

UBC Cardiology Research News

Reporting January - March 2020 Awards, Honors & Distinctions

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Message from Research Team

Dear Colleagues

During these unprecedented times, we have all been challenged to effectively carry on the obligations and responsibilities of our personal and professional lives while managing the heightened anxiety we have for the safety and well-being of our families, colleagues and patients during the COVID-19 Pandemic. And for those with "boots on the ground", grappling with the PPE issues and augmented risks of exposure, these anxieties are multiplied many fold. This has required bravery, determination, creativity and innovation of many sorts, including the rapid development of new skills, be they relevant to assessing a patient over the phone, teaching the principles of cardiovascular medicine, providing life-saving care with vigilance for both patient and provider, maintaining research services and projects through unconventional means or ensuring effective stewardship of our enterprise as a whole. It is humbling to see the incredible efforts and successes of our members in all these spheres, with benefits accrued to us here as well as to our international colleagues. The examples are simply too numerous to list but will be remembered forever. The impact on clinical research programs was immediate and profound, particularly those efforts dependent upon enrolment success and meticulous follow-up. But all forms of research from wet- to dry-lab, from basic to clinical, have been seriously impeded and rendered vulnerable. There is much focus on the impact of "small business" in the general community while the "small business" of each of our research programs is only now being assessed for its impact not solely on the research itself but on the high-skilled employment opportunities intrinsic to our huge, research enterprise. But even within this dire context, we have reason to celebrate those facets of determination, creativity and innovation that have characterized our division even prior to these challenging times. This issue highlights continued productivity, enhanced research funding and progressive impact of our publications. We are extremely proud of these achievements and humbly thank everyone for their steadfast efforts and successes.

Sincerely,
Mancini, Deyell, Sidhu

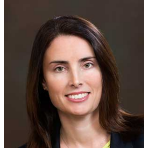
Luong, Christina

Canadian Society of Echocardiography's
European Association of Cardiovascular
Imaging (EACVI) Ambassador



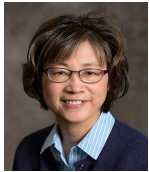
Sedlak, Tara

2020 Canadian Women's Heart Health
Advocacy Award



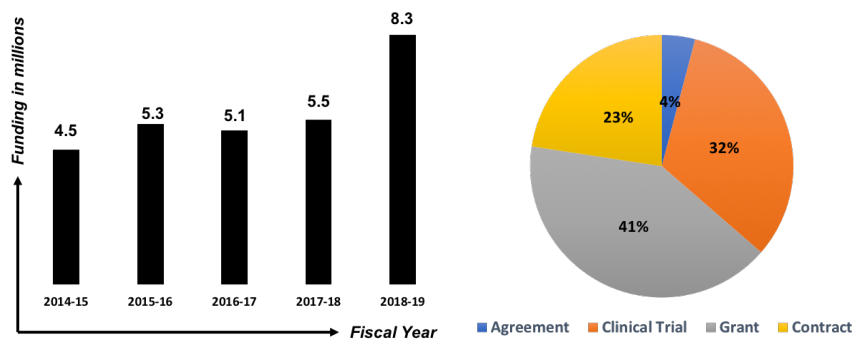
Tsang, Teresa

Won UBC's Supercluster Expansion Research
Award

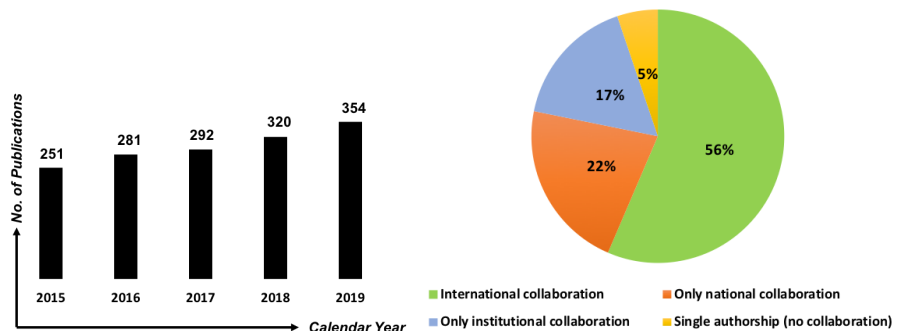


Research Funding data 2018-2019

Research funding in the Division of Cardiology has **increased 53%** over the past 5 years and 52% in the past year.



The 5-year publication rate for members of Division of Cardiology is **300 publications per year** and an average rate of citations is more than 4500 per year with nearly 20 citations per publication.



