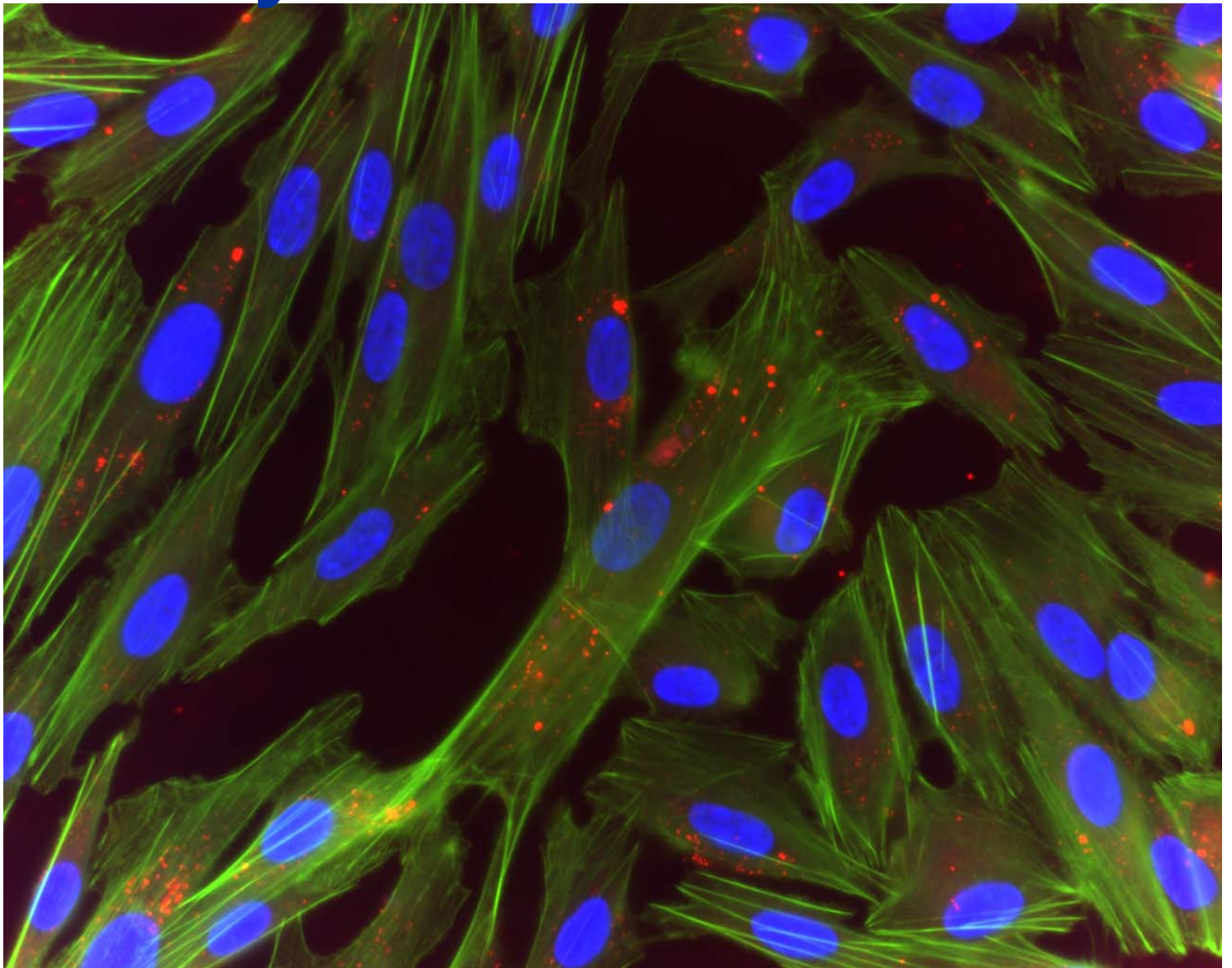


Kidney Research Centre



Annual Report
2018-2019

Inspired by research.
Driven by compassion.

Inspiré par la recherche.
Guidé par la compassion.



About the KRC

The Kidney Research Centre (KRC) was established in 2000 at The Ottawa Hospital Research Institute, University of Ottawa, and is the first centre of its kind in Canada devoted exclusively to the prevention, diagnosis and treatment of kidney disease.



Cover: Microphotography showing uptake of fluorescent exosomes into endothelial cells derived from human umbilical veins. Exosomes derived from umbilical cord blood protect against acute kidney injury by stimulating pro-survival mechanisms to heal injured cells.

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Message from the Director

Academic Year 2018-2019



*Dr. Kevin Burns, Director of the
Kidney Research Centre*

The Kidney Research Centre (KRC) Annual Report for 2018–19 highlights our scientific staff, trainees, publications, presentations, and other academic accomplishments, as well as community events in support of people affected by kidney disease. One of the unique features of KRC is that our research is driven by both bench scientists who are uncovering fundamental mechanisms responsible for causing kidney disease, and clinician researchers examining problems that directly affect patient care and quality of life. The bench research component in-

volves scientists within the Chronic Disease Program at the Ottawa Hospital Research Institute (OHRI), while the clinical research is conducted within the Program of Clinical Epidemiology. But these 2 programs do not exist in isolation. Indeed one of our major objectives is to encourage collaboration between bench scientists and clinicians, so that new discoveries can be brought to the patient's bedside as soon as possible. With increasing numbers of researchers and staff at the KRC in recent years, examples of this type of collaboration have become more evident, a trend that is likely to grow and result in improved patient outcomes.

From July 1, 2018 to June 30, 2019, our researchers published **88 peer-reviewed manuscripts** in scientific/medical journals. Discoveries at the laboratory bench included key insights into how filtration in the kidney is affected by two important proteins (called “ubiquitin C-terminal hydrolase L1”, and “NADPH oxidase”), led by **Dr. Kennedy’s lab**, and demonstration that small vesicles from human cord blood progenitor cells can prevent acute kidney injury by directly targeting damaged cells, work performed in **Dr. Burns’ lab**. As an example of excellent collaboration between bench and clinician scientists, **Dr. Dylan Burger** has worked with **Dr. Marcel Ruzicka** to investigate the implications of their discovery that women on chronic hemodialysis have higher circulating levels of platelet-derived vesicles called “microparticles” compared to men. On the clinical research side, exciting findings were published in high impact medical journals, including more than 20 manuscripts related to kidney transplantation and organ donation from Division Head **Dr. Greg Knoll**, and more than 15 papers from **KRC Jindal Research Chair on the Prevention of Kidney Disease**, **Dr. Manish Sood**, including the demonstration that a commonly used medication to treat high potassium levels (kayexelate) is associated with serious adverse effects in the gastrointestinal tract, published in the prestigious Journal of the American Medical Association (JAMA). Recent recruit to the Division of Nephrology **Dr. Greg Hundemer** has published on his research interest - the outcomes associated with an increasingly recognized cause of hypertension, primary aldosteronism. The Annual Report also includes references to the many interesting findings published by other clinical researchers and their trainees (**Drs. Akbari, Biyani, Brown, Bugeja, Clark,**

Hiremath, Lavoie, Magner, McCormick, Ruzicka, and Zimmerman), and several of these have been highlighted in our monthly KRC Newsflash (www.ohri.ca/centres/krc/newsflash.asp).

The KRC has been very successful once again in securing provincial and national grant funding. **Dr. Chris Kennedy** received a major 5-year project grant from the Canadian Institutes of Health Research (CIHR) to continue studies on the fundamental mechanisms causing kidney disease associated with hypertension. **Dr. Richard L. Hébert** was awarded a 2-year Biomedical Research Grant from the Kidney Foundation of Canada (KFOC) for his research project The role of prostaglandin EP receptors in hypertension-associated kidney disease. **Dr. Greg Hundemer** received a prestigious KRESCENT New Investigator award, from the KFOC, CIHR, and Canadian Society of Nephrology. **Drs. Burger** and **Ruzicka** were awarded a grant from The Ottawa Hospital (TOH) Department of Medicine to study sex differences in platelet microparticles in hemodialysis patients.

In March 2019, **Ms. Chloe Landry** and **Mrs. Thalia Medeiros** (both trainees from **Dr. Burger's laboratory**) were awarded the 2019 Agostino Monteduro Italian Night Scholarships, sponsored by the KFOC. The Scholarships support the training of these excellent students and fund their attendance and presentations at national and international meetings. In May, graduate student **Mr. Matthew Spence** successfully defended his M.Sc. thesis at the University of Ottawa on "The mechanisms for kidney targeting of exosomes in acute kidney injury" (supervisor: **Dr. K. Burns**).

The KRC held an Open House event on May 23, 2019 that featured excellent presentations on living kidney donation (**Dr. Ann Bugeja**) and TOH Home Dialysis Program (**Dr. Brendan McCormick**), as well as a moving speech by patient June Jones on the impact of chronic kidney disease on her and her family. The KRC labs were opened up for walk-through demonstrations of current projects by scientists and trainees.

We continue to receive tremendous support from the Ottawa community. On Sept. 17, 2018, the **15th Annual KRC Golf Tournament** at The Meadows course attracted more than 130 golfers, and raised more than \$24,000 to support kidney research. Mr. Sean Downey spoke eloquently at the dinner event about his experience as a kidney donor for his father. Organization of the event was led once again by **Mr. Sam Karkache**, his committee of volunteers, and TOH Foundation. We thank Sam and all committee members, our Honorary Chair-hockey legend Brian Kilrea, Dean Roberts from TSN 1200, Michael O'Byrne, and all participants and sponsors.

