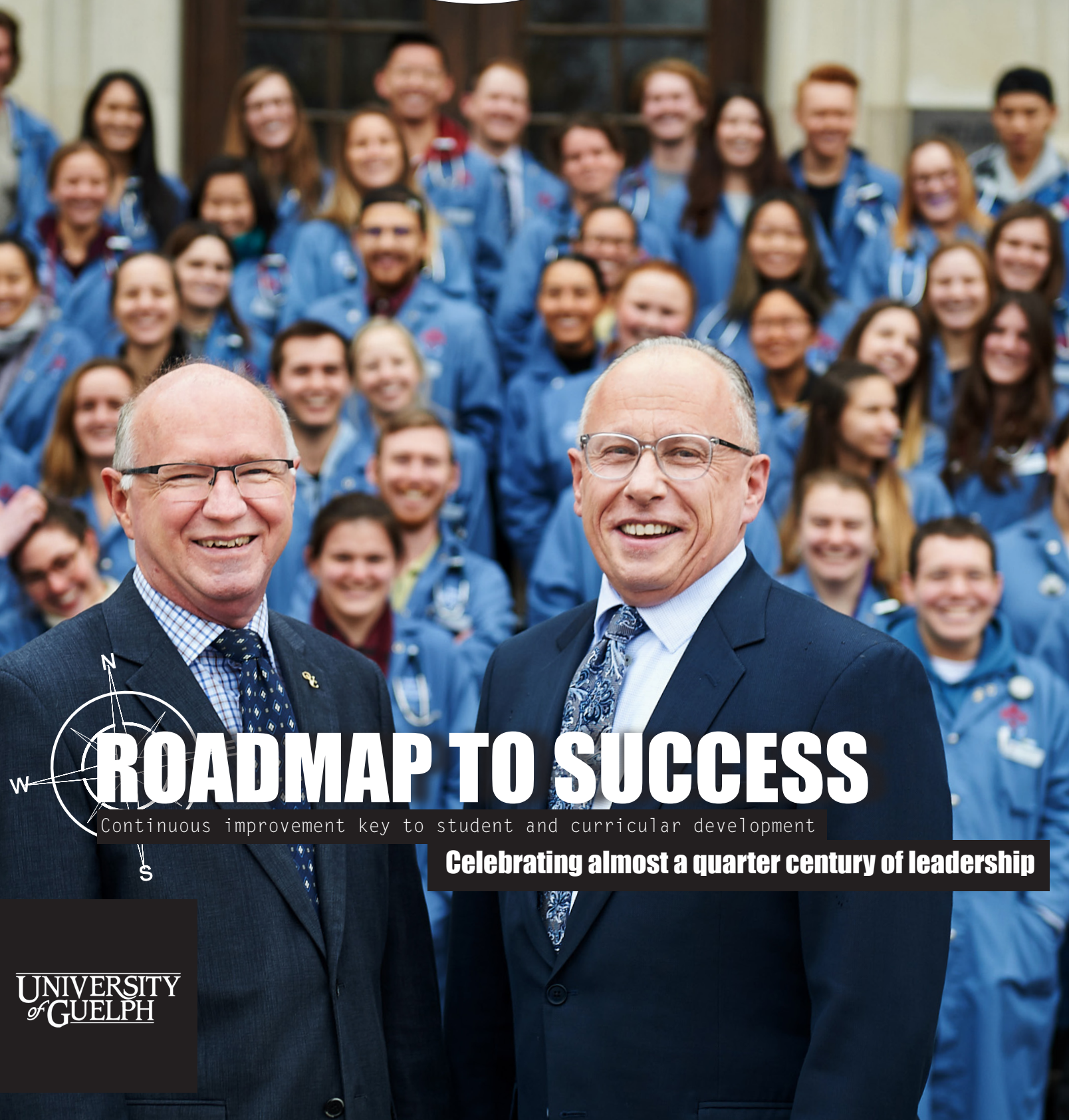


the crest



ROADMAP TO SUCCESS

Continuous improvement key to student and curricular development

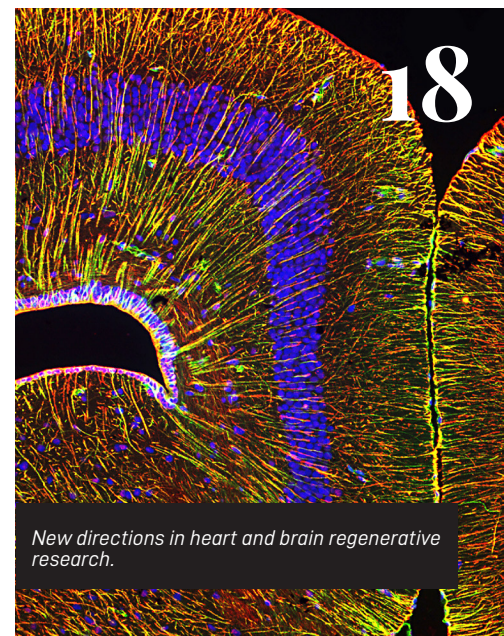
Celebrating almost a quarter century of leadership

contents



After almost a quarter of a century of leadership Drs. Peter Conlon and Kerry Lissemore complete their terms as associate deans at OVC. Read about their commitment to continuous improvement on page 8. Learn more about a NEW scholarship named in their honour on page 5.

Photo credit: Noelle O'Brien, Trina Koster Photography



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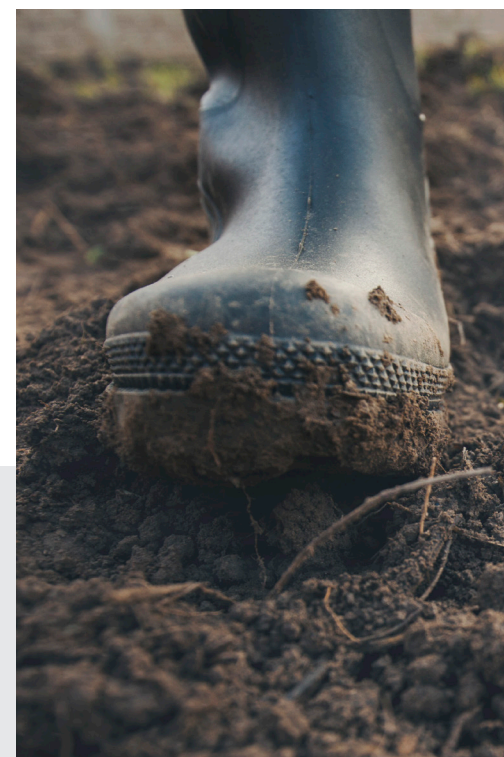
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about the crest

The Crest is the research, teaching and health care magazine of the University of Guelph's Ontario Veterinary College. It is published by OVC for alumni, friends and partners of the college to share our collective strengths in evidence-based discovery, veterinary expertise and educating the next generation of leaders in animal, human and environmental health.

Alumni and friends will receive both *The Crest* and the *Portico* separately two times per year.



From the Dean

Innovation is at the core of everything we do at the Ontario Veterinary College, as we strive to improve life for animals and people, and seek to sustain the health of the planet we share.

You'll find this mission clearly reflected in the following stories. From advancing animal health surveillance to impressive new discoveries in regenerative research, our learner-centred approach to education and research speaks to the unique and vital role colleges of veterinary medicine play in modern society.

An unparalleled commitment to the learner is clearly evident in the work of Drs. Peter Conlon and Kerry Lissemore, who both recently completed their terms as, respectively, Associate Dean Students and Associate Dean Academic. In these roles, Peter and Kerry have demonstrated visionary leadership, ensuring holistic professional and personal development in our students for more than two decades. And the results are clearly evident: Kerry and Peter have played pivotal roles in sustaining OVC as a globally top-ranked college of veterinary medicine. And, as a new Dean, they have been a tremendous resource to me personally. I extend a sincere thank you to them and encourage you to learn more about their work in these pages.

Dr. Joanne Hewson has taken the reins as Associate Dean, Students and Academic. Joanne brings an impressive skill set and a career-long commitment to advancing veterinary medical education; we look forward to working with her in this new role.

We appreciate the positive feedback many of you provided in the reader survey. We heard a clear preference for two issues of *The Crest* per year to stay abreast of the news and research at the college. Going forward, we'll have issues each January and June.

In this issue and future issues, you will find stories that speak to the many ways we are delivering on our 2017–2022 Strategic Plan: furthering One Health research and training; preparing students for diverse careers; enhancing our global impact; embracing novel learning and business technologies; and ultimately making OVC the first choice for students, staff and professors who aspire to Improve Life.

We look forward to keeping in touch with all of you and, as always, welcome your thoughts and comments.

Dr. Jeffrey Wichtel, BVSc, PhD, Dip. ACT
Professor and Dean, Ontario Veterinary College



OVC appoints new Associate Dean, Students and Academic

Ontario Veterinary College professor Dr. Joanne Hewson has been appointed to the position of Associate Dean, Students and Academic. Dr. Hewson began a five-year term in October 2018.

Dr. Hewson is a Large Animal Internal Medicine faculty member in the department of Clinical Studies at the University of Guelph. She holds both a Doctor of Veterinary Medicine (DVM) and PhD degree from the University of Guelph.

The Associate Dean, Students and Academic is a key member of the OVC senior leadership team and is responsible for providing leadership in advancing the academic, professional and personal development of students in the DVM program, curricular innovation and oversight, quality assurance and integrity and DVM student recruitment and career readiness.

"I look forward to working with Joanne on continuing the many initiatives and successes that have been implemented over the years through the stellar leadership of former Associate Deans Drs. Peter Conlon and Kerry Lissemore," says OVC dean Jeffrey Wichtel. "I also look forward to pursuing new opportunities as we continue to meet all of the challenges and opportunities that are presented to the college."

