



Tulane Hypertension and Renal Center of Excellence

Summer 2005

Volume 4, Issue 2



Two Center Faculty Members Invested as New Chairs at Tulane

Tulane University invested Dr. L. Lee Hamm, the Director of the Hypertension and Renal Center, in the A. Rudolph and Ruth Ryder Huberwald Chair in Medicine. Through the legacy of the late Dorothy Ryder of New Orleans, Dr. Hamm was invested as the inaugural holder of the chair. Dorothy Ryder established the Huberwald Chair endowment fund to memorialize her sister Ruth Ryder Huberwald and brother-in-law A. Rudolph Huberwald. Her gift was inspired and nurtured through her friend Robert Burch, clinical professor emeritus of medicine at Tulane, and his wife Lillie Margaret Burch, who represented Dorothy Ryder at the investiture ceremony.

Dr. Karen B. DeSalvo was recently invested in the C. Thorpe Ray Chair in Medicine. The new chair honors the late physician who was on the Tulane faculty for 43 years. Ray also chaired the medicine department at the University of Missouri and cardiology at Ochsner, returning to Tulane. More than 200 colleagues, friends and family donated to establish the endowed chair, with matching funds from the Louisiana Board of Regents Chairs for Eminent Scholars program.

In This Issue

Investitures

1

News and Awards

2

Publications

3-4

Presentations

5-7, 8

Calendar of Events

7

Summer Students

8



Pictured from left: Dr. Paul Whelton and Dr. L. Lee Hamm



Pictured from left: Dr. Paul Whelton and Dr. Karen DeSalvo

Dr. Hiroyuki Kobori receives ASH Young Scholars Award

Hiroyuki Kobori MD, PhD, was honored this year at the American Society of Hypertension (ASH) meeting in San Francisco on May 17th with receipt of the Young Scholars Award. The ASH Young Scholars Awards are given each year to emerging leaders in hypertension research or related cardiovascular disease research. Dr. Kobori gave a lecture on "Intratubular Angiotensinogen in Hypertension and Kidney Diseases" at the annual meeting. Dr. Kobori is a junior investigator on the COBRE grant. We extend our congratulations to Dr. Kobori for his achievement.



Recent Awards and honors received by Center faculty, fellows, and students.

L. Gabriel Navar recently received a renewal grant on Renal Functional Derangements in Hypertension from NHLBI renewed for year 24. Co-investigators include Drs. KD Mitchell, H Kobori, and T Hammond.

K Pandey received a Fellowship Grant from the Cancer Center for support of Dr. Prena Kumar, postdoctoral fellow.

J Lertora received the Food and Drug Administration's Leveraging/Collaboration Award as a member of the Office of Women's Health Cardiovascular Disease Initiative.

L Gabriel Navar served as co-chair of the organizing committee, XIV Scientific Meeting of the InterAmerican Society of Hypertension, Cancun, Mexico, April 2005.

K Jackson. Recipient of the Caroline tum Suden/Frances Hellebrandt Professional Opportunity Award and a NIDDK Minority Travel Fellowship Award at EB.

MC Prieto-Carrasquero. Young Investigator Travel Award, InterAmerican Society of Hypertension Meeting in Cancun, Mexico.

MC Prieto-Carrasquero. Recipient of the Young Investigator Recognition Award for Meritorious Research, American Physiological Society, Water Electrolyte Homeostasis Section.

F Botros received a National Kidney Foundation postdoctoral research award for 2005-2007.

MG Feng, Young Investigator Travel Award, InterAmerican Society of Hypertension Meeting in Cancun, Mexico.

L Kopkan. Young Investigator Travel Award, InterAmerican Society of Hypertension Meeting in Cancun, Mexico.

R Gonzalez-Villalobos. Recipient of a second place award for Student Excellence in Renal Research from the American Physiological Society Renal Section.

TT. Green. Recipient of a NIDDK Minority Travel Fellowship Award at EB.

B Shen. Recipient of a Research Recognition Award from Endocrine Section of American Physiological Society.

