

This annual issue highlights the achievements of CCRAM members for the year 2010 — CCRAM researchers have over 65 papers published or accepted in top-tier journals and have presented over 40 papers/invited talks/plenary lectures at various national and international meetings. Dr. Min Du received R01 funding by the NIH and the Early Career Achievement Award from the American Society of Animal Sciences. Drs. Zhang and Kandadi were awarded their PhD degrees. Alex Xu was nominated for the UW Graduate Council. Drs. Zhang and Turdi were chosen for the 2010 CCRAM Outstanding Research Award. Congratulations to all those who contributed to the success of CCRAM. -Editor

CCRAM Research Award 2010



Drs Yingmei (Megan) Zhang (left) , post-doctoral fellow and Dr. Subati Turdi M.D. graduate student Zoo/Phys both working with Dr. Jun Ren, MD. PhD, are the recipients of the UW-CCRAM Research Award for the year 2010. This award is given annually based on publications, presentations, fellowship (grantsmanship), patent and other award. Dr. Zhang and Turdi consistently published their papers in high-impact factor journals including *Aging Cell, Journal of Cellular and Molecular Medicine, Free Radicals Biology and Medicine, Autophagy, Atherosclerosis, Apoptosis, Journal of Nutritional Biochemistry* and have papers accepted in *Hypertension, Diabetes* and *Pharmacology and Therapeutics*.

Dr. Zhang is a physician scientist and she is the principal investigator on several grants including the Shannxi Science and Technology Research Plan of China, and the NIH INBRE. She was elected into the editorial board of “*Journal of Geriatric Cardiology*” and chosen as a guest editor for “*Experimental Diabetes and Research*”. She is also the nominee from the School of Pharmacy for the Health Sciences Outstanding Young Investigator Award for 2011.

Dr. Zhang successfully defended her PhD dissertation in summer of 2010 and Dr. Turdi expects to graduate at the end of this semester.

CCRAM will present a certificate and a cash award to Drs. Zhang and Turdi on their achievements. Congratulations!

Inside this issue:

Publications	2
Submitted Manuscripts	5
Meetings and Presentations	6
Honors, Awards, Recognition	8

