

**UNIVERSITY
OF ALBERTA**

2020-21 ANNUAL REPORT

DEPARTMENT OF ANESTHESIOLOGY
AND PAIN MEDICINE

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INTERIM CHAIR MESSAGE

Welcome to the Department of Anesthesiology and Pain Medicine. Our department is committed to excellence in clinical care, exemplary postgraduate education in anesthesiology, perioperative and pain medicine; and the discovery and dissemination of new knowledge in both basic science and clinical/translational research. The department consists of 6 full time Faculty and over 200 clinical Faculty based at 11 hospitals, including 4 major teaching hospitals, in the Edmonton area. These facilities provide a full range of complex medical and surgical care including trauma, cardiac, neuro, vascular, and thoracic surgery, critical care, obstetrics and gynecology, burns, surgical and critical care of infants and children and solid organ (heart/lung, liver, and kidney) transplantation.



This past year has been challenging yet again as we faced further successive waves of the COVID pandemic. As staff and resources were redeployed away from operating rooms in order to contribute to the COVID response we saw large reductions in surgical volume. With the gradual ebbing of active COVID infections we saw subsequent increases in surgical capacity in an attempt to address the backlog. Throughout this difficult time, it has been impossible not to notice how staff and colleagues responded to each new challenge. Whether working in a redeployed capacity in ICU, caring for COVID patients in the operating room or dealing with family and professional matters from home, the desire to contribute collectively was inspiring.

We found solutions to problems we had never faced before. Dr. Heather Ting, Residency Program Director, and Kay Kovithavongs, Residency Program Administrator, transitioned resident learning and assessments to a virtual platform. They ran a successful virtual CaRMS interview series for the first time ever. Dr. Adrianna Woolsey reinvented Journal Club and her efforts to this end have been a great success. Dr Bradley Kerr, Associate Chair for Research, presided over our first virtual Gelfan and Bell Department Research Day. The Clinical Site Chiefs at each of our hospitals, Dr. Michael Hogan at the University Hospital, Dr Alan Cheng at the Royal Alexandra Hospital, Dr. Will Flexer at the Misericordia Hospital and Dr Matt Simmonds at the Grey Nuns Hospital, coordinated the pandemic response while dealing with a growing staffing crisis. They listened to us, they supported us, and they made sure we continued to deliver the best possible care to our patients. Throughout all this, our Site Chiefs had the best possible stewardship from our Zone Clinical Leads, Drs Dominic Cave and Neil Klassen.

Dr Michael Jacka was the local Primary Investigator for the PVC-RAM study - Post Discharge after Surgery Virtual Care with Remote Automated Monitoring Technology. This innovative randomized controlled trial continues to inform the Edmonton Zone Virtual Surgical Hospital initiative. Drs Timur Ozelsel and Vivian Ip reminded us by way of several high-profile publications that we may be in the middle of a once in a lifetime pandemic, but our response must respect the tenets of environmental sustainability. Dr James Green, Director of Regional Anesthesia University Hospital, continued to advocate for regional anesthesia as the preferred choice whenever possible, and through the pages of Anesthesia and Analgesia advised the wider anesthesia community on how to make anesthesia for shoulder surgery safer for all operating room staff. Stephanie Russell, Assistant Chair Administration, continued to run the same tight ship while administrative support staff worked from home. Flexibility, dedication and courage. These are the values I see everywhere as I look back over the past year.

We foster a culture of curiosity and discovery. From medical student to internationally renowned professor we continue to make our presence felt on national and international platforms. Swetha Prakasha and Maggie Xiao, both University of Alberta medical students, were recipients of the 2021 Canadian Anesthesiologists' Society (CAS) Medical Student Prize. On the anesthesia resident front, Dr Allyson Farran won Best Paper in Pediatric Anesthesia at the 2021 CAS Annual Meeting while I was very happy to see Dr Melissa Shears appointed as the resident member of the CAS Research Advisory Committee. Dr Michael Zaugg, in addition to helming another successful CIHR application was recognized for his many years of innovative research by being appointed Associate Editor at Anesthesiology, one of our most prestigious journals. In total, department members secured \$1,060, 737 in external funding this year. Internally, the inaugural Jean Hugill Research Award recipients were named in 2021. Witnessing the enthusiasm for this seed funding competition was one of the highlights of my year and I am excited for what comes next as we continue to build our research infrastructure.

This year we said farewell to some cherished colleagues who retired from clinical and academic duties. Many anesthesiologists in Edmonton owe a special debt of gratitude to Dr Barry Finegan who retired in September 2020. Erudite and inspirational throughout his remarkable career, we wish him, and all our recently retired colleagues, the very best in their future endeavours.

The resolve to deliver the best care, teaching and research in the face of adversity defines who we are. We are a resilient group, and we support each other. It is an honour for me to work with such a wonderful community of professionals.

Dr. Derek Dillane

Associate Professor and Interim Chair
 Department of Anesthesiology and Pain Medicine
 Faculty of Medicine and Dentistry



DEPARTMENT HISTORY

The history of anesthesia at the University of Alberta is as old as the institution itself. The precursor to the University of Alberta Hospital, Strathcona Hospital, was a five storied building with a 150-bed capacity which opened in 1914. Medical education at the University of Alberta also began in 1914 with twenty-six students. As the Great War was looming, Strathcona Hospital came under the authority of the Federal Government. From 1916 to 1922 the hospital was known as the Strathcona Military Hospital. In 1922 the hospital became fully affiliated with the University of Alberta and was renamed the University Hospital.

