Dear Colleagues,

C-CRAM experienced another successful year. The ‘news of the year’ was the $16.9 million dollars National Institutes of Health Wyoming IDeA Networks of Biomedical Research Excellence (INBRE-II) program grant awarded to UW (see page 3 for details). C-CRAM joins you all in congratulating Dr. Jun Ren, the director of the program, Drs. Scott Seville and Heywood Sawyer, program coordinators and the faculty and staff responsible for this achievement. In 2009, CCRAM members published over 40 articles in peer-reviewed journals; received 29 research grants funded for a total of $2,251,654.00, presented their research in over 70 national/inter-national conferences and had four faculty serving in study section/committee service at federal or national funding agencies. CCRAM thanks you all for a wonderful year and looks forward for an exciting and productive 2010!

- Editor

2009 CCRAM Award Winners

Dr. Heng (Henry) Ma (School of Pharmacy) and Dr. Meijun Zhu (Department of Animal Sciences) have been selected for the 2009-CCRAM Research Award. This award is given annually and is based on a points-system that takes into account peer-reviewed publications, journal impact-factor, presentations, fellowship/grants, patents and other scholarly activities. CCRAM congratulates the awardees on their achievement.


NIH Awards $16.9 Million for Biomedical Research and Education at UW

UW Media Release Oct 1, 2009. Cardiovascular, obesity and diabetes research and education in Wyoming will be bolstered by the largest single research grant ever awarded to the University of Wyoming -- $16.9 million from the National Institutes of Health (NIH). The award funds the Wyoming IDeA Networks of Biomedical Research Excellence (INBRE) program. The five-year research program will focus on diseases that are among the leading causes of death and high health care costs in the United States and that are significant health issues in Wyoming, says Bill Gern, UW's vice president for research and economic development.

"This effort will result in better training for our students who will contribute to better quality health care in Wyoming and beyond," Gern says. "It will generate student interest in biomedical fields and highlight our research strengths in these areas." Jun Ren, associate dean for research in the College of Health Sciences and professor of pharmacology, directs the INBRE program. Scott Seville, associate dean in the Outreach School and associate professor of zoology and physiology, and Heywood Sawyer, a research professor in the School of Pharmacy, are the program's coordinators.

The grant allows us to pursue our long-term goal to establish a statewide network for biomedical education and research," Seville says.

Ren adds, "Additionally, we will partner with INBRE colleagues in surrounding states when appropriate, providing for an even stronger research capacity.

Ren outlines the goals of the new INBRE program: i) Establish a multi disciplinary research network with scientific focus that will build and strengthen biomedical research at UW and its partner institutions; ii) Provide research support to faculty, postdoctoral fellows and graduate students; iii) Create a "pipeline" for undergraduate students at UW and Wyoming community colleges to continue health research careers; iv) Provide outreach activities for UW students and the community colleges that are part of the university's INBRE network; v) Enhance science and technology knowledge of the state's workforce; and vi) Expand Wyoming research opportunities across the region.

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Asli Ceylan-Isik, left, and Heng Ma, M.D., both INBRE junior researchers, study aging-induced risk of heart attacks in a University of Wyoming cardiovascular laboratory. This is among many INBRE-supported projects at UW focusing on diseases that are among the leading causes of death and high health care costs in the United States. Ma also holds the only American Heart Association postdoctoral

Publications (continued from page 2)


(Papers in press and under revision were not included –Ed)
Meetings and Presentations

1. Ceylan-Isik AF. Tauroursodeoxycholic acid alleviates obesity-induced cardiac dysfunction: Role of endoplasmic reticulum stress on cardiac function. Western Region COBRE-INBRE Scientific Conference, Big Sky, MT, September 16-18, 2009

2. Ceylan-Isik AF, Ren J. Cardiomyocyte-specific endothelin A receptor knockout alleviates aging-induced cardiac remodeling and myocardial contractile dysfunction” 2nd Congress of Antiaging & Anesthetic Medicine Society, Izmir, Turkey. Oct 22-25, 2009


13. Hua Y, Ren J, Sreejayan N. ER-Stress Up-regulates Protein Tyrosine Phosphatase in Obesity, COBRE/INBRE Western Region Scientific Conference in Big Sky September 16-18, 2009


19. Li, J. Impaired Macrophage Migration Inhibitory Factor (MIF)-AMPK Cascades and Ischemic Recovery in the Senescent Heart”, Invited Lecture, University at Buffalo-SUNY, Division of Cardiology, Buffalo, NY, October 22, 2009

20. Li, J. Aging-Associated Reduction in Ischemic AMPK Activation”, Invited Lecture, Boston University, Boston, MA, April 14th, 2009


CCRAM researchers have presented their findings at the Annual Scientific Sessions of the American Heart Association, American Diabetes Association, Gordon Research Conference and have delivered invited lectures in Canada, China, Germany, Scotland, and Turkey.

