



THE UNIVERSITY OF BRITISH COLUMBIA
Faculty of Medicine

DEPARTMENT OF ANESTHESIOLOGY,
PHARMACOLOGY & THERAPEUTICS
ANNUAL REPORT 2019 – 2020



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Message from the Department Head



Thank you for taking a few minutes to go through this report. This year the report highlights a few areas in our department, with the usual detailed information placed as appendices. Please share with colleagues in your department, so they too can celebrate the successes of our colleagues as well as hopefully understand this diverse department a little better.

The Department reorganization has been very successful. We have functioning executive level committees that are being capably led by our new Vice-Chair roles. We started with a Vice-Chair Research – Dr. Tillie Hackett, and Vice-Chair Education – Dr. Peter Choi. We have now added a Vice-Chair EDI, which was a competitive process, with Dr. Alana Flexman the successful applicant. The Graduate Program in Pharmacology underwent a formal review in the fall of 2020 with the report generated in early 2021. There will be more on this in the next annual report.

Faculty Renewal

The Department has been very busy in recruitment activities since 2019, for both the faculty renewal positions, and a replacement position for Dr. Jim Wright who retired at the end of 2020. Dr. John (Kip) Kramer started as an Assistant Professor in our department in September 2020. The other recruits will be coming on-line in 2021 and 2022.

The Department's financial position is improved as all debts have been cleared, and is using available soft funds to support renovations to Med Block C building to support students and faculty. We are also working on space allocation renewal to ensure new faculty have appropriate work spaces, including the expanding Therapeutics Initiative.

COVID has stalled faculty development sessions. Hopefully to return in 2022.

Building on the success of the first three years of the Vancouver Summer Program course in Pharmacology, Dr. Andrew Horne is now the Program Director of the UBC Faculty of Medicine Vancouver Summer Program. He will also still be the course director for APT's offerings.

The study program for international medical graduates to prepare for the Royal College Exams in Anesthesiology continues to run successfully.

Once again the Whistler Anesthesia Summit held in March 2019 and March 2020 were enormous successes, with 2020 our last in-person conference just before the pandemic was declared. We again had a star-studded list of anesthesia experts and some excellent workshops. The co-chairs, Dr. Cynthia Yarnold and Dr. Juliet Atherstone are truly formidable organizers, and have pulled together an excellent succession plan to ensure the ongoing success of this UBC-led anesthesia conference. They did however hand over the reins of organizing this conference in 2020-21, capably taken up by a committee of young faculty.

The Pain Medicine Residency Program has 4 residents now in the program and is being capably led by Dr. Michael Butterfield, a psychiatrist and graduate of the UBC Pain Medicine Residency Program.

We have been expanding the Anesthesiology Residency program since 2018, and have gained 4 additional positions as of July 2020, with more to come. This allows us to have more residents in the affiliated sites such as Victoria, Kelowna and Surrey. The FPA Anesthesia residency program has also gained new positions.

We have also negotiated a new BC Clinical Anesthesiology Fellowships program with the MOH, allowing us to have up to 6 positions of 1 year paid clinical fellowships for US trained anesthesia residents, with the intent of improving anesthesiology recruitment in BC. The program was developed in 2019-2020 and the first position will start in 2021. This the first of its kind in Canada.

Research continues to flourish within the department. We have some very strong pharmacology researchers with well-established careers, and we have our first CRC Tier 1 Chair in the department – Dr. Tillie Hackett was successful in the (delayed) 2020 competition in the area of Asthma and COPD Lung Pathobiology & Therapeutics. On the anesthesia side, we have clinician-researchers such as Mark Ansermino, Stephan Schwarz, Don Griesdale, Alana Flexman, Himat Vaghadia, Ray Tang, Steve Petrar, Kevin Froehlich, Juliet Atherstone, Gord Finlayson, Jens Lohser, Zoe Brown, Gillian Lauder, Simon Whyte, John Veall, Jason Wilson, Simon Massey, Aaron MacInnes, Peter Choi, Sean McLean, Rael Klein, Kelly Mayson, Andrew Sawka, Jacquie Trudeau, Neal Badner, and Anton Chau, whose work is making a difference in health outcomes.

Teaching is what connects our department, with passion amongst so many for teaching students of all levels and interests. I would like to thank everyone who engages in teaching undergraduates and medical students as I know how important it is for the future of the department to incite passion for our work in our learners. Those teaching in pharmacology receive consistently excellent teaching evaluations and our undergraduate and graduate programs in Pharmacology are highly competitive. Our anesthesia training core sites (VGH, SPH, BCCH, BCWH, RCH) and our affiliated sites (Lions Gate, Richmond, Burnaby, Surrey, Delta, Langley, Abbotsford, Chilliwack, Victoria, Nanaimo, Prince George, Kelowna Vernon, Kamloops, Penticton, Terrace/Mills, Kootenay) all have numerous trainees from various disciplines, and have constant pressure to take on more.

I would like to thank all of you for continuing to be generous with your time, your energy, your knowledge and your passion. Despite our improved departmental financial picture, I can never provide adequate compensation for all your contributed time and effort as I would like to be able to. Let us work on our strategic priorities together, of which the most important is fostering the strengths of our people.

Most appreciatively

A handwritten signature in blue ink that reads "Roanne". The signature is fluid and cursive, with the first letter 'R' being significantly larger and more stylized than the rest of the name.

Roanne Preston, MD FRCPC
Department Head

Department Leadership

Roanne Preston – Department Head

Site Chiefs:

Jens Lohser – Head, VGH/UBCH Department of Anesthesia & Perioperative Care
Jim Kim – Head, St. Paul’s Hospital Department of Anesthesia
Simon Whyte – Head, BC Children’s Hospital Department of Anesthesia
James Brown – Head, BC Women’s Hospital Department of Anesthesia
Feisal Mohamedali – co-Head, Royal Columbian Hospital Department of Anesthesia
Kenneth Ryan – co-Head, Royal Columbian Hospital Department of Anesthesia
Feisal Mohamedali – Regional Head, Fraser Health Authority
Clare Morrison – Head, Lions Gate Hospital Department of Anesthesia
Glenn Dong – Head, Richmond General Hospital Department of Anesthesia
Gavin Gracias – Burnaby General Hospital Department of Anesthesia
Parisa Soltani – Chilliwack General Hospital Department of Anesthesia
Desmond Sweeney – Head, Victoria General/Royal Jubilee Hospitals Department of Anesthesia
Alistair Graham – Head, Kelowna General Hospital Department of Anesthesia
Adam van der Merwe – Medical Director Kelowna General Hospital Department of Anesthesia
Tom Cull – Head, Vernon Jubilee Hospital Department of Anesthesia
Mark Edge – Head, Royal Inland Hospital Kamloops Department of Anesthesia
Kenneth Harder – Head, Penticton Regional hospital Department of Anesthesia
Pal Dhadly – Head, University Hospital of Northern BC Department of Anesthesia

Academic Leadership

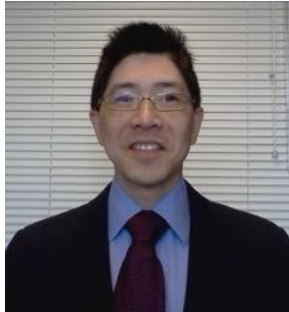
Colin Dormuth – Co-Managing Director, Therapeutics Initiatives
Ken Bassett – Co-Managing Director, Therapeutics Initiatives
Stephan KW Schwarz – Dr. Jean Templeton Hugill Chair in Anesthesia
K Malcolm Maclure – BC Patient Safety Chair
T. Laine Bosma – Anesthesia Residency Program Director
Sadiq Abudlla – Anesthesia Residency Program Associate Director
Michael Butterfield – Pain Medicine Residency Program Director
Alana Flexman – Vice-Chair, Equity, Diversity and Inclusion
Pascal Bernatchez – Basic Science Research Director
Don Griesdale – Clinical Research Director
Issy Laher – Acting Director/Advisor, PCTH Graduate Program
Peter Choi – Medical Undergraduate Program Director
John McAlpine - Family Practice Anesthesia Residency Program Director
John Veall - Simulation Program Director
Sadiq Abdulla – BC Anesthesia Clinical Fellowships Director
James Brown - Faculty Development Chair
Giselle Villar – Visiting Professor & Continuing Professional Development Program Director
Cynthia Yarnold and Juliet Atherstone - Whistler Anesthesia Conference co-chairs
Bali Dhaliwal – Clinical Faculty Advisory Committee Representative

Divisions

Alexander Wong – Division Heads, Regional Anesthesia
Bobby Lee – Division Head, Cardiac Anesthesia
William Rieley – Division co-Head, Neuroanesthesia
Sandra Kisilevsky – Division co-Head, Neuroanesthesia
Aaron MacInNES – Division Head, Pain Management
Simon Whyte – Division Head, Pediatric Anesthesia
Roanne Preston – Division Head, Obstetric Anesthesia
Travis Schisler – Division co-Head, Thoracic Anesthesia
Chris Durkin – Division co-Head, Thoracic Anesthesia

DEPARTMENT HIGHLIGHTS

AWARDS OF EXCELLENCE



Canadian Association for Medical Education Merit Award 2020

Dr. Peter T. Choi – Professor

Medical educator and professor in the MD Undergraduate Program, has played a major role in the highly successful development and renewal of the UBC medical Curriculum. His collaborative leadership style between students and stakeholders has been instrumental to the continuous improvements of the renewal curriculum



Michael Smith Foundation Research Scholar Award 2020

Dr. Matthias Görge – Assistant Professor (Partner)

Scientist at the BC Children's Hospital Research Institute, where he co-leads the Digital Health Innovation Lab (DHIL) and Pediatric Anesthesia Research Team (PART)



CAS Clinical Practitioner Award 2020

Dr. Trina Montemurro – Clinical Associate Professor

Highly valued member of the regional anesthesia team at St. Paul's Hospital. Serves on the Physician Advisory Group for the Strategic Pillar of Exceptional Safety and Quality. Past Safety Chair for the BC Anesthesiologists' Society

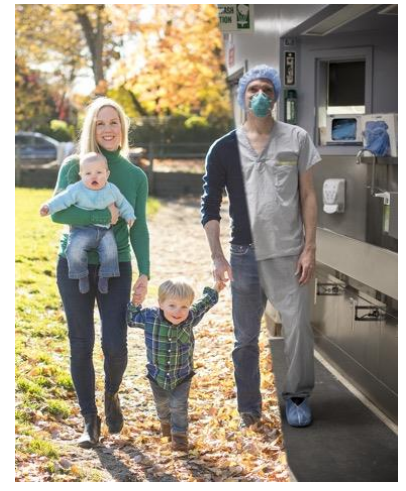
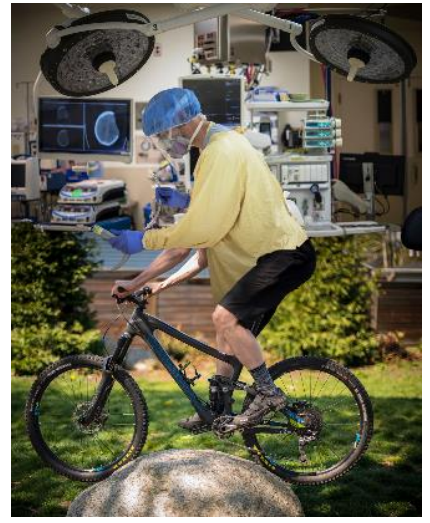
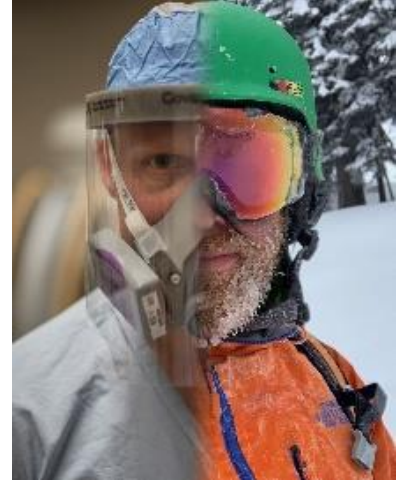


