



Antimicrobial resistance is one of the biggest threats facing animal and human health.

OVC brings expertise to One Health challenge

SURVEILLANCE, STEWARDSHIP, INNOVATION — these are the essence of a growing global approach to antimicrobial resistance and usage. It's an approach that also reflects the expertise OVC researchers and veterinarians bring to this One Health challenge.

The college is a leader in research into resistant bacteria and genes, thanks to scientists working at the forefront of surveillance and stewardship advances. For years, OVC researchers have been involved in research into antimicrobials and their use, the epidemiology and movement of resistant

bacteria, understanding antimicrobial practices by veterinarians, and developing guidelines for practitioners and input into public policy.

Ontario Veterinary College scientists such as Dr. Scott Weese, Pathobiology, bring their expertise to antimicrobial guideline development. The committee Weese chairs through the International Society for Companion Animal Infectious Diseases is a leader in clinical guideline development for companion animals. The guidelines are widely cited, notes Weese, with three sets published so far and more underway. ...continued on page 3



The **Ontario Veterinary College** placed sixth worldwide, first in Canada and third among veterinary schools in North America in a new global ranking of universities. This year's ranking by Quacquarelli Symonds looked at 1,127

universities from 74 countries, the most comprehensive global overview of higher education by discipline. Schools are graded based on academic and employer reputation and research impact.

FROM THE DEAN

Antimicrobial stewardship: the One Health challenge of the decade

IT IS HARD TO imagine a time without readily available, effective antimicrobial therapy, but antibiotic discovery began in earnest only at the end of the Second World War. From the start, we acknowledged that repeatedly exposing microorganisms to antimicrobials would likely increase resistance, and indeed this has happened quite quickly.

Today, there is remarkable consensus among governments, researchers, health professionals, food industries and the public that we must act to preserve effectiveness of our current antimicrobials, and protect the utility of the few new ones coming on the market. We are seeing unprecedented activity to address this issue; this could be the One Health *cause célèbre* of the decade.

Since the majority of antimicrobial use in developed nations is associated with food animal production, the stewardship of antimicrobials will involve veterinarians directly. Our profession has taken a leadership role in promoting antimicrobial stewardship, including their use in companion animal practice.

Researchers from OVC have been critically involved in understanding antimicrobial resistance and stewardship in Canada, and are highly respected globally and nationally for their work. They



Research is critical to understanding antimicrobials and identifying innovative solutions.

also have a central role in identifying and communicating innovative solutions.

The antimicrobial resistance and usage issue remains a top priority for the federal government. As new policies and regulations (<http://bit.ly/2r2fl4g>) are implemented in the months ahead, veterinarians will have an increasingly larger role in stewardship.

This challenge presents our profession with an opportunity to promote the One Health principles that are so well-suited to solving complex problems such as this.

We must continue to gather multidisciplinary teams to find solutions that

will assist our communities in protecting human and animal health while exercising more judicious use of antimicrobials. Also critical is training the next generation of veterinarians and highly qualified personnel, who will meet this challenge in clinical practice, industry and public service, as well as continued discovery.

You will learn a little more about OVC's expertise and innovation in this area, and meet some of our alumni and recent grads who are putting their talents to work on this One Health challenge in the pages ahead.

Dean Jeffrey Wichtel

The OVC welcomes **Anita Tucker**, who joined Population Medicine in 2016. Her research background and focus involves swine behaviour and welfare. More broadly, Tucker, who is a Métis citizen, also explores a range of In-



igenous issues in her research, such as Indigenous perspectives on animals and their care, traditional food systems, and the connection between Indigenous Peoples, animals and the environment.

COLLEGE NEWS

...continued from page 1

Weese, along with Dr. Patrick Boerlin, also in Pathobiology, recently received federal funding to further study how microbial resistance genes spread, the risks of infections from animals and how to prevent transmission to people (see page 4). Boerlin's studies include molecular epidemiology of antimicrobial resistance.

Surveillance of both antimicrobial use and resistance monitoring is essential, says Dr. Scott McEwen, Population Medicine, who has worked extensively on antibiotic resistance and food safety issues with national and international organizations. "It helps identify trends over time, how much is being used and where, and is vital for antibiotic stewardship."

