2024-2025

Annual Report

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Overview of Prairie Diagnostic Services Inc.

Our Passion

Empowering clients with world-class laboratory services and expertise

Our Strategic Goals

- Generate value for members
- Maximize impact on animal and One-Health sectors
- Emerge as a first choice for clients and employees

Our Core Values

- Integrity
- Teamwork
- Innovation
- Client-Centred
- Always Improving

Our Accreditations

- Standards Council of Canada (SCC) to ISO/IEC 17025 standard for specific tests
- Fully accredited by the American Association of Veterinary Laboratory Diagnosticians (AAVLD) for all species

Board of Directors

Mr. Lee Whittington
Chair
Chief Executive Officer
Four Oaks Investments

Dr. Betty Althouse
Vice-Chair
Former Saskatchewan
Chief Veterinary Officer
and Veterinarian (Retired)

Dr. Trent Wennekamp
Veterinary Practitioner
Mixed Animal Practice
Lloydminster Animal Hospital

Mr. Robert Pentland
Executive Director
Corporate Services
Saskatchewan Ministry of
Agriculture

Dr. Chris Bell
Executive Director and Equine Surgeon
Elders Equine Veterinary Service
Adjunct Professor – Equine Surgery (WCVM)

Dr. Alex McIsaac
Animal Health Veterinary Officer
Canadian Food Inspection Agency
(Retired)

Tammy Lucas
Chief Operating Officer
Veterinary Medical Centre
Western College of Veterinary Medicine

Mr. Pat Pitka
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Dr. Grant Maxie
Former Director
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Laboratory Services
University of Guelph (Retired)

Dr. William Murphy
Professor
Edwards School of Business
University of Saskatchewan

Dr. Shannon McCreary
Veterinary Practitioner & Ag Producer
McCreary Land & Livestock Ltd.
Regina Humane Society

Dr. Elemir Simko
Faculty Member
Department of Veterinary Pathology
Western College of Veterinary Medicine

Mr. Venkata Vakulabharanam
Executive Director
Livestock Branch
Saskatchewan Ministry of Agriculture

Message from Board Chair

At Prairie Diagnostic Services (PDS), we recognize that for any organization to thrive, it must be strong and focused in four essential areas: **Operations**, **Finance**, **Sales & Marketing**, and **Human Resources**. If you picture a four-legged table, you will see the analogy I use to describe a successful business. In our "table" analogy, these four legs are tied together by **strategy**, which serves as the tabletop. Yet, the true strength and long-term success of PDS rests on the floor beneath — the **culture** of our organization. I am pleased to report that this past year, PDS has made strategic investments and achieved important successes in each of these areas. As you read this Annual Report, you will see examples of how we have grown, met challenges, and positioned ourselves for the future.

As Chair, I extend my sincere appreciation to our Board of Directors for their enthusiasm, expertise, and commitment in advancing our Vision: **Empowering Clients with World-Class Laboratory Services and Expertise**.

Many organizations claim to be "world-class," but at PDS, we define it in specific, tangible terms. First, our clients must be at the centre of everything we do. For food animal practitioners and their staff, this means delivering timely, accurate diagnostic services alongside practical insights and recommendations to support their animal husbandry clients. For our partners — the Government of Saskatchewan and the University of Saskatchewan — it means providing surveillance expertise, teaching capability, and core laboratory services that meet the highest scientific and operational standards.

I also wish to recognize **Dr. Yanyun Huang**, who this year completed his fifth year as Chief Executive Officer. A pathologist and long-standing member of PDS, Dr. Huang has brought both operational insight and a deep understanding of the technical requirements necessary to fulfill our mandate. Over the past five years, we have watched with pride as he has grown from a technical expert to a respected institutional leader — one who not only leads our staff, but also represents our industry on the national and international stage through research collaborations and professional events.

From a financial perspective, I am pleased to report that PDS achieved outstanding results this year. As a non-profit organization, we rely on the continued support of our key partners, the Government of Saskatchewan and the University of Saskatchewan. However, sustaining a state-of-the-art laboratory also requires prudent financial management and strategic investment in equipment and infrastructure. While grants and research funding play an important role, it is the careful stewardship of our resources that ensures we can meet the ongoing needs of both food animal and companion animal practitioners. This year's strong financial position is the result of the dedication and adaptability of our CEO and staff, who reorganized duties and went above and beyond during a period of significant change.

