CURRICULUM VITAE

Shaodong Guo, Ph.D.

A. PERSONAL DATA:

ADDRESS:

Business: Associate Professor
Department of Nutrition and Food Science
College of Agriculture and Life Sciences
Texas A&M University
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CITIZENSHIP: USA

B. EDUCATION:

1985		High School of Enshi, Hubei Province, China
1989	B.S.	Huazhong Agricultural University (Agronomy), Wuhan, China
1992	M.S.	Huazhong Agricultural University (Physiology & Biochemistry)
1995	Ph.D.	Peking University, Beijing, China (Physiology) Dissertation Title: Structure and Function of Enzyme Rubisco

C. POSTDOCTORAL TRAINING:

1995-1997	Research Associate, Chinese Academy of Sciences Institute of Genetics and Developmental Biology, Beijing, China
1997-2001	Research Associate in Endocrinology, Department of Medicine, University of Illinois at Chicago, Chicago, USA
2001-2003	Research Fellow in Molecular Medicine and Vascular Biology, Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Harvard University, Boston, USA
2003-2004	Research Fellow in Cardiovascular Biology, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Harvard University, Boston, USA
2004-2006	Research Fellow in Howard Hughes Medical Institute, Division of Endocrinology, Department of Medicine, Children's Hospital Boston, Harvard Medical School, Harvard University, Boston, USA

D. RESEARCH INTEREST:

Mechanisms of Insulin Resistance and Diabetes Mellitus
Fatty Liver, Metabolic Syndrome and Disease
Diabetic Cardiomyopathy and Heart Failure
Nutrient and Hormonal Signaling and Biology

Nutritional and Therapeutic Intervention of Metabolic/Cardiac Diseases Hypertension

E. ACADEMIC APPOINTMENTS:

2001	Research Assistant Professor, Division of Endocrinology, Department of Medicine, University of Illinois at Chicago, Chicago, USA
2006-2009	Instructor in Medicine, Harvard Medical School, Harvard University
2006-2009	Instructor in Medicine, Division of Endocrinology, Department of Medicine, Children's Hospital Boston, Boston, USA
2006-2009	Scientific Research Associate, Division of Endocrinology, Department of Medicine, Children's Hospital Boston, Boston, USA
2009-2015	Assistant Professor (Tenure-Track), Division of Molecular Cardiology, Department of Medicine, College of Medicine, Texas A&M University Health Science Center, Temple, Texas.
2015. Sept.1-Nov.30	Associate Professor (Tenure), Department of Internal Medicine, Department of Medical Physiology, College of Medicine, Texas A&M University Health Science Center, Temple, Texas.
2015. Dec.1 -	Associate Professor (Tenure), Department of Nutrition and Food Science, College of Agriculture and Life Sciences, Texas A&M University, College Station, Texas.

F. HONORS AND AWARDS:

1992-1995	Winner of Guanghua Scholarship for outstanding Ph.D. student, Peking University, Beijing, China
1997-1999	Young Investigator Award, Institute of Genetics and Developmental Biology of Chinese Academy of Sciences, Beijing, China
1997-1999	Young Investigator Award, National Natural Science Foundation of China
1999	American 81st Annual Meeting of Endocrine Society Competitive Travel Award
2007-2010	American Diabetes Association Junior Faculty Award
2015-2020	American Diabetes Association Career Development Award
2015	American Diabetes Association Research Excellent Thomas R Lee Award

G. TEACHING EXPERIENCE:

COURSE BASED TEACHING

1998	Developmental Biology for Undergraduate: Classroom lecture (4 hrs) on the control of gene expression during embryonic development. Department of Biology, Tsinghua University, Beijing China
2005	Biochemistry for Graduate Students: Classroom lecture (3 hrs) on decoding insulin signaling pathway. Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston, Massachusetts, USA
2010-	Current Topics of Cell Signaling (MSCI612) for Graduate Students: Class lectures (6 hrs) on Ras/MAPK cascade. Department of Medicine,

Texas A&M University Health Science Center, Temple, Texas, USA

2013- Cell Biology (MSCI601) for Graduate Students: Classroom lectures (10 hrs) on Protein Chemistry, Control of Gene Expression, Mitochondria, and Energy Metabolism. Department of Medicine, Texas A&M University College of Medicine, Temple, Texas, USA

2015- Cardiovascular Pathology (MPHY632) for Graduate Students: Classroom (6 hrs lecture) on Obesity and Metabolic Syndrome. Department of Medical Physiology, Texas A&M University College of Medicine, Temple, Texas, USA

2016- Nutrition Seminar (NUTR481) for Undergraduate Students: Classroom (15 hrs lectures) on Nutrition and Health-related articles for enhancing skills of students to read, write, and present, College of Agriculture and Life Sciences, Texas A&M University, College Station, Texas, USA

DISSERTATION COMMITTEE MEMBER
Colby A. Sounders: Ph.D. student, Department of Medicine, Texas A&M College of Medicine, 09/2009-06/2012
Amanda Galan: Ph.D. student, Department of Cellular and Structural Biology, University of Texas HSC, San Antonio, 09/2009-05/2016
Karen Doersch, MD, Ph.D. student, Department of Medicine, Texas A&M Health Science Center, College of Medicine, 09/2013-09/2017

H. TRAINEES:

Yajuan Qi, M.D., Ph.D., Post Doctoral Fellow, Nov. 2010-Present
Yuxin Wu, Ph.D., Post Doctoral Fellow, June 2013-Present
Hao Feng, Ph.D., Post Doctoral Fellow, Sept. 1 2015- Present
Kebin Zhang, M.D., Ph.D., Post Doctoral Fellow, Sept. 2010- June 2012
Travis Averitt, B.S. Student, July 2010- Sept. 2012
Ling Li, Ph.D. student and Postdoctoral Fellow, Sept. 2012- Oct. 2013
Dementria Perry, Summer Student of 2012
Zihui Xu, Post Doctoral Fellow, Dec. 2011- Present
Qinglei Zhu, Ph.D. Post Doctoral Fellow, Oct. 2011- February 2013
Shouwen Chen, Visiting Professor, April 2012- May 2013
Xiaoping Zhu, Ph.D., Post Doctoral Fellow
Kumar Dasuri, Ph.D. Post Doctoral Fellow
Chase Wampler, Student, Dec. 2014 - Present

I. MEMBERSHIP OF PROFESSIONAL ORGANIZATIONS:

1997- Member, The International Society of Developmental Biology
1998- Member, The Endocrine Society
2001- Member, American Diabetes Association
2002- Member, American Heart Association
2010- Member, American Physiology Society
2010- Associate Member, Graduate Studies of Texas A&M Health Science Center, TX
2004- Member of Chinese American Diabetes Association

J. COMMITTEE MEMBERSHIP:

2010- Member, Cardiovascular Research Institute (CVRI) Seminar Series Subcommittee of Texas A&M University Health Science Center

2013- Member, Ph.D. Thesis Committee (Colby A. Sounders, "Cardiac Remodeling is Regulated by c-Myc"), Department of Medicine, School of Graduate Studies, Texas A&M University Health Science Center

2003- Member, Basic Cardiovascular Research Council of American Heart Association

2014- Member, Grant Peer Review Committee of the Study Section Cardiac Signaling of American Heart Association

2014 Member of Scientific Meeting Planning Committee of American Diabetes Association for Abstract Reviewer

2014- Member of Central Texas Veteran Administration Research Grant Review Committee

2014- Member of Executive Committee of Nutrition and Obesity Research Center of Texas A&M University (NORC)

