GROUPE DE RECHERCHE EN
ÉPIDÉMIOLOGIE DES ZOONOSES
ET SANTÉ PUBLIQUE

GREZOSP

Université de Montréal

ACTIVITY REPORT

2023-2024

Table of contents

An overview of the GREZOSP

1	**1**	**139**
unique research group located in the only French-speaking veterinary faculty in North America	veterinary public health pavilion where professionals from two federal agencies and the FMVUM work together	members representing 17 institutions or organizations
35	**50**	**34**
graduate students	regular members, professionals and researchers	publications under GREZOSP affiliation this year

Figure 1: Word cloud based on keywords associated with GREZOSP scientific publications. The size of the words in the graph is proportional to their frequency.

A word from our director

I am pleased to present the Activity Report of the Groupe de recherche en épidémiologie des zoonoses et santé publique (GREZOSP) for the year 2023-2024. We would like this report to be both brief and complete, in-depth and pleasant to read, which is the equivalent of walking on a tightrope!

In addition to the arrival of our motivated and competent research advisor, **Jessie Longpré**, the year was marked by the post-COVID resumption of face-to-face activities. At last, daily activity at the veterinary public health pavilion has returned! Most occupants have returned to the premises at least a few days a week. We've launched a coffee hour every other Thursday morning, and they're proving to be very popular. For the first time since the pandemic, we shared a festive meal before the holiday break, accompanied by the welcome return of Pandémonium, the group's musical band. These activities have all been good opportunities for fruitful exchanges between members from different agencies and disciplines, which is precisely what the GREZOSP is all about.

Several face-to-face research events took place. GREZOSP organized or co-organized several of these, such as the *Cohabitation humains et animaux non-humains en milieu urbain* exchange day, the ACFAS colloquium entitled *Répondre aux impacts des changements climatiques à l'aide de l'approche "Une seule santé",* Christine Budke's conference, the meeting with Meggan Craft and the annual conference of the Société Québécoise pour l'Étude Biologique du Comportement (SQÉBC). Together with UQAM's Institut Santé et Société, GREZOSP also organized a virtual panel at the Canadian Public Health Association's (CPHA) Forum on Infectious Diseases and Climate Change. Finally, Clarice Lulai-Angi, **Julie Paré**, **Nicholas Ogden** and I presented, on behalf of the GREZOSP, a symposium on One Health at the Canadian Veterinary Medical Association Congress in Quebec City in July 2023.

It's safe to say that the year was marked by major advances in the global approach that concerns us all: a One Health approach, both within our university and on a global scale. Remarkably, the subject was the theme of a special issue of the journal Médecine Vétérinaire and featured in rector Daniel Jutras' annual declaration! It goes without saying that the methodological rigor promoted by the GREZOSP in epidemiology is essential to the advancement of this approach.

Some of our members, including student members, are making a name for themselves internationally, and we're proud of them! We strive to promote the achievements of our members to maximize their contribution to the advancement

of methods for studying the epidemiology of zoonoses, but also in the context of One Health.

I'd like to extend my warmest thanks to **Patrick Leighton** for his involvement as assistant director, **Jessie Longpré** for the skill and enthusiasm she brings to her work, and **Caroline Kilsdonk** for her loyalty and motivation in helping us shine.

I hope you enjoy reading our report and find it informative.

Hélène Carabin

International recognition

Several of our members have recently received international recognition for their outstanding contributions.

Jean-Pierre Vaillancourt was presented with the Carl Brock Award by Animal Health Canada at its annual forum on September 20, in recognition of his leadership, commitment and interest in the livestock sector, particularly with regard to animal health and welfare, throughout his career.

Hélène Carabin was elected a Fellow of the U.S. National Academy of Medicine (NAM) on October 9, an honor considered among the most prestigious in recognition of her professional achievements and commitment to health and medicine. This is a remarkable appointment for a non-American researcher from the field of veterinary medicine, and the first person affiliated with the Université de Montréal to be inducted.

