
LMP Chair's Report - February 2025

1 message

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Laboratory Medicine & Pathology

Chair's Report February 2025

Dear Colleagues, Learners & Friends!

Welcome to the first Chair's report of 2025. I hope everyone has had a great start to the year. I'm sure many of you are grateful to see an end to the recent cold spell, but for my fellow winter enthusiasts, here's hoping the snow can hang on for a few more outdoor adventures before spring fully arrives!

In this Chair's report, we are returning to our **Spotlight on Research** series, starting with the great work from **Dr. Hongquan Zhang's** lab in the Division of Analytical and Environmental Toxicology. With world-leading expertise in DNA nanotechnology, functional nucleic acids, isothermal amplification, and CRISPR, Dr. Zhang's team has become a major player in the field of Analytical Chemistry, particularly with the development of tools for ultrasensitive and specific detection of biological targets in health and environmental sciences. Please read below for further details on the exciting work from Dr. Zhang and his outstanding team of trainees and collaborators.

I wish to extend a warm welcome to the new members that have joined our department over the last few months. Recent appointments that I would like to highlight for some of our existing faculty include **Dr. Anne Halpin** as President Elect for the American Society for Histocompatibility and Immunogenetics (ASHI), and **Dr. Mathew Diggle** as Deputy Editor-In-Chief for the Journal of Medical Microbiology. Also, special thanks to **Dr. Greg Tyrrell** for his many years of dedicated service as Director of the Division of Diagnostic and Applied Microbiology, and to **Dr. Natalie Marshall** for stepping into the role as of January 1st.

I encourage you to review the many other impressive academic contributions and achievements from LMP members over the last quarter, including numerous presentations, publications, grants, and recognitions. In particular, I would like to highlight the many awards and successful thesis defenses by our graduate students, including **Dr. Teresa Kumblathan** ('24 PhD, Supervisor Xing-Fang Li), who received the prestigious Governor General's Gold Medal. In addition, **Dr. William Stokes** received the 2024 Systems Block Lecturer Excellence Award from the Medicine Class of 2027, and **Dr. Trish Campbell** was honoured with ASHI's 2024 Distinguished Service Award for the many contributions she has made to the field over her remarkable career. Congratulations, All!

Registration is now open for [2025 DRiVE Days](#), our department's annual research and education symposium, on April 25-26 at Lister Centre. I encourage anyone that is able to attend for all or part of the event to consider doing so. In addition to the usual networking opportunities and high-quality research, innovation, professional development and education updates, we have two internationally renowned speakers providing our named lectures: **Dr. Ming-Sound Tsao** from the University of Toronto (Dr. John W. Macgregor Memorial Lecture on April 25), and **Dr. Robert Montgomery** from NYU Langone Health (Dr. R.E. Bell Memorial Lecture on April 26).

For those interested in Anatomical Pathology, please also mark your calendars for the **2025 Banff Pathology Course (Head & Neck Pathology)**, co-hosted by our department and the University of Calgary, on September 25-27 at the Banff Centre for Arts and Creativity. We have an exciting lineup of external and internal speakers for what is sure to be another fantastic event. Please watch for additional program and registration details coming shortly.

In closing, I wish you all the best for the final few months of the academic year and thank you for your ongoing dedication and contributions to the Department.

Sincerely,

Benjamin Adam, MD, FRCPC

Associate Professor and Chair

Department of Laboratory Medicine & Pathology

Spotlight on Research

Hongquan Zhang, PhD, Associate Professor, Division of Analytical and Environmental Toxicology, Department of Laboratory Medicine and Pathology

Developing a Versatile Bioanalytical Toolbox for the Highly Sensitive and Specific Detection of Proteins and Nucleic Acids

Our research program focuses on developing innovative bioanalytical tools for ultrasensitive and specific detection of biological targets in health and environmental sciences. We also aim to advance health equity by creating simple, sensitive point-of-care

(POC) tests. Our strategy integrates cutting-edge technologies, including DNA nanotechnology, functional nucleic acids, isothermal amplification, and CRISPR technology. The key research directions include:

1. Binding-induced DNA assembly and its applications to homogeneous detection of proteins, small molecules, and pathogens.