Research Papers in Press/Print-2010

1. Ceylan-Isik AF, Ari N, Stefek M, Sotnikova R, Ozansoy G, Horakova L, Karasu C. Effects of a Long-Term Treatment with an Antioxidant Pyridoindole on Vascular Responsiveness in Diabetes-Induced Aging Rats. *Curr Aging Sci.* in press (IF: N/A)
2. Ceylan-Isik AF, McBride SM, Ren J. Sex difference in alcoholism: who is at a greater risk for development of alcoholic complication? *Life Sci*, 87, 133-8, 2010 (IF: 2.56)
3. Ceylan-Isik AF, Sreejayan N, Ren J. Endoplasmic reticulum chaperon tauroursodeoxycholic acid alleviates obesity-induced myocardial contractile dysfunction. *J Mol Cell Cardiol*, 50, 107-16, 2011. (IF: 4.965)
4. Ceylan-Isik AF, Zhao P, Zhang B, Xiao X, Su G, Ren J. Cardiac overexpression of metallothionein rescues cardiac contractile dysfunction and endoplasmic reticulum stress but not autophagy in sepsis. *J Mol Cell Cardiol*, 48, 367-78, 2010. (IF: 4.965)
5. Dodson MV, Hausman GJ, Guan L, Du M, Rasmussen TP, Poulos SP, Mir P, Bergen WG, Fernyhough ME, McFarland DC, Rhoads RP, Soret B, Reecy JM, Velleman SG, Jiang Z. Lipid metabolism, adipocyte depot physiology and utilization of meat animals as experimental models for metabolic research. *Int J Biol Sci*, 6, 691-9, 2010. (IF: 2.865)
6. Dodson MV, Hausman GJ, Guan L, Du M, Rasmussen TP, Poulos SP, Mir P, Bergen WG, Fernyhough ME, McFarland DC, Rhoads RP, Soret B, Reecy JM, Velleman SG, Jiang Z. Skeletal muscle stem cells from animals I. Basic cell biology. *Int J Biol Sci*, 6, 465-74, 2010. (IF: 2.865)
7. Du M, Tong J, Zhao J, Underwood KR, Zhu M, Ford SP, Nathanielsz PW. Fetal programming of skeletal muscle development in ruminant animals. *J Anim Sci*, 88, E51-60, 2010. (IF: 2.466)
8. Du M, Yan X, Tong JF, Zhao J, Zhu MJ. Maternal obesity, inflammation, and fetal skeletal muscle development. *Biol Reprod*, 82, 4-12, 2010. (IF: 3.00)
9. Du M, Yin J, Zhu MJ. Cellular signaling pathways regulating the initial stage of adipogenesis and marbling of skeletal muscle. *Meat Sci*, 86, 103-9, 2010. (IF: 1.954)
10. Du M, Zhao JX, Yan X, Huang Y, Nicodemus LV, Yue W, McCormick RJ, Zhu MJ. Fetal muscle development, mesenchymal multipotent cell differentiation, and associated signaling pathways. *J Anim Sci*, 89, 583-590, 2010 (IF: 2.466)
11. Fan X, Turdi S, Ford SP, Hua Y, Nijland MJ, Zhu M, Nathanielsz PW, Ren J. Influence of gestational over-feeding on cardiac morphometry and hypertrophic protein markers in fetal sheep. *J Nutr Biochem*, 22, 30-7, 2011 (IF: 4.288)
12. Feng X*, Zhang Y*, Xu R, Xie X, Tao L, Gao H, Gao Y, He Z, Wang H. Lipopolysaccharide up-regulates the expression of Fc α /mu receptor and promotes the binding of oxidized low-density lipoprotein and its IgM antibody complex to activated human macrophages. *Atherosclerosis*, 208, 396-405, 2010 (*equal first authorship) (IF: 4.522)
13. Ge W, Li Q, Turdi S, Wang XM, Ren J. Deficiency of insulin-like growth factor 1 reduces vulnerability to chronic alcohol intake-induced cardiomyocyte mechanical dysfunction: Role of AMPK. *J Cell Mol Med.*, in press. (IF: 5.228)
14. Ge W, Zhang Y, Han X, Ren J. Cardiac-specific overexpression of catalase attenuates paraquat-induced myocardial geometric and contractile alteration: role of ER stress. *Free Radic Biol Med*, 49, 2068-77, 2010 (IF: 6.081)
15. Gullapalli S, Amrutkar D, Gupta S, Kandadi MR, Kumar H, Gandhi M, Karande V, Narayanan S. Characterization of active and inactive states of CB1 receptor and the differential binding state modulation by cannabinoid agonists, antagonists and inverse agonists. *Neuropharmacology*, 58, 1215-9, 2010 (IF: 3.909)
16. Guo R, Ren J. Alcohol and acetaldehyde in public health: from marvel to menace. *Int J Environ Res Public Health*, 7, 1285-301, 2010 (IF: n/a).
17. Guo R, Ren J. Alcohol dehydrogenase accentuates ethanol-induced myocardial dysfunction and mitochondrial damage in mice: role of mitochondrial death pathway. *PLoS One*, 5, e8757, 2010 (IF: 4.351).

**Over sixty five
research
articles and
have been
published or
accepted for
publication in
high-impact
factor journals
during 2010.
Over 40
presentations
were made at
National or
International
Meetings**