A broad stewardship approach is vital for the prudent and effective use and conservation of antimicrobial drugs. "We are increasingly focused on all aspects of use because use drives resistance," says Dr. John Prescott, U of G professor emeritus.

Prescott has co-chaired three national conferences on antimicrobial drug use in animals in Canada, bringing together OVC faculty and collaborators from public health, industry, agriculture, government and consumers. The subsequent ad hoc committee for antimicrobial stewardship in Canadian agriculture and veterinary medicine, including several OVC faculty, has continued to keep a national dialogue going.

McEwen, Prescott and Weese have been involved with task groups focusing on surveillance and stewardship as the federal and provincial governments develop a Pan-Canadian Framework on Antimicrobial Resistance to be released in 2017.

Students trained for stewardship

TRAINING THE NEXT GENERATION of veterinarians in best practices is essential to promoting antimicrobial stewardship.

The veterinarian's role in prudent use of antimicrobials and stewardship is a key concept that the Ontario Veterinary College emphasizes to student veterinarians. The focus for both is "how to maintain optimal patient care while fulfilling principles of antimicrobial stewardship, a balance that can be tough to figure out at times," notes pathobiology professor Scott Weese, who has expertise in clinical antimicrobial use.

"Prudent and rational antimicrobial use are key stewardship messages instilled in veterinary clinical pharmacology, and where students learn about drug compounding and drug withdrawal periods in food-producing animals," says Ron Johnson, veterinary clinical pharmacologist in Biomedical Sciences. He also ensures students are familiar with the Canadian Global Food Animal Residue Avoidance Databank, an important resource for veterinary drug use in food-producing animals.

Graduate students and clinical residents also learn the principles and practice of antimicrobial therapy in one of the few courses of its kind in the world, adds Weese. "This intensive course covers various aspects of antimicrobial use, with a lot of stewardship tossed in, as we discuss how to deal with the complicated infections that occur in referral practice."

OVC's strong connections to public health

The Ontario Veterinary College plays a vital role in protecting our food sources and public health through research, education and collaborations with public health partners at the local, provin-

cial and federal levels. The Centre for Public Health and Zoonoses (CPHAZ) at OVC, directed by Dr. Jan Sargeant, plays a pivotal role in this commitment to public health.

A new website, unveiled this past spring, highlights research and outreach activities along with the centre's connections to the One Health concept.

Find out more at www.cphaz.ca.



Congratulations to **Dr. Éva Nagy**, a YMCA-YWCA of Guelph Annual Women of Distinction honouree. A virologist in OVC's Department of Pathobiology, Nagy was recognized as a trailblazer in the science, technology, engineering

and math category for her extraordinary work, for commitment to her field, and for encouraging and mentoring her female students. The awards celebrated 30 role models and community leaders.

COLLEGE NEWS

Consistent reporting helps herd veterinarians



Consistent record-keeping helps veterinarians monitor antibiotic efficacy.

ONE OF THE CHALLENGES in veterinary medicine involves capturing data on the efficacy of antimicrobial use, says Dr. David Kelton, OVC professor and Dairy Farmers of Ontario Research Chair in Dairy Cattle Health. An ongoing project looking at antibiotic use on Ontario dairy farms includes producer records.

Graduate student Alex Watters found variations in record-keeping by the producers involved in the study, suggesting a more standardized recording form

may be useful. While each producer has a record system that works well for their farm, there were inconsistencies in how the information was reported.

Herd veterinarians need access to good quality records to provide the best assessment of antibiotic protocols being used on the farm, adds Kelton. The project, funded by the Ontario Ministry of Agriculture, Food and Rural Affairs, and Dairy Farmers of Ontario, is continuing.

Research studies aim to combat antibiotic resistance

Two OVC researchers will use new federal funding to target antimicrobial resistance.

Pathobiology professors Patrick Boerlin and Scott Weese received funding from the Canadian Institutes of Health Research to look at the risks of infections from animals and how people can protect themselves.