Hewson is board-certified by the American College of Veterinary Internal Medicine. She has been actively involved in a variety of initiatives related to curricular design and redesign and has pursued various opportunities to enhance her skills and knowledge in this area over the past few years.

She is also an active researcher and part of the AWAR2E group, Advancement of Wellness and Resilience via Research and Education. The group came together in 2015 in a multi-pronged approach to mental health and wellness initiatives for veterinarians, student veterinarians and agricultural producers.

Dr. Lissemore, Associate Dean, Academic, completed his term at the end of September 2018 and Dr. Conlon, Associate Dean, Students, completed his term in December 2018.

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The important role of research and veterinary medicine in surveillance.



Photo credit: Michelle Oblak

VETERINARY NORTH AMERICA FIRST: 3-D PRINTED IMPLANT REPLACES DOG'S SKULL

In spring 2018, OVC veterinary surgical oncologist Dr. Michelle Oblak led a successful reconstructive skull surgery, implanting a custom 3-D printed skull plate in a dog. When Patches, an eight-year-old dachshund, presented to Dr. Galina Hayes at Cornell University's College of Veterinary Medicine with a large cancerous growth on her skull, Hayes contacted Oblak for her advice on the difficult case. Oblak, along with partners at Sheridan College and Western University's ADEISS, imaged and built a 3-D model of the dog's skull, along with a personalized skull plate, which resulted in a faster, safer and improved life-saving surgery. The story garnered media attention around the world, with most notable coverage in *The New York Times*, *CNN*, *BBC*, *CBS Evening News*, *TIME*, *People*, *The Canadian Press*, *The Globe and Mail* and more.



OVC PET TRUST WALK IN THE PARK GALA RAISES \$5 MILLION

Animal lovers and philanthropists announced a record-breaking \$4,944,680 million in donations at the fourth OVC Pet Trust Walk in the Park Gala on October 1, 2018. During the event, a gift of more than \$4 million was announced from the estate of the late Catherine Bergeron. A subsequent donation brought the total to \$5 million. The event attracted 250 people to Daniels Spectrum in Toronto. Funds raised will be used to support companion animal emergency medicine and critical care through the expansion of the Intensive Care Unit at OVC. The Gala was co-chaired by long-time health care philanthropist Emmanuelle Gattuso and OVC Pet Trust board member, Roly Browning Watt. The evening was emceed by Paul Sun-Hyung Lee, star of the Canadian comedy television series *Kim's Convenience*.



Photo credit: Ryan Emberley



Photo credit: Karen Mantel

EQUINE FOUNDATION OF CANADA SUPPORTS HANDS-ON CLINICAL SKILLS AT OVC

Thanks to the Equine Foundation of Canada (EFC) a NEW horse model is helping to enhance OVC's learner-centred approach to teaching. The detailed model, produced by Canada's Veterinary Simulator Industries, allows students within OVC's Doctor of Veterinary Medicine program to practice clinical and technical skills at their own pace. The advanced model includes an anatomically correct reproductive tract with ovaries and a uterus, plus the spleen, kidneys and digestive tract, so students can palpate for a variety of conditions — building both confidence and competencies before working with a live mare. The latex organs can be inflated to mimic certain reproductive challenges and colic, the leading cause of premature death in horses.



Photo credit: Jane Dawkins

FAMOUS PIG INSPIRES DONATIONS TO EXPAND OVC DIAGNOSTIC SERVICES

Esther the Wonder Pig, a 650-pound social media phenomenon, had fallen mysteriously ill and needed advanced imaging to arrive at an accurate diagnosis. Steve Jenkins and Derek Walter launched a campaign to equip OVC with a CT scanner large enough to accommodate her. With 11,000 donors from 57 countries, their Happily Ever Esther Farm Sanctuary raised \$650,000 in a few months. Now, Esther has her diagnosis and OVC is the first veterinary hospital in Canada to offer this type of advanced diagnostic service to large animals. Dr. Stephanie Nykamp, OVC's associate dean, clinical programs, says the new machine will fill a gap in large animal health care not only at OVC but also across Canada. "This new piece of equipment will enable us to scan a horse in a standing position, reducing the risks and recovery associated with anesthesia and placement on a table," says Nykamp.



Photo credit: Noelle O'Brien, Trina Koster Photography

NEW SCHOLARSHIPS NAMED TO HONOUR PAST ASSOCIATE DEAN ACADEMIC AND ASSOCIATE DEAN, STUDENTS

In recognition of Drs. Peter Conlon's and Kerry Lissemore's remarkable contributions to the Ontario Veterinary College (OVC) and to the student veterinarians whose lives and careers have been shaped by their service to education, OVC has launched a scholarship fund in each of their names. If you would like to join us in honouring their legacies you can do so by making a donation online. To honour Dr. Peter Conlon visit <http://uofg.convio.net/Conlon>. To honour Dr. Kerry Lissemore visit <http://uofg.convio.net/Lissemore>. Donations can also be made by mail: Ontario Veterinary College, University of Guelph, 50 Stone Rd E, N1G 2W1. For more information, contact Amy Tremaine, Alumni Advancement Manager at 519-824-4120 ext. 56679.



OVC PROFESSOR NAMED TO 2018 'HIGHLY CITED RESEARCHERS' LIST

OVC professor Dr. Stephen LeBlanc, OVC DVM 1997 and DVSc 2001, is one of three University of Guelph professors named to the prestigious Clarivate Analytics list of "Highly Cited Researchers" for 2018. The list, published annually, includes researchers ranking in the top one per cent by citations for field and publication year. In addition to teaching veterinary and agriculture students and providing clinical farm service, LeBlanc studies transition dairy cow metabolic and reproductive health and management, including field validation of precision technologies.



Illustration supplied by the OVC Health Sciences Centre

OVC PET TRUST CAMPAIGN REACHES \$9-MILLION GOAL

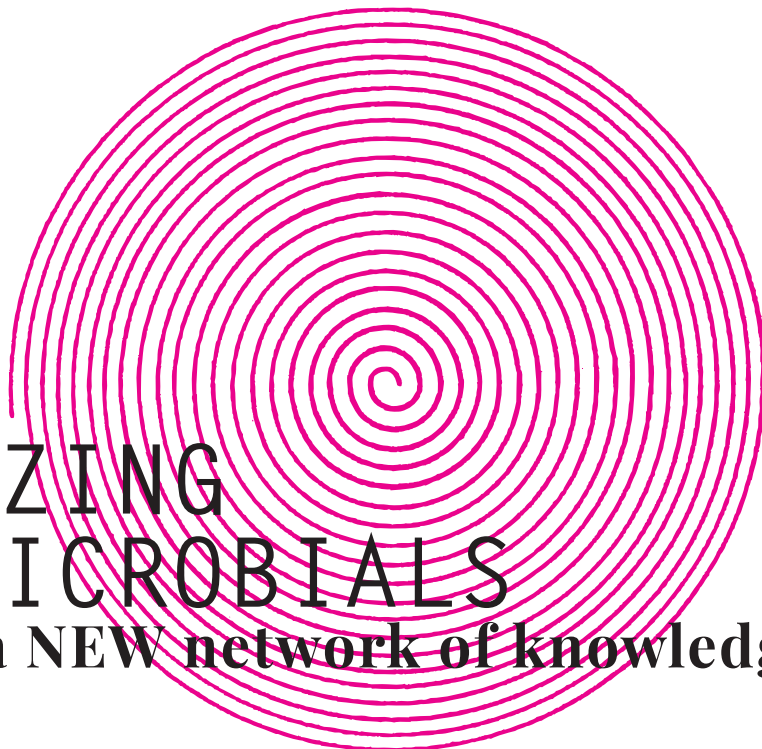
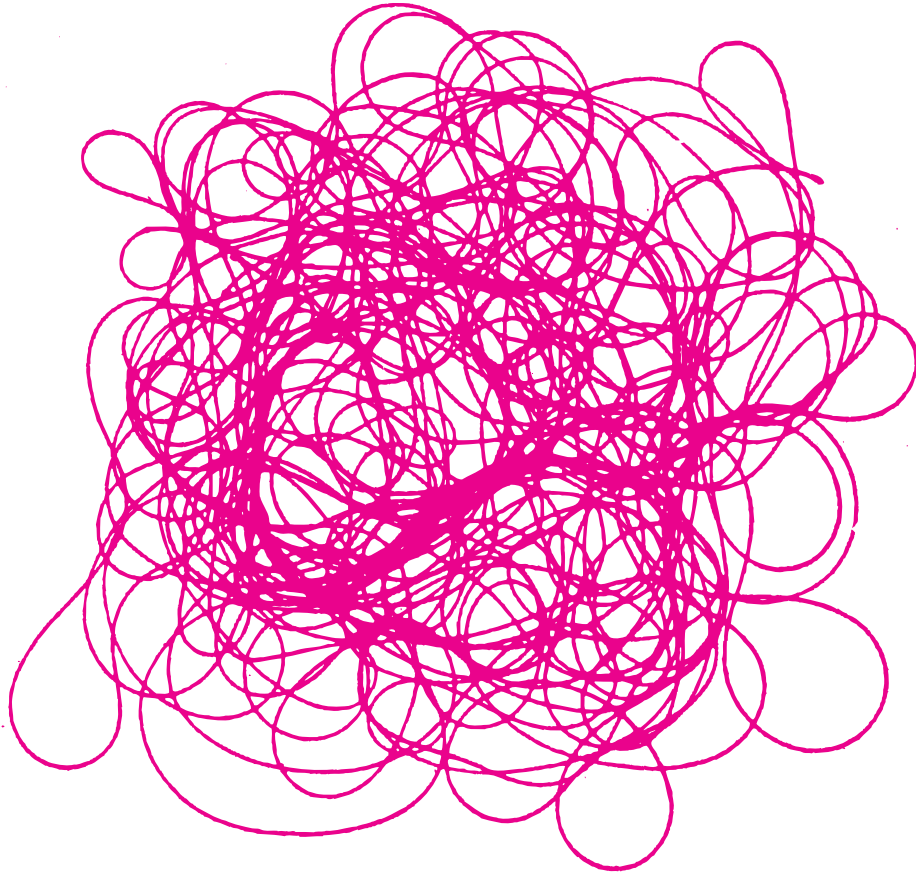
An extensive upgrade to the OVC Companion Animal Hospital will allow OVC to remain at the cutting-edge of veterinary medical care, training and discovery. Funds raised by OVC Pet Trust's *Friends Together for Longer* campaign will create new advanced surgery and anesthesia facilities. A new gift from the estate of the late Mona Campbell completed the \$9-million project this year and will create a new endoscopy unit in honour of past OVC dean, Dr. Elizabeth Stone. The new facilities are expected to open in 2019.