2015- Board Member of Chinese American Diabetes Association

K. GRANT REVIEW EXPERIENCE:

2010- Scott & White Hospital Research Program

2014- Peer Reviewer of the American Heart Association Research Grant

2014- Reviewer of Central Texas Veteran Administration Research Programs

2015- Reviewer and Study Section Member of the National Health Institute ZDK1-GRB-7 for the Special Emphasis Panel on Metabolic Signaling and Diseases

L. JOURNAL REVIEWER:

Diabetes
Endocrinology
Biochemical Journal
PlosOne, FEBS Letters
Journal of Endocrinology
Molecular Endocrinology
Current Diabetes Reviews
Digestive and Liver Disease
Journal of Cellular Physiology
Journal of Biological Chemistry
Current Hypertension Reviews
Molecular and Cellular Biology
Journal of American Physiology
Journal of Molecular Endocrinology
Journal of Molecular and Cellular Cardiology
Proceedings of National Academy of Sciences

M. EDITORIAL BOARD MEMBERS AND EDITOR:

2012- Present Journal of Endocrinology, Senior Editor
2012- Present Journal of Molecular Endocrinology, Senior Editor
2015- Present Nutrition Discovery, Associate Editor-in-Chief
2013- Present Austin Journal of Clinical Cardiology
2015- Present International Archives of Endocrinology Clinical Research

N. PUBILICATIONS / BIBLIOGRAPHY:

1. **Guo S**, Li H. Lipoxygenase and its role in sweet potato tubers infected by Ceratocystis fimbriata. *Acata Phytopathologica Sinica* 24 (4): 325-329, 1995.

2. **Guo S**, Wu G, Wu X. Nucleotide sequence of a cDNA encoding the small subunit of ribulose-1,5-bisphosphate carboxylase/oxygenase from Aegilops squarrosa. *Plant Physiology* 108 (3): 1319-1320, 1995. PMID:7630959.

3. **Guo S**, Wu G, Wu X. Rubisco activity and the small subunit gene cloning and functional analysis of Agelops squarrosa. *Acta Botanica Sinica* 39 (3): 222-230, 1997.

4. Li S, **Guo S,** Sun F. Novel gene expressed during early embryogenesis of zebrafish identified by mRNA differential display. *Chinese Science Bulletin* 43(11): 936-940, 1998.

5. Li S, **Guo S**, Sun F. Expression pattern of a beta 2 tubulin gene in zebrafish embryos identified by whole mount in situ hybridization. *Chinese Science Bulletin* 43(22): 1894-1998.

6. Cichy S, Uddin S, Danilkovich A, **Guo S**, Unterman T. Protein kinase B/Akt mediates effects of insulin on hepatic gene expression through a conserved insulin response sequence. *J. Biol. Chem.* 273 (11): 6482-6487, 1998. PMID:9497382.

7. Rena G, **Guo S**, Cichy S, Unterman T, Cohen P. Phosphorylation of the transcription factor forkhead family member FKHR by protein kinase B. *J. Biol. Chem.* 274 (24),17179-17183, 1999. PMID:10358075.

8. **Guo S**, Rena G, Cichy S, He X, Cohen P, Unterman T. Phosphorylation of serine 256 by protein kinase B disrupts transactivation by FKHR and mediates effects of insulin on IGF binding protein-1 promoter activity through a conserved insulin response sequence. *J. Biol. Chem.* 274 (24),17184-17192, 1999. PMID:10358076.

9. Ghosh A, Lacson R, Liu P, Cichy S, Danilkovich A, **Guo S**, Unterman TG. A Nucleoprotein Complex containing CCAAT/Enhancer-binding Protein β Interacts with an Insulin Response Sequence in the Insulin-like Growth Factor-binding Protein-1 Gene and Contributes to Insulin-regulated Gene Expression. *J. Biol. Chem.* 276: 8507–8515, 2001. PMID:11116147.

10. **Guo S**, Cichy S, He X, Ghosh AK, Jonson P, Unterman T. Insulin suppresses transactivation by CAAT/enhancer-binding protein b(CEBPb): Signaling to p300/CREB binding protein by protein kinase B disrupts interaction with the major activation domain of C/EBPb. *J. Biol. Chem.* 276 (11): 8516-8523, 2001. PMID:11116148.

11. Schmoll D, Walker K, Alessi D, Burchell A, **Guo S**, Unterman T, Walther R. Regulation of glucose-6-phosphatase gene expression by protein kinase Ba and the forkhead transcription factor FKHR: Evidence for insulin response unit (IRU)-dependent and

independent effects of insulin on promoter activity. *J. Biol. Chem.* 275 (46): 36324-36333, 2000. PMID:10960473.

12. Rena G, Prescott AR, **Guo S**, Cohen P, Unterman T. Roles of the forkhead in rhabdomyosarcoma (FKHR) phosphorylation sites in regulating nuclear targeting 14-3-3 binding, transactivation and nuclear targeting. *Biochem J.* 354: 605-612, 2001. PMID:11237865.

13. Woods VL, Rena G, Morrice N, Barthel A, Becker W, **Guo S**, Unterman T, Cohen P. DYRK1A phosphorylates the transcription factor FKHR at Ser 329, a novel in vivo phosphorylation site. *Biochem. J.* 355: 579-607, 2001. PMID:11311120.

14. Yeagley D, **Guo S**, Unterman T, Quinn P. Gene and activation-specific mechanisms for insulin inhibition of basal and glucocorticoid-induced IGFBP-1 and PEPCK transcription: roles of forkhead and insulin response sequences. *J. Biol. Chem.* 276(36): 33705-33710, 2001. PMID:11445561.

15. Zhang X, Gan L, Pan H, **Guo S**, He X, Olson ST, Mesecar A, Adam S, Unterman TG. Phosphorylation of serine 256 suppresses transactivation by FKHR (FoxO1) by multiple mechanisms: Direct and indirect effect on nuclear/cytoplasmic shuttling and DNA binding. *J. Biol. Chem.* 277 (47): 45276-45284, 2002. PMID:12228231.

16. Li P, Lee H, **Guo S**, Unterman TG, Jenster G , Bai W .AKT-independent protection of prostate cancer cells from apoptosis mediated through complex formation between the androgen receptor and FKHR. *Mol. Cell. Biol.* 23 (1): 104-118, 2003. PMID:12482965.

17. Abid R, **Guo S**, Walsh K, Aird WC. Vascular endothelial growth factor activates PI3Kinase/AKT/Forkhead signaling in endothelial cells. *Arteriosler. Thromb. Vasc. Biol.* 24: 1-8, 2004. PMID:14656735.

18. Abid MR, Yano K, **Guo S**, Patel VI, Shrikhande G, Spokes KC, Ferran C, Aird WC. Forkhead transcription factors inhibit vascular smooth muscle cell proliferation and neointimal hyperplasia. *J. Biol. Chem.* 280: 29864-29873, 2005. PMID:15961397

19. **Guo S**, Lopez-Ilasaca M, Dzau VJ. Identification of Calcium-modulating Cyclophilin Ligand (CAML) as Transducer of AngiotensinII -mediated Nuclear Factor of Activated T Cells (NFAT) Activation. *J. Biol. Chem.* 280: 12536 – 12541, 2005. PMID:15668245

20. Kushner JA, Simpson L, Wartschow LM, **Guo S**, Rankin M, Parsons R, White MF. Phosphatase and Tensin Homolog Regulation of Islet Growth and Glucose Homeostasis. *J. Biol. Chem.* 280: 39388 – 39393, 2005. PMID:16170201.