Tulane Auxiliary Supports Early Career Faculty, Honors Dr. Fruzsina Johnson

The Tulane University Health Sciences Center Auxiliary has endowed four early career faculty members with Excellence in Research and Teaching Awards. Fruzsina Johnson, MD, a COBRE junior investigator, was the recipient of the Endowment for Excellence in Research in the School of Medicine. The dean of the school of medicine designates the recipient for the award, which is bestowed every three years for a three-year funding period. The awards are created from funds generated by members of the auxiliary. We extend our congratulations to Dr. Johnson.



Pictured Dr. Fruzsina Johnson

Dr. Carlos Ferrario visits Hypertension and Renal Center in May

We would like to extend our appreciation to Merck & Co, through Hansel Huval, for their generous support of Dr. Carlos Ferrario's visit to Tulane. During his visit with us, Dr. Ferrario gave a dinner presentation, a presentation to the Hypertension and Renal Center of Excellence, and presented at the Nephrology Grand Rounds. Dr. Ferrario also met individually with several members of the Tulane faculty. We sincerely appreciate Merck's support for such an enriching experience.



Pictured Dr. Carlos Ferrario

Recent Publications

Block GA, Spiegel D, Ehrlich J, Mehta R, Lindbergh J, Dreisbach AW, Raggi P Effects of sevelamer and calcium on coronary artery calcification in patients new to hemodialysis *Kidney Int*, 2005 (in press).

Dreisbach AW, Japa S, Sigel A, Parenti MB, Hess AE, Srinouanprachanh SL, Rettie AE, Kim H, Farin FM, Lertora J. The prevalence of CYP2C8, 2C9, 2J2 and Soluble Epoxide Hydrdolase Polymorphisms in African-Americans with Hypertension. *Am J Hypertens*, 2005. (in press)

Evans RG, Majid DSA, and Eppel GA. Mechanisms mediating pressure natriuresis: what we know and what we need to find out. *Clin Exp Pharmacol Physiol*. May-Jun;32(5-6):400-9, 2005.

Fuller AJ, Hauschild BC, Gonzalez-Villalobos, R, Awayda MS, Imig JD, Inscho EW, Navar, LG. Calcium and Chloride Channel Activation by Angiotensin II-AT1 Receptors in Preglomerular Vascular Smooth Muscle Cells. *Am J Physiol Renal Physiol*. Jun 7, 2005. Epub ahead of print.

Garg R and Pandey KN. Regulation of guanylyl cyclase/natriuretic peptide receptor-A gene regulation. *Peptides* 26: 1009-1023, 2005.

Gu D, Reynolds K, Wu X, Chen J, Duan X, Reynolds RF, Whelton PK, He J for the InterASIA Collaboration Group. Prevalence of the metabolic syndrome and overweight among adults in China. *Lancet* 365:1398-1405, 2005.

Howard LL, Patterson ME, Mullins JJ, and Mitchell KD. Salt-sensitive hypertension develops after transient induction of ANG II-dependent hypertension in Cyp1a1-Ren2 transgenic rats. *Am J Physiol Renal Physiol* 288: F810-F815, 2005.

Kobori H, Ozawa Y, Suzaki Y, and Nishiyama A. Enhanced intrarenal angiotensinogen contributes to early renal injury in spontaneously hypertensive rats. *J Am Soc Nephrol* 16: 2073-2080, 2005. Epub ahead of print.

Majid DSA, Nishiyama A, Jackson KE, and Castillo A. Superoxide scavenging attenuates renal responses to ANG II during nitric oxide synthase inhibition in anesthetized dogs. *Am J*

(Continued on page 4)

Publications continued

Physiol Renal Physiol. Feb;288(2):F412-9, 2005.

Pandey KN, Nguyen HT, Garg R, Khurana ML and Fink J. Internalization and trafficking of guanylyl cyclase/natriuretic peptide receptor-A is regulated by an acidic tyrosine-based cytoplasmic motif GDAY. *Biochem J* 388: 103-113, 2005.

Pandey KN. Natriuretic peptides and their receptors. *Peptides* 26:899-900, 2005.

Pandey KN. Biology of natriuretic peptides and their receptors. *Peptides* 26: 901-932, 2005.

Pandey KN. Internalization and Trafficking of guanylyl/cyclase natriuretic peptide receptor-A *Peptides* 26: 985-1000, 2005.

