, A. and **Xia, Y.**: Metabolomic approach in probing drug candidates, *Current Topics in Medicinal Chemistry*, In press, 2016. [PMID: 27848895]
88. Goodman SR, Pace BS, Daescu, O, Hansen, KC, D' Alessandro, A., **Xia, Y**, Glatt SJ: Multiomic Candidate Biomarkers For Clinical Manifestations Of Sickle Cell Severity: Acquiring Validated Biomarkers For Precision Medicine, *Experimental Biology and Medicine*, **241**(7):772-81, 2016. [PMID: 27022133] **(3)**
89. Liu, H. and **Xia, Y.**: Beneficial and detrimental role of adenosine signaling in diseases and therapy, *J Appl Physiol*, **15**;119(10):1173-82, 2015. [PMID: 26316513] **(5)**
90. **Xia, Y.** and Kellems, RE,: Angiotensin receptor agonistic autoantibodies and hypertension, *Circulation Research*, **113**(1):78-87, 2013. [PMID: 23788505] **(70)**
91. Karmouty-Quintana H, **Xia Y**, Blackburn MR: Adenosine signaling during acute and chronic lung disease, *J Mol Med (Berl)*, **91**(2):173-81, 2013. [PMID: 23340998] **(33)**
92. Sun, K. Q. and **Xia, Y.**: New insights into Sickle Cell Disease: A disease of hypoxia. *Current Opinion of Hematology*, **20**(3):215-21, 2013. [PMID: 23549375] **(15)**
93. Zhang, Y.J. and **Xia, Y.**: Adenosine signaling in normal and sickle erythrocytes and beyond. *Microbes and Infection*, **14**(10):863-73, 2012. [PMID: 22634345] **(31)**
94. Wen, J. and **Xia, Y.**: Adenosine signaling, good or bad in erectile function. *Atherosclerosis Thrombosis Vascular Biology*, **32**(4):845-50, 2012. [PMID: 22423035] **(14)**
95. **Xia, Y.** and Kellems, R.E.: Receptor activating autoantibody and disease. *Expert Reviews In Immunology*, **7**(5):659-74, 2011. [PMID: 21895478] **(51)**
96. Irani, R.A. and **Xia, Y.**: Renin angiotensin signaling in normal pregnancy and preeclampsia. *Semin Nephrol*, **31**:47-58, 2010. [PMID: 21266264] **(50)**
97. Phatarpekar, P.V., Wen, J., and **Xia, Y.**: Role of adenosine signaling in penile erection and erectile disorders. *The Journal of Sexual Medicine*, **7**:3553-64, 2010. [PMID: 19889148] **(25)**
98. **Xia, Y.** and Kellems, R.E.: Is preeclampsia an autoimmune disease? *Clinical Immunology*, **133**:1-12, 2009. [PMID: 19501024] **(53)**
99. Irani, R.A. and **Xia, Y.**: The functional role of the renin-angiotensin system in pregnancy and preeclampsia. *Placenta*, **29**:763-771, 2008. [PMID: 18687466] **(145)**
100. **Xia, Y.**, Zhou, C.C., Ramin, S.M., and Kellems, R.E.: Angiotensin receptors, autoimmunity, and preeclampsia. *Journal of Immunology*, **179**:3391-3395, 2007. [PMID: 17785770] **(56)**

Book Chapters

1. Parchim, Nicholas F., Iriyama, Takayuki, Ashimi, Olaide and **Yang Xia** "Stress and Maternal Response – Preeclampsia and its Impact on Offspring Health" in "Stress and Developmental Programming of Health and Disease: Beyond Phenomenology" Nova Science Publishers, 2014
2. Parchim, Nicholas F., and **Yang Xia**. "Autoimmunity in Cardiovascular Disease." Nova Science Publishers. 2012