21. Zhang W, Patil S, Chauhan B, **Guo S**, Powell D, Le J, Klotsas A, Matika R, Xiao X, Franks R, Heidenreich K, Sajan M, Farese R, Stolz D, Tso P, Koo SH, Montminy M, Unterman TG. FoxO1 Regulates Multiple Metabolic Pathways in the Liver: effects on gluconeogenic, glycolytic, and lipogenic gene expression. *J. Biol. Chem.* 281: 10105 – 10117, 2006. PMID:16492665.

22. **Guo S**, Dun S, White MF. The stability of Irs2 and FoxO1 creates a regulatory circuit that regulates insulin action. *Molecular Endocrinology* 20 (12): 3389-3399, 2006. PMID:16916938.

23. Dong, X, Copps, K, **Guo S**, Li, Y, Kollipara, R, DePinho, RA, White MF. Inactivation of hepatic FoxO1 by Irs1 and Irs2 signaling is required for adaptive nutrient homeostasis and endocrine growth regulation. *Cell Metabolism* 8: 65-76, 2008. PMID:18590693.

24. Guo S, Copps K, Dong X, Park S, Cheng Z, Pocai A, Rossetti L, Sajan M, Farese R, White MF. Irs1-branch of the insulin signaling cascade plays a dominant role in hepatic nutrient homeostasis. *Molecular and Cellular Biology* 29(18):5070-5083, 2009. PMID:19596788.

25. Cheng Z, **Guo S**, Copps K, Dong X, Kollipara R, Rodgers J, Depinho R, Puigserver P, White MF. Foxo1 integrates insulin signaling with mitochondrial function in the liver. *Nature Medicine* 15(11):1307-1311, 2009. PMID:19838201.

26. Guo S. Insulin, Insulin Resistance, and Control of Diabetes Mellitus. *China Medical Tribune* (1): 7, 2010 (Chinese).

27. Messmer-Blust AF, Philbrick MJ, Guo S, Wu J, He P, **Guo S**, Li J. RTEF-1 Attenuates Blood Glucose Levels by Regulating Insulin-Like Growth Factor Binding Protein-1 in the Endothelium. *Circulation Research* 111:991-1001, 2012. For editorial see page 951-953. PMID:22843786.

28. Zhang, K, Li L, Qi Y, Zhu X, Gan B, DePinho R, Averitt T, Guo S. Hepatic Suppression of Foxo1 and Foxo3 Causes Hypoglycemia and Hyperlipidemia in Mice. For editorial preview see page 549-510. *Endocrinology* 153 (2): 631-646, 2012.. PMID:22147007.

29. Li X, Long D, Ji J, Yang W, Zeng Z, **Guo S**, Ji Z, Qi G, Chen S. Sample preparation for the metabolomics investigation of poly-gamma-glutamate-producing *Bacillus licheniformis* by GC-MS. *Journal of Microbiological Methods* 94: 61-67, 2013. PMID: 23628234.

30. Guo S. Molecular Basis of Insulin Resistance: The role of IRS and Foxo1 in the Control of Diabetes Mellitus and Its Complications. *Drug Discovery Today*: Disease Mechanisms. 10(2): e27-e33, 2013. PMID:24015152.

31. Qi Y, Zhu Q, Xu Z, Thomas C, Kumar R, Feng H, Dostal D, White MF, Baker K, **Guo S**. Myocardial Loss of IRS1 and IRS2 Causes Heart Failure and is Controlled by p38α MAPK During Insulin Resistance. For editorial highlights see page 3646. (Highlighted on Faculty of 1000). *Diabetes* 62:3887-3900, 2013. PMID:24015152.

32. Ma J, Zhang L, Tipton AR, Wu J, Qi Y, Messmer-Blust A, Philbrick M, Liu ST, Liu H, Li J, **Guo S.** Structural and Functional Analysis of the Related Transcriptional Enhancer Factor-1 (RTEF-1) and Nuclear Factor Kappa B (NF-κB) Interaction. *American Journal of Physiology*-Heart and Circulatory Physiology 306: H233-H242, 2014. PMID: 24213609.

33. Guo S. Insulin Signaling, Resistance, and the Metabolic Syndrome: Insights from mouse models to disease mechanisms. *J. Endocrinology* 220(2):T1-23, 2014. PMID: 24281010.

34. Guo S. Decoding Insulin Resistance and Metabolic Syndrome for Promising Therapeutic Intervention. *J. Endocrinology* 220 (2): E1-3, 2014. PMID 24431466.

35 Guo S. Mechanisms of Heart Failure in Type 2 Diabetes Mellitus*. Austin Journal of Clinical Cardiology* 1 (1):1-2, 2014.

36. Zhang L, He S, **Guo S**, Xie W, Xin R, Yu H, Yang F, Qiu J, Zhang D, Zhou S, Zhang K. Down-regulation of miR-34a alleviates mesangial proliferation in vitro and glomerular

hypertrophy in early diabetic nephropathy mice by targeting GAS1. *Journal of Diabetes and its Complications* 28(3):259-64, 2014. PMID: 24693981.

37. Yu H, He X, Xie W, Xiong J, Sheng H, **Guo S**, Huang C, Zhang D, Zhang K.Elastase LasB of Pseudomonas aeruginosa promotes biofilm formation partly through rhamnolipid-mediated regulation. *Can J Microbiol*. 60(4):227-35. 2014. PMID:24693981.

38. Guo S. Tissue-specific insulin resistance and associated mechanisms for metabolic syndrome. *Journal of Third Military University*, 36 (15): 1535-1542, 2014.

39. Ryu J, Galan AK, Xin X, Dong F, Abdul-Ghani MA, Zhou L, Wang C, Li C, Holmes BM, Sloane LB, Austad SN, **Guo S**, Musi N, Defronzo RA, Deng C, White MF, Liu F, Dong LQ. APPL1 Potentiates Insulin Sensitivity by Facilitating the Binding of IRS1/2 to the Insulin Receptor. *Cell Report.* 7(4):1227-38, 2014. PMID: 24813896.

40. Qi, Y, Zhang, K, Xu, Z, Yong, Q, Wu, Y, Kumar, R, Baker, K, Zhu, Q, Chen, S, **Guo, S**. Novel Mechanism of Blood Pressure Regulation by Foxo1-Mediated Transcriptional Control of Hepatic Angiotensinogen. *Hypertension 64 (5): 1131-1140,* 2014*.* PMID: 25069665

41. Qi, Y, Zhu, Q, Qi, Y, Zhang, K, Thomas, C, Wu, Y, Kumar, R, Baker, K, Xu, Z, Chen, S**, Guo, S**. Activation of Foxo1 by Insulin Resistance Promotes Cardiac Dysfunction and β-Myosin Heavy Chain Gene Expression*. Circulation: Heart Failure (8):198-208,* 2015. PMID:25477432.

42. Xie, W, Wang, L, Dai, Q, Qi, Y, Hu, F, **Guo, S***, Zhang, K* (2015). Activation of AMPK Restricts Coxsackievirus B3 Replication by Inhibiting Lipid Accumulation. *Journal of Molecular and Cellular Cardiology 85:155-167,* 2015. *co-corresponding author

43. Drosatos, K, Pollak, M, Pol, C, Ntziachristos, P, Willecke, F, Valenti, M, Trent, C, Hu, Y, **Guo, S**, Aifantis, I, Goldberg, I (2015). Cardiac Myocyte KLF5 Regulates *Ppara* Expression and Cardiac Function. *Circulation Research* (online published Nov. 16, 2015)

O. CHAPTER IN TEXTBOOKS:

Qi, Y, Guo, X, and **Guo, S**. (2016) Insulin Resistance in Obesity. In: *Metabolic Syndrome: A Comprehensive Textbook, pages 479-504*, 1st edition, edited by Rexford Ahima. Springer International Publishing, Switzerland.