At that time there were no formal training programs in anesthesia and therefore, anesthetics were administered by general practitioners. The earliest reports from the University Hospital in 1922 listed Dr. L.F. Jones as the Director of Anesthesia and his assistants included: Dr. J. Blezard, L. May, I. Bell and J. Oswald. In 1928 the annual report named Dr. J. Blezard, Director of Anesthesia, and Dr. J. E. Carmichael Assistant Anesthetist. Dr. Blezard was appointed Lecturer in Anesthesia in that same year.

Ernie A. Watts graduated from the University of Alberta with an MD degree 1930. He completed his internship at the University of Alberta Hospital and then decided to pursue a career in anesthesia. There were no formal training programs in anesthesia at that time but there were some reputable teachers of the art and science of anesthesia in Eastern Canada and the most respected was Dr. Wesley Bourne at McGill University. Watts applied for training there and spent three years at McGill (1931-1934) learning the basics of anesthesia. During his three-year training period in Montreal, Dr. Watts made several trips to Madison, Wisconsin to learn from Dr. Ralph Waters, who was the pre-eminent educator in anesthesia in the world at that time.

Dr. Watts returned to the University of Alberta Hospital in 1934 as Assistant Anesthetist and in 1936 was appointed Director of Anesthesia at the University of Alberta Hospital. Dr. Watts established a full time Hospital Department of Anesthesia and introduced an intern service. Dr. Watts was appointed Lecturer in Anesthesia at the University in 1937. Formal teaching of anesthesia was carried out by the Division of Therapeutics in the Department of Medicine, unlike most anesthesia departments, which were strictly under the control of the Department of Surgery. Dr. Irving Bell was the Director of therapeutics but was also a busy anesthetist. He and his colleague Samuel Gelfan, a member of the Department of Pharmacology, conducted the very first clinical trials in humans in North America on a new anesthetic, divinyl ether, which was approved for clinical use worldwide in 1933.

Dr. Watts served in the military in World War 2 from 1942 to 1945. He continued in his leadership role at the University of Alberta after the war but his career in Anesthesia was short lived due to ill health. However, prior to retirement he established a training program in Anesthesia in 1948. This training program was accredited by the Royal College. The first fellowship trained resident from this program, Dr. Ted Gain, graduated in 1951. Dr. Gain was appointed Director of Anesthesia at the University of Alberta upon Dr. Watts' retirement in 1951.

In 1955 Anesthesia became an independent Department under the leadership of Dr. Ted

Gain with a staff of six full time hospital employed anesthetists. Dr. Gain was appointed Clinical Professor and Head of the University Department in that same year. From 1948 until 1975 the Department of Anesthesia at the University of Alberta trained fifty-two residents. In 1974 there were twelve residents in training and fifteen staff anesthesiologists at the University Hospital. Dr. Gain was a very important member of Dr. John Callaghan's team that completed the first open heart procedure in Canada, at the University of Alberta Hospital in 1956.

In 1957 a major change occurred at the University Hospital. All members of the Department of Anesthesia elected to become independent, fee-for-service providers except the Head of the Department, who remained a hospital employee. This arrangement persisted until Dr. Gain's retirement in 1975, when he recommended that his successor should be a full university employee.

Dr. George T. Moonie succeeded Dr. Gain in 1975 and served as Chair of the Department of Anesthesia until his retirement in 1984. Dr. Moonie graduated from the University of Alberta in 1948 and completed his training in anesthesia at the University of Alberta with full Royal College credentials.

Dr William B. MacDonald was appointed Chair in 1984. He obtained his MD from the University of Saskatchewan in 1959 and was also a Royal College trained anesthetist. Dr. MacDonald completed his term as Chair in 1988.

Dr. Brendan Finucane was appointed Professor and Chair, Department of Anesthesia in 1989. Up to this time the Department had a very good reputation as a strong clinical department but had very little research productivity. The reason for this deficit was that there were only two Geographic Full Time (GFT) University funded positions in Anesthesia at that time, one of which belonged to the Chair. Under Dr Finucane's leadership, the number of GFT positions increased to six. Dr. Finucane's mandate was also to extend the reach of the Department beyond the operating room, especially in the discipline of Acute and Chronic Pain and Perioperative Care. In the process of doing so he changed the name of the department to the Department of Anesthesiology and Pain Medicine. The other major change he made was to place more emphasis on sub-specialization, especially in pediatrics. Dr. Finucane completed two, five-year terms as Chair and his successor was Dr. Barry Finegan in 1999.

Dr Barry Finegan took the research agenda to another level as we entered the new millennium. He was a highly respected researcher and excellent collaborator and mentor, and the Department thrived under his leadership. He was an excellent grantsman and was highly successful in obtaining research funding at a national level throughout his academic career. During his tenure as Chair, the Department of Anesthesiology and Pain Medicine at the University of Alberta was among the top four anesthesia departments in Canada in terms of research productivity, based on the number of publications in peer reviewed journals per year.

Dr Michael Murphy was appointed Professor and Chair, Department of Anesthesiology and Pain Medicine at the University of Alberta from 2010-2016. Prior to this appointment Dr Murphy held the position of Head of the Department of Anesthesiology, and Professor of Anesthesiology and Emergency Medicine at Dalhousie University from 2005-2010. He is



an internationally recognized educator in the field of procedural sedation and airway management and is a founding Director of the Difficult Airway Courses: Anesthesia, Emergency, EMS and Critical Care.

