



**rita** XXVIII

INTERNATIONAL CONFERENCE  
ON RABIES IN THE AMERICAS



CANADA

# XXVIII RABIES IN THE AMERICAS INTERNATIONAL CONFERENCE

UNIVERSITY OF CALGARY  
CALGARY, ALBERTA, CANADA  
22 – 26 OCTOBER 2017

PROGRAMME AND SCHEDULE  
PROGRAMME ET CALENDRIER  
PROGRAMA Y CALENDARIO  
PROGRAMA E PROGRAMAÇÃO

## WELCOME!

On behalf of the local planning committee, I welcome you all to the 28<sup>th</sup> International Conference on Rabies in the Americas (RITA) being held for the first time in western Canada in beautiful Calgary, Alberta, hosted by the University of Calgary Faculty of Veterinary Medicine (UCVM). Canada's newest veterinary school, UCVM has been instrumental in bringing this year's RITA conference to fruition.

The RITA meetings are essential to provide an opportunity for researchers, health professionals, international, national, provincial and local managers of rabies programs, wildlife biologists, and laboratory personnel to advance and discuss all aspects of rabies surveillance, prevention and control. We hope that this year's RITA meeting affords everyone the opportunity to create new partnerships and to renew and strengthen previous relationships between all groups working with various aspects of rabies management.

The organizers would sincerely like to thank our invited speakers, and oral and poster presenters and we appreciate the time you are taking to provide the latest information on your ongoing important rabies research. We also would like to thank all of our generous sponsors that make this event possible; the support from many different organizations has been essential to facilitating a successful, informative and enjoyable conference.

With warmest regards,

Dr Darcia Kostiuk, B.Sc.Ag., D.V.M.  
Chair, RITA2017 Local Organizing Committee  
Public Health Veterinarian  
Government of Alberta

On behalf of the International Steering Committee, welcome to the 28th Annual International Conference on Rabies in the Americas (RITA). RITA is a major international event that provides an annual gathering of world renowned experts who will meet and share advances in rabies research and management. The meeting agenda provides many formal and informal opportunities for discussion that advance the science of rabies prevention and control. This year RITA once again includes oral and poster presentations on a myriad of topics, including the surveillance, diagnostics, pathobiology, prevention and control of rabies with a focus on humans, domestic animals and wildlife. We thank the local organizers for their outstanding efforts in establishing an exciting program in a wonderful venue and look forward to renewing long-term friendships and making new acquaintances in Calgary!

Sincerely,

Dr. Ivanete Kotait, BS, MS, DVM  
President, Rabies in the Americas

## BIENVENUE!

Au nom du comité de planification locale, je vous souhaite la bienvenue à la 28e Conférence internationale sur la rage dans les Amériques (RITA) qui se tient pour la première fois dans l'ouest du Canada dans la belle Calgary, en Alberta, accueillie par la Faculté de médecine vétérinaire de l'Université de Calgary (UCVM). La plus récente école vétérinaire du Canada, UCVM a contribué énormément à la réalisation de la conférence RITA de cette année.

Les réunions de la RITA sont essentielles pour permettre aux chercheurs, aux professionnels de la santé, aux gestionnaires internationaux, nationaux, provinciaux et locaux des programmes de lutte contre la rage, des biologistes de la faune et du personnel de laboratoire d'avancer et de discuter de tous les aspects de la surveillance, de la prévention et du contrôle de la rage. Nous espérons que la réunion RITA de cette année offre à tous la possibilité de créer de nouveaux partenariats et de renouveler et de renforcer les relations antérieures entre tous les groupes travaillant avec divers aspects de la gestion de la rage.

Les organisateurs aimeraient sincèrement nos conférenciers invités et les présentateurs oraux et d'affiches et nous apprécions le temps que vous prenez pour fournir les dernières informations sur votre recherche de rage. Nous tenons également à remercier tous nos généreux commanditaires qui rendent cet événement possible; le soutien de nombreuses organisations différentes a été essentiel pour faciliter une conférence réussie, instructive et agréable.

Avec mes salutations distinguées,

Dre Darcia Kostiuk, B.Sc.Ag., D.V.M.  
Présidente, Comité d'organisation local de RITA2017  
Vétérinaire de santé publique  
Gouvernement d'Alberta

Au nom du Comité directeur international, soyez le bienvenu à la 28ème Conférence internationale annuelle sur la rage dans les Amériques (RITA). Le RITA est un événement international majeur qui offre un rassemblement annuel d'experts de renommée mondiale qui rencontreront et partageront les progrès dans la recherche et la gestion de la rage. L'ordre du jour de la réunion offre de nombreuses occasions formelles et informelles de discussion qui font progresser la science de la prévention et du contrôle de la rage. Cette année encore, RITA comprend des présentations orales et d'affiches sur une multitude de sujets, y compris la surveillance, le diagnostic, la pathologie, la prévention et le contrôle de la rage, en mettant l'accent sur les humains, les animaux domestiques et la faune sauvage. Nous remercions les organisateurs locaux pour leurs efforts remarquables dans la mise en place d'un programme passionnant dans un lieu merveilleux et nous espérons renouveler des amitiés à long terme et faire de nouvelles connaissances à Calgary!

Cordialement,

Dre Ivanete Kotait, BS, MS, DVM  
Présidente, La Rage dans les Amériques

## ¡BIENVENIDOS!

A nombre del comité local de planificación, les doy la bienvenida a todos a la 28ª Conferencia Internacional de Rabia en las Américas (RITA) que se celebra por primera vez en el oeste de Canadá en la hermosa ciudad de Calgary, Alberta, organizada por la Facultad de Veterinaria de la Universidad de Calgary (UCVM). La más reciente escuela de veterinaria de Canadá, UCVM ha sido fundamental para llevar a buen puerto la conferencia RITA de este año.

Las reuniones de RITA son esenciales para brindar a investigadores, profesionales de la salud, gerentes internacionales, nacionales, provinciales y locales de programas de rabia, biólogos de vida silvestre y personal de laboratorio para avanzar y discutir todos los aspectos de la vigilancia, prevención y control de la rabia. Esperamos que la reunión RITA de este año proporcione a todos la oportunidad de crear nuevas alianzas y de renovar y fortalecer relaciones anteriores entre todos los grupos que trabajan con diversos aspectos de la gestión de la rabia.

Los organizadores quisieran agradecer sinceramente a nuestros oradores invitados ya los presentadores orales y de carteles y apreciamos el tiempo que están tomando para proporcionar la información más reciente sobre su importante investigación sobre la rabia. También queremos agradecer a todos nuestros generosos patrocinadores que hacen posible este evento; el apoyo un gran número de diversas organizaciones ha sido esencial para facilitar una conferencia exitosa, informativa y agradable.

