



Kidney Research Centre
Centre de recherche
sur les maladies du rein



KIDNEY RESEARCH CENTRE,
OTTAWA HOSPITAL RESEARCH INSTITUTE
UNIVERSITY OF OTTAWA
THE OTTAWA HOSPITAL

ANNUAL REPORT 2009

KRC ANNUAL REPORT 2009

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**Kidney Research Centre,
The Ottawa Hospital Research Institute,
University of Ottawa**

1. EXECUTIVE SUMMARY

The Kidney Research Centre (KRC) report for 2009 contains information about our scientific staff, grants, publications, scholarly achievements and events that occurred throughout the year. I am pleased to report that this was another very successful year for the centre. Progress has been made at the basic science, translational, and clinical research levels in the quest to prevent, diagnose and treat kidney disease. For instance, in the KRC basic science laboratories, four of the scientists (Drs. Touyz, Hébert, Burns and Kennedy) have teamed together to study the role of renal oxidase enzymes (NADPH oxidase-NOX4) on the progression of experimental diabetic nephropathy, supported by a team grant from the Kidney Foundation of Canada (KFOC) and Pfizer Canada. The early data from this collaboration indicate that the enzyme NOX4 is found at increased levels in diabetic kidneys, and likely contributes to progressive injury to nephrons, the functional units of the kidney. These new findings have been submitted for publication, and form the basis for ongoing studies at the KRC to address this important area. Other advances at the basic science level can be found within the publication list of this report.

Translational research studies are also flourishing at the KRC. In 2009 a number of these studies were either initiated or continued. Drs. Burns, Kennedy and Knoll are conducting research to identify markers of kidney disease progression in people with kidney transplants and proteinuria. Drs. Touyz, Ruzicka and Burns (in collaborations with Drs. Sorisky, Ooi, and Gavin from the Division of Endocrinology and Metabolism) are performing studies on blood vessel structure and function in patients with hyperaldosteronism. Drs. Burns, Touyz and D. Allen (from the Division of Hematology), are studying the effects of endothelial progenitor cells in humans with acute kidney injury. A major goal of the KRC has always been to bridge the gap between the laboratory and the clinic and it is encouraging that these studies are progressing well, with the expert assistance of our clinical research team. To encourage translational research, the KRC also offers an innovative Clinical Curriculum course for PhD post-doctoral fellows, which involves exposure of basic scientists to clinical medicine, via observerships in Hypertension clinics and on the in-patient Nephrology service.

Clinical research studies at the KRC have demonstrated significant progress in 2009. By the end of the year, there were 17 clinical studies focused on various stages of kidney disease. Considerable progress has been made in enrolment of patients into the ACEI study of Dr. G. Knoll, which will determine if the drug

EXECUTIVE SUMMARY – CONTINUED

ramipril reduces the progression of kidney disease or prolongs survival in transplant patients. Progress was also made in enrolment of patients into Dr. D. Zimmerman's study, which is focused on the effect of short daily hemodialysis treatments on blood pressure control, compared to conventional 3 times per week hemodialysis. Drs. Touyz and Burns are part of a large multicentre international trial investigating effects of aliskiren on cardiovascular complications associated with diabetes. We are grateful to all the expert KRC clinical research staff who work diligently to ensure these studies are conducted carefully, efficiently and with high ethical standards, focused foremost on the safety and well-being of our patients.

Scientists at the KRC were recipients of a number of awards in 2009. Dr. David Z. Levine was appointed as Emeritus Professor at the University of Ottawa. This represents a distinct and prestigious honour for Dr. Levine, who is one of the founding scientists of the KRC.

Dr. Rhian Touyz received an honorary award, The Vincenzo Panagia Distinguished Lecture Award for achievements in Cardiovascular Research, from the University of Manitoba. Dr. Chris Kennedy was promoted to Associate Professor and Senior Scientist at the OHRI, in recognition of his excellent research record. Two KRC scientists were recipients of awards from the Department of Medicine at The Ottawa Hospital: Dr. Greg Knoll received a mid-career Research Award, and Dr. Kevin Burns received the first Research Chair Award. Dr. Todd Fairhead, our newest scientist at the KRC, was awarded a 3 year operating grant as a new investigator from the KFOC. Dr. Chris Kennedy and Dr. Richard Hébert both received operating grants from the CIHR and the KFOC, respectively.

Research studies on the role of the vasculature in kidney disease and hypertension are central to the mission of the KRC. In 2009, the KRC, led by Dr. Touyz, received \$1 M in funds as part of the \$62 M Translation of Innovation into Medical Excellence (TIMEX) grant awarded to the OHRI. These funds will be used to launch studies directed at the structure and function of large and small arteries from humans with kidney disease and hypertension. Dr. Touyz has also established the Vascular Health Seminars Series at the OHRI in collaboration with Dr. Duncan Stewart. Finally, the KRC has established a graduate level course at the University of Ottawa on the pathophysiology of hypertension and the role of the kidneys and vasculature, under the direction of Dr. Chris Kennedy. This course was offered for the first time in the fall of 2009.

The KRC is proud of its highly qualified staff. Our Laboratory Manager, Ms. Gabriele Cherton-Horvat, has developed and implemented policies and procedures that have ensured that the KRC meets the standards of good laboratory practice. Her expertise has also been instrumental in the purchase

EXECUTIVE SUMMARY – CONTINUED

and maintenance of major equipment items at the KRC. Our Clinical Research Manager, Ms. Judy Cheesman has developed an innovative human resources model for the conduct of clinical research at the KRC, which involves nurse and non-nurse coordinators, students, and clerical staff. This model has facilitated the conduct of clinical research studies, while maintaining high standards for good clinical practice in research.

The KRC welcomed several new trainees and research staff members in 2009 and also said farewell to honors students, graduate students, technicians, post doctoral fellows and visiting scientists. The names of these individuals are listed in our fall 2009 Newsletter. In particular, the KRC acknowledges the many significant contributions of Dr. D.Z. Levine, who closed his laboratory in late 2009, after a stellar research career spanning 5 decades. Dr. Levine is internationally recognized for his many studies on acid-base transport in the nephron, using *in vivo* micropuncture techniques. More recently, his laboratory had successfully conducted novel research on the effects of diabetes on kidney filtration function in the living animal, using mouse micropuncture, an exceedingly difficult method that represented one of the unique strengths of the KRC. Dr. Levine's senior technician, Ms. Michelle Iacovitti, also left the KRC in 2009, after providing many years of expert and meticulous technical support for this research.

In November 2009, the KRC welcomed Dr. Alexey Gutsol as a Research Associate, from the University of Manitoba. Dr. Gutsol is a pathologist with expertise in microscopic cell imaging, and his addition to the KRC will undoubtedly have a positive impact on the quality of our research studies. In addition, Dr. Gutsol has an interest in understanding the structure and function of blood vessels within the kidney, which is relevant to a number of conditions including diabetic nephropathy and hypertension-induced kidney disease.