We introduced binding-induced DNA assembly (BINDA), a novel DNA assembly strategy, and demonstrated its applications to developing homogeneous assays. Unlike DNA self-assembly, which relies on spontaneous hybridization between complementary sequences, BINDA occurs only when a specific target triggers a binding event. BINDA is a unique strategy for developing homogeneous assays with three key advantages: a) enhanced sensitivity – proteins are detected through amplifiable DNA, significantly improving detection limits. b) high specificity – DNA assembly is triggered only when two or more probes bind to a single target. c) simplicity – the assay operates in solution without separation steps, making it promising for POC applications. Using BINDA, we developed a set of homogeneous assays with complementary sensitivity and applications for protein detection. We further expanded its applicability to homogeneous assays for small molecules and pathogens.

2. High-Mobility DNA Motors and Their Applications to Amplified Nucleic Acid and Protein Detection and Enzyme Imaging in Live Cells

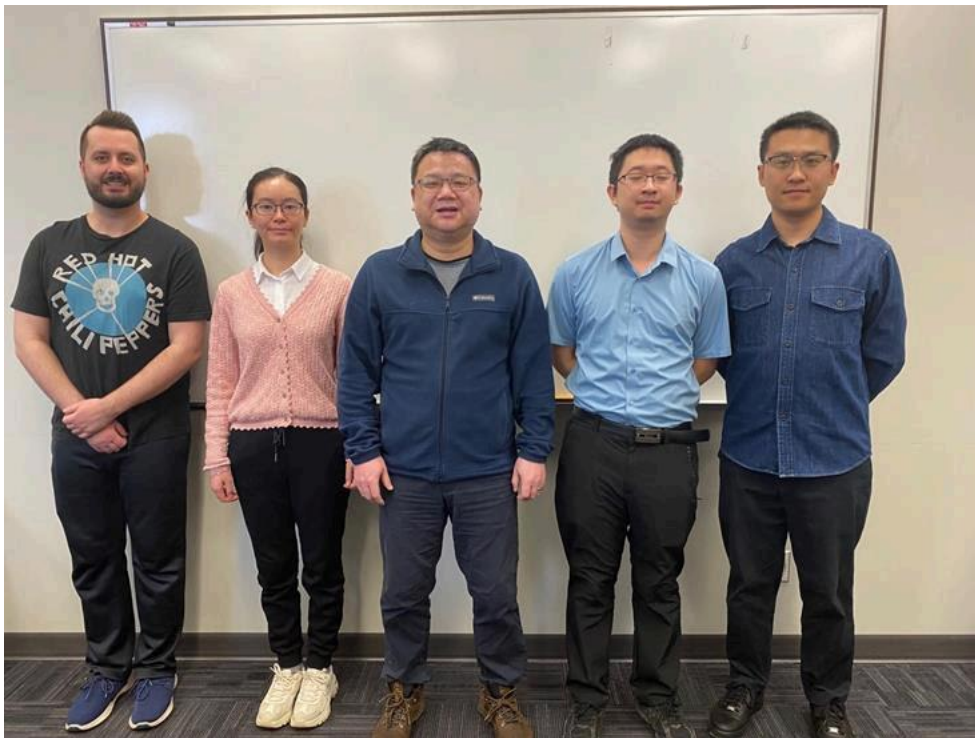
We pioneered the construction of high-mobility DNA motors for signal amplification and biosensing. Traditional synthetic DNA motors mimic the walking of protein motors but are limited to 20–30 steps, restricting their biosensing applications. To address this limitation, we have constructed high-mobility DNA motors capable of walking hundreds of steps, significantly enhancing signal amplification. We developed three types of high-mobility DNA motors for homogeneous detection of proteins and nucleic acids at low pM levels. Additionally, we constructed DNA motor systems that function in live cells, enabling amplified detection of intracellular microRNA and base excision repair enzymes. These advancements broaden the practical applications of DNA motors in biosensing and signal amplification, opening new avenues for developing high-mobility DNA motor systems.