Prieto-Carrasquero MC, Kobori H, Ozawa Y, Gutierrez A, Seth D, Navar LG. AT1 receptor-mediated enhancement of collecting duct renin in angiotensin II-dependent hypertensive rats. *Am J Physiol Renal Physiol* 289, 2005.

Rahman M, Barzilay J, Batuman V, Davis BR, Eckfeldt JH, Farber MA, Henriquez MA, Kopyt N, Louis GT, Nwachuku C, Pressel S, Saklayen MG, Stanford C, Walworth CC, Ward HJ, Whelton PK, Wiegmann TB, Wright JT. Renal Outcomes in high-risk hypertensive patients treated with an angiotensin converting enzyme inhibitor, or calcium channel blocker versus a diuretic: A report from The Antihypertensive and Lipid-Lowering Trial (ALLHAT). *Archives of Internal Medicine* 165:936-946, 2005.

Saifudeen Z, Diavolitsis V, Dipp S, Fan H, and El-Dahr SS. Spatiotemporal switch from deltaNp73 to TAp73 isoforms during nephrogenesis: impact on differentiation gene expression. *J Biol Chem* 280: 23094 - 23102, 2005.

Schofield GG and Ricci A. Electrophysiological characterization of C-terminal Kv4 channel fusion proteins. *Pflügers Archiv European Journal of Physiology* (online) Epub ahead of print.

Tai G, Farin F, Rieder MJ, Dreisbach AW, Veenstra DL, Verlinde C, Rettie AE. In-vitro and in-vivo effects of the CYP2C9*11 polymorphism on warfarin metabolism and dose. *Pharmacogenet Genomics* 15(7):475-48, 2005.

Vellaichamy E, Somanna NK and Pandey KN. Reduced cGMP signaling activates NF-kB in hypertrophied hearts of mice lacking natriuretic peptide receptor-A *Biochem Biophys Res Commun* 327:106-111, 2005.

Vellaichamy E, Khurana ML, Fink J and Pandey KN. Involvement of NF-(Kappa) B matrix metalloproteinase pathway in cardiac fibrosis of mice lacking guanylyl cyclase/natriuretic peptide receptor-A. *J Biol Chem* 280: 19230-19242, 2005.

(Whelton PK, Member) Panel on Dietary Reference Intakes for Electrolytes and Water Dietary Reference Intakes for Water, Potassium, Sodium, Chloride, and Sulfate. Institute of Medicine of the National Academies, Washington, DC: National Academies Press; 2005.

Wright JT, Dunn JK, Cutler JA, Davis BR, Cushman WC, Ford CE, Haywood LJ, Leenen FHH, Margolis KL, Papademetriou V, Probstfield JL, Whelton PK, Habib GB, for the ALLHAT Collaborative Research Group. Outcomes in hypertensive black and nonblack patients treated with chlorthalidone, amlodipine, and lisinopril. *Journal of the American Medical Association.* 13:1595-1607, 2005.

Tulane Investigators Participate in International, National, and Regional Meetings

American Physiological Society/IUPS/Experimental Biology 2005 meeting, San Diego, CA, April 2-6, 2005

Arise KK and Pandey KN. Transcriptional repression of guanylyl cyclase/natriuretic peptide receptor-A gene by angiotensin II.

Botros FT, Prieto-Carrasquero MC, Abraham NG, and Navar LG. The heme-heme oxygenase system is upregulated in the clipped but not in non-clipped kidneys of 2K1C renovascular hypertensive rats.

Feng M and Navar LG. Nitric oxide synthase inhibition activates T and L-type Ca²⁺ channels in afferent and efferent arterioles.

Fuller AJ, Hauschild BC, Awayda M, Gonzalez-Villalobos R, Imig JD, Inscho EW, and Navar LG. Early activation of calcium and chloride channels by angiotensin II receptors in preglomerular vascular smooth muscle cells.

Gonzalez-Villalobos R. Klassen RB, Johanson K. Allen PL, Navar LG, and Hammond TG. Interaction between megalin and angiotensin peptides.

Graciano ML, Seth D, Cabrera M, Prieto-Carrasquero M, Ortiz RM, and Navar LG. Purinergic receptors contribute to mesangial cell transformation during angiotensin II-induced hypertension.