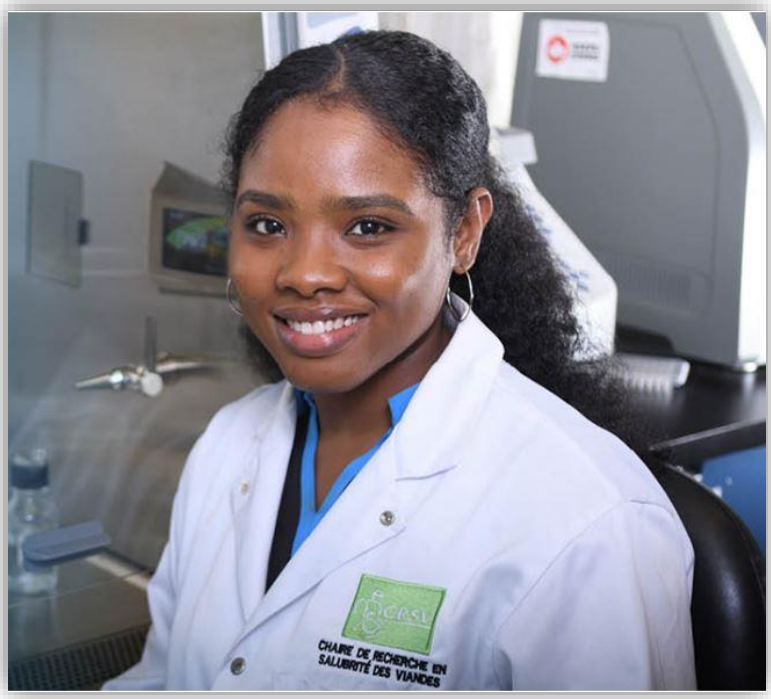
Olivier Kambere and Nancy Nson Nswal were honored with a *Global One Health Special Prize* awarded by the Food and Agriculture Organization of the United Nations (FAO) on November 29, 2023 at the *World Food Forum* (WFF) for their research project aimed at reducing the risk of leptospirosis in the Democratic Republic of Congo.

In addition, **Katrina Di Bacco was** selected for an internship at the World Organization for Animal Health (WOAH), where she actively contributed to the Preparedness and Resilience Service, collaborating with various WOAH departments and experts from the scientific network of the Quadripartite Alliance.

Bursary member projects

Schlasiva Cénatus

Schlasiva Cénatus, a master's student under the supervision of **Mohamed Rhouma**, assistant professor at the Faculté de médecine vétérinaire de l'Université de Montréal (FMVUM), and co-directed by **Julie Arsenault**, full professor also at FMVUM, has been awarded a recruitment bursary for her project: "Détermination de la prévalence de différents sérotypes de *Salmonella* et des pathotypes d'*E.coli* en production ovine au Québec et caractérisation de leur profil de résistance aux antimicrobiens (RAM)".



This project aims to estimate the prevalence of pathogenic *E. coli* in the Quebec sheep industry, quantify the use of antimicrobials in flocks, and establish a link between this use and *E. coli* resistance. The results generated by this project will enable better management of AMR.

Wassel Zekri

Wassel Zekri, a Master's student under the supervision of **Mohamed Rhouma**, Assistant Professor at FMVUM, and co-supervised by Marie-Lou Gaucher and **Maud de Lagarde**, respectively Associate Professor and Assistant Professor at FMVUM, has been awarded a recruitment grant for his project: "Characterization of the antibacterial activity and involvement of certain oxytetracycline metabolites in the development of antimicrobial resistance in avian pathogenic *Escherichia coli* (APEC)". Wassel's project aims to characterize the *in vitro* antibacterial activity of

the main metabolites derived from medically important oxytetracycline, as well as the molecular mechanisms of bacterial resistance to these compounds compared to their parent molecule. In addition, it seeks to define the pharmacokinetic parameters of these derivative metabolites in laying hens. The results of this project will be essential for developing policies to reduce the selection of antimicrobial-resistant bacteria in laying hens, and for strengthening consumer protection against residues of antimicrobials and their metabolites.