Dr Saifee Rashiq held the position of Interim Chair between 2016 and 2018. Dr Rashiq, a product of the department's residency program, joined the small group of locally trained Chairs since Dr Moonie held the position in 1975.

Dr Andrew Shaw succeeded Dr Rashiq as Department Chair in 2018, and he also assumed the position of Edmonton Zone Clinical Lead. Dr Shaw, an internationally recognized cardiac anesthesiologist, came to Edmonton by way of Vanderbilt University Medical Center where he had been Chief of Cardiac Anesthesia.



It is interesting that almost one hundred years have elapsed since the first Director of Anesthesia at the University Hospital, was appointed. It is also interesting to note that there have been 10 Department Heads in that one hundred or so years, excluding those who have been in an Interim role. It is surprising to me how few gaps there have been in those one hundred years. At the same time, we would like to give credit to those who have helmed the department in an interim role, Dr. Doug Duval 1988-1989, Michael Auld 2009-2010 and Dr. Saifee Rashiq 2016-18. One other important point to be noted is that the lion's share of resident teaching has been done on a volunteer basis by our colleagues in the affiliated hospitals across the city and for that we are extremely grateful. We estimate that more than 300 trainees have graduated from the University of Alberta, Anesthesia Training Program since 1951, when the Royal College first began credentialling trainees in Anesthesia.

Dr Brendan Finucane

Professor Emeritus

Department of Anesthesiology and Pain Medicine

Faculty of Medicine and Dentistry

University of Alberta

FACILITIES



Cross Cancer Institute



Manzanowski Alberta Heart Institute



Sturgeon Community Hospital



Fort Saskatchewan Community Hospital



Misericordia Hospital



University of Alberta Hospital



Grey Nuns Community Hospital



Royal Alexandra Hospital



Westview Health Centre



Leduc Community Hospital



Stollery Children's Hospital



AWARDS & RECOGNITION

INTERNAL AWARDS

2021 DR. JEAN HUGILL RESEARCH AWARDS

Yuqi Gu & Allyson Farran

Immersive Video To Teach Cannot Intubate Cannot Ventilate Scenarios: A Simulation-based randomized Control Trial

Montana Johnson & Ariane Fielding

Variability of Phenylephrine Concentration in Clinical Settings

Mancho Ng & Darren Freed

Pediatric enhanced recovery after cardiac surgery: a single-centre retrospective study

Surita Sidhu & Wing Lam

Three Dimensional Assessment of Right Ventricular Function in Patients Undergoing LeDDT Ventricular Assist Device Implantation

Angela Neufeld & Wing Lam

Large Value Autologous Whole Blood Therapy for Reversing Cardiopulmonary Bypass Induced Coagulopathy in High Risk Patients: Randomised Control Trial 2021

TEACHER OF THE YEAR

Dr. Yuqi Gu

DR. BRENDAN T FINUCANE RESIDENT ORAL RESEARCH AWARD

1st Place - Dr. Taylor Bucyk

2nd Place - Dr. Varun Suresh

POSTER RESEARCH AWARD

1st Place - Dr. Melissa Shears

2nd Place - Dr. Jaasmit Khurana

DR. BARRY A FINEGAN FELLOW RESEARCH AWARD

1st Place - Dr. Carole-Anne Potvin

2nd Place - Dr. Danika Vautour

EXTERNAL AWARDS

2021 CANADIAN ANESTHESIOLOGIST' SOCIETY MEDICAL STUDENT PRIZE

Swetha Prakash

Improving Rural Access to Anesthesia: The Pursuit of Equitable Patient Care

Maggie Xiao

A Vision of a Circular Economy for Plastics in Anesthesia and the Perioperative Arena

CIHR PROJECT GRANT

Dr. Michael Zaugg

Optimizing resuscitation of the after circulatory death heart by mitochondrial redox regulation and opioid receptor activation: a protocol for clinical application

2021 CANADIAN ANESTHESIOLOGISTS' SOCIETY AWARD

Dr. Allyson Farran (Best Paper in Pediatric Anesthesia)

