Dear Friends & Colleagues!

This is the Chair’s report before the Summer break! Unbelievable that almost half a year already past, but after a tough winter we can look forward to some time off enjoying the summer.

The Edmonton Lab Hub project has been paused and we are awaiting further direction from the government. The transition to Alberta Public Laboratories (APL) has been completed and our new Lab Services entity is now focusing on achieving its first strategic goals. The implementation of ‘Connect Care’ is now entering the training phase. The Super-Users and Physician-Builders have already completed their first training courses and all other staff have now been scheduled for training sessions for the late summer / early fall, i.e. right before Wave 1 of go live in the Edmonton Zone.

I sincerely thank you and appreciate your ongoing commitment, time, energy, and tremendous effort to move these large-scale transformative projects forward successfully!

Please join me in congratulating our faculty members who will be promoted for the coming academic year and I welcome our new appointees to the department – see full list of names on page 6. I also would like to acknowledge the re-appointments of three of our Divisional Directors: Dr. Judith Hugh, Dr. Greg Tyrrell, Ms. Lisa Purdy – see page 7. All are entering their second terms as Divisional Directors and other APL leadership roles and I’m grateful for their leadership in their Divisions and programs as the critical engines moving our department forward. Again, the last quarter has been very productive in terms of papers, presentations, new grants, and recognitions achieved by our faculty members – summarized on page 9-16.

Please review our Spotlight on Education. In this issue we feature the Medical Laboratory Science (MLS) Program – see page 3-4. The MLS program is the flagship program for this discipline in Canada and has recently undergone external review confirming its exceptional standing in terms of educational innovation and leadership in Medical Laboratory Science. Under the leadership of Ms. Lisa Purdy, the program went through a strategic planning and repositioning process, which was recognized by a significant investment from the Provost special purpose fund allowing the program to now develop new curriculum content for a MSc degree laddering expansion – Way to go Team MLS!
Registration is open for the 2019 Banff Pathology Course, which will be held on September 05. - 07. 2019 – the topic is Breast Pathology. The annual APL residents’ retreat for all Edmonton and Calgary AP and GP residents will also be taking place in conjunction with the Banff course. I hope to see many of you in Banff!

Sincerely,

Dr. Michael Mengel, MD
Professor and Chair
Department of Laboratory Medicine & Pathology, University of Alberta
North Sector Medical Director, Alberta Public Laboratories

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**POSITIVE THINKING *****

If you fail, never give up because
F.A.I.L. means
“First Attempt In Learning”

End is not the end. In fact
E.N.D. means
“Effort Never Dies”

If you get NO as an answer, remember
N.O. means
“Next Opportunity”
Spotlight on Education

Medical Laboratory Science

Ms. Lisa Purdy, Divisional Director
and
Ms. Roberta Martindale, Program Coordinator

Medical Laboratory Science overhaul brings rich, experiential learning opportunities
Hands-on training crucial to master emerging technologies, says director

With big data, artificial intelligence and precision health making strides in medical research and practice, the University of Alberta’s Medical Laboratory Science program is in the midst of major changes to ensure the professionals coming out of its program are ready to hit the ground running.

The four-year undergraduate degree, which celebrated its 60th anniversary in 2018, sees an annual intake of 29 students seeking both certification as a medical laboratory technologist and the enhanced theoretical knowledge that comes with having earned a degree. It’s the only degree-granting program of its kind in Western Canada, and director Lisa Purdy wants to see it grow.

Massive change is ahead in this field. “With the way technology is going, we need to be developing lab professionals who will be change agents, and who can help other health professionals manage the new technology,” she says.

To get ahead of the demand, Purdy is creating a new master’s degree in Medical Laboratory Science. In the process of working its way through university governance, the graduate program is so ahead of the curve, it will “create a professional that Alberta Health Services may not yet even have a job description for.”

Launching a master’s program necessitated an overhaul of the undergraduate degree as well, a process Purdy welcomes as a chance to analyze and shift the desired program outcomes to better reflect current U of A focuses such as ethics and community outreach. An example of this is the recent elimination of the upper quota on the number of Indigenous students admitted to the Medical Laboratory Science program.