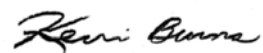
We are especially grateful for the outstanding support of **Russ and June Jones**, who donated \$500,000 on behalf of their family to support research projects at the KRC. At a celebratory event attended by the Jones family and clinical and basic research staff on Jan. 7, 2019, a plaque was unveiled by TOH Foundation to honor this generous donation, with naming of 3 lab facilities at KRC as "The Jones Family Foundation - Kidney Research Laboratories".

On March 2nd, 2019, the 35th **La Serata Italiana/Italian Night** gala dinner featured “An Italian Affair” and raised \$50,000 for the KRC. We thank **Anna Monteduro, Mario Frangione, Mauro Burri**, and all members of the Italian Night organizing committee for hosting this great gala, as well as TOH Foundation and the KFOC for their assistance and support.

Close to \$2,000 was raised to support the KRC at the **9th annual Alive to Strive Kidney Fitness Project** event on April 28, 2019. The event involved runners and walkers from all age groups, and included patients and their family members. Many thanks to **Ms. Marie-Eve Chainey**, Chair of the event, **Dr. Zimmerman**, and all committee members for their hard work and dedication to this important cause.

Lastly, we extend our thanks to all private donors, who have made contributions to the KRC in the past year that will go directly to support biomedical and clinical research projects. We also acknowledge the hard work of the trainees, research staff, our lab manager **Ms. Gaby Cherton-Horvat**, and administrative assistant **Ms. Jennifer Brownrigg** who have all contributed importantly to another successful year at KRC.

Sincerely,



Kevin D. Burns MD CM, FRCPC
Professor of Medicine, Division of Nephrology,
Dept. of Medicine
The Ottawa Hospital
Director, Kidney Research Centre
Chronic Disease Program
Ottawa Hospital Research Institute, University of Ottawa

Message du directeur

Année scolaire 2018-2019



Dr Kevin Burns, Directeur du Centre de recherche sur les maladies du rein.

Le rapport annuel du Centre de recherche sur le rein (CRMR) pour 2018-2019 met en valeur notre personnel scientifique, les stagiaires, des publications, des présentations et d'autres réalisations pédagogiques, ainsi que des événements communautaires touchant les personnes atteintes de maladies rénales. Une des caractéristiques uniques du CRMR est que nos recherches sont menées à la fois par un groupe de scientifiques qui découvrent les mécanismes fondamentaux responsables des maladies rénales et aussi par des chercheurs cliniciens examinant des problèmes qui affectent directement les soins aux patients et leur qualité de vie. Les chercheurs du programme de recherche sur les maladies chroniques de l'Institut de recherche de l'Hôpital d'Ottawa (IRHO) font partie de la recherche fondamentale, tandis que la recherche clinique est menée dans le cadre du programme d'épidémiologie clinique. Mais ces 2 programmes ne sont pas isolés. En effet, l'un de nos principaux objectifs est d'encourager la collaboration entre les scientifiques des deux groupes, afin que de nouvelles découvertes puissent être bénéfique pour les patients le plus rapidement possible. Avec le nombre croissant de chercheurs et de personnel au CRMR ces dernières années, les exemples de ce type de collaboration sont devenus plus évidents, une tendance susceptible de se développer et d'améliorer les résultats pour les patients.

Du 1er juillet 2018 au 30 juin 2019, nos chercheurs ont publié **88 manuscrits évalués par des pairs** dans des revues scientifiques/médicales. Les découvertes dans le laboratoire comprenaient des informations importantes impliquant la filtration dans le rein de deux protéines importantes (appelées « ubiquitine C terminal hydrolase L1 » et « NADPH oxydase »), effectuées par le **laboratoire du Dr Kennedy**, et la démonstration que les petites vésicules des cellules progénitrices du sang de cordon humain peuvent prévenir les lésions rénales aiguës en ciblant directement les cellules endommagées, travail effectué dans le laboratoire du **Dr Burns**. **Dr Dylan Burger** a collaboré avec le **Dr Marcel Ruzicka** pour étudier les implications de leur découverte selon laquelle les femmes recevant des traitements d'hémodialyse chronique présentent des taux plus élevés de vésicules circulantes dérivées des plaquettes, appelées « microparticules » par rapport aux hommes. Du côté de la recherche clinique, des résultats intéressants ont été publiés dans des revues médicales d'importance, notamment plus de 20 manuscrits impliquant la transplantation rénale et les don d'organes par le directeur de la division, le **Dr Greg Knoll**, et plus de 15 articles du président de la chaire Jindal de recherche CRMR le **Dr Manish Sood** sur la prévention de la maladie rénale, le **Dr Sood** a notamment démontré qu'un médicament couramment utilisé pour traiter les taux élevés de potassium (kayexelate) est associé à des effets indésirables graves sur le tractus gastro-intestinal, publié dans le prestigieux Journal de l'Association Médicale Américaine

(JAMA). Un nouveau membre de la Division de néphrologie, le **Dr Greg Hundemer**, a faites une découverte importante en trouvant une cause de plus en plus reconnue d'hypertension, l'aldostéronisme primaire. Le rapport annuel contient également des références aux nombreuses découvertes intéressantes publiées par d'autres chercheurs cliniques et leurs stagiaires (les docteurs **Akbari, Biyani, Brown, Bugeja, Clark, Hiremath, Lavoie, Magner, McCormick, Ruzicka** et **Zimmerman**), et plusieurs de ces personnes. A été souligné dans notre bulletin mensuel CRMR Newsflash (www.ohri.ca/centres/krc/newsflash.asp).

Le CRMR a encore une fois très bien réussi à obtenir des subventions provinciales et nationales. Le **Dr Chris Kennedy** a reçu une subvention de projet majeure d'une durée de cinq ans des Instituts de recherche en santé du Canada (IRSC) afin de poursuivre ses études sur les mécanismes fondamentaux responsables de l'insuffisance rénale associée à l'hypertension. Le **Dr Richard L. Hébert** a reçu une subvention de recherche biomédicale de deux ans de la Fondation canadienne du rein (FCR) pour son projet de recherche intitulé Le rôle des récepteurs de la prostaglandine EP dans l'insuffisance rénale associée à l'hypertension. Le **Dr Greg Hundemer** a reçu le prestigieux prix du nouveau chercheur KRESCENT, décerné par le KFOC, les IRSC et la Société canadienne de néphrologie. **Drs Burger** et **Ruzicka** ont reçu une subvention du département de médecine de L'Hôpital d'Ottawa pour étudier les différences entre les sexes dans les microparticules plaquettaires chez les patients hémodialysés.

En mars 2019, **Mlle Chloé Landry** et **Mme Thalia Medeiros** (toutes deux stagiaires du laboratoire du Dr Burger) ont reçu les bourses d'études Agostino Monteduro de la soirée Italienne 2019, parrainées par la Fondation Canadienne des maladies rénales. Les bourses soutiennent la formation de ces excellents étudiants et leur permet de présenter leurs résultats lors de réunions nationales et internationales. En mai, **M. Matthew Spence**, étudiant gradué, a défendu avec succès sa M.Sc. thèse de maitrise à l'Université d'Ottawa sur « Les mécanismes de ciblage rénal des exosomes dans les lésions rénales aiguës » (directeur : le **Dr K. Burns**).

Le 23 mai 2019, le CRMR a organisé une journée portes ouvertes avec d'excellentes présentations sur le don de rein vivant (**Dre Ann Bugeja**) et le programme de dialyse à domicile de l'HO (**Dr. Brendan McCormick**), ainsi que le discours émouvant d'une patiente June Jones sur l'impact d'être atteinte de l'insuffisance rénale chronique sur elle et sa famille. Les laboratoires du CRMR ont permis à une cinquantaine de personnes d'observer des démonstrations et des projets scientifique en cours.

Nous continuons de recevoir un soutien formidable de la part de la population de l'Outaouais. Le 17 septembre 2018, le **15e tournoi de golf annuel du CRMR** sur le parcours The Meadows a attiré plus de 130 golfeurs et a permis d'amasser plus de 24 000 \$ pour soutenir la recherche sur les maladies rénales. Lors du dîner, M. Sean Downey a parlé avec éloquence de son expérience en tant que donneur de rein pour son père. L'organisation de l'événement a été une nouvelle fois dirigée par M. Sam Karkache, son comité de bénévoles et la Fondation l'HO. Nous remercions Sam et tous les membres du comité, notre président d'honneur – une

légende du hockey moderne Brian Kilrea, Dean Roberts de TSN 1200, Michael O'Byrne de CTV ainsi que tous les participants et commanditaires.

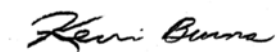
Nous sommes particulièrement reconnaissants pour le soutien exceptionnel de **Russ et June Jones**, qui ont donné 500 000 dollars pour soutenir des projets de recherche au CRMR. Lors d'une cérémonie à laquelle assistaient la famille Jones et le personnel de recherche clinique et fondamentale le 7 janvier 2019, une plaque a été dévoilée par la Fondation l'HO afin de rendre hommage à ce don généreux, avec la désignation de 3 laboratoires au CRMR étant identifiés « La Fondation de la famille Jones – Laboratoires de recherche sur les maladies rénales ».

Le 2 mars 2019, le dîner de gala de la 35e soirée « **La Serata Italiana/Soirée Italienne** » a permis de récolter 50 000 \$ pour le CRMR. Nous remercions **Anna Monteduro, Mario Frangione, Mauro Burri** et tous les membres du comité d'organisation de la soirée italienne d'avoir organisé ce grand gala, ainsi que la Fondation l'HO et la Fondation Canadienne des maladies rénales pour leur aide et leur soutien.