P. ABSTRACTS:

1. Guo S, Sun F. Oscillin gene cloning, expression and functional analysis during mouse fertilization, *Developmental Biology* 20 (13): 121A, 1997.

2. Guo S, Cichy S, He X, Wu J, Rena R, Cohen P, Unterman TG. Phosphorylation by protein kinase B disrupts transactivation by FKHR and mediates effects of insulin on hepatic IGFBP-1 gene expression. *Journal of investigative medicine* 47 (7): 258A, 1998.

3. Guo S, Abid R, Aird W. TNF-alpha signaling in vascular smooth muscle cells is coupled to forkhead proteins through MAPK and PI3K pathway, *Arteriosclerosis Thrombosis and Vascular Biology* 10 (2): 123A, 2004.

4. Guo S, Lopez-Ilasaca, Dzau V. Identification of calcium modulating cyclophilin ligand (CAML) as an important transducer for AT-1 receptor signaling. *Circulation* 4 (3):18A, 2004.

5. Guo S, White MF. Irs2 is the major regulator of p110a-> Akt-> Foxo1 signaling in mouse embryo fibroblasts. *Diabetes* 55: A299-300, 2006.

6. Cops K, Guo S, White MF. The role of Ser307 of IRS1 in insulin action in mice. *Diabetes* 55: 70-71A, 2006.

7. Cheng Z, Guo S, Copps K, Dong X, Kollipara R, Depinho R, White MF. The Hepatic Lipid Metabolism in Irs1 and Irs2 Double Knockout Mice. *Diabetes* 59: A407-A408, 2008.

8. Guo S, Copps, K, Dong, X, Park, S, Cheng, Z, Pocai, A, Rossetti, L, Sajan, M, Farese, R, White MF. Irs1-branch of the insulin signaling cascade plays a dominant role in hepatic nutrient homeostasis. *Diabetes* 4(5): A23, 2009.

9. Guo S, Gan B, Depinho RA. Regulation of Nutrient Homeostasis by Forkhead FoxO Proteins in the Liver of Mice. *Diabetes* 59: A13, 2010.

10. Messmer-Blust AF, Wu J, Jin Y, Guo S, Li J. Transcriptional Regulation of IGFBP-1 Gene by RTEF-1 in endothelial cells. *Circulation Research* 2(3): 11A, 2011.

11. Messmer-Blust AF, Wu J, Jin Y, Guo S, Li J. Transcriptional Regulation of the IGFBP-1 Gene by RTEF-1 in endothelial cells. *Circulation Research* 109: AP243, 2011.

12. Zhang K, Xu Z, Qi Y, Li L, Guo S. Forkhead/Helix Transcription Factor Foxo1 Serine 253 Controls Nutrient Homeostasis. *Diabetes* 2(4): A56, 2012.

13. Qi Y, Dostal D, Guo S. Myocardial Activation of p38 alpha MAPK Results in Cardiac Insulin Resistance by Chronic Insulin Signaling. *FASEB Journal* 2(1): A27, 2013.

14. Guo S, Qi Y, Zhu Q, Xu Z, Thomas C, Kumar R, Feng H, Dostal D, White MF, Baker MK. Insulin Resistance and Mechanisms of Heart Failure, *Circulation Research* 113: A177, 2013.

15. Zhang K, Xu Z, Li L, Qi Y, Guo S. Foxo1 Inhibits Hepatic Lipogenesis Involving Its Ser253 Dephosphorylation and Activation of AMPK. *Diabetes* 5(6): A334, 2013.

16. Qi Y, Wu Y, Thomas C, Kumar R, Baker K, S Guo. Inactivation of Cardiac Foxo1 by Insulin Signaling is Required for Cardiac Function and Suppression of β-Myosin Heavy Chain Gene Expression. *Circulation* 130 (Suppl 2), A11750-A11750, 2014.

17. Qi Y, Zhu, Q, Zhang, K, Thomas, C, Kumar R, Baker K, S Guo. Inactivation of Cardiac Foxo1 by Insulin Signaling is Required for Cardiac Function and Suppression of β-Myosin Heavy Chain Gene Expression. *Circulation Research* 115: A361, 2014.

Q. POSTER PRESENTATIONS:

1. Guo S, Li S, Sun F. A developmentally stage specific gene identification and expression during zebrafish early neurogenesis, The 15th Annual Meeting of Chinese Endocrinology and Developmental Biology, Suzhou, China, April, 1996.

2. Guo S, Sun F. Oscillin gene cloning, expression and functional analysis during mouse fertilization, The 15th Annual Meeting of Chinese Endocrinology and Developmental Biology. Suzhou, China, April, 1996.

3. Guo S, Li S, Sun F. Gene identification during zebrafish early embryogenesis, The 13th International Conference of Developmental Biology, Salt Lake City, Utah, July, 1997.

4. Guo S, Cichy S, He X, Cohen P, Unterman T. Phosphorylation of serine 256 by protein kinase B (AKT) disrupts transactivation by FKHR and mediates effects of insulin on IGFBP-1 gene expression via a conserved insulin response sequence. The 81st Annual Meeting of the Endocrine Society, San Diego, June, 1999.

5. Guo S, Cichy S, He X, Unterman T. Phosphorylation of serine 256 by protein kinase B (AKT) disrupts transactivation by FKHR and mediates effects of insulin on hepatic gene expression. Tthe Combined Annual Meetings of Midwest Section American Federation For Medical Research, Central Society For Clinical Research, Midwest Society For Pediatric Research, Midwest Region Society of General Medicine, Chicago, November, 1999.

6. Guo S, Cichy S, He X, Unterman T. Forkhead transcription factor in insulin actions. The 82nd Annual Meeting of the Endocrine Society, Toronto, June, 2000.

7. Guo S, Abid R, Aird W. TNF-alpha signaling in vascular smooth muscle cells is coupled to forkhead proteins through MAPK and PI3K pathway, The 5th Annual Conference on Arteriosclerosis Thrombosis and Vascular Biology, San Francisco, 2004.

8. Guo S, Lopez-Ilasaca, Dzau V. Identification of calcium modulating cyclophilin ligand (CAML) as an important transducer for AT-1 receptor signaling. Annual Conference of American Heart Association, New Orleans, Louisiana, October, 2004.

9. Yi X, Dong X, Guo S, White MF. Transcription factor FoxO1 mediates the survival of photoreceptors, International Association for Biological & Medical Research (IABMR) Annual Conference, Tampa Florida, June, 2005.

10. Guo S, Dun S, White MF. Stability of Irs2 and FoxO1 creates a regulatory circuit that regulates insulin action. Keystone Symposia – Diabetes, Vancouver, Canada, February, 2005.

11. Guo S, Dun S, White. IRS2 is the major mediator in insulin signaling pathway in mouse embryonic fibroblasts. The American Diabetes Association Annual Conference, San Diego, June, 2006

12. Cops K, Guo S, White MF. The role of Ser307 of IRS1 in insulin action in mice. The American Diabetes Association Annual Conference, San Diego, June, 2006.