Photo credit: istockphoto.com/ wundervisuals

ADVOCACY FOR MENTAL HEALTH & RESILIENCY IN AGRICULTURE

OVC professor Dr. Andria Jones-Bitton shared her expertise on farming and mental health as a witness for a House of Commons Standing Committee on Agriculture and Agri-Food study of farmer mental health. Jones-Bitton studies the epidemiology of mental health and resilience in the agricultural and veterinary sectors. In a survey looking at the health of Canadian farmers, she found multiple mental health concerns including high levels of stress, burnout and anxiety and low levels of resilience.



ANALYZING ANTIMICROBIALS

Creating a **NEW** network of knowledge

New research at the Ontario Veterinary College is tackling one of the biggest health challenges of the 20th century, the prudent and effective use of antimicrobials, and employing systematic reviews and network meta-analysis to search for answers to which treatment and management practices are most effective.

The study, conducted with support from The Pew Charitable Trusts, a non-profit research and public policy organization in the U.S., is focused on two areas: the efficacy of antibiotics used to prevent diseases in four live-stock groups and the efficacy of non-antibiotic management practices used to try to prevent these diseases.

This isn't just a literature review, notes principal researcher Dr. Jan Sargeant, a professor and epidemiologist in the Ontario Veterinary College's Department of Population Medicine, it's a very detailed study using network meta-analysis.

"This study fits beautifully into my interests in evidence synthesis, bringing together scientific information from a range of research sources to inform decisions on policies or clinical practice," says Sargeant, "but it also taps into the broader OVC expertise and interest in prudent antimicrobial use and reducing antimicrobial resistance."

The first step in this work, creating protocols to describe the methods for each study, was completed in the summer and early fall of 2018. These eight time-stamped protocols, posted publicly on a systematic review website (www.syreaf.org), outline exactly what the systematic review will involve: the rationale, objectives, and methods, including eligibility criteria and study designs. They outline information sources, search strategy, selection and data collection process, as well as outcomes, prioritization and how data synthesis will be

completed. Any deviation from this will be recorded, ensuring transparency throughout the process, a critical piece of the systematic review method, notes Sargeant.

"This is the international standard for systematic reviews, so it is very transparent," she adds. "For each question, we then do a network meta-analysis."

Once reviewers enter data from relevant studies, the computer program literally draws a network using direct comparisons from the studies and then estimates indirect comparisons between them.

"For example, there is more than one antibiotic choice to prevent specific infections. In a standard meta-analysis, we ask does antibiotic A work or does antibiotic B work? In a network meta-analysis we look at relative efficacy."

"If one study compares antibiotic A to antibiotic B and another compares antibiotic A to antibiotic C, the network can compare B to C based on the information it has," says Sargeant.

Ultimately, veterinarians want to know which treatment and which management practice works the best, she notes. Ideally this leads to more effective treatment decisions, as well as more prudent antibiotic use.

This is the next wave of where systematic reviews and evidence synthesis is going, she adds.

Once the eight systematic reviews and network meta-analyses are complete, Sargeant will bring together a small group of epidemiologists and animal industry experts in early 2019 to discuss next steps. This will help to direct resources and identify research gaps.

"We want to really drill down to identify where there are gaps and how we, as an agricultural community, who want to prudently use antibiotics, direct our research needs going forward," she adds. 🐾

the science behind systematic reviews & network meta-analysis

Imagine sifting through all the existing studies available to answer a specific question and synthesizing it to identify what has been discovered to date. That's the essence of systematic reviews.

An important part of evidence-based medicine, systematic reviews have been used for more than two decades in human health-care and are making important inroads into veterinary medicine.

Systematic reviews are a type of literature review that uses a structured series of steps to critically appraise and synthesize research studies. They are designed to answer a specific clinical or policy question and to provide a transparent and comprehensive summary of current evidence relevant to a research question. Systematic reviews of clinical trials are vital to the practice of evidence-based medicine. Key to the success of systematic reviews in veterinary medicine has been the implementation of clearly defined reporting guidelines for clinical trials in animal health, animal production, welfare and food safety.

Systematic reviews are an important tool to help veterinarians and animal health professionals understand the vast volume of scientific research available. For decision makers, they provide a transparent, comprehensive summary of current knowledge to incorporate scientific evidence into the decision-making process. They can also help recognize gaps in knowledge and provide insight when identifying questions that will need to be answered with future research.

Using meta-analysis or network meta-analysis, researchers can combine results from multiple studies identified in a systematic review, looking for all the possible answers to a specific question. At OVC, recent work in this area includes identifying and analyzing studies that evaluate the efficacy of antibiotics for a particular health issue and using network meta-analysis, evaluate the comparative efficacy of different antibiotic treatments.

Jan Sargeant has advanced reporting guidelines for observational (www.strobevet-statement.org) and clinical studies (www.REFLECT-statement.org) with animals, both developed in collaboration with Annette O'Connor, Iowa State University's College of Veterinary Medicine.



ROADMAP TO SUCCESS

Continuous improvement key to student and curricular development



Celebrating almost a quarter century of leadership

A roadmap is key to any journey. It not only pinpoints the destination, it provides direction and highlights important steps along the way. When the ultimate goal is competent, confident student veterinarians, a map is key to defining success.

Over their respective terms, Dr. Peter Conlon, Associate Dean, Students, and Dr. Kerry Lissemore, Associate Dean, Academic, have been integral guides in navigating the route to curricular and student success at the Ontario Veterinary College (OVC) over the past 25 years. Both completed their terms in 2018.

At the helm in Student Affairs since 1995, first as Assistant Dean then later as Associate Dean, Conlon spearheaded a number of initiatives to enhance student confidence, wellbeing and success.

Lissemore, who became Assistant Dean, Academic in 2003, before moving to the Associate Dean position in 2007,

has been a steady guide to continuous improvement in curricular development.

He was on the ground floor of OVC's adoption of the DVM 2000 curriculum introduced in the early 2000s. Since that time, the Doctor of Veterinary Medicine (DVM) program has benefitted from steady refinements to ensure students receive a competency-based skill set and assure continual accreditation success for the college. Phased in over four years, the new approach included outcome-based assessments, particularly evident over the last 10 years as structured clinical exams were incorporated into each year of the program.

This focus on continuous improvement, along with advances in the admissions process for DVM applicants, an enhanced approach to all aspects of primary healthcare, wellness, experiential learning and psychomotor skills, are important touchpoints over Conlon's and Lissemore's tenures.

Start with a destination

The road to success begins with a set destination. Define the expectation of the confident, competent veterinarian upon graduation from OVC and work backwards to determine not only what students will need to learn each year, but the skills, knowledge and attributes they will need when admitted into the four-year veterinary program.

A move to Multiple Mini Interviews (MMI) in 2009 from a panel style interview marked a significant change in the admissions process at OVC. A growing body of literature from medical schools in the 2000s indicated the MMI approach for admissions was valuable as a predictor of future characteristics of accepted students and prompted the change, says Conlon.

The MMI incorporate scenarios structured to draw on the DVM applicants' ability to think on their feet, communicate opinions and ideas, critically appraise information and demonstrate advanced understanding of issues facing the profession. During the MMI each May, 200 candidates independently interpret scenarios for 16 paired assessors who evaluate the candidates based on a scoring rubric.

As veterinary medicine becomes more complex, so do the scenarios. "We ask them about veterinary medicine and client scenarios, but over the years we've expanded these to ask them to think through more society-wide situations," says Conlon.

"It's been an important evolution of admissions. When we compare the MMI results to characteristics that we measure in first year Art of Veterinary Medicine communications labs, we have found a strong and direct correlation of the MMI's predictive value in choosing communication and problem-solving skills."

It's also a valuable engagement opportunity with alumni and students. Last year the number of assessors rivaled the number of candidates, with 60 alumni, 95 student veterinarians and 23 faculty interviewing through the week for a total of more than 800 volunteer hours.

A lot of alumni come back each year, says Elizabeth Lowenger, Manager, Student Affairs, who recruits each assessor. Some participate in a few sessions, others are involved for one or more full days of interviews. The mix of alumni from veterinary practices and industry provides a variety of expertise and perspectives to the selection process.

Hands-on learning in primary healthcare

An enhanced primary healthcare component initiated in 2010 marked a pivotal moment in OVC's curriculum. Most visible with the opening of the Hill's Pet Nutrition Primary Healthcare Centre (Hill's PHC), developed as part the OVC Masterplan under the vision and leadership of past OVC dean Dr. Elizabeth Stone, this new focus brought with it increased opportunities for experiential learning.