PDS remains a unique model in Canada — serving the needs of government, the university, and the broader livestock industry across Western Canada. In other jurisdictions, diagnostic laboratories often exist solely within government or university structures; here in Saskatchewan, PDS bridges both worlds, ensuring that the combined expertise and resources of each partner benefit the industry as a whole.

Our ability to adapt is essential. The livestock industry is evolving rapidly, and PDS must continuously align our services with the changing needs of our partners and clients. The creation of our Advisory Group three years ago has strengthened our forward-looking perspective, enabling us to anticipate challenges and opportunities in animal agriculture across North America.

Ultimately, while our science and services are about animal health, our day-to-day success depends on effective communication, collaboration, and the professional growth of our people.

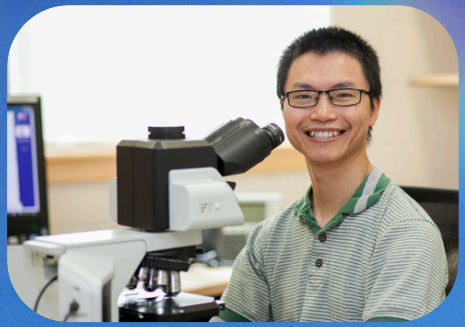
Highlights from the past year include:

- Rapid response to safeguard industries from emerging diseases such as Cache Valley virus in sheep and foreign animal diseases such as highly pathogenic avian influenza.
- Aggressive test development and improvement tailored to client needs.
- Successful launch of our **feed testing laboratory** in time for the upcoming testing season.
- Significant **research funding** secured for projects benefiting industry, including anthrax field tests and swine abortion investigations.

On behalf of the Board, I thank our partners, clients, and staff for their continued trust and commitment. Together, we will ensure that Prairie Diagnostic Services remains a valued, innovative, and world-class resource for animal health in Saskatchewan and beyond.

Lee Whittington
Chair of the Board
Prairie Diagnostic Services Inc.

Message from CEO



After several challenging years, 2024–25 has been a year of growth and achievement at Prairie Diagnostic Services (PDS), powered by our unwavering commitment to client focus and innovation.

We delivered the highest number of fee-for-service tests since 2018, addressing critical needs within Saskatchewan's poultry industry and expanding our portfolio to include feed nutritional analyses. We also set a record for developing or enhancing diagnostic tests, reinforcing PDS's position as a progressive leader in veterinary diagnostics and a trusted partner to our clients.

Our innovation strategy focuses on meeting real-world needs. This year, we secured approximately $0.5 million in research funding to advance field-based anthrax diagnostics, investigate the causes of unexplained swine abortions, and develop a comprehensive bovine infectious disease panel.

When Cache Valley Virus threatened the sheep industry, our team launched an active surveillance initiative within days, demonstrating our agility and vital role in safeguarding animal health.

We also maintained full accreditation from the American Association of Veterinary Laboratory Diagnosticians — an assurance of the quality and reliability of our work.

Equally important is our investment in people. Through our culture initiative, we are building PDS into a first-choice workplace where excellence, collaboration, and support thrive.

These accomplishments reflect our core values in action. We will continue to lead the region through purposeful innovation while delivering client-focused excellence.

Thank you to our dedicated staff, clients, and partners. Your trust propels us forward.

Dr. Yanyun Huang
Chief Executive Officer
Prairie Diagnostic Services Inc.

Year at a Glance

139,867 tests conducted

22 tests developed or improved

19,743 tests for regulated diseases

$327,993 equipment investment

7 peer-reviewed publications

Client Services Information

This year, PDS continued to strengthen our client relationships through a variety of outreach initiatives. Our team engaged directly with veterinary clinics to better understand their needs and provide support that enhances diagnostic outcomes.