Con mis mejores deseos,

Dra. Darcia Kostiuk, B.Sc.Ag., D.V.M.  
Presidente, RITA2017 Comité Organizador Local  
Veterinario de Salud Pública  
Gobierno de Alberta

A nombre del Comité Directivo Internacional, sean ustedes bienvenidos a la XXVIII Conferencia Internacional Anual sobre la Rabia en las Américas (RITA). La RITA es un importante evento internacional que proporciona una reunión anual de expertos de renombre mundial que se reunirá para compartir los avances en la investigación y la gestión de la rabia. La agenda de la reunión ofrece muchas oportunidades formales e informales de discusión que promueven la ciencia de la prevención y el control de la rabia. Este año RITA nuevamente incluye presentaciones orales y de carteles sobre una miríada de temas, incluyendo la vigilancia, diagnóstico, pato-biología, prevención y control de la rabia con un enfoque en los seres humanos, los animales domésticos y la vida silvestre. Damos las gracias a los organizadores locales por sus sobresalientes esfuerzos en la integración de un programa emocionante en un lugar maravilloso y esperamos renovar amistades a largo plazo y hacer nuevos conocidos en Calgary!

Sinceramente,

Dra. Ivanete Kotait, BS, MS, DVM  
Presidente, Rabia en las Américas

## BENVINDOS!

Em nome do comitê de planejamento local, damos as boas vindas a todos à 28ª Conferência Internacional sobre Raiva nas Américas (RITA) realizada pela primeira vez no oeste do Canadá, na bela Calgary, Alberta, organizada pela Faculdade de Medicina Veterinária da Universidade de Calgary (UCVM). A mais nova escola de veterinária do Canadá, a UCVM foi fundamental para a realização da conferência RITA deste ano.

As reuniões da RITA são essenciais para permitir aos pesquisadores, profissionais de saúde, responsáveis internacionais, nacionais, regionais e locais de programas contra a raiva, biólogos da vida selvagem e pessoal de laboratório para progredir e discutir todos os aspectos da vigilância, prevenção e controle da raiva. Esperamos que a reunião RITA deste ano ofereça a todos a oportunidade de criar novas parcerias e renovar e fortalecer as relações anteriores entre todos os grupos que trabalham com os vários aspectos da gestão da raiva.

Os organizadores agradecem sinceramente aos nossos palestrantes convidados e apresentadores orais e de posters e agradecemos o tempo que você está disponibilizando para fornecer as informações mais recentes sobre sua pesquisa de raiva. Também gostaríamos de agradecer a todos os nossos generosos patrocinadores que tornam este evento possível ; O apoio de muitas organizações diferentes foi essencial para facilitar uma conferência bem sucedida, informativa e agradável.

Com os melhores cumprimentos,

Dra. Darcia Kostiuk, B.Sc.Ag., D.V.M.  
Presidente do Comitê Organizador Local RITA2017  
Veterinário em Saúde Pública  
Governo de Alberta

Em nome do Comitê Diretor Internacional, sejam bem-vindos à 28ª Conferência Internacional Anual sobre Raiva nas Américas (RITA). A RITA é um grande evento internacional que possibilita o encontro anual de especialistas de renome mundial que se reunirão e compartilharão avanços na pesquisa e gestão da raiva. A agenda da reunião oferece muitas oportunidades formais e informais de discussão que promovem a ciência da prevenção e controle da raiva. Este ano, a RITA mais uma vez inclui apresentações orais e de pôsteres em uma miríade de tópicos, incluindo vigilância, diagnóstico, patobiologia, prevenção e controle da raiva com foco em humanos, animais domésticos e fauna selvagem. Agradecemos aos organizadores locais por seus esforços notáveis em estabelecer um programa emocionante em um local maravilhoso e esperamos renovar amizades de longo prazo e fazer novos conhecimentos em Calgary!

Atenciosamente,

Dra. Ivanete Kotait, BS, MS, DVM  
Presidente, Raiva nas Américas

## CONFERENCE HOST

HÔTE DE LA CONFÉRENCE/ANFITRIÓN DE LA CONFERENCIA/ANFITRIÃO DA CONFERÊNCIA



**UNIVERSITY OF CALGARY**  
FACULTY OF VETERINARY MEDICINE

## WITH SUPPORT FROM

AVEC LE SOUTIEN DE/CON EL APOYO DE/COM O APOIO DE



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Sylvia Checkley  
Susan Cork  
Darcia Kostiuk (Chair)  
Christine Fehlner-Gardiner  
Karen Green  
Alan Jackson  
Josephine Kush  
Morgann Reid  
Joanne Tataryn  
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## INTERNATIONAL STEERING COMMITTEE 2017

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Venco Saúde Animal  
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Departamento de Zoonosis y Vectores  
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**Eduardo Pacheco de Caldas**

State Department of Health  
Rio Grande do Sul, Brasil

**Charles Rupprecht**

Professor (Adjunct)  
The Wistar Institute  
Philadelphia, Pennsylvania, USA

**Ex-officio Member:**

Luis Lecuona  
USDA International Services  
México, DF., México

**Emeritus Members:**

Diódoro Batalla  
Rosely Cerqueira de Oliveira  
Dennis Donovan  
Susan Nadin-Davis  
Chris Nunan  
Dennis Slate  
Roly Tinline  
Fernando Vargas Pino  
Alex Wandeler

| TIME        | SUN<br>22 OCT  | MON<br>23 OCT   | TUES<br>24 OCT  | WED<br>25 OCT   | THURS<br>26 OCT  | FRI<br>27 OCT     |
|-------------|--|---|---|---|--|-------------------|
| 7:30-8:00   |  |   | REGISTRATION  |   | REGISTRATION   |                   |
| 8:00-8:30   |  | REGISTRATION  | Round Table:<br>Best Practice<br>Utilization of<br>Post-exposure<br>Rabies<br>Prophylaxis<br>(AR) | REGISTRATION  | Round Table:<br>Rabies Ecology<br>in the Warming<br>Arctic<br>(AR) | Webinar<br>(SR)   |
| 8:30-9:00   |  | REGISTRATION  |   |   |  |                   |
| 9:00-9:30   |  | Welcome &<br>George Baer<br>Latin American<br>Award<br>Presentation<br>(AR) |   | Round Table:<br>Management of<br>Skunk Rabies in<br>North America<br>(AR) |  |                   |
| 9:30-10:00  |  | Round Table:<br>Overcoming<br>Immune<br>Evasion by<br>Rabies Virus<br>(AR)  | Coffee Break  |   | Coffee Break   |                   |
| 10:00-10:30 |  |   | Domestic<br>Animal Rabies<br>(AR)   |   |  |                   |
| 10:30-11:00 |  | Coffee Break  |   | Coffee Break  |  |                   |
| 11:00-11:30 |  | Pathogenesis &<br>Other<br>(AR)   | Bat Rabies<br>(AR)  | Wildlife Rabies<br>(AR)   | Lunch Break<br>(90 min)<br>(OS)                                    |                   |
| 11:30-12:00 |  |   |   |   |  |                   |
| 12:00-12:30 |  | Lunch Break<br>(90 min)<br>(OS)   | Lunch Break<br>(90 min)<br>(OS)   | Lunch Break<br>(90 min)<br>(OS)   | Epidemiology<br>and<br>Surveillance<br>(AR)                        |                   |
| 12:30-13:00 |  |   |   |   |  |                   |
| 13:00-13:30 |  | RITA Steering<br>Committee<br><b>by invitation<br/>only</b><br>(SR)         | Sponsors'<br>Luncheon<br><b>by invitation<br/>only</b><br>(SR)                                    |   |  |                   |
| 13:30-14:00 |  |   |   |   |  |                   |
| 14:00-14:30 | REGISTRATION<br>(outside AR)   | Human Rabies<br>and Prophylaxis<br>(AR)                                     | Diagnostics<br>(AR)   | Wildlife Rabies<br>&<br>Rabies Control<br>(AR)                            | Closing<br>Ceremony<br>(AR)  |                   |
| 14:30-15:00 | Partners for<br>Rabies<br>Prevention<br>(2-4pm)<br>open invitation<br>(BR) |   |   |   | Coffee Break<br>&<br>Poster Session<br>(BR)                        | Reception<br>(AR) |
| 15:00-15:30 |  | Coffee Break  |   |   |  |                   |
| 15:30-16:00 |  | Vaccines and<br>Antivirals<br>(AR)  | Diagnostics<br>(AR)   | Coffee Break  |  |                   |
| 16:00-16:30 |  |   |   | Rabies Control<br>(AR)  |  |                   |
| 16:30-17:00 |  |   |   |   |  |                   |