Highlights of the Club étudiant pour Une seule santé

The student club was founded in 2020 by two FMVUM graduate students and GREZOSP members, **Jérôme Pelletier** and **Nikky Millar**, with the aim of promoting a One Health approach within UdeM. Today, the club supports this global initiative by encouraging inter-faculty participation and collaboration, aimed at improving the quality of life of animals, humans and ecosystems through a transdisciplinary approach to health. The club's mission is to educate young researchers to recognize that the health of all species is closely interdependent. As a result, the club offers a variety of activities such as lunchtime talks, workshops, as well as education and awareness programs for young people at day camps. Over the past year, numerous workshops have been organized as part of various conferences, such as the colloquium of the Association étudiante de l'École de santé publique de l'Université de Montréal (AÉÉSPUM), the colloquium of the St. Lawrence 2023 chapter (One Health: The Role of Ecotoxicology) and the annual conference of the SQÉBC (Société Québécoise pour l'Étude Biologique du Comportement). In addition, the club organizes an annual conference, welcoming various speakers, and currently sits on the scientific and steering committee of UdeM's One Health Initiative. Science accessibility activities are also in the planning stages (MIL campus day camp, Festival Eurêka!, workshops in primary and secondary schools). GREZOSP, meanwhile, proudly supported the club's

launch event in November 2022 and continues to support its initiatives and share important information within its network.

Awards and scholarships

GREZOSP supports its graduate students. Since its inception in 2015, the GREZOSP Scholarship Program has awarded over **$222,000** to its students for recruitment, end-of-course support and to enable them to present their results at international conferences.

The recipients of the 2023-2024 Master's and PhD recruitment scholarships are **Wassel Zekri** and **Schlasiva Cenatus**, both Master's students under the supervision of **Mohamed Rhouma**, worth **$15,000** and **$11,000** respectively.

Internship scholarships were also offered for projects focusing on zoonosis epidemiology and population health in a One Health context. A **$3,200** bursary was awarded to **Marie-Alice Prieur**, and a **$2,800** bursary to **Jessica Hainault**.

In addition, GREZOSP student members were awarded public health prizes and bursaries by the Faculté de médecine vétérinaire at the 2022-2023 Annual Prizes and Bursaries Ceremony on December 14, 2023. The Lucie Besner bursary (**$5,285)**, aimed at supporting a graduate student whose research project focuses on zoonoses, was awarded to **Schlasiva Cenatus**. **Benjamin Jacobek**, a master's student under the supervision of **Jean-Philippe Rocheleau**, received the Société zoologique de Granby prize (**$4,152**). Finally, the Lucie Dutil prize (**$500)**, aimed at supporting a graduate student or postdoctoral fellow member of GREZOSP in recognition of their outstanding contribution to the life of the group through their human qualities, was awarded to **Katrina Di Bacco**, a doctoral student under the supervision of **Hélène Carabin**.

Katrina Di Bacco, doctoral student and winner of the Lucie Dutil award, with Caroline Kilsdonk, GREZOSP research advisor.

GREZOSP events and workshops

Journée d'échange Cohabitation humains et animaux non-humains en milieu urbain

On April 25, 2023, this day was the closing activity in a series of webinars organized jointly by UQAM's Institut Santé et Société (ISS) and GREZOSP on the theme of the cohabitation of humans and animals in the city. The aim was to raise some of the contemporary issues surrounding the place of non-human animals in the city, while highlighting the complex and paradoxical relationships that exist between humans and other animals in an urban socio-ecological environment.

Catherine Amiot and Marion Desmarchelier at the panel on pets in the city.

ACFAS symposium: Responding to the impacts of climate change using the "One Health" approach

On May 8, 2023, as part of the ACFAS Congress held at the Université de Montréal, GREZOSP and three of its members (**Cécile Aenishaenslin**, **Jean-Philippe Rocheleau** and **Patrick Leighton**) collaborated on the organization, presentations and facilitation of a colloquium. The aim was to reflect on the opportunities and challenges of implementing a One Health approach to address the impacts of climate change on human, animal and ecosystem health.