3. Simple, Efficient Noncovalent DNA Catalytic Reactions

Non-covalent DNA catalytic reactions represent a major advance in dynamic DNA nanotechnology. Their programmability and ability to achieve isothermal amplification without the need for enzymes have promoted their applications in DNA nanomachines, molecular computation, drug delivery, and biomolecule/cancer cell sensing. However, their use in biosensing is limited by complex design and low amplification efficiency. To address this, we developed three simple, efficient DNA catalytic reactions, achieving ~60-fold amplification with a one-layer reaction and ~2000-fold amplification with a two-layer reaction, significantly enhancing DNA catalytic amplification. We further demonstrated the detection of low pM levels of microRNA at room temperature, without the need of enzymes.

This research program provides multidisciplinary training for highly qualified personnel (HQP) from diverse backgrounds in an inclusive environment that fosters creativity and innovation. HQP gain cross-disciplinary expertise, access to state-of-the-art technologies, and develop advanced analytical techniques for protein detection and molecular diagnostics. I have supervised and co-supervised 27 HQPs, many of whom have received prestigious scholarships and awards, including the Frederick Banting and Charles Best Canada Graduate Scholarships-Doctoral, the Alexander Graham Bell Canada Graduate Scholarship-Doctoral, the NSERC Postgraduate Scholarship-Doctoral, the Alberta Innovates Graduate Student Scholarship, and the China Scholarship Council Scholarship. My HQP have successfully advanced their careers, securing positions in academia, clinical and medical laboratories, and industry.

Since my appointment as a faculty member in the department, my independent and collaborative research has resulted in 52 peer-reviewed papers and four U.S. patents. Of these, 20 were published in journals with an impact factor greater than 10, and 22 have been cited over 100 times (Google Scholar). We acknowledge funding support from NSERC Discovery, NSERC CREATE, the New Frontiers in Research Fund, and the Canada Biomedical Research Fund, as well as our collaborators, including Profs. X. Chris Le, Greg Tyrrell, Xiandeng Hou (Sichuan University), and Hanyong Peng (Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences).



Current group photo of Zhang's lab - from left to right: Kyle Blacher (MLS student), Huyan Xiao (PhD student), Hongquan Zhang, Huidong Wang (MSc student), Yuqian Gao (PhD student)

New Appointments

The Department welcomes:

- Dr. Janet Zhou, Clinical Lecturer – Clinical Biochemist, UAH
- Dr. Tessa Boyer, Clinical Lecturer – Hematopathologist and Transfusion Medicine Physician, UAH
- Dr. Ashley Newbigging, Clinical Lecturer – Clinical Biochemist, APL Base Lab

New Appointments for Faculty/Clinical Faculty:

Dr. Mathew Diggle

- Appointed Deputy Editor-In-Chief for the Journal of Medical microbiology (Jan 2025 – 3-year term – before becoming Editor-In-Chief on a 3-year term)

Dr. Anne Halpin

- Serving as the American Society for Histocompatibility and Immunogenetics (ASHI) President Elect (2025)

Dr. Natalie Marshall

- Director of the Division of Diagnostic & Applied Microbiology (DDAM), Department of LMP, as of January 1, 2025

Graduate Studies

Milestones

Congratulations to Alexa Thompson (supervisors Carmen Charlton, Gregory Tyrrell) who has successfully defended their PhD thesis, *Improving the diagnosis and cascade of care for prenatal, infant, and priority populations infected with hepatitis C virus (HCV) in Alberta, Canada*, in January.

Congratulations to Camille Huang (supervisor X. Chris Le) who has successfully defended their MSc thesis, *Improving the Specificity of the CRISPR-Cas12a System for the Detection and Discrimination of Single Nucleotide Polymorphisms in Antibiotic Resistance Genes*, in January.

General Updates

The new LMP course-based MSc specialization in Molecular Diagnostics is now visible on the UofA admission website for the Fall 2025 semester. Curriculum development is underway, with 2 curriculum committees formed and meeting beginning in February.