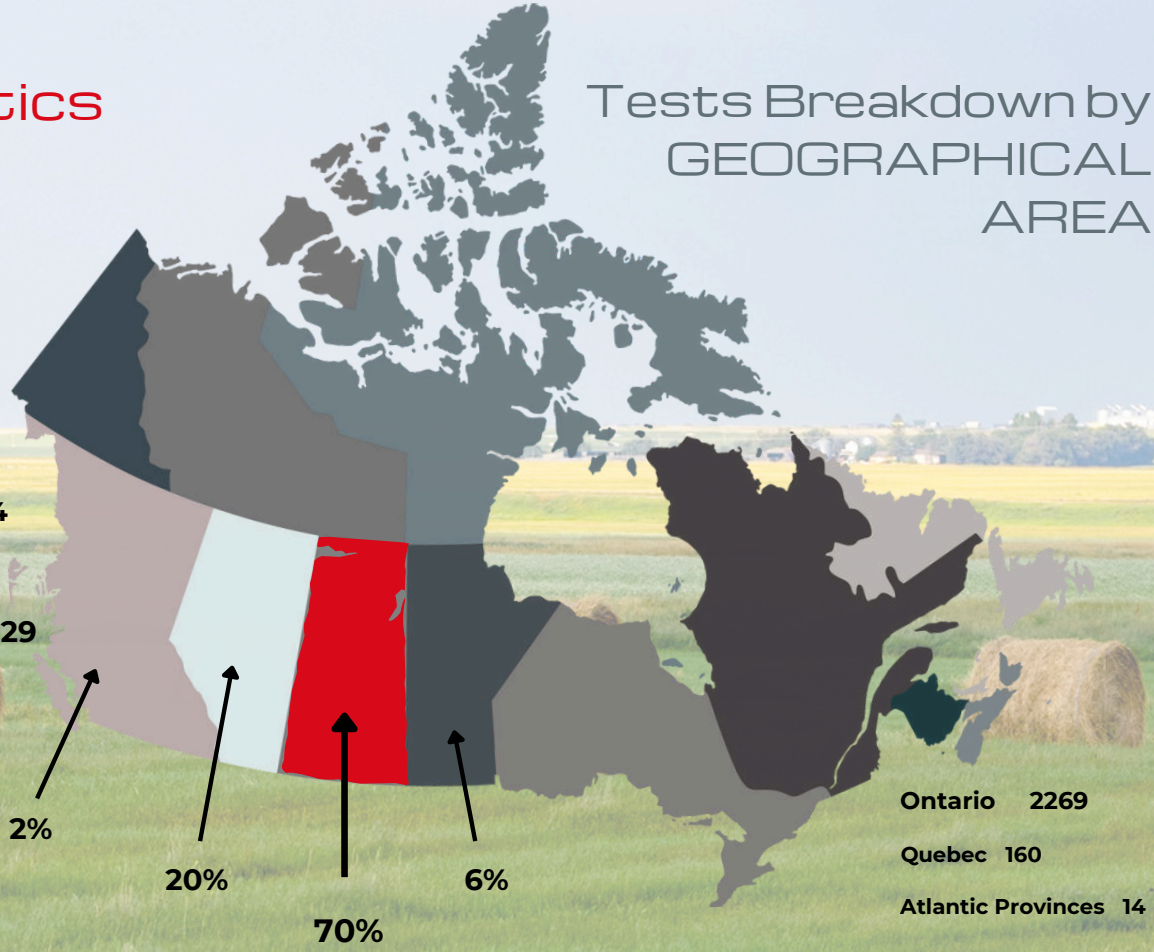
We were pleased to attend and participate in several veterinary and industry conferences, creating opportunities to connect with clients, share expertise, and stay current with emerging issues in animal health.

To further support communication, we launched a refreshed client newsletter, providing timely updates on new tests, service changes, and helpful resources. This initiative has been well-received and reinforces our commitment to keeping clients informed and engaged.

Together, these efforts reflect our ongoing dedication to delivering responsive, accessible, and client-focused service.