The enhanced approach to companion animal primary healthcare through the Hill's PHC was a game

changer, exposing students to work life in a general practice and managing appointments focused on wellness, nutrition, client communications and the importance of the relationship between veterinary teams, pets and clients.

"The philosophy of experiential learning in the Hill's PHC is to provide structured feedback in the moment as much as possible, with students taking responsibility for the appointments and building their confidence through a very supportive environment," says Conlon.

Every student veterinarian spends time at the Hill's PHC within each year of the program, culminating with a three-week mandatory rotation in fourth-year. "This is where we ask students to integrate medicine, surgery, nutrition, communications, and other knowledge, skills, and attributes to provide the best patient and client care possible," says Conlon, who served as the Director of the Hill's PHC since 2011. Central to this is the entire veterinary practice and faculty team who create the supportive learning environment.

"These curricular pieces help achieve much more than confidence for our students," Conlon says. "If you feel confident to make decisions, to think through issues, to talk to clients and apply strong hands-on experiential skills, all of that goes to self-assurance and a stronger sense of mental wellbeing."

Practice, practice, practice

Practicing key technical and clinical psychomotor skills, particularly in surgery and anesthesia, is key to building student confidence and another example of how the curriculum was strengthened under Dean Stone's tenure.

"This is a piece we've really worked on developing through the Clinical Medicine courses and surgical exercises within each year of the DVM program," says Lissemore.

Beginning in first year, students are introduced to surgical skills, instrument handling and suture patterns, along with gowning and draping skills through a variety of lab-based exercises. Students progressively build their technical skills, beginning with low-fidelity foam and rubber models, then moving to more sophisticated high-fidelity models to learn and refine advanced skills such as intubation before progressing through the four-year program to live animals. Surgery and anesthesia training in third year provides students additional hands-on opportunities while servicing humane society and animal shelter spay needs.

"By breaking technical skills down into smaller tasks, students can practice a procedure or process multiple times until they are comfortable, increasing their competence and confidence," he notes. "Students learn the proper techniques under faculty supervision and have the opportunity to practice them on their own and at their own pace."

The enhanced focus on psychomotor skills is the impetus for the new enhanced clinical skills facility due to be completed in 2019. Here students will have access to a dedicated clinical skills space, a library of clinical models, new communications teaching labs and flexible teaching space.

Wellbeing in all its forms

Wellbeing encompasses every aspect of veterinary care — including the patient, the client and the caregivers — and has become a significant discussion point within the veterinary profession.

“At OVC, we are really trying to encourage a culture change towards wellbeing,” says Conlon.

Growing research looking at veterinary mental health, as well as the veterinary profession’s advancing interest to talk about their experiences, has been a driving force behind this important conversation at OVC.

“We are an evidence-based and evidence-driven community; the evidence was clear there was a need for wellbeing initiatives in our curriculum,” he notes.

For Conlon, his own mental health challenges as a student and in practice underpins his passion for this area. “At that time, it wasn’t easy to find resources and they weren’t tailored to student veterinarians,” he recalls. “It is a privilege to be in a position where I can try to make a difference and I think it gives me more insight into our students’ struggles, having been there myself.”

Wellbeing topics are incorporated in the curriculum, starting with a focus on wellbeing during Orientation Week, continued with the first-year Art of Veterinary Medicine and an elective resiliency rotation in fourth year. All components are complemented by important co-curricular aspects such as Wellness Wednesday talks and an OVC Peer Helper program, which was started by Conlon in 1995.

This focus extends to the students’ personal support network.

“It’s all about connections, communications and a network of support right from day one,” says Conlon. For this reason, he has been an advocate over the years in fostering opportunities for friends, family members and mentors to have a chance to interact with the college and develop an understanding of what life is like as a student veterinarian. This includes the annual Family and Friends Day and Professional Welcome Ceremony (initiated by Conlon in 1997 and 2004, respectively) during the students’ first year, and the White Coat Ceremony in third year.



Photo credit: Noelle O'Brien, Trina Koster Photography

Continual assessment critical for continuous improvement

Successful navigation sometimes means correcting your course. Formal student assessments are critical to assure students achieve the competencies required at each phase level and provide the data needed to ensure continuous curricular improvement.

But they are only one part of assessment. Regular surveys of in-course DVM students, one and five-year-out graduates and their employers are also vital.

In-course student surveys at the start and end of each academic year consistently show increases in confidence in performance, preparedness, planning, analysis, conducting veterinary activities and professionalism. “We have student assessment data, student-employer-graduate data and student confidence data to complete formal outcome-based evaluations,” says Lissemore. “You have to look at the data from multiple aspects to see if there is alignment. This is part of our continuous improvement, to determine student successes and their challenges.”

Veterinary college accreditation requirements are always changing. It is critical to stay informed to ensure the curriculum and facilities are on the mark.

“You have to balance needs with available budget and resources and recognize where opportunities are available,” Lissemore says. “Veterinary medicine is constantly changing as are the issues it encompasses. Our students need to be able to address these areas and the curriculum must continually evolve to include them.”

Successful curricular design is an evolution not a revolution, building on existing strengths in order to navigate to new and uncharted destinations. 🐾



Photo credit: Noelle O'Brien, Trina Koster Photography



UNDERSTANDING THE BOTTOM LINE

Teaching the business side of vet med

Equipping students with tools to understand financial wellbeing is an important piece in the overall approach to wellness in the Ontario Veterinary College's Doctor of Veterinary Medicine (DVM) curriculum.

The more than 45 hours of lectures OVC Clinical Studies professor John Tait delivers to DVM students is structured around confidence-building strategies for both business and personal financial and debt management.

"Part of financial wellbeing is knowing how to protect your current and future income, planning for the future while learning how to live off early career income levels and manage debt right out of the gate," says the 1986 OVC DVM graduate.

In the first year of OVC's Art of Veterinary Medicine (AVM) course, Tait focuses on primary business areas — finance and tax tips, early debt management strategies, how to manage a budget and how to best utilize credit.

With third-year DVM students, he focuses teaching around business issues in the profession. He begins with an overview on economics and the veterinary industry and examines the operational portfolios of the veterinary practice before turning the course more personal with a presentation including personal financial issues.

Tait breaks it down further from there, delving into practice finance, individual compensation models and, while far off, succession planning. He spends time on marketing, including how to develop both a personal and business brand, as well as human resources skills, customer service, legal issues, business ethics, contracts,

negotiation skills, job seeking strategies and self-employment.

"Many graduates will eventually operate small businesses so it's important to cover these areas and set the stage," he notes.

Tait also tackles more in-depth financial and planning topics, focusing on three areas: income protection, income management and investing for the future, all part of financial wellbeing, he notes.

Business management has been a part of the AVM course since it was introduced almost 20 years ago. He regularly reassesses course content, hosting focus groups annually with graduates, who are one year out of the DVM program and have taken a variety of career paths.

During the sessions, Tait leaves the floor open so that new graduates can share what stressors they've encountered since graduation.

The answers depend on what is trending in the industry. Common financial issues include managing debt, becoming a practice owner, consolidation in the workplace, balancing a budget, determining net worth, as well as choosing insurance and investment products, says Tait, but also include how customer service has changed and the abundance of social media.

"Other areas of business that consistently affect young grads include the challenges of establishing oneself as a leader and inner conflict in the workplace," he notes.

He uses their real-world feedback to continuously improve the course and help students develop business and finance skills they will need throughout their career to market themselves and manage their bottom line.

John Tait brings a wealth of experience and expertise to his teaching, with a Doctor of Veterinary Medicine from the Ontario Veterinary College, an MBA in Health Services Management from McMaster University, as well as a Master of Science in Finance, combined with a Certification in Financial planning from the University of Toronto.

ONTARIO VETERINARY COLLEGE

THEN & NOW

CLASS OF 1922

FIRST CLASS

While OVC 1922 was the 60th class to enter the veterinary program at the Ontario Veterinary College, they were notably the last group of students to graduate from OVC's location in Toronto, ON. The college relocated to Guelph in late 1922.

CLASS SIZE IN 1922

18 — The number of students who graduated as the OVC class of 1922. While the veterinary program at OVC was a four-year program, as it is today, only 14 students entered as freshman in 1918. Previous classes were much larger. The small class size is thought to be due to World War I as well as the introduction of the automobile, which resulted in a decline in demand for veterinary services. Many students took time off from school or had to repeat years. Only 12 of the freshman that entered in 1918 graduated as part of the class of 1922.

THE PATH TO VETERINARY SCHOOL FOR THE CLASS OF 1922

The major admission requirement for applicants to the OVC in this period was a diploma from a College, Normal or High School. As a number of individuals came from rural areas and might not have had access to a high school and perhaps learned from home, they were required to write and pass an entrance examination a month before the year commenced at the OVC. Students were tested on: reading, spelling, comprehension, writing from dictation, letter writing, arithmetic and Canadian or American history.

FRESHMAN YEAR: CLASS OF 1922

In the first year of veterinary college the class of 1922 studied anatomy, embryology, histology, botany, pharmacy, veterinary economics, physics, minor surgery (including veterinary dentistry and principles of horse-shoeing), zoology, chemistry, sporadic diseases of the horse, parasitology, materia medica (pharmacology) and military drills.

CLASS OF 2022

ALMOST A CENTURY

The OVC Class of 2022 is the 156th class to enter the Ontario Veterinary College (OVC) and 99th cohort of students to graduate from the Guelph location. As OVC is a founding college of the University of Guelph (U of G), this group of student veterinarians will also be the 57th class to graduate from the veterinary program since the U of G was established in 1964. Prior to that point OVC was part of the University of Toronto (U of T) and students received their degree from U of T.