Awards

Congratulations to these students who received awards acknowledging their research and/or supporting their graduate programs:

Alberta Innovates Graduate Student Scholarship (AI GSS)

- Jenny Chau

Alberta Graduate Excellence Scholarship (AGES)

- Mahsa Yazdanbakhsh

- Huyan Xiao
- Yolanda Warkentin
- Eileen Tang

FoMD 75th Anniversary Graduate Student and Delnor Awards

- Skyler Ngo

Li Ka Shing Institute of Virology Graduate Studies Entrance Award

- Tamara Semeria Maitret
- Skyler Ngo

Postdoctoral Awards:

Med Star Award for Postdoctoral Fellows

- Qiming Shen

The Laboratory Medicine and Pathology Graduate Program is pleased to shine a well-deserved spotlight on **Teresa Kumblathan** ('24 PhD, Supervisor Xing-Fang Li), whose exceptional achievements have earned her the prestigious **Governor General's Gold Medal**. At the University of Alberta, the award recognizes the doctoral graduate who achieves the highest academic standing. It is with great pride that the Department celebrates her success and recognizes the excellence she has demonstrated during her studies. Teresa shared the following insights about her time in the program:



Teresa Kumblathan ('24 PhD)

What initially drew you to the LMP Grad Program?

I was initially drawn to the LMP Grad Program because of my experience with the undergraduate MLS research project. Working closely with my supervisor, Dr. Xing-Fang Li, on exciting microbiology projects sparked my passion for research. After speaking to some mentors and senior graduate students, I realized that doing a graduate degree perfectly aligns with my goal to further explore microbiology and contribute to improving public health.

What achievement, accomplishment or moment are you most proud of from your time in the LMP graduate program?

One of my proudest achievements was leading a research project on wastewater surveillance of SARS-CoV-2 and Norovirus. Working closely with our collaborators, we developed a novel method for detecting viral pathogens with excellent efficiency. This project not only resulted in several publications in reputable journals, but also

demonstrated that innovative approaches can be easily adapted for future outbreaks of pathogens. I was also able to present my findings at the Canadian Chemistry Conference and Exhibitions in Calgary and Vancouver, and was rewarded with the Best Graduate Presentation award for my research.

What was the biggest challenge you faced? How did you stay motivated?

The biggest challenge I faced during graduate studies was navigating my research and studies amid the COVID-19 pandemic and the uncertainties of the situation. Staying motivated required a blend of adaptability and resilience. I focused on the aspects of my work that I could control, such as data analysis and writing when I couldn't do lab work, and regularly checked in with my supervisor and peers to maintain a sense of community and support. Additionally, working as a Medical Laboratory Technologist during the pandemic kept me driven and inspired!

Looking back, is there any advice you would give to your younger self starting out as a graduate student?

Looking back, I would advise my younger self that balancing work and personal well-being is key. I would also tell my younger self to celebrate small victories along the way, as it helps build momentum toward your bigger goals!

What comes next for you in your professional journey?

Next in my professional journey, I will be continuing my passion for public health research. I have accepted a microbiology research position with Public Health Ontario. I hope to use my skills to advance our understanding of pathogens and contribute to controlling the spread of infectious diseases, ultimately improving the health and well-being of our communities.



Dr. Jelena Holovati & Teresa Kumblathan



Teresa Kumblathan & Dr. Xing-Fang Li

Save the Date!



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Laboratory Medicine & Pathology

DRIVE 2025

Discovery, Research, Innovation and Education

Date: Fri, Apr 25 - Sat, Apr 26

Location: Lister Hall, 11613 87 Ave NW, Edmonton, AB

Keynote Speakers:

DR. JOHN W. MACGREGOR MEMORIAL LECTURE

Friday, April 25

Dr. Ming-Sound Tsao

University of Toronto

DR. R.E. BELL MEMORIAL LECTURE

Saturday, April 26

Dr. Robert Montgomery

NYU Langone Health



Banff Pathology Course September 24-27, 2025 - Head & Neck Pathology

Scholarly Achievements

October 1, 2024 to January 31, 2025

Grants

Dr. Mathew Diggle

- \$270K (2025-2028) – awarded November 2024 – Clinical Microbiology Fellowship position – funded by SPP-ARC (Striving for Pandemic Preparedness The Alberta Research Consortium)

Dr. Anne Halpin

- GlycoNet Collaborative Teams Grant, Role: Co-PI, Total Funding 300,000\$, Funding as Co-PI \$58,440, Project: International multi-site validation of ABO antibody bead-based assay for immune risk assessment for ABO-incompatible transplantation, Funding Period: December 2024-December 2026

Dr. Chris Le

- Dr. Chris Le and a group of 12 team members received a \$2,357,988 Bio Innovation Grant, from the Alberta Jobs, Economy and Innovation, to support their development of “Innovative techniques and diagnostic tests for pandemic preparedness and health equity”