Boerlin will lead a genetic study on thousands of bacteria found in chicken, swine, cattle, dogs and humans to learn about the spread of drug resistance.

Working with researchers in Europe and Canada, he will look at how these bacteria resist treatment with antibiotics called cephalosporins.

They hope to learn when it's best to intervene to slow the spread of antimicrobial resistance, says Boerlin.

Weese will lead a three-year study of diseases that may spread from companion animals to humans.

His team will work with researchers in Europe to study disease transmission and antimicrobial resistance in humans and companion animals, looking at rates of transmission for each type of infection.

"It is known that animals share antimicrobial-resistant bacteria and genes with humans, but the extent to which this happens is unknown," says Weese.

Read more about OVC research – "No easy answers to antibiotic alternatives," pg. 19 in 2016 Agri-Food Yearbook: <http://bit.ly/pg19agrifoodyearbook>

After **Dr. Andrea Sanchez** completed her D.V.Sc. in anesthesiology at OVC in 2015, followed by a stint in private practice, she joined OVC's Clinical Studies department and the Health Sciences Centre's anesthesiology service



earlier this year. In addition to clinical teaching, her research will focus on pain management, including targeted anesthesia for specific diseases to better understand pain management and possible translational benefits.

Probiotics may offer alternative approach

Researchers in OVC are studying probiotics as alternatives to traditional antimicrobials to combat pathogens such as *Salmonella*, *Campylobacter jejuni* and *Clostridium perfringens* in poultry.

Over the last decade, pathobiology professor Shayan Sharif's lab has shown that probiotic combinations of lactic acid-producing bacteria significantly reduce *Salmonella* colonization in poultry.

They are now turning their attention to *Campylobacter jejuni*, the main bacterial cause of notifiable human food-borne illness in Canada. Few control measures, including vaccination, biosecurity or antibiotics, deter the bacteria in poultry. Both *Campylobacter jejuni* and *Salmonella* can harbour and transfer antimicrobial resistance genes.

Their next focus will be *Clostridium perfringens*, which can cause necrotic enteritis in poultry.

Research includes examining the effect of probiotics on the overall health, welfare and production of the animal.

"If you're not able to make a probiotic formulation that is safe, efficacious and able to provide equal production parameters, it is not going to be an economically sound investment for producers," says Sharif.

Read more:

<http://bit.ly/probioticsofferalternative>



Immune response may help combat parasites

RESEARCHERS AT THE ONTARIO Veterinary College are investigating how sheep on Ontario pastures produce an immune response to gastrointestinal parasite infections. By understanding how sheep develop immunity, researchers can identify animals that are better able to tolerate these parasites, reducing the need to treat them with anthelmintic drugs (dewormers).

Internal parasite infections can be deadly for sheep; widespread resistance of these parasites to the most common treatments makes managing them even more difficult.

Grad student Emma Borkowski, along with OVC professors Andrew Peregrine, Pathobiology; Paula Men-

zies, Population Medicine; and Ontario Agricultural College professor Niel Karrow, Department of Animal Biosciences, are examining different ways to measure immune responses of sheep to parasites. The goal is to identify markers that are most predictive of lower levels of parasitism.

"Anthelmintic drugs will always be important for managing clinical parasitism, but we need to look at alternative strategies," says Borkowski. "Identifying sheep with better immune responses and using that in breeding programs is one of those strategies that would be a very useful tool for the sheep industry."

Read more:

<http://bit.ly/sheepimmuneresponse>



The OVC was already a few years old when Canada was formed in 1867. That year, four students graduated from OVC: **Lavin Cather** of Lindsay, Ont.; **John Coates** of Barrie, Ont.; **Edward Harrison** of Milton, Ont.; and **Archibald McNe**e of

Perth, Lanark County, Ont. One hundred and fifty years later, 119 DVM students graduated from the college as OVC 2017 took their bows on the convocation stage, ready to begin their careers in veterinary medicine.

ALUMNI NEWS

Project benefits Ghana Veterinary Teaching Hospital

THE SCHOOL OF VETERINARY Medicine at the University of Ghana in Africa recently received a microscope and theriogenology diagnostic and clinical equipment through funds raised by the OVC Class of 1963 to celebrate their 50th anniversary.