CLASS SIZE IN 2022

120 — The number of students in the OVC class of 2022. To help encourage dialogue and collaborative thinking, students are placed into practice groups — which they will be members of throughout the four-year program. Each group includes a mix of international and domestic students, students with experience in different species (equine, bovine, exotic, companion, etc.) and strengths in various first-year course topics to encourage peer-to-peer mentoring. Each practice group also has two Phase 2 (second year) student mentors, to help guide them through the year.

THE PATH TO VETERINARY SCHOOL FOR THE CLASS OF 2022

Today, requirements for applying to OVC include completing a minimum of two years of a full-time university undergraduate degree. Prerequisite courses include: cell biology; biochemistry; genetics; statistics; two biological sciences; and two humanities and/or social sciences. Applicants must have experience with veterinarians and animals. The highest level of education held by OVC 2022 class members: 67-bachelor degrees, 19-two plus years of a full-time university undergraduate degree, 13-masters degree and one-professional degree.

PHASE ONE (FIRST YEAR): CLASS OF 2022

In the first year of veterinary college, the class of 2022 will study veterinary anatomy, embryology, genetics, histology, physiology, biochemistry, pathology, communications, teamwork and resiliency, physical exams, animal handling, herd health, epidemiology and public health. The program now includes a focus on the development of psychomotor skills, primary health care, wellness care and nutrition. 🐾



BOOTS ON THE GROUND: VETERINARY MEDICINE & SURVEILLANCE

In its broadest definition, surveillance means to scrutinize or observe closely. In veterinary medicine, surveillance is a fundamental, first line of defense when it comes to protecting animal and human health.

Researchers at the University of Guelph's Ontario Veterinary College (OVC), play a leading role in the collection and translation of surveillance data. From the field to the clinic to the laboratory, veterinary scientists are keeping their boots to the ground to create new knowledge, expand our understanding of disease, safeguard animal and human health and ensure food safety and security in Canada.

PROTECTING ANIMAL AND HUMAN HEALTH

OVC researchers are monitoring a zoonotic parasite that can cause disease in sheep and goats and is also a risk to humans.

Toxoplasmosis, caused by a microscopic parasite called *Toxoplasma gondii*, is one of the most common causes of abortion in Ontario sheep and goats, impacting the health of the herd, says OVC professor Paula Menzies. Along with researchers Karen Shapiro and Shannon Meadows, she is exploring the prevalence of toxoplasmosis in provincial goat and sheep herds to identify risk factors for exposure to the parasite and lower levels of infection.

From data gathered in a 2010-2012 study, researchers

found significant evidence of the parasite in sheep and goat herds across Ontario, and a definite connection of the parasite to farm cats. Cats can pick up the pathogen from infected rodents or birds and pass along the oocysts or parasite's eggs in their feces. Goats and sheep can then accidentally ingest the parasite eggs through contaminated feed, water or soil. If the animals are pregnant, this parasite can infect the fetuses causing fetal death and abortion.

Why the concern with this zoonotic pathogen? "It is very much a One Health issue that can impact domestic livestock, wildlife and humans," says Menzies.

Any warm-blooded organism can be infected by *Toxoplasma*, including marine and land-based mammals, as well as avian species, says Shapiro. "In humans, it has traditionally been a concern for pregnant women as infection may cause miscarriage and severe birth defects in infants. Adults may also be at risk: infection in those with compromised immune systems may result in severe brain infections; infection in healthy adults also has been linked to mental health disease."

While the parasite can be passed to humans through undercooked meat or unpasteurized milk from infected sheep or goats, thoroughly cooking meat to the correct temperature and pasteurizing milk kills the pathogen.

"It's a multifactorial, difficult parasite and it's very clever," says Menzies.

"The OVC study supports a critical need to develop a safe and effective vaccine to protect sheep and goats from infection and, by extension, protect people," says Menzies. "We generally recommend sheep and goat farmers don't have cats or if they must in order to manage rodent infestations, make sure they are spayed to reduce the number of kittens on-farm which are more likely to pass along the parasite. Unfortunately, despite attempting to reduce risk through these practices, infection with the parasite is still common in rural Ontario and based on our research, toxoplasmosis in sheep and goats remains a risk."

EXPLORING DISEASE OCCURRENCE

A landmark study is investigating how Lyme disease occurs in dogs as they age. The goal of this multi-year study is to gain insight from data that may help researchers better manage the disease. Researchers are recruiting 300 dogs from across Canada to take part in the 10-year study to identify and increase understanding of the risk factors associated with the disease. This includes examining age at diagnosis, clinical signs and response to treatment over time. The study will also explore other areas of pet health and welfare and will monitor this group of dogs and their families for years.

UNDERSTANDING DISEASE SPREAD

Researchers are learning more about Potomac Horse Fever through an Ontario Animal Health Network funded surveillance study. Caused by the bacterium *Neorickettsia risticii*, the disease can lead to a multitude of health issues in horses, including fever, poor appetite, diarrhea, laminitis and sometimes abortion. Although treatable once diagnosed, not a great deal is known about how horses contract the bacteria or the hot spots for the infection in Ontario.

Researchers are testing blood, serum and feces samples provided by veterinary practitioners across the province to try to identify bacteria isolates from different regions. They aim to map out disease prevalence to better inform veterinarians and horse owners and help them

combat the disease.

It is believed horses pick up the bacteria from the environment by accidentally eating infected flies or insects, or eating hay, grass or water contaminated with these insects.

While researchers know the main players in bacteria transmission, the routes to infection are complex and not well understood.

In a secondary study, U of G researchers are collecting flies and snails from rivers and ponds near Ontario horse farms to try to identify which types may be infected and learn more about how the bacteria is spread.

KEEPING TABS ON EMERGING DISEASE

Endemic in large parts of the U.S., *Salmonella dublin* has seldom appeared in Ontario. This changed about three years ago when it cropped up in samples coming through the University of Guelph's Animal Health Laboratory (AHL). Concerned researchers began investigating.

While salmonella typically causes diarrhea, *S. dublin* is atypical, manifesting as a respiratory illness in calves. A zoonotic pathogen, it also poses a risk to people.

In 2016 and 2017, OVC researchers asked Ontario veterinarians who had beef and dairy producers with calf mortalities to send these calves for necropsy at the AHL, specifically looking for *S. dublin*.

Researchers also surveyed 300 dairy farm bulk tank milk samples for antibodies to *S. dublin*. The disease mostly shows up in calves before they join the milking herd. As expected, researchers didn't find much evidence of *S. dublin* in bulk tank samples.

The study confirmed *S. dublin* was virtually

absent from the province's dairy herds, underscoring the value of ongoing surveillance for emerging diseases. This type of research bolsters OVC's relationship with veterinary practitioners, engaging them in surveillance activities and providing updated information they can share with clients.

MONITORING DISEASE AND FOOD SECURITY

Surveillance is vital to track the development of disease and protect our food supplies.

"Sometimes we look at diseases that aren't necessarily dramatic; they are not causing a lot of mortality or disease outbreak by themselves, but they are in the background in swine herds, stirring up trouble," says OVC professor Robert Friendship.

Recent research at OVC looked at 50 nursery barns. Researchers focused on the prevalence of specific clinical signs, such as coughing, lameness, diarrhea, ear necrosis and hernias to explore whether the presence of certain pathogens is related to the clinical signs, increased medication use, or reduced production.

Findings indicated that producers were often unaware diseases were cycling in the barn at low levels. "A producer may know there is a cough and production values may show growth is not as good as expected, but they may not realize there is actual disease," notes Friendship.

Concentrating on the nursery is key. Once piglets are weaned, they lose their passive protection and need to start producing active immunity. This is where they are the most vulnerable.

"If you're going to have disease, the nursery is where you're going to see

it," he notes.

It is also the spot where antibiotics often need to be used. "If you're going to try to eliminate or reduce antibiotic use you need to pay attention to the nursery where you may end up with big disease problems."

INVESTIGATING ANTIMICROBIAL RESISTANCE

A recent OVC baseline surveillance study identified the most common virulence genes and antimicrobial resistance patterns among avian pathogenic *Escherichia coli* (APEC) isolates. APEC causes colibacillosis, an important poultry disease worldwide, that can cause higher than normal mortality in a flock, secondary infection and reduced returns for producers.

Surveillance data collected through the Ontario Animal Health Network suggest that, in Ontario, colibacillosis is one of the most common diseases in broiler chickens of any age.

Researchers asked poultry veterinarians across the province to provide samples collected during necropsies from broiler and broiler breeder chickens with clinical signs consistent with systemic forms of colibacillosis.

The team tested the *E. coli* isolates from the samples searching for genes previously identified as being associated with virulence. They also tested each isolate to determine if any were resistant to certain antimicrobials.

The study provides a benchmark to measure changes in APEC's antimicrobial susceptibility and virulence gene patterns, as well as critical information to veterinarians and farmers for the treatment and prevention of colibacillosis in broilers and broiler breeders. —



AWESOME CAREERS

A passion for wildlife and a love of the outdoors...

A passion for wildlife and love of the outdoors has always been a part of Iga Stasiak's life.

Her studies and experiences have taken this 2007 graduate from the Ontario Veterinary College's (OVC) Doctor of Veterinary Medicine (DVM) program to the United States and Mexico, back to OVC for a DVSc and to Canada's North before she landed in her current job with the Saskatchewan government. With each step, she expanded her skill set and further embraced her passion for wildlife conservation.

She sees many opportunities for DVM graduates in this important One Health area. "The threats facing our wildlife populations are intensifying as we see expanding development, globalization and climate change. We need more veterinarians and professionals in this field to try to mitigate some of those impacts and conserve our wildlife."