13. Cheng Z, Guo S, Copps K, Dong X, Kollipara R, Depinho RA, White MF. The hepatic lipid metabolism in Irs1 and Irs2 double knockout mice. The American Diabetes Association Annual Conference, New Orleans, Louisiana, June, 2008

14. Guo S, Copps, K, Dong, X, Park, S, Cheng, Z, Pocai, A, Rossetti, L, Sajan, M, Farese, R, White MF. Irs1-branch of the insulin signaling cascade plays a dominant role in hepatic nutrient homeostasis. The American Diabetes Association Annual Conference, New Orleans, Louisiana, June, 2009.

15. Guo S, Gan B, R. Depinho. Regulation of nutrient homeostasis by forkhead FoxO proteins in the liver of mice, 70th Scientific Sessions of American Diabetes Association, Orlando, Florida, June, 2010.

16. Guo S. A cure of type 2 diabetes mellitus by targeting hepatic forkhead transcription factor Foxo1. Research Day Symposium, Texas A&M University, College Station, Texas, August 7-8, 2010.

17. Cheng Z, Guo S, Copps K, Dong X, Kollipara R, Depinho R, White MF. Ablation of hepatic insulin receptor substrate1 1 and 2 reveals an atypical pathway of nonalcoholic steatohepatisis (NASH). ALPCO Diagnostic Scholarship winner, Keystone Symposia – Type 2 diabetes, insulin resistance and metabolic dysfunction, and Obesity. Keystone Resort, Colorado, February, 2011.

18. Messmer-Blust AF, Wu J, Jin Y, Guo S, Li J. Transcriptional Regulation of IGFBP-1 Gene by RTEF-1 in endothelial cells. The American Heart Association, Orlando, Florida, November, 2011.

19. Zhang K, Xu Z, Qi Y, Li L, Guo S. Phosphorylation of Foxo1 Serine 253 Controls Nutrient Homeostasis. The 19th Annual Internal Medicine Research Day Symposium, Texas A&M University College of Medicine, Temple, Texas, April, 2012.

20. Zhang K, Xu Z, Qi Y, Li L, Guo S. Forkhead/Helix Transcription Factor Foxo1 Serine 253 Controls Nutrient Homeostasis. The 72nd Scientific Sessions of American Diabetes Association, a Guided Audio Poster Presentation. Philadelphia, June, 2012.

21. Perry D, Qi Y, Guo S. Activation of p38MAPK is involved in cardiac insulin resistance and heart failure. The College of Medicine of Texas A&M Health Science Center Summer Research Program, Poster Session at the Texas A&M University, College Station, Texas, August 8, 2012.

22. Zhang K, Xu Z, Li L, Qi Y, Guo S. Foxo1 Inhibits Hepatic Lipogenesis Involving Its Ser253 Dephosphorylation and Activation of AMPK. The 20th Annual Internal Medicine Research Day Symposium, Texas A&M University College of Medicine, Temple, Texas, March 7-8, 2013.

23. Xu Z, Li L, Zhang K, Qi Y, Guo S. Glucagon and cAMP Signaling Activate Foxo1 via Phosphorylation of Serine 276 by Protein Kinase A. The 20th Annual Internal Medicine Research Day Symposium, Texas A&M University College of Medicine, Temple, Texas, March 7-8, 2013.

24. Qi Y, Zhu Q, Xu Z, Thomas C, Kumar R, Feng H, Dostal D, White MF, Baker K, Guo S. Myocardial Loss of IRS1 and IRS2 Causes Heart Failure and is Controlled by p38α MAPK During Insulin Resistance. The 20th Annual Internal Medicine Research Day Symposium, Texas A&M University College of Medicine, Temple, Texas, March 7-8, 2013.

25. Zhu Q, Qi Y, Xu Z, Thomas C, Kumar R, Baker B, Guo S. Regulation of Cardiac Myosin Heavy Chain Hemostasis by Insulin through Foxo1. The 20th Annual Internal Medicine Research Day Symposium, Texas A&M University College of Medicine, Temple, Texas, March 7-8, 2013.

26. Qi Y, Dostal D, Guo S. Myocardial activation of p38α MAP kinase in the control of insulin resistance and heart failure. Annual Conference of Experimental Biology and American Society of Physiology, Boston, April 20-24, 2013.

27. Qi Y, Zhu Q, Xu Z, Thomas C, Kumar R, Baker K, Guo S. Myocardial Loss of Insulin Receptor Substrate 1 and 2 Proteins Causes Heart Failure in Mice. The 4th Research

Symposium, Cardiovascular Research Institute, Texas A&M University, Temple, Texas, May 2-3, 2013.

28. Zhang K, Xu Z, Li L, Qi Y, Guo S. Foxo1 Inhibits Hepatic Lipogenesis Involving Its Ser253 Dephosphorylation and Activation of AMPK. The 73rd Annual Meeting of American Diabetes Association, Chicago, June 21-25, 2013.

29. Qi Y, Zhu Q, Xu Z, Thomas C, Kumar R, Baker K, Guo S. Insulin Resistance and Mechanisms of Heart Failure. Basic Council of Vascular Study (BCVS) of American Heart Association, Paris Las Vegas, Nevada, Jul 22-25, 2013.

30. Qi Y, Zhang K, Xu Z, Zhu Q, Chen Q, Kumar R, Baker K, Guo S. Regulation of Blood Pressure by AngII and Hepatic forkhead Transcription Factor Foxo1, Gordon Conference-Angiotensin, Lucca (Barga), Italy, March 1-7, 2014.

31. Qi Y, Zhang K, Xu Z, Zhu Q, Chen Q, Kumar R, Baker K, Guo S. Novel Mechanisms of Blood Pressure by Foxo1-Mediated Transcriptional Control of Angiotensinogen. 2nd Annual Research Day of Baylor Scott and White Healthcare System, Texas A&M Health Science Center, Temple, Texas, May 9-10, 2014.

32. Qi Y, Zhang K, Xu Z, Zhu Q, Candice Thomas, Kumar R, Baker K, Guo S. IRS Signaling in Control of Heart Failure in Type 2 Diabetes Mellitus. 2014 Research Day of Central Texas Veterans Health Care System. Temple, Texas, May 21, 2014.

33. Qi Y, Zhang K, Xu Z, Zhu Q, Candice Thomas, Kumar R, Baker K, Guo S. A Central Mechanism in Control of Heart Failure: the IRS Signaling and p38MAP Kinase, Gordon Conference- Cardiac Regulatory Mechanism, New London, New Hampshire, June 8-13, 2014.

34. Drosatos K, Pollak N, Pol C, Ntziachristos P, Willecke F, Valenti M, Trent C, Hu Y, Guo S, Aifantis I, Goldberg I.J. Cardiomyocyte KLF5 regulates PPARα and cardiac function, Keystone meeting on Mitochondria, Heart Failure and Diabetes Mellitus, Santa Fe, New Mexico, January 27-31, 2015.

R. INVITED PRESENTATIONS AND CONFERENCE SEMINARS/ORGANIZERS:

1. A developmentally stage specific gene identification and expression during zebrafish early neurogenesis. The 15th Annual Meeting of Chinese Endocrinology and Developmental Biology, Suzhou, China, 15-16 April, 1996.

2. Oscillin gene cloning, expression and functional analysis during mouse fertilization. The 15th Annual Meeting of Chinese Endocrinology and Developmental Biology. Suzhou, China, 15-16 April, 1996.

3. Phosphorylation of serine 256 by protein kinase B (AKT) disrupts transactivation by FKHR and mediates effects of insulin on IGFBP-1 gene expression via a conserved insulin response sequence. The 81st Annual Meeting of the Endocrine Society, San Diego, 8-12 June, 1999.