“We need to be socially accountable as health professionals; we need to train our students to be more culturally aware”, says Purdy.

The technical program’s focus has always been on making sure students are prepared to meet national certification criteria. Purdy says that won’t change, but the best health professionals of the future will also be intent on serving, giving back and engaging in the community. A professionalism course will be offered throughout the program’s three years, with opportunities to explore what being an ethical and engaged member of the community looks like. Purdy is also exploring a future option for a rural rotation to address underserved community needs.

Continued ...
Medical Laboratory Science (cont’d …)

It’s in the final undergraduate year that the most sweeping curriculum changes appear, addressing the emerging technologies learners need to master. A series of one-credit courses—offered over three weeks online and one weekend hands-on in the lab—focus on advanced training in processes such as mass spectrometry and flow cytometry, neither of which are new technologies but are continually being called into action in new and different ways. “We have been teaching mass spec for years,” clarifies Purdy, “but most of it has been didactic. Now we want our students to get their hands on those instruments and become really proficient at using them, to address the growing need in clinical service.”

Because the modules are mostly online, they’ll be accessible not only to students in the undergraduate program, but also—in partnership with the Faculty of Extension—to professionals looking to advance their career development. This shift to online learning and making learning more accessible to non-degree students is brand new for the program and a necessity to ensure practising technologists keep up their professional development.

The proposed MSc in Laboratory Medicine & Pathology with Specialization in Medical Laboratory Science—which Purdy hopes to see launch in the fall of 2022—goes even further to ensure students enter their profession ready to embrace its fast pace of change. Purdy has proposed for the MSc four areas of specialization that reflect current and future needs: Bioinformatics & Molecular Diagnostics; Laboratory Leadership; Research & Development and Laboratory Utilization & Applied Statistics.

(Courtesy of Sasha Roeder Mah, from The Bridge)

Front row (L to R): Kimberlea Thompson, Valentin Villatoro, Chris Ward, Anthony Ralston
Middle row (L to R): Roberta Martindale, Anna Nevesinjac, Kristi Lew, Lisa Purdy, Cheryl Titus
Back row: (L to R): Zara Ahmed, Jelena Holovati, Monika Keelant, Karen Matejka
Missing: Amanda VanSpronsen, Ben Bablitz
Awards & Honours

Dr. Jason Acker received the “GSA Graduate Student Supervisory Award,” University of Alberta, Graduate Students’ Association, Mar 22, 2019. This award is presented by the Graduate Students’ Association for “excellence in mentoring and supervision, leadership amongst their peers in engaging graduate students; contribution to graduate student professional development; and overall commitment to the success of graduate students in their program”.

Dr. Linda Chui was awarded the “MP 2019 Staff Recognition Award for Excellence in Supporting Students”.

Dr. Janet Elliott has been elected as “Fellow of the American Institute for Medical and Biological Engineering”, a distinction reserved for the top two per cent of medical and biological engineers. (March 25, 2019, Washington, DC).

Ms. Danielle Lee was awarded the CAP-ACP (Canadian Association of Pathologists) “President Award for 2019.” This award is presented by the President for long and sustained service of an exceptional order to the CAP-ACP in whatever capacity, by an individual, member or non-member, a physician or non-physician. She will be presented this award on June 25, 2019 in Niagara Falls at the annual CAP-ACP Conference.

Dr. Harry Vinters was named to Google Scholars list of “Highly Cited” scientists of the past 120 years—h-index 100+ (Vinters cited as #1374 on the list).

Dr. Lori West received the following grants:
2. “Preparing for combined stem cell and solid organ transplants: Learning from hematopoietic mixed Chimeras”. West LJ (PI), The Canadian Donation and Transplantation Research Program, National Child Health Transplant Team Grant Award, $6500 Total Funding; March 2019.

