

Alberta Doctors' Digest

Perspectives from the future of laboratory medicine

Ever wonder why medical students and residents choose laboratory medicine? It's quite simple – laboratory medicine is fascinating and fulfilling.

Six residents from the Universities of Calgary and Alberta took different paths to get to where they are, but they all agree that laboratory medicine is an exciting field, and they have big plans for their careers.

Meet the residents

- Dr. Andrea Bakker is a fourth-year anatomical pathology resident who initially planned on practicing family medicine. During a chance meeting with a pathology group, she chatted with a resident and became so intrigued by the practice of pathology that she changed course. She's pursuing a fellowship in genito-urinary pathology and is open to working in smaller and larger centers.
- Dr. David Beyer entered medical school thinking he'd like to have a family practice in a small or rural community setting. Then he took a pathology elective and changed career paths. Now in his fifth and final year of residency, he remains interested in practicing general pathology in a community setting.
- Dr. Peter Dromparis has a background in pharmacology. His passion for research led him to pursue a PhD in experimental medicine. His experience with research influencing treatment and diagnostic techniques led him to medical school and then pathology, where he is a fifth-year resident in anatomical pathology. He has secured a fellowship in liver and gastrointestinal pathology and hopes to return to practice in Alberta.
- Dr. Caylea Foster is a fourth-year resident in general pathology. She was drawn to this specialty before she started med school; she has a special interest in medico-legal investigation. She is planning to pursue a forensic pathology fellowship, and her area of interest means she will likely practice in a larger centre.
- Dr. Danielle Meunier is a third-year resident in hematopathology. She learned about pathology while she worked as a lab tech and was inspired to go to med school. She was drawn to the clinical aspect of her specialty and is especially interested in molecular pathology. If she pursues a fellowship in this area, she'll probably practice in a larger centre.
- Dr. Peet van der Walt initially trained in South Africa, where he became interested in treatment of infectious diseases. When he moved to Canada, he worked as a general practitioner before going back to school. He's now a fifth-year medical microbiology resident who would like to practice in Alberta.



(L to R) Dr. Andrea Bakker, Dr. David Beyer, Dr. Peter Dromparis, Dr. Danielle Meunier, Dr. Peet van der Walt, not pictured: Dr. Caylea Foster

The ever-changing face of laboratory medicine

The field of laboratory medicine evolves rapidly, which residents find exciting and challenging. It's a draw for residents who enjoy learning and applying new technologies and approaches in their practice. What physician wouldn't be excited about new advances in their field – new tools to make better diagnoses and help colleagues in other specialties provide the best possible patient care?

When asked about challenges, every resident mentioned the struggle to balance rapidly evolving technology and testing with finite resources available to equip labs. One of those finite resources is time. Because of rapidly changing information, such as the classification of tumors, it becomes increasingly difficult to stay up to date on every organ system.

“We're seeing many pathologists training in subspecialties,” explains Dr. Bakker. “While this may mean they spend less time on other organ systems, it does promote in-depth expertise and opportunities for collaboration with other clinical specialists.”

Pathology as a consult

Dr. Foster cites a commonly quoted statistic that lab tests influence 70% of clinical decision making. “Although it is not the largest health care expenditure, it has a significant influence on a patient's journey through the health care system,” she notes.

At the same time, returning test results is a labor-intensive process, which is something that's not well understood. Dr. Beyer notes that even a common procedure, such as a pap smear, means a lot of work behind the scenes to ensure that the correct result is going back to the patient's physician.

“There are many screening tests that physicians routinely order as part of annual physicals or to confirm or rule out specific conditions. Behind the scenes there is someone preparing each slide, examining the tissue sample and writing a report,” he explains. “When the tests do reveal a concern, the work we do gives the patient a better chance of fighting their disease.”

Dr. Bakker agrees that reading a slide is not always straightforward, and there is a lot of analytical thinking that goes into diagnostic reports. But the role of the pathologist goes further than reviewing slides and issuing reports; they're available for physicians to consult, just like any other specialty.

“We’re pathologists, but we’re also physicians. Our expertise can help other physicians arrive at the right diagnosis, and we welcome the chance to discuss their patients with them,” says Dr. Bakker.

Beyond the pandemic

Laboratory medicine’s profile has increased in recent months because of the critical role it has played in responding to COVID-19. Although the virus is a public health matter, those working in medical microbiology play a key role in managing the situation.

“Situations like those we’ve faced in 2020 stress the importance of a system-level approach to infectious disease management,” explains Dr. van der Walt. “Lab services are critical to all patient care, and our physicians are well-equipped to collaborate with other specialties in the best interest of our patients’ health.”

However, the pandemic has changed more than workload in the labs. In an instant, it changed the residents’ training experience. While residents continued with their education, the personal protective equipment, physical distancing and patient management meant they had a different training experience over the last few months. While some pathology services ramped up, many slowed down because elective procedures were postponed.

“I believe this has made us rethink how medical education is delivered,” says Dr. Foster. “Hands-on experience is critical to developing great physicians, and our residency programs will need to plan for training under difficult circumstances.”

Rewarding career opportunities

Dr. Dromparis can’t stress enough what a great career path pathology is, and he encourages every medical student to explore its possibilities and become familiar with what it offers to patient care.

“Laboratory medicine doesn’t always get the recognition that other specialties do,” he says. “The direct impact we have on patient care, the ongoing learning and a healthy work-life balance, give me immense job satisfaction.”

Dr. Meunier was drawn to her specialty in part because of the ability to practice medicine in “real time,” working with other physicians to address the patient’s immediate needs.

“Lab medicine physicians are extremely passionate about their work,” says Dr. Meunier. “Whichever type of medical specialty they choose, they are dedicated to getting at the truth behind the pathology and using those results to help patients.”

The bottom line

Med students, take a chance on a pathology elective. You never know when you’ll discover a new and satisfying career path. At the very least, you’ll gain some appreciation for the work that goes into test results.

Practicing physicians, add your local lab medicine physicians to your list of valuable resources. They’re available to consult with you about your patients’ test results.

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