Invited Oral Presentations at National and International Meetings

1. "Erythrocyte Hypoxic Metabolic Reprogramming, Adaptation, Memory and Sickle Cell Disease" 3rd International Symposium on Erythrocyte Biology", Zhengzhou, China, 2018; Invited Speaker
2. "Erythrocyte Hypoxic Metabolic Reprogramming, Adaptation, Memory and Sickle Cell Disease" NIH Tri-institutes Workshop: Beyond Transcriptomics, Maturation of Red Blood Cells, Washington DC, 2018; Invited Speaker and Organizer committee
3. "Erythrocyte Hypoxic Metabolic Reprogramming, Adaptation, Memory and Sickle Cell Disease" International Conference on Blood Research and Therapy, Shanghai, China, 2018; Invited Speaker
4. "Erythrocyte Hypoxic Metabolic Reprogramming, Adaptation, Memory and Sickle Cell Disease" Society of Chinese Bioscientists in America-Texas International Symposium, Taiyuan, China, 2018; Invited Speaker
5. "Autoimmunity, Angiotensin Receptor, Preeclampsia"-Annual meeting of Society of Chinese Obstetric and Gynecology, Zhengzhou, China, 2018; Invited Speaker
6. "Autoimmunity, Angiotensin Receptor, Preeclampsia and Trans-generational Effects" 2018 Gordon Conference on Mammalian Reproduction, Italy, invited Speaker
7. "Inflammation, Autoimmunity, Transglutaminase and Hypertension" 2018 Gordon Conference on Transglutaminase, Switzerland, invited Speaker
8. "Past, Current and Future of Translational Studies in Preeclampsia" LianJiang Reproductive Symposium, Chongqing, China, 2017 (Meeting Organizer and Keynote Speaker).
9. "Autoimmunity, transglutaminase and hypertension" American Heart Association annual meeting, CA, 2017 (Invited speaker)
10. "Hypoxia Triggers Erythrocyte Metabolic Reprogramming for oxygen delivery and Establish A Hypoxic Memory" Chinese Physiology Annual Symposium, Shengya, China (keynote Speaker)
11. "Sickle Cell Disease Metabolomics, New Insight and Therapy" 3rd Global Congress on sickle cell disease. Bhubaneshwar, Odisha, India, 2017 (Session Chair)
12. "Inflammation, Autoimmunity and Preeclampsia" 4th SKLRB Symposium on Reproductive Biology, Beijing, China, 2016
13. "New insight to priapism, sickle cell disease and novel therapy" -10th Annual Symposium of Sickle Cell Disease, Lauderdale, FL, 2016
14. "Metabolomic profiling reveals function and regulation of elevated erythrocyte sphingosine 1 phosphate in sickle cell disease"- 2015 FASEB Science Research Conferences, Lysophospholipids and Related Mediators - From Bench to Clinics, Banff, Canada, 2015

15. "Angiotensin receptor, autoimmunity and preeclampsia" - 13th Tox Talx Meeting, San Francisco, CA, 2015
16. "Metabolite, sickle cell anemia, novel therapies" Metabolon Inc Workshop, North Carolina, 2015
17. "Metabolite, sickle cell anemia, novel therapies" Metabolon Inc Workshop, Boston, 2015
18. "Adenosine, 2,3-bisphosphoglycerate, oxygen delivery in hypoxia" - 19th International Hypoxia Meeting, Lake Louise, Banff, Canada, 2015
19. "The animal models of preeclampsia and basic research" - 18th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), New Orleans, 2014
20. "The Future of Preclinical and Translational Research on Preeclampsia", 18th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), (Plenary Talk) New Orleans, 2014
21. "Regulation and Function of ENT1 in erythrocyte"- 2014 Purinergic Signaling International Meeting, Bone, Germany, 2014
22. "Adenosine Signaling via A2B receptor Regulates Erythrocyte 2,3-Bisphosphate Induction at High Altitude" - Experimental Biology Annual Meeting, SD, CA, 2014
23. "Metabolomic profiling, sickle cell disease and novel therapies"- Metabolomic Inc Workshop, Shanghai, China, 2013
24. "In vitro human and preclinical animal studies of adenosine-based therapies in sickle cell disease"- 7th Annual Symposium of Sickle Cell Disease, Miami, FL, 2013
25. "Sphingosine-1-phosphate is an allosteric modulator of hemoglobin-oxygen affinity and contributes to pathophysiology of sickle cell disease"- 7th Annual Symposium of Sickle Cell Disease, Miami, FL, 2013
26. "Angiotensin receptor, autoimmunity and preeclampsia"- Symposium of Perinatal Medicine & Fetal Origin of Health and Disease, Suzhou, China, 2013
27. "Adenosine signaling, sickle cell disease and novel therapeutics"-Bayer Health Care Life Science Workshop Series 2013-Hemoglobinopathies: Sickle cell disease and β -thalassemia, San Francisco, 2013
28. "Extending the novel role of elevated adenosine signaling in sickle cell disease to innovative therapies" - Purine Meeting, Fukuoka, Japan, 2012
29. "Detrimental effect of adenosine signaling in sickle cell disease" - 5th Annual Symposium of Sickle Cell Disease, Hollywood, FL, 2011
30. "Angiotensin receptor, autoimmunity and beyond" - 11th Tox Talx Meeting, San Francisco, CA, 2011
31. "Angiotensin receptor, autoimmunity and preeclampsia" - American Heart Association, Council on High Blood Pressure Research, Annual Meeting, Washington DC, 2010
32. "Angiotensin receptor, autoimmunity and preeclampsia" - Angiotensin Gordon Conference, Ventura, CA, 2010
33. "Adenosine signaling, priapism and sickle cell disease" - Hunan Province Male Sexual Medicine Annual Meeting, ChangSha, Hunan, China, 2009