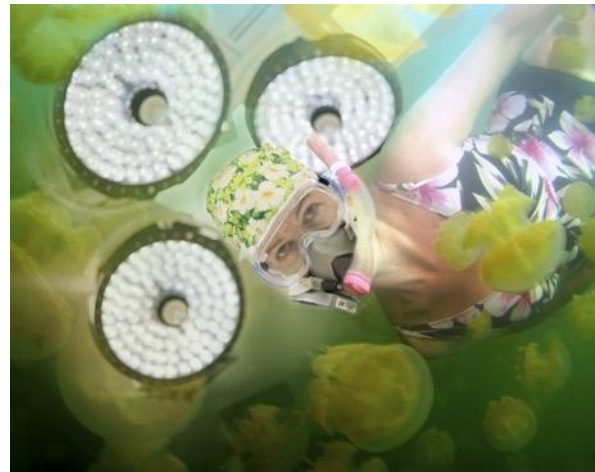
Killam Postdoctoral Fellow Research Prize recipient 2020
Dr. Ryan Hoiland – Postdoctoral Fellow



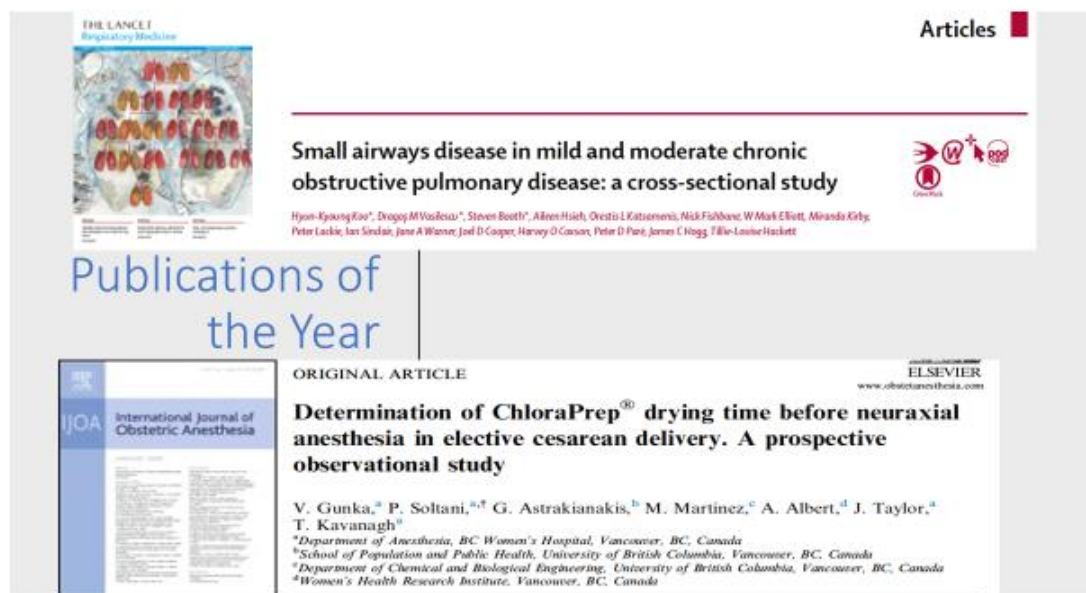
**CAS Honours Award
Emeritus Membership Winner 2019**
Dr. Anthony Boulton
Clinical Professor Emeritus

Who we are behind the mask





RESEARCH IN THE SPOTLIGHT



13th and 14th Annual Research Day and Awards Night May 16, 2019 and May 26, 2020 (first virtual Research Day)

Objective: To review research currently conducted by graduate and post-graduate trainees and fellows in the Department of Anesthesiology, Pharmacology & Therapeutics at the University of British Columbia.

Winning Presentations 2019

Oral - Anesthesiology

1st Place – Kelly A

2nd Place – James Taylor

Oral - Pharmacology & Therapeutics

1st Place – Arash Tehrani

2nd Place – Zoe White

Poster - Anesthesiology

1st Place – Thomas Prasloski

2nd Place – Nicholas Fergusson

Poster – Pharmacology & Therapeutics

1st Place – Brett Kiyota

AWARDS 2019

Anesthesiology Residents

Dr. Derek Daniel Wolney Prize for Clinical Proficiency – Richard Alexander

Dr. John A. McConnell Award for Academic Excellence – Sandy Pitfield

Dr. Jone Chang Memorial Award in Anesthesiology Excellence – Sandy Pitfield

Dr. Jone Chang Memorial Prize in Chronic Pain – Thomas Prasloski

Ken C.K. Wong Award for Clinical Teaching – Mihaela Van Idour

UBC APT Advanced Simulation Training Program – Rosie Earle, Katrina Genuis, Dan Werry

Dr. Dimitri Giannoulis Memorial Award in Regional Anesthesia – Martha DiGiuseppe

Dr. Keith Mills Award for Excellence in Neuroanesthesia – Evan Shao

Dr. Keith Mills Bursary for Excellence in Neuroanesthesia Studies – Alan Tung

Kenny Wong Award for Clinical Excellence and Collegiality – Alan Tung

BCAS Resident Award for Physician Leadership – Amber Galbraith

Dr. Anthony Boulton Award for FPA Clinical Excellence – Robin MacNearney

Dr. Paul Kliffer Golden Epidural Award – Michael Jew (**Jr. Resident**) and Richard Alexander (**Sr. Resident**)

Dr. Michael Smith Award for Pediatric Anesthesia – Evan Shao

RCH Resident Award for Clinical Excellence – Kate Mittermaier (**Jr. Resident**) and Kristen Kidson (**Sr. Resident**)

VGH Kenny Wong Award for Clinical Excellence and Collegiality – Kristen Kidson

Pharmacology & Therapeutics Undergraduate

Esther Anderson Memorial Prize (highest graduating average in Honors Pharmacology)

Mr. Ouellette Theophile William

Prakish Gill Memorial Prize (highest graduating average in Majors Pharmacology)

Ms. Helia Shariati and Mr. Tatsuma Hind

MERCK Canada (formerly FROSST) Medical Scholarship (final year medical student who has made achievement in Therapeutics -

Dr. Sarpreet Sekhon

MERCK Canada Scholarship in Medicine -

Dr Carol (Rui Qi) Dou

Pharmacology & Therapeutics Graduate Awards

Sacks Prize (Best presentations)

Maartje Westhoff

Steven Booth

Leighton Pharmacology Graduate Award
David Dong-Hyun Kim

FACULTY AWARDS 2019

Master Teacher Awards:

VGH – Dr. Jacquie Trudeau

SPH – Dr. Kevin Rondi

RCH – Dr. Barry Thorneleau

BCCH – Dr. Zoe Brown

BCWH – Dr. Anton Chau

Rural/Community – Dr. Mark Vu (**Victoria**)

Medicine – Dr. Don Griesdale (**Critical Care**)

Dr. Dimitri Giannoulis Resident Appreciation Award – Dr. Laine Bosma

FPA Master Teacher Award – Dr. Nevin Kilpatrick (**BCWH**)

FPA Master Teacher Award – Dr. Tyler Fraser (**LGH**)

FPA Master Teacher Award – Dr. Alex Kmet (**Whitehorse**)

Winning Presentations 2020

Oral - Anesthesiology

1st Place – Ryan Hoiland

2nd Place – Marie Johns

Oral - Pharmacology & Therapeutics

1st Place – Desmond Fung

Video Shorts - Anesthesiology

1st Place – Elena Vowels

2nd Place – Kai Zhu

Video Shorts – Pharmacology & Therapeutics

1st Place – Emmanuel Osei

2nd Place – Elodie Sauge

AWARDS 2020

Anesthesiology Residents

Dr. Derek Daniel Wolney Prize for Clinical Proficiency – **Dr. Martha DiGiuseppe**

Dr. John A. McConnell Award for Academic Excellence – **Dr. Victor Liu**

Dr. Jone Chang Memorial Award in Anesthesiology Excellence – **Dr. Kristen Kidson**

Dr. Jone Chang Memorial Prize in Chronic Pain – **Dr. Lacey Corbett**

Ken C.K. Wong Award for Clinical Teaching – **Dr. Charles You**

UBC APT Advanced Simulation Training Program – Drs. Julia Cory, Jimmy Lam, Kate Mittermaier Dr. Dimitri Giannoulis Memorial Award in Regional Anesthesia – Dr. Steven Wang

Dr. Keith Mills Award for Excellence in Neuroanesthesia – Dr. Dmitry Mebel

VGH Kenny Wong Award for Clinical Excellence and Collegiality – Dr. Julena Foglia

BCAS Resident Award for Physician Leadership – Dr. Martha DiGiuseppe

Dr. Anthony Boulton Award for FPA Clinical Excellence – Dr. Micaela Coombs

Dr. Paul Kliffer Golden Epidural Award – Dr. Naima Kotadia (Jr. Resident)

Dr. Andrew Wang (Sr. Resident)

Dr. Michael Smith Award for Pediatric Anesthesia – Dr. Matthew Walker

RCH Resident Award for Clinical Excellence – Dr. Kresimir (Jr. Resident)

Dr. Connie Drewbrook (Sr. Resident)

Master Teacher Award 2020

VGH – Dr. Christopher Durkin

SPH – Dr. Su-Yin MacDonell

RCH – Dr. Tonia Tauh

BCCH – Dr. Zoe Brown

BCWH – Dr. Sadiq Abdulla

Rural/Community – Dr. Kitt Turney

Medicine – Dr. Ken Kaila

Dr. Dimitri Giannoulis Resident Appreciation Award – Dr. Laine Bosma

FPA Master Teacher Award – Dr. Zoe Brown (**BCCH**)

FPA Master Teacher Award – Dr. Robert Fingland (**LGH**)

FPA Master Teacher Award – Dr. Jonathan Collins (**BCW**)

PROMOTIONS, RESEARCH AWARDS, SCHOLARSHIPS AND OTHER KUDOS

Promotions 2019

Approved for Promotion from Clinical Instructor to Clinical Assistant Professor:

Dr. Trevor Kavanagh – BC Women’s Hospital

Dr. Mark Masterson – Kelowna General Hospital

Dr. Steven lee – Vancouver General Hospital

Dr. Sean McLean – Vancouver General Hospital

Dr. Travis Schisler – Vancouver General Hospital

Dr. Jason Wilson – Vancouver General Hospital

Dr. Richard Gardiner – Victoria General Hospital

Dr. Shuen King – Victoria General Hospital

Dr. Meghan O’Connell – Victoria General Hospital

Approved for Promotion from Clinical Assistant Professor to Clinical Associate Professor

Dr. Simon Massey – BC Women’s Hospital

Dr. Gord Finlayson – Vancouver General Hospital

Clinical Associate Professor to Clinical Professor:

Dr. Jens Lohser – Vancouver General Hospital

Promotions 2020

Clinical Instructor to Clinical Assistant Professor:

Dr. Sadiq Abdulla – BC Women’s Hospital
Dr. Jonathan Collins – BC Women’s Hospital
Dr. Cheryl Holmes – BC Children’s Hospital
Dr. Nigel Barker – BC Children’s Hospital
Dr. Stephanie Peters – Burnaby General Hospital
Dr. James Capstick – Nanaimo Regional Hospital
Dr. Tim Sveinbjornson – Royal Columbian Hospital
Dr. Su-Yin Macdonell – St. Paul’s Hospital
Dr. Mahesh Palanisamy – Surrey Memorial Hospital
Dr. Marietjie Slabbert – UHNBC Prince George
Dr. Jei-Eung Park – Vancouver General Hospital
Dr. Alex Wong – Vancouver General Hospital
Dr. Donald Young – Vancouver General Hospital
Dr. Sandra Kisilevsky – Vancouver General Hospital
Dr. Stuart Holmes – Victoria
Dr. Kevin Yee – Victoria

Clinical Assistant Professor to Clinical Associate Professor

Dr. Dean Jones – Delta Hospital
Dr. Adam Pope McDiarmid – Lions Gate Hospital
Dr. Feisal Mohamedali – Royal Columbian Hospital
Dr. Aaron MacINNES – Surrey Memorial Hospital
Dr. Juliet Atherstone – Vancouver General Hospital

Clinical Associate Professor to Clinical Professor

Dr. Gillian Lauder – BC Children’s Hospital

Hospitals and Health Centres

CLINICAL OVERVIEW

Department Statistics

Full-time faculty - 21

Clinical Faculty - 527

Fellows - 12

Residents - 62

Medical Students - 224

Pharmacology Graduate Program – 12 students

Pharmacology Undergraduate Program – 54 students

Postdoctoral Fellows - 15

BRITISH COLUMBIA CHILDREN'S HOSPITAL

Dr. Simon Whyte
Department Head



The Department of Pediatric Anesthesia at BC Children's Hospital continued in its role as a foundation of academic and clinical medicine centred at BC Children's Hospital.