The class chose the project to support their classmate Dr. Bill Bosu's volunteer activities at the University of Ghana's Veterinary Teaching Hospital. Drs. Bosu and Joe Ocran, OVC 1963, were originally from Ghana and returned there following graduation.

Bosu later joined OVC, but Ocran died soon after. The project is a memorial to Ocran as well as a recognition of Bosu's volunteer efforts.

Prof. Paa Kobina Turkson, dean of the school, expressed gratitude to Bosu and his OVC 1963 colleagues for the equipment, which will aid teaching and research at the new Veterinary Teaching Hospital. The equipment includes a teaching microscope, calf puller, electro ejaculator for ruminants, and various medical devices to assist in the delivery of calves, lambs, kid goats and piglets.



Members of the University of Ghana celebrate OVC 1963's donation.



Sonia Randhawa joined OVC's advancement team in January 2017. She will serve as alumni advancement manager during Stefanie Sharp's parental leave. Randhawa previously worked with U of G's advancement team as a develop-



ment assistant supporting OVC fundraising efforts. Most recently, she worked as a development co-ordinator at the Peel Art Gallery, Museum and Archives. She can be contacted at 519-824-4120, Ext. 56679, or soniar@uoguelph.ca.

Veterinary College of 2017

Class Presidents

Julie Higgins	Darren Wood

Heather Bouts, Katherine Bottams, Spencer Darby, Kyla Campbell, Andrew Cheng, Natalie Chow, Claire Clements, Allison Collier, Kevin Collins

Sarah Croning, Kristina Doyle, Erin Duffy, Kyle Evans, Abigail Finlay, Gillian Fennie, Alicia Forsyth, Kristen Frederick, Avery Gagnon, Mallory Gilmer

Stephanie Guiler, Jennifer Hammond, Abigail Harris, Chris Hauser

Leah John, Kim Kabela, Kiarra Kamala, Julie Kipitel, Julia Kim, Sangwon/Daniel Kim

Stephanie Lowell, Rachel Morjas, Michelle Metzger, Kelsey Milbrink, Katherine Moffitt, Andrie Morin

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Rylee Ramsey, Khandice Rangan, Amanda Saldivia-Webb, Allison Schooner, Kerry Schuman

Melissa Smith, Tessa Spooner, Megan Saporiti, Carly Stevenson

Melissa Wagner, Ian White, Anne Wallace, Shannon Walsh, Rebecca Weller, Jessica White, Jenna Williamson, Kitty Ding, Kassandra Young

Anderson-Coxe Photography

Class of 1962 supports veterinary profession's future

The OVC Class of 1962 has underlined their commitment to the future of the veterinary profession with a new endowed scholarship.

The class successfully reached their \$100,000 goal to support the OVC 1962 Graduate Award for Clinical Research to be awarded to an OVC graduate student with the greatest research productivity, best academic performance and the highest likelihood of research results applicable to clinical practice.

The award recognizes that the world is facing significant challenges in the areas of veterinary medicine, and there is an ongoing need to continue to apply research findings to clinical practice.

Some of the class members devoted their careers to clinical practice, while others focused on academia, so the scholarship is a nice mix of the two areas, says Dr. Lyle Rea, OVC 1962.

The first scholarship was awarded in April 2017 as the class celebrated its 55th anniversary.

The inaugural recipient is Sophie Saati, who is completing her D.V.Sc. in small animal internal medicine. Her research focuses on hemostasis.



The Ontario Veterinary College welcomes **Dr. Nathalie Coté**, who joined the Large Animal Surgery Service and Department of Clinical Studies in February 2017. A board-certified large animal surgeon, Coté is recognized for

her surgical expertise. She graduated with her DVM from the University of Montreal and completed her D.V.Sc. in large animal surgery at OVC before becoming a Diplomate of the American College of Veterinary Surgeons.