34. “Angiotensin receptor, autoimmunity and preeclampsia” - 10th Tox Talx Meeting, San Francisco, CA, 2009
35. “AT₁-AA, antiangiogenic factors and preeclampsia” - 16th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), Washington, DC, 2008. **[SESSION CHAIR]**
36. “Adenosine signaling in normal penile erection, priapism and erectile dysfunction” - American Urology Foundation Summer Research Conference, Baltimore, MD, 2008
37. “Angiotensin receptor, autoimmunity and preeclampsia” - 9th Tox Talx Meeting, San Francisco, CA, 2007
38. “Angiotensin receptor, autoimmunity and preeclampsia” - National Institutes of Health, National Institute for Child Health and Human Development, Preeclampsia Workshop, Washington, 2006
39. “Adenosine signaling in priapism” - 2nd Asian-Pacific Andrology Meeting, Shanghai, China, 2006
40. “Pathophysiological role of angiotensin receptor agonistic autoantibodies in preeclampsia” - Fourth International Workshop on Reproductive Immunology/Immunological Tolerance and Immunology of Preeclampsia, Indian Ocean, 2004
41. “The Essential role of calcineurin signaling in normal and abnormal placental development” - Placenta workshop in Placental Association of America Conference Monterey, CA, 2004
42. “Angiotensin receptors, autoimmunity and preeclampsia” - 7th Tox Talx Meeting, San Francisco, CA, 2003.

Invited Oral Presentations at Local Meetings

1. “Therapeutic targets of angiotensin II type I receptor signaling in preeclampsia” - Nature Medicine and Nature Biotechnology sponsored Nature Café, Houston, TX, 2012.
2. “Detrimental effect of adenosine signaling in sickle cell disease and novel therapeutics” - Annual Symposium of Society of Chinese Bioscientists in American, Houston, TX, 2011.
3. “Detrimental effects of adenosine signaling in sickle cell disease and novel therapeutics” Annual Faculty Retreat, University of Texas Health Science Center-Medical School at Houston, 2011.
4. “Is preeclampsia an autoimmune disease” - Society of Chinese Bioscientists in America Annual Symposium, Houston, TX, 2009.
5. “Angiotensin receptor, autoimmunity and preeclampsia” - Second Annual Cullen Trust for Higher Education Symposium on Translational Research, Houston, TX, 2009.
6. “The renin angiotensin system in preeclampsia” - Young Guns Lecture Series, University of Texas Medical School at Houston, 2006.
7. “Adenosine signaling in priapism” - Annual Faculty Retreat, University of Texas Medical School at Houston, 2006.
8. “Molecular mechanisms of priapism and erectile dysfunction” - Asian Urology Symposium, Houston, TX, 2006.

Invited Seminars (National and International)