The clinical fellowship program remained strong and active, providing both advanced pediatric anesthesia clinical training and academic research and teaching opportunities for our fellows. Christopher Badenhorst (New Zealand) and Jorinde Polderman (The Netherlands), were our 2019-2020 Fellows. Dr. Katherine Bailey established a plan to increase clinical fellowship numbers from the longtime number of two up to a goal of four. Department case number data was used to show the ability to support the increased fellow numbers. Work is underway to develop funding streams for additional fellow remuneration. A third fellow, from Uganda and separately funded will be joining the department for the 2019-2020 academic year and will test the increased fellow number model.

BC Children's Hospital remained an active and engaged partner in the UBC anesthesia residency training program. In addition the department continues to provide exposure to anesthesia to non-anesthesia residents and fellows as well as medical students and associated health care providers.

The restructured Pediatric Anesthesia Research Team under the leadership of co-chairs Simon Whyte and Matthias Gorges has proven to be sustainable and effective in supporting clinical research in the Department. Andrew Poznikoff as the department's research coordinator provides the backbone of the unit's research support. The unit's effectiveness is evidenced by the breadth of active projects and the number of staff anesthesiologists involved in clinical research projects.

**BRITISH COLUMBIA WOMEN'S HOSPITAL
& HEALTH CENTRE**

Dr. James Brown
Department Head

Dr. Jonathan Collins
Associate Department Head



DEPARTMENT OF
ANESTHESIA

It has been several years since the last APT update, at which time we had just moved our Obstetric Services into the new Teck Acute Care Centre (TACC). Redevelopment has continued apace since then, to some extent pre-planned, but also in part motivated by the MOH Surgical Renewal project. The renovations of the Single Room Maternity Care unit are complete, and work to double the capacity of the Gynecology Surgical Services program is due to finish this July.

In common with other units around the Province, our workload continues to increase, and to meet these demands we have been steadily recruiting to our Department and the UBC APT Faculty; we are lucky to have added the talents and experience of Dr. Katie Seligman, Dr. Will Shippam, Dr. Clare Burlinson and most recently Dr. Helen Parker to our team. Dr. Andy Wang will join us in 2022 after his Fellowship in Toronto. We have also expanded our wider anesthesia team by recruiting additional Anesthesia Assistants and supporting their ongoing training. This culminated in enabling us to transition to 24/7 AA coverage such that we can now offer round-the-clock cell salvage for patients at high risk of postpartum hemorrhage. We continue to enhance our department's profile both within the hospital and the wider medical community: Dr. Jonathan Collins was appointed to the role of Medical Lead for Surgical Services and Associate Department Head, Dr. Katie Seligman leads our departmental Quality & Safety initiatives, and Dr. Sadiq Abdulla is in the newly-established role of Assistant Program Director for the UBC Anesthesiology residency program.

Dr. Anton Chau continues to expertly direct the Fellowship and Research Programs, and despite the challenges of the last year the quality of the Fellows' educational experience and our department's research output has been maintained. Last year one of our submissions to the prestigious Society for Obstetric Anesthesia and Perinatology (SOAP) annual meeting was awarded First Place in the Gertie Marx Research Award (*The effect of carbetocin dose on transmural dispersion of myocardial repolarization in healthy parturients scheduled for elective cesarean section under spinal*).

Perhaps this year's highlight was the BC Women's Hospital Department of Anesthesia being designated a SOAP Center of Excellence. This accolade celebrates our multiple achievements and successes, along with our commitment to continuous improvement, and is shared with only one other site in Canada.



SOCIETY FOR OBSTETRIC
ANESTHESIA AND PERINATOLOGY

**CENTER of
EXCELLENCE**

VANCOUVER GENERAL/UBC HOSPITALS

Dr. Jens Lohser
Department Head



Executive Summary

2020 was dominated by the Covid-19 pandemic, which affected all aspects of care and dominated departmental focus and personnel. Our department stepped forward and volunteered on multiple fronts; we provided a 24/7 Covid intubation team during the first wave of the pandemic, we provided volunteer staff to critical care during the first and third wave, as well as coverage to the Covid ward during the third wave. We were fortunate throughout the pandemic to not have any significant staff illnesses, however are facing cumulative fatigue and burnout like many other sites.

In parallel to the pandemic we were involved in the planning and execution of the OR redevelopment project at VGH with the goal of opening of 16 state-of the art operating rooms on the third floor of Jim Pattison Pavilion in 2021. The long-term goal of the OR expansion will be to run 24 VGH operating rooms in the latter part of 2021, in addition to 8 operating rooms at UBCH and the full complement of out of OR sites, including interventional cath lab, electrophysiology, radiology and ECT. This expansion is providing significant hiring pressure on our department, which we are actively addressing. At the end of 2020 our staffing level was up to 65 individuals with an anticipated staffing level of 80 in the coming 4-5 years.

Staffing departures

Dr. Laura Duggan: moved to Ottawa in 2019
Dr. Justin Naidu: moved to SPH in 2019
Dr. Alana Flexman: moved to SPH in 2020
Dr. Mitch Giffin: retired in 2020

New staff hires in 2019:

Dr. Kali Romano: joined in 2019 and proceeded to a Critical Care Fellowship at VGH
Dr. Nav Chima: joined in 2019 and proceeded to a Trauma Anesthesia and Simulation Fellowship at Sunnybrook in 2020
Dr. Sandy Pitfield: joined in 2019, planning a Cardiothoracic Anesthesia fellowship in 2021
Dr. Evan Shao: joined in 2019, planning a Neuro Anesthesia fellowship in 2021
Dr. Amber Galbraith: joined in 2019, planning a Regional Anesthesia fellowship in 2021
Dr. Rana Hamedizadeh: joined in 2019, planning a Regional Anesthesia fellowship in 2021

New staff hires in 2020:

Dr. Kristen Kidson: joined in 2020 and proceeded to Critical Care Fellowship at VGH
Dr. Matthew Walker: joined in 2020, planning a Trauma Anesthesia fellowship in 2021
Dr. Mark Mathieson: joined in 2020 after a General Fellowship at VGH and prior cardiothoracic and obstetric fellowships in Australia.

ROYAL COLUMBIAN & EAGLE RIDGE HOSPITALS

Dr. Feisal Mohamedali

Regional Medical Director & Regional Department Head, Anesthesiology



Dr. Kenneth Ryan

Co-Head, Department of Anesthesia

Royal Columbian and Eagle Ridge Hospitals

The Department of Anesthesiology and Perioperative Medicine provide services at both Royal Columbian and Eagle Ridge Hospitals. The Royal Columbian Hospital is one of only two Level 1 trauma centers in the province and serves as the tertiary care referral center for the entire Fraser Health Authority, which serves over 1.8 million people. The Royal Columbian Hospital is one of the few remaining truly general hospitals, provides a wide spectrum of surgical services. In fact, the range of surgical services provided at the Royal Columbian Hospital is unmatched by any other single site in British Columbia. It is the highest volume cardiac center in BC and also sees the most high-level trauma. The Royal Columbian Hospital continues to have one of the best NICU units in North America and is the one of the few centers in BC that can handle high-risk OB cases that require ICU and/or cardiac care for the mom while also being able to care for the sickest baby. Interestingly, over 60% of the cases performed at RCH are classified as urgent/emergent. Over the last decade, NSQIP data has consistently ranked RCH surgical patients as having the highest acuity amongst the hundreds of North American hospitals participating in the study and over 60% of our cases are non-elective emergency work. Finally, the Royal Columbian Hospital is actively involved in a number of multicenter randomized trials and is constantly expanding its research activities including the hiring of a full-time research assistant for 2019/2020.

Eagle Ridge Hospital is our lower acuity center. There are six operating rooms that provide space for nearly 10,000 surgical cases a year, the majority of which are Surgical Day Care cases. Most of the pediatric cases done by the Department are performed at Eagle Ridge Hospital.

VANCOUVER ISLAND HEALTH AUTHORITY

Sites:

**Victoria General Hospital, Cowichan District Hospital
Royal Jubilee Hospital, Westcoast General**



Hospital

**Saanich Peninsula Hospital, Nanaimo Regional Hospital
Comox Valley Hospital, Campbell River Hospital**

Dr. Desmond Sweeney
Department Head

Division Heads:

Dr. Lindi Thibodeau: Campbell River/Comox Valley Hospital
Dr. Jason Lee: Nanaimo Regional Hospital/West Coast General Hospital
Dr. Christie Avenant: Cowichan District Hospital/Saanich Peninsula Hospital
Dr. Adrian Vethanayagan: Royal Jubilee Hospital/Victoria General Hospital
Dr. Christie Avenant: Family Practice Anesthesia

The health authority's mandate was continue to reduce surgical waiting lists. As a result, there were additional funds available to support this initiative and were principally directed to do more joint and dental surgery. This required additional hiring of nurses, surgeons, AA's and anesthesiologists.

Dept Highlights

Dr Richard Alexander is our Education Representative and has helped coordinate the many students and residents training in the South Island.

Dr. Sara Waters is now the Clinical Education Lead

Meghan O'Connell, organizes our CME events for the year

Dr Shuen King and Dr Sarah Hall (NRGH) continued to organize simulations for dept members.

Several south island members host a Resident Exam Session annually in Victoria

Many sites host evening journal rounds and these have been successful in helping members get together and discuss topics of interest.

Dr Brent Caton organizes a CARE team from Victoria that travels to Guatemala annually

Future

The Department continues grow to meet increased surgical demand and provide innovative ways to improve efficiency and quality of care. We have recruited 11 new anesthesiologists during 2019-2021.

We have had a great year and continue to appreciate the talented people contributing to the care of patients and education of others.

Nanaimo Regional General Hospital

Sarah Hall MD, FRCPC

Site Coordinator

Nanaimo Regional General Hospital (NRGH) has 345 acute-care beds and serves as a regional referral centre for mid and upper Vancouver Island. Residents typically enjoy exposure to interesting ENT and general surgery cases, with frequent awake intubations. Nanaimo is a great place to get exposure to pediatric cases and to consolidate obstetrical anesthesia skills. A wide range of general, urologic, plastic, maxillofacial and orthopedic surgeries is performed with an emphasis on regional and neuraxial techniques. Department members staff a Preadmission Clinic, and monthly Morbidity and Mortality/Quality Assurance rounds are held. We routinely hold Journal Club evenings which are quite social, often chaired by the anesthesia resident. Two anesthesiologists are involved in the Interventional Interdisciplinary Pain Program where 7000 patients are seen annually.

John Riendl is in his last official year, having been in Nanaimo for most of his career. We hope to visit with him often as he returns as a locum, like his predecessor Bob Gaultois. Hans Babst, Jason Lee, John Riendl, Scott Neilson, Paul Castner, Sarah Hall, Georgia Hirst, Michael Seltenrich, Jim Capstick, Karen Wong, Bernice Duan, Theo LeRoux, Mark James carry on the battle. Michael Pariser has left the OR altogether for the greener pastures of the Pain Clinic, joining Karl Muendel.