Près de 2 000 \$ ont été collectés pour soutenir le CRMR lors de la 9e édition de la course Vivres ses défis qui a eu lieu le 28 avril 2019. Cet événement réunissait des coureurs et des marcheurs de tous les groupes d'âge, ainsi que des patients et des membres de leur famille. Nous remercions chaleureusement **Mme Marie-Eve Chainey**, présidente de l'événement, la **Dre Zimmerman**, ainsi que tous les membres du comité pour leur travail acharné et leur dévouement à cette cause importante.

Enfin, nous remercions tous les donateurs privés qui ont contribué au cours de l'année qui s'achève de leurs dons au CRMR, ces dons vont directement soutenir des projets de recherche biomédicale et clinique. Nous reconnaissons également le travail acharné des stagiaires, du personnel de recherche, de notre responsable de laboratoire **Mme Gaby Cherton-Horvat**, et de l'assistante administrative, **Mme Jennifer Brownrigg**, ils ont tous contribué de manière importante à une autre année fructueuse au CRMR.

Cordialement,



Kevin D. Burns, MD CM, FRCPC
Professeur de médecine, Division de néphrologie
Université d'Ottawa et l'Hôpital d'Ottawa
Directeur, Centre de recherche sur les maladies
du rein
Institut de recherche de L'Hôpital d'Ottawa, Université d'Ottawa

KRC Profile — Dr Greg Hundemer



Sky is literally the limit for newest KRC Scientist

Gregory Hundemer MD, MPH

Associate Scientist, Clinical Epidemiology Program
Ottawa Hospital Research Institute
Assistant Professor, Medicine
University of Ottawa
Staff Nephrologist
The Ottawa Hospital

When a new faculty recruit is introduced it is not uncommon to hear the expression “The sky is the limit” in reference to their research potential. For the newest recruit to the Kidney Research Centre that expression may be more true than most. **Dr. Gregory Hundemer** is a Nephrologist with a research interest in high blood pressure (hypertension). He also happens to be a former Flight Surgeon in the United States Air Force. We caught up with Dr. Hundemer for a brief interview that touches on his research ambitions, interests, and unique training prior to arriving in Ottawa.

Tell us about your childhood: I was born and raised just outside of Cleveland, Ohio.

Where did you go to school? For my undergraduate studies, I attended Case Western in Cleveland. I then moved to Nashville for medical school at Vanderbilt University. After medical school, I served in the US Air Force for 4 years as a flight surgeon for the U-2 high altitude spy plane squadron (where I had the rare opportunity to fly above 70,000 feet). At that time, I was stationed in Northern California but served multiple combat deployments in support of military operations in Iraq and Afghanistan. After completing 4 years of military service, I returned to academic medicine and moved to Boston for internal medicine residency (Massachusetts General Hospital) and nephrology fellowship (Brigham & Women’s Hospital and Massachusetts General Hospital combined program).

Did you always know that you wanted to be a doctor? No, I always knew I wanted to do something science-related but didn’t settle on becoming a doctor until my junior year of undergrad.

How did you decide to come to Ottawa? The Nephrology Division in Ottawa offered me the balance I was looking for in terms of clinical practice along with protected time for research. Plus, family was a big decider as we were looking to be closer to my wife’s family.

Tell us about your research? Who do you collaborate with in Ottawa? My main research interest is in hypertension, in particular primary aldosteronism which is a common, yet massively under-diagnosed, form of hypertension related to inappropriately high levels of the hormone aldosterone. Through a combination of epidemiologic, physiologic, and interventional studies, I hope to improve both the detection and treatment approaches for primary aldosteronism. In Ottawa, I am collaborating with **Drs. Marcel Ruzicka, Swapnil Hiremath,** and **Manish Sood** in addition to researchers from the cardiology and endocrinology divisions.

What are your interests outside of the clinic? I enjoy running, biking, traveling, and Cleveland sports (I am a diehard Browns fan). But the favorite part of my days is spending time with my wife (Marleen) and our 3 kids: Cooper (age 6), Avery (age 2), and Kennedy (age 1).



KRC Outreach

KRC Golf Tournament

A September tradition for over 15 years, the 2018 KRC Golf Tournament was held Monday, September 17 and welcomed more than 130 golfers, raising more than \$24,000 to support kidney research. The funds raised supported two projects. The first, is a clinical trial led by **Dr. Deb Zimmerman** aimed at establishing an effective exercise-based rehabilitation program for dialysis patients. Her study is teaching dialysis patients how to exercise and maintain motivation. The second project is an investment in state-of-the-art innovation,

a laboratory incubator chamber system developed by Ottawa based company Incuvers. This technology will accelerate KRC studies in kidney regeneration, drug development and cell replication and experiments.



Photo (left to right): Dr. Kevin Burns (KRC Director), Mr. Brian Kilrea (Honorary Chair) and Mr. Sam Karkache.



Photo: Mr. Mike McCann, representative of the CLV Group.

The KRC is grateful to the golfers, sponsors, The Ottawa Hospital Foundation, the organizing committee led by **Mr. Sam Karkache** and our host - The Meadows Golf and Country Club. Special thanks to our guest speaker Mr. Sean Downey, our Honorary Chair Mr. Brian Kilrea, Mr. Dean Roberts of TSN1200, Michael O'Byrne, the golfers and our generous main sponsors Urbandale Corporation, CLV Group and TSN1200 Ottawa. Pictured at the left is Mr. Mike McCann from CLV Group, who sadly passed away in 2019 after a brave fight with cancer. Mike was a long-time great supporter of the KRC, and we are grateful for his help over the years. Our sincere condolences go out to his family and friends.

Italian Night



Photo (left to right): Dr. Dylan Burger, Ms. Chloé Landry, Mrs. Thalia Medeiros, Ms. Anna Monteduro, Dr. Deb Zimmerman and Dr. Kevin Burns.

La Serata Italiana (Italian Night) has become one of the must attend gala events in Ottawa. Every year the organizing Committee, volunteers and staff of the Sala San Marco Conference Centre host an evening to remember. The theme of this year's gala held Saturday March 2nd 2019 was *An Italian Affair*. The event raised \$50,000 for the Kidney Research Centre.

Along with the money raised each year two KRC trainees are awarded the Agostino Monteduro Italian Night Scholarships, on behalf of the Kidney Foundation of Canada. The 2018 awardees, **Ms. Chloé Landry** and **Ms. Thalia Medeiros** received a salary stipend and funding to attend a national/international meeting to present their research. Chloé Landry is pursuing a Master's degree in the Department of Cellular and Molecular Medicine at the University of Ottawa, under the supervision of Dr. Dylan Burger. She is studying "The role of peptidylarginine deiminase 4 and neutrophil extracellular traps in vascular and renal function in hypertensive diabetic mice". Thalia Medeiros is a visiting PhD student from Brazil (also working in **Dr. Burger's laboratory**), and has been at the KRC since August 2018. She is studying "The analysis of podocyte and tubule-derived microparticles in experimental models of chronic kidney disease".

The KRC is grateful to **Anna Monteduro**, **Mario Frangione** and the members of La Serata Italiana organizing committee for their outstanding support of research aimed at improving the lives of people affected by kidney disease



2019 La serata Italiana organizing committee.

Alive to Strive

Walkers and runners of all ages enjoyed the 2019 Alive to Strive race held Sunday April 28. This year more than 500 runners and walkers participated. Over the past 8 years, the event has raised more than \$36,000 for the KRC. Funds raised support new basic and clinical research projects. Thank you to **Marie-Eve Chai-ney** (President of the Board of Directors), the organizing Committee and all the race day volunteers and participants.

The Jones Family Foundation – Kidney Research Laboratories

On Monday, January 7, 2019 KRC Clinical Research/Laboratory Research staff and students celebrated the recent generous donation made by the Jones family to support the KRC. The Ottawa Hospital Foundation and members of the Jones family were on hand to unveil a plaque in honor of this major donation. **Dr. Kevin Burns**, Director of the KRC and **Dr. Deb Zimmerman**, Director of Clinical Research expressed the KRC's gratitude and explained how the funds will support the work related to prevention, detection and treatment of kidney disease. Three laboratories at KRC have been named The Jones Family Foundation – Kidney Research Laboratories, in recognition of the Jones family contribution.



Photo (left to right): Dr. Kevin Burns, Mr. Russ Jones, Mrs. June Jones and Dr. Deb Zimmerman.

KRC Open House

Every two years the KRC opens the doors of the Basic Science laboratories to the community. On May 23, 2019 more than 50 guests joined us to learn about the exciting research in progress at the KRC and the impact it is having on kidney disease. Our speakers were **Dr. Ann Bugeja** who presented on the advances in living kidney donation, **Dr. Brendan McCormick** who presented on the progress in home dialysis therapies and Mrs. June Jones who shared her personal story.

The laboratory tours consisted of 5 stations: *How oxygen can damage the kidney in diabetes* (**Dr. Chris Kennedy**), *Protecting kidneys from ischemic injury: From cells to exosomes to "MicroRNA"* (**Dr. Kevin Burns**); *Hemodialysis and cardiovascular risk: Are there differences for men and women* (**Dr. Dylan Burger**); *Novel antidiabetic drugs. How do they work?* (**Dr. Richard Hébert**); *Patient partners and the road to a clinical trial* (**Dr. Deb Zimmerman**).