Diagnostics

Tests Breakdown by GEOGRAPHICAL AREA



Yukon 31

Northwest Territories 158

British Columbia 2324

Alberta 23,455

Saskatchewan 80,929

Manitoba 6731

United States 7

International 4

Unknown 8

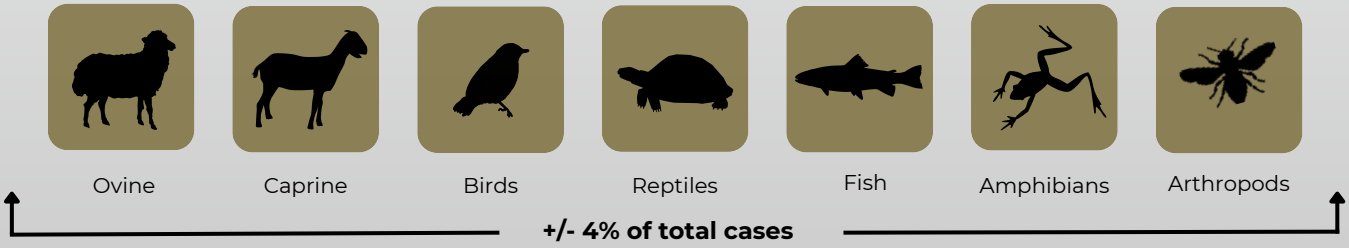
Ontario 2269

Quebec 160

Atlantic Provinces 14

Between May 2024 and April 2025, PDS received close to 35,000 cases and conducted almost 140,000 tests. The prairie provinces (Saskatchewan, Alberta, and Manitoba), comprising ~98% of the total submissions, continue to be the main geographical areas that PDS serves. PDS also occasionally supports other Canadian provinces and conducts small numbers of digital pathology internationally.

Test Breakdown by SPECIES



PDS continues to provide diagnostic services for all species to veterinary communities. The top four species PDS serves are bovine, porcine, equine and canine, comprising a total of 80% of samples.

Innovation Updates

We focus on our clients, and we innovate for our clients. From targeted test development to externally funded research, PDS has delivered another strong year of innovation.

A cross-disciplinary test development team was established, meeting regularly to set priorities and track progress. This coordinated approach resulted in a record number of tests being developed or improved in 2024–25. Many of these directly support the poultry and swine sectors, reinforcing client feedback that PDS's comprehensive testing portfolio is a key reason for choosing our services. We are building on this strength to further solidify our position as a "one-stop shop" for veterinarians.

One notable achievement was the successful launch of feed nutritional analyses. This initiative emerged from listening to industry concerns, collaborating with subject matter experts, and making strategic investments. Industry stakeholders identified the absence of a Saskatchewan-based feed testing laboratory as a gap. After consultation with University of Saskatchewan experts, we determined that PDS could offer this service with modest investment and careful planning. We now look forward to supporting the industry and adding value to livestock production.

Our success in attracting research funding was another highlight. Approximately $0.5 million was awarded to PDS for applied research and development, including projects to:

- Develop an accurate and convenient field test for anthrax screening.
- Investigate the causes of unexplained swine abortions.
- Provide a cost-effective and comprehensive diagnostic panel for bovine infectious diseases — eliminating the need for clients to select individual pathogens to test.

Diagnostic Highlights

This year, we completed the highest number of fee-for-service tests since 2018. Continued growth in serology, molecular biology, and endocrinology more than offset declines in certain other areas of our portfolio where private sector testing has expanded.

Changes in the Saskatchewan poultry industry created a gap in diagnostic services, and PDS stepped up to fill this need. We now provide necropsy services for both commercial and backyard flocks. To further support the poultry sector, we developed a suite of PCR tests and sequencing assays to monitor and combat pathogens of concern, including reovirus, infectious bursal disease (IBD) virus, adenovirus (inclusion body hepatitis), metapneumovirus, and infectious bronchitis (IB) virus, among others.

The second phase of the Bovine Reproductive Sequencing Panel (BovReproSeq) study, funded by the Beef Cattle Research Council (BCRC), concluded this year. In this phase, we applied BovReproSeq in real diagnostic cases and compared its performance with a panel of traditional tests. While the results are still being analyzed, one notable case has already demonstrated BovReproSeq's value — identifying Mycoplasma bovis as a previously under-recognized reproductive pathogen. Without BovReproSeq, this case would have remained unresolved.