Summary of 2019 and 2020:

- Dr. Jason Lee served as Division Head Anesthesia Geography 2 and Karen Wong as Medical Lead Anesthesia NRGH, both replacing Jim Capstick who hung up his shingle at the end of 2020.
- The Simulation program continued to be highly successful. The Inter-professional Perioperative Simulation Workshops, for which we have obtained Section 3 accreditation, was very useful in times of Covid, when we ran everyone in the OR including nurses, physicians (anesthetists, surgeons and surgical assistants), PAs, AAs, OB and PACU staff through endless rounds of protocols and routines which changed daily. It was a time to practice resilience and acceptance that the only constant in life is change.
- Our Anesthesia Assistant department has four full time positions. Edwin Dreef joins Paul Gear, Jessica Barak, and Sarah Repa and we now have coverage on weekends!
- Our monthly Journal Club, typically led by the Anesthesia resident rotating through, is held at a different restaurant every month and is a very popular event.
- The surgical renewal plan implemented in 2020 has successfully addressed the needs of our growing population. Our elderly population has grown because of retirement relocation, and young families are moving to the island as it is increasingly recognized as a great place to raise kids.
Our OR time has grown by 20%, significantly reducing or eliminating surgical wait lists. Unfortunately, while we continue to actively recruit, we have been unable to attract enough anesthesiologists to keep up with the increasing workload.

Our department has gone above and beyond to ensure the extra OR time is staffed. We continue to recruit and are hopeful that we may attract anesthesiologists and especially new graduates to Vancouver Island. It is a great opportunity to consider community anesthesia in a fantastic location!

- We have completed the provincial collaborative on pre-surgical optimization in hip and knee arthroplasty, so we now have the blueprint to move forward with other surgical services.

In the past our department has hosted medical students and residents from across Canada and throughout the world. Nanaimo has received high praise from students and residents as a great place to live and learn. Since Covid, however, we have been limited to BC students only. We look forward to the return of international students in the future, continuing to be pioneers in the simulation world and to ongoing medical education.



Airway Simulation in OR

Pharmacology and Therapeutics

PHARMACOLOGY

PHARMACOLOGY

As part of the Department of Anesthesiology, Pharmacology & Therapeutics (APT), we are committed to excellence in Pharmacology and Anesthesiology education and research through creativity and dedication. Our present research strength is in areas of neural, cardiovascular, respiratory, ion channels, and clinical pharmacology as well as drug development. We have strong collaborations within the Department in Anesthesiology, Pharmacology and the Therapeutics Initiative as well as outside of the Department.

In addition to research efforts, we have maintained our excellence in teaching at the undergraduate, graduate and postgraduate levels in both pharmacology and therapeutics. The department has been offering degree programs in undergraduate and graduate pharmacology. The PCTH 514 seminar series, led by Drs. Pascal Bernatchez and Issy Laher, continue to provide opportunities for our students to share their research interests and accomplishments with opportunity for faculty and students to be exposed to other related research areas from within and outside the university.

Medical Undergraduate Teaching

The pharmacotherapy content in the MD Undergraduate Program curriculum is undergoing revision. One week in the first-year curriculum has been revised to further emphasize pharmacotherapy. In collaboration with the Therapeutics Initiative, the UBC medical school formulary is being revised to reflect prescribing patterns in BC. Pharmacology-driven educational activities and assessable learning objectives have been incorporated into most weeks of the first- and second-year curricula. Existing Case Based Learning (CBL) cases undergo continual review for opportunities to add further pharmacology content. The clinical experiences in years three and four continue to focus on clinical rotations where pharmacology teaching is integrated into the clinical setting. New modules on the pharmacology of drugs used in anesthesia and pharmacogenomics are being developed. Additional pharmacology teaching is being incorporated into several aspects of the Transition into Professional Practice (TIPP) course. Student shadowing and out-of-province electives were cancelled on account of COVID.

Graduate Program

The department offers both Ph.D. and M.Sc. degrees in pharmacology and therapeutics. In 2019-2020, 12 new MSc students joined, and 4 students graduated with a degree (2 MSc and 2 PhDs).

Undergraduate Pharmacology

Undergraduate Education-Non-Medical, Bachelor of Science

The Department offers a 4-year B.Sc. and a 5-year B.Sc. Co-op Education program in Honours as well as Major pharmacology. The aim of our programs is to produce a graduates broadly trained

in all aspects of pharmacology. The B.Sc. Pharmacology program has been in existence under the Faculty of Science for about three decades. In the first and second years, the students take a basic science program. Since there is room for a maximum of 24 students in third year, all those registered in second year are interviewed by Dr. S. Karim as part of the selection process. Entrance to third year is primarily on the basis of marks and completion of a minimum of 60 credits within the winter terms of year 1 and 2. Students then select Honours or Majors in either the four year or five year (Co-op) program.

The program emphasizes the experimental and laboratory aspects of Pharmacology and students learn both the whole animal and isolated tissue techniques as well as biochemical and chemical procedures. Skills that are stressed include the ability to search for information, design appropriate experiments, carry out experiments individually and as a member of a team, analyze data and, communicate and write effectively.

Co-op Program

For the co-op program, in addition to classical laboratory-based university instruction, the students will do 12 to 16 months (i.e., 3 to 4 work-terms) of paid work placement (i.e., 3 to 4 work-terms) in pharmacology research laboratories in pharmaceutical companies or academic institutions.

Work placement starts in May or September after the completion of year 3 and continues through year 4. Students in the honours program will take additional credits in years 2,3, and 5 and conduct a laboratory-based research project for 6 months during year 5 (Sept. to March) within the Department and present an Honours thesis (PCTH 449).

Students participating in the Co-op program register for PCTH 398, 399, and 498, in addition to the normal academic requirements, and pay the Co-op Education Program fee for each course. PCTH 499 is optional for students who want to have four work placements.

Over the past few years, we have had our co-op students placed in various pharmaceutical and biotechnology companies in Canada, Japan, Germany, Singapore, Austria, and the United States.

THERAPEUTICS INITIATIVE

Dr. Colin Dormuth, MA, SM, ScD (Harv)
Co-Managing Director

Dr. Ken Bassett, MD MA PhD
Co-Managing Director



The Therapeutics Initiative (TI) was established in 1994 with the mission to provide prescribing physicians and dispensing pharmacists with up-to-date, evidence-based, practical information on prescription drug therapy in British Columbia. It is currently supported by a 5-year grant from the BC Ministry of Health to the University of British Columbia. The grant was first established in 1994 and the current grant ensures funding until March 31, 2023.

Over the years, the TI has substantially enhanced its ability to assess the clinical evidence presented in published articles, meta-analyses by the Cochrane Collaboration and scientific material presented by the pharmaceutical industry. In pace with the extensive assessment of clinical evidence, the TI has also developed effective ways of knowledge translation and dissemination of this evidence to all active players involved in drug therapy: physicians, pharmacists, nurses and policy-makers (Ministry of Health) and is committed to analyzing its own impact.

The TI is composed of 6 working groups that collaborate to assess and disseminate clinical evidence of prescription drugs:

- 1. Drug Assessment Working Group (DAWG):** assesses the clinical evidence of effectiveness and safety of new and existing drug therapies in the province and relate that evidence to the care of individual patients. The DAWG completed 6 therapeutic reviews of single drugs and drug classes in 2019-2020.
 - COPD therapeutic class review
 - Edaravone for ALS
 - AntiVEGF drugs and rate of glaucoma surgery
 - MS Therapeutics class review
 - Biosimilars: Infliximab vs. biosimilars
 - PPI serious harms of long-term use

The DAWG provides problem-based learning opportunities regarding critical appraisal of clinical trials. Over 30 practicing physicians, residents and trainees (graduate, pharmacy and medical students from UBC) attended DAWG meetings last year. They participated in drug assessment projects, where they presented and discussed the findings with the rest of the team. Students visiting from other medical schools in Alberta, Ontario, England and New Zealand also attended DAWG meetings and learned to critically appraise systematic reviews.

2. PharmacoEpidemiology Group (PEG): uses epidemiological methods to analyze linked administrative data in British Columbia to answer population-based questions often not addressed in clinical trials. Projects include evaluation of drug policies and educational interventions, monitoring of drug utilization, and analysis of prescription drug safety and effectiveness. In 2019-2020, the PEG completed 5 epidemiological studies:

- Antihypertensive medications and Non-Melanoma Skin Cancer
- Biosimilars Initiative: The Effect of a New Coverage Policy for Anti-inflammatory Medications (Infliximab & Etanercept) in Non-Gastrointestinal Diseases
- Biosimilars Initiative: The Effect of a New Coverage Policy for Infliximab in Gastrointestinal Diseases
- Biosimilars Initiative: The Effect of a New Coverage Policy for Insulin Glargine
- Influence of opioid prescribing standards on drug use and health outcomes among patients with long-term opioid use

The PEG also developed a training syllabus for economists and analysts, and other interested staff in the Ministry of Health to internally conduct drug assessments. Two modules of the curriculum were delivered in 2019-2020:

- Module 1: Introduction and Epidemiologic Measures
- Module 2: Confounding, Study Designs and Stratified Analysis

3. Quality Prescribing Working Group (QPWG): designs and evaluates an audit and feedback intervention, called Portrait, to improve the quality of prescribing in BC. The Portrait provides primary care prescribers with: a concise evidence overview, a comparison of their prescribing to peers and advice about possible improvements to their prescribing pattern. Two prescribing portraits were distributed in 2019-2020:

- Group portrait for the Vancouver Division of Family Practice
- Individualized Portrait for BC physicians on persistent Proton Pump Inhibitor (PPI) prescribing

4. Education Working Group (EWG): provides health professionals with up-to-date, evidence based, practical information about rational drug therapy. The EWG held 12 main educational event series across BC with over two thousand attendees, highlights:



- Mini-course in the East and West Kootenays, BC on April 30 - May 2, 2019
- Drugs, Dinosaurs & Dinner 3D Conference with Northern Health in Tumbler Ridge, BC on May 31 - June 2, 2018
- Royal Jubilee Hospital Grand Rounds in Victoria, BC from October 2019 to January 2020
- Evidence Appraisal Workshop at UBC Robson Square, Vancouver, BC on October 4, 2019
- Bringing Best Evidence to Clinicians: Annual UBC Therapeutics Initiative Course at Vancouver General Hospital in Vancouver, BC on October 5, 2019
- Vancouver Division of Family Practice Grand Rounds, Vancouver, BC from June 2019 to February 2020
- Nanaimo Regional General Hospital in Nanaimo, BC from September 2019 to February 2020
- Best Evidence monthly webinar series on various clinical therapeutics issues
- Methods Speaker monthly webinar series on topics related to systematic reviews, meta-analysis, methods and statistics in evidence synthesis.

The EWG also publishes the Therapeutics Letters that provide brief practical messages on how to deal with problematic therapeutic issues. All issues of the Therapeutics Letter are distributed to physician prescribers across BC and available on the TI website in English and Spanish. The EWG published 9 Therapeutics Letters in 2019-2020:

Issue Number / Publication Date	Title
TL 118 / April 2019	Trends in utilization of proton pump inhibitors in British Columbia
TL 119 / May 2019	Epinephrine autoinjectors available in Canada
TL 120 / July 2019	Routine VTE prophylaxis: Is there a net health benefit?
TL 121 / August 2019	Twenty-Five Pearls from 25 years (part 1)
TL 122 / September 2019	Twenty-Five Pearls from 25 years (part 2)
TL 123 / November 2019	Biosimilars or Biologics: What's the difference?
TL 124 / February 2020	Your views of the Therapeutics Initiative: 2019 Survey
TL 125 / March 2020	Pill splitting: Making the most of meds in a time of need

The EWG has provided teaching and training sessions on evidence-based medicine, systematic review, meta-analysis methodology, and critical appraisal of randomized controlled studies for a diverse medical and pharmacy student body.

- 20 elective medical students from BC, Alberta, Ontario, England, and New Zealand.
- 15 pharmacy practice residents for a 2-week to one-month critical appraisal rotation.

