

# KRC Newsflash

Research advances, awards and upcoming events in the kidney research community

November/December 2019

### Research Advances

The effect of transplant volume and patient case mix on center variation in kidney transplantation outcomes.

Previous studies from the U.S., Canada and Europe have found variation in graft and patient-survival rates between kidney transplant centers. In this study **Dr. Gregory Knoll** and colleagues compared the graft and patient survival rates across 5 transplant centers in Ontario to determine if centers with a higher volume of kidney transplants had improved patient graft and transplant survival. Kidney transplant recipients between 2000 and 2013 were



identified using the Canadian Organ Replacement Register (CORR). After data analysis **Dr. Knoll** and colleagues found statistically significant variation in graft and patient-survival rates across kidney transplant centers in Ontario. The association between center volume and graft survival was not statistically significant though there was a tendency towards reduced risk of graft loss in centers with higher volumes. Further study of factors, other than transplant volume and patient mix, will improve the understanding of the difference in graft and patient survival rates between kidney transplant centers in Ontario.

Tsampalieros A, Fergusson D, Dixon S, English S, Manuel D, Van Walraven C, Taljaard M, Knoll G. The effect of transplant volume and patient case mix on center variation in kidney transplantation outcomes. Canadian Journal of Kidney Health and Disease 6:1-12, 2019. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6755637/pdf/10.1177 2054358119875462.pdf

#### **Kidney Week 2019**

The American Society of Nephrology (ASN) Conference, also known as "Kidney Week" is an annual international meeting and scientific exposition, featuring advances in treatment, research and technology in the fight against kidney disease. KRC Clinicians, Scientists, Fellows and Students gave over 20 presentations at this year's event in Washington, DC. **Drs. Dylan Burger** and **Marcel Ruzicka** were honoured to be listed in the ASN list of Faculty for Kidney Week 2019.

#### **Posters and Presentations**

1. Empagliflozin attenuates PGE2-mediated inhibition of arginine vasopressin-stimulated water reabsorption in type II diabetic (db/db) mouse collecting duct. Nasrallah R, Zimpelmann J, Burns KD, Hébert RL.

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The Ottawa Hospital Foundation <a href="https://bit.ly/2SeEKWO">https://bit.ly/2SeEKWO</a>

or

#### Mail-in

- 1) Complete the donation form
- 2) Mail donation along with donation form to: The Ottawa Hospital Kidney Research Centre 2518-451 Smyth Road Ottawa ON K1H 8M5

#### **Living Kidney Donor Program**

Information regarding The Ottawa Hospital's Living Kidney Donor program is available on The Ottawa Hospital website.

www.ottawahospital.on.ca/en/ clinical-services/deptpgrmcs/ programs/kidney-donation/.

The KRC Newsflash is published by scientists and staff at the KRC. For more information, please contact the KRC Administrative Assistant, Jennifer Brownrigg.

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#### Research Advances (continued)

- 2. An evaluation of renin-angiotensin system markers in youth with type 2 diabetes and associations with renal outcomes. Dart A, Wicklow B, Scholey J, Sellers EAC, Mahmud FH, Sochett EB, Hamilton J, Blydt-Hansen TD, **Burns KD**.
- 3. Administration of miR-486-5p protects against kidney ischemic injury and alters the transcriptome in male and female mice. Vinas J, Spence M, Zimpelmann J, Douvris A, Gutsol A, Campbell PA, Porter C, Burns KD.
- 4. Podocyte Nox5 expression increases microparticle formation and oxidative stress in mice. Battaion H, Holterman CE, Burger D, Kennedy CR.
- 5. Assessment of urinary microparticles in aristolochic acid-induced nephropathy in wild-type and GPR40 receptor knockout mice.