Green TT and Navar LG. Cyclooxygenase-2 inhibition alters renal regional blood flow and hemodynamics in sodium-restricted rats.

Haque MZ, Castillo A, and Madid DSA. Inhibition of nitric oxide synthase on renal and systemic action on gp91PHOX knockout mice

Kopkan K, Wellen K, Castillo A, and Majid DSA. Enhancement of superoxide activity contributes to salt-sensitivity in rats during chronic nitric oxide synthase inhibition.

Majid DSA, Haque MZ, Castillo A, and Graciano M. Blood pressure and renal injury responses to chronic angiotensin II administration in endothelial nitric oxide synthase knockout mice.

Ortiz RM, Bailey AN, Cabrera M, Vukojicic I, Awayda MS, and Navar LG. Eplerenone acutely increases Na⁺ excretion, but does not chronically affect Na⁺ balance, renal aENaC content or systolic blood pressure in angiotensin II-induced hypertension.

Pandey KN, Nguyen HT, Arise KK, and Khurana ML. Internalization and trafficking of NPRA is regulated by an acidic tyrosine-based cytoplasmic motif.

Pandey KN, Khurana ML, Arise KK, and Nguyen HT. Homologous down-regulation of guanylyl cyclase/natriuretic peptide receptor-A in human embryonic kidney, 293 (HEK-293) cells.

Prieto-Carrasquero MC, Botros FT, Cabrera MA, Rauv ML, and Navar LG. Collecting duct renin expression in Goldblatt hypertensive rats.

Presentations continued

Rodriguez JA, Green TT, and Navar LG. Role of cyclooxygenase-2 in regulation of renal function during angiotensin converting enzyme inhibition.
 Vellaichamy E, Binford LC, Fink J, and Pandey KN. Sustained activation of nuclear factor kappa-B in mice lacking natriuretic peptide receptor-A.

XIV Scientific Meeting of the InterAmerican Society of Hypertension, Cancun, Mexcio, April 2005. LG Navar, co-chair of the organizing committee.

Feng MG and Navar LG. Nitric oxide synthase inhibition recruits L-type Ca²⁺ channels in post-glomerular arterioles. **Young Investigator Travel Award.**

Kopkan L, Wellen K, Castillo A, and Majid DSA. Superoxide contributes to the development of salt-sensitivity induced by deficient nitric oxide generation. **Young Investigator Travel Award**

Majid DSA, Haque MZ, Castillo A, and Graciano M. Angiotensin II induced renal injury and mortality in eNOS knockout mice markedly improved by treatment with superoxide scavenger, tempol.

Prieto-Carrasquero MC. Increased collecting duct renin in both kidneys of 2K1C Goldblatt hypertensive rats. **Young Investigator Travel Award.**

Vellaichamy E and Pandey KN. Enhanced cytokine gene expression in hypertrophied hearts of mice lacking NPRA.

American Society of Hypertension meeting, San Francisco, CA, May 2005.

Feng MG and Navar LG. Nitric oxide synthase inhibition recruits L-type Ca²⁺ channels in post-glomerular arterioles.

Majid DSA, Haque MZ, Castillo A, and Graciano M. Superoxide scavenger tempol markedly improves angiotensin II induced renal injury and mortality in eNOS knockout mice.

Navar LG. Co-Chair Session, Prevention and reversal of target organ damage involved in hypertension.

Navar LG. Co-chair session, Ischemic nephropathy: is drive-by angioplasty the answer?

87th Annual Meeting of the Endocrine Society, San Diego, CA, June 3-7, 2005.

Pandey KN and Khurma ML. Internalization and down-regulation of guanylyl cyclase/natriuretic peptide receptor-A.

Southern Regional Meeting of the American Federation for Medical Research - February 24-26, 2005

Haque MZ, Castillo A, Majid DSA. Renal and systemic responses to NO blockade in pg91PHOX knockout mice.

Mohammed Haque, PhD - SAFMR/SSCI Trainee Research Award winner

Invited Speakers:

El-Dahr SS, Invited talk at the International Kinin Meeting in Lund, Sweden, "The Bradykinin B2-receptor is an angiotensin II-regulated gene", May 26, 2005

Hamm, LL, visiting professor at Emory University, "Metabolic Causes of Kidney Stones" June 2005

T.H.R.C.E.