For Stasiak it wasn't until she was immersed in OVC's DVM program that she was exposed to the many pathways related to wildlife health available within the field of veterinary medicine.

Post-graduation she continued to network with wildlife health professionals while supplementing her degree with stints in emergency and locum work and externships in wildlife and equine medicine.

A two-week program in marine animal medicine included lessons on sea turtle necropsies, experience that proved invaluable when she met wildlife conservationist Alonso Aguirre at a Wildlife Disease Association Conference. Aguirre was trying to figure out the cause of mortality in the Pacific Loggerhead sea turtle population along the Pacific coast of Baja California in Mexico.

He needed a research assistant for a month to do sea turtle necropsies. Says Stasiak, "I was in the right place at the right time and jumped at the chance."

The game-changing opportunity helped her gain an understanding of issues facing communities in more underdeveloped areas. Stasiak worked with the local community to help them understand potential impacts of fishing activities on the sea turtles and to form grass root

solutions to assist in their conservation.

It also provided valuable experience when she applied to the DVSc Zoological Medicine and Pathology joint program with The Toronto Zoo and OVC in 2009. Falling in love with the powerful aspects of pathology and the investigation of disease in populations, Stasiak recalls, "For me it always came back to conservation and population management and what can we do to preserve our native wildlife."

Stasiak's interest in wildlife conservation has led her to Canada's North, working closely with the Indigenous community and hunters to focus on the health of caribou populations in the Northwest Territories. She travelled to Kentucky to manage emergent disease issues such as the potential spread of raccoon strain rabies into the state and a viral hemorrhagic disease in deer, spread by biting flies or midges.

Throughout, Stasiak has learned the value strong relationships bring to her work. In Canada's North "not only were we protecting the health of the caribou, our findings were helping to protect the health of the Indigenous culture and the people's way of life."

Now in Saskatchewan since May 2018, Stasiak is once again contributing to wildlife health in Canada. Her current focus: chronic wasting disease, a neurological disease affecting the deer family, introduced to the province almost 20 years ago.

While the disease has not yet appeared in boreal forest caribou, there are concerns it may spread to this population. "There are a lot of priorities across the province and varied stakeholders, with farm land to the south, intact wilderness to the north and a very strong Indigenous population," she notes. Once again, she is working with a variety of interested parties, to educate them about the disease and develop management actions to limit the spread.

"As I have progressed in my career I've engaged more and more on the human side, trying to create relationships, bridge the divide and sometimes work in very conflicting areas. Ultimately it's for the same goal - to ensure we have healthy wildlife and sustainable populations for many generations."

TAKE PRECAUTIONS ON YOUR NEXT DESERT CAMEL RIDE

Camels have been implicated as a host for a severe zoonotic disease



Zoonotic disease, disease that can be transmitted between humans and animals, requires extra attention to understand how it spreads. Middle East respiratory syndrome coronavirus (MERS-CoV) is one of those diseases – it can transfer between humans and dromedary, one-hump camels. About one-third of the human cases charted since 2012 have been fatal.

University of Guelph PhD candidate Dr. Emma Gardner, in OVC's Department of Population Medicine, is determining environmental factors that affect MERS-CoV transmission to help prevent the spread of this potentially fatal disease and better inform at-risk individuals.

Early results show that cool, dry days with good visibility promote the spread of the disease from camels to humans.

"These results are similar to what is typically seen in respiratory diseases except for the findings regarding good visibility, but that could be explained by human behaviour," says Gardner. "You're more likely to spend time and be close to your camels when there is good weather and visibility."

Human MERS-CoV cases have been seen in 27 countries. So far, all zoonotic cases have occurred in the Middle East; cases elsewhere were caused by people who picked up the infection in the Middle East and

travelled. This respiratory virus can cause a range of symptoms from minor fever and coughing to pneumonia to severe acute respiratory disease. Researchers are focusing their attention on how to reduce spread due to the high frequency of severe disease.

By comparison, MERS-CoV in camels is mild and typically lacks signs of infection. At its worst, it causes camels to have a runny nose for a few days, meaning the disease is easily missed by camel owners and health professionals. About 90 per cent of adult camels in the Middle East have had MERS-CoV at some point, allowing many opportunities for human contact with the virus.

Fortunately, the virus isn't highly contagious.

Humans must closely interact with infected camels or consume contaminated camel milk and meat products to contract the disease. Furthermore, camels do not naturally spread the virus to their milk and meat, these must be physically contaminated by the camel.

In fact, most transmission so far has occurred between humans in medical facilities once one human contracts the disease and seeks medical assistance.

Gardner and her advisory committee modelled daily weather measurements with new cases of disease in Saudi Arabia to determine

what increases the chances of contracting the disease from camels. This led to the discovery that cool, dry days with good visibility increase the likelihood of contracting the disease from camels directly.

Now that researchers have a better understanding of the disease and what meteorological factors increase zoonotic transmission, they are looking to increase our ability to understand how and why MERS-CoV is spreading.

"We want to create a mathematical model to explore how the infection is spreading among camels," says Gardner. "For example, using this model, we could hypothetically vaccinate half the camel population and then see how it would affect virus spread."

To do this, researchers will be using MERS-CoV data in camels shared by colleagues in Kenya to build more detailed knowledge of factors affecting the disease. This information can then be put into the mathematical model to begin mapping out real-world scenarios.

"This disease is of huge public health importance," says Gardner. "By working to understand the human-camel interface using a One Health approach, the idea that all individuals and species contribute to health, we can help prevent future MERS-CoV outbreaks by informing the public and policy makers."

MIDDLE EAST RESPIRATORY SYNDROME

CORONAVIRUS

Family of common viruses that affects humans and animals, that includes SARS.



UTILIZING MATH MAPS TO UNDERSTAND MERS-CoV

Using a One Health approach, researchers at OVC are creating a mathematical model to map out real-world scenarios and test solutions to control MERS-CoV. They use equations to simulate the processes of a system, in this case, MERS-CoV transmission between camels; they manipulate certain elements and hold others constant to better understand how the disease spreads.

Collaborators on this project include supervisor Prof. Amy Greer, Dr. David Kelton, Dr. Sophie van Dobschuetz, Dr. Zvonimir Poljak, Dr. Maria Van Kerkhove, The Food and Agriculture Organization (FAO) and The Directorate of Veterinary Services of Kenya. Funding for this research is provided by NSERC, OVC Fellowship and a Canada Research Chairs grant.



The Vickaryous Lab studies the biology of regeneration and repair focusing on the natural abilities of species such as lizards. This research offers insight into advancing wound healing and translational medicine in humans and companion animals.

PUSHING THE BOUNDARIES

New directions in heart and brain regenerative research

Why are some tissues and organisms able to regenerate while others cannot? It is a fundamental question that drives discovery in the Vickaryous lab at the University of Guelph's Ontario Veterinary College.

Using a species of lizard — the leopard gecko — as a model to explore naturally occurring tissue replacement, Biomedical Sciences professor Matt Vickaryous focuses on the biology of regeneration and repair, research that may offer insight into wound healing in humans. Although long overlooked, lizards such as geckos are providing valuable new information about how reptiles, unlike humans, can regenerate lost or damaged tissues.

Since joining OVC in 2008, Vickaryous has published numerous papers investigating tissue regrowth behaviour of geckos. This work includes a 2017 study that identified the type of stem cell that enables geckos to regrow the spinal cord in their tails. Additional research looks at the geckos' ability to heal wounds to their skin without scarring. Findings in both areas may one day have implications in human medicine.

Now, new research from graduate students Kathy Jacyniak and Rebecca McDonald has found evidence that geckos can also replace cells in their heart and brain, suggesting that their regenerative capabilities may extend to other organs.

While most regenerative work has focused on zebrafish or salamanders, less is known about other species. Lizards, such as the gecko, are more closely related to mammals than salamanders and thus might offer important clues for clinical medicine, McDonald says.

In each of their studies, Jacyniak and McDonald found evidence that leopard geckos have the ability to routinely generate new, highly specialized cells that are otherwise rarely regrown in mammals.

"In most species, when cells are injured or die in the brain or the heart they are replaced with scar tissue, and this impacts function," says Jacyniak. "Using naturally occurring examples of regeneration, such as the leopard gecko, we seek to understand how tissues and cells can be restored without scarring." Jacyniak adds that further research in this area may have many translational benefits for other species, including our own.

For both Jacyniak and McDonald, their research focused on discovering what the animals do naturally, without any clinical intervention.

"We found the geckos' heart muscle cells (cardiomyocytes) continuously divide and create new cells," says Jacyniak. To be certain the cells were actually dividing, she needed to use multiple methods and label the cells for various proteins.

"I found that around 10 per cent of cardiomyocytes are dividing at any given time, whereas in mammals it is less than one per cent per year," she notes.

McDonald's research looks at a region of the brain known as the medial cortex, an area that corresponds to the human hippocampus or memory centre. Using a chemical label that identifies dividing cells, McDonald was able to track when new cells appeared, where they migrated to and determine when they ultimately became new neurons in the brain.

To their surprise, the team also found that cell proliferation in both the heart and brain was not slowed by tail loss or tail regeneration in the gecko, indicating that wound healing does not alter routine cell division elsewhere in the body.

With this initial research on brain and heart cells in place, research is now moving to the next step — analyzing how these cells respond to injury with a focus on both structure and function.

