Date of Preparation __7/16/2014_____

CURRICULUM VITAE

Name: ZHOUSHENG XIAO

Citizenship: US Citizen

Current Academic Rank: Associate Professor

Department(s): Nephrology/ Medicine

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EDUCATION:

Undergraduate:

Years (Inclusive)	Degree	Institution
1982-1987 (5 years)	M.D.	School of Medicine, Nanhua University

Graduate/Professional School:

Years (Inclusive)	Degree	Institution
1989-1992 (3 years)	M.S.	Xiangya School of Medicine, Central South University (CSU)
2000-2003 (3 years)	Ph.D.	Duke University Medical Center (DUMC)/Xiangya School of Medicine, Central South University (CSU)

Postgraduate Training

Month and Year	Position	Institution
06/1995~03/1996	Post-doctor	Human Metabolic Section, NIEHS
03/1996~03/1999	Post-doctor	Medicine, Duke University Medical Center

HONORS/AWARDS:

Year	Award
06/1996	Young Investigator Award, the Nature Science Foundation Commission of Hunan
07/1999	Third Prize of Science and Technology Progress Award, the State Education Commission of China
12/2000	Excellent Young Teacher and Researcher, the Education Commission of China
09/2001	First Prize of Science and Technology Progress Award, the University Commission of China
09/2003	Young Investigator Award, 25th the American Society for Bone and Mineral Research, USA

MILITARY SERVICE:
N/A

BOARD CERTIFICATION:
N/A

LICENSURE:
N/A

SOCIETY MEMBERSHIPS:

Date	Organization (including offices held)
08/2001~present	A member of the American Society for Bone and Mineral Research

UNIVERSITY (AND COLLEGE) APPOINTMENTS:

Month and Year	Position	Institution
07/1987~07/1992	Teaching and Research Assistant	Pharmacology, Hunan Medical University
07/1992~06/1995	Assistant Professor	Pharmacology, Hunan Medical University
03/1999~08/2001	Associate Professor	Pharmacology, Xiangya School of Medicine, Central South University (CSU)
08/2001~03/2004	Research Assistant	Medicine, Duke University Medical

	Professor	Center
03/2004~07/2009	Research Assistant Professor	Medicine, University of Kansas Medical Center
07/2009~11/2009	Research Associate Professor	Medicine, University of Kansas Medical Center
11/2009~present	Associate Professor	Medicine, University of Tennessee Health Science Center

HOSPITAL/CLINICAL APPOINTMENTS:
N/A

PRACTICE/PROFESSIONAL EXPERIENCE:
N/A

OTHER ACADEMIC APPOINTMENTS:
N/A

PRIVATE SECTOR APPOINTMENTS:
N/A

GOVERNMENT SECTOR APPOINTMENTS:
..N/A

TEACHING EXPERIENCE:

Master's Theses and PhD Dissertations directed

Year	Student Name	Thesis Title	Degree (Completed/In process)
2007~2010	Yalin Li	Role of Runx2 isoforms in osteogenic differentiation of human BMSC culture	Ph.D.
2008~2011	Ni Qiu	Role of PC1, PC2, and Kif3a in bone development and mechanosensing	Ph.D.

VISITING PROFESSORSHIPS AND INVITED LECTURES:

Year	Title Description	Intended Audience
2/8/2006	Primary cilium and polycystin-1 in osteoblasts/osteocytes and	Dept. of Oral Biology, UMKC, Graduate students and faculty

	associated abnormalities in skeletogenesis and *Runx*2 expression	members
8/27/2007	PKD1, a Novel Mechanosensor/Transducer in Bone	Xiangya School of Medicine, CSU, Graduate students and faculty members
9/4/2009	Conditional Deletion and/or Disruption of Pkd1 in Osteocytes Results in a Significant Reduction in Anabolic Response to Mechanical Loading.	Dept. of Oral Biology, UMKC, Graduate students and faculty members
5/22/2010	Role of polycystin-1 in bone development and mechanosensing.	St Jude Research Hospital, Graduate students and faculty members
10/7/2011	Role of Primary Cilium-Polycystin Complex in Bone Development, Postnatal Skeletal Homeostasis, and Bone Mechanosensing	UTHSC, BME Graduate students and faculty members