Grants


Dr. Andrei Drabovich was nominated PI, Movember Rising Star in Prostate Cancer Research grant "Bridging genomics and proteomics to identify protein biomarkers for stratification of prostate cancer aggressiveness", Prostate Cancer Canada, application # RS2015-01. Total amount: $117,782 CAD. November 1, 2018 – October 31, 2019.

Dr. Josh Raizman received a Covenant Health Research Centre grant for 2018-2019 in the amount of $2348 for the research project entitled “Development of Laboratory Reporting Guidelines for Hydroxycobalamin Interference in Patients Pulled from House Fires”.

Dr. Lori West received a grant from the Canada Foundation for Innovation/Alberta Economic Development and Trade. Amount: $150,000. Term: 04/2019-03/2020. Role: Principal Investigator. Project title: “Molecular injury and repair assessment in ex vivo perfused solid organ transplants”.

New Appointments

Welcome to Dr. Nathan Zelyas

Dr. Zelyas is the new Program Director, Medical Microbiology Residency Program. Dr. Zelyas was a resident in the program from 2011 – 2016 and began working as a Medical Virologist at Provincial Lab upon graduating in 2016.

Dr. Banu Sis has served as a grant reviewer / panel member at 2019 Women and Children’s Health Research Institute (WCHRI) Innovation Grants Biomedical Advisory Committee.

The Department has appointed our CBD (Competency Based by Design Medical Education) Leads:

- Dr. Kerri Chung, Anatomical & General Pathology
- Dr. Kathleen Wong, Hematological Pathology
- Dr. Nathan Zelyas, Medical Microbiology

The Department welcomes:

- Dr. Kimberly Wood - Clinical Lecturer / Staff Pathologist, Misericordia Community Hospital & DynaLIFE
- Dr. Hanan Armanious - Assistant Clinical Professor / Staff Pathologist, Red Deer Regional Hospital Centre
- Dr. Nathan Zelyas - Clinical Lecturer / Medical Microbiologist, University of Alberta Hospital
- Mr. Wenjun Liu - Clinical Lecturer, Pathologists’ Assistant, Queen Elizabeth II Hospital, Grande Prairie

Promotions

Please join us in congratulating the following on their promotions effective July 1st

- Dr. Hongquan Zhang to Associate Professor
- Dr. Melanie Bodnar to Associate Clinical Professor
- Dr. Christopher Walker to Associate Clinical Professor
- Dr. Wayne Ramsey to Associate Clinical Professor
- Dr. Terence Agbor to Assistant Clinical Professor
- Dr. Sumit Das to Assistant Clinical Professor
- Ms. Danielle Lee to Assistant Clinical Professor
- Dr. Heidi Paulin to Assistant Clinical Professor
- Dr. Laura Schmitt to Assistant Clinical Professor
Appointment Renewals

Dr. Judith Hugh, APL Site Chief University of Alberta Hospital and Divisional Director Anatomical Pathology, Department of Laboratory Medicine & Pathology, Faculty of Medicine & Dentistry, University of Alberta.

Dr. Judith Hugh served the last five years as Site Chief at the University of Alberta Hospital and as Divisional Director Anatomical Pathology, Department of Laboratory Medicine & Pathology, Faculty of Medicine & Dentistry, University of Alberta. In her dual role Dr. Hugh has made major contributions to recruitment, quality clinical service delivery and facilitation of our training programs at the University of Alberta Hospital site. Dr. Hugh has agreed to renew her term for this dual role for the next three years.

Ms. Lisa Purdy, Director for the Medical Laboratory Science (MLS) Program.

Ms. Purdy has served in this role for the last five years and has led the program together with the MLS faculty and staff through successful accreditation reviews, a strategic planning exercise, and to securing additional funding from the Provost Office for further developing the scope of the MLS program.

Ms. Purdy’s commitment to the MLS program, our department and her exceptional leadership has advanced our Vision and Mission for excellence in education. Ms. Purdy has agreed to renew her term for this role for the next five years.