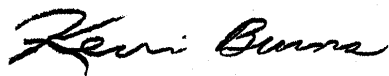
The KRC continues to offer an excellent environment for research training. We are particularly proud of the high quality of our research trainees, and this is exemplified by trainee achievements in 2009. For example, Dr. Augusto Montezano from Dr. Touyz' lab received a prestigious Fellowship Award from the CIHR. Drs. Mona Sedeeq and Dylan Burger (both from Dr. Touyz' lab) were each awarded Fellowships from the national KRESCENT program. Dr. Alvaro Yogi from Dr. Touyz' lab received a Fellowship Award from the Heart and Stroke Foundation of Canada, and Dr. Glauca Callera, a Research Associate in Dr. Touyz ' lab, won the American Society of Hypertension Young Scholar Award. Finally, the Ottawa Italian Night Committee, with support from the KFOC, awarded scholarships to Ms. Erin Cavanagh (Dr. Kennedy's lab), Dr. Rania Nasrallah (Dr. Hébert's lab), Alvaro Yogi and Augusto Montezano (both from Dr. Touyz' lab), in recognition of their research accomplishments.

EXECUTIVE SUMMARY – CONTINUED

In 2009 The Ottawa Hospital Foundation announced that it had reached its fundraising goal of \$2 M for the Jindal Research Chair on The Prevention of Kidney Disease. Dr. Shiv Jindal made a generous contribution of \$1 M to launch this campaign and the other \$1 M was raised from community supporters and the Division of Nephrology at The Ottawa Hospital. The achievement of this goal was announced at a special ceremony at the Riverside Campus in October 2009, to coincide with the opening of the Jindal Kidney Care Centre. In the coming year, the KRC will be actively recruiting a world class scientist to fill this important research position.

The conduct of research at the KRC depends on peer-reviewed grant support, and these grants are highlighted in this report. In addition, the KRC is grateful for the support of industry sponsors (Amgen Canada, Baxter Corp., Fresenius Medical Care, Pfizer Canada and Ortho-Biotech Inc.), as well as community fund-raising events. In this regard, the KRC is particularly grateful to the annual Italian Night Committee, which donated funds in 2009 from this event to the KRC. The 8th Annual KRC Golf tournament, organized by Mr. Sam Karkache, raised close to \$40,000 again in 2009 for the KRC. The KRC also received significant funding support from the CLV Annual Golf Tournament and the Annual Hellenic Night. These funds go directly to support research in the centre: they have been used to purchase major research equipment items, and/or fund specific projects.

Finally, I would like to acknowledge the excellent work of our KRC Administrative Assistant, Ms. Pauline Messier. Pauline contributes in many important ways to keep the KRC functioning well. In particular, she works tirelessly to assist new trainees and staff, especially those coming from outside Canada, so that they can feel welcome to our centre. She also performs many hours of work in preparation for community fund-raising events, and is always on site to assist during these events. We are grateful for her enthusiasm and dedication to the cause.



Kevin D. Burns, MD, FRCPC
Director, Kidney Research Centre
Professor of Medicine, Division of Nephrology

2. RESEARCH PERSONNEL

RESEARCH SCIENTISTS AND DIVISION MEMBERS

<u>NAME</u>	<u>TITLE</u>	
Dr. Ayub Akbari	Associate Professor Division of Nephrology	Clinical Investigator, OHRI
Dr. Robert Bell	Associate Professor Division of Nephrology	
Dr. Mohan Biyani	Assistant Professor Division of Nephrology	Clinical Investigator, OHRI
Dr. Pierre Antoine Brown	Assistant Professor Division of Nephrology	
Dr. Ann Bugeja	Assistant Professor Division of Nephrology	
Dr. Kevin D. Burns	Full Professor, Division of Nephrology Director, Kidney Research Centre	Senior Scientist, OHRI
Dr. Janet Davis	Assistant Professor Division of Nephrology	
Dr. Cedric Edwards	Assistant Professor Division of Nephrology	
Dr. Todd Fairhead	Assistant Professor Division of Nephrology	Clinical Investigator, OHRI
Dr. Richard L. Hébert	Assistant Dean, Admissions Professor, Dept. of Cellular & Molecular Medicine	
Dr. Swapnil Hiremath	Assistant Professor Division of Nephrology	
Dr. Stephanie Hoar	Assistant Professor Division of Nephrology	
Dr. Shiv Jindal	Associate Professor Division of Nephrology	

RESEARCH SCIENTISTS AND DIVISION MEMBERS - CONTINUED

<u>NAME</u>	<u>TITLE</u>	
Dr. Jolanta Karpinski	Assistant Professor Division of Nephrology	Clinical Investigator, OHRI
Dr. Chris Kennedy	Associate Professor Division of Nephrology	Senior Scientist, OHRI
Dr. Greg Knoll	Associate Professor Division of Nephrology	Associate Scientist, OHRI
Dr. Susan Lavoie	Associate Professor Division of Nephrology	Clinical Investigator, OHRI
Dr. David Z. Levine	Emeritus Professor Division of Nephrology	Affiliate Investigator, OHRI
Dr. Peter Magner	Associate Professor Head, Division of Nephrology Division of Nephrology	Clinical Investigator, OHRI
Dr. Brendan McCormick	Assistant Professor Division of Nephrology	
Dr. Steven Nadler	Associate Professor Division of Nephrology	
Dr. Gerald Posen	Associate Professor Division of Nephrology	Clinical Investigator, OHRI
Dr. Marcel Ruzicka	Assistant Professor Division of Nephrology	Clinical Investigator, OHRI
Dr. Rhian Touyz	Full Professor Division of Nephrology Canada Research Chair in Hypertension	Senior Scientist, OHRI
Dr. Deborah Zimmerman	Associate Professor Division of Nephrology	Affiliate Investigator, OHRI

POST-DOCTORAL FELLOWS

<u>NAME</u>	<u>SUPERVISOR</u>	<u>TITLE OF PROJECT</u>
Dr. Maheen Ahmed (Amgen KRC Fellow)	Dr. R. Touyz Dr. K. Burns	Endothelial dysfunction and vascular inflammation in childhood hypertension
Dr. Ana Briones	Dr. R. Touyz	Role of the adipose tissue renin-angiotensin-aldosterone system in vascular biology
Dr. Dylan Burger (KRESCENT awardee)	Dr. R. Touyz	Role of epidermal growth factor ligands in microparticle signaling during hypertension
Dr. Rosangela Milagres	Dr. K. Burns	Characterization of ACE2 transgenic mice
Dr. Augusto Montezano (CIHR awardee)	Dr. R. Touyz	Role of c-Src in aldosterone & Ang II cross-talk in hypertension
Dr. Rania Nasrallah	Dr. R.L. Hébert	The effects of chronic COX inhibition on the development of diabetic kidney disease in mice: Comparing non-selective NSAIDs to COX-2 specific inhibitors.
Dr. Aurelie Nguyen	Dr. R. Touyz	Adipocytes, aldosterone and vascular biology In hypertension.
Dr. Nobuhiro Nishigaki	Dr. R. Touyz	Role of cellular senescence in onset and/or development of cardiovascular disease and mechanisms in premature cellular senescence in disease conditions.
Dr. Mona Sedeek (KRESCENT awardee)	Dr. R. Touyz Dr. R.L. Hébert	Role of Nox4 in the development of diabetic nephropathy in mice model of type II diabetes
Dr. Bruno Sontia	Dr. R.Touyz	Role of TRPM channels, magnesium and annexin in hypertension
Dr. Alvaro Yogi (HSF awardee)	Dr. R. Touyz	Magnesium regulation of vascular function in hypertension: role of TRPM7.