KRC Staff / Trainees

Research Personnel

Members of the Division of Nephrology / Kidney Research Centre

<u>Name</u>	<u>Title</u>	<u>Scientific Rank</u>
Dr. Ayub Akbari	Associate Professor Division of Nephrology	Senior Clinician Investigator, OHRI
Dr. Syed Obaid Amin	Clinical Nephrology Associate	
Dr. Robert Bell	Associate Professor Division of Nephrology	
Dr. Mohan Biyani	Assistant Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Pierre Antoine Brown	Assistant Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Ann Bugeja	Assistant Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Dylan Burger	Assistant Professor Dept of Cellular and Molecular Medicine	Scientist, OHRI, KRC
Dr. Kevin D. Burns	Professor of Medicine Division of Nephrology Director of Kidney Research Centre	Senior Scientist, OHRI
Dr. Edward Clark	Assistant Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Janet Davis	Assistant Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Cedric Edwards	Assistant Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Todd Fairhead	Assistant Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Richard L. Hébert	Full Professor Dept of Cellular & Molecular Medicine	
Dr. Caitlin Hesketh	Clinical Associate Division of Nephrology	
Dr. Swapnil Hiremath	Associate Professor Division of Nephrology	Senior Clinician Investigator, OHRI
Dr. Stephanie Hoar	Assistant Professor Division of Nephrology	
Dr. Greg Hundemer	Assistant Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Jolanta Karpinski	Associate Professor Division of Nephrology	Clinician Investigator, OHRI

Members of the Division of Nephrology / Kidney Research Centre

Dr. Chris Kennedy	Full Professor Dept of Cellular & Molecular Medicine	Senior Scientist, OHRI
Dr. Greg Knoll	Professor of Medicine Division of Nephrology Head, Division of Nephrology	Senior Scientist, OHRI
Dr. Susan Lavoie	Associate Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. David Z. Levine	Emeritus Professor Division of Nephrology	Affiliate Investigator, OHRI
Dr. Peter Magner	Associate Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Brendan McCormick	Associate Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Soraya Moghadam	Clinical Associate Division of Nephrology	
Dr. Steven Nadler	Associate Professor Division of Nephrology	
Dr. Sushil Ratnaparkhe	Clinical Nephrology Associate	
Dr. Marcel Ruzicka	Associate Professor Division of Nephrology	Clinician Investigator, OHRI
Dr. Manish Sood	Jindal Research Chair for Prevention of Kidney Disease Assistant Professor Division of Nephrology	Associate Scientist, OHRI
Dr. Deborah Zimmerman	Associate Professor Division of Nephrology, Director of Clinical Research, KRC	Clinician Investigator, OHRI

Clinical Scholars, Trainees and Fellows

<u>Name</u>	<u>Title</u>
Dr. Rima Abou Arkoub	Clinical Fellow
Dr. Mahesh Bennikal	Clinical Fellow
Dr. Tushar Dhakate	Clinical Fellow
Dr. Ankur Gupta	Clinical Fellow
Dr. Januvi Jegatheswaran	Clinical Fellow (RCPSC)
Dr. Prabhu Kanchi	Clinical Fellow
Dr. Teerath Kumar	Clinical Fellow
Dr. Darius Lazarus	Clinical Fellow
Dr. Trevor Mace-Brickman	Clinical Fellow (RCPSC)

Clinical Scholars, Trainees and Fellows (continued)

<u>Name</u>	<u>Title</u>
Dr. David Massicotte-Azarniouch	Clinical Fellow (RCPSC)
Dr. Amr Nagy	Clinical Fellow (RCPSC)
Dr. Rajeevalochana Parthasarathy	Clinical Fellow
Dr. Krishnam Penmatsa	Clinical Fellow
Dr. Rayees Yousuf Sheikh	Clinical Fellow
Dr. Sriram Sriperumbuduri	Clinical Fellow

Research Associates

<u>Name</u>	<u>Supervisor</u>
Dr. Alexey Gutsol	Dr. K. Burns
Dr. Chet Holterman	Dr. C. Kennedy
Dr. Rania Nasrallah	Dr. R. L. Hébert
Dr. Jean-François Thibodeau	Dr. C. Kennedy (<i>Research Scientist - Prometic collaboration</i>)
Dr. Jose Vinas	Dr. K. Burns
Dr. Fengxia Xiao	Dr. D. Burger / Dr. K. Burns

Post Graduate Medical Trainees

<u>Name</u>	<u>Supervisor</u>	<u>Name</u>	<u>Supervisor</u>
Dr. Justin Ashley	Dr. M. Sood	Dr. Kevin Hill	Dr. M. Sood
Dr. Jason Bau	Dr. D. Burger	Dr. Nicole Hryciw	Dr. E. Clark
Dr. Ryan Chan	Dr. D. Zimmerman	Dr. Danielle Moorman	Dr. M. Sood
Dr. Sonali de Chickera	Dr. M. Sood	Dr. Arianna Noel	Dr. M. Sood
Dr. Ben Gershkovitz	Dr. K. Burns	Dr. Carol Wang	Dr. E. Clark
Dr. Richard Hae	Dr. E. Clark	Dr. Jieqing Xu	Dr. K. Burns

Medical Students

<u>Name</u>	<u>Supervisor</u>	<u>Name</u>	<u>Supervisor</u>
Adrian Bailey	Dr. K. Burns (with Dr. David Allan)	Trisha Kandiah	Dr. D. Zimmerman
Mohammed Ali Faraz	Dr. S. Hiremath	Jonathan Lau	Dr. A. Akbari
Maryam Basim Zaree	Dr. S. Hiremath	Gurpreet Mahli	Dr. E. Clark
Brandon Budhram	Dr. M. Sood	Soroush Rouhani	Dr. S. Hiremath
Daniel Chan Chun Kong	Dr. S. Hoar	Tharshka Thangarasa	Dr. D. Zimmerman
Michael Che	Dr. A. Akbari	Sarah Zankar	Dr. K. Burns
Rana Hassan	Dr. A. Akbari / Dr. S. Hiremath	Khalid Zeid	Dr. E. Clark
Johnny Huang	Dr. S. Hiremath		

Post Graduate Student (Basic Research)

<u>Name</u>		<u>Supervisor</u>
Dr. Mayra Trentin-Sonoda	Effect of human vascular progenitor cell-derived exosomes or micro-RNA on renal function in mice with cisplatin induced acute kidney injury.	Dr. K. Burns

Graduate Students (Basic Research)

<u>Name</u>	<u>Project Title</u>	<u>Supervisor</u>
Akram Abolbaghaei	Microparticles in diabetes and pregnancy.	Dr. D. Burger
Hannah Battaion	Nox5-containing urinary microparticles in renal injury associated with diabetes and hypertension.	Dr. C. Kennedy
Choé Landry	The role of peptidylarginine deiminase 4 and neutrophil extracellular traps in vascular and renal function in hypertensive diabetic mice.	Dr. D. Burger
Thalia Medeiros	Analysis of podocyte and tubule-derived microparticles in experimental models of chronic kidney disease.	Dr. KD. Burger
Matthew Spence	Mechanisms for kidney targeting of exosomes in acute kidney injury.	Dr. K. Burns

Graduate Students (Clinical Research)

<u>Name</u>	<u>Project Title</u>	<u>Supervisor</u>
Dr. David Massicotte-Azarniouch	The risks associated with blood transfusions in kidney transplant recipients: A retrospective cohort study using health administrative data.	Dr. M. Sood / Dr. G. Knoll
Silvia Leon Mantilla	Impact of ACEi/ARB discontinuation after an episode of hyperkalemia in patients with CKD. A population-based cohort study.	Dr. M. Sood

Honours Student (Clinical Research)

<u>Name</u>	<u>Supervisor</u>
Adesewa Oloko	Dr. S. Hiremath

Honours Students (Basic Research)

<u>Name</u>	<u>Project Title</u>	<u>Supervisor</u>
Sérina Archambault	Characterization of renal macrophages from WT and GPR84-deficient mice.	Dr. C. Kennedy
Sirene Bellahnid	Effect of peptidylarginine deiminase enzyme inhibition on vascular endothelial cell function in vitro.	Dr. D. Burger
Véronique Cheff	Development and characterization of a novel model of diabetic kidney disease in mice.	Dr. C. Kennedy
Jude Sanon	Novel approaches to the isolation and characterization of extracellular vesicles.	Dr. D. Burger
Mayur Tailor	Circulating anti-angiogenic factors in women with type 1 diabetes in pregnancy.	Dr. D. burger
Frédéric Vachon	Effect of GPR84 activation in the production of podocyte microparticles.	Dr. C. Kennedy
Tessa Whiteley	The effect of dianeal 2.5% peritoneal dialysis solution exposure on human mesothelial cells.	Dr. D. Burger

Summer Students (Clinical Research)

<u>Name</u>	<u>Supervisor</u>
Brianna Lahey	Dr. S. Hiremath
Olivia McBride	Dr. S. Hiremath

Summer Students (Basic Research)

<u>Name</u>	<u>Supervisor</u>
Sirene Bellanid	Dr. D. Burger
Chloé Landry	Dr. D. Burger
Emma Ruzicka	Dr. D. Burger
Jude Sanon	Dr. D. Burger
Mayur Tailor	Dr. D. Burger
Frédéric Vachon	Dr. C. Kennedy
Tessa Whiteley	Dr. D. Burger

Co-Op Student (Basic Research)

<u>Name</u>	<u>Supervisor</u>
Amélie Blais	Dr. C. Kennedy
Ozgun Varol	Dr. D. Burger

Technical Staff

<u>Name</u>	<u>Title</u>	<u>Supervisor</u>
Gabriele Cherton-Horvat	Laboratory Manager	Dr. K. Burns
Lihua Zhu	Laboratory Technician	Dr. C. Kennedy
Joseph Zimpelmann	Senior Laboratory Technician	Dr. K. Burns / Dr. R. L. Hébert

Clinical Research Staff

<u>Name</u>	<u>Title</u>	<u>Supervisor</u>
Jennifer Biggs	Clinical Research Nurse Coordinator	Dr. D. Zimmerman
Valerie Cronin	Clinical Research Coordinator	Dr. D. Zimmerman
Justine Davis	Clinical Research Administrative Coordinator	Dr. D. Zimmerman
Julie Leidecker	Clinical Research Coordinator	Dr. D. Zimmerman
Jessica Wagner	Clinical Research Coordinator	Dr. D. Zimmerman
Jennifer Wong	Research Assistant (KRC Trial)	Dr. D. Zimmerman