1. “Erythrocyte Metabolic reprogramming promotes oxygen delivery to counteract tissue hypoxia” Chinese Academic, Beijing, China, 2017
2. “Inflammation, Autoimmunity and Hypertension” WangRen Nephrologists Symposium, Dalian, China, 2016
3. “Erythrocyte Metabolic reprogramming promotes oxygen delivery to counteract tissue hypoxia”- Xiangya Hospital affiliated to Xiangya School of Medicine, Central South University, 2016
4. “Erythrocyte Metabolic reprogramming promotes oxygen delivery to counteract tissue hypoxia”- First Dalian Hospital affiliated to Dalian Medical School, Dalian, China, 2016
5. “Erythrocyte Metabolic reprogramming promotes oxygen delivery to counteract tissue hypoxia”- Chongqi Medical School, Chongqing, China, 2016
6. “Erythrocyte Metabolic reprogramming promotes oxygen delivery to counteract tissue hypoxia” – Shanghai Second Military Medical School, Shanghai, China, 2016
7. “Preeclampsia and Epigenetic transgeneration effects”-Chongqi Medical School, Chongqing, China, 2015
8. “Angiotensin receptor, autoimmunity and preeclampsia” – Shanghai Second Military Medical School, Shanghai, China, 2015
9. “Angiotensin receptor, preeclampsia and novel therapies” - UCLA, CA, USA, 2014
10. “Metabolite profiling reveals adenosine signaling in sickle cell disease and beyond” - New York University, NY, USA, 2014
11. “Angiotensin receptor, preeclampsia and novel therapies” - Chinese Zoology Academy, Beijing, China, 2014
12. “Metabolite profiling reveals adenosine signaling in sickle cell disease and beyond” - Guilin Medical School, China, 2014
13. “Angiotensin receptor, autoimmunity and preeclampsia” - Chinese Zoology Academy, Beijing, China, 2013
14. “Angiotensin receptor, autoimmunity and preeclampsia” - Shanghai Second Military University, Shanghai, China, 2013
15. “Angiotensin receptor, autoimmunity and preeclampsia” - Nanjing University, Nanjing, China, 2013
16. “Angiotensin receptor, autoimmunity and preeclampsia” - Wuhan University, Wuhan, China, 2013
17. “Angiotensin receptor, autoimmunity and preeclampsia” - Beijing first Hospital, Peking University, Beijing, China, 2013
18. “Metabolites, sickle cell disease and novel therapies” - Biochemistry Department, Peking University, Beijing, China, 2013
19. “Angiotensin receptor, autoimmunity and preeclampsia” - Xi’an Jiaotong University, College of Medicine, Xi’an, China, 2013
20. “Metabolites, sickle cell disease and novel therapies” - Hematology Department, Guangxi Nanning Hospital, Guangxia Medical School, Nanning, Guangxi, China, 2013

21. “Metabolites, sickle cell disease and novel therapies” - Renal Department, XiangYa Hospital, Central South University, Changsha, Hunan, China, 2013
22. “Metabolomic profiling reveals novel role of adenosine and sphingosine 1 phosphate in sickle cell disease and novel therapies” - University of Colorado, Denver , CO, 2013
23. “Angiotensin Receptor, autoimmunity and preeclampsia”-Center for Perinatal Biology, Loma Linda University School of Medicine, Loma Linda, California, 2012
24. “Metabolomic profiling reveals novel role of adenosine and sphingosine 1 phosphate in sickle cell disease and novel therapies” - Basic Science, Loma Linda University School of Medicine, Loma Linda, California, 2012
25. “Autoantibody, preeclampsia and novel therapeutics” - First XiangYa Hospital, Central South University, Changsha, Hunan, China, 2011.
26. “Metabolites, sickle cell disease and novel therapeutics” - First Xiangya Hospital, Central South University, Changsha, Hunan, China, 2011.
27. “Translational research: From bench to bedside-21st century science” - First Xiangya Hospital, Central South University, Changsha, Hunan, China, 2010.
28. “Translational research: From bench to bedside-21st century science” - Top Talks, Central South University, Changsha, Hunan, China, 2010.
29. “Role of adenosine signaling in priapism and penile fibrosis” - Third XiangYa Hospital, Central South University, Changsha, Hunan, China, 2009.
30. “Pathophysiological role of angiotensin receptor activating autoantibody in preeclampsia” - 3rd Xiangya Hospital, Central South University, Changsha, Hunan, China, 2009.
31. “Is preeclampsia an autoimmune disease?” - Reproductive and Stem Cell Center, Central South University, Changsha, Hunan, China, 2009.
32. “Adenosine signaling in renal fibrosis and novel therapies” - Third Xiangya Hospital, Central South University, Changsha, Hunan, China, 2009.
33. “Adenosine signaling, priapism and sickle cell disease” - University of Colorado, Denver, CO, 2008.
34. “Angiotensin receptor, autoimmunity and preeclampsia” - University of Colorado, Denver, CO, 2008.
35. “Adenosine signaling in normal penile erection, priapism and erectile dysfunction” - Third Xiangya Hospital, Central South University, Changsha, Hunan, China, 2008.
36. “Adenosine signaling in priapism” - Third Xiangya Hospital, Central South University, Changsha, Hunan, China, 2006.
37. “Angiotensin receptor, autoimmunity and preeclampsia” - Cardiology Division, King’s College of London, London, UK, 2006.
38. “The MEKK3/MEK5/BMK1 signaling regulates calcineurin/NFAT activation through phosphorylation of MCIP1 in cardiac hypertrophy” - University of Birmingham, Birmingham, UK, 2005.