4. Phosphorylation of serine 256 by protein kinase B (AKT) disrupts transactivation by FKHR and mediates effects of insulin on hepatic gene expression. The Combined Annual Meetings of Midwest Section American Federation For Medical Research, Central Society

For Clinical Research, Midwest Society For Pediatric Research, Midwest Region Society of General Medicine, Chicago, 20 December, 1999.

5. Regulation of insulin-like growth factor binding protein (IGFBP-1) gene expression by insulin. Lexicon Genetics, Woodlands, Texas, 5 June, 2000.

6. FoxO signaling pathway in the control of gene expression. Department of Biology, University of Chicago, 20 October, 2000.

7. Decoding insulin signaling pathway. Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston, 15 May, 2005.

8. The role of insulin receptor substrate -1 and -2 in regulating hepatic nutrient homeostasis. The 1st Scientific Meeting of the Chinese-American Diabetes Association (CADA), San Diego, 10 June 2006.

9. The role of insulin receptor substrate proteins in pancreatic beta cells and central nervous system. Division of Endocrinology, Department of Medicine, Children's Hospital Boston, Boston, 10 June 2007.

10. Signaling form insulin receptor substrate (IRS) to forkhead in Diabetes Mellitus. Department of Biochemistry, Temple University, Philadelphia, 20-21 January, 2008.

11. Circuit, transducer, and conductor of insulin signaling. Second Military Medical University, Department of Basic Sciences, Shanghai, China, 28-29 October, 2008.

12. Forkhead Signaling and Diabetes Mellitus. Department of Biochemistry, Temple University, Philadelphia, 9-11 March, 2008.

13. Nutrient Sensor- FoxO transcription factors. Department of Nutrition, Drexel University, Philadelphia, 12-14 March, 2008.

14. Insulin receptor substrate proteins in insulin action. Department of Physiology, Michigan State University, East Lansing, Michigan, 20-22 January, 2009.

15. Control of Diabetes Mellitus by targeting FoxO forkhead transcription factors in the liver. The Scripts Research Institute, San Diego, 23-24 February, 2009.

16. Molecular basis of insulin action. Department of Nutrition, University of Tennessee, Knoxville, 8-9 May, 2009.

17. Mechanisms of Diabetes and its Cardiovascular Complications. Cardiovascular Research Institute, Texas A&M Health Science Center, Temple Texas, 8 September, 2009.

18. Role of FoxO Transcription Factors in Hepatic Glucose and Lipid Metabolism. 70th Scientific Sessions of American Diabetes Association, Orlando Florida, 8-12 June, 2010.

19. Targeting hepatic Foxo genes for a cure of type 2 diabetes mellitus. Third Military Medical University, Chongqing, China, 10-12 August 2010.

20. Approaches of basic science research in the studies of insulin signaling and Diabetes Mellitus. Division of Endocrinology, Scott & White Hospital, Temple, Texas, 22 November, 2010.

21. Diabetic Cardiomyopathy and Insulin Resistance, Symposium on Targeting our Great Enemies: Breakthroughs in Heart Disease and Cancer. Scott & White Hospital and Texas A&M Center for Cell Death and Differentiation, Temple, Texas, 1-2 March, 2012.

22. Hepatic Insulin Resistance, FoxO signaling and Diabetes Mellitus. Scott & White Hospital Digestive Diseases Research Center, Temple, Texas, 22 March, 2012.

23. Transcriptional Regulation of Nutrient Homeostasis by Insulin and FoxO Signaling. The 2nd Annual World Congress of Endobolism, Beijing, China, 12-18 June, 2012.

24. Targeting Hepatic Insulin Signaling Pathway for the Treatment of Diabetes Mellitus. Institute of Metabolic Syndrome. Xiangya Hospital, The South-Central University, Changsha, China, 7 July, 2012.

25. Transcriptional Regulation of Hepatic and Metabolic Homeostasis by FoxO Signaling. The 1st Annual Joseph E. and Martha E. Kutscher Digestive Disease Research Symposium. Scott & White Hospital Digestive Diseases Research Center, Central Texas Olin E. League Veterans Medical Center, Temple, Texas, 28 September, 2012.

26. Insulin resistance and heart failure. The 4th Research Symposium, Cardiovascular Research Institute, Texas A&M University, Temple, Texas, May 2-3, 2013.

27. Myocardial Loss of Insulin Receptor Substrate 1 and 2 Proteins and Mechanisms of Heart Failure in Mice. The 5th Scientific Meeting of Chinese American Diabetes Association, Chicago, June 20-21, 2013.

28. Mechanisms of type 2 diabetes mellitus and associated heart failure. Department of Cellular and Molecular Physiology, School of Medicine, Loyola University, Chicago, October 23, 2013.

29. Forkhead and liver metabolism. Department of Pathophysiology, Second Military University, Shanghai, November 2, 2013.

30. The molecular link between type 2 diabetes mellitus and heart failure. School of Public Health, Zhejiang University, Hangzhou, China, November 4, 2013.

31. Forkhead transcription factor Foxo1 regulates hepatic metabolism by Serine 253 phosphorylation in mice. Cold Spring Harbor Conference Asia, Suzhou, China, November 6, 2013.

32. Decoding insulin resistance in control of heart failure in type 2 diabetes mellitus. Xinqiao Hospital, Third Military University, Chongqing, China, November 14, 2013.

33. Insulin receptor substrate (IRS) and FoxO signaling in control of type 2 diabetes mellitus and heart failure. John Hopkins University School of Medicine Diabetes Research Center, Baltimore, March 19, 2014.

34. Diabetes and Cardiovascular Medicine. Speaker and Organizer of Mini-Symposium on Metabolic Studies. Division of Molecular Cardiology, Department of Medicine, Texas A&M University Health Science Center, Temple, Texas, August 26, 2014.

35. Molecular links between type 2 diabetes mellitus and heart failure. Department of Pharmacology, University of Texas at San Antonio, San Antonio, Texas, September 2, 2014.

36. The role of Forkhead Transcription Factor Foxo1 in Control of Cardiac Homeostasis and Myosin Heavy Chain Gene Expression, keynote lecture speaker and Chair of the Session of Cardiovascular Diseases in Diabetes for the BIT 4th Annual World Congress of Endobolism and 3rd Annual World Congress of Diabetes, Haiko, Hainan International Convention & Exhibition Center, China, November 13-16, 2014.

37. A Central Mechanism in Control of Heart Failure in Diabetes Mellitus: Suppression of IRS Signaling and Activation of p38MAPK, keynote lecture speaker for the BIT 6th Annual International Conference of Cardiology and Chair the Session of Cardiovascular Genetics, Epigenetics, Genomics, Proteomics and Molecular Signaling, Haiko, Hainan International Convention & Exhibition Center, China. November 12-15, 2014.

38. The Molecular Basis of Diabetes Mellitus and Heart Failure: Targeting the IRS Signaling. Speaker for Chinese Forum at the International Conference of Cardiology, Haiko, Hainan International Convention & Exhibition Center, China. November 12-15, 2014.

39. Activation of Foxo1 in control of cardiac function and beta-myosin heavy chain gene expression, Annual meeting the 4th Chinese American Heart Association, Chicago, November 15-19, 2014.

40. Foxo1 Signaling in Control of Hepatic Homeostasis and Metabolism. National Institutes of Diabetes and Digestive and Kidney Diseases, New PI Workshop Conferences. NIH, Bethesda, Baltimore, December 2-3, 2014.

41. Molecular basis of type 2 diabetes mellitus and heart failure, Department of Biochemistry, University of Texas at Southwestern Medical Center, Autophagy Research Center, Dallas, Texas, December 3-4, 2014.