| TIME        | SUN<br>22 OCT                | MON<br>23 OCT  | TUES<br>24 OCT                             | WED<br>25 OCT | THURS<br>26 OCT | FRI<br>27 OCT |  |
|-------------|------------------------------|--|--|---------------|-----------------|---------------|--|
| 17:00-17:30 |                              |  | Board Buses &<br>Travel to Gala<br>Banquet |               |                 |               |  |
| 17:30-18:00 |                              |  |  |               |                 |               |  |
| 18:00-18:30 | WELCOME (AR)                 | North American<br>Rabies<br>Management<br>Plan<br><b>by invitation<br/>only<br/>(AR)</b> | Gala Banquet &<br>Auction                  |               |                 |               |  |
| 18:30-19:00 | Opening<br>Reception<br>(AR) |  |  |               |                 |               |  |
| 19:00-19:30 |                              |  |  |               |                 |               |  |
| 19:30-20:00 |                              |  |  |               |                 |               |  |
| 20:00-20:30 |                              |  |  |               |                 |               |  |
| 20:30-21:00 |                              |  |  |               |                 |               |  |
| 21:00-21:30 |                              |  |  |               |                 |               |  |
| 21:30-22:00 |                              |  |  |               |                 |               |  |
| 22:00-22:30 |                              |  |  |               |                 |               |  |
| 22:30-23:00 |                              |  |  |               |                 |               |  |
| 23:00-23:30 |                              |  | Travel by bus to<br>UofC                   |               |                 |               |  |

| ROOM KEY |  |
|----------|--|
| AR       | Alberta Room – upper level of Dining Centre    |
| BR       | Blue Room – upper level of Dining Centre       |
| LR       | Legacy Room – lower level of Dining Centre     |
| SR       | Senate Room - 7 <sup>th</sup> Floor Hotel Alma |
| OS       | Off Site                                       |



## PROGRAMME/PROGRAMA

**SUNDAY 22 OCTOBER**

14:00 – 16:00

**PARTNERS FOR RABIES PREVENTION**

Organized by the Global Alliance for Rabies Control

Blue Room – open to ALL

14:00 – 18:00

**REGISTRATION**

Alberta Room Foyer

18:00 – 22:00

**WELCOME & OPENING RECEPTION**

Alberta Room

**MONDAY 23 OCTOBER**

8:00 – 9:00

**REGISTRATION**

Alberta Room Foyer

9:00 – 9:30

**WELCOME and GEORGE BAER LATIN AMERICAN AWARD PRESENTATION**

Alberta Room

**MONDAY 23 OCTOBER 9:30 – 10:30 Alberta Room****ROUND TABLE: Overcoming Immune Evasion by Rabies Virus** - chaired by Dr. Zhen F. Fu (60 min)

**Summary:** The hallmark of rabies is the almost 100% mortality because there is currently no effective treatment for clinical rabies. Although various approaches have been attempted, the success has been limited. One possible reason is that once the virus invades the central nervous system (CNS), it evades immune surveillance. In order to develop effective therapeutics for clinical rabies, it is necessary to clear the virus from the CNS. It has been known for some time that virus neutralizing antibodies (VNA) are capable of clearing rabies virus from the CNS. However, VNA are not detected in the CNS of most rabies patients even at the time of death. This is because first, most patients never develop VNA. Even if VNA develop in the periphery, they might not cross the blood-brain barrier (BBB) to reach the CNS. Thus to clear rabies virus, VNA have to be developed and BBB permeability has to be enhanced. Recombinant viruses have been used to stimulate VNA production and enhance BBB permeability. VNA can also be administered directly into the CNS. All of these have been shown to be capable of clearing rabies virus from the CNS in experimental animals.

**Agenda and Speakers:**

1. Overview of therapeutics for clinical rabies: successes and failures (8 min) Dr. Charles Rupprecht, Wistar institute
2. The blood-brain barrier and potential therapeutic targets (8 min) Dr. Alan C. Jackson, University

of Manitoba

3. Live viruses used for virus clearance and possible therapy (8 min) Dr. Ashley Banyard, Animal and Plant Health Agency, UK
4. Direct administration of VNA into the CNS can clear rabies virus from the CNS (8 min), Dr. Zhen F. Fu, University of Georgia.

Discussion (28 min)

## MONDAY 23 OCTOBER

10:30 – 11:00 Morning Break

11:00 – 12:00

### PATHOGENESIS /OTHER

Moderators: Zhen Fu and Alan Jackson

**OP01** RABIES VIRUS DOWN-REGULATES EXPRESSION OF EB3 AND P140CAP IN NEURONS  
Waqas Ahmad

**OP02** RABIES DERIVED PEPTIDES INTERACT WITH NEURONAL NICOTINIC RECEPTORS AND ALTER ANIMAL BEHAVIOR  
Karsten Hueffer

**OP03** ACTIVATION OF DENDRITIC CELLS IS ASSOCIATED WITH THE GLYCOSYLATION PATTERN OF RABIES VIRUS GLYCOPROTEIN  
Zhen Fu

**OP04** RABIES IS REAL - AN INNOVATIVE APPROACH TO RABIES AWARENESS  
Connie DeBenedet

12:00 – 13:30 LUNCH BREAK

13:30 – 15:00

### HUMAN RABIES AND PROPHYLAXIS

Moderator: Alan Jackson

**OP05** PROTECTIVE EFFICACY OF MONOCLONAL ANTIBODY R172 AGAINST NORTH AMERICAN RABIES VIRUS VARIANTS IN THE HAMSTER LETHAL CHALLENGE MODEL OF POST EXPOSURE PROPHYLAXIS (PEP)  
Heidi Smith