Research Administrative Staff

<u>Name</u>	<u>Title</u>	<u>Supervisor</u>
Jennifer Brownrigg	Research Administrative Assistant	Dr. K. Burns

Publications

1. **Sriperumbuduri S**, Dent R, Malcolm J, **Hiremath S**, Klein R, White CA, **Brown PA**, **Akbari A**. Accurate GFR in obesity-protocol for a systematic review. *Systematic Reviews* 8(1):147, 2019.
2. Zelt JGE, Mielniczuk LM, Liu PP, Dupuis JY, Chih S, **Akbari A**, Sun LY. Utility of novel cardio-renal biomarkers in the prediction and early detection of congestive kidney injury following cardiac surgery. *Journal of Clinical Medicine* 7(12) pii:e540, 2018.
3. Hassan R, **Akbari A**, **Brown PA**, **Hiremath S**, Brimble KS, Molnar AO. Risk factors for unplanned dialysis initiation: A systematic review of the literature. *Canadian Journal of Kidney Health and Disease* 6:2054358119831684, 2019.
4. Manns B, Agar JWM, **Biyani M**, Blake PG, Cass A, Culleton B, Kleophas W, Komenda P, Lobbedez T, MacRae J, Marshall MR, Scott-Douglas N, Srivastava V, **Magner P**. Can economic incentives increase the use of home dialysis? *Nephrology, Dialysis, Transplantation* 34(5):731-741, 2019.
5. Makedonov I, **Clark EG**, Kanchi P, **Brown PA**. Adult nephrotic syndrome complicated by spontaneous pneumococcal peritonitis: A case report. *Clinical Nephrology* 90:76-78, 2018.
6. **Bugeja A**, Harris S, Ernst J, **Burns KD**, **Knoll GA**, **Clark EG**. Changes in body weight before and after kidney donation. *Canadian Journal of Kidney Health and Disease* 6:1-6, 2019.
7. **Bugeja A**, Blanco P, **Clark EG**, **Sood MM**. Sick cell disease: A case report of renal amyloidosis. *BMC Nephrology* 19(1):256, 2018.
8. They C, **Burger D**, ... et al. Minimal information for studies of extracellular vesicles 2018 (MISEV2018): A position statement of the International Society for Extracellular Vesicles and update of the MISEV2014 guidelines. *Journal of Extracellular Vesicles* 7(1):1535750, 2018.
9. Beaney ... **Burger D**, ... et al. May Measurement Month 2017: An analysis of blood pressure screening results worldwide. *The Lancet. Global Health* 6(7):e736-743, 2018.
10. **Gutsol A**, Blanco P, Samokhina S, Afanasiev S, **Kennedy CRJ**, Popov S and **Burns KD**. A novel method for comparison of arterial remodeling in hypertension: Quantification of arterial trees and recognition of remodeling patterns on histological sections. *PLoS One* 14(5):e0216734, 2019.
11. **Burns KD**, Cherney D. Renal angiotensinogen and sodium-glucose cotransporter-2 inhibition: Insights from experimental diabetic kidney disease. *American Journal of Nephrology* 49:328-330, 2019.
12. **Vinãs JL**, **Spence M**, **Gutsol A**, **Knoll W**, **Burger D**, **Zimpelmann J**, Allan DS, **Burns KD**. Receptor-ligand interaction mediates targeting of endothelial colony forming cell-derived exosomes to the kidney after ischemic injury. *Scientific Reports* 8(1):16320, 2018.

13. Gershkovich B, McCudden C, and **Burns KD**. A unique case of Metformin-associated lactic acidosis. *Case Reports in Nephrology* 2018:4696182, 2018.
14. Dellinger RP, Bagshaw SM, Antonelli M, Foster DM, Klein DJ, Marshall JC, Palevsky PM, Weisberg LS, Schorr CA, Trzeciak S, Walker PM, for the EUPHRATES Trial Investigators (includes **Burns KD**). Effect of targeted polymyxin b hemoperfusion on 28-day mortality in patients with septic shock and elevated endotoxin level: The EUPHRATES randomized clinical trial. *Journal of the American Medical Association* 320(14):1455-1463, 2018.
15. **Clark EG**, McIntyre L, Ramsay T, Tinmouth A, **Knoll GA**, **Brown PA**, Watpool I, Porteous R, Montroy K, Harris S, Kong J, **Hiremath S**. Saline versus albumin fluid for extracorporeal removal with slow low-efficiency dialysis (SAFER-SLED): Study protocol for a pilot trial. *Pilot and Feasibility Studies* 5(72), 2019.
16. **Bugeja A**, **Clark EG**. A clinical decision support system can help facilitate living kidney donor assessments. *Transplantation* 102(10):1601-1602, 2018.
17. **Douvrin A**, Zeid K, **Hiremath S**, **Brown PA**, **Sood MM**, **Abou Arkoub R**, Malhi G, **Clark EG**. Safety lapses prior to initiation of hemodialysis for acute kidney injury in hospitalized patients: A patient safety initiative. *Journal of Clinical Medicine* 7(10) pii:e317, 2018.
18. **Massicotte-Azarniouch D**, Barbour S, Blanco P, **Clark EG**. Primary membranous nephropathy presenting with crescentic glomerulonephritis 25 years after initial presentation: A case report. *Clinical Nephrology* 90(4):291-295, 2018.
19. **Abou Arkoub R**, Xiao CW, Claman P, **Clark EG**. Acute kidney injury due to ovarian hyperstimulation syndrome. *American Journal of Kidney Diseases* 73:416-420, 2019.
20. Wang C, Samaha D, **Hiremath S**, Sikora L, **Sood MM**, Kanji S, **Clark EG**. Outcomes after toxic alcohol poisoning: A systematic review protocol. *Systematic Reviews* 7(1):250, 2018.
21. Gagnon L, Sarra-Bournet F, **Kamto E**, Laverdure A, Cloutier, MP, Leduc M, **Thibodeau JF**, Grouix B, **Holterman CE**, Ouboudinar J, Felton A, Letourneau S, Harris RC, Zhang MZ, **Kennedy CRJ**, **Hébert RL**, Trinh Nguyen Q, Gagnon W, Zacharie B, Dupuis J, Calderone A, Duceppe JS, **Gutsol A**, Tremblay M, Geerts L, Hince K, Gervais L, Richard J, Leblond F, Penney C, Abbott SD, Laurin P. A newly discovered antifibrotic pathway regulated by two fatty acid receptors GPR40 and GPR84. *American Journal of Pathology* 188(5):1132-1148, 2018.
22. Huang JW, Clarkin OJ, McCudden C, **Akbari A**, Chow BJW, Shabana W, Kanji S, Davis A, **Hiremath S**. The effect of n-acetylcysteine on creatinine measurement: Protocol for a systematic review. *Canadian Journal of Kidney Health and Disease* 5:1-6, 2018.
23. **Hiremath S**, **Akbari A**, Wells GA, Chow BJW. Are iso-osmolar, as compared to low-osmolar, contrast media cost-effective in patients undergoing cardiac catheterization? An economic analysis. *International Urology and Nephrology Journal* 50(8):1477-1482, 2018.

24. Topf JM, **Hiremath S**. Got CKD? There's an app for that! *Clinical Journal of the American Society of Nephrology* 14(4):491-492, 2019.
25. **Sriperumbuduri S, Hiremath S**. The case for cautious consumption: NSAIDs in chronic kidney disease. *Current Opinion in Nephrology and Hypertension* 28(2):163-170, 2019.
26. Devireddy C, **Hiremath S**. Acute kidney injury after transcatheter aortic valve replacement. *Circulation: Cardiovascular Interventions* 11(8):e007135, 2018.
27. Poinen K, Quinn RR, Clarke A, Ravani P, **Hiremath S**, Miller LM, Blake PG, Oliver MJ. Complications from tunneled hemodialysis catheters: A Canadian observational cohort study. *American Journal of Kidney Diseases* 73(4):467-475, 2019.
28. Schieda N, Maralani PJ, Hurrell C, Tsampalieros AK, **Hiremath S**. Updated clinical practice guideline on use of gadolinium-based contrast agents in kidney disease issued by the Canadian Association of Radiologists. *Canadian Association of Radiologists Journal* pii:S0846-5371(19)30045-2, 2019.
29. Kamar F, Quinn RR, Oliver MJ, Viecelli AK, **Hiremath S**, MacRae J, Miller L, Blake P, Moist L, Garg AX, Lam NN, Kabani R, Clarke A, Liu P, Gillespie B, Ravani P. Outcomes of the first and second hemodialysis fistula: A cohort study. *American Journal of Kidney Diseases* 73(1):62-71, 2019.
30. Clarke A, Ravani P, Oliver MJ, **Hiremath S**, Blake PG, Moist LM, Garg AX, Lam NN, Quinn RR. Timing of fistula creation and the probability of catheter-free use: A cohort study. *Canadian Journal of Kidney Health and Disease* 6:2054358119843139, 2019.
31. Kanji S, Roberts JA, Xie J, Alobaid A, Zelenitsky S, **Hiremath S**, Zhang G, Watpool I, Porteous R, Patel R. Piperacillin population pharmacokinetics in critically ill adults during sustained low-efficiency dialysis. *The Annals of Pharmacotherapy* 52(10):965-973, 2018.
32. **Hundemer G, Sood MM**. Pre-dialysis care and cardiovascular outcomes: Why the lead up to dialysis matters. *Kidney International Reports* 4(5):635-637, 2019.
33. **Hundemer GL**, Curhan GC, Yozamp N, Wang M, Vaidya A. Incidence of atrial fibrillation and mineralocorticoid receptor activity in patients with medically and surgically treated primary aldosteronism. *Journal of the American Medical Association* 3(8):768-774, 2018.
34. **Hundemer GL**, Curhan GC, Yozamp N, Wang M, Vaidya A. Renal outcomes in medically and surgically treated primary aldosteronism. *Hypertension* 72(3):658-66, 2018.
35. **Boisvert NC, Holterman CE, Gutsol A**, Coulombe J, Pan W, Alexander RT, Gray DA, **Kennedy CRJ**. Ubiquitin COOH-terminal hydrolase L1 deletion is associated with urinary α -klotho deficiency and perturbed phosphate homeostasis. *American Journal of Physiology-Renal Physiology* 315(2):f353-363, 2018.
36. **Boisvert NC, Holterman CE, Thibodeau JF, Nasrallah R, Kamto E**, Comin CH, Costa LDF, Carter A, **Hébert RL, Gutsol A**, Cron GO, Lacoste B, Gray DA, **Kennedy CRJ**. Hyperfiltration in ubiquitin C-terminal hydrolase L1-deleted mice. *Clinical Science* 132(13):1453-1470, 2018.