EDITORIAL APPOINTMENTS:
N/A

COMMITTEES AND OFFICES HELD:

1. Reviewed two manuscripts for *Journal of Cellular Biochemistry* and *Bone* in 2005.
2. Reviewed one manuscript for European Journal of Pharmacology in 2006 and 2009.
3. Reviewed two manuscripts for Molecular Medicine and Cell Proliferation in 2007 and 2008.
4. Reviewed one review article for Cellular and Molecular Life Science in 2011.
5. Reviewed one research manuscript for PPAR Research in 2012.
6. Reviewed one research manuscript for Kidney International in 2012.
7. Reviewed one research manuscript for Bone in 2012.
8. Reviewed one research manuscript for BMC Medical Genomics in 2013.
9. Reviewed one research manuscript for Clinical Biomechanics in 2013.
10. Reviewed one manuscript for *Journal of Cellular Biochemistry* in 2013.
11. Reviewed one manuscript for *PLoS ONE* in 2014.
12. Reviewed one review article (marrow-002) for *MARROW-Annals of the New York Academy of Science* in 2014.

OTHER PROFESSIONAL AFFILIATIONS AND ACTIVITIES: (OPTIONAL)
N/A

RESIDENTS/FELLOWS/GRADUATE STUDENTS TRAINED:

Year	Fellow Name	Area of Study
2004~2009	Shiqin Zhang	Bone biology, osteoblast culture, molecular biology
2005	Gan Zhou	Bone biology and bone mechanosensing mechanism
2006	Franck Belibi	Role of polycystin-1 in osteoblast function
2007	Johanna McCullagh	Role of Runx2 isoform in bone development
2007~2009	Nan He	Role of Runx2 isoform in bone development
2011~2012	Ni Qiu	Role of PC1, PC2, and Kif3a in bone development and mechanosensing
2011~2012	Rodriguez Ortiz, Maria Encarnacion	Regulation of Fibroblast Growth Factor 23 expression
2012~2013	Jinsong Huang	(1) Role of polycystins in fracture healing (2) Bone gene mapping using BXD strains
2012~2013	Xia Hong	Role of polycystins in bone development and mechanosensing

RESEARCH AND OTHER EXTERNAL SUPPORT:

Principal Investigator	Investigators	Title of Grant	Funding Source	Direct Costs	Years	Status
L. Darryl Quarles	Zhousheng Xiao	Differential Function and Regulation of Runx2 Isoforms	NIH/NIAMS	$250,000	2003-2008	No cost extension
Zhousheng Xiao	Gan Zhou	PKD1, a Novel Mechanosensor/Transducer in Bone	NIH/NIDDK	$50,000	2006-2007	No cost extension
L. Darryl Quarles	Co-PI: Zhousheng Xiao	Cilia-PKD 1/PKD2 Complex: A Novel Mechanosensor in Bone	KCALSI	$47,727	2008-2009	funded
L. Darryl	Co-PI:	To screen three CGRP				

Quarles	Zhousheng Xiao	analogs for bioactivity *in vitro*	VasoGenix	$250,000	2008-2009	funded
L. Darryl Quarles	Zhousheng Xiao	Differential Function and Regulation of Runx2 Isoforms	KUMC Research Institute	$35,000	2008-2009	funded
Zhousheng Xiao	Shiqin Zhang	Mechanosensing function on primary cilium-polycystin complex in bone	NIH/NIAMS	$125,000	2008-2010	funded
L. Darryl Quarles	Co-PI: Zhousheng Xiao	Extrarenal Functions of Polycystin-1	NIH/NIDDK	$81,702	2009-2010	funded
Liang Hong	Zhousheng Xiao	Development of miniature plasma brush for dental caries prevention	NIH/NIDCR	$35,250	2011-2012	funded
L. Darryl Quarles	Co-I: Zhousheng Xiao	Extrarenal Functions of Polycystin-1	NIH/NIDDK	$250,000	2010-2015	funded
L. Darryl Quarles	Co-I: Zhousheng Xiao	Regulation and function of FGF23	NIH/NIAMS	$250,000	2012-2017	funded
Zhousheng Xiao	Co-PI: L. Darryl Quarles	Targeting the primary cilium-polycystin mechanosensor in bone to stimulate bone formation	Launch YourCity	$20,000	2012-2013	funded
L. Darryl Quarles	Co-I: Zhousheng Xiao	Regulation and function of FGF23 (NIAMS BIRT Grant)	NIH/NIAMS	$149,427	2014-2015	funded