Dr. Gregory Tyrrell, APL Section Chief Microbiology North Sector and Divisional Director Diagnostic and Applied Microbiology, Department of Laboratory Medicine & Pathology, Faculty of Medicine & Dentistry, University of Alberta.

Dr. Greg Tyrrell served for the last five years as Section Chief Microbiology for the Edmonton Zone and as Divisional Director Diagnostic and Applied Microbiology, Department of Laboratory Medicine & Pathology, Faculty of Medicine & Dentistry, University of Alberta. In his dual role Dr. Tyrrell focused on integrating acute care Infectious disease diagnostics with the Provincial Laboratory for Public Health and our microbiology colleagues at DynaLIFE Diagnostics, while simultaneously facilitating the transition and integration of the Medical and Clinical microbiology training programs in our department. Dr. Tyrrell has agreed to renew his term for this dual role for the next three years.
The Medical Microbiology Residents said farewell to Dr. Hong Yuan Zhou in April. Dr. Zhou was the Program Director for the Medical Microbiology Residency program from March 2018 to April 2019. Dr. Zhou moved to Calgary to be closer to her family. She will continue on in her role as Medical Virologist at Provincial Lab Southern Alberta (PLSA) and assures everyone that she is just an email away.

The Medical Microbiology Residency Program hosted this year's LMP Resident Retreat on April 23. Residents from AP, GP, Hematopathology, and Med Micro participated in the event. Sessions included a Clinician’s Perspective on Alberta Public Labs by Dr. Dilini Vethanayagam, Transition to Practice Tips by Ryan Smith from MD Financial Management, and a presentation on the new PARA contract by Rob Key from the Professional Association of Resident Physicians of Alberta. The afternoon included a resident wellness event hosted by the microbiology residents at The Cat Café on Whyte.
**Graduate Studies**

Congratulations to **Nicholas Wawryk** who has been awarded an Alexander Graham Bell Canada Graduate Scholarship – Master’s (NSERC CGS-M).

**Summer Studentship Stipend Recipients**

- **Ruqaya Jasim** (supervisor: Dr. Ben Adam)
- **Teresa Kumblathan** (supervisor: Dr. Xing-Fang Li)
- **Regina Mendoza** (supervisor: Dr. Andrei Drabovich)

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**Hematopathology Residency Program**

Dr. Brian Wong has been nominated for the “Dr. T A Kasper Resident Excellence Scholarship”. The value of the award is $4,000 and is awarded to a Medicine resident with superior academic achievement specializing in any of the three disciplines of Pathology (Anatomical, General Pathology or Hematopathology). Selection based on academic standing as demonstrated by excellence on the residency exam.

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**Presentations**

**Dr. Jason Acker:**

**Presentations**

2. Acker, J.P. “Taking good business ideas out of the lab…. the 4 P’s that will help you commercialize your research”. SMO 686: Entrepreneurial Strategizing, Alberta School of Business, University of Alberta, Feb 25, 2019.
   - Acker, J.P. and Hagedorn, M. “Enabling the Cryopreservation of embryos from aquatic species using ice recrystallization inhibitors”.
   - Sajja, A., Acker, J.P., Turner, T. and Ben, R. “Improving Long-Term Storage Conditions of Peripheral Blood Mononuclear Cells Using Small Molecule Ice Recrystallization Inhibitors to Mitigate Ice-Recrystallization Induced Cryoinjury”.
   - Lautner, L., Acker, J.P., Nagendra, J. “The Use of Ice Recrystallization Inhibitors in the Cryopreservation of Lungs”.
   - William, N., Acker, J.P. and Ben, R. “Mitigating Post-Thaw Cellular and Structural Injury in Liver Tissue Sections Using Small Molecule Ice Recrystallization Inhibitors”.