Research Papers in Press/Print-2010

18. Guo R, Scott GI, Ren J. Involvement of AMPK in alcohol dehydrogenase accentuated myocardial dysfunction following acute ethanol challenge in mice. *PLoS One*, 5, e11268, 2010 (IF: 4.351)
19. Han X, Ren J. Caloric restriction and heart function: is there a sensible link? *Acta Pharmacol Sin*, 31, 1111-7, 2010 (IF: 1.783)
20. Hu N, Guo R, Han X, Zhu B, Ren J. Cardiac-specific overexpression of metallothionein rescues nicotine-induced cardiac contractile dysfunction and interstitial fibrosis. *Toxicol Lett*, in press (IF: 3.479)
21. Hua Y, Kandadi MR, Zhu M, Ren J, Sreejayan N. Tauroursodeoxycholic acid attenuates lipid accumulation in endoplasmic reticulum-stressed macrophages. *J Cardiovasc Pharmacol*, 55, 49-55, 2010 (IF: 2.826).
22. Hua Y, Zhang Y, Ren J. IGF-1 deficiency resists cardiac hypertrophy and myocardial contractile dysfunction: Role of microRNA-1 and microRNA-133a. *J Cell Mol Med*, acceptance pending (IF: 5.228)
23. Huang Y, Yan X, Zhao JX, Zhu MJ, McCormick RJ, Ford SP, Nathanielsz PW, Ren J, Du M. Maternal obesity induces fibrosis in fetal myocardium of sheep. *Am J Physiol Endocrinol Metab*, 299, E968-75, 2010 (IF: 4.395)
24. Huang Y, Yan X, Zhu MJ, McCormick RJ, Ford SP, Nathanielsz PW, Du M. Enhanced transforming growth factor-beta signaling and fibrogenesis in ovine fetal skeletal muscle of obese dams at late gestation. *Am J Physiol Endocrinol Metab*, 298, E1254-60, 2010 (IF: 4.395)
25. Kandadi MR, Hua Y, Ma H, Li Q, Kuo SR, Frankel AE, Ren J. Anthrax lethal toxin suppresses murine cardiomyocyte contractile function and intracellular Ca²⁺ handling via a NADPH oxidase-dependent mechanism. *PLoS One*, 5, e13335, 2010. (IF: 4.351)
26. Kandadi MR, Rajanna PK, Unnikrishnan MK, Boddu SP, Hua Y, Li J, Du M, Ren J, Sreejayan N. 2-(3,4-Dihydro-2H-pyrrolium-1-yl)-3-oxoindan-1-olate (DHPO), a novel, synthetic small molecule that alleviates insulin resistance and lipid abnormalities. *Biochem Pharmacol*, 79, 623-31, 2010 (IF: 4.395)
27. Kandadi MR, Stratton MS, Ren J. The role of Src homology 2 containing protein tyrosine phosphatase 2 in vascular smooth muscle cell migration and proliferation. *Acta Pharmacol Sin*, 31, 1277-83, 2010 (IF: 1.783)
28. Kandadi MR, Unnikrishnan MK, Warriar AK, Du M, Ren J, Sreejayan N. Chromium (D-phenylalanine)₃ alleviates high fat-induced insulin resistance and lipid abnormalities. *J Inorg Biochem*, 105, 58-62, 2011 (IF: 3.252)
29. Li DL, Liu JJ, Liu BH, Hu H, Sun L, Miao Y, Xu HF, Yu XJ, Ma X, Ren J, Zang WJ. Acetylcholine inhibits hypoxia-induced tumor necrosis factor-alpha production via regulation of MAPKs phosphorylation in cardiomyocytes. *J Cell Physiol*, in press, (IF: 4.586)
30. Li FN, Yin JD, Ni JJ, Liu L, Zhang HY, Du M. Chloride intracellular channel 5 modulates adipocyte accumulation in skeletal muscle by inhibiting preadipocyte differentiation. *J Cell Biochem*, 110, 1013-21, 2010 (IF: 2.935)
31. Li Q*, Turdi S*, Thomas DP, Zhou T, Ren J. Intra-myocardial delivery of mesenchymal stem cells ameliorates left ventricular and cardiomyocyte contractile dysfunction following myocardial infarction. *Toxicol Lett*, 195, 119-26, 2010, (*equal first authorship) (IF: 3.479)
32. Ma H, Guo R, Yu L, Zhang Y, Ren J. Aldehyde dehydrogenase 2 (ALDH2) rescues myocardial ischaemia/reperfusion injury: role of autophagy paradox and toxic aldehyde. *Eur Heart J*. in press (IF: 9.8)
33. Ma H, Jones KR, Guo R, Xu P, Shen Y, Ren J. Cisplatin compromises myocardial contractile function and mitochondrial ultrastructure: role of endoplasmic reticulum stress. *Clin Exp Pharmacol Physiol*, 37, 460-5, 2010 (IF: 1.963)
34. Ma H, Wang J, Thomas DP, Tong C, Leng L, Wang W, Merk M, Zierow S, Bernhagen J, Ren J, Bucala R, Li J. Impaired macrophage migration inhibitory factor-AMP-activated protein kinase activation and ischemic recovery in the senescent heart. *Circulation*, 122, 282-92, 2010 (IF: 14.816)
35. Ma H, Yu L, Byra EA, Hu N, Kitagawa K, Nakayama KI, Kawamoto T, Ren J. Aldehyde dehydrogenase 2 knockout accentuates ethanol-induced cardiac depression: role of protein phosphatases. *J Mol Cell Cardiol*, 49, 322-9, 2010 (IF: 4.965)
36. Pei Z, Meng R, Li G, Yan G, Xu C, Zhuang Z, Ren J*, Wu Z*. Angiotensin-(1-7) ameliorates myocardial remodeling and interstitial fibrosis in spontaneous hypertension: role of MMPs/TIMPs. *Toxicol Lett*, 199, 173-81, 2010. (*corresponding author) (IF: 3.479)