(Left) Cécile Aenishaenslin and Patrick Leighton welcome visitors. (Right) Jean-Philippe Rocheleau outlines the major challenges of climate change for human, animal and ecosystem health.

Christine Budke's lecture

On October 5, 2023, GREZOSP invited its members to a lecture by Dr. Christine Budke. She presented the progress of work on the *Development of the Competencies for a* One *Health Field Epidemiology* (*COHFE) Framework*.

Christine Budke, Professor and Director of the Graduate Program in Veterinary Public Health and Epidemiology at *Texas A&M University*'s School of Veterinary Medicine and Biomedical Sciences. She is also Scientific Director of *the Institute for Infectious Animal Diseases (IIAD).*

A friendly scientific exchange with Meggan Craft

On November 2, 2023, at the invitation of GREZOSP, members met with Meggan Craft, a researcher from the University of Minnesota. Her laboratory is interested in the impact of structure and movement of animal contact on the spread of infectious diseases, a necessarily interdisciplinary question.

Meggan Craft, Associate Professor at the *University of Minnesota*, during her visit to the Veterinary Public Health Pavilion.

Forum on infectious diseases and climate change

On November 9, 2023, GREZOSP presented a panel at the Canadian Public Health Association's (CPHA) Infectious Disease and Climate Change Forum. The panel, entitled "Urban green spaces and climate change: how to talk about infectious risks and public health benefits" presented the benefits of a One Health approach to promoting consistent messages to the public. The speakers were Maryline Vivion from Université Laval and **Camille Guillot** from Université de Sherbrooke, followed by moderator Johanne Saint-Charles from UQAM's Institut santé et société. **Ariane Adam-Poupart** presented an oral paper entitled "Un

programme scientifique pour accroître la capacité d'adaptation du Québec aux incidences des changements climatiques sur les zoonoses". Organizing committee member **Nicholas Ogden** took part in the panel "Vector-borne diseases and climate change: what are the health risks for Canadians?"

SQÉBC Annual Conference

GREZOSP, via its assitant director **Patrick A. Leighton**, co-organized the SQÉBC (Société Québécoise pour l'Étude Biologique du Comportement) annual symposium held in Montreal in November 2023. The theme of this 48th edition was "Animal Social Networks". The event, which brought together 224 participants, including **Caroline Sauvé**, **Manon Boiteux**, **Antoine Boudreau Leblanc**, **Katrina Di Bacco**, **Caroline Kilsdonk**, **Sarah Mediouni**, **Jérôme Pelletier**, **Timothée Poisot** and **Juliette Di Francesco**, was also supported by the Université de Montréal's One Health Initiative. One of the colloquium's aims was to create new interdisciplinary and interfaculty links. The USS student club also presented a workshop on Staging animal sociability in the urban fabric.

Holiday lunch

On December 20, the holiday spirit graced GREZOSP as members gathered to celebrate in a warm and friendly atmosphere with a performance by the band Pandémonium. The event, the first carefully orchestrated by **Jessie Longpré**, was the perfect occasion to extend a warm welcome to the new research advisor.

Coffee hour

During the winter 2024 session, GREZOSP relaunched a series of café-causeries, or coffee hours, warmly inviting its members to join in informal gatherings. These convivial moments are designed to encourage exchanges between colleagues and stimulate interdisciplinary research. Guided by the enthusiasm of Jessie and Caroline, these cafés offered much more than enriching discussions. Members were welcomed with tasty snacks and coffee, creating an atmosphere conducive to reflection and connection. What's more, these cafés played a crucial role in reconnecting members after the pandemic, leaving a lasting impression of broadening horizons, creating valuable bonds, and reinforcing commitment to innovative collaboration.