**Dr. Ben Adam:**


**Abstracts**

Presentations (cont’d)

Dr. Ben Adam: (cont’d)


Dr. Linda Chui

Abstracts

1. AMMI-CACMID (April 3-6, 2019), Ottawa.
   - Byron Berenger, Linda Chui, Christina Ferrato, Tracie Lloyd, Dylan Pillai. “Evaluation of Five Commercial Nucleic Acid Tests for Bacterial Gastroenteritis in Alberta, Canada”.
   - Wilson W. Chan, Dylan Pillai, Linda Chui, Byron Berenger. “Comparison of Culture-Based Method for the Detection of Shiga toxin-producing E. coli”.
   - Michael Bording-Jorgensen, Brendon Parsons, Jonas Szelewicki, Colin Lloyd, Linda Chui. “Molecular Detection Of Non-0157 Shiga Toxin-Producing Escherichia coli (STEC) Directly From Stool Using Real-time Multiplex PCR Assays”.

2. The Pediatric Academic Societies (PAS) Meeting (April 24-May1), Baltimore, MD, USA
   - Jianling Xie, Gillian A.M. Tarr, Samina Ali, Linda Chui, Xiao-Li Pang, Bonita Lee, Ott G. Vanderkooi, Phillip I. Tarr, Tanis Dingle: (cont’d)

Dr. Matthew Croxen:


Dr. Tanis Dingle:

Abstracts

1. DRIvE Days, Edmonton, AB, April 12-13, 2019.
   - Van der Walt, P. and Dingle, T.C. “A review of Pneumocystis jirovecii microscopy in Northern Alberta”.
   - Feng, L., Jansen, B. and Dingle, T.C. “Evaluation of MALDI-TOF MS for identification of dermatophytes and aerobic actinomycetes”

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Presentations (cont’d)

Dr. Tanis Dingle (cont’d):
2. AMMI–CACMID 2019, Ottawa, ON, Apr 3-6, 2019.
   - Van der Walt, P. and Dingle, T.C. “A review of Pneumocystis jiroveci microscopy in Northern Alberta”.

Dr. Andrei Drabovich

Dr. Steven Drews:
Abstracts

3. AMMI/CACMID, Ottawa, ON, Canada, April 5, 2019.
   - German, G., Keenan, R., Arseneau, V., Tsang, R., Petrich, A., Drews, S, “Bordetella pertussis Molecular Validation / Verification Using AmpliVue and the BDMax with Open System reagents to allow for timely and cost-effective testing for both routine and outbreak demands”.

Drs. Janet Elliott & Locksley McGann:
Presentations
   - Nasim Eskandari, Leah A. Marquez-Curtis, Locksley E. McGann, Janet A. W. Elliott*. “Cryopreservation of Endothelial Monolayers”.

Poster presentations

Invited talks
Presentations (cont’d)

Drs. Janet Elliott & Locksley McGann (cont’d):

Ms. Anne Halpin:
American Society of Transplantation Cutting Edge of Research (AST CEoT) meeting (Phoenix, AZ) February 22, 2019 “Next Gen’ ABO Antibody Assessment: Development of a Bead-Based ABO Antibody Detection Assay”. **Was awarded the “Young Innovator Abstract Award” for this abstract.**

Dr. Nausherwan Mahmood:

Dr. Michael Mengel:
Invited lectures:
1. The Transplantation Society International consensus conference (March 06. – 07.) 2019, Los Angeles, USA: Develop Consensus Guidelines for Diagnosis and Treatment of Anti-Body Mediated Rejection – “Update on the Banff Criteria for The Diagnosis of Kidney: unresolved issues and controversies”
2. 33rd Advanced HLA Technical Workshop (March 11.-14.) 2019, Rancho Mirage, USA: “STAR 2019 update – Antibody Attributes”.

Dr. Josh Raizman:
Steven V Dang, Albert Tsui, and Joshua E Raizman.

Dr. Farshid Siadat:
“Making Sense of Pathology Report in Prostate Cancer, and how the pathologist can predict the outcome”. Prostate Edmonton Peer Support Society (Prostate Cancer Canada Network), Kaye Edmonton Clinic, 12 Feb 2019.