39. “The MEKK3/MEK5/BMK1 signaling pathway regulates calcineurin/NFAT activation through phosphorylation of MCIP1 in cardiac hypertrophy” - King’s College London, University of London, London, UK, 2005.
40. “The pathophysiology role of angiotensin receptor autoantibodies in preeclampsia” - Max Delbruck Center of Molecular Medicine, Berlin, Germany, 2003.

Invited Seminars (Local)

1. “Erythrocyte metabolic reprogramming protects tissue hypoxia damage and establishes memory”- University of Texas McGovern Medical School, Sickle Cell Disease Center, 2017
2. “Metabolic Reprogramming, hypoxia erythrocyte response and novel therapies”-Texas Heart Institute, Houston, TX, USA, 2016
3. “Autoimmunity, inflammation and preeclampsia”-Nephrology Department, Baylor College of Medicine, Houston, USA, 2016
4. “Metabolite profiling reveals adenosine signaling in sickle cell disease and beyond”-Texas Children Hospital, Baylor College of Medicine, Houston, USA, 2014
5. “Metabolites, sickle cell disease and novel therapies”-Genetic Center, UTHSC-School of Public Health, Houston, 2014
6. “Metabolites, sickle cell disease and novel therapies”- Integrative Biology and Physiology Department, UTHSC-Medical School, Houston, 2013
7. “Metabolites, sickle cell disease and novel therapies”- Pathology Department, UTHSC-Medical School, Houston, 2013
8. “Detrimental role of metabolites in sickle cell disease and novel therapies” - Ground Rounds, Department of Pediatric Hematology, MD Anderson Cancer Center, Houston, 2013
9. “Metabolites, sickle cell disease and novel therapies” - Department of Physiology, Baylor College of Medicine, 2012
10. “Detrimental effects of adenosine signaling in sickle cell disease and novel therapeutics” - Ground Rounds, Department of Internal Medicine, University of Texas Medical School at Houston, 2011.
11. “Translational Research: From bench to bedside” - M.D./Ph.D Program, Graduate School of Biomedical Science, University of Texas Health Science Center at Houston, 2011.
12. “Adenosine signaling in sickle cell disease and novel therapeutics” - Division of Hematology, Department of Internal Medicine, University of Texas Medical School at Houston, 2011.
13. “Angiotensin receptor, autoimmunity and preeclampsia” - School of Public Health, University of Texas Health Science Center at Houston, 2009.
14. “Angiotensin receptor, autoimmunity and preeclampsia” - Institute of Molecular Medicine, University of Texas Medical School at Houston, 2007.
15. “Angiotensin receptor, autoimmunity and preeclampsia” - Department of Obstetrics, Gynecology and Reproductive Sciences, University of Texas Medical School at Houston, 2006.

16. “Adenosine signaling in priapism and erectile dysfunction” - Department of Vascular Surgery, University of Texas Medical School at Houston, 2006.
17. “Regulatory role of protein kinases in calcineurin signaling” - Department of Biochemistry and Molecular Biology, The University of Texas Medical School at Houston, 2005.
18. “Novel regulatory role of protein kinases in calcineurin signaling” - Division of Cardiology, Department of Internal Medicine, University of Texas Medical School at Houston, 2005.
19. “The pathophysiology role of angiotensin receptor autoantibodies in preeclampsia” - Department of Obstetrics, Gynecology and Reproductive Sciences, University of Texas Houston Medical School, 2004.

