



## Laboratory Medicine

The Core Laboratory at Victoria Hospital has introduced testing on cerebrospinal fluid (CSF) for a panel of Alzheimer's disease (AD) biomarkers (beta-amyloid 42, phosphorylated tau 181, and total tau). The testing is performed using Roche electrochemiluminescent immunoassays, which are Health Canada approved for in vitro diagnostic use. When interpreted together, these AD CSF biomarkers can identify Alzheimer's-related pathologic change with high diagnostic accuracy and aid in making a clinical diagnosis of AD.


Dr. Liju Yang, Clinical Biochemist, and Dr. Adrian Budhram, Clinical Neuroscientist, recently published a journal article on the use of an autoimmune neurology approval process to improve test utilization at LHSC. Here's a brief summary: Neural antibodies are valuable diagnostic biomarkers of autoimmune encephalitis, a devastating yet treatable neurologic illness. However, overutilization of neural antibody testing can place strain on healthcare resources and increase the proportion of false-positive results, which may be detrimental to patient care. In this study, researchers examined the impact of an Autoimmune Neurology approval process for this testing at LHSC, and found that it substantially improved test utilization: test volume was reduced by nearly half,

unnecessary repeating of negative results was eliminated, the number of true-positive results increased, and the yield of testing more than doubled. The study acknowledged several limitations, such as its retrospective design and the potential impact of the COVID-19 pandemic. The researchers also emphasized the importance of a comprehensive testing approach, using techniques like tissue indirect immunofluorescence (TIIF) to detect a broader range of neural antibodies with high sensitivity and specificity. The findings of this study suggest that an approval process incorporating Autoimmune Neurology expertise can improve utilization and yield of neural antibody testing for autoimmune encephalitis. Further research is needed to determine how these findings can be applied to a diverse array of academic and community clinical care settings. <https://doi.org/10.1016/j.jns.2023.120676>



### Message from Dr. David Driman and John French

As we look back on 2023, and look forward to 2024, we reflect on the essential work that is done within PaLM, without which the health system would not function, and upon which our patients depend. Underpinning this work is the fact that across LHSC, and throughout PaLM, we have GREAT PEOPLE, who go out of their way to deliver GREAT CARE, day in and day out. For that we extend our warm thanks and gratitude to you, and extend our best regards to all for the holiday season, and wish you all the very best for 2024.



Thank you,  
David and John

## Pathology

In Pathology, we have been actively taking steps towards complete digitalization. Over the last several months there have been opportunities to get practical, hands-on exposure as a number of digital systems have been showcased in the department by various vendors. Thanks to all who have been working hard to move the process forward.

We are excited to announce the hiring of a Molecular (Biomarker) Analyst in Pathology. The analyst will be involved in and will help facilitate reporting some of the many new biomarker tests that are essential for diagnosis and treatment decisions.

Pathology also continues to move ahead with ventilation improvement in the grossing room. This project will primarily involve renovation and expansion of the grossing area. The general design appears to be taking shape, getting ready for next steps.

In staffing news, Pathology continues to recruit for open pathologist positions.

## Microbiology

In Microbiology, we've dedicated substantial effort to enhance the standardization of our procedures and result reporting. Our initial focus was on the urine bench and after months of diligent review and frequent meetings, we successfully implemented a new workflow pathway in March 2023. This transformation was met with enthusiastic approval from our technologists as it provided them with a more concise, and highly efficient workflow.

We conducted analysis by comparing data extracted before and after the implementation. The results demonstrated a notable improvement in the standardization of reporting, marked by a 41% reduction in the variety of reports provided to physicians. Remarkably, these changes had little to no impact on reported susceptibilities, ensuring that the quality of our services remained uncompromised.

Following the streamlining of our workflow, we undertook the validation and introduction of Urine Chromagar orientation media. This represents the initial step in our journey towards laboratory automation. It has further enhanced the efficiency of reading urine cultures.

As we look ahead, our next objective involves the evaluation of a 10 uL specimen implant, in contrast to the current 1 uL, in our preparation for transitioning urine specimens to BD Keistra. This endeavor underscores our commitment to continuously improving our methods and remaining at the cutting edge of microbiological practices.



On November 2, 2023, the Microbiology Program celebrated the installation of their world-first 3<sup>rd</sup> generation BD Kiestra Total Laboratory Automation (TLA) system. A ribbon-cutting event was held in VH-B10-210 with leadership representatives from London Health Sciences Centre, St. Joseph's Health Care London, and Becton Dickinson.

This new TLA system will allow the laboratory to accommodate an increased volume in diagnostic testing, in addition to helping optimize staff productivity, test accuracy, and the time required to report a test result. Implementing automation is a key part of a larger transformation strategy to ensure future growth and sustainability of clinical microbiology services in Southwestern Ontario.

For more information on project implementation, see the [video](#) created by LHSC's Communications and Public Engagement team.

## PaLM Representation at LHSC

London Health Sciences Centre (LHSC) hosted its inaugural Teaching Awards ceremony on Friday, September 15, as part of the organization's first-ever Education Week. The Teaching Awards were designed to celebrate members of Team LHSC who have been instrumental in driving LHSC's education mandate forward and creating exceptional learning experiences for more than 4,000 learners at LHSC each year.

A call for nominations under the categories of Preceptors, Educators and Innovators was sent out earlier this summer. More than 70 nominations were received, and Irina Bacanu, Core Lab MLT, was one of the 26 individuals that were awarded at the in-person ceremony. Congratulations, Irina!



“Irina is enthusiastic about promoting laboratory science at every opportunity she gets. She has taken high school students on tours of PaLM, been an active participant in Take Your Kid to Work Day, presented to interns in the Transformation Trailblazers program, and provided an immersive experience at Trauma Career Bootcamp.” – Sue Milburn, Director, Pathology and Laboratory Medicine

## New Hires in PaLM in Q2 (July to September 2023)

Name	Job Title	Department Name
Noel Day	Medical Lab Technologist	Microbiology
Melanee DeSantis-Garner	Medical Lab Technologist	Core Lab, VH
Andrew Kim	Medical Lab Technologist	Pathology
Rebecca Robbins	Medical Lab Technologist	Microbiology
Zoe Tuckey	Medical Lab Technologist	Core Lab, UH
Kevin Carson	Medical Lab Technologist	Microbiology
Lauren McCulloch	Medical Lab Assistant	Lab Test Centre, LRCP
Anurag Sharma	Pathologist	Pathology
Bojana Djordjevic	Pathologist	Pathology
Paulnin Barbanida	Medical Lab Technologist	Core Lab, UH
Alyx Child	Medical Lab Assistant	Pathology
Michelle O'Shea	Lab Clerk	Pathology
Cirle Fernandes	Medical Lab Assistant	Core Labs, UH/VH
Ugonwa Ukwueze	Lab Clerk	Pathology
Jessica Franco	Medical Secretary	Pathology
Cassidy Da Costa	Phlebotomist	Lab Test Centre