Dr. Iveta Sosova:

Dr. Artur Szkotak:

Dr. Elona Turley
Invited speaker:

Poster Presentations:
   - Turley E, Gowdeau B, Nahiriak S, Szkotak A, Bodnar M. “Whole Blood is Not Equivalent to Plasma Using the Triage D-Dimer Assay”.
   - Wong B, Turley E. “A Web-based Tool for Generating Bone Marrow Synoptic Reports”.

Dr. Lori West:
Presentations:
   - British Transplantation Society organized session “Let’s talk about sex!” “Fifty shades of cell therapy: the impact of sex on cells and cell therapy”.
   - NSBT organized session “A vision for UK transplantation and donation research” “Communication for research”.

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Recent Publications

Dr. Jason Acker:
Publications


Dr. Ben Adam:

Dr. Linda Chui:


Dr. Matthew Croxen:


Dr. Tanis Dingle:

Recent Publications Cont’d ...

**Dr. Andrei Drabovich:**
**Peer-reviewed publications**

**Book Chapter**

**Dr. Steven Drews:**
**Peer reviewed**


**Drs. Janet Elliott & Locksley McGann:**

**Dr. Michael Mengel:**
**Peer-reviewed publications**


**Book Chapter:**

**Dr. Laura Schmitt:**

**Dr. Consolato Sergi:**


Recent Publications cont’d...

Dr. Consolato Sergi (cont’d):


Dr. Harry Vinters:


Dr. Iveta Sosova:

Peer-reviewed papers

Christopher Newell, Aneal Khan, David Sinasac, John Shoffner, Marisa W. Friederich, Johan L.K., Van Hove, Stacey Hume, Jane Shearer, Iveta Sosova “Hybrid gel electrophoresis using skin fibroblasts to aid in diagnosing mitochondrial disease”. Neurol Genet June 2019, 5 (3) e336; DOI: 10.1212/NXG.0000000000000336

Dr. Albert Tsui:


Dr. Lori West:

Abstracts


The Department of Laboratory Medicine and Pathology  
Faculty of Medicine and Dentistry, University of Alberta

June 2019

Recent Publications Cont’d ...

Dr. Lori West (cont’d)

Peer-reviewed publications


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Awards & Highlights

Oral Presentation Awards
(presented by Dr. Michael Mengel)

PhD - Ms. Ashley Newbigging

Post Doctoral Fellow - Dr. Hanyong Peng

MSc - Ms. Janet Zhou

MLS - Mr. Elijah Chan
Poster Presentation Awards
(presented by Dr. Michael Mengel)

Grad PhD - Ms. Ruqayyah Almizraq
Grad MSc - Mr. Nicholas Wawryk
MLS - Mr. Steven Dang & Ms. Denise Alano
MLT - Ms. Linda Galbraith

DRiVE Day Judges

Oral Judges:
Ms. Lisa Purdy
Dr. Michael Mengel
Dr. Mireille Kattar
Dr. Hongquan Zhang

Poster Judges:
Ms. Roberta Martindale
Ms. Shelly Stevens
Ms. Kristi Lew
Dr. Michael Reid
Dr. Andrea Macyk-Davey
Ms. Xiufen Lu

Dr. Peter Dromparis
Dr. Yanming Liu
Dr. Nausherwan Mahmood
Dr. Susan Nahimiak
Dr. Monika Keelan
Dr. Andrei Drabovich
Bell McLeod Educational Fund Citizenship Award

Ms. Angela Ma & Ms. Ruqayyah Almizraq

Staff Recognition Award
chosen by LMP Students' Group

Ms. Katerina Carastathis and Dr. Linda Chui
(presented by Jagdeesh Uppal)
The Banff Pathology Course is a collaborative effort of the Canadian Association of Pathologists (CAP-ACP), Department of Laboratory Medicine and Pathology, University of Alberta and the Department of Pathology and Laboratory Medicine, University of Calgary to provide a continuing medical education activity for practicing pathologists, residents and pathologists' assistants.

Next course: Sept 5-7, 2019 - Breast
Future Courses: Sept. 3-5, 2020
Sept. 9-11, 2021
Sept. 8-10, 2022