**OP06** DEVELOPMENT OF ANTI-RABIES MABS FOR POST-EXPOSURE PROPHYLAXIS  
Eric Tsao

**OP07** CLINICAL STUDY OF THE SAFETY AND EFFECTIVENESS OF SIMULATED POST-EXPOSURE PROPHYLAXIS WITH HUMAN IMMUNE GLOBULIN (KEDRAB) WITH CO-ADMINISTRATION OF ACTIVE VACCINE IN HEALTHY SUBJECTS  
Garrett Bergman

**OP08** VACCINE HESITANCY AND RABIES DEATHS AMONG PREGNANT AND BREASTFEEDING WOMEN IN VIETNAM, 2015– 2016  
Huong Nguyen

**OP09** EVALUATION OF THE EXPECTED COSTS AND BENEFITS OF INCREASING ACCESS TO HUMAN RABIES BIOLOGICS  
Ryan Wallace

**OP10** RETROSPECTIVE REVIEW OF HUMAN RABIES CASES IN CANADA  
Morgann Reid

15:00 – 15:30 Afternoon Break



15:30 – 17:00

**VACCINES AND ANTIVIRALS**Moderators: Christine Fehlner-Gardiner and  
Julio Pompei**OP11 MONITORING THE CANINE VACCINE COLD CHAIN IN THE FIELD**

Alasdair King

**OP12 NOVEL 3-DOSE RABIES VACCINE BASED ON RECOMBINANT G PROTEIN NANOPARTICLES**

Nirav Desai

**OP13 RISK ASSESSMENT FOR POTENTIAL SHEDDING OF AN ORAL RABIES VIRUS VACCINE**

Ad Vos

**OP14 NEUTRALIZATION OF DIVERGENT LYSSAVIRUSES WITH AVAILABLE BIOLOGICS IN VITRO**

Todd G Smith

**OP15 PRIMARY RABIES PRE-EXPOSURE VACCINATION AND BOOSTER RESPONSE: A SYSTEMATIC REVIEW AND META-ANALYSIS**  
Jesse Blanton**OP16 PARTIAL STABILITY AND QUALITY ATTRIBUTES ASSESSMENT OF ACTIVE PHARMACEUTICAL INGREDIENT AND LYOPHILIZED RABIES VACCINE**

Carlos Adolfo Palacios

18:00 – 20:00

**North American Rabies Management Plan**Alberta Room – **by Invitation Only****TUESDAY 24 OCTOBER**7:30 – 8:00 **REGISTRATION****TUESDAY 24 OCTOBER 8:00 – 9:30 Alberta Room****ROUND TABLE: Best Practice Utilization of Post-exposure Rabies Prophylaxis** - chaired by Dr. Charles E Rupprecht (90 min)

**Summary:** Although great regional progress has occurred over the past three decades, rabies prevention and control activities in the Americas are less than homogeneous. This roundtable session will explore different approaches to human and animal rabies management throughout the Americas. The basis for these differences stem from a variety of ecological, economic and cultural circumstances. For instance, surveillance criteria and activities vary. Reservoirs are diverse. Epidemiological patterns are complex, from the Arctic to the Neotropics. Canine rabies virus transmission has been eliminated in many countries, but not all. Vampire rabies is a major issue for parts of the region, whereas rabies perpetuation among insectivorous bats impacts others. Using salient local examples, widespread historical experiences, professional ingenuity and audience participation, the panel will provide an engaging experience within the backdrop of current PAHO/WHO recommendations.

## Agenda and Speakers

1. Wisdom with WHO – Dr. Bernadette Abela-Ridder
2. Current conundrums in Canada - Dr. C. Filejski
3. Unresolved understatements in the USA - Dr. C.E. Rupprecht
4. Medical maelstroms in Mexico - Drs. V. Gutierrez / B. Contreras
5. Biomedical bedevilment in Brazil -Dr. E. Pacheco de Caldas

| <b>TUESDAY 24 OCTOBER</b>  |   |
|--|---|
| <b>9:30 – 10:00 Morning Break</b>  | LYSSAVIRUSES<br>Ashley Charles Banyard  |
| 10:00 – 11:00<br><b>DOMESTIC ANIMAL RABIES</b><br>Moderators: Catherine Filejski and Juan Montano Hirose     | <b>OP22</b> LONG-TERM POPULATION SURVEYS OF TWO SEROTINE BAT (EPTESICUS SEROTINUS) COLONIES EXPOSED TO EBLV-1 (EUROPEAN BAT LYSSAVIRUS TYPE 1): ASSESSMENT OF RABIES TRANSMISSION USING CAPTURE-RECAPTURE MODELS<br>Emmanuelle Robardet |
| <b>OP17</b> MICROPLANNING OF URBAN CANINE RABIES VACCINATION CAMPAIGNS, HAITI, 2017<br>Benjamin Monroe       | <b>OP23</b> VACCINATION AND INTRA-CAGE TRANSMISSION OF A RECOMBINANT PARAINFLUENZA VIRUS 5 EXPRESSING RABIES LYSSAVIRUS GLYCOPROTEIN IN THE BIG BROWN BAT (EPTESICUS FUSCUS)<br>James Ellison   |
| <b>OP18</b> UTILITY OF A PHOTO BASED SIGHT-RESIGHT STUDY IN A DOG POPULATION IN HAITI, 2016<br>Julie Cleaton | <b>OP24</b> PHYLOGEOGRAPHIC ANALYSIS OF RABIES IN MEXICO 2014-2016<br>Laura Villarreal  |
| <b>OP19</b> RABIES ANTIBODY LEVELS IN IN DIFFERENT GROUPS OF PETS FOLLOWING VACCINATION<br>Elizabeth McQuade | <b>12:00 – 13:30 LUNCH BREAK</b>  |
| <b>OP20</b> TOWARDS CANINE RABIES ELIMINATION IN MEXICO: NEW CHALLENGE REVEALS IN 2017<br>Nidia Arechiga     | 13:30 – 14:30<br><b>DIAGNOSTICS – Part 1</b><br>Moderators: Susan Moore and Nidia Arechiga-Ceballos   |
| 11:00 – 12:00<br><b>BAT RABIES</b><br>Moderators: Charles Rupprecht and Luis Lecuona                         | <b>OP25</b> SEROLOGICAL RESPONSE TO RABIES NUCLEOPROTEIN IN RECENTLY INFECTED VERSUS VACCINATED INDIVIDUALS USING AN N-PROTEIN ELISA<br>Susan Realegeno   |
| <b>OP21</b> THE CONTINUING CHALLENGE OF NOVEL  |   |



