Summary of the summer professional activities (July – September 2005)

A. Paper in press or acceptable during July – Sept 2005: (highlight = 1st draft writer)

1. Ceylan-Isik AF, LaCour KH, Ren J. Impact of metallothionein on gender disparity in intrinsic and diabetes-influenced cardiomyocyte function: Role of Akt and c-Jun. *J. Appl Physiol.* minor revision required.
2. Dong F, Ford SP, Fang CX, Nijland MJ, Nathanielsz PW, Ren J. Intrauterine nutrition deficiency during early to mid gestation up-regulates cardiac insulin-like growth factor (IGF) receptors associated with ventricular hypertrophy in fetal sheep. *Growth Horm IGF Res* 15: 291-299, 2005 (August 2005's issue).
3. Dong F, Zhang X, Culver B, Chew, HG, Jr., Kelley RO, Ren J. Dietary iron deficiency induces ventricular dilation, mitochondrial ultra-structural aberrations and cytochrome C release: Involvement of nitric oxide synthase and protein tyrosine nitration. *Clin Science* 109: 277-286, 2005 (September 2005's issue).
4. Duan J, Dai S, Fang CX, Sun RY, Shavali S, Sharma SK, Ebadi M, Ren J. Phytoestrogen α-zearalanol antagonizes homocysteine-induced imbalance of nitric oxide/endothelin-1 and apoptosis in human umbilical vein endothelial cells (HUVEC). *Cell. Biochem. Biophys.* in press.
5. Fang CX, Dong F, Ren BH, Epstein PN, Ren J. Metallothionein alleviates insulin resistance-induced cardiac contractile dysfunction: Role of Akt phosphorylation, PTB1B, PPARγ and c-Jun. *Diabetologia* in press.
6. Li SY*, Fang CX*, Aberle NS II*, Ren BH, Ceylan-Isik AF, Ren J. Inhibition of PI-3 kinase/Akt/mTOR but not calcineurin signaling reverses insulin-like growth factor I-induced protection against glucose toxicity in cardiomyocyte contractile function. *J. Endocrinol.* 186: 491 – 503, 2005. (* equal first authorship).
7. Li SY, Li Q, Shen J, Dong F, Sigmon VK, Liu Y, Ren J. Attenuation of acetaldehyde-induced cell injury by overexpression of aldehyde dehydrogenase-2 transgene in human cardiac myocytes: Role of MAP kinase signaling. *J. Mol. Cell. Cardiol.* acceptable.
8. McBride SM, Flynn FW, Ren J. Cardiovascular alteration and treatment of hypertension: Do men and women differ? *Endocrine* in press.
9. Muralikrishnan D, Ren J. The emerging role of coenzyme Q-10 in aging, neurodegeneration, cardiovascular disease, cancer and diabetes mellitus. *Curr. Neurovasc. Res.* in press.
10. Wu S, Ren J. Benfotiamine alleviates diabetes-induced cerebral oxidative damage independent of advanced glycation end-product, tissue factor and TNF-α. *Neurosci Lett* in press.
11. Yang X, Thomas DP, Zhang X, Culver B, Ren J, Tulis DA, Sreejayan N. Curcumin inhibits PDGF-stimulated vascular smooth muscle cell function and injury-induced neointima formation. ATVB

Manuscript submitted in July – September 2005

12. Dong F, Zhang X, Ren J. Leptin regulates cardiomyocyte contractile function through endothelin-1 receptor - NADPH Oxidase pathway. *Hypertension* in revision.
13. Dong F, Taylor MM, Samson WK, Ren J. Intermedin (Adrenomedullin-2) enhances cardiac contractile function via a protein kinase C-dependent pathway in ventricular myocytes. *Br. J. Pharmacol.* in review.
14. Dong F, Zhang X, Yang X, Yang H, Zhang Z, Culver B, Ren J. Impaired cardiac contractile function in ventricular myocytes from leptin deficient ob/ob obese mice. *J. Endocrinol* revised.
15. Fang CX, Doser TA, Yang X, Sreejayan N, Ren J. Metallothionein antagonizes aging-induced cardiac contractile dysfunction: Role of PTP1B, insulin receptor tyrosine phosphorylation and Akt. *Aging Cell* in review.