42. Strategies on research grant writing for postdoctoral fellows. Department of Biochemistry, University of Texas at Southwestern Medical Center, Autophagy Research Center, Dallas, Texas, December 3-4, 2014.

43. Control of Heart Failure in Type 2 Diabetes Mellitus, Symposium on Metabolic Studies and Diabetes Mellitus, Department of Biochemistry, University of New Mexico, Albuquerque, February 2-3, 2015.

44. Insulin resistance and control of diabetic cardiomyopathy, Texas A&M DeBaker Institute Cardiovascular Seminar Series, College of Veterinary Medicine and Biological Sciences, College Station, March 10, 2015.

45. Insulin Resistance in Control of Obesity, Type 2 Diabetes, and Heart Failure. 3rd Yangtze River International Congress of Cardiology (YRICC), VIP speaker, Chongqing, China, April 24-26, 2015.

46. Metabolic and Cardiac Diseases. University Front Science Seminar, The Southwest Hospital, Keynote speaker, Chongqing, China, May 18, 2015.

47. Metabolic Syndrome and fatty liver. University Symposium on Metabolic Diseases. Second Military Medical University, Keynote speaker, Shanghai, China, May 20, 2015.

48. Metabolic and Cardiac Signaling and Diseases. University Symposium on Metabolism. University of Huazhong Technology and Science and Tongji Hospital. Keynote speaker, Wuhan, China, May 23, 2015.

49. Insulin Signaling, Resistance and Diseases. University Symposium on Metabolism and Diseases. North China University of Technology and Science. Keynote speaker, Tangshan, China, May 25, 2015.

50. Nutrient and Insulin Signaling in Control of Obesity, Type 2 Diabetes, and Heart Failure. University Symposium on Nutrition and Diseases. China Agricultural University, Keynote speaker, Beijing, China, May 27, 2015.

51. Insulin Resistance in Control of Heart Failure. Department of Medicine of Boston University, Invited speaker, Boston, June 2, 2015.

52. Regulation of Foxo1 by glucagon signaling via protein kinase A, The 75th Scientific Meeting of American Diabetes Association, Boston, June 8, 2015.

53. Hepatic and Cardiac Resistance. Department of Nutrition and Food Science of Texas A&M University, Invited speaker, College Station, Texas, July 7, 2015.

54. Insulin Action and Resistance in Control Type 2 Diabetes. BIT 4th Annual World Congress of Diabetes, Invited speaker, Kaohsiung, Taiwan, November 27, 2015.

55. Insulin Resistance in Control of Cardiac Function. Annual Conference of International Cardiology, Invited speaker, Shanghai, China, December 5, 2015.

56. Metabolic Syndrome and Disease Mechanisms. Key laboratory of Neuro regeneration of Nantong University. Invited speaker, Nangtong, Jiansu Province, China, December 6, 2015.

57. Hepatic Insulin Resistance and FoxO1 Signaling in Control of Nutrient Homeostasis and Cardiovascular System. Department of Cellular and Structural Biology of University of Texas Health Science Center, Invited Departmental Seminar Series Speaker, San Antonio, December 16, 2015.

S. RESEARCH SUPPORT:

CURRRENT ACTIVE (PI)

2012-2017 National Institutes of Health/NIDDK - RO1 DK095118
Transcriptional Regulation of Metabolic and Hepatic Homeostasis by FoxO Signaling
PI, Shaodong Guo, Direct Cost: $1,250,000 for 5 years

2015-2020 American Diabetes Association Career Development Award
Control of Liver Fibrosis and Failure by Insulin Resistance via Forkhead Signaling
PI, Shaodong Guo, Direct Cost: $925,000 for 5 years

2016-2018 Texas A&M University AgriLife Start-up Funds
Nutrients and Hormones in Control of Metabolic and Cardiovascular Diseases
PI, Shaodong Guo, Direct Cost: $ 900,000 for 3 years

COMPLETED (PI)

2011-2013 American Heart Association Grant-in Aid - BGIA7880040
Forkhead Signaling in the Control of Renin-Angiotensin System in Diabetic Cardiomyopathy
PI, Shaodong Guo, Direct Cost: $70,000/yr for 2 years

2009-2013 Texas A&M Cardiovascular Research Institute Start-up Funds
The Mechanism of Diabetes Mellitus and associated Cardiac Dysfunction
PI, Shaodong Guo, Direct Cost: $133,000/yr for 3 years

2007-2010 American Diabetes Association - JF-7-07-27
Transcriptional Regulation of Nutrient Homeostasis by Forkhead in the liver
PI, Shaodong Guo, Direct Cost: $120,000/yr for 3 years

1996-1999 Institute of Genetics and Developmental Biology of Chinese Academy of Science
Identification of genes controlling the early embryogenesis in Zebrafish
PI, Shaodong Guo, Direct Costs: ¥ 20,000

1997-1999 National Natural Science Foundation of China
Characterization of genes in control of embryogenesis in Zebrafish
PI, Shaodong Guo, Direct Costs: ¥ 120,000

T. CITATION INDEX:

Science Citation Index: Shaodong Guo, Ph.D.
Compiled from data of the Institute of Scientific Information (Philadelphia, PA)
Cited (*):

1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
53	94	149	170	207	191	234	201	263	287	263	278	351	290

2013	**2014**	**2015**
232	352	162

* Average number of citations per year for all scientists is 17. More than 100 citations per year is considered highly cited.

Google Scholar Citations: 4,331 h-index (*): 27
* The h-index reflects both the number of publications and the number of citations per publication (the h-Index is intended to measure simultaneously the quality and quantity of scientific output)

U. TEACHING STATEMENT of Dr. GUO (Biochemistry; Molecular & Cellular Physiology)

I believe that fundamental biological principles coupled with critical thinking skills provide the active learning foundation of every good biologist. There are five essential tenets to my teaching philosophy: 1) Motivate and guide students to recognize and fully understand the fundamental

concepts in biology; 2) transfer my hands-on and state-of-the-art technologies involved in my research laboratory to students; 3) help students develop their critical thinking skills so that advanced concepts are no longer viewed as a complex maze, but rather as extensions of several first principles; 4) help students gain a broad understanding of their field by unifying seemingly disparate concepts and disciplines; and 5) ultimately help students become independent and active learners.

I embrace teaching as an opportunity to inspire and empower. The mind of a student is not a vessel to be filled, but a fire to be kindled. I will inspire students to understand the world in a scientific view, articulating where we hope to be at the end of the course and how we intend to get there by emphasizing fundamental concepts and their applications to solve problems. As a teacher, I pursue an idea of the big picture; therefore, I can accurately assess the important principles that need to be covered for the most effective lectures. Moreover, I present materials in a way that caters to different learning styles. Some learn independently by using the text book, while some require case studies and analogies to tie the material together. In designing the course format and evaluation requirements, I strive to optimize student engagement and feedback. At the undergraduate level, class format varies and may include lecturing material on chalk boards and PowerPoint presentations for stimulating class discussion along with guest speakers. At the graduate level, we teach advanced biochemistry by a series of seminars where individuals select their papers of interest, I will incorporate group activities so students can teach each other by solving problems together. These activities, along with my personal interaction with individuals, will not only help the learning process as students interact with one another, but also build valuable communication skills in organizing their thought processing on how to approach problems.