Research Papers in Press/Print-2010

37. Ren J, Dong F, Cai GJ, Zhao P, Nunn JM, Wold LE, Pei J. Interaction between age and obesity on cardiomyocyte contractile function: role of leptin and stress signaling. *PLoS One*, 5, e10085, 2010 (IF: 4.351).
38. Ren J, Pulakat L, Whaley-Connell A, Sowers JR. Mitochondrial biogenesis in the metabolic syndrome and cardiovascular disease. *J Mol Med*, 88, 993-1001, 2010 (IF: 5.010)
39. Roe ND, Thomas DP, Ren J. Inhibition of NADPH oxidase alleviates experimental diabetes-induced myocardial contractile dysfunction. *Diab. Obes. Metab.*, in press (IF: 4.126).
40. Si R, Tao L, Zhang HF, Yu QJ, Zhang R, Lv AL, Zhou N, Cao F, Guo WY, Ren J, Wang HC, Gao F. Survivin: A novel player in insulin cardioprotection against myocardial ischemia/reperfusion injury. *J Mol Cell Cardiol*, 50, 16-24, 2010 (IF: 4.965).
41. Sreejayan N, Marone PA, Lau FC, Yasmin T, Bagchi M, Bagchi D. Safety and toxicological evaluation of a novel chromium (III) dinicocysteinate complex. *Toxicol Mech Methods*, 20, 321-33, 2010 (IF: 0.792)
42. Teng M, Dang YM, Zhang JP, Zhang Q, Fang YD, Ren J, Huang YS. Microtubular stability affects cardiomyocyte glycolysis by HIF-1alpha expression and endonuclear aggregation during early stages of hypoxia. *Am J Physiol Heart Circ Physiol*, 298, H1919-31, 2010 (IF: 3.712).
43. Turdi S, Fan X, Li J, Zhao J, Huff AF, Du M, Ren J. AMP-activated protein kinase deficiency exacerbates aging-induced myocardial contractile dysfunction. *Aging Cell*, 9, 592-606, 2010 (IF: 7.8).
44. Turdi S, Kandadi MR, Zhao J, Huff AF, Du M, Ren J. Deficiency in AMP-activated protein kinase exaggerates high fat diet-induced cardiac hypertrophy and contractile dysfunction. *J Mol Cell Cardiol.*, in press (IF: 4.965)
45. Underwood KR, Tong JF, Price PL, Roberts AJ, Grings EE, Hess BW, Means WJ, Du M. Gestational nutrition affects growth, adipose tissue deposition, and tenderness in steers. *Meat Sci*, 86, 588-93, 2010 (IF: 1.954)
46. Veerapur VP, Prabhakar KR, Kandadi MR, Srinivasan KK, Unnikrishnan MK. (2010) Antidiabetic effect of *Dodonaea viscosa* aerial parts in high fat diet and low dose streptozotocin-induced type 2 diabetic rats: a mechanistic approach. *Pharm. Biol.*, 48, 2010 (IF: 0.672)
47. Wang GJ, Lin YL, Chen CH, Wu XC, Liao JF, Ren J. Cellular calcium regulatory machinery of vasorelaxation elicited by pectin. *Clin Exp Pharmacol Physiol*, 37, 309-15, 2010 (IF: 1.936)
48. Wang J, Ma H, Tong C, Zhang H, Lawlis GB, Li Y, Zang M, Ren J, Nijland MJ, Ford SP, Nathanielsz PW, Li J. Overnutrition and maternal obesity in sheep pregnancy alter the JNK-IRS-1 signaling cascades and cardiac function in the fetal heart. *FASEB J*, 24, 2066-76., 2010 (IF: 6.401)
49. Wang L, Tao Y, Xie Z, Ran X, Zhang M, Wang Y, Luo X, Hu M, Gen W, Wufuer H, Li L, Ren J, Mao X. Prevalence of metabolic syndrome, insulin resistance, impaired fasting blood glucose, and dyslipidemia in Uygur and Kazak populations. *J Clin Hypertens (Greenwich)*, 12, 741-5, 2010 (IF: n/a)
50. Wei L, Sun D, Yin Z, Yuan Y, Hwang A, Zhang Y, Si R, Zhang R, Guo W, Cao F, Wang H. A PKC-beta inhibitor protects against cardiac microvascular ischemia reperfusion injury in diabetic rats. *Apoptosis*, 15, 488-98, 2010 (IF: 3.971)
51. Xiao S, Zhang WG, Yang Y, Yang C, Ma W, Ahn DU, Li X, Lei JK, Du M. Changes of hormone-sensitive lipase (HSL), adipose tissue triglyceride lipase (ATGL) and free fatty acids in subcutaneous adipose tissues throughout the ripening process of dry-cured ham. *Food Chem*, 121, 191-195, 2010 (IF: 3.146)
52. Yan X, Huang Y, Wang H, Du M, Hess BW, Ford SP, Nathanielsz PW, Zhu MJ. Maternal obesity induces sustained inflammation in both fetal and offspring large intestine of sheep*. *Inflamm Bowel Dis.*, 2010 (IF: 4.643)
53. Yan X, Zhu MJ, Xu W, Tong JF, Ford SP, Nathanielsz PW, Du M. Up-regulation of Toll-like receptor 4/nuclear factor-kappaB signaling is associated with enhanced adipogenesis and insulin resistance in fetal skeletal muscle of obese sheep at late gestation. *Endocrinology*, 151, 380-7(IF: 4.752).
54. Yang Y, Zhao C, Xiao S, Zhan H, Du M, Wu C, Ma C. Lipids deposition, composition and oxidative stability of subcutaneous adipose tissue and Longissimus dorsi muscle in Guizhou mini-pig at different developmental stages. *Meat Sci*, 84, 684-90, 2010, (IF: 1.954)
55. Yuan M, Ohishi M, Wang L, Raguki H, Wang H, Tao L, Ren J. Association between serum levels of soluble CD40/CD40 ligand and organ damage in hypertensive patients. *Clin Exp Pharmacol Physiol*, 37, 848-51., 2010 (IF: 1.936)