**OP26** EVALUATION OF DIFFERENT PARAMETERS FOR VIRUS ISOLATION IN N2A CELL CULTURE FOR RABV DIAGNOSIS IN HORSES

Willian Oliveira Fahl

**OP27** DEVELOPMENT AND EVALUATION OF A METHOD FOR AUTOMATED DETERMINATION OF RABIES VIRUS NEUTRALIZING ANTIBODY TITERS BY THE FLUORESCENT ANTIBODY VIRUS NEUTRALIZATION TEST

Susan Moore

**OP28** DETECTION OF RABIES VIRUS IN CRANIAL LAVAGE OF NATURALLY INFECTED BATS - PARTIAL RESULTS

Karin Correa Scheffer

14:30 – 15:30 Afternoon Break  
and

**POSTER SESSION**

15:30 – 16:30

**DIAGNOSTICS** – Part 2

Moderators: Susan Moore and Nidia Arechiga-Ceballos

**OP29** DEVELOPMENT OF THE REAL-TIME POLYMERASE CHAIN REACTION TECHNIQUE FOR THE DIAGNOSIS OF RABIES

Yuliet Ramirez Cintra

**OP30** IMPROVED RABIES DIAGNOSTICS BY ADDING THE PAN-LYSSAVIRUS REAL-TIME RT-PCR ASSAY LN34 TO THE STANDARDIZED PROTOCOL FOR RABIES TESTING

Yu Li

**OP31** LONG-TERM PRESERVATION OF INACTIVATED RABIES LYSSAVIRUS RNA

Rene Edgar Condori-Condori

**OP32** RABIES DIAGNOSIS IN THE USA - TIME FOR A REVISION TO THE NATIONAL STANDARD DFA PROTOCOL?

Lillian Orciari

17:00 Board Buses in Front of Hotel Alma

Monter à bord les autobus devant l'hôtel Alma

Subir a los autobuses en el frente Hotel Alma

Embarcar ônibus em frente ao Hotel Alma

17:15 – 18:00 Travel to Heritage Park – Gasoline Alley

18:00 – 23:00 Gala Event & Banquet

18:00 – 19:00 Cocktails & Silent Auction

19:00 – 20:00 Banquet

20:00 – 20:30 Auction

Auctioneer: Richard Chipman

20:30 – 23:00 Music & Dance

New Soul Duo

23:00 – 23:30 Return to U of C Hotel Alma

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**WEDNESDAY 25 OCTOBER 9:00 – 10:30 Alberta Room**

**ROUND TABLE: Management of Skunk Rabies in North America** - chaired by Drs. A. Gilbert and R. Chipman (90 min)

**Summary:** Striped skunks (*Mephitis mephitis*) are an important spillover host for raccoon and Arctic fox rabies virus variants, which have been or are currently circulating eastern in North America. In addition, striped skunks are the primary host of at least four rabies virus variants circulating in North America (NCSK, SCSK, CASK, MXSK), although spotted skunks (*Spilogale gracilis*), hog-nosed skunks (*Conepatus leuconotus*) and hooded skunks (*Mephitis macroura*) may also be important regional hosts. Although spillover infections to domestic animals and other wildlife, as well as human exposure burden, are lower in areas where skunk rabies virus variants circulate compared to levels associated with other meso-carnivore variants, the vast territories affected by skunk rabies and enzootic persistence of skunk rabies circulation over the past half-century present challenges for management and control.

Limited tools and strategies currently exist for skunk rabies management in North America. Historically, toxicants have been used to reduce local skunk populations in an attempt to reduce rabies incidence, but these methods are now illegal in many areas, lack broad social acceptance, and their effects were transient. Trap-vaccinate-release (TVR) strategies have been successful at controlling skunk rabies in limited areas, but TVR quickly becomes intractable at larger geographic scales. Since the late 1990s, oral rabies vaccination (ORV) has been used to manage rabies in red foxes, raccoons, and striped skunks in eastern North America. Frequent cross species transmission of raccoon variant into skunks in the eastern US as well as a lack of understanding of the implications for raccoon rabies elimination and potential for a host shift of raccoon variant into skunks, present management challenges. Moreover, field applications of ORV targeting skunks to date have shown less than promising results at economically sustainable bait densities. Recent field trials with RABORAL V-RG and ONRAB in skunks in the US are in progress or recently completed that may, along with skunk rabies control programs in Ontario, provide some direction for future steps. This session is designed to discuss and debate the myriad of questions and challenges we face for effective ORV-based management of rabies in skunks in North America.

#### Agenda and Speakers

##### Background (20 min)

1. Skunk ecology (10 mins) (Dr. Tad Theimer)
2. History of skunk rabies and control efforts in North America (10 mins) (Dr. Margo Pybus)

##### Skunk Rabies Management with ORV (20 min)

3. ONRAB field studies targeting skunks in Canada (10 min) (Tore Buchanan)
4. ONRAB field trials using standard density applications in the US – WV, NY/VT/NH, with

focus on skunk results; plus WV ONRAB high density field trial and skunk ecology study (10 min) (Rich Chipman)

ORV Bait Product Development (20 min)

5. Oral rabies vaccine bait development for Raboral V-RG (10 min) (Dr. Joanne Maki, Merial, Inc.)
6. Oral rabies vaccine bait development for ONRAB (10 min) (Alex Beath, Artemis Technologies, Inc.)

Summary and Discussion (30 min)

7. Key factors for improving skunk rabies management (10 min) (Dr. Charles Rupprecht)

Discussions and identification of research gaps (20 min)- all

### WEDNESDAY 25 OCTOBER

10:30 – 11:00 Morning Break

11:00 – 12:30

#### WILDLIFE RABIES – Part 1

Moderator: Rich Chipman

**OP33** TEN YEARS OF ORAL VACCINATION AND SEROLOGIC MONITORING OF RACCOONS: WHAT HAVE WE LEARNED SO FAR?

Ariane Masse

**OP34** RE-INCURSION OF RACCOON RABIES VARIANT INTO ONTARIO CANADA; AN URBAN CONTEXT

Tore Buchanan

**OP35** WILDLIFE RABIES MANAGEMENT IN URBAN-SUBURBAN HABITATS - CHALLENGES AND INNOVATIONS

Jordona Kirby

**OP36** RABIES VIRUS ANTIBODIES FROM ORAL VACCINATION AS A CORRELATE OF PROTECTION AGAINST LETHAL INFECTION IN WILDLIFE

Susan Moore

**OP37** A SPATIALLY-EXPLICIT SIMULATION MODEL OF MONGOOSE RABIES IN PUERTO RICO: INFLUENCE OF MONGOOSE ECOLOGY AND LANDSCAPE FEATURES

Caroline Sauvé

**OP38** EFFICACY OF ONRAB VACCINE BAIT DELIVERY AGAINST RABIES CHALLENGE IN RACCOONS

Amy Gilbert

12:30 – 14:00 LUNCH BREAK

14:00 – 15:30

#### WILDLIFE RABIES – Part 2

Moderators: Rich Chipman

#### RABIES CONTROL – Part 1

Moderators: Tore Buchanan and Veronica Gutierrez

**OP39** EVALUATION OF ORAL RABIES VACCINE BAIT UPTAKE BY SMALL INDIAN MONGOOSES: PRELIMINARY RESULTS FROM THE LAB AND FIELD  
Are Berentsen