37. **Holterman CE, Boisvert NC, Thibodeau JF, Kamto E**, Novakovic M, Abdelrahman K, Ferguson S, **Kennedy CRJ**. Podocyte NADPH oxidase 5 promotes renal inflammation regulated by the toll-like receptor pathway. *Antioxidants and Redox Signaling* 30(15):1817-1830, 2018.
38. Yee A, Papillon J, Guillemette J, Kaufman DR, **Kennedy CRJ**, Cybulsky AV. Proteostasis as a therapeutic target in glomerular injury associated with mutant α -actinin-4. *American Journal of Renal Physiology* 315(4):f954-966, 2018.
39. Tutunea-Fatan E, Abd-Elrahman KS, **Thibodeau JF, Holterman CE**, Holleran BJ, Leduc R, **Kennedy CRJ**, Gros R, Ferguson SSG. GRK2 knockdown in mice exacerbates kidney injury and alters renal mechanisms of blood pressure regulation. *Scientific Reports* 8(1):11415, 2018.
40. White CA, Allen CM, **Akbari A**, Collier CP, Holland DC, Day AG, **Knoll GA**. Comparison of the new and traditional CKD-EPI GFR estimation equations with urinary inulin clearance: A study of equation performance. *International Journal of Clinical Chemistry* 488:189-195, 2018.
41. **Knoll GA**, Chadban S. Preexisting cancer in transplant candidates: Time for a change in practice? *Transplantation* 102(7):1037-1038, 2018.
42. Brett KE, Ritchie LJ, Ertel E, Bennett A, **Knoll GA**. Quality metrics in solid organ transplantation: A systematic review. *Transplantation* 102(7):e308-330, 2018.
43. Tsampalieros A, Dixon S, English S, Manuel D, Van Walraven C, Taljaard M, **Knoll GA**, Fergusson D. Case-mix, patterns of care and in-patient outcomes among Ontario kidney transplant centers: A population-based study. *Canadian Journal of Kidney Health and Disease* 5:1-16, 2018.
44. Naylor KL, Kim SJ, McArthur E, Garg AX, McCallum MK, **Knoll GA**. Mortality after incident end-stage kidney disease treated with maintenance dialysis versus incident solid organ cancer: A population-based cohort. *American Journal of Kidney Diseases* 73(6):765-776, 2019.
45. Fergusson NA, Ramsay T, Chassé M, English SW, **Knoll GA**. Impact of using alternative graft function endpoints: A secondary analysis of a kidney transplant trial. *Transplant Direct* 5(4):e439, 2019.
46. Brett KE, Ertel E, Grimshaw J, **Knoll GA**. Perspectives on quality of care in kidney transplantation: A semistructured interview study. *Transplantation Direct* 4(9):e383, 2018.
47. Tong A, Sautenet B, Poggio ED, Lentine KL, Oberbauer R, Mannon R, Murphy B, Padilla B, Chow KM, Marson L, Chadban S, Craig JC, Ju A, Manera KE, Hanson CS, Josephson MA, **Knoll GA**; SONG-Tx Graft Health Workshop Investigators. Establishing a core outcome measure for graft health: A standardized outcomes in Nephrology - Kidney Transplantation (SONG-Tx) Consensus Workshop Report. *Transplantation* 102(8):1358-1366, 2018.
48. Habbous S, Arnold J, Begen MA, Boudville N, Cooper M, Dipchand C, Dixon SN, Feldman LS, Goździk D, Karpinski M, Klarenbach S, **Knoll GA**, Lam NN, Lentine KL, Lok C, McArthur E, McKenzie S, Miller M, Monroy-Cuadros M, Nguan C, Prasad GVR, Przech S, Sarma S, Segev DL, Storsley L, Garg AX; Donor Nephrectomy Outcomes Research (DONOR) Network. Duration of living kidney transplant donor evaluations: Findings from 2 multicenter cohort studies. *American Journal of Kidney Diseases* 72(4):483-498, 2018.

49. Ahn H, Tay J, Shea B, Hutton B, Shorr R, **Knoll GA**, Cameron B, Cowan J. Effectiveness of immunoglobulin prophylaxis in reducing clinical complications of hematopoietic stem cell transplantation: A systematic review and meta-analysis. *Transfusion* 58(10):2437-2452, 2018.
50. Squires J, Coughlin M, Dorrance K, Linklater S, Chassé M, Grimshaw J, Shemie S, Dhanani S, **Knoll GA**. Criteria to identify a potential deceased organ donor: A systematic review. *Critical Care Medicine* 46(8):1318-1327, 2018.
51. Allard J, Ballesteros F, Anthony S, Dumez V, Hartell D, **Knoll GA**, Wright L, Fortin MC. What does patient engagement mean for Canadian National Transplant Research Program researchers? *Research Involvement and Engagement* 4:13, 2018.
52. Zavalkoff S, Shemie SD, Grimshaw JM, Chassé M, Squires JE, Linklater S, Appleby A, Hartell D, Lalani J, Lotherington K, **Knoll GA**; Potential Organ Donation Identification and System Accountability (PODISA) conference participants. Potential organ donor identification and system accountability: Expert guidance from a Canadian consensus conference. *Canadian Journal of Anaesthesia* 66(4):432-447, 2018.
53. Cowan J, Bennett A, Fergusson N, McLean C, Mallick R, Cameron W, **Knoll GA**. Incidence rate of post-kidney transplant infection: A retrospective cohort study examining infection rates at a large Canadian multicenter tertiary-care facility. *Canadian Journal of Kidney Health and Disease* 5:2054358118799692, 2018.
54. Naylor KL, **Knoll GA**, Shariff SZ, McArthur E, Garg AX, Van Walraven C, Austin PC, McCallum MK, Quinn RR, Tan VS, Kim SJ. Socioeconomic status and kidney transplant outcomes in a universal healthcare system: A population-based cohort study. *Transplantation* 103(5):1024-1035, 2019.
55. Breau RH, Cagiannos I, **Knoll GA**, Morash C, Cnossen S, Lavallée LT, Mallick R, Finelli A, Jewett M, Leibovich BC, Cook J, LeBel L, Kapoor A, Pouliot F, Izawa J, Rendon R, Fergusson DA. Renal hypothermia during partial nephrectomy for patients with renal tumours: A randomised controlled clinical trial protocol. *BMJ Open* 9(1):e025662, 2019.
56. Young A, **Knoll GA**, McArthur E, Dixon SN, Garg AX, Lok CE, Lam NN, Kim SJ. Is the kidney donor risk index a useful tool in non-US patients? *Canadian Journal of Kidney Health and Disease* 5:2054358118791148, 2018.
57. Tan VS, Garg A, McArthur E, Patzer R, Gander J, Roshanov P, Kim J, **Knoll GA**, Yohanna S, McCallum M, Naylor K. Predicting 3-year survival in patients receiving maintenance dialysis: An external validation of iChoose Kidney in Ontario, Canada. *Canadian Journal of Kidney Health and Disease* 5:2054358118799693, 2018.
58. Ju A, Josephson MA, Butt Z, Jowsey-Gregoire S, Tan J, Taylor Q, Fowler K, Dobbels F, Caskey F, Jha V, Locke J, **Knoll GA**, Ahn C, Hanson CS, Sautenet B, Manera K, Craig JC, Howell M, Rutherford C, Tong A. Establishing a core outcome measure for life participation: A Standardized Outcomes in Nephrology - Kidney Transplantation (SONG-Tx) Consensus Workshop Report. *Transplantation* 103(6):1199-1205, 2019.