Biochemistry is an applied field where students constantly apply the fundamental concepts and theory learned in the classroom. One of my main goals is to allow students to gain insights of state-of-the-art techniques commonly used in research laboratories in both academia and industry. An effective way is to encourage students to apply their knowledge and problem-solving skills by participating in biochemical experiments and projects in departmental research laboratories. Additionally, students can apply their critical thinking skills on a more regular basis during weekly timed quizzes with problems selected from GRE, MCAT, and USMLE databases. As a result, students can have hands-on discovery on what is known, while some problems are still unresolved.

Many biochemical concepts that are repeatedly discussed in several courses can initially seem like disparate ideas. In my teaching, I show how cohesive these concepts can be by presenting several of their manifestations during a lecture. This way, students can recognize that what they are learning in one class directly applies to several other classes in their curriculum. Such unification is important because students can then focus their efforts on critical thinking and problem solving, rather than spend time learning the same concept presented in different ways in different classes. When students learn to evaluate problems on their own, they become independent thinkers with the ability to implement their problem solving skills to everyday challenges.

I hope that students truly appreciate learning the materials that are incorporated as update at my classes. For example, in the post-genomic era, using software for gene analysis is essential for students to understand the complexity of biochemistry. Although it is personally enjoyable for me to teach the front lines of biology, the real success lies in seeing students thrive when they move on to professional schools or industry. It would be a great pleasure to see my lectures bear fruit; that it does not merely offer a fish to satisfy my students for a short period of time, but it teaches them a way of fishing that would offer the benefit of a lifetime.

Having joined Texas A&M, I have been teaching the biochemistry course on "Current Topic on Cell Signaling" (MSCI612) receiving good scores from student evaluations and the cell biology course (MSCI601) receiving outstanding scores. In addition, I have also mentored 10 postdoctoral fellows studying the mechanisms of type 2 diabetes in my research lab.

V. RESEARCH STATEMENT of Dr. GUO

When I was a graduate student majoring in molecular and cellular physiology, I understood that spectacular advances in the field of molecular biology and genetics could have a dramatic impact on modern biomedical research. When I finished my Ph.D. thesis on energy metabolism studies in the Department of Biology at Peking University, I realized the importance of studying gene function and regulatory networks in control of cellular signal transduction and metabolic pathways and associated diseases. After completing my training in developmental biology at the Institute of Genetics and Developmental Biology at the Chinese Academy of Sciences, I joined Dr. Terry Unterman's laboratory at the University of Illinois and began studying the molecular mechanisms of insulin action. After 4 years working on insulin, I ascertained that my future interest would focus on the study of molecular genetics of human diseases, particularly diabetes, obesity and associated cardiovascular complications, in which dysregulated energy metabolism and insulin resistance cause illness. To broaden my knowledge and enhance visions in biomedical research, I moved to Harvard Medical School where I further studied diabetes and cardiovascular biology for 8 years. At Harvard, I participated in many seminars organized by Harvard institutions. While working with Dr. Victor Dzau, I realized that gene and cell therapy could offer an approach treating diabetes and its complications in the future. I was interested in insulin and diabetes research and a variety of experimental approaches it entailed. When Dr. Dzau left Harvard for Duke, I joined Dr. Morris White's HHMI laboratory where I received extensive training in mouse genetics studying gene's function. Since I joined Texas A&M University in the fall of 2009, I have developed several independent research programs by receiving 4.45 million dollars from several foundations, including the American Diabetes Association ($1,410,000), American Heart Association ($140,000), Texas A&M start-up ($1,300,000), and National Institutes of Health ($1,600,000). We have published 20 papers since 2009 and authored 40 peer-reviewed papers in total, receiving 4,300 citations with an h-factor of 27 based on google scholar citation.

With the completion of human and mouse genomic projects, it is known that about 25,000 genes and their encoding proteins govern the biological function of a cell. It has accumulated a large amount of information as to how these genes function in a network within a cell and how malfunctions result in diseases. One of the most important recent findings in biology is the molecular basis of longevity control. The key elements regulating longevity, from worm to fruit fly, are components or mediators involved in insulin action, of which downstream PI3K, protein kinase B (known as Akt), and the forkhead transcription factor FoxO1 are key in control of lifespan. Our previous studies have built up textbook knowledge regarding how insulin inactivates FoxO1 protein via activation of PI3K and Akt in control of gene expression and energy metabolism (Lehninger Principles of Biochemistry, 6th edition by David Nelson and M. Cox, page 609-612), while dysregulation of insulin at the level of Akt and Foxo1 regulation can result in diabetes and associated cardiovascular complications.

The long-term goal of my research is to study the molecular mechanisms of insulin signal transduction, insulin resistance and associated cardiovascular dysfunction, aiming at nutritional and therapeutic intervention for control of diabetes and cardiovascular disorders. My laboratory is focused on the study of cellular signaling and gene transcriptional regulation of metabolic homeostasis by the PI3K→Akt→FoxO pathway, with the hope of understanding how the dysregulation of this pathway in insulin/IGF-1 action causes liver damage, cardiovascular

dysfunction, and pancreatic beta cell failure, resulting in diabetes, obesity, and heart failure. My research encompasses several areas. Firstly, we will decode the mechanism of insulin resistance and associated cardiovascular dysfunction. It is known that excess nutrients cause or accelerate insulin resistance, investigating how nutrient-mediated signaling activates intracellular mediators that attenuate the insulin→IRS→Akt→FoxO signaling pathway provides a powerful platform for nutritional and therapeutic intervention for the treatment of diabetes and cardiovascular disorders. The discovery of bioactive compounds, functional food, peptides, nucleotides, or stem cells that increase gene expression of IRS or promote FoxO phosphorylation and ubiquitination will promote drug development by providing new insights on nutritional and therapeutic targets. Secondly, we will define the roles of FoxO proteins in insulin signaling and insulin resistance through creation of cell lines and animal models in which FoxO is either eliminated by a genetic "knock-out" or increased by overexpression. This will also include studies utilizing the technique of tissue specific gene inactivation or activation (knock-in) to determine the role of FoxO in various tissues, including classic and non-classic target tissues for insulin action, such as liver and heart. Lastly, we will explore the novel players mediating insulin actions, as well as other hormones including glucagon and other hormones, in control of energy metabolism and survival. We have taken advantage of IRS and FoxO genetically engineered mouse models with analyses in genomics, proteomics, and metabolomics, to better define the physiological connections between metabolic regulation and FoxO in intracellular signaling networks. Over the past several years, my lab has made significant efforts on studying the role of IRS and FoxO in the hepatic and cardiac systems.

W. SERVICE STATEMENT of Dr. GUO

Public service is a responsibility for faculty members. Although research in labs and classroom teaching occupy the most time, faculty members should take opportunities to contribute to the public community locally, nationally, and globally. Public service provides a platform for faculty to translate knowledge, bring expertise and make contributions at different levels. By organizing and joining in a variety of activities in the public domain, a faculty member can promote local and global education, publication, and research, as well as inspire future generations to fight against current issues, such as diseases and poverty. By acting as a speaker, reviewer of research grants and educational programs, editor of journals, organizer of conferences, member of local committees, or volunteer in community, a faculty member can better contribute to delivering science to the public. In turn, feedback from the public can encourage the faculty member to design research proposals focusing on public interests and problems.

At Texas A&M, I have served as a member on the graduate school study committee, Ph.D./M.D. student thesis committee, cardiovascular research institute (CVRI) series seminar committee, the Central Texas VA research safety committee, and the study section of grant review committee for the American Heart Association. I have also delivered 35 seminars and presentations to local, national, and international conferences. Currently, I serve as a senior editor for the Journal of Endocrinology (IF 4.06) and Journal of Molecular Endocrinology (IF 3.58), two official journals of the Endocrine Societies of Europe and United Kingdom.