  Medeiros T, Thibodeau J-F, Blais A, Holterman CE, Silva AA, Reis Aleida J, Taqn VA, Langlois M-A, Kennedy CR, Gagnon L, Burger D.
- 6. A pilot study of urinary podocyte-derived microparticles (MP) as a marker for podocyte injury in youth with type 1 diabetes. Sullivan K, Scholey J, Moineddin R, Elia Y, Medeiros T, Sadi P, Sochett EB, Burger D, Mahmud FH, Dart A.
- 7. Fatty acid receptors GPR40/GPR84: Two promising targets in kidney fibrosis. Gagnon L, Thibodeau J-F, Zhang M-Z, Sarra-Bournet F, Hince K, Tremblay M, Geerts L, Kennedy CR, Hébert RL, Gutsol A, Holterman CE, Harris RC, Grouix B.
- 8. The relative roles of Nox4 vs. Nox5 in diabetic kidney disease. Jha JC, Urner S, Cooper ME, Kennedy CR, Jandeleit-Dahm K.
- 9. *PBI-4610 improves renal function, anemia, and histopathological abnormalities in an adenine-induced CKD model.* **Thibodeau J-F**, Hince K, **Blais A**, Corpuz R, Leblond FA, Grouix B, Leduc M, **Hébert RL**, **Kennedy CR**, Gagnon L.
- 10. PBI-4050 reduces renal injury in a mouse model of aristolochic acid-induced nephropathy. **Thibodeau J-F**, **Blais A**, Sarra-Bournet F, Grouix B, **Gutsol A**, Leduc M, Leblond FA, **Hébert RL**, Gagnon L, **Kennedy CR**.
- 11. The prevalence of nonadherence in patients with resistant hypertension: A systematic review. Bourque GEM, Ilin JV, Ruzicka M, Hiremath S.
- 12. Perils of renal revascularization for severe hypertension. Sriperumbuduri S, Hiremath S, Ruzicka M.
- 13. Sex differences in vascular access. MacRae JM, Ahmed SB, Elliott MJ, Quinn RR, James MT, **Hiremath S**, King-Shhier KM, Oliver MJ, Hemmelgarn B, Scott-Douglas NW, Ravani P.
- 14. Measurement of dialysate sodium: Beware of assay artifact. Brown P-A, Hiremath S.
- 15. Renal, cardiac, and safety-related events with alpha-blockers in patients with CKD. **Hundemer GL**, Petrcich W, **Hiremath S**, **Ruzicka M**, **Sood MM**.
- 16. Nephrology education and the use of social media among Irish nephrologists. Slattery LM, Stoneman S, Fitzgerald TJ, Sparks MA, Shah S, **Hiremath S**, Leavey SF, Brown CM.
- 17. *Kidney function, albuminuria, and the risk of hemorrhage and thrombosis after kidney transplantation*. Jeong RH, Quinn RR, Ravani P, **Sood MM**, Tonelli M, Ye F, Hemmelgarn B, **Massicotte-Azarniouch D**, Lam N.
- 18. Challenges to hemodialysis care and solutions: Qualitative analysis of the Can-SOLVE CKD Triple I Study. Bohm C, Rossum KF, Finlay J, Desjarlais AD, Mccormick MD, Pannu NI, James MT, Tennankore KK, **Sood MM**, Thompson SE, Tonelli M.
- 19. AKI in renal transplant recipients undergoing cardiac surgery. Hundemer GL, Srivastava A, Sharma S, Kellum JA, Riella LV, Leaf DE.
- 20. Hemoglobin A1c and major adverse kidney events after cardiac surgery. Short S, Hundemer GL, Rawn J, Axtell AL, Leaf DE.
- 21. The phenotype of intentional nonadherence and the role of direct measurement. **Dr. Marcel Ruzicka** speaker, Clinical Practice Session.







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### **Awards & Distinctions**

**Dr. Dylan Burger** was awarded a grant from the Jean Sealy Trust for Cancer Research to study a new predictive test for identifying venous thromboembolism in cancer patients. Venous thromboembolism is a blood clot that forms in the veins of the leg, groin, or arm. It can travel through the circulation to the lungs causing a blockage (termed a pulmonary embolism) and is a major cause of death and disability in patients with cancer. Together with **Dr. Phillip Wells** at The Ottawa Hospital, **Dr. Burger** will determine whether a new test, based on measuring small particles in the blood, can identify individuals at risk of developing venous thromboembolism in cancer.

**Dr. Ted Clark** was awarded a grant of \$40,000 from The Ottawa Hospital Department of Medicine for "Exploring the relationship between mitochondrial health and hemodynamic instability related to renal replacement therapy in critically ill patients".

# Retirement of KRC Research Nurse Val Cronin

After moving from Winnipeg to Ottawa, **Val Cronin** worked as a clinical nurse at the University of Ottawa Heart Institute from 1988 to 2001. She then applied her extensive skills to research and joined the Rehabilitation Centre at The Ottawa Hospital as a Research Coordinator from 2001 to 2007. It was also during this time that she joined the Kidney Research Centre. She has been an outstanding asset to our team.

Val is passionate about research and patient care. Her attention to detail, knowledge and kindness are widely known. Our entire research group will miss her.

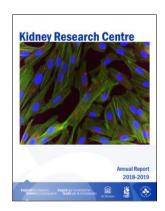
## **Community Outreach**

## **Bill C-316 Organ and Tissue Donation Bill**

Conservative MP Bill Webber has made the list of MPs allowed to introduce private members legislation in the current session of Parliament. Mr. Webber will reintroduce Bill C-316, a bill to collect organ and tissue donation consent on Canadian income tax return forms to maintain or establish provincial or territorial registries. To follow the Bill's progress, visit the **Support Bill C-316** Facebook page, <a href="https://www.facebook.com/BillC316/">https://www.facebook.com/BillC316/</a>.

## **KRC Annual Report**

The 2018-2019 KRC Annual Report is available on the KRC <u>website</u>.



#### La Serata Italiana

Saturday March 7, 2020

#### For Tickets:

Giuseppe Pasian 613-324-7533 Wilma Bianco 613-226-2708 Anna Monteduro 613-296-2660