Events with strong GREZOSP member participation

ACFAS symposium: Making way for the next generation of milk quality researchers

On May 9, 2023, **Simon Dufour** and Josée Labrie collaborated on a symposium aimed at fostering the development of a strong next generation of dairy farmers, equipped and positioned to meet the challenges facing the Quebec dairy industry. **Juan Carlos Arango Sabogal** and **William Lelorel Nankam Nguekap** took the

opportunity to present the results of their project entitled "Detection of dairy herds infected with *Mycobacterium avium subsp. paratuberculosis* (MAP): where are we now and where are we going?". In addition, several members of GREZOSP's next generation of scientists (**Daryna Kurban**, **Karol Gilberto Solano Suarez** and **Marie-Pascale Morin**) also had the opportunity to present posters.

CVMA Congress

Hélène Carabin, Clarice Lulai-Angi, **Julie Paré** and **Nicholas Ogden** jointly presented the One Health approach at the CVMA (Canadian Veterinary Medical Association) conference from July 6 to 9, 2023. During this training session, they elaborated on the new definition of the One Health approach according to the Quadripartite Alliance, the operationalization of the approach with the help of examples relevant to veterinarians and animal health technicians, and the role veterinarians can play in finding sustainable solutions to problems at the human-animal-environment interface (e.g. emerging and zoonotic diseases, judicious use of antimicrobials, etc.).

TickNet Canada Scientific Symposium

TickNet Canada's first Scientific Symposium was held in October 2023. The event brought together scientists, healthcare professionals, research staff, students, trainees, patients and community partners from across North America to address current issues related to the emerging threat of tick-borne diseases, fueled by climate change, affecting the health of all Canadians. Several GREZOSP members presented posters, oral communications or participated in panel discussions. Among them were **Ariane Dumas**, **Catherine Bouchard**, **Raphaëlle Audet-Legault**, **Olivia Tardy**, **Natasha Bowser, Patrick A. Leighton**, **Hélène Carabin**, **Jean-Philippe Rocheleau**, **Emily Jenkins**, **Cécile Aenishaenslin** and **Nicholas Ogden**.

CoEvalAMR

Several GREZOSP members including **Nikky Millar**, **Christopher Fernandez-Prada**, **Sarah Mediouni** and **Cécile Aenishaenslin** took part in the final meeting of the CoEvalAMR (Convergence in evaluation frameworks for integrated surveillance of AMR) network in Montreal in January 2024. Sarah and Cécile played a major role in coordinating this event, whose objectives were to share the results and work accomplished during the second phase of the network, and to discuss future opportunities. The CoEvalAMR network aims to develop and share guidelines for the evaluation of surveillance systems and activities related to antimicrobial use and resistance.

FMVUM Research Week

The GREZOSP student community was well represented at FMVUM Research Week, held from March 18 to 21, 2024. **Faustin Farison**, **Karol Gilberto Solano Suarez**, **Schlasiva Cénatus**, **Vitoria Régia Lima Campêlo**, **Wassel Zekri**, **Marie-Pascale Morin, Djibrine Nassir Ahmat**, **Daryna Kurban** and **William Lelorel Nankam Nguekap** all presented their research projects. **Simon Dufour** participated as a panelist in a round-table discussion on open access to research data, while **Faustin Farison** and **Juan Carlos Arango Sabogal** offered an introductory training workshop on the basics of R and RStudio.

GREZOSP's involvement in the One Health Initiative

Training

The One Health Initiative is supported by the Vice-Rector for Research, Discovery, Creation and Innovation (VRRDCI) and the Vice-Rector for Student Affairs and Education (VRAEE), and aims to develop Université de Montréal's strategic vision around a One Health approach. **Cécile Aenishaenslin** chairs the working

committee on the development of postgraduate training in One Health at our institution. This committee, which brings together professors representing six faculties, also includes our assistant director **Patrick Leighton**. In addition to the new PhD program in One Health and the new post-graduate microprogram that will result from this work, this committee has rolled out the summer school "The One Health approach: acting together in a changing world".