Grants and contracts submitted:

Principal Investigator	Investigators	Title of Grant	Funding Source	Direct Costs	Years	Status
Raymond Runyan	Co-PI: Zhousheng Xiao	Runx2 in heart development and pathology	NIH	$614,110	2011-2016	Submitted
Zhousheng Xiao	Co-I: Valentin David	Mechanosensing function of the polycystin-primary cilium complex in osteocytes	NIH/NIAMS	$250,000	2011-2016	Scored and Plan to resubmit
Karl Wenger	Co-PI: Zhousheng Xiao	Role of polycystin-cilium complex in transduction of therapeutic mechanical signals for bone	NIH/NIAMS	$230,921	2012-2014	Submitted

Raymond Runyan	Co-PI: Zhoushen g Xiao	Runx2 in Valve Development and Calcification	NIH/NH LBI	$250,00 0	2012-2017	Scored and Plan to resubmit
Karl Wenger	Co-PI: Zhoushen g Xiao	Modulation of fracture healing by primary cilium-polycystin complex in bone	NIH/NI AMS	$155,92 1	2012-2014	Submitted
Karen Hasty	Co-PI: Zhoushen g Xiao	Pkd1 and Primary Cilia in Cartilage Metabolism and OA	NIH/NI AMS	$185,37 4	2012-2014	Scored and Plan to resubmit
Zhousheng Xiao	Co-I: Jinsong Huang	Mechano-regulatory function of polycystins in bone fracture healing	NIH/NI AMS	$250,00 0	2014-2019	Plan to resubmit

BOOKS AND BOOK CHAPTERS:

1. **Zhousheng Xiao**, P450 family and subfamily, a Book chapter of Dr. HaoHong Zhou (2001) of Pharmacogenetics, China Science and Technolgy Press. pp50-85.

PEER-REVIEWED JOURNAL ARTICLES:

1. **Xiao ZS**, Huang JS, Cao L, Liang YJ, Quarles LD. 2014, Bone Specific Deletion of *Fgfr1* in *Hyp* Mice Partially Corrects the Hypophosphatemic Rickets Phenotype. *PLoS One*, *In Press* 2014.
2. Dai J, Li Y, Zhou H, Chen J, Chen M, **Xiao ZS**. Genistein promotion of osteogenic differentiation through BMP2/SMAD5/RUNX2 signaling. *Int J Biol Sci*. 2013 Nov 21;9(10):1089-98. doi: 10.7150/ijbs.7367.
3. Qiu N, **Xiao ZS**, Cao L, David V, Quarles LD. 2012, Conditional Disruption of *Pkd1* in Mesenchymal Lineage Results in Osteopenia and Polycystic Kidney Disease, *PLoS One.*, Sep 21. 7(9):e46038. PMID:23029375.
4. Qiu N, **Xiao ZS**, Cao L, Buechel MM, David V, Roan E, Quarles LD. 2012, Disruption of *Kif3a* in osteoblasts results in defective bone formation and osteopenia, *Journal of Cell Science*, Feb 22. 125(Pt 8):1945-57. PMID:22357948. .
5. Qiu N, Zhou H, **Xiao ZS.** 2011, Downregulation of PKD1 by shRNA results in defective osteogenic differentiation via cAMP/PKA pathway in human MG-63 cells. *J Cell Biochem*. Oct 27. 113(3):967-76. PMID: 22034075.
6. **Xiao ZS**, Dallas M, Qiu N, Nicolella D, Cao L, Johnson M, Bonewald L, Quarles LD. 2011, Conditional deletion of *Pkd1* in osteocytes disrupts skeletal mechanosensing in mice. *FASEB J.* Mar 31. 25(7):2418-32 [Epub ahead of print]. PMID: 21454365
7. He N, **Xiao ZS**, Yin T, Stubbs J, Li L, Quarles LD. 2011, Inducible expression of *Runx2* results in multiorgan abnormalities in mice. *J Cell Biochem.* Feb;112(2):653-65. PMID: 21268087
8. Qiu N, Cao L, David V, Quarles LD, **Xiao ZS**. 2010, Kif3a deficiency reverses the skeletal abnormalities in Pkd1 deficient mice by restoring the balance between osteogenesis and adipogenesis. *PLoS One.*Dec 2;5(12):e15240. PMID: 21151991
9. **Xiao ZS** and Quarles LD. Role of the Polycytins-Primary Cilia Complex in Bone Development and Mechanosensing. 2010, *Ann N Y Acad Sci.* 1192(1):410-21.