Research Papers in Press/Print-2010

56. Yue T, Yin J, Li F, Li D, Du M. High glucose induces differentiation and adipogenesis in porcine muscle satellite cells via mTOR. *BMB Rep*, 43, 140-5, 2010 (IF: 2.276)
57. Zhang B*, Turdi S*, Li Q, Lopez FL, Eason AR, Anversa P, Ren J. Cardiac overexpression of insulin-like growth factor 1 attenuates chronic alcohol intake-induced myocardial contractile dysfunction but not hypertrophy: Roles of Akt, mTOR, GSK3beta, and PTEN. *Free Radic Biol Med*, 49, 1238-53, 2010, *Equal first authorship (IF: 6.081)
58. Zhang Y, Ren J. Autophagy in ALDH2-elicited cardioprotection against ischemic heart disease: slayer or savior? *Autophagy*, 6, 1212-3, 2010 (IF: 6.829)
59. Zhang Y, Ren J. Role of cardiac steatosis and lipotoxicity in obesity-related cardiomyopathy. *Hypertension*, 57: 148-151, 2011. (IF: 6.614)
60. Zhang Y, Wei L, Sun D, Cao F, Gao H, Zhao L, Du J, Li Y, Wang H. Tanshinone IIA pretreatment protects myocardium against ischaemia/reperfusion injury through the phosphatidylinositol 3-kinase/Akt-dependent pathway in diabetic rats. *Diabetes Obes Metab*, 12, 316-22, 2010 (IF: 4.126)
61. Zhang Y, Yuan M, Bradley KM, Dong F, Maris JR, Ren J. Insulin-like growth factor I alleviates high fat diet-induced myocardial contractile dysfunction despite of persistent cardiac hypertrophy: Role of Akt-GSK3 β -Foxo3a and mitochondrial function. *Diabetes acceptable pending minor revision*. *Diabetes*, acceptable. (IF: 8.515)
62. Zhang Y, Ren J. ALDH2 in alcoholic heart disease: Molecular Mechanisms and Clinical Implications. *Pharmacol Therap*, accepted (IF: 9.8)
63. Zhao J, Yue W, Zhu MJ, Sreejayan N, Du M. AMP-activated protein kinase (AMPK) cross-talks with canonical Wnt signaling via phosphorylation of beta-catenin at Ser 552. *Biochem Biophys Res Commun*, 395, 146-51, 2010 (IF: 2.548)
64. Zhao JX, Yan X, Tong JF, Means WJ, McCormick RJ, Zhu MJ, Du M. Mouse AMP-activated protein kinase gamma3 subunit R225Q mutation affecting mouse growth performance when fed a high-energy diet. *J Anim Sci*, 88, 1332-40, 2010 (IF: 2.466)
65. Zhu MJ, Ma Y, Long NM, Du M, Ford SP. Maternal obesity markedly increases placental fatty acid transporter expression and fetal blood triglycerides at midgestation in the ewe. *Am J Physiol Regul Integr Comp Physiol*, 299, R1224-31, 2010 (IF: 3.058)