Jacyniak has already begun this work as she pursues her PhD at OVC. Jacyniak first came to OVC for the one-year Master of Biomedical Sciences (MBS) program to get a taste of research life after she completed her undergraduate degree at the University of Toronto. "I tried it and I loved it, so I transferred into the two-year Master of Science (MSc) program," shares Jacyniak. "There are so many things I want to answer. After doing all the ground work, I am excited to explore the next steps in this research as I enter my PhD." McDonald is also continuing studies at OVC, albeit in a slightly different direction, as she pursues veterinary medicine, having joined the OVC DVM Class of 2022 in fall 2018. She takes along her passion for regenerative medicine and exotics, particularly the leopard gecko. 🦎



the GECKO GOODS

As with many types of lizards, leopard geckos can detach a portion of their tails, in a process known as tail autotomy, and regenerate a replacement tail. They can also regenerate skin on both their body and tail without forming a scar (unlike what happens in mammals, such as humans).

Leopard geckos are members of the Eublepharidae, a group of related geckos known as 'true eyelid' geckos. Unlike other types of geckos, eublepharids have movable eyelids.

Geckos are native to Pakistan, India, Afghanistan, and possibly Iran.


They have temperature-dependent sex determination meaning the temperature the geckos are exposed to during embryonic development will help determine their sex.

the LOWDOWN on LIZARDS

Lizards come in a variety of shapes and sizes. Their adult body length ranges from about 1.6 cm to more than 300 cm in length and can vary in shape. Some lizards have four limbs and others are completely limbless.

Lizards are amniotes and are the closest relatives of mammals capable of appendage (tail) regeneration. The study of tail regeneration in lizards offers insight into the evolution of wound healing in mammals and may help explain why some fish, amphibians and lizards are better at healing wounds than mammals.

Lizards have the same number of species as mammals – approximately 6,500.

A woman with long brown hair, wearing dark sunglasses and a dark blue quilted jacket, is smiling. She has a daisy flower in her mouth and is holding the stem of another daisy flower in her right hand. The background shows a vast mountain range under a cloudy sky.

BOUNDLESS: Pursuing your dreams in veterinary medicine.

In conversation with...
SMADAR TAL

Dr. Smadar Tal has always had a passion for reproductive veterinary medicine. After 20 years in clinical practice, she changed gears to pioneer a small animal theriogenology department in a university teaching hospital in Israel, focus on groundbreaking research in canine pregnancy and neonatology and teach a new generation of veterinarians cutting-edge reproductive techniques.

Many people describe their career in veterinary medicine as a calling from a young age. Can you tell us about the moment that you knew you had to pursue a career in veterinary medicine?

It was not “love at first sight” for me. In fact, when I was a young child I was afraid of dogs (until my animal loving parents made sure I lived with one, my first pet). I worked in the cowshed and milked cows for several years during my teenage years and early twenties in Israel, and during that time developed an interest in calf and breeding cows’ health. This period in my life sparked an interest in veterinary medicine and this interest became my lifelong passion. I graduated from the Ontario Veterinary College with my DVM in 1992.

We often tell our students that a career in veterinary medicine opens a world of possibilities that can take you anywhere. What can you tell us about a surprise career opportunity that you would have never expected to happen when you chose a career in veterinary medicine?

When OVC Prof. Cathy Gartley suggested that I go for a residency after years in private practice, I never expected that by completing my residency and passing the boards with the American College of Theriogenologists in 2011 and the European College for Animal Reproduction in 2014, I would enter a world of teaching this field to a whole new generation of students in my country. Or, that I would conduct cutting-edge research into canine pregnancy and canine neonatology. I never expected this was something I could do after so many years in private practice. There are almost no boundaries to when one can change gears in their veterinary career – from private practitioner to educator and researcher, all while not abandoning the clinic.

A career in veterinary science is an important one; academic institutions make

discoveries and create new knowledge each and every day. Can you give us a behind-the-scenes look at your life as a researcher and educator at The Hebrew University Veterinary Teaching Hospital (HUVTH) at the Koret School of Veterinary Medicine in Israel? What do you value most about this role?

As soon as I began researching, I found that in my field much of what I want to touch upon is in its infancy and virgin ground. I decided to pursue my PhD in order to learn how to conduct research and am still going at it today (expected to finish in two to three years). I am devel-

Veterinary medicine is so diverse and offers so many opportunities, one should not be afraid to take hold of them with both hands and enjoy.

oping new techniques to find and create standards of diagnosis and treatment for medical conditions in pregnant bitches, puppies and male dogs, as well as assisted reproductive techniques in fruit bats, and contraceptive techniques in invading wild species. I am also involved with a joint PetPace and Orivet study to identify genetic markers and biometric data patterns that indicate risk and occurrence of uterine inertia in canine labour (which involves absent or weak uterine contractions resulting in the inability to push a fetus through the birth canal). As well, I conduct clinical research with colleagues at the HUVTH, Koret School of Veterinary Medicine and at the Tel Hai College in Israel. As far as teaching theriogenology, I developed and expanded the small animal theriogenology field and head the small animal theriog-

enology department of HUVTH. I teach the future generation and feel I hand the students and new grads tools that enable them to better deal with the clinical aspects of the field in a more comprehensive way. This is a great pleasure and pride of mine.

Who has influenced you the most, either through personal support or professional mentorship? What is their impact on the choices or decisions you have made?

There is no doubt in my mind that the greatest influence in my professional life was and is Prof. Gartley – she was my teacher while I was at OVC and has remained my friend and mentor since then. She was the one who encouraged me to pursue a residency after having four kids and already being the owner of a large small animal practice in the center of Israel and was my supervisor while I was undergoing my residency. I traveled back and forth all the years of my residency and spent a few weeks each time at OVC. We remain in contact to this day and always look for opportunities to teach, research and just hang out together whenever possible. I always had an interest in theriogenology even before I knew the name of the field and Cathy made the path so interesting and believed in me. Without her, in all honesty, I would not be where I am now.

What advice do you have for DVM graduates as they make their own transition into the next phase of their career?

The best advice is to always keep the profession fresh and interesting and not to sink into a mundane life. Veterinary medicine is always exciting and if it isn't at a certain time in one's career then one should change paths. Veterinary medicine is so diverse and offers so many opportunities, one should not be afraid to take hold of them with both hands and enjoy! 🐾

OVC ALUMNI ASSOCIATION

2018 ALUMNI AWARD WINNERS



Photo provided by Bruce Fogle

DISTINGUISHED ALUMNUS AWARD

Dr. Bruce Fogle, OVC 1970, was recognized for his veterinary career, charitable and community contributions with the 2018 Distinguished Alumnus award. After arriving in London on a travel fellowship, in 1973 Bruce set up the London Veterinary Clinic, where he continues to work. In 1980 he opened the UK's first 24-hour emergency veterinary clinic. Bruce is co-founder of the charity Hearing Dogs for Deaf People and chair of Humane Society International. In recognition of his charitable and veterinary work, the British Small Animal Veterinary Association granted him Honorary Life Membership and the Queen appointed him a Member of the Order of the British Empire. Having written over 40 books, his publishers say he is the world's best-selling practicing vet. Bruce, his children and grandchildren all live in London and Sussex.



Photo provided by University of Guelph

YOUNG ALUMNUS AWARD

Young Alumnus Award winner, Dr. Michelle Oblak's, OVC DVM 2008, comparative oncology work allows for advancement of human health while also providing veterinary patients access to the most up-to-date and cutting-edge techniques and technologies. She followed up her DVM and DVSc at OVC with a Post-Doctoral Fellowship in Surgical Oncology (one of only two in North America) at the University of Florida, before joining OVC's Department of Clinical Studies in 2013. In addition to teaching both lectures and labs in the DVM program and mentoring interns and residents, she teaches surgical oncology at several levels in the DVM program. In March 2018, Dr. Oblak performed, for the first known time in North America, a canine cranioplasty with a 3-D printed titanium plate, work made possible by her research with OVC Drs. Alex Zur Linden and Fiona James as the RaPPID Group (rapid prototyping of patient-specific implants for dogs).



Photo credit: Karen Mantel

ALUMNI VOLUNTEER AWARD

Throughout his time as a student at OVC and professor in OVC's Department of Biomedical Sciences, Dr. Brad Hanna, OVC 1989, has embodied the spirit of volunteerism, selflessly giving up his time in the pursuit of helping others. Dr. Hanna served as a long-time member of the OVC Alumni Association Board of Directors, holding the role of OVC Alumni Association President from 2012 to 2015. In addition, Dr. Hanna has been instrumental to supporting OVC's longstanding hockey tradition. He helps organize the annual Challenge Cup Tournament, volunteering his time to officiate games and encouraging a love of the game in those who had not previously played. He took his support to another level in 2012, creating the Challenge Cup trophy, unveiled in the College's 150th year. He also has served as Regional Director (Canada) for the Evidence-Based Veterinary Medicine Association and has provided expert advice to the Competition Bureau of Canada, the Canadian Department of Justice and the Canadian Olympic Equestrian Team.