ALUMNI NEWS

Career blends veterinary science and public policy

TACKLING THE ISSUE of appropriate antimicrobial use in food animals is a critical part of solving the problems of antimicrobial resistance — and an important aspect of Mary Jane Ireland's work as director general of the Veterinary Drugs Directorate (VDD).

A part of Health Canada, VDD is responsible for protecting human and animal health, and the safety of the food supply. The VDD evaluates and monitors the safety, quality and effectiveness of veterinary drugs, and promotes their prudent use in food and companion animals. As concerns about antimicrobial resistance grow worldwide, Ireland and her colleagues are working with multiple partners with cross-cutting responsibilities to promote appropriate use of antimicrobials in animals across Canada.

"We all have a role to play in promoting the responsible use of antimicrobials," she says. "For veterinarians this role includes what treatment choices they make to treat and prevent disease and in educating their clients."

Becoming a veterinarian was a lifelong dream for Ireland. After completing her B.Sc at the University of Guelph, she completed a master of science and a DVM at OVC in 2000 and more recently earned an MBA. After graduation,



Mary Jane Ireland

she worked in a veterinary practice for several years before accepting a role at VDD as a clinical drug evaluator who assessed the safety and effectiveness of veterinary drugs.

"I had never imagined myself doing this kind of work," says Ireland, "but it was a great career decision for me. My work with the VDD is a blend of veterinary science, public policy and being able to work nationally and internationally. The work we do has an impact on the safety of food we eat every day. There's never a dull day."

With respect to antimicrobial resistance, the Public Health Agency of Can-

ada has provided national leadership for the government, with a focus on the three pillars of surveillance, stewardship and innovation under the One Health principle.

The directorate's initiatives are integral components of this plan and include proposed regulatory changes to the food and drug regulations. The changes will increase oversight over imports to ensure the quality of drugs for veterinary use, control own-use imports of veterinary drugs, and gather information to support antimicrobial resistance surveillance while facilitating access to low-risk veterinary health products as additional health management tools.

"Resistant bacteria can spread between animals and humans through the food we eat or through direct contact," she says.

Her studies at OVC prepared her well for this role, she says. "The training I received there provided me with strong analytical and critical thinking skills."

The foundation that a degree in veterinary medicine provides is also why many veterinarians are hired by the VDD and are found in leadership roles throughout the federal government. She is enthusiastic about sharing information about exciting and challenging career opportunities for veterinarians within the federal public service. "When I graduated then I didn't fully understand how far my DVM degree could take me."

Julie Byczynski joined Alumni Affairs and Development in February 2017 as the senior development manager in OVC. Most recently, she was campaign director for the Detroit Symphony Orchestra, raising funds for endowment



and new initiatives. Previously, Byczynski served Canada's National Arts Centre, working with donors across Canada. She is a U of G double alumna (BA, MA). Contact her at 519-824-4120, Ext. 54370, or at jbyczyns@uoguelph.ca

ALUMNI NEWS

One Health approach critical in globalized world

ASK BERNADETTE DUNHAM WHAT prompted her to pursue an opportunity with the Milken Institute School of Public Health and she'll point to the importance of the One Health concept.

"During my career I realized that no one discipline or sector of society has enough knowledge and resources to prevent emergence or resurgence of diseases in today's globalized world," says Dunham. "One Health is a worldwide strategy for expanding interdisciplinary collaborations in all aspects of health care for humans, animals and the environment."

Dunham envisioned a career in private practice when she graduated from OVC in 1975 but the "door of opportunity opened and I walked through it." Following a few years in private practice, she returned to academia, obtaining a PhD from Boston University, and as her career continued to unfold, she gained experience in teaching, research, policy and government service.

Most recently she served as director of the U.S. Food and Drug Administration's Center for Veterinary Medicine, where she ensured that animal drugs and medicated feeds are safe and effective, and that food from treated animals is safe to eat.



Bernadette Dunham

Today, as a visiting professor at the Milken Institute School of Public Health at George Washington University in Washington, D.C., she focuses on a One Health approach to training public health professionals. She envisions a far-reaching impact.

"The more that we can bring faculty and students from a wide range of disciplines together, the greater their comfort level," says Dunham. "Hopefully throughout their careers they will continue to break down the barriers and work across professions to solve issues of mutual concern under a One Health approach."