59. Hanson C, Sautenet B, Craig J, Chapman J, **Knoll GA**, Reese P, Tong A. Informative for decision-making? The spectrum and consistency of outcomes following living kidney donation reported in trials and observational studies. *Transplantation* 103(2):284-290, 2019.
60. Przech S, Garg AX, Arnold JB, Barnieh L, Cuerden MS, Dipchand C, Feldman L, S Gill J, Karpinski M, **Knoll GA**, Lok C, Miller M, Monroy M, Nguan C, Prasad GVR, Sarma S, Sontrop JM, Storsley L, Klarenbach S. Financial costs incurred by living kidney donors: A prospective cohort study. *Journal of the American Society of Nephrology* 29(12):2847-2857, 2018.
61. Barnieh L, Klarenbach S, Arnold J, Cuerden M, **Knoll GA**, Lok C, Sontrop JM, Miller M, Prasad R, Przech S, Garg A. Non-reimbursed costs incurred by living kidney donors: A case study from Ontario, Canada. *Transplantation* 103(6):e164-171, 2019.
62. Bourassa-Blanchette S, **Knoll GA**, Hutton B, Fergusson N, Bennett A, Tay J, Cameron W, Cowan J. Clinical outcomes of polyvalent immunoglobulin use in solid organ transplant recipients: A systematic review and meta-analysis Part I: Kidney Transplant. *Clinical Transplantation* 33(6):e13625, 2019.
63. Ho J, Sharma A, Kroeker K, Carroll R, De Serres S, Gibson I, Hirt-Minkowski P, Jevnikar A, Kim SJ, **Knoll GA**, Rush D, Wiebe C, Nickerson P. A multi-center randomized controlled trial protocol of urine CXCL10 monitoring strategy in kidney transplant recipients. *BMJ Open* 9:e024908, 2019.
64. **Gupta A, Lavoie S, Blew B, Biyani M, McCormick BB**. Successful initiation of dialysis with a 20-year-old buried peritoneal dialysis catheter: Case report and literature review. *Case Reports in Nephrology* 5678026, 2019.
65. **Keskar V, Biyani M, Blew B, Warren J, McCormick BB**. Characteristics and outcomes of exit sites of buried peritoneal dialysis catheters: A cohort study. *Peritoneal Dialysis International* 38(5):387-389, 2018.
66. **Hiremath S, Ruzicka M**. Behind the Mask. *Hypertension* 72(4):841-842, 2018.
67. **Ruzicka M, Leenen FH, Ramsay T, Bugeja A, Edwards C, Magner P, McCormick B, Hiremath S**. Use of directly observed therapy to assess treatment adherence in patients with apparent treatment-resistant hypertension. *Journal of the American Medical Association - Internal Medicine* doi:10.1001/jamainternmed.2019.1455.
68. Noel JA, Bota SE, Petrcich W, Garg AX, Carrero JJ, Harel Z, Tangri N, **Clark EG, Komenda P, Sood MM**. Risk of hospitalization for serious adverse gastrointestinal events associated with sodium polystyrene sulfonate use in patients of advanced age. *Journal of the American Medical Association Internal Medicine* doi:10.1001/jamainternmed.2019.0631, 2019.
69. **Jegatheswaran J, Sood MM**. From mice to men: Is that fancy new biomarker clinically relevant? *Nephrology Dialysis Transplantation* 34(6):899-900, 2018.
70. **de Chickera SN, Bota SE, Kuwornu JP, Wijeyesundera HC, Molnar AO, Lam NN, Silver SA, Clark EG, Sood MM**. Albuminuria, reduced kidney function, and the risk of ST - and non-ST-segment-elevation myocardial infarction. *Journal of the American Heart Association* 7(20):E009995, 2018.

71. **Massicotte-Azarniouch D**, Kuwornu JP, McCallum MK, Bansal N, Lam N, Molnar AO, Pun P, **Zimmerman D**, Garg AX, **Sood MM**. The association of kidney function and albuminuria with the risk and outcomes of syncope: A population-based cohort study. *The Canadian Journal of Cardiology* 34 (12):1631-1640, 2018.
72. Bathini L, Jandoc R, Kuwornu P, McArthur E, Weir MA, **Sood MM**, Battistella M, Muanda FT, Liu A, Jain AK, Garg AX. Clinical outcomes of failing to dose-reduce cephalosporin antibiotics in older adults with CKD. *Clinical Journal of the American Society of Nephrology* 14(2):197-205, 2019.
73. Chimunda T, Silver S, Kuwornu JP, Li L, Nash DM, Adhikari N, Acedillo RR, Harel Z, Kitchlu A, Garg AX, Bell CM, **Sood MM**, Kim J, Wald R. Hospital case volume and clinical outcomes in critically ill patients with acute kidney injury treated with dialysis. *Journal of Critical Care* 48:276-282, 2018.
74. Perl J, Garg AX, Harel Z, Li AH, McArthur E, Nash DM, **Sood MM**, Tan VS, Wald R, Ray JG. ESRD among immigrants to Ontario, Canada: A population-based study. *Journal of the American Society of Nephrology* 29(7):1948-1959, 2018.
75. McArthur E, Bota SE, **Sood MM**, Nesrallah GE, Kim SJ, Garg AX, Dixon SN. Comparing five comorbidity indices to predict mortality in chronic kidney disease: A retrospective cohort study. *Canadian Journal of Kidney Health and Disease* 5:2054358118805418, 2018.
76. House AA, Wanner C, Sarnak MJ, **Sood MM**, ... et al. Heart failure in chronic kidney disease: Conclusions from a Kidney Disease: Improving Global Outcomes (KDIGO) Controversies Conference. *Kidney International* 95(6):1304-1317, 2019.
77. Carrero JJ, Trevisan M, **Sood MM**, Bárány P, Xu H, Evans M, Friberg L, Szummer K. Incident atrial fibrillation and the risk of stroke in adults with chronic kidney disease: The Stockholm CREATinine measurements (SCREAM) project. *Clinical Journal of the American Society of Nephrology* 13(9):1314-1320, 2018.
78. Nesrallah GE, Dixon SN, MacKinnon M, Jassal SV, Bota SE, Dirk JS, Arthurs E, Blake PG, **Sood MM**, Garg AX, Davison SN. Home palliative service utilization and care trajectory among Ontario residents dying on chronic dialysis. *Canadian Journal of Kidney Health and Disease* 5:2054358118783761, 2018.
79. Woodfine J, **Sood MM**, van Walraven C. Derivation of the severe hyponatremia overcorrection risk score (SHOR) index. *Clinical Journal of the American Society of Nephrology* 14(7):975-982, 2019.
80. Ferguson TW, Garg AX, **Sood MM**, Rigatto C, Chau E, Komenda P, Naimark D, Nesrallah GE, Soroka SD, Beaulieu M, Alam A, Kim SJ, Dixon S, Manns B, Tangri N. Association between the publication of the initiating dialysis early and late trial and the timing of dialysis initiation in Canada. *Journal of the American Medical Association Internal Medicine* 179(7):934-941, 2019.
81. Collister D, Healey J, Conen D, Brimble S, Rigatto C, Harel Z, **Sood MM**, Walsh M. Canadian Nephrologist views regarding stroke and systemic embolism prevention in dialysis patients with nonvalvular atrial fibrillation: A survey. *The Canadian Journal of Kidney Health and Disease* 6:2054358118821945, 2019.

82. **Massicotte-Azarniouch D, Sood MM.** Uncertainty surrounds anticoagulation risks and benefits in patients with chronic kidney disease with atrial fibrillation. *BMJ Evidence-based Medicine* 24(1):35-36, 2018.
83. Molnar A, Moist L, Klarenbach S, Lafrance JP, Kim J, Tennankore K, Perl J, Kappel J, Terner M, Gill J, **Sood MM.** Hospitalizations in dialysis patients in Canada: A National cohort study. *The Canadian Journal of Kidney Health and Disease* 5: 2054358118780372, 2018.
84. Garg AX, Devereaux PJ, Hill A, **Sood MM,** Aggarwal B, Dubois L, **Hiremath S,** Guzman R, Iyer V, James M, McArthur E, Moist L, Ouellet G, Parikh CR, Schumann V, Sharan S, Thiessen-Philbrook H, Tobe S, Wald R, Walsh M, Weir M, Pannu N; Curcumin AAA AKI Investigators. Oral curcumin in elective abdominal aortic aneurysm repair: A multicentre randomized controlled trial. *Canadian Medical Association Journal* 190(43):e1273-1280, 2018.
85. **Sriperumbuduri S, Zimmerman D.** Cloudy dialysate as the initial presentation for Lymphoma. *Case Reports in Nephrology* 2018:2192043, 2018.
86. Huang SS, MacRae J, Ross D, **Imtiaz R, Hollingsworth B,** Nesrallah GE, Copland MA, McFarlane PA, Chan CT, **Zimmerman D.** Buttonhole versus stepladder cannulation for home hemodialysis: A multicenter, randomized, pilot trial. *Clinical Journal of the American Society of Nephrology* 14(3):403-410, 2019.
87. **Moorman D,** Suri R, **Hiremath S, Jegatheswaran J, Kumar T, Bugeja A, Zimmerman D.** Benefits and barriers to and desired outcomes with exercise in patients with ESKD. *Clinical Journal of the American Society of Nephrology* 14(2):268-276, 2019.
88. Pauly RP, Rosychuk RJ, Usman I, Reintjes F, Muneer M, Chan CT, Copland M, Komenda P, Lindsay R, MacRae J, Nesrallah G, Pierratos A, **Zimmerman D.** Technique failure in a multicenter Canadian home hemodialysis cohort. *American Journal of Kidney Diseases* 73(2):230-239, 2019.

KRC Grant Funding (2018-2019)

Clinical Research

Dr. Ayub Akbari

Risk factors for sub-optimal dialysis initiation.

Kidney Foundation of Canada

2018-2020

\$100,000

Dr. Ann Bugeja

Tinzaparin use among INHD patients.

Leo Pharma

2018-2019

\$10,000

Dr. Edward Clark

Predicting renal recovery in patients requiring outpatient dialysis after acute kidney injury (RECOVER AKI).

Ontario Renal Network (ORN)

2018-2019

\$147,230

Saline versus albumin fluid for extracorporeal removal with slow low efficiency dialysis.

University of Ottawa Department of Medicine

2017-2019

\$47,988

(Co-principal-investigator with Dr. Swapnil Hiremath)

Dr. Swapnil Hiremath

Diet or additional supplement to increase potassium intake: An adaptive clinical trial.