CONVOCATION OCTOBER 2018

CONGRATULATIONS TO OUR NEWEST ALUMNI MEMBERS

DOCTOR OF PHILOSOPHY PATHOBIOLOGY

Maureen Jarau
Amanda MacDonald
Gabriella Guadalupe Mallia
Maria Carla Rosales Gerpe
Courtney Roxanne Schott

Chetna Sharma
Samantha Robyn Steinberg

MASTER OF SCIENCE BIOMEDICAL SCIENCES

Allyssa Lorin Hooper
Ashutosh Patel

POPULATION MEDICINE

Alessia Dianne Guthrie
Rachael Michal Milwid
Carly Moody

CLINICAL STUDIES

Sarah Dodd
Alexandra Rankovic

DOCTOR OF VETERINARY SCIENCE

CLINICAL STUDIES
Kimberly Hooi
Tiffany Jagodich
Jacqueline Scott

PATHOBIOLOGY

Jakob Matthias Domm
Rachel Kimiko Imai
Juraj Korbek
Gurleen Kaur Taggar

PATHOBIOLOGY

Eleanor Milnes

POPULATION MEDICINE

Melanie Maryanne Cousins
Alyssa Carol Green
Anna Jane Wilson Manore
Erin Ruth-Anne McGill
Andrea Nwosu
Erin Colleen Rodenburg
Victoria Catherine Jennie Seip

MASTER OF BIOMEDICAL SCIENCE

Benjamin Baker
Cynthia Way-See Chong
Stacey Szann Del Castillo
Poppe
Roxanne Hayley Hummel
Jessica Joshua
Viola Verjica Kajendrakumar
Isabella Laskowski
Rachel Elizabeth MacDonald
Tiffany Neal

GRADUATE DIPLOMA PATHOBIOLOGY

Emily Rita Brouwer

DOCTOR OF VETERINARY MEDICINE

D. Ryan Sherwood

SAVE
THE
DATE



**ALUMNI & REUNION
WEEKEND**
June 21-23, 2019

NOMINATIONS
NOW OPEN
FOR THE
2019
OVCAA ALUMNI AWARDS

Do you know someone who graduated from the Ontario Veterinary College and should be recognized for their accomplishments?

SUBMIT YOUR NOMINATION BY MARCH 1, 2019
Awards will be presented at the OVCAA AGM on June 22, 2019.
Find submission forms at www.ovc.uoguelph.ca/alumni or email
OVCAA@uoguelph.ca.

OVC Alumni Class Notes

AWARDS & ACCOMPLISHMENTS

If you have news or an update you would like to share please contact: Amy Tremaine, Alumni Advancement Manager, OVC phone (519) 824-4120 x 56679 or email tremaina@uoguelph.ca.

60s

OVC professor **Dr. Carlton Gyles**, OVC DVM 1964, honoured with a **Life Membership to the Canadian Veterinary Medical Association** in July 2018 for his significant contributions to the CVMA and veterinary profession worldwide.

70s

Dr. Ron Taylor, OVC DVM 1975, inducted into **Atlantic Agricultural Hall of Fame**. Taylor was regional veterinarian with the Government of Newfoundland and Labrador for 32 years and served as president of the Newfoundland and Labrador Veterinary Medical Association.

Dr. Doug MacDougald, OVC DVM 1977, founding partner at South West Ontario Veterinary Services, and a founding member of the Ontario Swine Health Advisory Board received the **2018 CAHI Industry Leadership Award**.

Dr. Cate Dewey, OVC DVM 1979, has been appointed as the **University of Guelph's Associate Vice-President (Academic)**.

Dr. Barry Stems-horn, OVC PhD 1979, received the **Canadian Veterinary Medical Association (CVMA) President's Award** for his exceptional

commitment to the association and for his tireless contributions to veterinary medicine and policy at the international level.

80s

Dr. Dale Smith, OVC DVM 1980 and DVSc 1984, named **University Professor Emerita at the University of Guelph** Convocation ceremonies in June 2018. She was recognized for her outstanding contributions to veterinary medicine, particularly zoological medicine and pathology in Canada and internationally.

Dr. Angus McKinnon, OVC Grad Diploma 1981, received a **Medal of the Order of Australia** for services to veterinary science, particularly equine reproduction.

Dr. Henry Ceelen, OVC DVM 1981, named **2018 Boehringer Ingelheim Practitioner of the Year** at the Conference of the American Association of Bovine Practitioners (AABP) in September 2018.

Dr. Alice Crook, OVC DVM 1982, was one of five recipients of the **World Veterinary Association's Animal Welfare Award** and the only recipient from North America. The award recognizes her work to promote animal welfare through research, service and education.

90s

Dr. Todd Duffield, OVC DVM 1990, DVSc 1997, was awarded the **2018 Metacam® 20 Bovine Welfare Award** for his profound and lasting impact on the well-being of the bovine species. His contributions include an extraordinary commitment to scientific research, teaching, extension education and the mentorship of veterinary students and new scientists.

Dr. Steeve Giguère, OVC PhD 1999 and University of Montreal D.M.V. 1992, was posthumously inducted in the **University of Kentucky Equine Research Hall of Fame** in October 2018. A former professor of large animal medicine and Marguerite Thomas Hodgson Chair in Equine Studies at the University of Georgia, Giguère was an equine infectious diseases and comparative immunology researcher.

Dr. Stephen LeBlanc, OVC DVM 1997 and DVSc 2001, one of three University of Guelph profs named to the prestigious **Clarivate Analytics** list of "Highly Cited Researchers" for 2018.

Dr. George Mutwiri, OVC PhD 1994, is the **2018 president of the American Association of Veterinary Immunologists**.

Mutwiri is professor of Vaccinology, School of Public Health, Senior Scientist, VIDO-International Vaccine Center, University of Saskatchewan in Saskatoon.

00s

The University of Florida College of Veterinary Medicine has named **Subhashinie Kariyawasam**, OVC PhD 2002, **Chair of the Department of Comparative, Diagnostic and Population Medicine**.

Dr. Tanya Sparling, OVC DVM 2009, received the **Young Veterinarian Award** at the **Nova Scotia Veterinary Medical Association's** AGM in October.

OVC Community

Biomedical Sciences professor **Dr. Thomas Koch**, received a **Special Recognition Award for Young Investigators at U of G**.

OVC Population Medicine professor **Jennifer McWhirter**, received the **Rising Star Award at the Health Promotion Canada 2018 Recognition Awards**.

Retiring Faculty

A Tier 1 Canada Research Chair in Animal Reproductive Technologies, **Prof. Allan King**, Depart-

ment of Biomedical Sciences, established a research program at the OVC with national and international academic collaborations.

Prof. Janet MacInnes, Department of Pathobiology, joined OVC in 1985. Her research focuses on molecular analysis of virulence determinants of bacteria, as well as the development of recombinant and live attenuated vaccines.

New Faculty

Prof. Matthew Little, OVC PhD 2017, joined OVC as **assistant professor** in Population Medicine in August 2018.

Prof. Nicole Ricker has been appointed **assistant professor**, Pathogenomics and Disease Informatics, in Pathobiology.

New to HSC

Dr. Omar Khan, OVC DVM 2000, joined the **Hill's Pet Nutrition Primary Healthcare Centre** at the Ontario Veterinary College. His main areas of interest are ultrasonography, dentistry and ophthalmology.

Dr. Angie Lagos Carvajal joined the OVC Health Sciences Centre **Anesthesiology Service** as anesthesia specialist in September 2018.

40s

Dr. Thomas Hawke, OVC DVM 1945, passed away August 29, 2018.

50s

Dr. David Gaunt, OVC DVM 1950, passed away on June 18, 2018.

Dr. William Osborne, OVC DVM 1951, former owner of the **Kingston Veterinary Clinic**, Ontario, passed away on February 14, 2017.

Dr. Tom Hulland, OVC DVM 1954, a former OVC faculty member, chair of the department of Pathology and Associate Dean (Academic) from 1969 to 1981, passed away on October 15, 2018. His many contributions to the veterinary profession were celebrated with the **OVC Alumni Association Distinguished Alumnus Award** in 2002.

60s

Dr. W (Dalton) Maxwell, Class of OVC DVM 1962, passed away April 23, 2018.

Dr. Michael Anthony 'Tony' Bernard, OVC DVM 1967, passed away on November 22, 2018

90s

Dr. Steeve Giguère, OVC PhD 1999, passed away on May 27, 2018.

1931

VETERINARY HISTORY IN CANADA

VETERINARY SCIENCE PRACTICE ACT EXPANDED

While retaining many of the provisions regarding qualifications to practice in the previous Act in 1931, under a revised 'Veterinary Science Practice Act', the Ontario government broadened the definition of 'veterinary science' to include treatment of 'any kind of livestock or domestic

animals'. This recognized that small companion animals also deserved the protection of treatment by qualified veterinarians. The revised Act also abolished the government-appointed Veterinary Practice Board and made the Ontario Veterinary Association the registration body for Veterinary Surgeons in Ontario, with compulsory membership. This measure made veterinary

medicine in Ontario self-regulating. While 'empirics' grandfathered under the 1920 Veterinary Science Act could continue to practice, as the 1930s progressed, they gradually left the field through attrition.

Photo above: Milestones Small animal demonstration in the classroom. (C.A.V. Barker Collection, Archival Collections, University of Guelph Library.)

COMING EVENTS

Watch the OVC website for more information on these events:

Winter U of G Convocation
February 2019

College Royal
March 16 to 17, 2019

OVC Alumni Hockey Tournament
April 12 to 13, 2019
University of Guelph
Gryphon Centre Arena

Campbell Centre for the Study of Animal Welfare Research Symposium
May 8, 2019

Institute for Comparative Cancer Investigation
May 2019

Ontario Swine Research Network Research Day
May 2019

Centre for Public Health and Zoonoses Symposium
June 2019

Spring U of G Convocation
June 2019

Alumni Weekend June 21 to 23, 2019
Did you know Alumni Affairs helps organize class reunions? Find more information at www.alumni.uoguelph.ca/alumniweekend/reunions or contact OVC's Alumni Advancement Manager, Amy Tremaine at tremaina@uoguelph.ca or 519-824-4120 ext. 56679.

The University of Guelph, and by extension OVC, is a registered charity. Your contribution can support the area of your choice or OVC's highest priority at the time. Visit our giving page at uoguelph.ca/give. Tax receipts are provided.

The University of Guelph charitable registration number: 10816 1829 RR 0001

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