CONFERENCES

April 14

Frank Park, Ph.D.
Louisiana State University Health Sciences Center
"Targeting gene transfer to the vasculature using modified lentiviral vectors"

April 28

Philip Kadowitz, Ph.D.
Tulane University Health Sciences Center
"Update on COX-2"

May 26

Carlos Ferrario, M.D.
Wake Forest University School of Medicine
"ACE2 and ANG-(1-7): Novel functions and their role in blood pressure regulation"
Supported by Merck & Co.

June 9

Rachel Wildman, Ph.D.
Tulane University Health Sciences Center
"Isolated Systolic Hypertension and Arterial Stiffness: Diseases of Aging"

June 23

Rudy M. Ortiz, Ph.D
University of California, Merced
"Benefit or Consequence: Effects of Eplerenone Treatment during Ang II-dependent Hypertension"

July 14

Phillip Darwin Bell, Ph.D
University of Alabama at Birmingham
"Loss of Cilia Results in Deregulated and Unabated Apical Calcium Entry into Collecting Duct Cells "

Upcoming Speakers:

August 21: Dr. Al Dreisbach
August 4: Dr. Ron Victor
August 18: Dr. Efrain Reisin
September 1: Dr. Richard Re

September 15: Dr. Hiroyuki Kobori
September 29: Dr. Tom Giles
October 13: Dr. Ulrich Hopfer

Conferences are held every other Thursday at 4:00 pm in the Medical School Building room 4700

Other happenings

Hypertension and Renal Center welcomes 2005 Summer Students

The Tulane Hypertension and Renal Center of Excellence is pleased to host our Summer Student Program again. For 8-12 weeks, students work with the Center's researchers and clinicians. Summer students are exposed to the nature of a career path in research and have the opportunity to attend the Hypertension and Renal Center conferences. While the majority of our summer students are Tulane medical students, we also have students representing Tulane's uptown campus, Xavier University and Wake Forest University.

Tulane Hypertension and Renal Center of Excellence 2005 Summer Students

- ◇ George Adesina, Dr. Navar, mentor
- ◇ Christine Lin, Dr. R. Johnson, mentor
- ◇ Nermin Imsirovic, Dr. Nakhoul, mentor
- ◇ Mary McCarty, Dr. R. Johnson, mentor
- ◇ Shawn Sarwar, Dr. Awayda, mentor
- ◇ John Scales, Dr. Majid, mentor
- ◇ Andrew Tarleton, Dr. Majid, mentor
- ◇ Melissa Vallas, Drs. Navar/Prieto, mentors

Presentations continued

Hamm LL, Invited Speaker, Ochsner Clinic Foundation, New Orleans, LA, May 2005

Muntner P, Invited Speaker, Ochsner Clinic Foundation, New Orleans, LA, May 2005

Navar LG, Whitney Lecturer, University of Little Rock, Little Rock, AR. "The Kidney in blood pressure regulation and pathophysiology of hyperentention. April 28, 2005

Pandey KN, Invited Speaker, Ochsner Clinic Foundation, New Orleans, LA

Whelton PK. Medical Grand Rounds, University of Colorado Health Sciences Center "Global Burden of Hypertension", Denver, Colorado, March 2005

Whelton, PK. American Society of Hypertension Clinical Hypertension Review Course "Prevention of Hypertension", New Orleans, Louisiana, April 2005

Whelton PK. XXVIIth Annual Meeting of the North American Section of the International Society for Heart Research "Global Burden and Risk of Hypertension" New Orleans, Louisiana, May 2005

Whelton PK. Southern Medical Association 9th Annual Conference on Hypertension "Benefits of Lifestyle Intervention in Prevention and Treatment of Hypertension" "Why Diuretics Should be Initial Therapy in Treatment of Hypertension" New Orleans, Louisiana, June 2005

The directors invite faculty members interested in participating in the activities of the T.H.R.C.E. to submit your name, phone number, fax number, and e-mail address to the Program Coordinator by e-mail at khender@tulane.edu or regular mail to the address provided. Also, please forward all information (awards, publications, presentations) to this email address for inclusion in the next newsletter.