Abstracts selected for oral presentation at national and international meetings

1. Wu, H.Y., Bogdanov, M, Zhang, Y.J., Sun, K.Q., Zhao, S.S., Song, A.R., Alexander, D.C., Milburn, M., Kellems, R.E., Dowhan, W., Idowu, I., Juneja, H.S., and Xia, Y.: Imbalanced Lands’ cycle impairs membrane lipid components that promotes sickling and progression of sickle cell disease, 57th American Association of Hematology, Orlando, 2015
2. Liu, H., Zhang, Y.J., Sun, K.Q., Eltzschig, H.R., Kellems, R.E., Roach, R., Blackburn, M.R. and Xia, Y. : Adenosine Signaling via A2B receptor Regulates Erythrocyte 2,3-Bisphosphate Induction at High Altitude”-Experimental Biology Annual Meeting, SD, CA, 2014
3. Luo, Renna, Zhang, W.R., Wang, W., Zhang, Y.J., Grenz, A., Tao, L.J., Blackburn, R.M., Eltzschig, H.K., Kellems, R.E., and Xia, Y.: RT-PCR profiling reveals the detrimental role of increased HIF-1 α in chronic hypertensive nephropathy. American Heart Association High Blood Pressure Research Conference, New Orleans, 2013
4. Sun, K.Q., Zhang, Y.J., Song, A.R., Berka, V., Tsai, A.H., Juneja, H.S., Idowu, M., Kellems, R.E., and Xia, Y.: Role and regulation of sphingosine kinase I in normal and sickle erythrocytes. 55th American Society of Hematology, New Orleans, 2013.
5. Luo, R., Zhang, W.R., Wang, W., Zhang, Y.J., Grenz, A., Tao, L.J., Blackburn, R.M., Eltzschig, H.K., Kellems, R.E., and Xia, Y.: RT-PCR profiling reveals the detrimental role of increased HIF-1 α in chronic hypertensive nephropathy. American Heart Association High Blood Pressure Research Conference, New Orleans, 2013.
6. Ning, C., Wen, J., M. ., Zhang, Y.J., Qi, L., Blackburn, M.R., Kellems, R.E., and Xia, Y. “In vitro human and preclinical animal studies of adenosine-based therapies in sickle cell disease”- 7th Annual Symposium of Sickle Cell Disease, Miami, FL, 2013.
7. Zhang, Y.J., Berka, V., Song, A.R., Wang, W., Zhang, W.R., Ning, C., Sun, K.Q., Alexander, D.C., Milburn, M.V., Ahmed, M.H., Idowu, I., Kellems, R.E., Zhang, J., Safo, M., Tsai, A.T., Juneja H.S., and Xia, Y.: Sphingosine-1-phosphate is an allosteric modulator of hemoglobin-oxygen affinity and contributes to pathophysiology of sickle cell disease”- 7th Annual Symposium of Sickle Cell Disease, Miami, FL, 2013.
8. Zhang, Y.J., Berka, V., Song, A.R., Wang, W., Zhang, W.R., Ning, C., Sun, K.Q., Alexander, D.C., Milburn, M.V., Ahmed, M.H., Idowu, I., Kellems, R.E., Zhang, J., Safo, M., Tsai, A.T., Juneja H.S., and Xia, Y.: Sphingosine-1-phosphate is an allosteric modulator of hemoglobin-oxygen affinity

and contributes to pathophysiology of sickle cell disease. 54th American Society of Hematology Annual Meeting, Atlanta, 2012