2020 DR. MASURU YUKAWA AWARD FOR INNOVATION IN WORKPLACE WELLNESS:



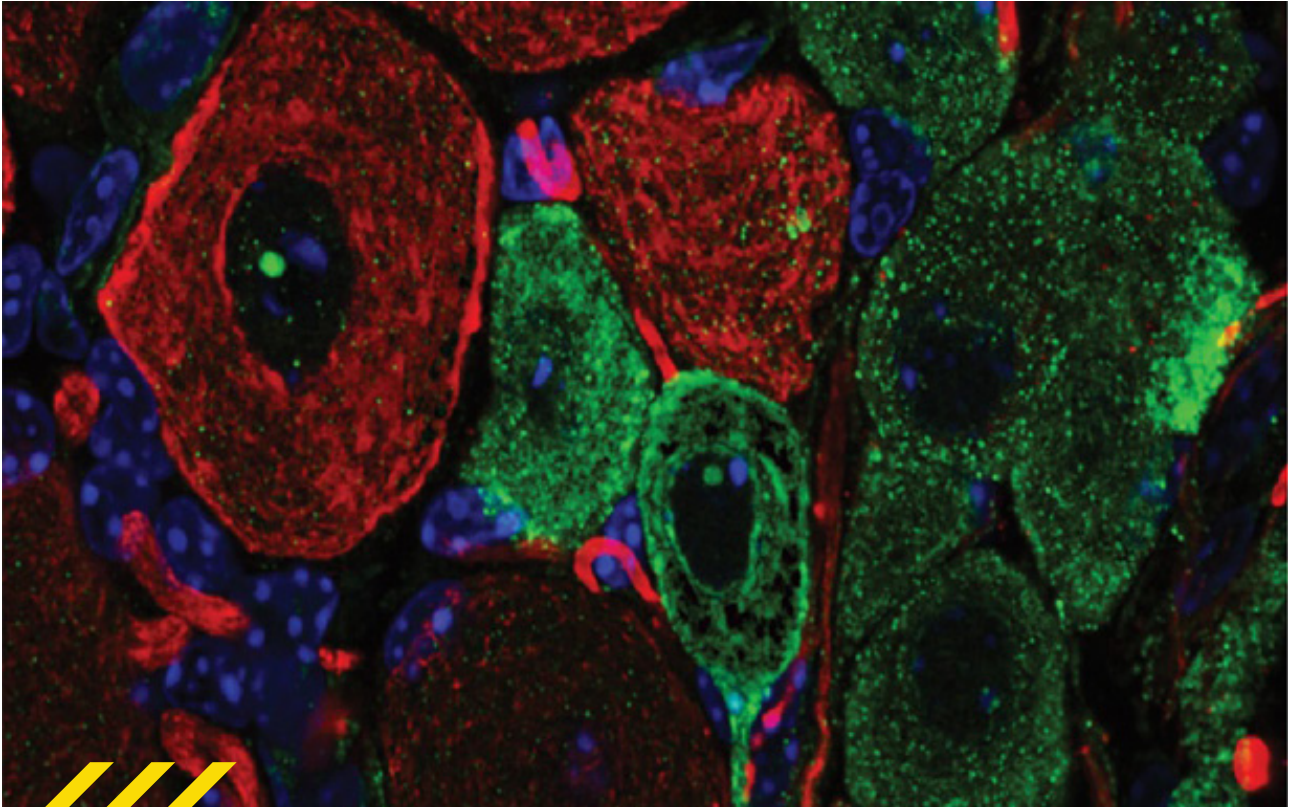
Dr Masaru (“Mas”) Yukawa (1977-2017) was Chief of Anesthesia at the Mazankowski Heart Institute. He was an outstanding clinician, teacher and mentor. He died by his own hand, following a longstanding and very private battle with mental illness. By creating this award in his name, his family wishes to stimulate the study and remediation of physical, psychological, organizational and other factors that might cause or perpetuate mental illness in those who work in the Operating Rooms of the University of Alberta Hospitals, and, by extension, in other similar places.

For more information please visit masyukawafoundation.com/



2020 Dr. Masuru Yukawa Award for Innovation in Workplace Wellness:

Dr. Ariane Fielding - proposal, "Civility and Respect in the OR"



RESEARCH

The Department of Anesthesiology & Pain Medicine in the Faculty of Medicine & Dentistry at the University of Alberta has extensive basic and clinical research programs that promote and encourage innovation and discovery. Research projects and initiatives are conducted on an ongoing basis, and play an important role in our faculty, department, practice and training.

AREAS OF RESEARCH

- Pain Research
- Cardiovascular Research
- Regional Anesthesiology Research
- UofA Pain Interest Group

2020-2021 PUBLICATIONS

- 62 total publications
- 16 publications with Department Faculty as first or senior author
- 3 publications in JAMA Network journal

See full list on page 17.

10th ANNUAL GELFAN AND BELL ANESTHESIA CONTINUING EDUCATION AND RESEARCH SYMPOSIUM

KEYNOTE SPEAKER

The Yellow Brick Road to Research

- Dr. Andre Denault
MD PhD FRCPC FASE ABIM-CCM, FCCS

GUEST ADJUDICATORS

Dr. Frances Plane
BSc PhD

Dr. Andre Denault
MD PhD FRCPC FASE ABIM-CCM, FCCS

Dr. Jamie Sim
BSc MD FRPC

7 Oral Presentations

7 R3 Poster Presentations

6 R2 Poster Presentations

LAKE LOUISE ANESTHESIA CONFERENCE



National and International Leaders in Anesthesiology, Perioperative Medicine, & Critical Care

Ultrasound Guided Regional Anesthesiology & Airway Workshops

Lake Louise Anesthesia Conference
March 5-8, 2020
Chateau Fairmont, Lake Louise, Alberta, Canada

Register at www.llac2020.com

2021 Lake Louise Anesthesia Conference was cancelled due to COVID-19



UPDATE FROM THE LABS

DR. MICHAEL ZAUGG

Research in the Zaugg Lab seeks to understand the signaling networks involved in the stress response related to ischemia-reperfusion injury in mammalian cells and tissues, with the goal of translating this knowledge into potential therapies aiming at improving perioperative patient care and outcomes. In addition, we strive to understand the role of metabolic stress and of inflammatory pathways in conditions relevant to perioperative medicine such as major trauma (surgery), transplantation, cardiovascular, and thoracic surgery. Finally, we understand that the enhancement and optimization of nutritional support in surgical and critically ill patients is of great importance at a time of major stress with synthesis of key blood/tissue components and necessary for proper wound healing and recovery (regeneration).