Symposium Towards One Health: Mobilizing for Interdisciplinary Action

The Symposium Towards One Health: Mobilizing for Interdisciplinary Action was held on January 25 and 26. On the first day of the event, a panel of GREZOSP members (**Cécile Aenishaenslin** and **Nicholas Ogden)** presented the theme of interdisciplinary training in a One Health context. The following day, two discussion workshops were held on the campus of the Faculté de médecine vétérinaire, in St-Hyacinthe. The first dealt with the One Health perspective on neglected tropical diseases. Participants included **Hélène Carabin**, **Cécile Aenishaenslin**, **Christopher Fernandez-Prada**, **Catherine Bouchard**, **Ariane Massé** and **Isabelle Picard.** The second, organized by **Hélène Carabin**, served as a consultation session with the research community on the WHO Agreement on Pandemics from a One Health perspective. Our member **Émilie Bouchard** was a contributor.

Thesis defenses (successfully defended)

Jérôme Pelletier

Doctoral student under the supervision of **Patrick Leighton**, full professor at the Faculté de médecine vétérinaire, and co-directed by **Catherine Bouchard**, researcher at the Public Health Agency of Canada (PHAC) and **Jean-Philippe Rocheleau**, associate professor at the Faculty of Veterinary Medicine.

"Treating wild micromammals with an isoxazoline acaricide to alter the endemic cycle of Borrelia burgdorferi sensu stricto"

The emergence of Lyme disease raises the importance of identifying new prevention methods. Treating small mammals, such as *Peromyscus spp.* mice, with acaricides is an experimental method that could reduce the abundance of Lyme disease-infected ticks in the environment and, ultimately, the risk of transmission to humans. In this thesis, fluralaner, an acaricide of the isoxazoline family, was administered to laboratory mice and wild mouse populations. The results of the studies on wild mice showed a reduction in the abundance of ticks infected with Lyme disease. Finally, the combination of laboratory and field studies has enabled us to propose the development of a framework to promote the development of this type of intervention.

Fanie Shedleur-Bourguignon

Doctoral student supervised by **Philippe Fravalo**, associate professor at the Faculté de médecine vétérinaire and holder of the Conservatoire National des Arts et Métiers (Cnam) Chair.

"Identification of microbial ecosystem components of pork production surfaces associated with Listeria monocytogenes".

The aim of her project was to identify bacterial determinants present in the microbiota of surfaces in contact with meat products in the cutting room of a pig slaughterhouse, associated with the presence or absence of *L. monocytogenes*. Characterization of the microbiota and detection of *L. monocytogenes were* carried out in parallel on the surface samples collected. Diversity analyses carried out on

the results of 16S rRNA sequencing revealed heterogeneity in the distribution of bacterial genera on these surfaces, depending on the production lines and the different visits. *L. monocytogenes* was found in 12.24% of the cutting surface samples collected. A non-stochastic distribution of isolates was observed (on three of the six production lines), suggesting a preferential localization of *L. monocytogenes* in the cutting room. Characterization of the isolates revealed low genetic diversity and the presence of several characteristics associated with adaptation to the production environment and attenuation of virulence. The MaAsLin statistical tool was used to identify the *Veillonella* taxon as the bacterial determinant of the presence of *L. monocytogenes* on cutting surfaces. A laboratory culture approach demonstrated that *Veillonella dispar* and *Veillonella atypica* significantly increased the growth and survival of *L. monocytogenes* in planktonic cocultures and biofilms. These results suggest that the action of *Veillonella is* mediated by compounds secreted or made available by the bacterium. The results of the present study contribute to a better understanding of contamination patterns associated with *L. monocytogenes* in abattoirs.

Antoine Boudreau Leblanc

Doctoral candidate supervised by Bryn Williams-Jones, professor at l'École de santé publique de l'Université de Montréal (ESPUM), and co-supervised by **Cécile Aenishaenslin,** associate professor at the FMVUM.

"Ecosystemic Bio-Ethics: From medical, agricultural and environmental data to an ethics of antimicrobiogovernance."