Antimicrobial resistance (AMR) is a global threat that requires not only a better understanding of it and how resistance genes spread, but also strengthening knowledge through research and surveillance, and judicious use to protect human, animal and environmental health, she notes.

The One Health approach brings together experts from multiple disciplines to address this critical issue in a collaborative manner.

Veterinarians play a vital role, bringing their expertise in both animal and public health to the table. Their role in stewardship and prudent use of antibiotics in production agriculture and companion animal medicine is quintessential, she adds.

Antimicrobial resistance threatens human, animal and environmental health on a national and global level. "Microbes travel and don't acknowledge geographical borders," she adds. A coordinated global surveillance effort is needed to adequately capture the various factors contributing to AMR. A One Health approach is critical.

Today's technology enables veterinarians to use rapid diagnostics, courtesy of smartphone-based lab-on-chip diagnostics, and smartphone apps for real-time disease surveillance and reporting in the field, says Dunham. This in turn assists in decreasing unnecessary prescribing, allowing for more accurate antimicrobial use.



The Ontario Veterinary College welcomes **Dr. Cathy Bauman**, who joined the Department of Population Medicine as an assistant professor in June 2017. Bauman has extensive teaching experience at the graduate and under-

graduate levels. Her PhD work focused on the dairy goat and dairy sheep industry in Ontario. Most recently, she worked extensively on the National Dairy Study 2015, a cross-Canada dairy health and herd management research project.

ALUMNI NEWS

Grad one year out

WHAT MYTHRI VISWANATHAN ENJOYS most about her role at the Public Health Agency of Canada (PHAC) is the sense that she is contributing to something that has a real impact on people's lives and health. Working for both FoodNet Canada, which is responsible for enteric disease surveillance, and the Canadian Integrated Program for Antibiotic Resistance Surveillance (CIPARS), she helps with the co-ordination and analysis of retail samples.

Here's how it works: retail samplers obtain samples of food from grocery stores and deliver them to the laboratory for testing. The tests look first for the presence of pathogens in the food; any microbes found are then tested for antimicrobial resistance. Both FoodNet and CIPARS also test samples in other parts of the food chain.

Viswanathan begins her workday by entering new data that has been submitted, validating it and managing any issues with the database. Later she attends meetings with those working on special projects or discussing issues.

Viswanathan, who graduated from OVC in 2015 with a master's degree in epidemiology, was very familiar with the database even before she was hired. That's because her thesis research used some of that data.

"At that point I was only using a



Dr. Mythri Viswanathan

small piece of the data," she adds. "It surprised me when I came here to see how much information there is, and I appreciate how much work goes into gathering, collecting and making sense of that data."

Her thesis experience was key to being hired in this role, but Viswana-

than says her OVC studies prepared her in other ways as well.

"The soft skills I learned in school about working collaboratively with others and thinking critically on how to analyze and present data have really helped me in my work," she says. Her future plans include pursuing a PhD.

During her D.V.Sc. studies at OVC, **Dr. Janet Beeler-Marfisi**, DVM '07, studied heaves in horses. A Diplomate of the American College of Veterinary Pathologists in Clinical Pathology, she joined OVC's Pathobiology depart-



ment in early 2017. Her research focuses on finding better ways to diagnose lung disease in cats, dogs and horses using cell markers. She will also study asthma in young horses to see whether there is a connection to air pollution.

ALUMNI NEWS



Dr. Zbarsky's son Jeffrey and daughter Pamela present the inaugural award to Amy Weber, OVC Class of 2018, centre.

Award honours OVC 1976 graduate

THE FAMILY OF DR. Richard Zbarsky, OVC 1976, has created the Dr. Richard Zbarsky Memorial Scholarship in honour of a beloved father and veterinarian who owned Etobicoke Veterinary Hospital for more than 30 years.

Zbarsky was passionate about small animal medicine, believed in mentoring others and dedicated his time to the patients who needed him most. He provided the highest quality of care to all, including those with limited financial resources.