- Conditioning of the heart in cardiac surgery and cardiac transplantation with the aim at reducing reperfusion injury.
- Immuno-metabolism: we are studying the potential to beneficially modulate the activity of the immune system by nutritional interventions with specific metabolic compounds such as lipid mediators (resolvins, maresins) involved in the resolution of the inflammatory state using a mouse model of total parenteral nutrition (TPN).

Collaborations are always welcome and we very much support translational research contributing to the understanding of physiological changes (e.g. genetic, metabolome- or microbiome-related) in response to anesthesia and/or to surgical stress in patients.



DR. BRAD KERR

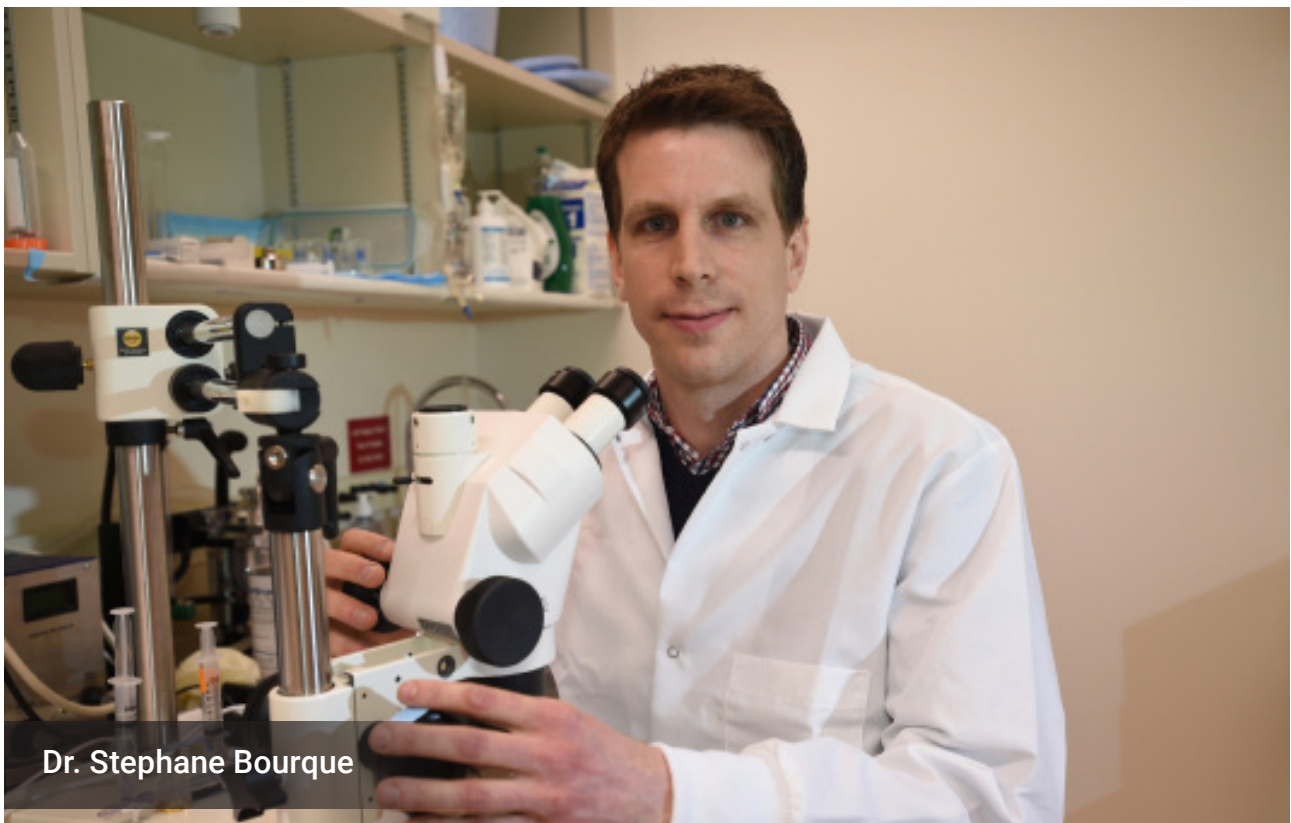
Research in the Kerr lab is focusing on the neuro-immune contributions to chronic pain states arising from injury or disease in the nervous system. We have a primary focus on pain in auto-immune disorders such as MS. The lab employs a variety of behavioral assays to assess pain and nociception in rodents and we also use cell and molecular techniques to understand the underlying mechanisms generating chronic pain. In 2018, the Neuroimmunology and Pain Lab at the University of Alberta (UofA) was opened with Dr. Jason Plemel (Dept. Medicine) and Dr. Bradley Kerr (Dept. of Anesthesiology) as co-directors. The Neuroimmunology and Pain lab represents a hub for neuroimmunology research within the Neuroscience and Mental Health Institute (NMHI) at the UofA.



DR. STEPHANE BOURQUE

My research group has a longstanding interest in iron deficiency (ID) during pregnancy, and how it affects fetal and placental growth. In addition to increasing the risk of adverse pregnancy outcomes, prenatal ID (like many prenatal insults) can predispose the offspring to a lifetime of health complications. Though our past work in this area has been largely preclinical, our recent publications highlight a concerted effort to translate these findings to the clinical realm.