Grants Awarded

Tsang T (PI), Tsang M, Abolmaesumi P, Luong C, Gin K, Jue J and Nair P

"Artificial intelligence of aortic valve stenosis" Total funds awarded- \$812,000. Edwards Life Sciences Grant

Tsang T (PI), Abolmaesumi P, McGrail K, Rohling R, Gin K, Jue J, Nair P and Luong C

"Machine learning with herterogenous and sparsely labeled data to improve stroke risk assessment and management". Total funds awarded- \$420,000. UBC Supercluster Expansion Research Award

Invited Presentations

Krahn, Andrew

- "Perfect is the Enemy of Good Enough: Improving CIED Quality". Inside EP: Insights from Clinical Decision Makers for the Industry Professional, Heart Rhythm Society, Chicago. Mar 6, 2020.

Mancini, John

- "What Does Comprehensive Vascular Protection Look Like in 2020?" Cerebrovascular Conferences, Vancouver Stroke Program, Vancouver, BC. Jan 7, 2020
- "Heart of Diabetes", 16th Annual Hot Topics in Cardiology, Vancouver, BC. Feb 8, 2020
- "ISCHEMIA Trials". Royal Columbian Hospital- Cardiology Journal Club, Coquitlam, BC. Feb 13, 2020

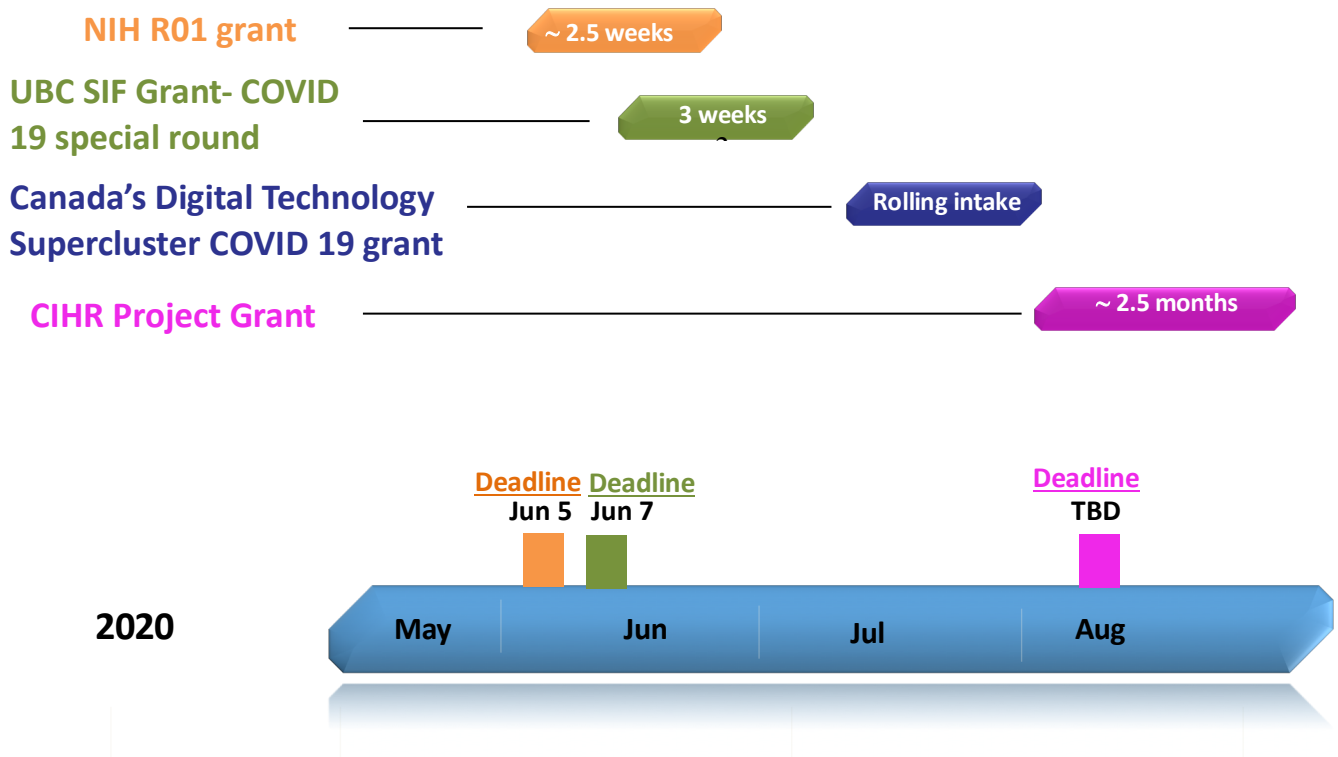
Saw, Jacqueline

- "Stroke Prevention in AF", AF Symposium, Washington DC, Jan 2020.
- "Device-related thrombus, diagnosis, prevention, management", Structural Heart Intervention and Imaging 2020, San Diego, USA, Feb 2020.
- "LAAC Device Related Erosions, PV and MV Impingement", ISLAA, New York, USA, Feb 2020.
- "Proctoring ICE for LAA Closure Procedures", "Using ICE for LAA closure guidance", LAAO Summit, Frankfurt, Germany, Feb 2020.