Dr. Susan Nahirniak

- Co-applicant for Clinical Trial entitled Platelet Transfusion Domain of the Canadian Critical Care Comparative Effectiveness Platform(e) d'Évaluation Clinique Comparée en soins Critiques (CEPEC); CIHR funding approved January 29, 2025; 4 year term; and value of \$1,193,400

Awards

Dr. William Stokes

- 2024 - Systems Block Lecturer Excellence Award, Faculty of Medicine, Class of 2027

Dr. Trish Campbell

- Received the American Society for Histocompatibility and Immunogenetics (ASHI) 2024 Distinguished Service Award. This honour was due to her many years of service to ASHI not only as President, but on many different ASHI Committees as well as service to the transplant community in general (AST, STAR, CST, etc).

Pictured below left to right: Dr. Esme Dijke, Dr. Trish Campbell, Dr. Anne Halpin



Recent Presentations

Dr. Steven Drews

Abstract:

1. "Donor re-entry following deferral for false reactive human immunodeficiency virus-1/2, hepatitis B virus, hepatitis C virus, syphilis, and human T-cell lymphotropic virus-1/2 is effective." Drews, S.J., Bigham, M., Uzicanind, S., Charlton, C., Huppe, P, MacDonald, K., O'Briend, S.F. AABB, Houston, TX, USA October 19-24

Presentations:

1. "Donor re-entry following deferral for false reactive human immunodeficiency virus-1/2, hepatitis B virus, hepatitis C virus, syphilis, and human T-cell lymphotropic virus-1/2 is effective" Canadian Blood Services Medical Services and Hospital Relations team. Virtual, February 6, 2025
2. "The Role of Blood Operators and Transfusion Services in Preventing and Responding to Transfusion-transmitted Malaria" (AABB, Houston Texas, October 21, 2024)

Dr. Anne Halpin

Abstract:

1. presented at the American Society for Histocompatibility and Immunogenetics (ASHI) 50th Annual Meeting, Anaheim, CA, USA, October 22, 2024: Anne M Halpin, B. Motyka, L. Rebellato, D.B. Leeser, C. Li, J. Pearcey, L.J. West, "ABO-A2 red cell agglutination titres: Not the solution to improved ABO-A2-incompatible transplant eligibility assessment". Human Immunology, Volume 85, Supplement, 2024

Invited Talks (in-person):

1. Grand Rounds, Mayo Clinic Transplant Center, Rochester, MN, January 27, 2025, "ABO-Histocompatibility: A New Approach to ABO-Incompatible Transplantation"
2. Gairdner Pediatric Transplant Symposium, Calgary, Canada, December 2, 2024, "Inequities in Transplant Access: ABO Offers Opportunities"
3. American Society for Histocompatibility and Immunogenetics, (ASHI) 50th annual meeting, Anaheim, California, USA, October 22, 2024, "ABO-histocompatibility in ABO-incompatible transplantation"
4. Canadian Society of Transplantation (CST) annual meeting, Montreal, Canada, October 16, 2024, "Applying ABO-histocompatibility Canadian innovation to the Canadian ABOi Lite Program"

Dr. Linnet Immaraj

Abstract:

1. Linnet Immaraj¹, Sudha Bhavanam¹, Qiang Jiang¹, Judy Qiu^{1,2}, Tiejun Gao¹, Michael Parkins³, Casey Hubert⁴, Bonita Lee⁵, Xiaoli Pang¹
1 Department of Laboratory Medicine & Pathology, Faculty of Medicine & Dentistry, University of Alberta, Edmonton, Alberta, Canada
2 Public Health Laboratory, Alberta Precision Laboratories, Edmonton, Alberta, Canada
3 Departments of Medicine and Microbiology, Immunology and Infectious Diseases, University of Calgary, Calgary, Canada
4 Department of Biological Sciences, University of Calgary, Calgary, Canada
5 Department of Pediatrics, University of Alberta, Edmonton, Alberta, Canada
“Comprehensive Viral Pathogens Surveillance in Wastewater: Insights from Hybrid Capture Sequencing in Alberta”, Microbes in Wastewater: Antibiotic Resistance, Public Health, and Climate Change, January 16-17, 2025, Newport Beach, California