9. Ning, C., Wen, J.M., Zhang, Y.J., Qi, L., Blackburn, M.R., Kellems, R.E., and Xia, Y.: Detrimental role of excess adenosine signaling in priapism and novel therapeutics. 14th International Meeting of the Society of Sexual Medicine and American Society of Sexual Medicine, Chicago, 2012
10. Ning, C., Wen, J.M., Zhang, Y.J., Qi, L., Blackburn, M.R., Kellems, R.E., and Xia, Y.: Reduced adenosine signaling contributes to erectile dysfunction. 14th International Meeting of the Society of Sexual Medicine and American Society of Sexual Medicine, Chicago, 2012.
11. Liu, C., Wang, W., Parchim, N., Irani, Roxanna, Kellems, R.E., and Xia, Y.: Pathophysiological role of transglutaminase in preeclampsia. 18th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), Geneva, Switzerland, 2012.
12. Wang, W., Irani, R.A., Blackwell, S.C., Tao, L.J., Kellems, R.E., and Xia, Y.: Light, a TNF-alpha superfamily member, signaling via HVEM and LTBR receptors, contributes to preeclampsia. 18th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), Geneva, Switzerland, 2012.
13. Zhang, W.R., Wang, W., Grenz, A., Blackburn, M.R., Eltzschig, H.K., Kellems, R.E., and **Xia, Y.**: “Elevated CD73-Mediated Increased Renal Adenosine Signaling via A_{2B} adenosine receptor Underlies Chronic Hypertensive Nephropathy” - Purine Signaling Meeting, Fukuoka, Japan, 2012.
14. Zhang, Y.J., Wen, J.M., Ning, C., Juneja, H.S., and **Xia, Y.**: “Extending the novel role of elevated adenosine signaling in sickle cell disease to innovative therapies” - 6th Annual Symposium of Sickle Cell Disease, Hollywood, FL, 2012.
15. Zhang, Y.J., Berka, V., Wang, W., Zhang, W.R., Ning, C., Sun, K.Q., Alexander, D.C., Milburn, M.V., Ahmed, M.H., Idowu, I., Kellems, R.E., Zhang, J., Safo, M., Tsai, A.T., Juneja, H.S., and **Xia, Y.**: “Sphingosine-1-phosphate is an allosteric modulator of hemoglobin-oxygen affinity and contributes to pathophysiology of sickle cell disease” - One of the six Late Breaking Abstracts presented in 53rd Annual Meeting of the American Association of Hematology, San Diego, CA, 2011.
16. Wang, W., Irani, R.A., Blackwell, S.C., Ramin, S.M., Kellems, R.E., and **Xia, Y.**: “Detrimental effects of elevated complement C3a in angiotensin receptor agonistic autoantibody-induced preeclampsia” - American Heart Association High Blood Pressure Research Conference, Orlando, FL, 2011
17. Zhang, Yujin, Dai, Y.B., Wen, J.M., Kellems, R.E., Blackburn, R.M., Juneja, H.S., and **Xia, Y.**: “Detrimental effect of adenosine signaling in sickle cell disease” - 5th Annual Symposium of Sickle Cell Disease, Hollywood, FL, 2011.
18. Zhang, Y.J., Dai, Y.B., Wen, J.M., Kellems, R.E., Blackburn, R.M., Juneja, H.S., and **Xia, Y.**: “Detrimental role of adenosine signaling in sickle cell disease” 2010 Purine Signaling meeting, Barcelona, Spain, 2010.
19. Zhang, Y.J., Dai, J.B., Wen, J.M., Kellems, R.E., Blackburn, R.M., Juneja, H.S., and **Xia, Y.**: “Novel role of adenosine signaling in sickle cell disease” - 51st Annual Meeting of the American Society of Hematology, New Orleans, LA, 2009.

20. Dai, Y.B., Zhang, Y.J., Phataparker, P., Mi, T.J., Blackburn, M., Wang, R., and **Xia, Y.**: “Adenosine signaling in priapism and novel therapies” - Joint Congress of the European and International Societies for Sexual Medicine, Brussels, Belgium, 2008.
21. Irani, R.A., Zhou, C.C., Zhang, Y.J., Zhang, H., Mi, T.J., Ramin, S.M., Kellems, R.E., and **Xia, Y.**: “Angiotensinreceptor agonistic autoantibodies induce abnormal placental development” - 16th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), Washington, DC, 2008.
22. Zhang, Y.J., Zhou, C.C., Irani, R.A., Zhang, H., Mi, T.J., Ramin, S.M., Kellems, R.E., and **Xia, Y.**: “Angiotensinreceptor agonistic autoantibodies cross placenta and cause abnormal fetal development” - 16th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), Washington, DC, 2008.
23. Zhou, C.C., Zhang, Y.J., Irani, R.A., Zhang, H., Mi, T.J., Popek, E.J., Hicks, J.M., Ramin, S.M., Kellems, R.E., and **Xia, Y.**: “Angiotensin receptor agonistic autoantibodies induce preeclampsia in pregnant Mice” - 16th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP), Washington, DC, 2008.
24. Mi, T.J., Abbasi, S., Zhang, H., Uray, K., Chunn, J.L., Xia, L.W., Molina, J.C., Weisbrodt, N.W., Kellems, R.E., Blackburn, R.B., and **Xia, Y.**: “Excess adenosine in penile erectile tissues contributes to priapism via A_{2B} adenosine receptor signaling” - Purine Signaling Meeting, Copenhagen, Denmark, 2008.
25. Zhou, C.C., Abbasi, S., Xia, L.W., Gilstrap, L.C., Kellems, R.E., and **Xia, Y.**: “Renin angiotensin system and upregulation of placental soluble fms-like tyrosine kinase 1 (sFlt-1)” - Platform presentation in 15th World Congress of the International Society for the Study of Hypertension in Pregnancy (ISSHP) Lisbon, Portugal, 2006.
26. Abbasi, S., Yang, J.H., Li, M., Mi, T.J., Razeghi, P., Taegtmeier, H., Lee, J.D., Kellems, R.E., and **Xia, Y.**: “The MEKK3-MEK5-BMK1 signaling pathways regulates calcineurin activity by phosphorylation of MCIP1” - 78th Annual Meeting of American Heart Association, Dallas, TX, 2005.
27. Zhou, C.C., Abbasi, S., Xia, L.W., Gilstrap, L.C., Kellems, R.E., and **Xia, Y.**: “Upregulation of placental soluble fms-like tyrosine kinase 1 by AT1 receptor agonistic antibodies in preeclampsia” - 78th Annual Meeting of American Heart Association, Dallas, TX, 2005.
28. Abbasi, S., Lee, J.D., Kellems, R.E., Yang, J.H., and **Xia, Y.**: “The MEKK3-MEK5-BMK1 Signaling Pathway Regulates Calcineurin Activity by Phosphorylation of MCIP1 in cardiac hypertrophy” - 2nd annual American Heart association basic cardiac vascular symposium, Keystone, CO, 2005.
29. Abbasi, S., Lee, J.D., Kellems, R.E., Yang, J.H., and **Xia, Y.**: “The MEKK3-MEK5-BMK1 Signaling Pathway Regulates Calcineurin Activity by Phosphorylation of MCIP1 in cardiac hypertrophy” - International Society of Heart Research 27th annual meeting, New Orleans, LA, 2005.
30. Abbasi, S., Lee, J.D., Kellems, R.E., Yang, J.H., and **Xia, Y.**: “The MEKK3-MEK5-BMK1 Signaling Pathway Regulates Calcineurin Activity by Phosphorylation of MCIP1 in the Heart” - 77th Annual Meeting of American Heart Association, New Orleans, LA, 2004.
31. Kellems, R.E. and **Xia, Y.**: “Angiotensin Receptor Autoantibodies and the Pathophysiology of Preeclampsia” - Platform presentation in 14th World Congress of the international Society for the Study of Hypertension in Pregnancy (ISSHP) Vienna, Austria, 2004.