**OP40** KUDU RABIES IN NAMIBIA – RECENT EXPERIMENTAL STUDIES ON TRANSMISSION AND VACCINATION  
Thomas Müller

**OP41** FIRST REPORT OF CONEPATUS MESOLECUS AND MEPHITIS MACROURA AS RABIES VIRUS RESERVOIRS IN NUEVO LEÓN STATE, MEXICO  
Efrén Jaramillo-Reyna

**OP42** EARLY CONTROL RESPONSE TO THE RABIES OUTBREAK IN SARAWAK, MALAYSIA  
Andrea Britton

**OP43** RABIES CONTROL IN MANITOBA, CANADA: A ONE HEALTH APPROACH  
Judy Hodge

**OP44** TARGETED RESPONSE TO PERSISTENT RACCOON VARIANT RABIES IN A RABIES CONTROL ZONE IN SOUTHWESTERN NEW BRUNSWICK  
Michael Allan

**OP45** EVALUATION OF A TRADITIONAL MASS DOG VACCINATION CAMPAIGN SUPPLEMENTED WITH SPBNGAS-GAS ORAL RABIES VACCINE, HAITI, 2016  
Todd G Smith

**OP46** WHAT IS THE RISK? A PROBABILISTIC SAFETY MODEL TO PREDICT HUMAN ADVERSE EVENTS TO MODIFIED LIVE ORAL RABIES VACCINES FOR DOGS  
Ryan Wallace

**OP47** CAPACITY BUILDING FOR GLOBAL RABIES ELIMINATION  
Louise Taylor

**OP48** DEMOGRAPHIC AND ECOLOGICAL SURVEY OF DOG POPULATION IN ABA, ABIA STATE, NIGERIA  
Gbeminiyi Richard Otolorin

**OP49** IN-DEPTH ANALYSIS OF SPECIES DIFFERENCES IN VACCINE UPTAKE EFFICIENCY – FOX AND SKUNK AS EXAMPLES  
Conrad Freuling

**OP50** FACTORES DE LA POBLACION CANINA Y FELINA QUE SE RELACIONAN CON LA PRESENTACION DE RABIA EN EL ESTADO DE TLAXCALA, MEXICO  
José Hernández Pérez

15:30 – 16:00 Afternoon Break

16:00 – 17:30

**RABIES CONTROL – Part 2**

Moderators: Tore Buchanan and Veronica Gutierrez

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**THURSDAY 26 OCTOBER 8:00 – 9:30 Alberta Room**

**ROUND TABLE: Rabies Ecology in the Warming Arctic:** - chaired by Drs. P. Leighton and E. Rees (90 min)

**Summary:** Arctic fox rabies is one of the most important wildlife diseases for public health in the Arctic. This lethal disease is endemic in the Arctic ecosystem, maintained by transmission within arctic (*Vulpes lagopus*) and red fox (*Vulpes vulpes*) populations. Transmission to humans occurs primarily through contact with infected foxes, or from domestic dogs that have become infected by rabid foxes.

The disease persists in the primary reservoir species, arctic foxes, despite having a population density lower than would be predicted to maintain this disease in red fox populations further south. Disease dynamics are potentially driven by multiple and interacting aspects of arctic and red fox ecology. The current climate warming adds an additional layer of complexity by: 1) altering fox habitat quality through weather and surface ice/snow conditions, 2) reducing lemming habitat quality, and consequently the punctual abundance of this food resource for foxes, 3) enabling red foxes to expand their range further northwards and overlap more densely and expansively with arctic foxes, and 4) facilitating growth and number of northern communities through increasing economic activities.

It is not known how climate-induced factors will in turn influence rabies dynamics and rabies management in northern communities. This session focuses on discussing what is known, addressing knowledge gaps, and strategies for moving forward for managing public health risk to northern communities.

#### Agenda and Speakers

##### Context (30 min)

1. Introduction to roundtable discussion (5 min) (Drs. Erin Rees and Patrick Leighton)
2. Arctic fox rabies ecology (5 mins) (Dr. Karsten Hueffer) (U. Alaska)
3. Insights from phylogenetics (5 mins) (Dr. Christine Fehlner-Gardiner) (CFIA)
4. Wild card of natural immunity (5 mins) (Dr. Stacey Elmore) (USDA)
5. Climate warming and changes to rabies dynamics (5 mins) (Dr. Erin Rees) (Public Health Agency of Canada)
6. Dogs and rabies management (5 mins) (Dr. Catherine Filejski)

##### Discussion (60 min)

Identification of research gaps

Key factors for improving management

**THURSDAY 26 OCTOBER**

9:30 – 10:00 Morning Break

10:00 – 11:30

EPIDEMIOLOGY AND SURVEILLANCE – Part 1

Moderators: Joanne Tataryn and Ivanete Kotait

**OP51** EVALUATING THE ENDEMIC DOG VACCINATION RATE ON THE NAVAJO NATION AND POTENTIAL RISK TO THE PUBLIC

Scott Bender

**OP52** RABIES SURVEILLANCE IN THE UNITED STATES DURING 2016

Xiaoyue Ma

**OP53** USE OF THE DIRECT RAPID IMMUNOHISTOCHEMICAL TEST (DRIT) IN A LARGE SCALE SURVEILLANCE PROGRAM TO MONITOR THE DISTRIBUTION AND SPREAD OF RABIES IN WILDLIFE

Kevin Middel

**OP54** RISK FACTORS FOR INADEQUATE ANTIBODY RESPONSE TO PRIMARY RABIES VACCINATION IN DOGS UNDER ONE YEAR OF AGE

Susan Moore

**OP55** LESSONS FROM VIRTUAL LANDSCAPES: SPACE-TIME CHARACTERISTICS OF RABIES SPREAD

Erin Rees

**OP56** MONITORING AND TRACKING RABIES IN

THE UNITED STATES: CONSIDERATIONS FOR PHYLOGENETIC CHARACTERIZATION OF WILDLIFE AND DOMESTIC ANIMAL SPECIMENS

Emily Pieracci

11:30 – 13:00 **LUNCH BREAK**

13:00 – 14:00

EPIDEMIOLOGY AND SURVEILLANCE – Part 2

Moderators: Joanne Tataryn and Ivanete Kotait

**OP57** ANALYSIS OF A RABIES CROSS-SPECIES TRANSMISSION SUGGESTS A ROLE FOR SUB-VIRAL POPULATIONS IN SUCCESSFUL MAINTENANCE WITHIN NEW HOST RESERVOIRS