10. **Xiao ZS**, Zhang SQ, Cao L, Qiu N, David V, Quarles LD. 2010, Conditional Disruption of *Pkd1* in Osteoblasts Results in Osteopenia due to Direct Impairment of Bone. *J Biol Chem.* 285(2):1177-87.
11. Zhang SQ, **Xiao ZS**, Luo JM, He N, Mahlios J, Quarles L.D. 2009, Dose-dependent effects of *Runx2* on bone development. *J Bone Miner Res.* Nov;24(11):1889-904.
12. Liu S, Tang W, Fang J, Ren J, Li H, **Xiao ZS**, Quarles LD. 2009, Novel Regulators of Fgf23 Expression and Mineralization in Hyp Bone. *Mol Endocrinol.* Sep;23(9):1505-18.
13. Li YL, Pan W, Xu WF, He N, Chen XW, Liu H, Quarles LD, Zhou HH, **Xiao ZS**. 2009, *RUNX2* mutations in Chinese patients with cleidocranial dysplasia. *Mutagenesis*. Sep;24(5):425-31.
14. **Xiao ZS**, Zhang S, Magenheimer BS, Luo J, Quarles LD. 2008, Polycystin-1 regulates skeletogenesis through stimulation of the osteoblast-specific transcription factor *Runx2*-II. *J Biol Chem.* 283(18):12624-34.
15. **Xiao ZS**, Zhang S, Mahlios J, Zhou G, Magenheimer BS, Guo D, Dallas SL, Maser R, Calvet JP, Bonewald L, Quarles LD. 2006, Cilia-like structures and polycystin-1 in osteoblasts/osteocytes and associated abnormalities in skeletogenesis and Runx2 expression. *J Biol Chem.* 281(41):30884-95.
16. Li YL, Zhang W, Guo D, Zhou G, Zhou HH, **Xiao ZS**. 2008, Pharmacokinetics of the new proton pump inhibitor ilaprazole in Chinese healthy subjects in relation to *CYP3A5* and *CYP2C19* genotypes. *Clinica Chimica Acta*. 391(1-2):60-7.
17. Huang L, QIU N, Zhang C, Wei HY, Li YL, Zhou HH, **Xiao ZS**. 2008, Nitroglycerin enhances proliferation and osteoblastic differentiation in human mesenchymal stem cells via nitric oxide pathway. *Acta Pharmacol Sin*. 29(5):580-6.
18. Liao QC, Li YL, Qin YF, Quarles LD, Xu KK, Li R, Zhou HH, and **Xiao ZS**. 2008, Inhibition of adipocyte differentiation by phytoestrogen genistein through a potential downregulation of extracellular signal-regulated kinase 1/2 activity. *J Cell Biochem*. 104(5):1853-64.
19. Li YL, Quarles LD, Zhou HH, **Xiao ZS**. 2007, RNA interference and its application in bone-related diseases. *Biochem Biophys Res Commun.* 361(4):817-21.
20. Liao QC, **Xiao ZS**, Qin YF, Zhou HH. 2007, Genistein stimulates osteoblastic differentiation via p38 MAPK-Cbfa1 pathway in bone marrow culture. *Acta Pharmacol Sin*. 28(10):1597-602.
21. Li YL, **Xiao ZS**. 2007, Advances in Runx2 regulation and its isoforms. *Med Hypotheses*. 68(1):169-75.
22. Dai ZJ, Li YL, Quarles LD, Song T, Pan W, Zhou HH, **Xiao ZS.** 2007, Resveratrol enhances proliferation and osteoblastic differentiation in human mesenchymal stem cells via ER-dependent ERK1/2 activation. *Phytomedicine*, 14: 806-814.
23. Song LH, Pan W, Yu YH, Quarles LD, Zhou HH, **Xiao ZS.** 2006, Resveratrol prevents CsA inhibition of proliferation and osteoblastic differentiation of mouse bone marrow-derived mesenchymal stem cells through an ER/NO/cGMP pathway. *Toxicol In Vitro.* 20(6):915-22.
24. Pan W, Quarles LD, Song LH, Yu YH, Jiao C, Tang HB, Jiang CH, Deng HW, Li YJ, Zhou HH, **Xiao ZS**. 2005, Genistein stimulates the osteoblastic differentiation via NO/cGMP in bone marrow culture. *J Cell Biochem.* 94(2):307-16.
25. Liu S, Brown TA, Zhou J, **Xiao ZS**, Awad H, Guilak F, Quarles LD. 2005, Role of matrix extracellular phosphoglycoprotein in the pathogenesis of X-linked hypophosphatemia. *J Am Soc Nephrol*. 16(6):1645-53.
26. **Xiao ZS**, Awad, H.A., Liu, S., Mahlios, J., Zhang, S., Guilak, F., Mayo, M.S., and Quarles, L.D. 2005, Selective Runx2-II deficiency leads to low-turnover osteopenia in adult mice. *Dev Biol* 283:345-356.