Manuscripts Submitted/Under Review/Revision

1. Ge W, Ren J. Aldehyde Dehydrogenase 2 (ALDH2) protects against acute ethanol challenge-induced cardiac contractile dysfunction and autophagy: Role of AMP-dependent kinase. *Free Radic. Biol. Med.* in review.
2. Ge W, Ren J. Aldehyde Dehydrogenase 2 (ALDH2) Protects against Chronic Alcohol Intake-Induced Cardiac Contractile Dysfunction and Autophagy: Role of mTOR, STAT3 and Notch1 Signaling. *JMCC*, in revision.
3. Ge W, Ren J. Attenuation of doxorubicin-induced cardiomyopathy by mitochondrial aldehyde dehydrogenase 2 (ALDH2) through TRAP V1 and eNOS. *Circulation* in review.
4. Ge W, George LA, Ford SP, Ren J. Cardiac glucose metabolism and inflammatory response in adult offspring of nutrient restricted ewes. *J. Nutr. Biochem.* in review.
5. Turdi S, Ge W, Ji L, Kato K, Gao F, Bradley KM, Ren J. Maternal high fat diet exposure predisposes postnatal high fat diet-induced myocardial risk in offspring through IRS-1 serine phosphorylation and mitochondrial anomalies. *Diabetes* in review.
6. Zhang Y, Xia Z, La Cour KH, Ren J. Activation of Akt rescues endoplasmic reticulum stress-impaired murine cardiac contractile function via glycogen synthase kinase-3 β -mediated suppression of mitochondrial permeation pore opening. *Antioxidant Redox Signaling*, minor revision
7. Zhang Y*, Li SY*, Babcock SA, Brownlee M, Trucillo M, Cohen RA, Ren J. Methylglyoxal-derived advanced glycation endproduct impairs cardiomyocyte function through NAD(P)H oxidase-mediated irreversible oxidative modification of sarco(endo)plasmic reticulum Ca²⁺-ATPase. *Circ. Res.* In review.
8. Zhang Y*, Li LL*, Hua Y, Nunn JM, Dong F, Yanagisawa M, Ren J. Cardiomyocyte-specific knockout of endothelin A receptor mitigates cold exposure-induced myocardial hypertrophy and contractile dysfunction: Role of TRPV1 and mitochondrial oxidative damage. *Cell Metab.* in review.
9. Zhao JX, Yue WF, Zhu MJ, Du M. AMP-activated protein kinase regulates beta-catenin transcription via histone deacetylase 5. *J. Biol. Chem.*, under revision