CLINICAL SCHOLARS, TRAINEES AND FELLOWS

NAME

TITLE

Dr. Ali Al-Sawi	Nephrology Trainee (RCPSC)
Dr. Jean Francois Bilodeau	Clinical Fellow
Dr. Pierre Antoine Brown	Nephrology Trainee (RCPSC)
Dr. Deepak Jadhav	Clinical Fellow
Dr. Al-Ali Fadwa	Clinical Fellow
Dr. Kamal Goplani	Clinical Fellow
Dr. Armitabh Kulkarni	Clinical Fellow
Dr. Haresh Patel	Clinical Fellow
Dr. Nasim Shahbazi	Nephrology Trainee (RCPSC)
Dr. Andrew Wong	Nephrology Trainee (RCPSC)
Dr. Moftah Younis	Clinical Fellow

GRADUATE STUDENTS

NAME

SUPERVISOR

TITLE OF PROJECT

Monica Atanya	Dr. K. Burns Dr. R. Munger	Effects of oxygen on optical spectroscopy in hemodialysis
Jordan Clark	Dr. R. L. Hébert	PPAR γ and collecting duct growth and apoptosis
Marc Dilauro	Dr. K. Burns	The role of ACE2 and its product, angiotensin-(1-7), in progressive chronic kidney disease
Laura Labonté	Dr. K. Burns Dr. D. Allan	Integrins and vascular endothelial cell progenitor function
Faycal Meziri	Dr. R. Touyz	The physiological and molecular mechanism whereby physical training and/or erythropoietin may improve vascular and renal function in rats with kidney failure
Renisha Nadarajah	Dr. K. Burns	The role of podocyte ACE2 in diabetic nephropathy
Roya Shaji	Dr. C. Kennedy	Investigating the effects of thromboxane activity on the glomerular podocyte
Erin Stitt-Cavanagh	Dr. C. Kennedy	The role of podocyte prostaglandin E2 EP4 receptors in kidney disease

GRADUATE STUDENTS

<u>NAME</u>	<u>SUPERVISOR</u>	<u>TITLE OF PROJECT</u>
Geneviève Paris	Dr. R. L. Hébert	High salt alters prostanoid signaling in M-1 cells
Sabeur Taouti	Dr. R. Touyz	Molecular mechanisms whereby exercise training and diet modification intervention improve vascular function and insulin sensitivity in a rat model of diet induced obesity
Jean Francois Thibodeau	Dr. C. Kennedy	EP receptors in diabetic kidney disease
Jose Wilson Correa	Dr. R. Touyz	Evaluation of the expression and activity of the renin-angiotensin system after ACE inhibition and/or AT1A receptor blockade in 2K-1C hypertensive rats.

HONOURS/ UNDERGRADUATE STUDENTS

<u>NAME</u>	<u>SUPERVISOR</u>	<u>TITLE OF PROJECT</u>
Mahmoud Almasri	Dr. R. Touyz	Role of Nox 5 in endothelial cell adhesion.
Sarah O'Connor	Dr. R. Touyz	Role of the TRPM7 kinase domain in TRPM7 channel activity and in cellular signaling pathways.
Danielle Zimmerman	Drs. K Burns R Touyz	Effect of angiotensin receptor blockade on the intrarenal RAS.

SUMMER STUDENTS

<u>NAME</u>	<u>SUPERVISOR</u>	<u>TITLE OF PROJECT</u>
Mona Hosseini-Abedeh	Dr. R. Touyz	Role of reactive oxygen species on vascular cell senescence and apoptosis in angiotensin II-infused apolipoprotein E-deficient mice
Bo Li	Dr. T. Fairhead	The Role of the Immune System on the pathophysiology of Hypertension
Laura MacLeod	Dr. C. Kennedy	The role of podocyte prostaglandin E2 EP4 receptors in kidney disease

RESEARCH ASSOCIATES

NAME

Dr. Glauca Callera
Dr. Alexey Gutsol

TECHNICAL STAFF

NAME

TITLE

Anthony Carter	KRC Research Technician
Gabriele Cherton-Horvat	KRC Lab Manager
Ying He	Research Technician
Michelle Iacovitti	Research Technician
Dr. Kaede Takami	Research Technician
Hiba Yusuf	Research Technician
Lihua Zhu	Research Technician
Joseph Zimpelmann	Research Technician

CLINICAL RESEARCH STAFF

NAME

SUPERVISOR

TITLE

Josee Champagne	J. Cheesman	Clinical Research Coordinator
Judy Cheesman	Dr. K. Burns	Clinical Research Manager
Jennilea Courtney	J. Cheesman	Clinical Research Coordinator
Laurie Coveduck	J. Cheesman	Clinical Research Coordinator
Valerie Cronin	J. Cheesman	Clinical Research Coordinator
Edita Delic	J. Cheesman	Clinical Research Assistant II
Deborah Hogan	J. Cheesman	ACE study Coordinator
Ivan Jelesan	J. Cheesman	U of Ottawa, student
Margot McCoshen	J. Cheesman	Clinical Research Coordinator
Scott Mullen	J. Cheesman	Research Assistant Coordinator
Polina Ostrovsky	J. Cheesman	Research Assistant Coordinator
Linda Panther	J. Cheesman	Clinical Research Coordinator
Siobhan Rhodes	J. Cheesman	U of Ottawa, student
Sonia Schellengerger	J. Cheesman	Study Manager
Jessica Wagner	J. Cheesman	Clinical Research Assistant I
Lindsay Walter	J. Cheesman	U of Ottawa, student

ADMINISTRATIVE PERSONNEL

<u>NAME</u>	<u>SUPERVISOR</u>	<u>TITLE</u>
Pauline Messier	Dr. K. Burns	Administrative Assistant, KRC

3. ADMINISTRATIVE COMMITTEES

Kidney Research Centre - Clinical Trials Committee

Dr. A. Akbari	
Dr. K. Burns	(Chair)
Ms. J. Graham	(Vascular Access Coordinator)
Mrs. J. Cheesman	(Clinical Research Manager)
Dr. G. Knoll	
Dr. P. Magner	
Dr. M. Ruzicka	
Dr. D. Zimmerman	

Kidney Research Centre Basic Science Committee

Dr. K. Burns	(Chair)
Dr. R. L. Hébert	
Dr. T. Fairhead	
Dr. C. Kennedy	
Dr. R. Touyz	

4. PEER-REVIEWED FUNDING 2009

CIHR: Canadian Institutes of Health Research
 CFI/OIT: Canada Foundation for Innovation/Ontario Innovation Trust
 KFOC: Kidney Foundation of Canada
 HSFC: Heart and Stroke Foundation of Canada
 IOF: Infrastructure Operating Funds (Canada Foundation for Innovation)
 PSI: Physicians' Services Incorporated Foundation