5. Cochrane Hypertension Group (CHG): prepares, maintains and promotes systematic reviews of the effects of healthcare interventions for hypertension. The scope of CHG includes randomized controlled trials of interventions evaluating blood pressure and clinical outcomes for the prevention and treatment of essential hypertension. Part of the international Cochrane Collaboration, the CHG published the following Cochrane systematic reviews and protocols in 2010-2020:

- Musini VM, Tejani AM, Bassett K, Puil L, Wright JM. Pharmacotherapy for hypertension in adults 60 years or older. [Updated Review] Cochrane Database of Systematic Reviews. Issue 6, 2019. Published 04/06/2019. Amended 23/01/2020. DOI: 10.1002/14651858.CD000028.pub3
- Erviti J, Saiz LC, Salzwedel DM, Leache L, Pijoan JI, Menéndez Oregana M, Méndez-López I. Blood pressure targets for hypertension in people with chronic renal disease. [Updated Protocol – Major change] Cochrane Database of Systematic Reviews. Issue 7, 2019. Published 21/07/2019. Revised and re-published in Issue 3, 2020. Published 30/03/2020. DOI: 10.1002/14651858.CD008564.pub2
- Finizola, RM, Infante E, Finizola B, Pardo Pardo J, Flores Y, Granero R, Arai KJ, Leache L. Pharmacotherapy for hypertension-induced left ventricular hypertrophy. [Updated Protocol – Major change] Cochrane Database of Systematic Reviews. Issue 9, 2019. Published 16/09/2019. DOI: 10.1002/14651858.CD012039.pub2
- Shawish MI, Ben-Eltriki M, Wright JM. Effect of phosphodiesterase 5 inhibitors on blood pressure. [New Protocol] Cochrane Database of Systematic Reviews. Issue 12, 2019. Published 16/12/2019. DOI: 10.1002/14651858.CD013507
- Adams SP, Tiellet N, Alaeiikhchi N, Wright JM. Cerivastatin for lowering lipids. [New Review] Cochrane Database of Systematic Reviews. Issue 1, 2020. Published 25/01/2020. DOI: 10.1002/14651858.CD012501.pub2
- Garjón J, Saiz LC, Azparren A, Gaminde I, Ariz MJ, Erviti J. First-line combination therapy versus first-line monotherapy for primary hypertension. [Updated Review] Published 06/02/2020. DOI: 10.1002/14651858.CD010316.pub3

6. Communications and Outreach Group (COG): was created in 2020 to provide leadership in all aspects of communications to advance the TI strategic priorities. The overarching goal of the COG is to lead strategies to expand and enhance the reputation of the TI as an independent, non-partisan, university-based group providing therapeutics information to support the high quality and safe use of medicines in BC.

The TI website www.ti.ubc.ca is maintained and updated regularly with evidence-based information, including TI webinars and Therapeutics Letters. In 2019 the TI website received a total of 971,200 visits, an average of 80,933 visits per month from over 82,200 registered users. In March 2020, the website exceeded 100,000 visits, the highest monthly count in the history of the TI. The TI is also prominent on social media with a strong presence on Twitter and Facebook. In February 2020, the TI had 2,900 followers, issued 93 tweets, had 1,060 profile visits, 119 mentions and 110,000 tweet impressions (number of times users saw our tweets on Twitter).

Selected TI Publications

- Bassett K, Musini V. Response to the Joint Canadian Association of Gastroenterology and Crohn's Colitis Canada Position Statement on Biosimilars for the Treatment of Inflammatory Bowel Disease. *J Can Assoc Gastroenterol*. 2020 Apr; 3(2): 96–97. doi: 10.1093/jcag/gwz046
- Carney G, Bassett K, Maclure M, Taylor S, Dormuth CR. Cardiovascular and neuropsychiatric safety of smoking cessation pharmacotherapies in non-depressed adults: a retrospective cohort study. *Addiction*. 2020 Aug;115(8):1534-1546. doi: 10.1111/add.14951.
- Dormuth CR, Fisher A, Carney G. A rapid monitoring plan following a shift in coverage from brand name to biosimilar drugs for rheumatoid arthritis in British Columbia. *Pharmacoepidemiol Drug Saf*. 2020 Jul;29(7):796-802. doi: 10.1002/pds.4957.
- Carney G, Maclure M, Bassett K, Taylor S, Dormuth CR. Identifying sequential episodes of pharmacotherapy as a method for assessing treatment failure in comparative effectiveness research. *Pharmacoepidemiol Drug Saf*. 2020 Feb;29(2):199-207. doi: 10.1002/pds.4926.
- Carney G, Bassett K, Wright JM, Maclure M, McGuire N, Dormuth CR. Comparison of cholinesterase inhibitor safety in real-world practice. *Alzheimers Dement (NY)*. 2019 Nov 25;5:732-739. doi: 10.1016/j.trci.2019.09.011. eCollection 2019.
- Fisher A, Carney G, Bassett K, Maclure KM, Dormuth CR. Policy-induced selection bias in pharmacoepidemiology: The example of coverage for Alzheimer's medications in British Columbia. *Pharmacoepidemiol Drug Saf*. 2019 Aug;28(8):1067-1076. doi: 10.1002/pds.4804.
- Morrow RL, Bassett K, Wright JM, Carney G, Dormuth CR. Influence of opioid prescribing standards on drug use among patients with long-term opioid use: a longitudinal cohort study. *CMAJ Open*. 2019 Jul 25;7(3):E484-E491. doi: 10.9778/cmajo.20190003.
- Morrow RL, Bassett K, Maclure M, Dormuth CR. Outcomes associated with hospital admissions for accidental opioid overdose in British Columbia: a retrospective cohort study. *BMJ Open*. 2019 May 5;9(5):e025567. doi: 10.1136/bmjopen-2018-025567.
- Tejani AM, Perry TL. Toward trustworthy, useful and independent guidelines - acknowledging conflicts when they exist. *CMAJ*. 2019 Dec 16;191(50):E1387. doi: 10.1503/cmaj.73669.
- Hong J, Tung A, Kinkade A, Tejani AM. Noninferiority drug trials fail to report adequate methodological detail: an assessment of noninferiority trials from 2010 to 2015. *J Clin Epidemiol*. 2019 Apr;108:144-146. doi: 10.1016/j.jclinepi.2018.11.028.
- Tandun R, Bubbar C, Tejani AM. Who has the guts to deprescribe proton pump inhibitors? A pharmacist-led intervention in a long-term care facility setting. *Aging Med*. 2019;00:1–6. doi: 10.1002/agm2.12063

EDUCATION

POST-GRADUATE MEDICAL EDUCATION PROGRAM ANESTHESIA RESIDENCY

Dr. T. Laine Bosma
Program Director

Training Positions

As of December 2020, a total of 62 residents were registered in the 5-year Royal College Physicians & Surgeons program. This is a significant increase over the past 3 years. Eleven of these residents are scheduled to complete their residency during the 2020/2021 academic year and will be taking their RCPSC examinations in Anesthesiology in the spring of 2021. The number of CaRMs positions has been increased for the 2021 intake to 15. Fourteen residents joined the program in 2020. We continued to have a large applicant pool of over 100 well qualified students with a large contingent of UBC students applying.

New Graduates

All of the PGY5 residents were successful in the 2020 Royal College specialty examinations in Anesthesiology, which were delayed until August due to COVID. Our Exam Seminar Series, led by Dr. Ron Ree and Dr. Jason Wilson, continues to be very successful and a model for Royal College exam preparation. With the upcoming splitting of the RCPSC exam in 2021, the Exam Seminar Series will undergo a revision to optimize education for the new timeline. The vast majority of 2020's graduates have faculty positions at UBC academic hospitals.

Competency by Design

2020 is the final year of the traditional program as the "new competency by design curriculum" becomes the dominant curriculum. The initial cohort (2017) worked through completing the core stage of CBD while planning for the final Transition to Practice stage has begun. The Resident's and the faculty remain committed to building and delivering a very high-quality educational product through this transition.

Accreditation

The UBC Anesthesiology Residency Program underwent accreditation in March 2020 and received full accreditation. This is a big accomplishment as the entire accreditation system and tools had been revised while simultaneously, the program is entirely new and growing. The staff, faculty, and residents are to be commended on this significant accomplishment. Our next accreditation will be in eight years' time.

Resident Selection Committee

A very robust and active sub-committee of the Residency Program Committee (RPC) reviewed all applicants. The Selection Committee was chaired by Dr. Sadiq Abdulla, with committee

members representing all of the major BC teaching hospitals. Resident members are also well represented on the committee.

Resident Wellness

The peer mentorship program which was started in 2017 continues to grow and be refined. The initial feedback from residents is that this is a very valuable program and that it would be great to continue to expand the program through all of the years of training. Additionally, several resident wellness workshops have been included in the academic day schedule.

Academic Program

- **COVID** – COVID resulted in the cancellation of all elective surgery in April and May. In spite of this, our residents continued to work and learn full time being redistributed between the primary hospital anesthesia sites and the tertiary ICUs in the lower mainland. The residents demonstrated incredible resilience, determination, and courage during this trying time. Since June, with the return of elective surgery, COVID has not caused any interruption to the residents clinical learning.
- **Academic Day** - The full day academic program involving active participation from each of the teaching hospitals was very successful. Some sessions were cancelled at the end of the 2019/2020 academic year due to COVID, but the vast majority of sessions were transitioned to virtual. The 2020/2021 academic curriculum was revised to accommodate a majority of virtual sessions, with a handful of mandatory workshops (regional, POCUS, etc.) maintained in person with appropriate COVID safety planning. The feedback on our virtual academic sessions remained positive although the collegial interaction was significantly missed.
- The Residency Program Committee continues to support the autonomy of each participating UBC teaching hospital in delivering their contribution to the residents' educational program.
- **Simulation** - as led by Dr. John Veall, simulation continues to be a mainstay of our residency program. Of particular note, all of the R4s successfully completed the Royal College CanNASc scenarios as required by the new curriculum. This was an enormous undertaking and Dr. John Veall, as well as the entire simulation team, is to be commended. Please refer to the simulation report for specific details
- **Journal Club** - an integral part of the academic program. Meetings occur monthly at faculty members' homes or other venues. Dr. Terri Sun joined Dr. Anton Chau in the coordinator role and the sessions continued virtually. In spite of everything, these sessions continue to provide the residents with an excellent educational opportunity to learn about critical appraisal skills.

Clinical Program

The clinical program continues to be a strong element of the UBC Anesthesiology training program. Core training in both core anesthesiology as well as subspecialty anesthesiology is distributed between the primary teaching sites, as well as distributed to the secondary teaching sites. The program continues to work at recruiting new training experiences for residents, with Surrey Memorial Hospital and Kelowna General Hospital increasing their participation in the program. These expansions continue to be monitored closely.

Residency Program Committee (RPC)

This committee met 5 times in 2020 and as always was very effective in guiding the activities of the residency training program and negotiating the difficulties of COVID. Committee members include hospital program coordinators from each site, our Royal College Examiners, members at large, UBC APT Department Head, resident representation from all years, and the program director as chair.

Administration

At the end of 2020, Dr. Ken Ryan completed his position as CBD director and competency committee chair. Dr. Ryan is to be thanked for his enormous service to the program as we embarked on this major transition. A new associate program director position was established and after a search process, Dr. Sadiq Abdulla joined the program administration as the inaugural associate PD. Dr. Cynthia Yarnold started as the chair of the competency committee.

Ms. Jill Delane continued in her role as the Program Coordinator. Ms. Susan Van Bruggen continues to be an excellent Program Secretary. Jay Park started as Project Manager for accreditation and has continued on to help maintain and innovate the administrative support of the program. All have been invaluable in the administration of the program.

Summary

Overall, despite all of the adversity, this has been a successful year for the UBC Anesthesiology Residency Training Program. This is due to the many hours of hard work on the part of our clinical faculty working with our residents, taking part in the academic program, as well as helping senior residents prepare for the oral exam and to become skilled anesthesiology consultants. In addition, the engagement of the resident body in building and improving the program has been beyond expectation. The goodwill and high level of commitment to residency training is a credit to this department.