Lotte & John Hecht Memorial Foundation

2018-2021

\$286,540

Dr. Gregory Hundemer

Characterizing renal outcomes in overt and subclinical aldosterone excess.

KRESCENT–New Investigator Award

Kidney Foundation of Canada/CIHR/Canadian Society of Nephrology

2019-2020

\$210,000

Characterizing renal outcomes in overt and subclinical aldosterone excess.

KRESCENT–Infrastructure Award

Kidney Foundation of Canada/CIHR/Canadian Society of Nephrology

2019

\$50,000

Dr. Greg Knoll

A research program to improve patient outcomes in kidney transplantation.

Canadian Institutes of Health Research

2015-2022

\$3,871,800

Dr. Marcel Ruzicka

Sex differences in platelet microparticles on dialysis.

The Ottawa Hospital Department of Medicine Translational Research Grant

2019

\$48,000

(Co-principal investigator with Dr. Dylan Burger)

Dr. Manish Sood

The risk: Benefit trade-off of newer anticoagulants for heart disease in patients with CKD.

The Ottawa Hospital Academic Medical Organization (TOHAMO)

2018-2019

\$98,939

Dr. Deb Zimmerman

A simple exercise program for patients with end stage kidney disease to improve strength and quality of life: A feasibility study.

Canadian Institutes of Health Research

2018-2020

\$252,450

Basic Research

Dr. Dylan Burger

Mesenchymal stromal cell derived exosomes as a preconditioning therapy for cardiac ischemia-reperfusion injury.

University of Ottawa Faculty of Medicine Translational Research Grant

2019

\$50,000

(Co-principal investigator with Dr. Manoj Lalu)

Sex differences in platelet microparticles on dialysis.

The Ottawa Hospital Department of Medicine Translational Research Grant

2019

\$48,000

(Co-principal investigator with Dr. Marcel Ruzicka)

Microparticles in diabetes.

Early Researcher Award

Ministry of Research, Innovation and Science, Government of Ontario

2018-2023

\$140,000

Microparticles in diabetes.

Canadian Institutes of Health Research

2017-2022

\$284,676

Extracellular vesicles in vascular and renal disease.

Canada Foundation for Innovation

2015-2020

\$173,953

Dr. Kevin Burns

Endothelial progenitor cell exosomes and MicroRNA transfer as therapy for acute kidney injury.

Canadian Institutes of Health Research

2018-2022

\$742,050

Exosomal transfer of MicroRNA-486-5p in acute kidney injury repair.

Kidney Foundation of Canada

2017-2019

\$100,000

Listening, Learning, Leading: Canadians seeking solutions and innovations to overcome chronic kidney disease (Can-SOLVE CKD).

Canadian Institutes of Health Research

2016 to 2021

\$12,500,000 (Precision Medicine in Diabetic Kidney Disease: \$2,000,000)

Dr. Chris Kennedy

The role of Nox5 in hypertension-associated renal injury.

Canadian Institute of Health Research

2018-2023

\$822,375

Nox5-containing urinary microparticles in renal injury associated with diabetes and hypertension.

Kidney Foundation of Canada

2018-2020

\$100,000

Dr. Richard Hébert

The renal PGE2/EP3 system affects kidney concentrating mechanisms and diabetic polyuria.

Kidney Foundation of Canada

2016-2018

\$100,000

Drs. Richard Hébert, Chris Kennedy and Jean-François Thibodeau

GPR40 and GPR84 receptors as novel targets in acute and chronic kidney disease.

ProMetic Life Sciences Inc.

2016-2020

\$500,000

Investigators—Invited Presentations

Dr. Ann Bugeja

What happens after you donate a kidney?

Renal Division Rounds, University Health Network, University of Toronto

January 2019

Toronto, ON.

Dr. Pierre Antoine Brown

Autosomal dominant polycystic kidney disease (ADPKD) – improving quality of care through evidence based management.

Medicine Grand Rounds, Department of Medicine, Western University

October 2018

London, ON.

ADPKD: Management practicalities.

Nephrology Grand Rounds, Division of Nephrology, Queen's University

October 2018

Kingston, ON.

Dr. Dylan Burger

Microparticles and glycaemic control during type 1 diabetes in pregnancy.

The 10th International Symposium on Diabetes, Hypertension, Metabolic Syndrome, and Pregnancy

May 2019

Florence, Italy.

Cell-free cell therapeutics.

Solutions for Cardio-pulmonary Organ Repair and Regeneration (SCORR) - Scientific Research Day

March 2019

Ottawa, ON.

An overview of the academic recruitment process.

Queen's University

November 2018

Kingston, ON.

Extracellular vesicles in diabetic nephropathy.

American Society of Nephrology Kidney Week 2018

October 2018

San Diego, USA.

Circulating microparticles: Liquid biopsy for vascular profiling.
International Society of Hypertension Scientific Meeting.
September 2018
Beijing China.

Dr. Swapnil Hiremath

Sustained low efficiency dialysis (SLED) Fundamentals.
Acute Therapies Institute Summit
May 2019
Montreal, QC.

Connecting through technology: Harnessing the power of social media.
Canadian Association of Nephrology Administrators Summit
May 2019
Montreal, QC.

Pragmatic and adaptive clinical trials.
KidneyCon
April 2019
Little Rock, Arkansas, USA.

Dr. Chris Kennedy

The role of Nox5 and oxidative stress in the kidney.
Université de Montréal
January 2019
Montreal, QC.

Dr. Greg Knoll

BK virus in transplantation: What now?
University Health Network Transplant Infectious Diseases Symposium
August 2018
Toronto, ON.

Dr. Manish Sood

Emerging and chronic management of hyperkalemia
European Renal Association-European Dialysis and Transplant Association (ERA-EDTA)
June 2019
Budapest, Hungary.

End-stage kidney disease (ESKD): Putting the patient first.
American Society of Nephrology (ASN) Highlights
January 2019
Berlin, Germany.

Current evidence & future perspectives in non-dietary management of chronic hyperkalemia.
Kidney Disease: Improving Global Outcomes (KDIGO) - Potassium Management Conference
October 2018
Miami, USA.

Influence of kidney function estimating equations on anticoagulation selection and dosing The
American Society of Nephrology, Clinical nephro-pharmacology across the spectrum of kidney
diseases pre-course
Oct 2018
San Diego, USA.

Awards and Distinctions

Recipient	Year	Award
Dr. Ann Bugeja	2018	Honorary President of School of Medicine, University of Ottawa
Dr. Dylan Burger	2018	Government of Ontario Early Researcher Award, Ministry of Research, Innovation and Science. Elected to the International Society of Hypertension Scientific Committee. Member: Kidney Foundation of Canada Biomedical Research Grant Review Panel Member: CIHR Program Grants Pharmacology and Toxicology Review Panel Department of Medicine PhD Scientist Award
Dr. Kevin Burns	2018 2018-19	Scientific Officer, HDK Peer Review Committee, CIHR Member, Health Research Fellowships Peer Review Committee, CIHR
Dr. Greg Hundemer	2019	Awarded the Krescent New Investigator Award.
Dr. Chris Kennedy	2018	Director of Awards and Prizes for Excellence in Education and Research for the Faculty of Medicine, University of Ottawa
Ms. Chloé Landry	2019	2019 Agostino Monteduro Italian Night Scholarship
Mr. Matthew Spence	2019	2019 Agostino Monteduro Italian Night Scholarship

Visiting Speakers

Date	Scholar	Title of Presentation	Seminar
Sept. 20, 2018	Dr. Pietro Ravani MD, PhD Department of Medicine Division of Nephrology University of Calgary Calgary, AB	<i>Promoting Shared Decision-making in HD Access Practice</i>	Nephrology Grand Rounds
Nov. 15, 2018	Dr. Samuel Silver MD, MSc, FRCPC Assistant Professor, Queen's University Dept of Medicine, Nephrology Kingston General Hospital Kingston, ON	<i>Care of the AKI Survivor</i>	Nephrology Grand Rounds
Dec. 6, 2018	Dr. Abhijat Kitchlu MD, FRCPC Department of Medicine University of Toronto Toronto General Hospital Toronto, ON	<i>Onco-nephrology: Overview, Cases and Research in Progress</i>	Nephrology Grand Rounds
Dec. 13, 2018	Dr. Michelle Wong MD, MSc, FRCPC, Department of Medicine UBC Infinity Medical Specialists Clinic Nanaimo Regional General Hospital Vancouver, BC	<i>International perspectives on volume management in end-stage kidney disease</i>	Nephrology Grand Rounds
Apr. 25, 2018	Dr. Julie Ho MD, FRCPC Director, Quality Initiatives & Transplant Nephrologist Health Sciences Centre Winnipeg Winnipeg, MB	<i>Precision Medicine in Kidney Transplantation.</i>	Nephrology Grand Rounds
Apr. 11, 2019	Dr. Uta Erdbrügger MD Associate Professor of Medicine, University of Virginia Division of Nephrology, University of Virginia Health System Charlottesville, Virginia, USA	<i>Extracellular vesicles in hypertension: Phenotype and function.</i>	KRC Journal Club
May 23, 2019	Dr. Amber Molnar MD, MSc, FRCPC Assistant Professor, McMaster University St. Joseph's Healthcare Hamilton, ON	<i>Suboptimal dialysis initiation: Can we do better?</i>	Nephrology Grand Rounds

The Kidney Research Centre—Ottawa Hospital Research Institute
Centre de recherche sur les maladies du rein—Institut de recherche de l'Hôpital d'Ottawa
University of Ottawa / Université d'Ottawa
2518-451 chemin Smyth Road, Ottawa, Ontario K1H 8M5