Principal Investigator	Source	Term	Total Amount	Title	Amount Awarded in 2009
Dr. K. Burns	KFOC	2009-2010	\$100,000	The role of angiotensin (1-7) and its receptor MAS in chronic kidney disease	\$50,000
	KFoC	2005-2011	\$5,100,000	The Kidney Research Scientist Core Education & National Training Program (KRESCENT)	\$850,000
	CIHR				
	CSN				
	CFI (Co-inv)	2008-2010	\$32,533,426	Translation of Innovations into Medical Excellence - TIMEX	
	IOF	2003-2007	\$1.03 million	Infrastructure Operating fund for the KRC	\$85,000
	CIHR	2005-2010	\$716,695	The role of intrarenal ACE2 in the progression of diabetic nephropathy	\$143,339
	CIHR (Co-App)	2007-2010	\$751,860	Optical Spectroscopy: A new tool for assessing blood status and treatment efficacy in end-stage renal disease	\$250,620
	HSFC (co-Invest)	2007-2010	\$219,304	Control of Hypertension in End-Stage Renal Disease: A randomized Cross-Over Study Comparing Daily Hemofiltration to Conventional Hemodialysis	\$36,550
	CIHR (co-appl)	2006-2009	\$491,412	Development of New Angiotensin II AT1A Receptors Radioligands for PET Imaging in Cardiovascular Disease	\$163,804
KFOC (group)	2008-2010	\$150,000	Role of Nox 1 and Nox 4 in diabetic nephropathy and associated cardiovascular injury	\$75,000	
DoM	2008-2009	\$41,500	Vascular Progenitors and Recovery of Renal Function Following Acute Kidney Injury	\$41,500	
Todd Fairhead	KFOC	2009-2011	\$150,000		\$50,000
Dr. R. L. Hébert	KFOC	2009-2011	\$100,000	Prostanoid Signaling in Diabetic Nephropathy	\$111,194
	CIHR	2006-2011	\$605,000	Signaling of Prostaglandin EP Receptors in the Diabetic Collecting Duct	\$120,847
Dr. C. Kennedy	CIHR	2009-2012	\$333,582	The development of a mouse model of familial FSGS	\$111,194
	CIHR	2007-2012	\$560,000	Function of prostaglandin EP receptor subtypes in glomerular podocytes	\$122,857

Dr. G. Knoll	CIHR	2005-2010	\$2,949,260	ACE-inhibition for the Preservation of Renal Function and Patient Survival in Kidney Transplantation	\$589,252
	CIHR	2007-2012	\$230,900	Novel Markers to Improve the Detection of Declining Kidney Function	\$46,180
	PSI	2007-2009	\$145,500	Vitamin D Deficiency and the Risk of Acute Rejection Post Renal Transplantation	\$72,750
	CIHR Co-appl.	2009-2014	\$877,796	Canadian Living Kidney Donor Safety Study	\$175,559
	Co-appl.	2009-2010	\$100,000	Canadian Living Kidney Donor Safety Study Operating Grant-Bridge Funding	\$100,000
Dr. D. Z. Levine	CIHR	2003-2008	\$694,120 + Equip \$44,900	Nitric oxide and renin angiotensin modulation of glomerular hyperfiltration and glomerulosclerosis in gene-targeted mouse models of diabetes studied in vivo.	\$138,824
Dr. R. Touyz	CIHR	2006-2011	\$708,275	Nox Homologues and redox signaling in hypertension	\$141,655
	CIHR co-appl	2005-2010	\$405,000	Identification of cellular mechanisms responsible for the cardioprotective effects of cyclic GMP	\$85,000
	HSFO	2009-2011	\$339,366	TRPM7 signaling through lipid rafts in vascular smooth muscles cells- implications in hypertension	\$108,905
	DoM	2009-2010	\$26,240	Adipocytes, aldosterone and vascular function in hypertension	\$21,240
	CFI Co appli	2008-2010	\$32,533,426	TIMEX	
	KFoC	2008-2010	\$150,000	Role of Nox1 and Nox4 in diabetic nephropathy and associated cardiovascular injury	\$75,000
	HSFC Co appli	2009-2010	\$220,759	Sympathetic Activity in the Patients with endstage renal disease on peritoneal dialysis	
	HSFC	2009-2008-	\$29,250	A potential role for salt-inducible kinase in the molecular etiology of salt-sensitive hypertension and hypertrophy.	\$14,625
	CIHR Co appl	2009		Integrated research network in perinatology of Quebec and Eastern Ontario	

Dr. D. Zimmerman	HSFC	2007- 2010	\$109,652	Control of Hypertension in End Stage Renal Disease: A randomized Cross-Over Study Comparing Daily Hemofiltration to Conventional Hemodialysis	
	CIHR Co-appl.	2007- 2010	\$250,620	Optical Spectroscopy: A new tool for assessing blood status and treatment efficacy in end-stage renal disease	\$83,540
	CIHR. Co-appl	2007- 2010	\$73,200	Canadian Kidney Disease Cohort Study	
	PSI Co-Appl	2007- 2010	\$145,500	Vitamin D Deficiency and the Risk of Acute Rejection Post Renal Transplantation	\$48,500

5. SCHOLARLY ACTIVITIES

A) PUBLICATIONS (2009)

1. Xu S, He Y, Vokurkova M, **Touyz RM**. Endothelial cells negatively modulate reactive oxygen species generation in vascular smooth muscle cells: role of thioredoxin. *Hypertension*.; 54(2):427-33, 2009.
2. Callera GE, He Y, Yogi A, Montezano AC, Paravicini T, Yao G, **Touyz RM**. Regulation of the novel Mg²⁺ transporter transient receptor potential melastatin 7 (TRPM7) cation channel by bradykinin in vascular smooth muscle cells. *J Hypertens*. ;27(1):155-66, 2009.
3. Paravicini TM, Yogi A, Mazur A, **Touyz RM**. Dysregulation of vascular TRPM7 and annexin-1 is associated with endothelial dysfunction in inherited hypomagnesaemia. *Hypertension* ;53(2):423-9, 2009
4. **Touyz RM**, Montezano AC. Vascular smooth muscle cells sense calcium: a new paradigm in vascular calcification. *Cardiovasc Res*. ;81(2):237-9, 2009
5. Park YM, Lim BH, **Touyz RM**, Park JB. Expression of NAD(P)H Oxidase Subunits and Their Contribution to Cardiovascular Damage in Aldosterone/Salt-Induced Hypertensive Rat. *J Korean Med Sci*. ;23(6):1039-45, 2008
6. White M, **Touyz RM**, Tessier Y, Van Le V, Ross H, Sirois MG. Persistent elevation of VEGF and prostacyclin following poor cardiopulmonary maladaptation to high altitude: *Wilderness and Environmental Med*.20(1):97-98, 2009
7. White M, **Touyz RM**, Tessier Y, Van Le V, Ross H, Sirois MG. A cardiac and kidney transplant patient above 6000 meters in Bolivia. *Wilderness and Environmental Med*. ;20(1):99-100, 2009.