27. **Xiao ZS**, Hjelmeland AB, Quarles LD. 2004, Selective deficiency of the "bone-related" *Runx*2-II unexpectedly preserves osteoblast-mediated skeletogenesis. *J Biol Chem* 279(19):20307-20313.
28. Liu S, Guo R, Simpson LG, **Xiao ZS**, Burnham CE, Quarles LD. 2003, Regulation of fibroblastic growth factor 23 expression but not degradation by PHEX. *J Biol Chem* 278(39):37419-26.
29. Guo R, Rowe PS, Liu S, Simpson LG, **Xiao ZS**, Darryl Quarles LD. 2002, Inhibition of MEPE cleavage by Phex. *Biochem Biophys Res Commun.* 297(1):38-45.
30. **Xiao, ZS,** Simpson, L.G., Quarles, L.D. 2003, IRES-dependent translational control of *Cbfa*1/*Runx*2 expression. *J Cell Biochem* 99: 1-13.
31. He N, Yan FX, Huang SL, Wang W, **Xiao ZS,** Liu ZQ, Zhou HH. 2002, *CYP 2C19* genotype and S-mephenytoin 4'-hydroxylation phenotype in a Chinese Dai population. *Eur J Clin Pharmacol* 58:15-18.
32. **Xiao ZS**, Quarles LD, Chen QQ, et al. 2001, Effect of asymmetric dimethylarginine on osteoblastic differentiation. *Kidney Int* 60: 1699-1704.
33. **Xiao ZS**, Liu SG, Hinson TK and Quarles LD. 2001, Characterization of the upstream mouse *Cbfa*1/*Runx*2 Promoter. *J Cell Biochem* 82: 647-659.
34. **Xiao ZS**, Hinson TK and Quarles LD. 1999, *Cbfa*1 isoform overexpression upregulates osteocalcin gene expression in non-osteoblastic and pre-osteoblastic cells. *J Cell Biochem* 74(4): 596-605.
35. Xie HG, Stein CM, Kim RB, **Xiao ZS,** He N, Zhou HH, Gainer JV, Brown NJ, Haines JL, Wood AJ. 1999, Frequency of functionally important beta-2 adrenoceptor polymorphisms varies markedly among African-American, Caucasian and Chinese individuals. *Pharmacogenetics* 9:511-516.
36. **Xiao ZS**, Crenshaw M, Guo R, Nesbitt T, Drezner and Quarles LD. 1998, Intrinisic mineralization defect in hyp mouse osteoblasts. *Am J Physiol* 275: E700-E708.
37. Nesbitt, T., Fujiwara, I., Thomas, R., **Xiao, Z.S.,** Quarles, L.D., Drezner, M.K. 1999, Coordinated maturational regulation of *PHEX* and renal phosphate transport inhibitory activity: evidence for the pathophysiological role of *PHEX* in X-linked hypophosphatemia. *J. Bone. Min. Res.,* 14(12):2027-2035.
38. **Xiao ZS**, Thomas R, Hinson TK, and Quarles LD. 1998, Genomic structure and isoform expression of mouse, rat and human *Cbfa*1/*Osf*2 transcription factor. *Gene* 214: 187-197.
39. **Xiao ZS**, Goldstein JA, Xie HG, et al. 1997, Differences in the incidence of the *CYP2C19* polymorphism affecting the S-mephenytoin phenotype in Chinese Han and Bai populations and identification of a new rare *CYP2C19* mutant allele. *J Pharmacol Exper Ther* 281: 604-609.
40. Xie H.G., Huang S.L, Xu Z.H., **Xiao Z.S**., Zhou H.H. 1997, Evidence for the effect of gender on activity of (S)-mephenytoin 4'-hydroxylase(CYP2C19) in Chinese population. *Pharmacogenetics*. 7: 115-119.
41. **Xiao ZS**, Xie HG, He N, et al. 1996, The effect of gene dose on the activity of S-mephenytoin hydroxylase. *Natl Med J China* 76(5): 389-390.
42. **Xiao ZS**, Li YJ, Deng HW. 1996, Ischemic preconditioning mediated by calcitonin generelated peptide in isolated rat hearts. *Acta Pharmacol. Sin* 17: 445-448.
43. **Xiao ZS**, Fang YX, Chen X. 1994, Effects of sodium salicylate on ischemia and reperfusion injury in isolated rat hearts. *Chinese journal of pharmacology and toxicology*. 8(3): 187-190.
44. Li Y.J., **Xiao Z.S.**, Peng C.F., Deng H.W. 1996, Calcitonin gene-related peptide-induced preconditioning protects against ischemia-reperfusion injury in isolated rat hearts. *Eur. J. Pharmacol.* 311: 163-167.