**POST-GRADUATE MEDICAL EDUCATION PROGRAM
FAMILY PRACTICE ANESTHESIA**

Dr. John McAlpine
Program Director

The UBC FPA Enhanced Skills program can accommodate 3 residents per year with a mandate to produce family practice anesthetists committed to working in rural British Columbia. It is a challenging and demanding 12 month program with rotations in tertiary centers throughout the lower mainland in adult, pediatric, and obstetrical anesthesia, a community rotation in Whitehorse, adult ICU, and an elective block. Through an Enhanced Skills program and administered through the Dept of Family Practice, it naturally has a very close clinical affiliation with the Royal College anesthesia program from which it benefits greatly participating in its academic days and other educational opportunities such as airway, regional and simulation workshops in addition to the shared rotation experiences with the fabulous UBC anesthesia faculty.

Early in the year, the FPA residents attended the “FPA Bootcamp” which is an intensive and innovative conference/simulation training program hosted by the NOSM. It is a week in duration and comprised many hours of simulation sessions and lectures and receives very positive reviews from participants. The UBC FPA program is very grateful to the BC REAP program for supporting the tuition for this resident event.

In November, the annual UBC FPA Refresher Course was held with high attendance from the BC FPA community and increasing attendance from other regions. This conference receives tremendous support from the UBC Anesthesia faculty towards the academic content of lectures and workshops. This teaching contribution has been so greatly appreciated and is key to its success.

Summary

Overall, this has been a successful year for the UBC Anesthesiology Residency Training Program. This is due to the many hours of hard work on the part of our clinical faculty working with our residents, taking part in the academic program, as well as helping senior residents prepare for the oral exam and to become skilled anesthesiology consultants. The goodwill and high level of commitment to residency training is a credit to this department.

Pain Medicine Residency Program

Dr. Michael Butterfield MSc, MD, FRCPC (Psychiatry and Pain Medicine)
Program Director

Program overview

A. Program Expansion

This academic year 2019-2020 has been the first year that we have had funding for two residency positions in Pain Medicine. These two spots were filled by two individuals whose primary specialty is in anesthesia, the first anesthesiologists to enter our program. One being a recent graduate from Western University (Zameer Pirani) and the other being in practice for over 20 years (Sri Kollipara).

In July 2020, we have our next cohort of pain medicine residents start. Both have recently graduated from their respective residency programs, one from University of Western Ontario in Internal Medicine (Bilal Munir) and one from the University of Ottawa in PM&R (Sachin Rathee).

B. Graduating residents

In 2019, Audrey Chen was the second graduate from the program. She currently works in Vancouver and she continues to practice pain medicine almost exclusively. She works primarily in interventional pain medicine in two different community pain clinics and works at Vancouver General Hospital in the Transitional Pain Clinic.

Aaron Rizzardo, the third resident in the program graduated in January 2020 and also primarily works in in the area of interventional pain medicine. He currently works at two tertiary pain clinics, one at the Jim Pattison Outpatient Care and Surgical Centre and the other at the St. Paul's Hospital.

Education

A. Accreditation

This is the first year that we are going through the new accreditation process with the Canadian Excellence in Residency Accreditation (CanERA) system. We have been undergoing an extensive internal program review to ensure that our program meets all of the Pain Medicine specific standards of accreditation. This has involved an entire curriculum review, evaluation of all rotations and development of a new process of resident evaluation including the development and implementation of a Competency Committee. We have received informal feedback that we have received Full Accreditation with Regular Review!

Research

We have confirmed that Dr. Ken Craig, who is an internationally renowned pain researcher in the UBC Department of Psychology, will be joining the Pain Medicine RTC to mentor our residents for their research/scholarly projects. However, our two most recent graduates, Drs. Chen and Rizzardo, both completed the one-year SSC Physician Quality Improvement training program through Fraser Health Authority and presented the results of their research projects at

research conferences. Both of their research projects have focused on reducing tertiary pain clinic wait lists.

The Program Director is leading a research study surveying program directors across the country from the primary specialties that can apply to the pain medicine residency programs. The primary purpose of this survey is to characterize the extent of pain management training and determine if there are any perceived barriers to encouraging residents to pursue subspecialty training in pain medicine.

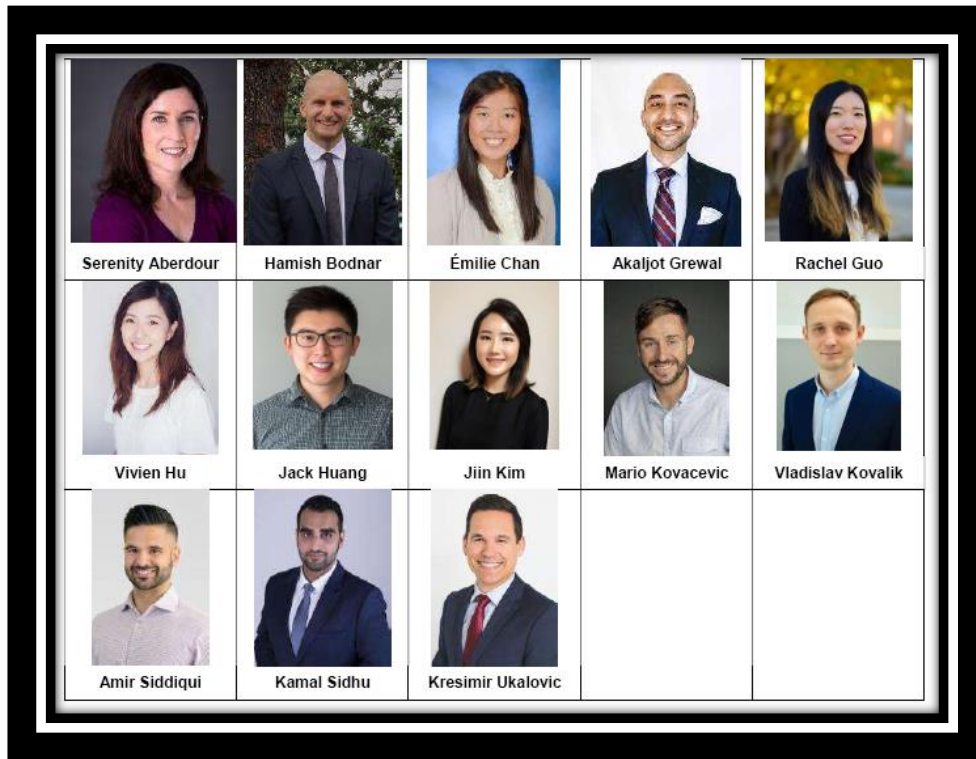
Patient Care

Residents provide patient care at multiple sites across the lower mainland and as the program has expanded, we have increased the option for residents to complete electives and part of their core multidisciplinary pain clinic rotations at sites outside of the Lower Mainland. Our residents currently provide patient care at Vancouver General Hospital, St. Paul's Hospital, GF Strong Rehabilitation Centre, Jim Pattison Outpatient Care and Surgical Centre, BC Cancer Agency, BC Children's Hospital, UBC Hospital, Surrey Memorial Hospital, Nanaimo Regional General Hospital, and Bill Nelems Pain and Research Centre (Interior Health Authority Pain Clinic in Kelowna).

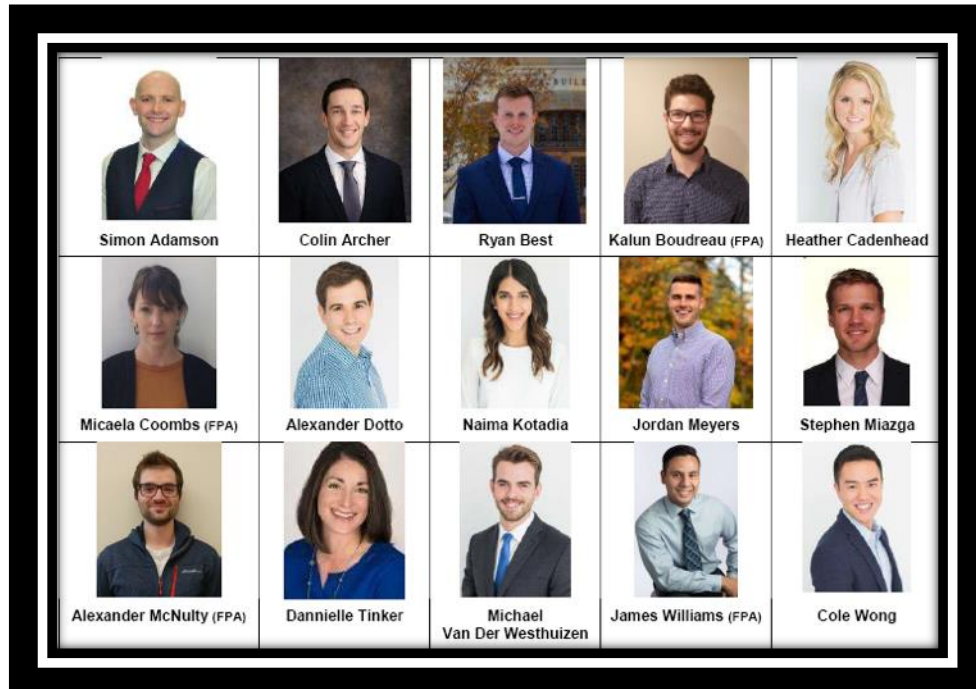
Future Directions

- A. Increase our research capacity and output
- B. Expand our residents' role in education to other residents and medical students
- C. Develop a dedicated simulation program for managing emergencies that can occur when performing interventional procedures
- D. Increase resident capacity to offer psychotherapeutic interventions for pain management.
- E. Increase resident engagement in leadership and community advocacy for individuals with chronic pain.

UBC ANESTHESIA RESIDENTS 2019-2020 - PGY 1



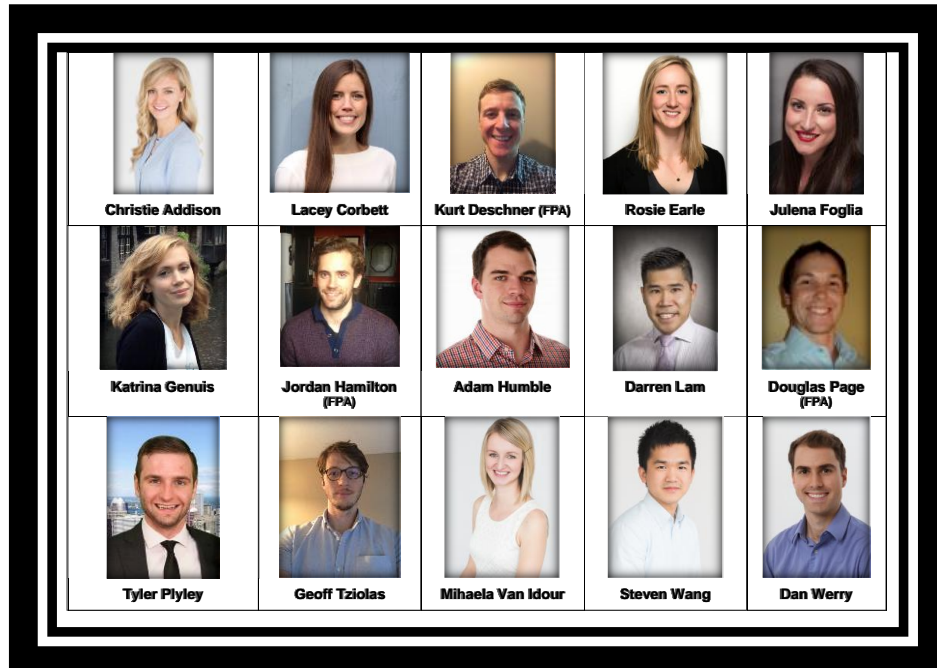
UBC ANESTHESIA RESIDENTS 2019-2020- PGY 2



UBC ANESTHESIA RESIDENTS 2019-2020 - PGY 3



UBC ANESTHESIA RESIDENTS 2019-2020 - PGY 4



UBC ANESTHESIA RESIDENTS 2019-2020 - PGY 5



Martha DiGiuseppe



Kristen Kidson



Katarina Kojic



Victor Liu



Dmitry Mebel



Kelli O'Reilly



Sandy Pitfield



Thomas Prasloski



Alan Tung



Matthew Walker



Andrew Wang

CONTINUING PROFESSIONAL DEVELOPMENT & VISITING PROFESSOR PROGRAM

Dr. Giselle C Villar
Program Director

The goal of the Visiting Professor program is to provide anesthesiologists from around the province stimulating and thought provoking speakers throughout the academic year. Each regional hospital (Vancouver General Hospital, St. Paul's Hospital, Royal Columbian Hospital, BC Children's Hospital, BC Women's Hospital) selects a speaker which best reflects that hospital's interests at that particular time.