PUBLICATIONS (2009) CONTINUED

8. **Touyz RM**, Callera GE. A new look at the eye: aldosterone and mineralocorticoid receptors as novel targets in retinal vasculopathy. *Circ Res.*;104(1):9-11, 2009
9. Cherney, DZ, Scholey, JW, Zhou, J, Zimpelmann, J, **Kennedy, C**, **Burns, KD**, Lai, V & Miller, JA: Endothelial nitric oxide synthase gene polymorphisms and the renal hemodynamic response to L-arginine. *Kidney Int*, 75(3): 327-32, 2009.
10. Cybulsky, AV, Takano, T, Papillon, J, Bijian, K, Guillemette, J & **Kennedy, CRJ**: Glomerular Epithelial Cell Injury Associated with Mutant {alpha}-Actinin-4. *Am J Physiol Renal Physiol*: 00055.2009,
11. Konger, RL, Billings, SD, Prall, NC, Katona, TM, Dasilva, SC, **Kennedy, CR**, Badve, S, Perkins, SM & Lacelle, PT: The EP(1) subtype of prostaglandin E(2) receptor: Role in keratinocyte differentiation and expression in non-melanoma skin cancer. *Prostaglandins Leukot Essent Fatty Acids*, 2009.
12. **Mulay A**, van Walraven C, **Knoll GA**. Impact of Immunosuppressive Medication on the Risk of Renal Allograft Failure due to Recurrent Glomerulonephritis. *American Journal of Transplantation* 9: 804–811, 2009.
13. **Knoll G**. Predicting the ideal serum creatinine level following kidney transplantation. *Nature Clinical Practice Nephrology* 5: 72-73, 2009.
14. **McCormick B**, Akbari A, **Knoll G**. In reply to the promise of pentoxifylline and interference with the renin-angiotensin system in diabetic nephropathy (letter). *American Journal of Kidney Diseases* 53(2): 355-356, 2009.
15. Shmorgun D, Claman P, McGregor P, **McCormick B**. Renal artery dissection during an in vitro fertilization/intracytoplasmic sperm injection cycle. *Fertil Steril*;92:1498 e1-3, 2009.
16. White C, **Akbari A**, Doucette S, Fergusson D, Hussain N, Dihn L, Filler G, Lepage N, **Knoll G**. Effect of Clinical Variables and Immunosuppression on Serum Cystatin C and Beta-Trace Protein in Kidney Transplant Recipients . *Am J of Kidney Dis* : Nov 54(5): 922-30, 2009.
17. White C, **Akbari A**, Doucette S, Fergusson D, Hussain N, Dihn L, Filler G, Lepage N, **Knoll G**. Estimating GFR using Serum Beta Trace Protein: Accuracy and Validation in Kidney Transplant and Pediatric Populations. **(Senior Author)**. *Kidney Int*. Oct;76(7):784-91, 2009.
18. White CA, **Akbari A**, Doucette S, Fergusson D, **Knoll GA**. Estimating Glomerular Filtration Rate in Kidney Transplantation: Is the new Chronic Disease Epidemiology Collaboration Equation any Better? *Clin Chem*. Dec 3, 2009
19. **Knoll GA**. Is Kidney Transplantation for Everyone? The Example of the Older Dialysis Patient. *Clin J Am Soc Nephrol*. Dec;4(12):2040-4, 2009.

PUBLICATIONS (2009) CONTINUED

20. **Knoll GA**. Proteinuria in Kidney Transplant Recipients: Prevalence, Prognosis and Evidence-Based Management. *Am J Kidney Dis*. 2009 Aug 31
21. **Akbari A**, **Knoll G**, **McCormick B**, Fergusson D, Davis A, **Biyani M**. Angiotensin converting Enzyme Inhibitors and Angiotensin Receptor Blockers in Peritoneal Dialysis: Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Perit Dial Int*; 29:554-6, 2009
22. Hux J, Holland D, **Nadler S**, Richardson R, Lok C, Churchill D. An investigation of satellite hemodialysis fallbacks in the province of Ontario. *Clin J Am Soc Nephrol*. 4(3):603-8, 2009.
23. Prasad GV, **Ruzicka M**, **Burns KD**, Li SW, Lebel M Hypertension in dialysis and kidney transplant patients. *Can J Cardiol*. May;25(5):309-14, 2009
24. Khan NA, Hemmelgarn B, Herman RJ, Bell CM, Mahon JL, Leiter LA, Rabkin SW, Hill MD, Padwal R, **Touyz RM**, Larochelle P, Feldman RD, Schiffrin EL, Campbell NR, Moe G, Prasad R, Arnold MO, Campbell TS, Milot A, Stone JA, Jones C, Ogilvie RI, Hamet P, Fodor G, Carruthers G, **Burns KD**, **Ruzicka M**, DeChamplain J, Pylypchuk G, Petrella R, Boulanger JM, Trudeau L, Hegele RA, Woo V, McFarlane P, Vallée M, Howlett J, Bacon SL, Lindsay P, Gilbert RE, Lewanczuk RZ, Tobe S. The 2009 Canadian Hypertension Education Program recommendations for the management of hypertension: Part 2--therapy.; Canadian Hypertension Education Program. *Can J Cardiol*. May;25(5):287-98, 2009
25. Padwal RS, Hemmelgarn BR, Khan NA, Grover S, McKay DW, Wilson T, Penner B, Burgess E, McAlister FA, Bolli P, Hill MD, Mahon J, Myers MG, Abbott C, Schiffrin EL, Honos G, Mann K, Tremblay G, Milot A, Cloutier L, Chockalingam A, Rabkin SW, Dawes M, **Touyz RM**, Bell C, **Burns KD**, **Ruzicka M**, Campbell NR, Vallée M, Prasad R, Lebel M, Tobe SW The 2009 Canadian Hypertension Education Program recommendations for the management of hypertension: Part 1--blood pressure measurement, diagnosis and assessment of risk.; Canadian Hypertension Education Program. *Can J Cardiol*. May;25(5):279-86, 2009
26. **Bugeja A**, Dacouris N, Thomas A, Marticorena R, McFarlane P, Donnelly S, Goldstein M. In-center nocturnal hemodialysis: another option in the management of chronic kidney disease. *Clin J Am Soc Nephrol*. 2009 Apr;4(4):778-83, 2009.
27. Dilauro M, **Burns KD**. Angiotensin-(1-7) and its effects in the kidney. *Scientific World Journal*. 2009 Jun 30;9:522-35, 2009.
28. Gava E , Samad-Zadeh A, Zimpelmann J, Bahramifarid N, Kitten GT, Santos RA, **Touyz RM**, **Burns KD**. Angiotensin-(1-7) activates a tyrosine phosphatase and inhibits glucose-induced signalling in proximal tubular cells. *Nephrol Dial Transplant*. Jun;24(6):1766-73, 2009