The scholarship is awarded to a student veterinarian whose volunteer work relates to the care or well-being of companion animals and benefits companion animal welfare.

The inaugural award was presented in November 2016 to Amy Weber, OVC Class of 2018, who is looking toward a career in small animal medicine and outreach veterinary care.

Alumni give back to U of G with scholarship

Lyle Rea, DVM '62, and Louise Rea, B.H.Sc. '60, are proud University of Guelph alumni and have been strong supporters of U of G for more than 30 years. A new graduate scholarship in their name will benefit a graduate student pursuing pharmacology research in OVC's Department of Biomedical Sciences.

"Our lives and the lives of our kids were basically a product of not one but two degrees from the University of Guelph, plus my 34 years in the pharmaceutical industry," says Lyle. Establishing a graduate scholarship related to pharmacology at OVC seemed like the perfect fit to the Reas.

After a few years in private practice following his graduation from OVC, Lyle joined the UpJohn Pharmaceutical Company in Canada and eventually became vice-president of the Asia-Pacific (animal health) division. Louise became a registered dietitian, then a home economist and finally pursued a high school home economics teaching career, following her graduation from the Macdonald Institute in 1960.

The inaugural Lyle and Louise Rea Graduate Entrance Scholarship in Pharmacology was awarded in April 2017 to master's student Ashutosh Patel, who is studying how stress can affect attention, learning and memory at the cellular and molecular level.



Louise and Lyle Rea present the inaugural award to Ashutosh Patel, centre.



Dr. Stefan Keller, Department of Pathobiology, has received funding from the Canada Foundation for Innovation through the John R. Evans Leaders Fund for profiling adaptive immune responses in animals. His research on

adaptive immunity focuses on factors that influence the composition and dynamics of immune repertoires in health and disease as well as possible impacts on diagnosing disease.

COLLEGE NEWS

Databank helps protect Canada's food supply

THE CANADIAN GLOBAL FOOD Animal Residue Avoidance Databank (CgFARAD) provides veterinarians with quick turnaround, science-based information on prudent use of medications for food-producing animals. The web-based service provides veterinarians with withdrawal period information for drugs that are used extra-label in food animals.

Dr. Ron Johnson, Biomedical Sciences, and Dr. Patricia Dowling, based at the Western College of Veterinary Medicine, along with OVC staff veterinarian Dr. Saad Enouri, contribute to CgFARAD's clinical pharmacology expertise.

While CgFARAD has played an important role in ensuring the safety of animal-based food products for many years, growing public concern and impending regulations regarding antimicrobial use has made CgFARAD a keystone program in Canada's food safety system.

The databank is funded by key stakeholders, including the pharma-



Dr. Ron Johnson in the food safety lab.

ceutical industry, feed mills, veterinary associations and food processors.

Support for recent lab and database enhancements at OVC were facilitated with support from the Livestock Research Innovation Corp. and Growing Forward II.

New tissue culture lab facilities will allow CgFARAD researchers to establish a vital food safety research program focused on factors that can affect how drugs are metabolized in food-producing animals, such as drug interactions, disease, genetics, nutrition and environment.

To learn more about CgFARAD, visit <https://cgfarad.usask.ca/home.html>.

COMING EVENTS

OCT. 14

OVC Animal Welfare Forum
OVC Lifetime Learning Centre

OCT. 15

OVC Alumni Association
Continuing Education Symposium
OVC Lifetime Learning Centre

For more information or to register for any events, please contact Sonia Randhawa, alumni affairs advancement manager, at soniar@uoguelph.ca or 519-824-4120, Ext. 56679.

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The Crest Editorial Board

Jane Dawkins

Brad Hanna

Carol Ann Higgins

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Karen Mantel

Sonia Randhawa

Matt Spiegle

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Writing/Editing

Susan Bubak

Karen Mantel

Robyn Meerveld

Teresa Pitman

Articles in *The Crest* do not necessarily reflect the views of the editorial board. We encourage you to send comments and story suggestions to:

Karen Mantel
OVC Communications
519-824-4120, Ext. 52746, or
kmantel@uoguelph.ca

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