Our visiting professor committee consist of: Dr(s). Giselle Villar (Chair and BCWH representative), Stephan Malherbe (BCCH representative), Kevin Rondi (SPH representative), Paula Meyler (RCH representative), Jacque Trudeau (VGH representative).

We continue to video-conference the visiting professor lecture series with multiple sites now having access to our speakers in real time. Sites involved via video-conference link include Lions Gate, Nanaimo, Port Alberni, Prince George, Nanaimo, Vernon and Victoria. Feedback from the program has been very positive. Our video library of speakers continues to grow and is available on our website below.

<http://apt.med.ubc.ca/anesthesiology/video-lectures/>

Visiting Professor Video Lectures

November 6, 2019 – Dr. Norm Buckley Professor Emeritus Department of Anesthesia, Michael G. DeGroot School of Medicine, McMaster University ([Biosketch](#))

Title: "Chronic Pain Network"

[Click here to be directed to the video](#)

January 9, 2019 – Dr. Eric Jacobsohn, MD Professor, Department of Anesthesiology, Pain and Perioperative Medicine

Max Ruby College of Medicine, Rady Faculty of Health Sciences, University of Manitoba

Title: "Science and the Future of Anesthesiology in Canada"

[Click here to be directed to the video](#)

The UBC department website is linked to the Canadian Anesthesiology Society Continuing Professional Development website so that interested anesthesiologists can access our departmental website and visiting professor videos.

Anesthesia Simulation Program

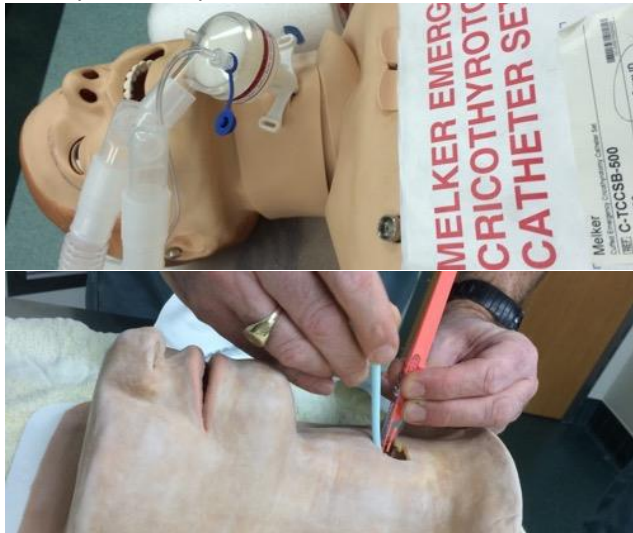
Vancouver General Hospital Simulation Centre (VGH SIM)-formerly CESEI



Children's and Women's Health Centre Simulation Centre



Vancouver Island Simulation Program
Airway workshop



Coastal Simulation Program Lions Gate Hospital



Interior Health Regional Simulation Program



DIVISION REPORT

CARDIAC ANESTHESIA

Dr. Bobby Lee, Head

The overarching theme of the past year in 2020 has been one of tumult and chaos brought about by the worldwide SARS-CoV-2 crisis. As it was in the world, so it was in the world of anesthesia. Confronting the unknown of SARS-CoV-2 with resolve and a willingness to adapt and to work together to solve problems were hallmarks of all anesthesiologists based at UBC teaching hospitals. From the laudable level of clinical care to the exemplary leadership exhibited in all realms of education, administration, and emergency planning, it was a privilege to watch my colleagues at work.

And despite the challenges being slightly different in cardiac anesthesia in the context of SARS-CoV-2, the response from the members of the UBC Division of Cardiac Anesthesia at UBC was just as exemplary.

UBC Anesthesia Residency and Fellowship Training

We carried on with our educational responsibilities to the residents and fellows located at the 5 different sites where cardiac anesthesia training occurred. Residents complete a 2 month cardiac anesthesia rotation at either St. Paul's (SPH), Vancouver General (VGH), or Royal Columbian Hospitals (RCH); however, it is now not uncommon for residents to gain some additional experience at the Royal Jubilee Hospital based in Victoria. Each of the training sites also has their unique training opportunities such as endovascular thoracic aortic aneurysm repair, mechanical assist devices, transplants, and transcatheter mitral valve and tricuspid valve repair outside of the standard experience during such a rotation.

Residents spend an additional month in the Cardiac Surgery ICU (CSICU) while fellows complete a 3 month rotation. Given the increasing complexity of cardiac surgery patients, this has resulted in an excellent learning experience in managing complex patients with a variety of mechanical assist devices such as ECMO and LVAD's as well as challenging medical conditions historically seen in the ICU.

An additional one-month TEE/POCUS elective is also offered at two of the sites, Vancouver General and St. Paul's Hospitals, focussing on both cardiac anesthesia and perioperative medicine.



Cardiac Anesthesia Staff Update

New cardiac anesthesia staff added in 2019/2020:

Vancouver General Hospital
Dr. Cyrus McEachern

Kelowna General Hospital
Dr. Vincent Joannis

Royal Columbian Hospital
Dr. Hardy Zeitsman
Dr. Kamen Valchanov
Dr. Marc Defoe
Dr. Pawel Martinka

Royal Jubilee Hospital
Dr Fani Nhuch

St. Paul's Hospital
Dr. Jean Raubenheimer
Dr. Justen Naidu

Research - Site Updates

Vancouver General Hospital

Mullane D, Lenihan M, Hanley C, Wall T, Bukowska I, Griffin M, Flood G. Efficacy of Glyceryl trinitrate (GTN) to facilitate the rewarming process during cardiopulmonary bypass. *J Cardiothorac Surg.* 2020 Aug 10;15(1):214.

Romano KR, Cory JM, Ronco JJ, Legiehn GM, Bone JN, Finlayson GN. Vancouver General Hospital Pulmonary Embolism Response Team (VGH PERT): initial three-year experience. *Can J Anaesth.* 2020 Aug 17.

Hecht P, Besser M, Falter F. Are We Able to Dose Protamine Accurately Yet? A Review of the Protamine Conundrum. *J Extra Corpor Technol.* 2020 Mar;52(1):63-70.

Kramer A, Holliday K, Keenan S, Isac G et al. Donation after circulatory determination of death in western Canada: a multicentre study of donor characteristics and critical care practices. *Can J Anaesth.* 2020 May;67(5):521-531

Kelowna

Saczkowski R, Kuzak N, Grunau B, Schulze C. Extracorporeal Life Support Rewarming Rate is associated with Survival with Good Neurologic Outcome in Accidental Hypothermia. *European Journal of Cardio-Thoracic Surgery* 59(2021), 593-600

Royal Columbian Hospital

Callum, J et al; for the FIBRES Research Group. Effect of Fibrinogen concentrate vs Cryoprecipitate on Blood Component Transfusion After Cardiac Surgery – The FIBRES Randomized Clinical Trial. *JAMA.* 2019; 322(20):1966-76

Division of Thoracic Anesthesia

Dr. Jens Lohser, Head

Membership

In 2020, there were 10 members in the Division of Thoracic Anesthesia - Dr. Chris Durkin, Dr Gord Finalyson, Dr Brett Fizmaurice, Dr. Patrick Hecht, Dr Bevan Hughes, Dr Paul Kapnoudhis, Dr Jens Lohser, Dr. Sean McLean, Dr Travis Schisler, Dr Hamed Umedaly. The division looks forward welcoming Dr. Kali Romano who will be returning from a cardiothoracic fellowship at the Royal Papworth Hospital in Cambridge, England in 2021.

2021 is expected to bring significant change to the division with Dr Jens Lohser transitioning leadership to Drs Durkin and Schisler as Co-Heads. Dr. Lohser has served as division head for over ten years. In this role he has promoted and provided leadership in the practice of Thoracic Anesthesia for residents and faculty throughout the APT Department. A world expert in one lung ventilation and lung injury he has been instrumental in advancing the division.

Education

The UBC anesthesia residents complete a three-week rotation at Vancouver General Hospital where they gain experience primarily in anesthesia for video assisted and open lung resection surgery. Further exposure is gained at Surrey Memorial Hospital, Kelowna General Hospital and Victoria General Hospital. Emphasis is placed on the preoperative assessment for lung resection surgery and understanding bronchoscopic anatomy to inform lung isolation strategies and ultimately develop a plan that is safe, patient-centred and considers the risk and benefits of all approaches. Evidence based one-lung ventilation strategies are discussed as are approaches to the less common scenarios of anterior mediastinal masses and pulmonary hemorrhage. Current anesthetic management of patients having an esophagectomy is also experienced. The division remains engaged with leading the thoracic themed academic days as well as providing mentorship for a UBC wide thoracic journal club (held virtually in 2020).

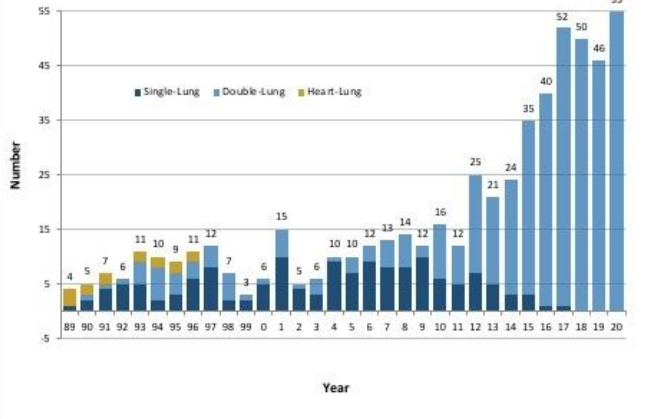
Research

The division continues to remain active in both local and international research projects. A manuscript is currently in preparation after completing a randomized controlled trial comparing erector spinae block versus placebo for video assisted thoracic surgery. Dr. Sean McLean has been the site lead for the international COP-AF trial looking at the prevention of perioperative atrial fibrillation in patients undergoing thoracic surgery. In 2019 the 2nd edition of the textbook Principles and Practice of Anesthesia for Thoracic Surgery was published. Dr. Jens Lohser is the associate editor and the division contributed three chapters to this comprehensive review and update on thoracic anesthesia.

Lung Transplantation

The lung transplant program continues to expand in frequency and complexity. In 2020, 55 double lung transplants were completed with excellent outcomes.

**Number of Lung Transplants by Year and Procedure Type
(1989 - 2020)**



DIVISION OF NEUROANESTHESIA

Head, Alana Flexman MD FRCPC

Former Head, Dr. Cynthia Henderson MD FRCPC

Summary

The Division of Neuroanesthesia has been active in the three key areas of providing 1) expert clinical care for neurosurgical cases; 2) education to residents, fellows and faculty in the subspecialty of neuroanesthesia; and 3) research and quality assurance. The Division of Neuroanesthesia provides subspecialty education to senior UBC anesthesia residents, Clinical Fellows at VGH, medical students and students in the Anesthesia Assistant training program. The Division is also active in research, supporting several medical student, resident and fellow projects.