Meetings and Invited Presentations-2010

1. Ceylan-Isik AF, Ren J, Sreejayan N. The chemical chaperone tauroursodeoxycholic acid alleviates cardiac contractile dysfunction in obesity: Role of endoplasmic reticulum-stress in cardiac functionality. *FASEB J.* 24:573.8, 2010. EB 2010 Anaheim, CA.
2. Ceylan-Isik AF, Kandadi MR, Ren J, Sreejayan N. Apelin Alleviates High Fat Diet-Induced Cardiac Remodeling and Myocardial Contractile Dysfunction: Role of miRNA-133a. EB 2011 Washington DC.
3. Ge W, Ma H, Zhang YM, Han XF, Ren J. Cardiac-specific overexpression of catalase prolongs survival and attenuates paraquat-induced myocardial contractile dysfunction. *FASEB J.* 24:575.3, 2010. EB 2010 Anaheim, CA.
4. Du M, visited University of Washington School of Medicine, Seattle, WA, Dec. 13 to 18, 2010.
5. Du M, was an invited speaker of the Symposium of Lipogenesis and Lipid Metabolism in Livestock, Beijing, Nov. 2 to 4, Beijing, China.
6. Du M, chaired the Muscle Biology and Meat Science Session, and gave a keynote presentation at the International Conference of Meat Science & Technology (ICoMST) 2010, Jeju, South Korea, Aug. 15-20, 2010.
7. Du M, was an invited speaker in the Gordon Research Conference on Musculoskeletal Biology and Bioengineering, Proctor Academy, Andover, NH, August 1-6, 2010.
8. Du M, gave an oral presentation at the 2010 ASAS-ADSA-PSA Joint Annual Meeting, Denver, CO, July 11-15, 2010. All lab members attended the meeting.
9. Guo R, Scott GI, Ren J. Involvement of AMPK in alcohol dehydrogenase accentuated myocardial dysfunction following acute ethanol challenge in mice. NISBRE 2010, Washington DC.
10. Han X, Ren J. Caloric restriction and cardiac health. Wyoming INBRE Retreat, Grand Teton, WY 9/2010.
11. Huang, Y., X. Yan, M. J. Zhu, J. Ren, R. J. McCormick, S. P. Ford, and M. Du. (2010). Maternal obesity induces fibrosis in fetal ventricular muscle of sheep. NIH, *NICRR Third Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE)*, Bethesda, Maryland, June 16-18.
12. Huang, Y., X. Yan, M. J. Zhu, R. J. McCormick, S. P. Ford, P. W. Nathanielsz, and M. Du. (2010). Enhanced transforming growth factor β (TGF- β) signaling and fibrogenesis in ovine fetal skeletal muscle of obese dams at late gestation. *2010 ADSA-CSAS-ASAS Joint Annual Meeting*, Denver, CO, July 11-15.
13. Kandadi MR, Frankel AE, Ren J. Toll like receptor-4 deficiency rescues anthrax lethal toxin-elicited cardiac contractile dysfunction: Role of Autophagy. EB 2011 Washington DC.
14. Kandadi MR, PhD, successfully defended his PhD dissertation in summer 2010.
15. Nicodemus, L. V., K. R. Underwood J. F. Tong, P. L. Price, E. E. Grings, B. W. Hess, W. J. Means, and M. Du. (2010). Effect of Maternal Nutritional Status on Muscle Development and Carcass Characteristics in Heifer Progeny. *2010 ADSA-CSAS-ASAS Joint Annual Meeting*, Denver, CO, July 11-15.
16. Ren J, "Acetaldehyde and alcoholic cardiomyopathy – lessons from the ADH and ALDH-2 transgenic models". NIH/NIAAA, Bethesda, MD, March 31, 2010.
17. Ren J, "Cardiac disease in cardiometabolic syndrome: pathogenesis and protection". University of California Los Angeles School of Medicine, Los Angeles, CA, April 30, 2010.
18. Ren J, "Hypertrophic cardiomyopathy in high-fat diet-induced obesity: role of suppression of forkhead transcription factor and atrophy gene transcription". Experimental Biology, Anaheim, CA, April 2010.
19. Ren J, "Cardiac health in cardiometabolic syndrome: Clinical aspects and pathophysiology", Guangzhou Medical College, Guangzhou, China, April 2010.
20. Ren J: "Cardiomyopathy in diabetes, obesity and critical care medicine: Pathogenesis and protection", The Third Military Medical University, Chongqing, China April 2010.
21. Ren J, "Cardiometabolic syndrome and aging", Beijing Hospital, Ministry of Health, Beijing, China April 2010.
22. Ren J, "Cardiac health in cardiometabolic syndrome: Clinical aspects and pathophysiology", The 12th South China Conference of Cardiology – international Symposium on Cardiology, Guangzhou, China, April 2010.
23. Ren J, "Cardiac health in cardiometabolic syndrome", Beijing 307 Hospital, Beijing, China, June 2010.
24. Ren J, "ALDH and cardiac protection: from physiology to pathophysiology", The School of Pharmacy, Second Military Medical University, Shanghai, China, June 2010.