Manuscripts submitted but not yet accepted:

1. Zhousheng Xiao, Jinsong Huang, Li Cao, Yingjuan Liang, L. Darryl Quarles. 2014, Conditional Disruption of *Pkd2* in Osteoblasts Results in Osteopenia due to Direct Impairment of Bone. *Journal of Biological Chemistry*.

Invited or non-peer-reviewed articles or reviews:

1. Xiao ZS and Quarles LD. Physiological and Therapeutic Importance of Mechanosensing In Bone. 2014, *Ann N Y Acad Sci.*

OTHER PUBLICATIONS: (OPTIONAL) or other appropriate category
Published abstracts: (Provide names of all authors, year, title, where published, volume, and pages.)

1. Z. Xiao, L.G. Simpson, L.D. Quarles. (2002) Cap- and IRES-Dependent Translational Control of Cbfa1 Runx2 Expression. J Bone Miner Res. Abstract No. F180, S193.

2. Z. Xiao, L.G. Simpson, L. D. Quarles. (2003) Selective deficiency of Runx2 type II isoform causes limited skeletal abnormalities involving terminal events in bone development. J Bone Miner Res. Abstract No. 1054, S15.

3. Z. Xiao, H. Awad, S. Liu, F. Guilak, L. D. Quarles. (2004) Selective Runx2-II deficiency differentially affects endochondral, cortical and intramembranous bone formation in adult mice. Bone Abstract No. F220, S75.

4. Z. Xiao, S. Zhang, J. Mahlios, J.P. Calvet, L. Bonewald, L.D. Quarles. (2005) Polycystin-1: A Novel Mechanosensor in Osteoblast/ Osteocytes Coupled to *Runx*2. J Bone Miner Res. Abstract No. 1061.

5. Z. Xiao, S. Zhang, J. Mahlios, J.P. Calvet, L. Bonewald, L.D. Quarles. (2005) Polycystin-1: A Novel Mechanosensor in Osteoblast/ Osteocytes Coupled to *Runx*2. JASN Abstract No. SA-PO114.

6. Z. Xiao, S. Zhang, J. Mahlios, G. Zhou, B.S. Magenheimer, D. Guo, S.L. Dallas, R. Maser, J.P. Calvet, L. Bonewald, L.D. Quarles. (2006) Primary cilium and polycystin-1 in osteoblasts/ osteocytes and associated abnormalities in skeletogenesis and *Runx*2 expression. Bone Abstract No. 1141, S 39.

7. Z. Xiao, S. Zhang, J. Mahlios, G. Zhou, B.S. Magenheimer, D. Guo, S.L. Dallas, R. Maser, J.P. Calvet, L. Bonewald, L.D. Quarles. (2006) Primary cilium and polycystin-1 in osteoblasts/ osteocytes and associated abnormalities in skeletogenesis and *Runx*2 expression. JASN Abstract No. F-PO855.