Wood, David

- "Precautions and Procedures for the Cath Lab During the COVID-19 Pandemic". Webinar CAIC-ACCI, March 26, 2020.
- "COVID-19 and the Cardiovascular Patient: Practical Advice for Implementing Recommendations from the CCS COVID-19 Rapid Response Team". Webinar CCS, March 25, 2020.

Upcoming Grant Competitions



PUBLICATIONS

1. Al'Aref SJ, Maliakal G, Singh G, van Rosendael AR, Ma X, Xu Z, Alawamlh OAH, Lee B, Pandey M, Achenbach S, Al-Mallah MH, Andreini D, Bax JJ, Berman DS, Budoff MJ, Cademartiri F, Callister TQ, Chang HJ, Chinnaiyan K, Chow BJW, Cury RC, DeLago A, Feuchtner G, Hadamitzky M, Hausleiter J, Kaufmann PA, Kim YJ, **Leipsic JA**, Maffei E, Marques H, Gonçalves PA, Pontone G, Raff GL, Rubinshtein R, Villines TC, Gransar H, Lu Y, Jones EC, Peña JM, Lin FY, Min JK, Shaw LJ. Machine learning of clinical variables and coronary artery calcium scoring for the prediction of obstructive coronary artery disease on coronary computed tomography angiography: analysis from the CONFIRM registry. *Eur Heart J*. 2020 Jan 14;41(3):359-367. doi: 10.1093/eurheartj/ehz565. PubMed PMID: 31513271.
2. Amat-Santos IJ, Gutiérrez H, **Sathananthan J, Webb JG**. Fracture of small Mitroflow® aortic bioprosthesis following valve-in-valve transcatheter aortic valve replacement with ACURATE neo valve-From bench testing to clinical practice. *Catheter Cardiovasc Interv*. 2020 Mar 1;95(4):E120-E122. doi: 10.1002/ccd.28347. Epub 2019 May 29. PubMed PMID: 31140682.
3. Anand SS, Friedrich MG, Desai D, Schulze KM, Awadalla P, Busseuil D, Dummer TJB, Jacquemont S, Dick A, Kelton D, Kirpalani A, **Lear SA, Leipsic J**, Noseworthy MD, Parker L, Parraga G, Poirier P, Robson P, Tardif JC, Teo K, Vena J, Yusuf S, Moody AR, Black SE, Smith EE; Canadian Alliance for Healthy Hearts and Minds Cohort. Reduced Cognitive Assessment Scores Among Individuals With Magnetic Resonance Imaging-Detected Vascular Brain Injury. *Stroke*. 2020 Apr;51(4):1158-1165. doi: 10.1161/STROKEAHA.119.028179. Epub 2020 Mar 4. PubMed PMID: 32126938.
4. Anastasius M, Godoy M, Weir-McCall JR, Bapat V, **Sathananthan J**, Hensey M, Sellers SL, Cheung A, Ye J, **Wood DA, Leipsic J, Webb J**, Blanke P. Reference dimensions to determine valve size of stented surgical aortic bioprostheses by computed tomography. *EuroIntervention*. 2020 Feb 4. pii: EIJ-D-19-00921. doi: 10.4244/EIJ-D-19-00921. [Epub ahead of print] PubMed PMID: 32011284.
5. **Andrade JG, Deyell MW**, Nattel S, Khairy P, Dubuc M, Champagne J, Leong-Sit P, Jolly U, Badra-Verdu M, Sapp J, Verma A, Macle L; CIRCA-DOSE Study Investigators. Prevalence and clinical impact of spontaneous and adenosine-induced pulmonary vein reconnection in the Contact-Force vs. Cryoballoon Atrial Fibrillation Ablation (CIRCA-DOSE) study. *Heart Rhythm*. 2020 Jan 21. pii: S1547-5271(20)30030-8. doi:

- 10.1016/j.hrthm.2020.01.017. [Epub ahead of print] PubMed PMID: 31978593.
6. **Andrade JG**, Macle L, Verma A, Mitchell LB. Comment on "The Canadian Cardiovascular Society 2018 guideline update for atrial fibrillation – A different perspective". *CJEM*. 2020 Mar 26;1-2. doi: 10.1017/cem.2019.487. [Epub ahead of print] PubMed PMID: 32213228.
 7. **Andrade JG**, Yao RRJ, **Deyell MW**, **Hawkins NM**, Rizkallah J, Jolly U, Khoo C, Raymond JM, **McKinney J**, Cheung C, Steinberg C, Ha A, **Ramanathan K**, **Luong C**, Glover B, Verma A, Macle L, Khairy P; CIRCA-DOSE Study Investigators. Clinical assessment of AF pattern is poorly correlated with AF burden and post ablation outcomes: A CIRCA-DOSE sub-study. *J Electrocardiol*. 2020 Mar 21;60:159-164. doi: 10.1016/j.jelectrocard.2020.03.008. [Epub ahead of print] PubMed PMID: 32371199.
 8. Attinger-Toller A, Htun NM, Murdoch D, Perlman GY, Alenezi A, **Sathananthan J**, Blanke P, **Leipsic J**, Thompson C, Ye J, Cheung A, **Wood D**, **Webb JG**. Transcatheter aortic valve-in-valve implantation for failed surgical bioprosthetic valves. A minimalist approach without contrast aortography or echocardiographic guidance. *Catheter Cardiovasc Interv*. 2020 Jan;95(1):45-53. doi: 10.1002/ccd.28299. Epub 2019 Apr 30. PubMed PMID: 31038290.
 9. Awad E, Christenson J, Grunau B, Tallon J, **Humphries K**. Sex differences in out-of-hospital cardiac arrest interventions within the province of British Columbia, Canada. *Resuscitation*. 2020 Mar 1;148:128-134. doi: 10.1016/j.resuscitation.2020.01.016. Epub 2020 Jan 24. PubMed PMID: 31987889.
 10. Baskaran L, Al'Aref SJ, Maliakal G, Lee BC, Xu Z, Choi JW, Lee SE, Sung JM, Lin FY, Dunham S, Mosadegh B, Kim YJ, Gottlieb I, Lee BK, Chun EJ, Cademartiri F, Maffei E, Marques H, Shin S, Choi JH, Chinnaiyan K, Hadamitzky M, Conte E, Andreini D, Pontone G, Budoff MJ, **Leipsic JA**, Raff GL, Virmani R, Samady H, Stone PH, Berman DS, Narula J, Bax JJ, Chang HJ, Min JK, Shaw LJ. Automatic segmentation of multiple cardiovascular structures from cardiac computed tomography angiography images using deep learning. *PLoS One*. 2020 May 6;15(5):e0232573. doi: 10.1371/journal.pone.0232573. eCollection 2020. PubMed PMID: 32374784.
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 12. Bertic M, **Fordyce CB**, Moghaddam N, **Cairns J**, Mackay M, Singer J, Lee T, Perry-Arnesen M, Tocher W, **Wong G**. Association of left anterior

- descending artery involvement on clinical outcomes among patients with STEMI presenting with and without out-of-hospital cardiac arrest. *Open Heart*. 2020 Mar 4;7(1):e001065. doi: 10.1136/openhrt-2019-001065. eCollection 2020. PubMed PMID: 32201581; PubMed Central PMCID: PMC7059451.
13. Blanke P, **Leipsic JA**, Popma JJ, Yakubov SJ, Deeb GM, Gada H, Mumtaz M, Ramlawi B, Kleiman NS, Sorajja P, Askew J, Meduri CU, Kauten J, Melnitchouk S, Inglessis I, Huang J, Boulware M, Reardon MJ; Evolut Low Risk LTI Sub-study Investigators. Leaflet Thickening or Immobility Following Aortic Valve Replacement: Results from the Evolut Low Risk Sub-study. *J Am Coll Cardiol*. 2020 Mar 18. pii: S0735-1097(20)34583-6. doi: 10.1016/j.jacc.2020.03.022. [Epub ahead of print] PubMed PMID: 32234463.
 14. Boden WE, **Mancini GBJ**. The Two-Edged Sword of Shared Clinical Decision-Making in the Post-ISCHEMIA World of Stable Coronary Artery Disease Management: Clinical Commentary on "It Happened So Fast ... I Guess, Yes, I Was Lucky". *Circ Cardiovasc Qual Outcomes*. 2020 Feb;13(2):e006451. doi: 10.1161/CIRCOUTCOMES.119.006451. Epub 2020 Feb 17. PubMed PMID: 32063039.
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25. Freixa X, Aminian A, Tzikas A, **Saw J**, Nielsen-Kudsk JE, Ghanem A, Schmidt B, Hildick-Smith D. Left atrial appendage occlusion with the Amplatzer Amulet: update on device sizing. *J Interv Card Electrophysiol*. 2020 Mar 12. doi: 10.1007/s10840-019-00699-5. [Epub ahead of print] Review. PubMed PMID: 32166532.

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31. Hensey M, **Sathananthan J**, Alkhodair A, Landes U, **Wood DA**, Daniels D, **Webb JG**. Single-center prospective study examining use of the Wattson temporary pacing guidewire for transcatheter aortic valve replacement. *Catheter Cardiovasc Interv*. 2020 Mar 9. doi: 10.1002/ccd.28832. [Epub ahead of print] PubMed PMID: 32150334.
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