Iron deficiency (ID) is a pervasive global health issue, and represents one of the most treatable and preventable causes of daily adjusted life-years lost. Yet a worldwide prevalence of ~25%, with a sizeable majority of this burden shouldered by young women and children, underscores the challenges that impede effective treatment. Accurate assessments of maternal and fetal/neonatal iron status and hematological indices are critical for pre- and post-natal interventions to maximize health benefits and minimize adverse outcomes. Although direct sampling of fetal/neonatal blood is possible, it is rarely done. Instead, maternal haematological and iron status indices are used to guide intervention in pregnancy and the neonatal period. However, the prevailing notion that maternal iron status and severity of anemia is a useful surrogate of fetal iron status has not been validated. In fact, our recent clinical study and systematic review challenges this assumption. A discordance between maternal and fetal indices could have implications for fetal and neonatal health, since ID in pregnancy is associated with adverse pregnancy outcomes (e.g. preterm birth, fetal growth restriction, congenital defects). Moreover, ID during gestation may deprive the neonate of critical iron stores needed for optimal growth and development in early postnatal life. Thus, there is an urgent need for better diagnostic methods to diagnose fetal/neonatal ID and anemia to guide intervention strategies during this critical period of life.

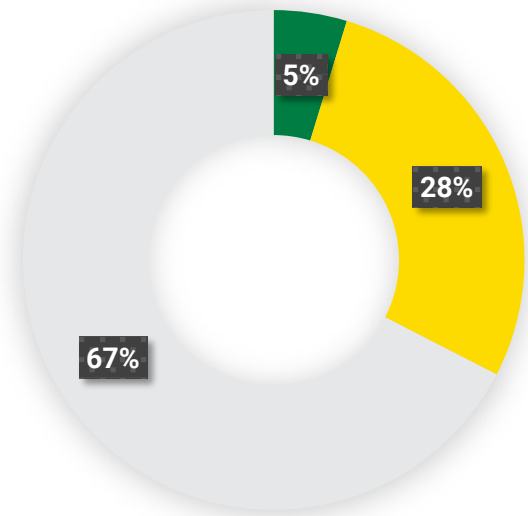


Dr. Stephane Bourque

\$1,060,737
TOTAL GRANT FUNDING

GRANTS

- Heart & Stroke Foundation of Canada
- Multiple Sclerosis Society of Canada
- CIHR



INVESTIGATOR	YEAR	FUNDER	TITLE	START	END	TOTAL
Bourque, Stephane	2021	Heart & Stroke Foundation of Canada	Mechanisms of programming of cardiovascular dysfunction by perinatal iron deficiency	2020	2021	\$50,000
Kerr, Bradley	2021	Multiple Sclerosis Society of Canada	MSSC Operating Grant-Examining inflammatory processes in the DRG as a driver of neuropathic pain in MS	2021	2023	\$295,461
Zaugg, Michael (PI)	2021	CIHR	Optimizing resuscitation of the donation after circulatory death (DCD) heart by mitochondrial redox regulation and opioid receptor activation: a protocol for clinical application	2020	2025	\$715,276

TOTAL \$1,060,737



EDUCATION

The Department of Anesthesiology & Pain Medicine provides medical training programs across the entire MD educational spectrum (undergraduate, postgraduate and postdoctoral fellowships). Our faculty and educational programs have gained a strong reputation for training clinically sound anesthesia practitioners, and our staff are fully committed to the training and teaching of the next generation of anesthesiologists.

EDUCATION LEADERSHIP

UNDERGRADUATE PROGRAM

Dr. Kelsey Rutten - Undergraduate Director
(term ended January 29, 2021)

POSTGRADUATE PROGRAM

Dr. Heather Ting - Program Director
 Dr. Nirupan Vipulanathan - Assistant Program Director

POSTGRADUATE FAMILY PRACTICE PROGRAM

Dr. Will Flexer - Program Director

FELLOWSHIP TRAINING PROGRAM

Dr. Saifee Rashid - Fellowship Program Director
 Associate Chair, Education

Dr. Ciaran Twomey - Regional Anesthesia Fellowship Director
 Dr. Angela Neufeld - Cardiac Anesthesia Fellowship Director
 Dr. Graham Steel - Pediatric Anesthesia Fellowship Director
 Dr. Mark Simmonds - Pain Medicine Fellowship Director
 Dr. Ron Cheng - Liver Transplant Fellowship Director
 Dr. Michael Zaugg - Transitional Research Fellowship Director
 Dr. Derek Dillane - Perioperative Ultrasound Fellowship Director



Dr. Heather Ting

CaRMS



ACCREDITATION

We are very pleased to announce that after the 2020 external review of our residency program, a recommendation will be made to the Royal College Accreditation Committee that our program receive a status of “Accredited Program With Follow Up at Next Regular Survey.