In 2019, Dr Sandy Kisilevsky took over the role of neuroanesthesia resident education coordinator from Dr Alana Flexman. In July 2019, the "Question of the Month" was introduced for the new academic year. This educational initiative assigns a neuroanesthesia specific question to the resident on their 4 week VGH neuroanesthesia rotation.

Dr Flexman became Neuroanesthesia Fellowship Program Director in September 2019 and appointed Dr Rieley as her Associate. The Neuroanesthesia fellowship directors were invited by the International Council of Perioperative Neuroscience Training (ICPNT) to apply for accreditation of the Neuroanesthesia Fellowship in September 2019. The application was submitted in December. The fellowship was awarded A1 Accreditation on April 30 2020 for a term of 5 years. In the fall of 2020 Dr Rieley became Neuroanesthesia Fellowship Program Director.

Dr Andrew Lindberg started a Neuroanesthesia Fellowship at VGH in February 11 2020. He is expected to complete his Fellowship in 2021

In September 2020, a new 12 week subspecialty block was implemented at VGH for senior UBC anesthesiology residents. This new rotation includes 3 weeks each of neuroanesthesia, spine, vascular and thoracic anesthesia (and replaces the previously existing neuroanesthesia rotation). Change was implemented by the UBC anesthesiology residency program to ensure a growing number of anesthesiology residents have access to bottle-neck subspecialty rotations at VGH. 3 cohorts of anesthesiology residents have now completed the subspecialty block.

The neuroanesthesia resident journal club took place in November 2019. Topics included a discussion of the CRASH-3 trial¹ (presented by Dr Jimmy Lam, PGY-3) and depth of anesthesia monitoring and post-operative outcomes² (presented by Dr Kelli O'Reilly, PGY-4).

Combined neuroanesthesia-neurosurgical rounds took place in April 2019. An update on the clinical management of sub-arachnoid hemorrhage was presented by Dr Alana Flexman. This included a discussion on the optimal timing of surgical intervention in these cases.

Combined neuroanesthesia-neurointerventional radiology rounds were held in November 2019 with a focus on endovascular therapy for acute stroke. An update on the current evidence for best anesthesia practice for mechanical thrombectomy was presented by Dr Sandy Kisilevsky. In early 2019, anesthesia involvement in all VGH "Code Stroke" activations for acute ischemic stroke in IR was initiated. An audit of VGH data since the inception of the Code Stroke program was presented by Dr Alana Flexman.

The UBC city-wide neuroanesthesia journal club was held in June 2019 at the Boulevard restaurant in

Vancouver. The theme was depth of anesthesia and postoperative delirium. Two journal articles were presented (Dr Mark Mathieson & DR Oliver Brett – Fellows) for discussion including the STRIDE trial³ and the ENGAGES trial⁴.

The winter of 2020 brought with it the first wave of the Covid-19 pandemic and an ever changing clinical environment including delay of non-emergent surgeries. Temporary suspension of resident and faculty educational events ensued with the eventual adaptation to physically-distanced gathering via electronic platforms. The first virtual UBC resident and faculty neuroanesthesia journal club was held in May 2020. Three articles on the neurological manifestations of Covid-19^{5,6,7} were presented by Dr Vanessa Giesbrecht (PGY-3) and Dr Andy Lindberg (neuroanesthesia fellow).

In the fall 2020, Dr Alana Flexman stepped down as the UBC APT neuroanesthesia division head. The enormous contribution made by Dr Flexman during her time in the division head role cannot be overstated and we thank her for her hard work and dedication to the subspecialty. Dr Cynthia Henderson was named acting interim neuroanesthesia division head during the departmental search for a new head.

2019-2020 members:

Dr Cynthia Henderson, Head
Dr Alana Flexman, Former Head
Dr Jon McEwen
Dr Bali Dhaliwal
Dr Henrik Huttunen
Dr Jason Wilson
Dr Sandy Kisilevsky
Dr Joshua Bennitz
Dr Kelly Mason
Dr Lynn Martin
Dr Yvonne Peng
Dr William Rieley

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1. *Lancet* (2019) **394**:1713-1723
2. *Lancet* (2019) **394**:1907-1914
3. *JAMA Surgery* (2018) **153**:987-995
4. *JAMA* (2019) **321**:473-483
5. *NEJM* (2020) **383**:400-401
6. *NEJM* (2020) **382**:e60
7. *JAMA Neurology* (2020) **77**:683-690

RESEARCH

Dr. Donald Griesdale
Clinical Research Director (Anesthesiology)



The Department of Anesthesiology, Pharmacology and Therapeutics is composed of basic scientists, clinician scientists and epidemiologists who conduct impactful research in many diverse areas within and between these three pillars. The main research themes of our department include: neurosciences, cardiopulmonary, clinical outcomes and patient safety, and perioperative technology integration. Not surprisingly, there are broad research focuses within these domains. Important areas of basic research include: physiology and pharmacology of the cardiovascular, respiratory and central nervous system. Our clinical research touches all the major domains of anesthesiology: cardiothoracics, critical care, obstetrics, neuroanesthesiology, regional anesthesia, pediatrics, perioperative medicine, patient safety, and clinical monitoring. Finally, there is an important research program in pharmacoepidemiology.

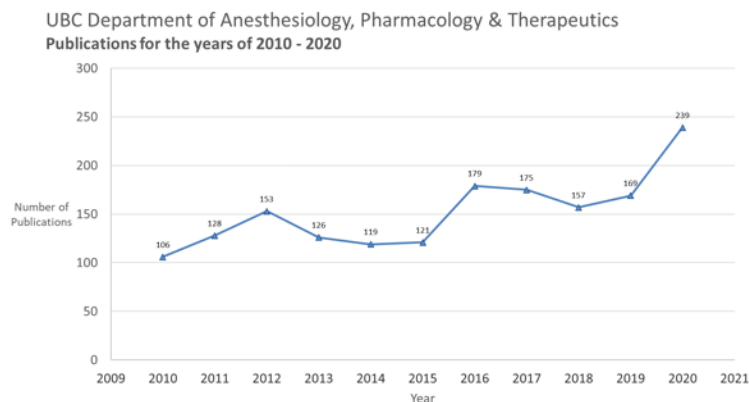
With the strengths of three related but different sections in our department, our diversity enables us to build partnerships between the sections, which allow us to pursue investigations from the bench to the bedside to the population. Furthermore, our department has a long-standing tradition of collaboration with other groups within the UBC Faculty of Medicine (Critical Care, Neurology, Population and Public Health, Psychiatry) and other UBC faculties (Electrical and Computer Engineering).

2019 Publication – 169

2020 Publication – 239

(Please refer to Appendix for details)

Number of publications between 2010 and 2020



DR. JEAN TEMPLETON HUGILL CHAIR IN ANESTHESIA 2019/2020 Highlights
HUGILL ANESTHESIA RESEARCH CENTRE

Dr. Stephan K W Schwarz, Chair



Welcome to the *Dr. Jean Templeton Hugill Chair in Anesthesia* section of our Department's 2019/20 Annual Report! As always, I am delighted to summarize below some of the highlights and activities that took place under the aegis of the Chairship. My principal priority was to continue to foster the interdisciplinary team-based laboratory research in *the Hugill Anesthesia Research Centre (HARC)* while at the same time providing ongoing guidance and support for my clinical colleagues' research projects at St. Paul's Hospital. Results again appeared in numerous national and international abstract and poster presentations as well as full-length peer-reviewed manuscripts, listed in the APT Annual Report's Publications section.

As the highlight that brings me most pleasure and pride, HARC graduate student, Desmond Fung graduated with his MSc after successfully defending his thesis in April 2020, entitled *Local Anesthesia Produced by Quaternary Lidocaine Derivatives: The Comparative Efficacy and Safety of QW-314, QX-572, And QX-222 in Mice*. I am tremendously proud of this extraordinary young individual and his amazing work.

Subsequently, his Abstract, *Motor block produced by quaternary lidocaine derivatives: A preclinical comparison of QX-572 and QX-222 versus QX-314 in mice* won the Best of Meeting Abstract Award at the 45th Annual Regional Anesthesiology and Acute Pain Medicine Meeting of the American Society of Regional Anesthesia and Pain Medicine (ASRA); originally scheduled to take place in San Francisco in April 2020, the physical meeting was cancelled due to the COVID-19 pandemic and the presentation made via live Twitter session on April 24, 2020.

Speaking of awards, Desmond also won the First Price [Oral Presentations] in the Pharmacology & Therapeutics research competition at the 14th Annual APT Research Day (held virtually on May 26, 2020) for his paper, *Long-lasting motor block and local tissue toxicity produced by QX-572: a preclinical comparison to lidocaine in mice*.

It has always been a priority of mine to utilize the *Hugill Chair* position to continue to build bridges between Anesthesiology and Pharmacology & Therapeutics; as a reflection of this spirit, an important goal was to once again bring in high-profile speakers for our Department's annual *Hugill Lectures* who could help accomplish just that. Supported by the *Dr. Jean Templeton Hugill Endowment*, we accordingly hosted on May 16, 2019 Dr. William Catterall from the University of Washington who delivered a state-of-the-art presentation entitled, *Voltage Gated Sodium and Calcium Channels: From Atomic Structure to Disease and Therapy*. For 2019, honoring Dr. Hugill's spirit and intent to celebrate and promote research, we held for the first time the annual Hugill lecture concomitantly with and as keynote presentation of the *Annual APT Research Day*. In 2020, on December 9, we hosted the distinguished Canadian anesthesiology leader and female clinician-scientist role model, Dr. Beverley Orser from the University of Toronto, who spoke on *Setting Our Sights on Long-Term Outcomes*.

As *Hugill Chair* and HARC Director, I was an invited lecturer for five talks at the *South African Society of Anesthesiologists (SASA) Congress 2020* (Pretoria; March 11–15, 2020), where I presented some of the Centre's key research findings over the years. I also was invited as a presenter and panellist at Guy's Airway Management Course (Guy's & St Thomas' NHS Foundation Trust; London, UK; January 29, 2021 [held virtually]).

Another highlight was the creation in 2020 of a new interdisciplinary research group dedicated to the intersection of perioperative medicine with BC's worsening opioid crisis. Together with faculty colleagues,

Drs. Malcolm Maclure, Anton Chau, and Michael Krausz (Addiction Psychiatry)—as well as numerous students—we embarked on a project to study postoperative opioid prescription patterns and trends in BC, the results of which have just been submitted as two full-length manuscripts.

Lastly, “Yours truly” was awarded the distinction of “Top 5 Percent of Reviewers” by the *Canadian Journal of Anesthesia/Journal canadien d’anesthésie* in 2020, and, effective January 1, was named the new Editor-in-Chief of said *Journal*. Undoubtedly the greatest privilege of my career, I feel deeply honoured and humbled to bring this prestigious portfolio to UBC as our Department’s *Dr. Jean Templeton Hugill Chair in Anesthesia*.

APPENDIX

Consolidated List of Publications – 2019

1. Abuyassin B, Badran M, Ayas NT, **Laher I**. The antioxidant α -lipoic acid attenuates intermittent hypoxia-related renal injury in a mouse model of sleep apnea. *Sleep*. 2019 Jun 11;42(6):zsz066. doi: 10.1093/sleep/zsz066. PMID: 30880336.
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10. Badran M, Abuyassin B, Golbidi S, Ayas N, **Laher I**. Alpha Lipoic Acid Improves Endothelial Function and Oxidative Stress in Mice Exposed to Chronic Intermittent Hypoxia. *Oxid Med Cell Longev*. 2019 Apr 9;2019:4093018. doi: 10.1155/2019/4093018. PMID: 31093313; PMCID: PMC6481039.

11. Badran M, Yassin BA, Lin DTS, Kobor MS, Ayas N, **Laher I**. Gestational intermittent hypoxia induces endothelial dysfunction, reduces perivascular adiponectin and causes epigenetic changes in adult male offspring. *J Physiol*. 2019 Nov;597(22):5349-5364. doi: 10.1113/JP277936. Epub 2019 Aug 22. PMID: 31441069.
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