16. Li SY, Babcock SA, Xu PS, Shen Y, Ren J. Advanced glycation endproducts (AGEs) is linked to cardiomyocyte contractile dysfunction in streptozotocin-induced diabetic mice. *Diabetologia* in review.
17. Li SY, Yang X, Ceylan-Isik AF, Du M, Sreejayan N, Ren J. Cardiac contractile dysfunction in ob/ob obesity is accompanied with NADPH Oxidase Activation, oxidative modification of sarco(endo)plasmic reticulum Ca2+-ATPase and myosin heavy chain isozyme switch. *Diabetologia* revision submitted.
18. Relling DP, Esberg LB, Fang CX, Johnson WT, Murphy EJ, Carlson EC, Saari JT, Ren J. High fat diet induced-obesity leads to cardiomyocyte dysfunction and upregulation of Foxo3a transcription factor independent of lipotoxicity and apoptosis. *J. Hyperten* revision submitted.
19. Ren J, Relling DP. Leptin-induced suppression of cardiomyocyte contraction is amplified by ceramide. *Int. J. Obesity* in review.
20. Shen Q, Du M, Ren J. Fitness or fatness: the debate continues for AMP-activated protein kinase (AMPK) in the heart. *Cardiovasc. Toxicol.* In review.
21. Wold LE, Ceylan-Isik AF, Fang CX, Yang X, Li SY, Sreeyajan N, Privratsky JR, Ren J. Metallothionein alleviates cardiac dysfunction in streptozotocin-induced diabetes: Role of AP-1, PRAP and MHC. *Cardiovasc. Res.*
22. Wu S, Li Q, Lopez FL, Li SY, Du M, Ren J. Cardiac overexpression of antioxidant catalase attenuates aging-induced cardiac diastolic dysfunction and protein damage: the proteomic identification. *Aging Cell* in review.
23. Yang X, Doser TA, Nunn JM, Fang CX, Janardhanan R, Zhu MJ, Sreejayan N, Quinn MT, Ren J. Metallothionein prolongs survival and antagonizes senescence-associated cardiomyocyte diastolic dysfunction: Role of oxidative stress. *Proc. Natl. Acad. Sci. USA* in review.
24. Yang X, Li SY, Dong F, Ren J, Sreejayan N. Chromium (phenylalanine)3 improves insulin-sensitivity and lowers plasma cholesterol In obese mice. *Biochem Biophys Res Comm*
25. Zou XW, Wu S, Ren J. Systemic inflammatory response syndrome (SIRS) after stroke. *Chin. J . Pathol.* in review.

Meeting presentation and abstract submitted in July – September 2005

Jun Ren – 12th International Congress for Heart Disease, July 2005 Vancouver, Canada; 2nd Annual Scientific Meeting for Academy of Cardiovascular Research Excellence, July 2005, Vancouver, Canada. Sreejayan: American Heart Association Summer Conference, July 2005, Keystone, CO.

Proposal submitted or funded:

Du, Ford, Hess and Ren, Mechanisms for the down-regulation of mTOR Signaling in Fetal skeletal Muscle under Nutrient Deficiency. $60,000, Agency – AES; submitted 9/2005.

CRAM & Laboratory issues:

(1). Congratulations to Dr. Sreejayan for the Inaugural CRAM Research Award. An award certificate and a check ($100) were given to Sree in honor of this award. Next one will be awarded on 1/2006.

(2). Welcome new members Kris Schamber (graduate student), Jamie Hexem (pre-pharmacy) and Kieley (Pharmacy) who joined Dr. Culver's lab. Jackie Maris (pre-pharm) who joined Sree's lab.

(3). 2005 Fall EPSCoR Applications: **Dave Bruch** "Mechanisms underlying Benzyl-N-Methylthylamine enhanced Methamphetamine-Neurotoxicity-The Role of Cytochrome P450"; **Olalekan** "An investigation into the effects of stress on BDNF levels and hippocampal neurogenesis in an Animal Model of Depression"; **Jennifer Nunn** and **Jackie Maris** also submitted an application each.

(4). Please pay extra attention to your lab habit. Put thing back to where it belongs – clean things after use – bottom line - Your mom does not work here.

(5). From 1/1/2006, we will be very strict on meeting travel in accordance with our school's rule. No travel if you are not the first or senior author on a meeting presentation (oral or poster). We will have a sharp decline in travel fund from next year. Amount: $1500 for faculty, $1400 for research scientist and postdocs; $1300 for PhD students (since registration is lot less for trainees). We cover the extra expense with our packet money like other faculty in the school (unless you have other source such as travel award or fellowship). To help out with our travel budget, I (J. Ren) will not attend any meeting next year unless I am an invited speaker or I have a travel award from another source. I have never attended a meeting without a poster or oral presentation in my 18 years of scientific career.

(6). Lab duties: (A). Make sure pipette tips are filled; (B) Distilled H2O is filled (can do two at the same time); (C). Dish wishing; these things should be the top priority if you are on duty on a given day.