Meetings and Invited Presentations-2010

25. Ren J, "Translational research in cardiometabolic syndrome", Tangdu Hospital, The Fourth Military Medical University, Xi'an, China, July 2010.
26. Ren J, "Updates on ADH and ALDH2 in alcoholic cardiomyopathy", East Carolina University, Greenville, NC, USA October 2010.
27. Roe N, Thomas DP, Ren J. NADPH oxidase inhibition alleviates diabetes-induced myocardial contractile dysfunction. *FASEB J.* 24:597.4, 2010. EB 2010 Anaheim, CA.
28. Sreejayan N, "Novel Chromium complexes as Insulin Sensitizers" IFT Annual Meeting, Chicago July 17-20, 2010
29. Sreejayan N, "Molecular Mechanisms of Chromium's Insulin Potentiating Activity", 5th International Symposium on Diet and Health held at Niigata, Japan, Oct 30-Nov 1, 2010
30. Xu X, Hua Y, Zhang Y, Ren J. Akt2 Knockout Alleviates High Fat Diet-Induced Cardiac Contractile Dysfunction. EB 2011 Washington DC.
31. Xu X, Zhang Y, Ren J. TRAF6 mediates the cardioprotective effect of lipopolysaccharide against insulin resistance in an Akt2 knockout murine model. American Heart Association Winter conference, accepted.
32. Yan, X., M. J. Zhu, and M. Du. (2011). MicroRNA *has-let-7g* inhibits proliferation, adipogenic differentiation and inflammation in C3H10T $\frac{1}{2}$ cells. *Experimental Biology Meeting*, Washington DC, April 9 to 13.
33. Yan, X., M. Nijland, T. McDonald, S. P. Pereira, M. J. Zhu, P. W. Nathanielsz, and M. Du. (2010). Regulation of mitochondrial biogenesis in fetal baboon skeletal muscle (SM) by maternal nutrient reduction at mid-gestation (G). *58th Annual Meeting of the Society for Gynecologic Investigation*. Miami Beach, Florida, March 16-19.
34. Yan, X., M. Nijland, T. McDonald, S. P. Pereira, M. J. Zhu, P. W. Nathanielsz, and M. Du. (2010). Maternal over-nutrition is associated with chronic inflammation and decreased mitochondrial number in fetal baboon skeletal muscle (SM) at late-gestation. *58th Annual Meeting of the Society for Gynecologic Investigation*. Miami Beach, Florida, March 16-19.
35. Yan, X., Y. Huang, M. J. Zhu, N.M. Long, A.B. Uthlaut, R. J. McCormick, S. P. Ford, P. W. Nathanielsz, and M. Du. (2010). Lipid accumulation and fibrosis in skeletal muscle of offspring born to obese dams. *2010 ADSA-CSAS-ASAS Joint Annual Meeting*, Denver, CO, July 11-15.
36. Yue, W. F., J. Zhao, M. J. Zhu, and M. Du. (2010). Hedgehog signaling mediates adipogenesis in C3H10T $\frac{1}{2}$ cells via down-regulation of COUP-TFII. *2010 ADSA-CSAS-ASAS Joint Annual Meeting*, Denver, CO, July 11-15.
37. Zhang Y, Ge W, Ren J. Akt plays an important role in lipopolysaccharide-induced myocardial injury and protection. *FASEB J.* 24:1036.14, 2010. EB 2010 Anaheim, CA.
38. Zhang Y, Cardiac dysfunction in sepsis". Wyoming INBRE Conference, Laramie, WY (podium).
39. Zhang Y*, Li LL*, Hua Y, Nunn JM, Dong F, Ren J. Cardiomyocyte-specific knockout of endothelin A receptor mitigates cold exposure-induced myocardial hypertrophy and contractile dysfunction: Role of TRPV1 and mitochondrial oxidative damage. American Heart Association Winter conference, accepted.
40. Zhao, J. X., W. F. Yue, M. J. Zhu, and M. Du. (2011). AMP-activated protein kinase regulates beta-catenin transcription via histone deacetylase 5. *Experimental Biology Meeting*, Washington DC, April 9 to 13.
41. Zhao, J., J. Hu, M. J. Zhu, W. J. Means, and M. Du. (2010). Trenbolone regulates myogenic differentiation via inducing androgen receptor and β -catenin interaction in muscle-derived stem cells of cattle. *2010 ADSA-CSAS-ASAS Joint Annual Meeting*, Denver, CO, July 11-15.



CCRAM members discuss their data with guest speaker.

Honors, Awards and Recognition



Dr. Min Du, Ph.D was awarded \$1,174,450 (2010/9-2015/8) grant from the *NIH* for his *ROI* proposal titled “AMP-activated protein kinase in cell differentiation during muscle development affected by maternal obesity” His proposal received priority score: 11; percentile 4.0 (NIH new score system: the highest possible score: 10 and the lowest possible score: 90). Dr. Du was also the recipient of the Early Career Achievement Award, American Society of Animal Science, 2010. He received the CCRAM Research Award in 2007. Dr. Du’s graduate students Yan Xu and Junxing Zhao received the Kercher International Graduate Student scholarship, University of Wyoming, 2010 and the Gamma Sigma Delta Outstanding Ph.D. Student Award, University of Wyoming Chapter, 2010, respectively. CCRAM congratulates Dr. Du on his achievements.



Dr. Jun Ren, MD, PhD, FAHA, was elected to the editorial boards of several prestigious journals including “*Journal of Molecular and Cellular Cardiology*”, “*Toxicology Letter*” and “*American Journal of Physiology*”. He also chaired the session on “*Redox Signaling and Oxidative Stress - new observations and perspectives*”, at the American Heart Association’s Scientific Session in Chicago, IL. He served as a board member for selecting the for *Millennium Promise Award, Women Health in Diabetes*. Dr. Ren also received an invitation to join a welcome ceremony for the Chinese President Hu, Jin-Tao in White House hosted by President Obama. Dr. Ren was nominated for “1000 Talent Professorship” Program in China.

CCRAM Newsletter

Center for Cardiovascular Research and Alternative Medicine

University of Wyoming, School of Pharmacy
1000 E. University Avenue
Laramie, WY 82072
Ph: (307)766-6138
Email: sreejay@uwyo.edu
Url: <http://www.uwyo.edu/pharmacy/info.asp?>