The governance of health, technology and data is a process, indeed a system, essential to the sustainable and responsible adoption of integrated programs, interventions and actions at the intersection of human, animal and environmental health. The aim of his project was to propose an ethical approach to co-constructing the governance of relationships between sectors and disciplines built on the values of health, productivity and biodiversity. His work, which was equally theoretical and practical, focused on the One Health case of the development of antibiotic governance - particularly from the perspective of the field of veterinary medicine and the bio-food sector in Quebec. Ultimately, his research advanced the theory of ecosystem approaches used in health and the environment by introducing the perspective of organizational ethics and procedural fairness. It led to the design of a methodological and reflexive toolbox.

Publications under GREZOSP affiliation

This list covers the period from April 1, 2023 to March 31, 2024.

1) **Arsenault, J.**, Cote, G., **Turgeon, P.**, Tchamdja, E., Parmley, E. J., Daignault, D., Belanger, M., Buczinski, S., & **Fravalo, P.** (2024). Prevalence and Antimicrobial Resistance of Salmonella Dublin and Thermotolerant Campylobacter in Liver from Veal Calves in Quebec, Canada. *Foodborne Pathog Dis*, *21*(1), 19-26. https://doi.org/10.1089/fpd.2023.0074
2) Avramov, M., Gallo, V., Gross, A., Lapen, D. R., **Ludwig, A.**, & Cullingham, C. I. (2024). A cost-effective RNA extraction and RT-qPCR approach to detect California serogroup viruses from pooled mosquito samples. *Sci Rep*, *14*(1), 2339. https://doi.org/10.1038/s41598-024-52534-1

3) Avramov, M., Thaivalappil, A., **Ludwig, A.**, Miner, L., Cullingham, C. I., Waddell, L., & Lapen, D. R. (2023). Relationships between water quality and mosquito presence and abundance: a systematic review and meta-analysis. *Journal of Medical Entomology*, *61*(1), 1-33. https://doi.org/10.1093/jme/tjad139
4) Bergevin, M. D., Ng, V., Sadeghieh, T., Menzies, P., **Ludwig, A.**, Mubareka, S., & Clow, K. M. (2024). A Scoping Review on the Epidemiology of Orthobunyaviruses in Canada, in the Context of Human, Wildlife, and Domestic Animal Host Species. *Vector Borne Zoonotic Dis.* https://doi.org/10.1089/vbz.2023.0109
5) **Bouchard, E.**, Bonin, M., Sharma, R., Hernandez-Ortiz, A., Gouin, G. G., **Simon, A.**, **Leighton, P.**, & Jenkins, E. (2024). Use of stable isotopes to reveal trophic relationships and transmission of a food-borne pathogen. *Sci Rep*, *14*(1), 2812. https://doi.org/10.1038/s41598-024-53369-6
6) **Bowser, N.**, **Bouchard, C.**, Sautié Castellanos, M., Baron, G., **Carabin, H.**, Chuard, P., **Leighton, P.**, **Milord, F**., Richard, L., Savage, J., **Tardy, O.**, & **Aenishaenslin, C.** (2024). Self-reported tick exposure as an indicator of Lyme disease risk in an endemic region of Quebec, Canada. *Ticks Tick Borne Dis*, *15*(1), 102271. https://doi.org/10.1016/j.ttbdis.2023.102271
7) **Cisse, B.**, Lapen, D. R., Chalvet-Monfray, K., **Ogden, N. H.**, & **Ludwig, A.** (2024). Modeling West Nile Virus transmission in birds and humans: Advantages of using a cellular automata approach. *Infect Dis Model*, *9*(1), 278-297. https://doi.org/10.1016/j.idm.2024.01.002
8) **Daigle, L.**, **Ravel, A.**, Levesque, F., Mokoush, K. N., Rondenay, Y., **Simon, A.**, & **Aenishaenslin, C.** (2023). Barriers and opportunities for improving dog bite prevention and dog management practices in northern Indigenous communities. *Front Vet Sci*, *10*, 1199576. https://doi.org/10.3389/fvets.2023.1199576
9) **de Lagarde, M.**, **Fairbrother, J. M.**, Archambault, M., **Dufour, S.**, Francoz, D., Massé, J., Lardé, H., **Aenishaenslin, C.**, Paradis, M.-E., Terrat, Y., & Roy, J.-P. (2024). Clonal and plasmidic dissemination of critical antimicrobial resistance genes through clinically relevant ExPEC and APEC-like lineages (ST) in the dairy cattle population of Québec, Canada [Original Research]. *Frontiers in Microbiology*, *14.* https://doi.org/10.3389/fmicb.2023.1304678
10) **Denis-Robichaud, J.**, **Millar, N.**, **Hongoh, V.**, **Carabin, H.**, Richard, L., & **Aenishaenslin, C.** (2023). Professional characteristics, attitudes, and practices associated with stress and quality of life among Canadian animal health workers. *Can Vet J*, *64*(9), 854-863.
11) Dermauw, V., Van De Vijver, E., Dorny, P., Giorgi, E., Ganaba, R., Millogo, A., Tarnagda, Z., Cisse, A. K., & **Carabin, H.** (2023). Geostatistical analysis of