Dr. Susan Nahirniak:

1. Invited speaker for AABB 2024, Houston, TX on Monday October 21, 2024, Educational Session on “The Role of Blood Operators and Transfusion Services in Preventing and Responding to Transfusion-transmitted Malaria”

Dr. Judy Qiu

Abstracts:

1. Tang E, Immaraj L, Brand LA, Parkins MD, Hubert CRJ, Lee BE, Pang XL, Qiu JY. “Wastewater-Based Surveillance for Enterovirus D68 (EV-D68) in Alberta, Canada from 2021-2024”. Microbes in Wastewater Symposium, Newport Beach, USA, Jan 2025
2. Immaraj L, Bhavanam S, Jiang Q, Qiu JY, Gao TJ, Lee BE, Pang XL. “Comprehensive Viral Pathogens Surveillance in Wastewater: Insights from Hybrid Capture Sequencing in Alberta”. Microbes in Wastewater Symposium, Newport Beach, USA, Jan 2025

Dr. Iveta Sosova

Abstract:

1. “Long-chain Fatty Acid Oxidation Disorders: A Review of Newborn Screening Around the Globe for LC-FAOD” Ida Schwartz, Jennifer Audi, Sarah C. Grünert, Deborah Marsden, Pinay Kainth, David Kasper, Tatiele Nalin, Marzia Pasquali, Vanessa Rangel-Miller, Iveta Sosova, Kimimasa Tobita, Go Tajima,⁷ Nicole Miller. Presented at: 2024 APHL Newborn Screening Symposium; Oct 20 -24, 2024, Omaha, NE, USA

Recent Publications

Dr. Ben Adam

Peer-reviewed papers:

1. Huang G, Albers P, Mookerji N, Pfanner T, Hui A, Mittal R, Broomfield S, Dean L, St Martin B, Jacobsen N, Evans H, Gao Y, Hung R, Abele J, Dromparis P, Lima JF, Bismar TA, Michelakis E, Sutendra G, Wuest F, Tu W, Adam BA, Fung C, Ghosh S, Tamm A, Kinnaird A. “Three-Dimensional Spatial Localization and Volume Estimation of Prostate Tumors Using 18F-PSMA-1007 PET/CT Versus Multiparametric MRI”. *Eur J Nucl Med Mol Imaging*. 2024 Dec 27. doi: 10.1007/s00259-024-07021-0. Online ahead of print. [IF 8.600]
2. Wagner MJ, da Silva GMA, Hatami S, Khan M, Lin L, Wang X, Pidborochynski T, Adam BA, Nagendran J, Conway J, Freed DH. “Subnormothermic machine perfusion of neonatal and small sized pediatric donor hearts”. *ASAIO J*. 2024 Dec 19. doi: 10.1097/MAT.0000000000002366. Online ahead of print. PMID: 39700028. [IF 3.100]
3. Buxeda A, Crespo M, Chamoun B, Gimeno J, Torres IB, Redondo-Pachón D, Riera M, Burballa C,

Pascual J, Mengel M, Adam BA, Pérez-Sáez MJ. "Clinical and molecular spectrum of v-lesion". *Am J Transplant*. 2024 Nov;24(11):2007-2021. PMID: 39084462. [IF 9.369]

4. Restall BS, Haven NJM, Martell MT, Cikaluk BD, Wang J, Kedarisetti P, Tejay S, Adam BA, Sutendra G, Li X, Zemp RJ. "Metabolic light absorption, scattering and emission (MetaLASE) microscopy". *Sci Adv*. 2024 Oct 18;10(42):eadl5729. [IF 11.700]

Dr. Thambirajah Balachandra

Peer-reviewed paper:

1. Ariba Kamal and Thambirajah Balachandra, "A review of accidental residential fire death investigations in Alberta 2012 - 2021", *Canadian Society of Forensic Science Journal*; 2024; <https://doi.org/10.1080/00085030.2024.2430422>; 1 -15

Dr. Matthew Croxen

Peer-reviewed papers:

1. Tyrrell GJ, Croxen M, McCullough E, Li V, Golden AR, Martin I. "Group A streptococcal infections in Alberta, Canada 2018-2023". *Epidemiol Infect*. 2024 Dec 23:1-31. doi: 10.1017/S0950268824001857. Epub ahead of print. PMID: 39711024