LEARNERS

34 RCPSC Residents

3 RCPSC Fellows

3 CFPC Residents

59 Medical Students

Dr. Melissa Shears (R2)



EDUCATION EVENTS

GENERAL EVENTS

Transfusion Bootcamp	Aug 28, Oct 9, Feb 5, Apr 9, Jun 18
Virtual Residency Fair	Feb 11
CaRMS	March 17
Journal Clubs	Nov 17 & March 25
Research Day	May 14
Written exam	April 12-13
Applied exam	May 5-6

ANESTHESIA KNOWLEDGE TEST (AKT)

AKT-1 PreTest	July 1 for R1s & FPAs.
AKT-1 PostTest	Aug 5 for R1s & FPAs
AKT-24	Aug 27 for R5s
AKT-6	Dec 9 for R2s & FPAs

SIMULATION

R1 Boot Camp	July 20, 21 and 24.
ACRM	Dec 7-11 (all residents, incl FPA)
CanNASC	Oct 14-16, Feb 1-5
Foundations SIM	Feb 22-24 (R1s & R2s)
MEPA	March 9-10 (R3s & FPAs)
Senior SIMs	April 13-14 (R3s & R4s)



DEPARTMENT MEMBERS

DEPARTMENT STAFF

DEPARTMENT OFFICE

Dr. Derek Dillane - Interim Chair
 Stephanie Russell - Assistant Chair - Administration
 Heather Clark - Administrative Assistant to Drs. Cave and Klassen
 Megan Groat - Administrative Assistant (Scheduler)
 Lorraine Nowak - Executive Administrative Assistant
 Rosanne Prinsen - Communications Coordinator

EDUCATION

Dr. Saifee Rashid - Associate Chair, Education
 Dr. Heather Ting - Program Director
 Dr. Nirupan Vipulanathan - Assistant Program Director
 Dr. Saifee Rashid - Fellowship Program Director
 Dr. Will Flexer - CFPC Program Director
 Darci Chaba - Program Administrator
 Kay Kovithavongs - Program Administrator
 Laura Kruzenga - Administrative Support - Fellowship Program

RESEARCH

Maliha Muneer - Clinical Research Coordinator

FACULTY

ASSOCIATE PROFESSOR

Bourque, Stephane

PROFESSOR

Dick, Bruce	Kerr, Bradley	Rashid, Saifee	Zaugg, Michael
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CLINICAL LECTURER

Abulhamayel, Tammam	Gamez, Ryan David	Kwon, Elena	Seguin, Patrick
Amyotte, Nicholas	Garrett, Kyle	Labba, Saeed	Sim, Jaime
Baithoun, Hala	George, Anthony	Largoza, Josef	Smith, Graeme
Baldonado, Narciso	Gilchrist, Ainslie	Leighton-Lane, Dayna	Strydom, Carin Sunelle
Bittencourt, Ricardo	Gill, Rajwinder	Lima, Ronald	Terblanche, Ockert
Bobart, Vonda	Godlewski, Bartosz	Lindsay, Martine	Tran, Victor
Booyesen, Corne Francois	Goranson, Blair	Marois, Judith	Turnbull, Shauna
Brin, Geoff	Hajat, Zakir	McGowan, Liam	Van Haften, Timothy
Byers, Justin	Halliday, Susan	Mohamed, Karim	Van Rensburg, Gerhardus
Calvert, Robert Andrew	Heinrichs, Jeffrey	Moyo, Jabulani	Vargo, Michael
Campbell, Elroy	Heyns, Marthinus(Daneel)	Murray, Katie	Varughese, Thomas
Charlton, Jeff	Hoda, Syed (Zia)	Oman, Kathleen (Katie)	Vipulanathan, Nirupan
Cheung, Joseph	Horne, Sara	Osmond, Colette	Weisgerber, Grahme
Chung, Brendon	Jewer, Kyle	Quapp, Russell James	Wensveen, Quentin
Colcy, Elizabeth	Kokotilo, Matthew	Quigley, Nicole	Woolsey, Adrianna
Datta, Ansuman	Kosick, Thomas	Rutten, Kelsey	Zaki, Mahmood
Dattilo, Franco	Koziak, Adrian	Saran, Jagroop (Singh)	
Duthie, Justin	Kreitz, Andrea	Schneider, Oliver	

ASSISTANT CLINICAL PROFESSOR

Achen, Blaine	Fedorow, Christine	Kropelin, Bruce	Popoff, Jeff
Alakkad, Husni	Flexer, William V	Kwetny, Igor	Quinn, Michael
Backlin, Sam	Ford, Victor	Lalonde, Megan	Reid, Susan
Barker, Andrew	Freed, Adam	Lam, Wing Ying	Rimmer, Tara
Bateman, Kendall	Fuger, Jason	Lazar, Edward	Roopnundh, Anita
Behmanesh, Saeid	Gelinas, Jean Pierre	Leung, Tanya	Rudge, Trevor Damon
Berger, Landon	Gregg, Kevin Ronald	Mack, Cheryl	Rudolph, Florian
Bhachu, Santokh	Gu, Yuqi	Maragh, Vashti	Scheelar, Les
Boyle, Riley Matthew	Gupta, Sunil	Matthey, Peter	Singh, Sarab
Broemling, Sunita	Gurges, Ramy	Moir, James	Snider, Doug
Bucyk, Brent	Hardy, Dorothy	Muzyka, David	Soong, John
Campbell, Jeffery	Hasanni, Sameer	Nanji, Jalal	Stetsko, Samuel
Chan, Douglas	Hawkins, Kenneth Wm	Needham, Craig	Tang, Cathy
Chen, Danny	Holinski, Paula	Neufeld, Angela	Ting, Heather
Cheng, Alan	Joly, Sarah	Ng, Ambrose Chun	Tse, Jennifer E
Cheng, Ronald	Kapitoulski, Boris	Ng, Man Cho	Twomey, Ciaran
Chisholm, Mary	Kembhavi, Nikhil	Noble, Colin	Wachowski, Ireneusz
Chou, Eric Meng	Kindzierski, Robert	Noonan, Liza	Wilson, P Scott
Duffy, Deirdre	Klinck, Jennifer	O'Leary, Tom	Ziwenga, Ophillia
Dupuis, Joseph	Knezevich, Mark	Paetsch, Paul	
Escuder, Juan Ruiz	Koller, John	Pfeifer, Linda	