Meetings and Presentations 2009


Meetings and Presentations 2009


55. Aylin Marquez. McNair Program Student. Understanding the application of fractal dynamics in health and applying the concepts from chaos theory to biomedical problems. UW 2009 Undergraduate Research Day, Mentor: Jun Ren, Subat Turdi.

56. Jun Ren made a number of national and international meeting presentations, invited talks during 2009.

Research Funding in 2009 (Ongoing, renewed or completed)

1. Ma H. The role of advanced glycation endproducts (AGEs) induced eNOS uncoupling in diabetic cardiomyopathy American Heart Association - $100,000 for two years; Sponsor: Ren J.

2. Das, M (PI), PKC Isozymes in Hypoxia-Induced Fibroblast Proliferation. NIH 2R01 HL64917-01A1 - NHLBI (2006-2010),$330,950.93

Research Funding in 2009 (Ongoing, renewed or completed)


10. Li, J. (PI) Heart Stress Signaling during Ischemia, NIH/NIA, R03AG0268163-01ª (04/01/08-07/31/09)

11. Li, J (PI), Alterations in AMP-activated Protein Kinase in Response to Ischemia/Reperfusion with Aging, American Federation Aging Research AFAR A08007 (07/01/08-07/31/09)

12. Li, J (PI), Aging-associated Alterations in Heart Stress Signaling Pathways during Ischemia-Reperfusion. American Heart Association National AHA0835169N (07/01/08-07/31/09)

13. Li, J (PI), Macrophage Migration Inhibitory Factor in the Heart, ITHS pilot small grant (04/01/09-07/31/10), $10,000

14. Li, J (PI), Glucose Transporters Regulated by AMP-activated Protein Kinase, UW College of Health Sciences Seed Grant (04/01/09-07/31/09)

15. Li, J (mentor), UW Graduate Assistantship, Ph.D. student stipend support (01/01/09-12/31/11), $40,000

16. Li, J (PI). Aging-associated Alterations in Heart Stress Signaling Pathways during Ischemia-Reperfusion, AHA Pacific Mountain Affiliate BIA (07/01/08-06/30/10), American Heart Association. $132,000, Relinquished due to overlap with AHA SDG

17. Li, J (PI) Aging-associated Alterations in Cardiac MIF-AMPK Signaling during Ischemia/reperfusion, NIH UW INBRE Pilot Grants, 06/01/08-05/31/09

18. Ren J (PI) IGF-1 and eNOS uncoupling in diabetic heart disease. Chinese National Science Foundation. $100,000 (1/2008-12/2011)

19. Ren J (PI) eNOS uncoupling in diabetic cardiomyopathy: mechanisms, consequences and therapeutics,American Diabetes Association, $300,000 (7/1/2008-6/30/2011)

20. Ren J (PI) Natural Science Foundation of China (NSFC), key laboratory establishment in Xinjiang, Platform for selection of anti-diabetic drugs, YMB 50,000 (1/1/09-12/31/10)

21. Ren J (PI) Role of acetaldehyde in alcoholic cardiomyopathy. NIAAA R01 (1R01 AA013412-01), $1,082,745 (4/1/04-3/31/10)


News

1. Jun Ren, Ji Li, Min Du, Mita Das served as reviewers on study sections/committees for various federal/national agencies
2. Wang J. College Health Science Student Research Award. The cardioprotection effect of activated protein C. $1,000.
3. Li J. College Health Sciences New Investigator Award 2009
4. Sreejayan Nair. College Health Science Outstanding Research Award 2009
5. Newly member of CCRAM—Nate Roe (MCLS PhD student), Nan (Nick) Hu (exchange graduate student), Xuefeng (Hank) Han (Visiting Scholar), Wei Ge (Visiting Scholar) and Yingmei (Megan) Zhang (exchange PhD student)
6. Xuejun Yu (Xi’an) and Ellen Thompson (Cheyenne) both received 2010 EPSCoR undergraduate scholarship.
7. Wyoming INBRE and C-CRAM lab research were televised on NBC-Wyoming and introduced on NPR, local and state newspapers this fall.
8. Dr. Ren has been appointed as the Associate Editor for “Cardiovascular Toxicology”

Picture taken at the farewell to Linlin Li, Lu Yu and Heng Ma (on temporary leave of absence)