PUBLICATIONS (2009) CONTINUED

29. Zimpelmann J, **Burns KD**. Angiotensin-(1-7) activates growth-stimulatory pathways in human mesangial cells. *Am J Physiol Renal Physiol*. Feb;296(2):F337-46, 2009.
30. Sedeek M, **Hébert RL**, **Kennedy CR**, **Burns KD**, **Touyz RM**: Molecular mechanisms of hypertension: role of Nox family NADPH oxidases. *Curr Opin Nephrol Hypertens*, 18: 122-7, 2009.
31. Brar SS, **Hiremath S**, Dangas G, Mehran R, Brar SK, Leon MB. Sodium bicarbonate for the prevention of contrast induced-acute kidney injury: a systematic review and meta-analysis. *Clin J Am Soc Nephrol*. Oct;4(10):1584-92, 2009
32. **Hiremath S**, Holden RM, Fergusson D, **Zimmerman DL**. Antiplatelet medications in hemodialysis patients: a systematic review of bleeding rates. *Clin J Am Soc Nephrol*. Aug;4(8):1347-55, 2009
33. Flegel K, **Magner P**. Get excess salt out of our diet. *CMAJ*. Feb 3;180(3):263-65, 2009
34. Michaud, JL, Hosseini-Abardeh, M, Farah, K & **Kennedy, CR**: Modulating alpha-actinin-4 dynamics in podocytes. *Cell Motil Cytoskeleton*, 66: 166-78, 2009
35. Michaud, JL, Stitt-Cavanaugh, E, Endlich, N, Endlich, K, De Repentigny, Y, Kothary, R & **Kennedy, CR**: Mice with podocyte-specific overexpression of wild type alpha-actinin-4 are healthy controls for K256E-alpha-actinin-4 mutant transgenic mice. *Transgenic Res*, July 8, 2009.
36. Miura P, Chakkalakal JV, Boudreault L, Bélanger G, **Hébert RL**, Renaud JM, Jasmin BJ. Pharmacological activation of PPAR{beta}/{delta} stimulates utrophin A expression in skeletal muscle fibers and restores sarcolemmal integrity in mature mdx mice. *Hum Mol Genet*. Dec 1;18(23):4640-9,2009.
37. Nasrallah R, Robertson SJ, **Hébert RL**. Chronic COX inhibition reduces diabetes-induced hyperfiltration, proteinuria, and renal pathological markers in 36-week B6-Ins2(Akita) mice. *Am J Nephrol*. ;30(4):346-53, 2009
38. Fu A, Ng ACH, Depatie C, Wijesekara N, He Y, Wang GS, Bardeesy N, Scott F, **Touyz RM**, Wheeler MB, Sreaton RA. Loss of Lkb1 in adult β cells promotes insulin secretion and improves glucose tolerance in mice. *Cell Metab*. Oct;10(4):285-95, 2009.
39. Clark J, Nasrallah R, **Hébert RL**. The PPARdelta Ligand GW501516 Reduces Growth but Not Apoptosis in Mouse Inner Medullary Collecting Duct Cells. *PPAR Res*. :706283, 2009.
40. Briones AM, **Touyz RM**. Moderate exercise decreases inflammation and oxidative stress in hypertension – but what are the mechanisms? *Hypertension*. Dec; 54(6):1206-8, 2009.

PUBLICATIONS (2009) CONTINUED

41. **Burns KD**, Li, N. Characterization of renin-angiotensin system enzyme activities in cultured mouse podocytes. *Am J Physiol Renal Physiol*. Mar;296(3):F666, 2009 (letter to the editor).
42. Takami K, Touyz LZ, **Touyz RM**. Licorice alert. *Br Dent J*. Dec 12;207(11) 519, 2009.
43. Yogi A, Callera GE, Hipolito UV, Silva CR, **Touyz RM**, Tirapelli, CR. Ethanol-induced vasoconstriction is mediated via redox-sensitive, cyclooxygenase-dependent mechanisms. *Clin Sci (Lond)* Dec 3, 2009.
44. **Levine DZ**, Iacovitti M, Robertson SJ. Modulation of single-nephron GFR in the db/db/db/db mouse model of type 2 diabetes mellitus II. Effects of renal mass reduction. *Am J Physiol Regul Integr Comp Physiol*. Jan; 296910:R193, 2009.
45. Jain Ak, McLeod I, Huo C, Cuerden MS, **Akbari A**, Tonelli M, van Walraven C, Quinn RR, Hemmelgrarn B, Oliver MJ, Li P, Garg AX. When laboratories report estimated glomerular filtrations rates in addition to serum creatinines, nephrology consults increase. *Kidney Int*. Aug;76(3):318-23, 2009.
46. Lindsay RM, Hux J, Holland D, **Nadler S**, Richardson R, Lok C, Moist L, Churchill D. An investigation of satellite hemodialysis fallbacks in the province of Ontario. *Clin J Am Soc Nephrol*. Mar;4(3):603-8, 2009.
47. **Knoll GA**, KDIGO clinical practice guideline for the care of kidney transplant recipients. Kidney Disease: Improving Global Outcomes (KDIGO) Transplant Work Group. *Am J Transplant*. Nov;9 Suppl 3:S1-155, 2009.
48. Horvat LD, Shariff SZ, Garg AX, **Knoll GA**; Donor Nephrectomy Outcomes. Global trends in the rates of living kidney donation. *Kidney Int*. May;75(10):1088-98, 2009.
49. Stitt-Cavanaugh E, MacLoed, L., and **Kennedy, C.R.J.** The Podocyte in Diabetic Kidney Disease. *The Scientific World*: Oct 14;9:1127-39, 2009
50. Schena FP, Pascoe MD, Alberu J, del Carmen Rial M, Oberbauer R, Brennan DC, Campistol JM, Racusen L, Polinsky MS, Goldberg-Alberts R, Li H, Scarola J, Neylan JF, **Knoll GA**. Conversion from calcineurin inhibitors to sirolimus maintenance therapy in renal allograft recipients: 24-month efficacy and safety results from the CONVERT trial.; Sirolimus CONVERT Trial Study Group. *Transplantation*. Jan 27;87(2):233-42, 2009.
51. Rush DN, Cockfield SM, Nickerson PW, Arlen DJ, Boucher A, Busque S, Girardin CE, **Knoll GA**, Lachance JG, Landsberg DN, Shapiro RJ, Shoker A, Yilmaz S. Factors associated with progression of interstitial fibrosis in renal transplant patients receiving tacrolimus and mycophenolate mofetil. *Transplantation*. Oct 15;88(7):897-903, 2009.

B) AWARDS/DISTINCTIONS

2005-2012 - Canada Research Chair in Hypertension (tier 1) **(Dr. R. Touyz)**

2007-2011- NIH member of Hypertension and Microcirculation Study Section **(Dr. R. Touyz)**

2009 - **Dr. Rhian Touyz** has been appointed as the Chair of the Kidney Council for High Blood Pressure Research of the American Heart Association.