Denise Marston

**OP58** COMMUNITY ENGAGEMENT AND DOG BITE PREVENTION

Jasmine Dhillon

**OP59** DOG ECOLOGY AND ITS IMPLICATIONS FOR RABIES CONTROL IN GWAGWALADA, FEDERAL CAPITAL TERRITORY, ABUJA, NIGERIA

Philip Mshelbwala

**OP60** EPIDEMIOLOGY OF HUMAN RABIES DEATH IN VIETNAM 1994-2016

Huong Nguyen

14:00 – 14:30 **CLOSING CEREMONY**

**POSTERS**

- PP02 THE IMPORTANCE OF PASSIVE SURVEILLANCE: THE SECOND CASE OF RABIES BAT IN THE URBAN AREA OF JABOTICABAL, SÃO PAULO, BRAZIL  
Adolorata Carvalho
- PP03 THE IMPORTANCE OF PHYLOGENETIC ANALYSIS OF RABIES VIRUS ISOLATED FROM INSECTIVOROUS BATS NYCTINOMOPS LATICAUDATUS IN SÃO PAULO STATE, BRAZIL  
Adolorata Carvalho
- PP05 INNOVACIÓN EN BIOSEGURIDAD EN LA SUJECIÓN DE CABEZAS PARA LA EXTRACCIÓN DE ENCÉFALOS EN EL DIAGNÓSTICO DE RABIA  
Israel Nicolas-Reyes
- PP06 THE DEVELOPMENT OF THE HIGH THROUGHPUT NEUTRALIZATION ASSAY FOR ANTI-RABIES ANTIBODY DETECTION  
Lauren Greenberg
- PP07 DEVELOPMENT OF NEW HIGH AFFINITY MONOCLONAL ANTIBODY AGAINST RABIES VIRUS MATRIX PROTEIN FOR DIAGNOSIS OF HUMAN RABIES  
Dalmuri Han
- PP08 UPDATE ON NEW RABIES DIAGNOSIS TECHNIQUES  
Alexandre Servat
- PP09 NEUTRALIZING ACTIVITY OF PLANT-DERIVED RABIES MONOCLONAL ANTIBODY AGAINST CLINICAL RABIES ISOLATE FROM SOUTH KOREA  
Dalmuri Han
- PP10 PERFORMANCE EVALUATION OF LABORATORIES IN RABIES DIAGNOSIS TEST: WHICH TECHNIQUES LEAD TO THE MOST RELIABLE RESULTS IN PRACTICE?  
Emmanuelle Robardet
- PP11 VARIABLE RABIES VIRUS DISTRIBUTION ACROSS DIFFERENT BRAIN REGIONS IN THREE 'LOW POSITIVE' CLINICAL SAMPLES  
Crystal Gigante
- PP12 COMPARISON OF THE HIGH THROUGHPUT NEUTRALIZATION ASSAYS FOR RABIES ANTIBODY DETECTION USING DIFFERENT PLATFORMS  
Jillybeth Burgado
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**POSTERS**

- PP13 WHAT IS THE IMPACT AND UPTAKE OF ONCE ANNUAL SUBSIDIZED VETERINARY SERVICES IN REMOTE COMMUNITIES IN THE NORTHWEST TERRITORIES?  
Tessa Baker
- PP14 EFFECTIVENESS OF HOUSE TO HOUSE STRATEGY OF DOG RABIES VACCINATION IN A PERI-URBAN SETTING IN THE PHILIPPINES  
Daria Manalo
- PP15 LEVEL OF ANTI-RABIES PROTECTION IN DOGS AND CATS WITH DIFFERENT NUMBER OF VACCINATIONS IN MARIQUITA COLOMBIA, AFTER AN OUTBREAK OF RABIES  
María del Pilar Sanchez
- PP16 EVALUATION OF INTERFERENCE OF COMPLEMENT SYSTEM IN CELL CULTURE NEUTRALIZATION TESTS FOR TITRATION OF RABIES VIRUS NEUTRALIZING ANTIBODIES IN CAT SERA  
Luciana Chaves
- PP17 SUVIS AND YOU ... KNOWING THE ACTIONS OF SUVIS IN ST. MIGUEL IN ITS TERRITORY, VIEWING IMPROVEMENT IN THE PREVENTION OF THE TRANSMISSION OF HUMAN RAGE (SUVIS E VOCÊ... CONHECENDO AS AÇÕES DA SUVIS SÃO MIGUEL NO SEU TERRITÓRIO, VISANDO MELHORIA NA PREVEN  
João Gabriel Zerba Corrêa
- PP18 RABIES IN CANADA – 2016  
Christine Fehlner-Gardiner
- PP19 MORE THAN JUST SKUNKS! RABIES IN MANITOBA  
Judy Hodge
- PP20 SURVEILLANCE OF RABIES IN WILD ANIMALS IN RUSSIA  
Mikhail Shulpin
- PP21 EPIDEMIOLOGICAL SITUATION OF RABIES IN PARAGUAY (2014-2017)  
Mirtha Colmán
- PP22 REEMERGENCE OF RABIES VIRUS MAINTAINED BY CANID POPULATIONS IN PARAGUAY  
Silvana Favoretto



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**POSTERS**

- PP23 ANTIGENIC AND GENETIC CHARACTERIZATION OF RABIES VIRUS STRAINS, CIRCULATING IN THE STATE OF PARÁ, BRAZILIAN AMAZONIA, BETWEEN 2015 AND 2016  
Livia Casseb
- PP24 COMPARISON OF IMPURITIES IN THREE HRIG PRODUCTS: PRELIMINARY RESULTS  
Roberto Meidler
- PP25 ENGAGING RURAL STUDENTS IN BIOMEDICAL RESEARCH THROUGH ONE HEALTH FOCUSED UNDERGRADUATE RESEARCH EXPERIENCES  
Karsten Hueffer
- PP27 ANALYSIS OF THE VIRULENCE OF STREET RABIES VIRUS STRAINS ASSOCIATED WITH CERDOCYON THOUS  
Iana Katz
- PP28 IMPACT OF THE INITIAL STREET RABV AMOUNT IN THE BRAIN IN VIRUS REPLICATION  
Iana Katz
- PP29 ANALYSIS OF THE VIRULENCE OF STREET RABIES VIRUS STRAINS IN BHK CELLS  
Iana Katz
- PP30 EXPRESSION OF CELLULAR RECEPTORS IN NERVE TISSUE OF MICE INFECTED WITH RABIES LYSSVIRUSES  
Livia Casseb
- PP31 A COMMUNITY BASED KNOWLEDGE, ATTITUDE, AND PRACTICE SURVEY REGARDING RABIES AMONG CATTLE OWNERS IN TWO DISTRICTS (RABIES ENDEMIC AND NON-ENDEMIC) OF BHUTAN  
Sangay Rinchen
- PP32 TARGETING CANINE RABIES IN SIERRA LEONE: A SYSTEMATIC REVIEW  
Remi Landry
- PP33 INTERVENTIONS FOR RABIES CONTROL OUTBREAKS BY THE NATIONAL PROGRAMME OF ZOOSES CONTROL AND RABIES NATIONAL CENTER IN PARAGUAY (2014-2017)  
Jorge Miret