active human cysticercosis: Results of a large-scale study in 60 villages in Burkina Faso. *PLoS Negl Trop Dis*, *17*(7), e0011437. https://doi.org/10.1371/journal.pntd.0011437

12) Gallo-Cajiao, E., Lieberman, S., Dolsak, N., Prakash, A., Labonte, R., Biggs, D., Franklin, C., Morrison, T. H., Viens, A. M., Fuller, R. A., Aguiar, R., Fidelman, P., Watson, J. E. M., **Aenishaenslin, C.**, & Wiktorowicz, M. (2023). Global governance for pandemic prevention and the wildlife trade. *Lancet Planet Health*, *7*(4), e336-e345. https://doi.org/10.1016/S2542-5196(23)00029-3

13) **Guillot, C.**, **Aenishaenslin, C.**, **Acheson, E. S.**, **Koffi, J.**, **Bouchard, C.**, & **Leighton, P. A.** (2024). Spatial multi-criteria decision analysis for the selection of sentinel regions in tick-borne disease surveillance. *BMC Public Health*, *24*(1), 294. https://doi.org/10.1186/s12889-024-17684-x

14) **Guillot, C.**, **Bouchard, C.**, Buhler, K., Pelletier, R., **Milord, F.,** & **Leighton, P.** (2023). Quality over quantity in active tick surveillance: Sentinel surveillance outperforms risk-based surveillance for tracking tick-borne disease emergence in southern Canada. *Can Commun Dis Rep*, *49*(2-3), 50-58. https://www.ncbi.nlm.nih.gov/pubmed/38090724

15) Hernandez-Ortiz, A., **Bouchard, E.**, Snyman, L. P., Al-Adhami, B. H., Gouin, G. G., Neelin, M., & Jenkins, E. J. (2023). Toxoplasma gondii and related Sarcocystidae parasites in harvested caribou from Nunavik, Canada. *Int J Parasitol Parasites Wildl*, *21*, 246-254. https://doi.org/10.1016/j.ijppaw.2023.06.008

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director of GREZOSP and full professor at FMVUM
Caroline Kilsdonk,
research advisor, GREZOSP
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assistant director of GREZOSP and full professor at FMVUM
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Hélène Carabin,
director of GREZOSP and full professor at FMVUM
Manon Racicot,
senior Veterinary Epidemiologist, Canadian Food Inspection Agency
Antoinette Ludwig,
research Scientist at the Public Health Agency of Canada and Associate Professor at FMVUM
Faustin Farison,
PhD student in epidemiology at FMVUM
Mohamed Rhouma,
assistant professor at FMVUM
Patricia Turgeon,

section Head and Veterinary Epidemiologist at the Public Health Agency of Canada and Associate Professor at FMVUM

Jessie Longpré,

senior research advisor, GREZOSP