ASSOCIATE CLINICAL PROFESSOR

Wilson, P Scott	Christ, Albert	Hogan, Michael	Simmonds, Matthew
Ziwenga, Ophillia	Cohen, Matthew R	Hui, Carolyn May	Sobolev, Igor
Barnard, Eduard	Doyle, Kate (Kathleen)	Ip, Vivian	Sondekoppam, Rakesh
Bergstrom, Richard	Drader, Keith	Kulkarni, Pradeep	Sowa, Bernard
Berube, Joel Michel	Eliasson, Teresa	LaFontaine, Alike	Taam, Jason
Bhalla, Raveen	Ewanchuk, Mark	Marchak, Barbara	Wildgrube, Peter
Breitling, Magnus	Farries, Alayne	Patil, Deepali	Yeh, Timothy
Chiarella, Angelo	Fielding, Ariane	Sandhu, Harminder	

CLINICAL PROFESSOR

Armstrong, J Neil	Gray, Daniel	Lilley, John	Sidhu, Surita
Auld, Michael	Green, James	Ozelsel, Timur	Simmonds, Mark
Cave, Dominic	Haugen, Richard	Paterson, Scott	Steel, Graham
DuVal, Doug	Klassen, Neil	Ramsey, Bruce	
Gragasin, Ferrante	Knight, Brian	Seal, Robert	

SECONDARY ANESTHESIOLOGY

Jacka, Michael	Reid, Kathleen	Townsend, Derek
Luksun, Warren	Torok-Both, Clinton	

ADJUNCT ANESTHESIOLOGY

Bostick, Geoffrey	Funk, Gregory	Etches, Wai	Taylor, Anna
Brindley, Peter	Eagle, Christopher	Macala, Kimberly	
Dickson, Clayton	Chuck, Anderson Wong	Pagliardini, Silvia	

RETIREMENTS IN 2020-21

Cisar, Pat	Finegan, Barry	Hrazdil, Jiri	Marchak, Barbara
Dupuis, Joseph,	Gray, Daniel	Kearney, Ramona	
Faccenda, Kathrynne	Hudson, Robert	Kulkarni, Pradeep	



2020-2021 PUBLICATIONS

1. Hartling I, Cremonesi A, Osuna E, Lou PH, Lucchinetti E, **Zaugg M**, Hersberger M. Quantitative profiling of inflammatory and pro-resolving lipid mediators in human adolescents and mouse plasma using UHPLC-MS/MS. *Clin Chem Lab Med*. 2021 Jul 9. doi: 10.1515/cclm-2021-0644. Online ahead of print. PMID: 34243224 IF: 3.7
2. McIlroy DR, Roman B, Billings FT 4th, Bollen BA, Fox A, Geube M, Liu H, Shore-Lesserson L, Zarbock A, **Shaw AD**. Potential Renoprotective Strategies in Adult Cardiac Surgery: A Survey of Society of Cardiovascular Anesthesiologists Members to Explore the Rationale and Beliefs Driving Current Clinical Decision- Making. *J Cardiothorac Vasc Anesth*. 2021 Jul;35(7):2043-2051. doi: 10.1053/j.jvca.2021.02.004. Epub 2021 Feb 6. PMID: 33674203.
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4. Gregory A, Stapelfeldt WH, Khanna AK, Smischney NJ, Boero IJ, Chen Q, Stevens M, **Shaw AD**. Intraoperative Hypotension Is Associated With Adverse Clinical Outcomes After Noncardiac Surgery. *Anesth Analg*. 2021 Jun 1;132(6):1654-1665. doi: 10.1213/ANE.0000000000005250. PMID: 33177322; PMCID: PMC8115733.
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6. Woolsey AJ, Nanji JA, Moreau C, Sivapalan S, **Bourque SL**, Ceccherini-Nelli A, **Gragasin FS**. Low-dose ketamine does not improve the speed of recovery from depression in electroconvulsive therapy: a randomized controlled trial. *Braz J Psychiatry*. 2021 May 28:S1516-44462021005017202. doi:10.1590/1516-4446-2020-1705. Epub ahead of print. PMID: 34076068.
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 22. Rogler G, **Zaugg M**. Nutrition-or Lack Thereof-As a Source of Gut Inflammation: Evidence from Basic Science and Clinical Studies. *Mol Nutr Food Res.* 2021 Mar;65(5):e2001086. doi: 10.1002/mnfr.202001086. PMID: 33655661.
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 60. *Preoperative Assessment A Case-Based Approach*. (2021) ISBN 978-3-030-58842-7. Editors: Dillane, Derek, Finegan, Barry.
 61. *The Pregnant Patient in: Preoperative Assessment A Case-Based Approach*. (2021) **Nanji**, Jalal A.
 62. *The Adult Congenital Cardiac Patient for Noncardiac Surgery in: Preoperative Assessment A Case-Based Approach*. (2021) **Sidhu**, Surita.



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