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**POSTERS**

- PP34 EVALUATION OF A CANINE RABIES VACCINATION CAMPAIGN IN THE SOUTH OF GUATEMALA  
David Moran
- PP35 GENETIC CHARACTERIZATION OF SPECIES OF WILD CANIDS IN THE STATE OF CEARA AND ITS CORRELATION WITH THE RABIES VIRUS  
Silvana Favoretto
- PP36 EVIDENCE FOR LONG-TERM SURVIVAL OF ARCTIC FOXES FOLLOWING RABIES EXPOSURE  
Stacey Elmore
- PP37 PATTERNS OF HOST GENETIC STRUCTURE IN RELATION TO VIRUS VARIANT IN A RECENT FOX RABIES EPIZOOTIC OF THE EASTERN SUBARCTIC  
Ariane Masse
- PP38 REALIZACIONES, DESAFÍOS Y PERSPECTIVAS PARA LA ELIMINACIÓN DE LA RABIA TRANSMITIDAPOR PERRO EN HAITI, 2015-2017  
Natael Fenelon
- PP39 RABIA EN MURCIÉLAGOS DE COAHUILA  
Maria Susana Moreno Fernandez
- PP40 SPECIES IDENTIFICATION OF RABIES POSITIVE BATS IN SÃO PAULO STATE – BRAZIL, FROM JANUARY/2015 TO JUNE/2017  
Karin Correa Scheffer
- PP41 BASELINE FEATURES OF A RABIES VIRUS STRAIN ISOLATED FROM A DESMODUS ROTUNDUS BRAIN PERU 2014  
Graciela Leda Yarleque Javier
- PP42 RABIES VIRUS DETECTION AND TYPING USING PYROSEQUENCING  
Jinxin Gao
- PP43 QUANTIFYING THE RISK OF RABIES IN BITING DOGS  
Xiaoyue Ma
- PP44 RABIES VIRUS NEUROINVASIVENESS PATTERN IN THE CENTRAL NERVOUS SYSTEM FROM NATURALLY INFECTED CATTLE EVALUATED BY DIFFERENT DIAGNOSTIC TECHNIQUES  
Enio Mori

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**POSTERS**

- PP45 EVALUATION OF THE PARTICIPATION OF THE VIRTUAL COURSE OF PROPHYLAXIS POST EXPOSURE OF RABIES OF PAN AMERICAN HEALTH ORGANIZATION/ WORLD HEALTH ORGANIZATION (DECEMBER 2015 - JUNE 2017)  
ORNELA CHAVEZ INAGAKI
- PP47 EVALUATION OF POST-EXPOSURE PROPHYLAXIS IN VIETNAM  
Huong Nguyen
- PP48 EVALUACIÓN DE LA APLICACIÓN PARA SMARTPHONES SOBRE LA PROFILAXIS DE LA RABIA DE LA ORGANIZACIÓN PANAMERICANA DE LA SALUD/ORGANIZACIÓN MUNDIAL DE LA SALUD (ENERO-MAYO 2016)  
Ornela Chavez Inagaki
- PP49 OPTIMIZING ORAL RABIES VACCINATION AERIAL DISTRIBUTIONS FOR STRIPED SKUNK  
Shylo Johnson
- PP50 HUMAN EXPOSURE TO A NOVEL RABIES VIRUS VARIANT OF BAT ORIGIN THROUGH A FOX BITE REVEALS COMPLEX RABIES TRANSMISSION PATHWAYS  
Andres Velasco-Villa
- PP51 CORRECT USE OF THE CURRENT LYSSAVIRUS NOMENCLATURE: IS THE RECENT UPDATE OF THE SPECIES NAMES IN THE GENUS LYSSAVIRUS A CONFOUNDING PROBLEM?  
Andres Velasco-Villa
- PP52 ONE HEALTH APPROACH TOWARDS RABIES OUTBREAK CONTROL IN BHUTAN: PREVENTION IS BETTER THAN CURE  
Tenzin Tenzin
- PP53 ONE HEALTH, RABIES PREVENTION AND MORE-THAN-HUMAN CONSIDERATIONS IN INDIGENOUS COMMUNITIES IN NORTHERN AUSTRALIA  
Chris Degeling
- PP54 DOG-BITES, RABIES AND ONE HEALTH: TOWARDS IMPROVED COORDINATION IN RESEARCH, POLICY AND PRACTICE  
Dawn Rault

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**POSTERS**

- PP55 THE PAN AFRICAN RABIES CONTROL NETWORK  
Louis Nel
- PP56 ANALISIS HISTORICO DE LA RABIA EN EL ESTADO DE NUEVO LEON, MEXICO  
Alejandra Marines Ramirez
- PP57 SPATIAL HETEROGENEITY IN VACCINE COVERAGE BETWEEN FIXED POINT VS MOBILE TEAM APPROACHES IN AREQUIPA, PERU  
Ricardo Castillo-Neyra
- PP58 SCOPING THE EVIDENCE: A REVIEW OF DOG BITE-RELATED SEQUELAE  
Jasmine Dhillon
- PP60 ACCIONES DE CONTROL DE LA RABIA EN BOVINOS Y ESPECIES GANADERAS EN EL ESTADO DE HIDALGO  
Anahel Carpio Ruano
- PP61 IMPLEMENTACIÓN DEL PLAN ANDINO DE ELIMINACIÓN DE RABIA HUMANA TRANSMITIDA POR PERRO Y DISMINUCIÓN DE LA RABIA TRASMITIDA POR ANIMALES SILVESTRES - RESULTADOS COLOMBIA 2016  
Angela Xiomara Castro Duran
- PP62 FERAL AND DOMESTIC CAT VACCINATION IN ORDER TO CONTROL HUMAN RABIES & RABIES VACCINES MUST BE PROVIDED AT LOW COST TO THE VETERINARIAN PROFESSIONAL IN LATIN AMERICAN COUNTRIES  
M. Camila PARDO
- PP63 SAFETY AND IMMUNOGENICITY SUTY OF TLR-3 AGONIST-BASED RABIES VACCINE IN HEALTHY ADULTS  
Zhongkai Shi
- PP64 EARLY POST-EXPOSURE ADMINISTRATION OF PIKA RABIES VACCINE DEMONSTRATES ENHANCED PROTECTION OVER COMMERCIAL VACCINE IN MOUSE MODELS  
Zhongkai Shi
- PP65 EVALUATION OF THE ANALYTICAL SENSITIVITY OF THE VIRAL ISOLATION TECHNIQUE IN N2A CELL CULTURE USING DIFFERENT PROTOCOLS: PRELIMINARY RESULTS  
Keila lamamoto

**POSTERS**

PP66 NEUTRALIZING ANTIRABIES ANTIBODIES PERSISTENCE AFTER SEVEN YEARS OF PRE-EXPOSITION RABIES VACCINATION

Neuza Maria Frazatti-Gallina