We also developed PCRs for additional swine respiratory and neurological pathogens, filling important gaps in Canadian diagnostics. To the best of our knowledge, PDS is currently the only laboratory in Canada offering PCR tests for porcine astrovirus 3 and 4, porcine sapelovirus, porcine atypical pestivirus, and porcine parainfluenza virus 1. These assays significantly enhance our ability to investigate complex neurological and respiratory disease cases in pigs.

Surveillance Highlights

PDS continues to be a strong supporter of the Western Canadian Animal Health Network (WeCAHN), maintaining our commitment to data sharing while increasing participation from our team of diagnosticians. As a member of the Canadian Animal Health Surveillance System (CAHSS), we also contribute data to support the development of a national disease dashboard, helping to coordinate and streamline surveillance across the country.

Surveillance is not just about numbers — it is also about timely communication. Informal exchanges between veterinarians and diagnosticians can be a powerful tool for detecting disease patterns, sometimes referred to as "rumor surveillance." In late 2024, during internal diagnostic case rounds, our diagnosticians noted a surge in aborted, deformed lambs. This was independently observed by the Western College of Veterinary Medicine (WCVM) field service team. We quickly recognized the likely cause: an outbreak of Cache Valley Virus.

Within a single day, PDS collaborated with the WCVM Disease Investigation Unit and the Saskatchewan Ministry of Agriculture to design and launch an active surveillance project. This work confirmed the cause of the outbreak and enabled PDS to validate a new PCR assay for Cache Valley Virus.

Through systematic surveillance and by staying alert to real-time diagnostic trends, PDS strengthens provincial, regional, and national animal health monitoring — maximizing the impact of our work and delivering strong value to our members.

Quality Assurance

PDS implements a Quality Management System in accordance with the current version of the ISO/IEC 17025 *General Requirements for the Competence of Testing and Calibration Laboratories*, Standards Council of Canada, and the current version of the standard *AAVLD Requirements for an Accredited Veterinary Medical Diagnostic Laboratory*, American Association of Veterinary Laboratory Diagnosticians, Inc.

The laboratory participates in proficiency test programs, inter-laboratory comparisons, and in-lab assessments to ensure the standard of testing expertise is maintained.

Highlights from the 2024-2025 year include:

- The American Association of Veterinary Laboratory Diagnosticians conducted a four-day on-site assessment of PDS in August 2024. This assessment was a third-party review of laboratory competence and quality assurance. It covered the entire spectrum of the organization, including all laboratory areas, administration, human resources, financial management and information technology. Successful re-accreditation till December 2029 was granted by the AAVLD.

- The PDS Microbiology Laboratory is preparing for the upcoming biennial Standards Council of Canada site visit and audit, which will occur in late 2025.


The American Association
of
Veterinary Laboratory Diagnosticians
Accreditation Committee
certifies that
Prairie Diagnostic Services Inc.
University of Saskatchewan
Saskatoon Saskatchewan, Canada
Has met the standard for
Full Accreditation / All species

SCC Accredited LAB

Looking Forward

With a continued focus on clients and client-driven innovation, PDS will build on proven strategies to deliver value to our members, maximize our impact on animal health and One Health, and strengthen our reputation as the first-choice laboratory for both clients and employees.

Journal Publications

- Facciuolo, A., Aubrey, L., Barron-Castillo, U., Berube, N., Norleen, C., McCreary, S., **Huang, Y.**, Pessoa, N., Jacome, L.M., Mubareka, S. and McGeer, A., 2025. Dairy cows develop protective immunity against reinfection with bovine H5N1 influenza virus. *Nature Microbiology*, pp.1-12.

- **Periyasamy, D.**, **Huang, Y.** and Hill, J.E., 2025. Targeted syndromic next-generation sequencing panel for simultaneous detection of pathogens associated with bovine reproductive failure. *Journal of Clinical Microbiology*, 63(1), pp.e01433-24.

- Christensen, J., **Huang, Y.** and Duizer, G., 2024. Lessons from CanSpotASF: Moving towards risk-based African Swine Fever surveillance with rule-out testing in Western Canada. *Preventive Veterinary Medicine,* 226, p.106196.

- **Koziy, R.V.**, Bracamonte, J.L., Katselis, G.S., Udenze, D., Hayat, S., Hammond, S.A., Simko, E. Putative mRNA Biomarkers for the Eradication of Infection in an Equine Experimental Model of Septic Arthritis. *Veterinary Sciences*. 2024 Jul 2;11 (7):299.