32. Wen, H., Kellems, R.E., and **Xia, Y.**: “mTOR (Mammalian Target of Rapamycin): A Placental Growth Signaling” New Investigator Presentation at Placental Association of American Conference, Monterey, CA, 2004.
33. **Xia, Y.**, Wen, H., Bobst, S., Day, M.C., Gilstrap, L.C., and Kellems, R.E.: “Pathophysiological Role of Maternal Angiotensin Receptor Reactive Autoantibodies in Preeclampsia” - Platform presentation at 50th Annual Meeting of The Society of Gynecologic Investigation, Washington, DC, 2003.
34. **Xia, Y.**, Wen, H., Bobst, S., Day, M.D., Gilstrap, L.C., and Kellems, R.E.: "Maternal autoantibodies from preeclamptic patients activate angiotensin receptors in human trophoblast cells" - Platform presentation at 13th International Society for the Study of Hypertension in Pregnancy, Toronto, CA, 2002.
35. Prashner, H.R., **Xia, Y.**, Inagami, T., Kellems, R.E.: “Correlation of Renin Immunoreactivity and Renin mRNA in Situ Hybridization in Preterm and Term Placentas” - Platform presentation at Society for Pediatric Pathology Interim Meeting, Providence, RI, 1999.
36. **Xia, Y.**, Buja, L.M., and McMillin, J.B.: Carnitine palmitonyltransferase I isoform switching with electrical stimulation in cultured rat neonatal cardiac myocytes. The 69th FASEB Meeting, New Orleans, LA, 1996.

Patents

1. **Xia, Y.**, Zhang, Y.J., Kellems, R.E., and Juneja, S. Harrider: “Methods and composition for the treatment of sickle cell disease” - Provisional Patent Application (4005-001690), 2010.
2. **Xia, Y.**, Kellems, R.E., and Blackburn, M.R.: “Adenosine signaling in diagnosis, treatment and prevention of priapism and erectile dysfunction” (4005.000900), 2007.

VISTING PROFESSORSHIP

- 2009-Present Visiting Professor, Xiangya Hospital, Xiangya Medical School, Central South University, Changsha, Hunan, China, 410078
- 2009-Present Visiting Professor, Institute of Reproductive & Genetic Medicine, Central South University, Changsha, Hunan, China, 410078