8. Z. Xiao, S. Zhang, B.S. Magenheimer,J. P. Calvet, L. D. Quarles. (2006) Polycystin-1 selective activation of *Runx2*-II isoform transcription is mediated through the calcium-PI3K-Akt pathway. J Bone Miner Res. Abstract No. 1142.

9. Z. Xiao, S. Zhang, B.S. Magenheimer,J. P. Calvet, L. D. Quarles. (2007) Polycystin-1 selective activation of *Runx2*-II isoform transcription is mediated through the calcium-PI3K-Akt pathway. JASN Abstract No. F-PO090.

10. Z. Xiao, S. Zhang, L. Cao, R Wu, L.F. Bonewald, L.D. Quarles. Conditional Disruption of *Pkd1* in Osteoblast Lineage Results in Osteopenia. JASN. Abstract No. TH-FC116.

11. Z. Xiao, S. Zhang, L. Cao, R. Wu, L. D. Quarles. (2008) Conditional disruption of *Pkd1* in osteoblasts results in osteopenia due to direct impairment of osteoblast-mediated bone formation. J Bone Miner Res. Abstract No. 317.

RECENT PRESENTATIONS

Oral paper presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review, and location and date of presentation.)

1. **Z. Xiao,** L.G. Simpson, L. D. Quarles. (2003) Selective deficiency of Runx2 type II isoform causes limited skeletal abnormalities involving terminal events in bone development. Plenary oral Presentation on the 25th American Society for Bone and Mineral Research meeting, Minneapolis, MN. Abstract No. 1054, S15.

2. **Z. Xiao**, S. Zhang, J. Mahlios, J.P. Calvet, L. Bonewald, L.D. Quarles. (2005) Polycystin-1: A Novel Mechanosensor in Osteoblast/ Osteocytes Coupled to *Runx*2. Section oral presentation on ASBMR 27th Nashville, TN. Abstract No. 1061.

3. **Z. Xiao**, S. Zhang, J. Mahlios, G. Zhou, B.S. Magenheimer, D. Guo, S.L. Dallas, R. Maser, J.P. Calvet, L. Bonewald, L.D. Quarles (2006) Primary cilium and polycystin-1 in osteoblasts/ osteocytes and associated abnormalities in skeletogenesis and *Runx*2 expression. Section back-to back oral presentation on ASBMR 28th Philadelphia, PA. Abstract No. 1141, S 39.

4. **Z. Xiao**, S. Zhang, B.S. Magenheimer,J. P. Calvet, L. D. Quarles (2007). Polycystin-1 selective activation of *Runx2*-II isoform transcription is mediated through the calcium-PI3K-Akt pathway. Section oral presentation on ASBMR 29th Honolulu, HI. Abstract No. 1142.

5. **Z. Xiao**, S. Zhang, L. Cao, R Wu, L.F. Bonewald, L.D. Quarles (2008). Conditional Disruption of *Pkd1* in Osteoblast Lineage Results in Osteopenia. Abstract No.552943 and Oral presentation on ASN 2008 annual meeting Philadelphia, PA. Presentation No. TH-FC116.

6. **Z. Xiao**, Dallas M, S. Zhang, Nicollella D, Cao L, He N, Johnson M, Bonewald L, and Quarles LD (2009). Conditional Deletion and/or Disruption of Pkd1 in Osteocytes Results in a Significant Reduction in Anabolic Response to Mechanical Loading. Oral presentation on ASBMR 31st Denver, CO. Presentation Number: 1042.

7. S. Zhang, **Z. Xiao**, Qiu N, Cao L, Quarles LD (2009). Conditional disruption of Kif3a in osteoblasts results in osteopenia due to direct impairment of osteoblast-mediated bone formation. Oral presentation on ASBMR 31st Denver, CO. Presentation Number: 1078.

8. **Zhousheng Xiao**, Jinsong Huang, Li Cao, Yingjuan Liang, L. Darryl Quarles. Bone Specific Deletion of Fgfr1 in Hyp Mice Partially Corrects the Hypophosphatemic Rickets Phenotype. Department of Medicine, University of Tennessee Health Science Center, Memphis, TN, 38165, USA. 2013, **ASBMR annual meeting selected as a distinguished oral presentation.** Presentation Number:1047.