- **Koziy, R.V.**, Katselis, G.S., Yoshimura, S., Simko, E., Bracamonte, J.L. Temporal kinetics of serum amyloid A (SAA) concentration and identification of SAA isoforms in blood and synovial fluid of horses with experimentally induced septic arthritis, nonseptic synovitis, and systemic inflammation. *Journal of Veterinary Diagnostic Investigation 2024.*

- Biganski, S., Obshta, O., **Kozii, I.**, **Koziy, R.**, **Zabrodski, M.W.**, Jose, M.S., Thebeau, J.M., Silva, M.C.B., Raza, M.F., Masood, F., Wood, S.C, and Simko, E. (2024) Fall treatment with fumagillin contributes to an overwinter shift in Vairimorpha species prevalence in honey bee colonies in western Canada. Life; DOI: https://doi.org/10.3390/life14030373

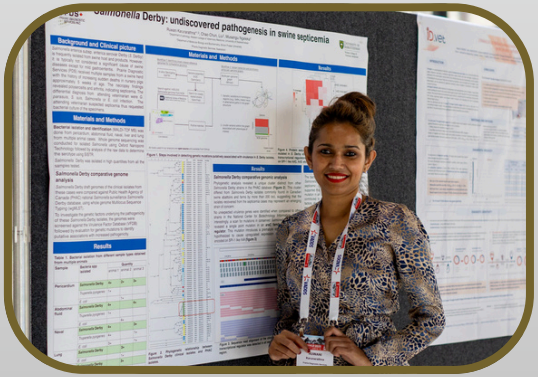
- Camilli, M.P., Simko, O.M., Bevelander, B., Thebeau, J.M., Masood, F., Silva, M.C.B., Raza, M.F., Markova, S., Obshta, O., Jose, M.S., Biganski, S., **Kozii, I.V.**, **Zabrodski, M.W.**, Moshynskyy, I., Simko, E., and Wood, S.C. (2024) Fetal alcohol spectrum disorder: the honey bee as a social animal model. Life; DOI: https://doi.org/10.3390/life14040434

Conference Presentations

- **I. Kozii, S.**, Wood, S. Martian. Workshop: Honey Bee Biology and Common Diseases. 63rd Annual CALAS/ACSAL Symposium, 22-25 June 2024, Saskatoon, SK.
- **Ngeleka, M.**, Streamlining diagnostic bacteriology information using genomics. Canadian Animal Health Laboratorians Network, 2-5 June 2024, Ottawa, ON.
- **Ngeleka, M.**, Genomics for a rapid and comprehensive diagnostic information delivery in clinical bacteriology. American Association of Veterinary Laboratory Diagnosticians, 11-14 October 2024, Nashville, TN.
- **Periyasamy, D.**, BovReproSeq Bovine reproductive pathogen sequencing panel. Canadian Animal Health Laboratorians Network, 2-5 June 2024, Ottawa, ON.
- **Periyasamy, D.**, **Huang, Y.**, Hill, J.E., 2025 BovReproSeq Bovine reproductive pathogen sequencing panel. International Symposium of the World Association of Veterinary Laboratory Diagnosticians, 12-14 June 2025, Calgary, AB.
- **Karunarathna, R.**, Liu, C.C., Periyasamy, A.B., **Ngeleka, M.**, Metagenomics for a rapid and comprehensive *Salmonella* surveillance diagnostics in the poultry egg farming, Western Poultry Disease Conference, 7-9 April, 2025, Calgary, AB.
- **Karunarathna, R.**, Liu, C.C., **Ngeleka, M.**, Genomics to deliver and comprehensive information on swine production limiting diseases, Western Canadian Association of swine veterinarians, 24-25 October, 2024, Saskatoon, SK.

Poster Presentation

- **Karunarathna, R.**, Lui, C.C., **Ngeleka, M.**, *Salmonella* Derby: undiscovered pathogenesis in swine septicemia, International Symposium of the World Association of Veterinary Laboratory Diagnosticians, 12-14 June, 2025, Calgary, AB.



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