2007-2009- Ontario Graduate Scholarship In Science and Technology (\$10,000 and \$5,000 from OHRI for salary support **(Marc Dilauro from Dr. Kevin Burns' lab)**)

2008-2010 - Ontario Graduate Scholarship In Science and Technology (salary support **(Erin Stitt from Dr.C. Kennedy lab)**)

2008-2010- Fonds de recherche en santé du *Québec* (FRSQ) , salary support for two years, \$15,000 per year **(Genevieve Paris from Dr. Richard Hébert lab)**

2009-10_ CIHR Fellowship, salary support **(Augusto Montezano from Dr. Rhian Touyz Lab)**

2009-2012- KRESCENT, salary support **(Mona Sedeeq from Dr. Rhian Touyz lab)**

2009-2012- KRESCENT, salary support **Dylan Burger from Dr. Rhian Touyz lab)**

2009- The American Society of Hypertension Inc. Young scholar award. **Dr. Glaucia Callera from Dr. Touyz Lab.**

2009 - **Dr. David Z. Levine** has been appointed as an Emeritus Professor of Medicine at the University of Ottawa

2009 - **Dr. Kevin Burns** has been awarded the first Research Chair of the Dept. of Medicine at TOH

2009 –**Dr. Kevin Burns** was appointed as Deputy Chair, Research, in the Dept. of Medicine at The Ottawa Hospital

2009 - **Dr. Greg Knoll** is recipient of a Mid-Career Research Award from the Dept. of Medicine at TOH

2009 -10 The KRC laboratory **scientist group**, led by Dr. Touyz, was awarded the first ever team grant from the Kidney Foundation of Canada and Pfizer Canada, Inc.

2009-2010 - Ontario Graduate Scholarship In Science and Technology salary support **(Jean Francois Thibodeau from Dr.C. Kennedy lab)**

Oct 2009 _ **Guto Montezano from Dr. R. Touyz lab**, received the post doctoral award for best presentation at the Canadian Hypertension Society

AWARDS/DISTINCTIONS CONTINUED

2009 - Vincenzo Panagia Distinguished Lecture Award, Institute of Cardiovascular Sciences Award.
Dr. R. Touyz .

2009– Post Doctoral Scholarship Award from Italian Night Committee c/o Kidney Foundation of Canada
(Dr.Rania Nashralla, Dr. R. Hebert’s lab)

2009– Post Doctoral Scholarship Award from Italian Night Committee c/o Kidney Foundation of Canada **(Dr. Augusto Montezano, Dr. R. Touyz’ lab)**

2009 – Graduate Student Scholarship Award from Italian Night Committee c/o Kidney Foundation of Canada
(Erin Stitt, Dr. C. Kennedy’s lab)

2009 – Graduate Student Scholarship Award from Italian Night Committee c/o Kidney Foundation of Canada
(Alvaro Yogi, Dr. R. Touyz’ lab)

C) INVITED PRESENTATIONS 2009

1. February 18-20, 2009 - **Touyz RM**. Vascular Protection After Acute Stroke. International Stroke Conference. AHA. San Diego..
2. 25 February 2009 - **Knoll, G**. Evaluation of the Older Dialysis Patient: Is it ever too old for Kidney Transplantation? University of Manitoba City-Wide Nephrology Grand Rounds, Winnipeg, Manitoba.
3. 27 February 2009 – **Knoll G**. Proteinuria Following Kidney Transplantation: Does it Mean Anything and Do We Need to Treat It? University of British Columbia City-Wide Nephrology Rounds, Vancouver, BC.
4. 4 March 2009 - **Knoll G**. Clinical Trial Groups in Transplantation. Canadian Transplant Academy Training Day, Banff, Alberta.
5. March 12-14, 2009.- **Touyz RM**. Free radicals, oxidative stress and vascular (patho)biology. Seventh International Workshop on “Structure and function of the Vascular System” - Paris,
6. 17 April 2009 -**Knoll G**. Is Kidney Transplantation for Everyone? The Example of the “Older” Dialysis Patient. The John J. Curtis Festschrift at the University of Alabama at Birmingham, Birmingham, Alabama, USA.
7. 16-18 April, 2009.**Touyz RM**. Signaling networks by angiotensin II and aldosterone: basic concepts and clinical implications. Forum of the Renin Angiotensin System. Capri, Italy.
8. April 18-22, 2009 - **Touyz RM**. Molecular mechanisms of hypertension. Experimental Biology meeting. New Orleans.
9. April 18-22, 2009-**Touyz RM**. Biology of signaling in the vascular system – role in hypertension. Experimental Biology meeting. New Orleans.

INVITED PRESENTATIONS 2009 CONTINUED

10. 25 April 2009 – **Bugeja A**, Canadian Society of Gastroenterology Nurses, Ottawa, Ontario, Living Kidney Donation
11. 4 May, 2009 - **Knoll G**. Increasing Access and Reducing Wait Times for Transplantation in Ontario: The Path Forward. Session II, Moving Forward. Session Co-Chair and Moderator of Round Table Discussion. University of Toronto.
12. May 6-9, 2009. - **Touyz RM**. Protein phosphorylation, vascular biology and hypertension. 24th American Society of Hypertension, San Francisco.
13. May 8-9- **Burns, KD**, KRESCENT Workshop. Edmonton, Alberta.
14. May 12-14, 2009 - **Touyz RM**. Nox homologues, reactive oxygen species and vascular biology. Endothelium-dependent vasodilation meeting. Iasi, Romania.
15. May 14, 2009 – **Burns KD**. Vascular Progenitors and Recovery of Renal Function after Acute Kidney Injury. OHRI Retreat. Merrickville, Ontario.
16. 31 May 2009 - **Knoll G**. Improving GFR Estimation in Transplantation: Standardized Serum Creatinine, Cystatin C and Beyond. Invited lecture during a symposium (Assessing Renal Function in Transplantation) at the American Transplant Congress.
17. 5 June 2009 - **Knoll G**. The Importance of Proteinuria in the Kidney Transplant Recipient. Multi-Organ Transplant Rounds, University of Montreal, Montreal.
18. 11 June 2009 - **Knoll G**. 20 years of microperfusion and still running strong.. BC Transplant Provincial Renal Transplant Day 2009, Vancouver.
19. 11 June 2009 – **Hébert, RL**, 20 years of microperfusion and still running strong City Wide Renal Rounds, University of Calgary, Calgary, AB.
20. 12 June 2009 – **Hébert, RL**. 20 years of microperfusion and still running strong Division of Nephrology, Research Seminar, University of Alberta, Edmonton, AB.
21. 12 June 2009- – **Hébert, RL**, RL , Renal Ground Rounds, University of Alberta, Edmonton, AB.
22. 12 June 2009– **Zimmerman, D**. Atrial Fibrillation. To Do Something or Nothing, that is the real question. Kingston, Ontario.
23. June 2009 – **Bugeja, A**, Hypertension and Chronic Kidney Disease: Are we ON TARGET? Alberta Association of Renal Pharmacists, Calgary, Alberta
24. August 3-6, 2009 - **Touyz RM**. Cross talk between angiotensin and aldosterone – implications in hypertension. Interamerican Society of Hypertension, Belo Horizonte, Brazil.
25. August 7, 2009 – **Burns KD**, ACE2 and Ang-(1-7) in the Kidney. IASH/SBH 2009 Conference. . Belo Horizonte, Minas Gerais, Brazil