2. Gill EE, Jia B, Murall CL, Poujol R, Anwar MZ, John NS, Richardsson J, Hobb A, Olabode AS, Lepsa A, Duggan AT, Tyler AD, N'Guessan A, Kachru A, Chan B, Yoshida C, Yung CK, Bujold D, Andric D, Su E, Griffiths EJ, Van Domselaar G, Jolly GW, Ward HKE, Feher H, Baker J, Simpson JT, Uddin J, Ragoussis J, Eubank J, Fritz JH, Gálvez JH, Fang K, Cullion K, Rivera L, Xiang L, Croxen MA, Shiell M, Prystajec N, Quirion PO, Bajari R, Rich S, Mubareka S, Moreira S, Cain S, Sutcliffe SG, Kraemer SA, Alturmessov Y, Joly Y, CphIn Consortium, CanCOGeN Consortium, VirusSeq Data Portal Academic And Health Network, Fiume M, Snutch TP, Bell C, Lopez-Correa C, Hussin JG, Joy JB, Colijn C, Gordon PMK, Hsiao WWL, Poon AFY, Knox NC, Courtot M, Stein L, Otto SP, Bourque G, Shapiro BJ, Brinkman FSL. "The Canadian VirusSeq Data Portal and Duotang: open resources for SARS-CoV-2 viral sequences and genomic epidemiology". *Microb Genom*. 2024 Oct;10(10):001293. doi: 10.1099/mgen.0.001293. PMID: 39401061; PMCID: PMC11472881

3. Qaddoura A, McQuiston M, Tyrrell G, Croxen M, Li V, Demarco R, Pinfield S, Ramazanov R, Hope K, Cairns ER, MacDonald J, Hu J, Larios O, Kim J, Missaghi B, Vayalunkal J, Martin I, Marsten V, Soucie J, Wilson RD, Birch C, Conly J. "Analysis of invasive group A streptococcal puerperal sepsis in Calgary, Alberta: clinical consequences and policy implications". *Infect Control Hosp Epidemiol*. 2024 Oct 10;45(9):1-4. doi: 10.1017/ice.2024.154. Epub ahead of print. PMID: 39387197; PMCID: PMC11518661

Dr. Mathew Diggle:

1. Qiu JY, Mah R, Brand LA, Pang X, Barnett M, Diggle M, Tipples G. "Impact of Sample Storage Time and Temperature on the Stability of Respiratory Viruses and Enteric Viruses in Wastewater". *Microorganisms*. 2024; 12(12):2459. <https://doi.org/10.3390/microorganisms12122459>

2. "Phenotypic diversity and shared genomic determinants among isolates causing a large incidence of disseminated gonococcal infections in Canada" Gursonika Binopal, Emil Jurga, Duncan Carruthers-Lay, Sören Krüger, Sandra Zittermann, Jessica Minion, Mathew Diggle, David C. Alexander, Irene Martin, Vanessa Allen, John Parkinson, Scott D. Gray-Owen bioRxiv 2024.09.08.611882; doi: <https://doi.org/10.1101/2024.09.08.611882>

Dr. Sumit Das

Peer-reviewed journal:

1. Das S. "TTF-1 Immunoreactivity in the Germinal Matrix: A Brief Case Study". *Pediatr Dev Pathol*. 2024; 27 (6): 608-610

Dr. Steven Drews:

1. Fu MX, Faddy HM, Candotti D, Groves J, Saa P, Styles C, Adesina O, Carrillo JP, Seltsam A, Weber-

- Schehl M, O'Brien SF, Drews SJ, Aidoo NB, Pajares ÁL, Perez LN, Deng X, van de Laar T, Laperche S, Lehtisalo R, Yilmaz S, Tsoi WC, Juhl D, Niederhauser C, Chenarsabz N, O'Flaherty N, Goto N, Satake M, Renaud C, Lewin A, Cloutier M, Sawadogo S, Reynolds C, Zhiburt E, Muylaert A, Van Gaever V, Garcia-Otalora MA, Jarvis L, Vermeulen M, Busch M, Blackmore S, Jones A, Brailsford S, Irving WL, Andersson M, Simmonds P, Harvala H; Virology subgroup of the ISBT WP-TTID. "International review of blood donation screening for anti-HBc and occult hepatitis B virus infection". *Transfusion*. 2024 Oct 2. doi: 10.1111/trf.18018. Epub ahead of print. PMID: 39359112
2. Lieshout-Krikke R, Hoad V, Chua SS, Kam G, Satake M, Hino I, Stramer SL, Groves JA, de La Taille V, Laperche S, Cheng A, Goodison K, Tsoi WC, Lee CK, Prati D, Pati I, Drews SJ, Bigham M, Gratz G, Jungbauer C, Charlewood R, Smith M, Flaherty NO, Raftery A, Oyonarte S, Gubbe K, Luhm J, Ngcobo S, Slot E, Davison K, Brailsford S, Dunbar N. "International Forum on Donor- and Recipient-triggered Lookback for Traditional Transfusion-transmitted Infections: Responses". *Vox Sang*. 2024 Nov 14. doi: 10.1111/vox.13764. Epub ahead of print. PMID: 39542012
3. Lieshout-Krikke R, Hoad V, Chua SS, Kam G, Satake M, Hino I, Stramer SL, Groves JA, de La Taille V, Laperche S, Cheng A, Goodison K, Tsoi WC, Lee CK, Prati D, Pati I, Drews SJ, Bigham M, Gratz G, Jungbauer C, Charlewood R, Smith M, O'Flaherty N, Raftery A, Oyonarte S, Gubbe K, Luhm J, Ngcobo S, Slot E, Davison K, Brailsford S, Dunbar N. "International Forum on Donor- and Recipient-triggered Lookback for Traditional Transfusion-transmitted Infections: Summary". *Vox Sang*. 2024 Nov 14. doi: 10.1111/vox.13763. Epub ahead of print. PMID: 39542027
4. Talbot B, Ludwig A, O'Brien SF, Drews SJ, Ogden NH, Kulkarni MA. "Spatial and temporal analysis of West Nile virus infection in mosquito and human populations based on arboviral detection testing data". *Sci Rep*. 2024 Dec 28;14(1):31343. doi: 10.1038/s41598-024-82739-3. PMID: 39733139
5. O'Brien SF, Naicker K, Osmond L, Holloway K, Drews SJ, Bigham M, Goldman M. "Notification of blood donors who test positive for transfusion-transmissible infections". *Vox Sang*. 2025 Jan 14. doi: 10.1111/vox.13796. Epub ahead of print. PMID: 39809317
6. Drews, S.J. "Chapter 82, Transfusion-Transmitted Diseases" in *Transfusion Medicine and Hemostasis: Clinical and Laboratory Aspects*, 4th Edition, Editors Shaz, B.H., Hillyer, C.D., Schwartz, J., Gil, M.R., Elsevier Amsterdam, Netherlands. 2025. Pages 370-381

Dr. Anne Halpin:

1. Halpin, Anne, Motyka Bruce, West, Lori. "Manual of Molecular and Clinical Laboratory Immunology, 9th Edition", Chapter Title: ABO Blood Groups and Transplantation, Edited by John Schmitz, Barbara, Detrick, O'Gorman, Maurice R. Published by ASM Press. Published December 24, 2024 (note: this is a book chapter)

Dr. Victoria Higgins

Peer-reviewed publications:

1. Higgins V, Raizman JE, Leung F, Lafreniere MA, Beach LA. "The Lab Report Podcast: Enhancing the Visibility and Communication of Laboratory Medicine". *J Appl Lab Med*. 2025 Jan 3;10(1):211-213
2. Higgins V, Parker ML, Beriault DR, Mostafa A, Estey MP, Agbor T, Ismail OZ. "A survey of Canadian neurologists' perspectives and preferences for laboratory reporting of CSF oligoclonal banding". *Clin Biochem*. 2025 Jan;135:110855
3. Lewis CW, Raizman JE, Higgins V, Gifford JL, Symonds C, Kline G, Romney J, Doulla M, Huang C, Venner AA. "Multidisciplinary approach to redefining thyroid hormone reference intervals with big data analysis". *Clin Biochem*. 2024 Dec;133-134:110835

Dr. Chris Le:

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