Poster presentations: (Provide names of all authors, title, sponsoring organization, extent of peer-review and location and date of presentation.)

1. **Z. Xiao,** L.G. Simpson, L.D. Quarles. (2002) Cap- and IRES-Dependent Translational Control of Cbfa1 Runx2 Expression. Plenary Poster on the 24th American Society for Bone and Mineral Research meeting, San Antonio, TX. Abstract No. F180, S193

2. **Z. Xiao**, H. Awad, S. Liu, F. Guilak, L. D. Quarles. (2004) Selective Runx2-II deficiency differentially affects endochondral, cortical and intramembranous bone formation in adult mice. Plenary poster on the ASBMR 26th annual meeting. Seattle, WA, Abstract No. F220, S75.

3. **Z. Xiao**, S. Zhang, J. Mahlios, J.P. Calvet, L. Bonewald, L.D. Quarles. Polycystin-1: A Novel Mechanosensor in Osteoblast/ Osteocytes Coupled to *Runx*2. (2005) Poster on ASN annual meeting Philadelphia, PA. Abstract No. SA-PO114.

3. **Z. Xiao**, S. Zhang, J. Mahlios, G. Zhou, B.S. Magenheimer, D. Guo, S.L. Dallas, R. Maser, J.P. Calvet, L. Bonewald, L.D. Quarles. (2006) Primary cilium and polycystin-1 in osteoblasts/ osteocytes and associated abnormalities in skeletogenesis and *Runx*2 expression. Poster on ASN annual meeting San Diego, CA. Abstract No. F-PO855.

4. **Z. Xiao**, S. Zhang, B.S. Magenheimer,J. P. Calvet, L. D. Quarles. (2007) Polycystin-1 selective activation of *Runx2*-II isoform transcription is mediated through the calcium-PI3K-Akt pathway. Poster on ASN annual meeting San Francisco, CA. Abstract No. F-PO090.

5. **Z. Xiao**, S. Zhang, L. Cao, R. Wu, L. D. Quarles. (2008) Conditional disruption of *Pkd1* in osteoblasts results in osteopenia due to direct impairment of osteoblast-mediated bone formation. Abstract No. 317 and Poster on ASBMR 30th annual meeting Montreal, Quebec, Canada. Presentation No. SA019.

6. N. Qiu, **Z.S. Xiao**, L. Cao, V.N. David, L.D. Quarles. (2010) Conditional Disruption of *Pkd1* in Mesenchymal Lineage Results in Osteopenia and Polycystic Kidney Disease. Poster on ASN annual meeting Denver, CO. Presentation No: TH−PO350.

Poster presentations at local and regional meetings:

1. **Z. Xiao**, S. Zhang, J. Mahlios, G. Zhou, B.S. Magenheimer, D. Guo, S.L. Dallas, R. Maser, J.P. Calvet, L. Bonewald, L.D. Quarles. (2006) Primary cilium and polycystin-1 in osteoblasts/ osteocytes and associated abnormalities in skeletogenesis and *Runx*2 expression. Poster on Faculty Research Day and poster Session, KUMC Research Institute.

2. **Z. Xiao**, S. Zhang, B.S. Magenheimer,J. P. Calvet, L. D. Quarles. (2007) Polycystin-1 selective activation of *Runx2*-II isoform transcription is mediated through the calcium-

PI3K-Akt pathway. Poster on Faculty Research Day and poster Session, KUMC Research Institute.

3. Primary Cilia-Polycystin Complex Functions As A Mechanosensor To Regulate Osteogenesis And Adipogenesis In Bone. **Zhousheng Xiao**, Ni Qiu, Li Cao, Valentin David and L. Darryl Quarles. Division of Nephrology, Department of Medicine, University of Tennessee Health Science Center, Memphis, TN, USA. Research in Medicine 2013.

PATENT APPLICATIONS AND AWARDS

1.Xiao, ZS; Quarles,LD. 2013 March. METHOD OF DETECTING MECHANOSENSING RESPONSES IN BONE CELLS. The application was filed on March 14, 2013, and has been assigned Serial No. 13/804,091 of the same title.

CONSULTATION ACTIVITIES:

N/A