INVITED PRESENTATIONS 2009 CONTINUED

26. August 13-16, 2009- **Touyz RM**. Endothelial dysfunction – role of caveolae. Canadian Vascular Biology Working Group. Vancouver.
27. Sept 23, 2009-**Ruzicka M**. Dual blockade of the RAS in treatment of hypertension at the CSIM meeting in Ottawa
28. Sept 27, 2009 – **Zimmerman, D**. Home Dialysis: More is Better. Eastern Ontario Nephrology Conference. Amgen Canada Inc.. Merrickville, Ontario.
29. 2 October 2009 - **Knoll G**. Significance and Management of Proteinuria in Kidney Transplantation: A Review of the Evidence. University of Toronto Nephrology Rounds. Toronto.
30. 9 October 2009 - **Knoll G**. Importance and Management of Proteinuria in Kidney Transplant Recipients. 20th Indian Society of Transplantation Scientific Meeting, Varanasi, India.
31. 10 October, 2009 - **Knoll G**. Improving Long-Term Kidney Transplant Survival: Non-Immunological Strategies. 20th Indian Society of Transplantation Scientific Meeting, Varanasi, India.
32. 11 October 2009 - **Knoll G**. Management Strategies to Improve Long-Term Graft Survival: Evidence-Based Review. Mumbai Nephrology Group Meeting, Mumbai, India.
33. October 14-16, 2009 - **Touyz RM**. Adipocytes, vascular remodeling and hypertension. Hypertension and the Cardiometabolic Syndrome. Univ of Missouri. Missouri.
34. 21 October 2009 – **Hiremath S**. Contrast-Induced Nephropathy: prophylaxis. At the Canadian Society of Internal Medicine Annual meeting in Ottawa.
35. October 2009- **Kennedy CJ**. “Prostanoids, podocytes and diabetic kidney disease” University of Montreal, Faculty of Medicine.
36. October 17-20, 2009 - **Touyz RM**. Free radicals in the cardiovascular system. 41ST Brazilian Congress on Pharmacology. Ribeiro Preto, Brazil.
37. October 22nd, 2009- **Hiremath S**. Prophylaxis of Contrast-induced Acute Kidney Injury at the Canadian Society of Internal Medicine annual conference.
38. October 28 to November 1, 2009 - **Touyz RM**. Endothelial function, vascular biology and hypertension. World Hypertension Congress. Beijing, China.
39. November 2009 – **Kennedy CJ**. Mouse models of renal injury and disease. KRESCENT workshop, Montreal.
40. November 15-18, 2009 - **Touyz RM**. Ang II and mineralocorticoid receptor signaling. Scientific Sessions. American Heart Association. Orlando, Florida.
41. November 2009 – **Dr. K. Burns**. KRESCENT Workshop.

D) VISITING SCHOLARS

1. 8 January, 2009 – **Dr. Geoffrey Block**, MD, CCRI, Director of Clinical Research at Denver, Nephrology Associate, Clinical Professor, University of Colorado Health Sciences Centre presented “Vascular Calcification in the CKD Patient” at Nephrology Grand Rounds.
2. Feb 24, 2009 – **Dr. Richard Amerling** Medical Director, Irving Place Unit, New York, NY presented “Treatment of Type II DM: The Current Model is Flawed” at Nephrology Grand Rounds.
3. Feb 26, 2009, - **Dr. Kathryn Sandberg**, from Georgetown University presented “Why can’t a woman be more like a man? Is the renin angiotensin system to blame or to thank when it comes to hypertension?” at the Kidney Research Centre Journal Club.
4. 24 Mar 2009–**Dr. David Naimark**, Assistant Professor, Division of Nephrology, Sunnybrook and Women’s College Health Sciences Centre, University of Toronto presented “Re-engineering the linkage between primary and subspecialty Nephrology care: A Proposal” at Nephrology Grand Rounds.
5. 31 March 2009–**Dr. Jim Scholey** presented “Vitamin D and Mechanisms of Chronic Kidney Disease Progression” at Nephrology Grand Rounds and presented “ACE2 and Kidney Disease: Insight from Studies in Mice” at the Kidney Research Centre Journal Club.
6. 11 May 09- **Dr. Jennifer Wilkinson-Berka** from Melbourne, Australia, presented “Prorenin, angiotensin and aldosterone: their roles in retinal pathology” at the Kidney Research Centre Journal Club.
7. 16 June 09 – **Dr. Amit Garg**, MD, Med, FRCPC, PhD Associate Professor of Medicine, Division of Nephrology, University of Western Ontario, London Health Sciences Centre, presented “Safety in Numbers? Donor Risks of Living Kidney Donation” at Nephrology Grand Rounds.
8. 23 June 1009 – **Dr. Alexei Gutsol** from University of Manitoba presented “Renal arterial remodeling in hypertension – what is first, what is after?” At the Kidney Research Centre Journal Club.
9. August 26th – **Darren Yuen**, MD, PhD from University of Toronto, presented “Bone marrow cell therapy for cardiac and renal injury in chronic kidney disease” at OHRI Vascular Biology rounds.
10. 31 August 2009 – **Dr. Edward D. Frohlich**, MD for Ochsner Clinic Foundation, New Orleans, USA presented at “The Heart and Hypertension” at Hypertension Rounds and then “Role of Salt in Hypertension. Doesn’t only increase blood pressure” at Nephrology Grand Rounds.
11. 15 Sept 2009 – **Dr. Luis G. Navar** PhD Chair, Department of Physiology, Director, Center of Biomedical Research Excellence in Hypertension and Renal Biology at Tulane University in New Orleans USA presented “Mechanisms of Intrarenal Angiotensin II Augmentation in Angiotensin II dependent Hypertension at Nephrology Grand Rounds and “The Intratubular Renin-Angiotensin System” at The Ottawa Hospital Medial Grand Rounds (Sourirajan Lecture)

VISITING SCHOLARS CONTINUED

- 12.22 Sept 2009 – **Richard Gilbert**, MD, PhD, FRCP(C) from Division of Endocrinology & Metabolism, St. Michael's Hospital, Toronto, ON. Professor Department of Medicine, University of Toronto presented “Evolving new therapies for progressive kidney disease at Kidney Research Centre Journal Club” and “The (pro)renin receptor: physiological and pathophysiological implications” at Nephrology Grand Rounds
- 13.6 October 09 – **Marie Helene Lafage-Proust**, MD, PhD professor in Cell Biology, Medical School of the Jean Monnet University, Saint-Etienne, France presented “Bone fragility in CKD : Diagnosis & Therapeutic Approaches” at Nephrology Grand Rounds.
- 14.15 October 2009 – **Dr. Shao-Ling Zhang** PhD Assistant Professor from Faculty of Medicine, University of Montreal presented “Maternal Diabetes and Perinatal Programming of Hypertension and Kidney Injury” at Kidney Research Centre Journal Club.
- 15.27 October 2009 – **Michael Copland**, MD, FRCPC Clinical Associate Professor, Division of Nephrology, University of British Columbia, Vancouver Hospital and Health Sciences Centre presented “Independent Hemodialysis- Where do we grow from here?” at Nephrology Grand Rounds.
- 16.8 December 2009 – **Dr. Kathryn Tinckham**, MD, Assistant Professor of Laboratory Medicine and Pathology, University Health Network, University of Toronto presented “2010 HLA Lab: New Paradigms in Risk Assessment” at the Nephrology Grand Rounds.