



RITA

2015

Rabies in the Americas
Fort Collins, Colorado

October 4-8, 2015



Embassy Suites Loveland



www.ritaconference.org

Cover photo: *Longs Peak is framed by beautiful aspens
above Bear Lake in Rocky Mountain National Park*

© Thomas Mangan

Thomas Mangan Photography

The Rocky Gallery

1435 Blue Sky Way, 102

Erie, Colorado 80516

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manganphoto@yahoo.com

www.thomasmangan.com

www.therockygallery.com



WELCOME!

On behalf of the local planning committee I would like to welcome you to the 26th Annual Rabies in the Americas Conference held in beautiful Fort Collins, Colorado. Fort Collins is home to the USDA, APHIS, Wildlife Services (WS), National Wildlife Research Center (NWRC), Colorado State University and a rich craft brewing industry. The NWRC is a premier research organization that works collaboratively with many agencies and organizations across the country including the WS National Rabies Management Program to reduce the burden of terrestrial rabies in the US.

We hope while you're here that you have the opportunity to enjoy the scenic Rocky Mountains and venture into Old Town Fort Collins for some local flavor. In addition, a tour of the NWRC facility provides a glimpse into the world class research conducted there. We are excited that you are attending the conference and hope that you benefit from the exceptional research and collaborative opportunities presented at RITA26.

To the oral and poster presenters, we appreciate you taking the time to provide information regarding your important rabies research. Lastly, we would also like to thank all of the generous sponsors that have made this conference possible. The support from many different organizations has been crucial to facilitating an outstanding conference.

With warmest regards,



Stephanie A. Shwiff, PhD
Chair, RITA26 Local Organizing Committee
Research Economist/Project Leader
USDA, APHIS, WS, National Wildlife Research Center

On behalf of the International Steering Committee, welcome to the 26th Annual International Conference on Rabies in the Americas (RITA)!

The RITA is a major international event, providing a diversity of biomedical research topics related to rabies, including the control, diagnostics, ecology, economics, epidemiology, pathobiology, phylogenetics, prevention treatment and other virological aspects of this zoonosis, focusing upon humans, domestic animals and wildlife, drawing from a world renowned group of experts, both in the Americas and the Old World.

We thank all of our sponsors for their kind support and the local organizers for all of their valiant efforts.

I look forward to an exciting program, sharing knowledge, renewing long term friendships, initiating collaborative projects, and making new acquaintances, in a beautiful scenic western venue heralding the autumnal equinox.

Bond, Enjoy, Learn, Share – Pax Vobiscum!

Sincerely,



Charles E. Rupprecht, VMD, MS, PhD
President, International Steering Committee
RITA, Inc.

¡BIENVENIDOS!

A nombre del Comité Organizador Local, tengo el gusto de darle la bienvenida a la 26va Conferencia Anual Internacional de Rabia en las Américas (RITA) que se celebrará en la hermosa Fort Collins, Colorado. La ciudad de Fort Collins, es la sede del Centro Nacional de Investigación en Vida Silvestre (NWRC), de los Servicios de Vida Silvestre (WS) del USDA, APHIS, de la Universidad Estatal de Colorado y de una muy rica industria productora de cerveza. El NWRC es la más importante organización que colabora con diversas agencias y organizaciones a lo largo del país incluyendo al Programa Nacional de Control de la Rabia de los Servicios de Vida Silvestre para reducir el riesgo de rabia terrestre en EUA.

Esperamos que ustedes tengan la oportunidad de disfrutar las panorámicas de las Montañas Rocosas y la aventura del antiguo centro de Fort Collins y su sabor local. Adicionalmente, una visita guiada a las instalaciones del NWRC les permita dar un vistazo a la investigación de clase mundial que se realiza en esas instalaciones. Nosotros estamos muy contentos de que usted participe en la conferencia y esperamos que se beneficie de la excepcional investigación y oportunidades de colaboración que se presentan en la RITA26.

Para los expositores en las sesiones orales y en carteles, queremos agradecerles que presenten su información relacionada con sus importantes investigaciones en rabia. Finalmente, también queremos agradecer a todos los generosos patrocinadores que han hecho posible esta conferencia. El apoyo de diversas y diferentes organizaciones ha sido esencial para facilitar esta excepcional conferencia.

Con un afectuoso saludo,



Dra. Stephanie Shwiff

Presidenta del Comité

Organizador de la RITA26

Economista Investigadora/Líder de Proyecto

Centro Nacional de Investigación en Vida Silvestre

A nombre del Comité Directivo Internacional, bienvenido a la 26a Conferencia Internacional Annual de Rabia en Las Americas (RITA)!

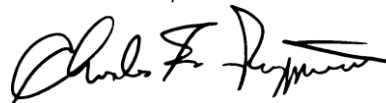
La RITA es un evento importante a nivel internacional, proporcionando una diversidad de temas sobre investigación biomédica relacionados a rabia, incluyendo el control, diagnóstico, ecología, economía, epidemiología, patobiología, filogenética, tratamiento preventivo y otros aspectos virológicos de esta zoonosis, enfocándose en humanos, animales domésticos y fauna silvestre, todo esto proviniendo de un grupo de expertos a nivel mundial, tanto de las Américas como del Viejo Mundo.

Agradecemos a todos nuestros patrocinadores por su amable apoyo y a los organizadores locales por sus valientes esfuerzos.

Espero con ansia el poder disfrutar de un emocionante programa, compartir información, renovar viejas amistades, iniciar proyectos de colaboración y hacer nuevas amistades, en un sitio con una hermosa escénica occidental anunciando el equinoccio de otoño.

Creen lazos, disfruten, aprendan, compartan – Pax vobiscum!

Sinceramente,



Charles E. Rupprecht, VMD, MS, PhD
Presidente, Comité Directivo Internacional
RITA, Inc.

BEMVINDOS!

Em nome do comitê local de planejamento, gostaria de recebê-lo para 26 Conferência anual de Raiva nas Américas, realizada na bela Fort Collins, Colorado. Fort Collins é o local do USDA, APHIS, Wildlife Services (WS), Centro Nacional de Pesquisa da Vida Selvagem (NWRC), Universidade Estadual do Colorado e um rico artesanato indústria cervejeira. O NWRC é uma organização de pesquisa principal, que trabalha em colaboração com muitas agências e organizações em todo o país, incluindo o Programa Nacional de Gestão da Raiva WS para reduzir o fardo da raiva terrestre em os EUA.

Esperamos enquanto estiver aqui que você tem a oportunidade de desfrutar as montanhas rochosas cénicos e se aventurar em Old Town Fort Collins para algum sabor local. Além disso, uma excursão da facilidade NWRC fornece um vislumbre da investigação de nível mundial realizadas na instalação. Estamos muito animado que você está participando da conferência e espero que você se beneficia da pesquisa excepcional e oportunidades de colaboração apresentado na RITA26.

Para os apresentadores orais e de poster, agradecemos a você tomar tempo para fornecer informações sobre a sua investigação raiva importante. Por último, gostaríamos também de agradecer a todos os patrocinadores generosos que fizeram esta conferência possível. O apoio de muitas organizações diferentes tem sido crucial para facilitar uma conferência excepcional.

Atenciosamente,



Stephanie A. Shwiff, PhD

Chair, RITA26 Comitê Organizador Local

Economists/ Líder de Projeto

USDA, APHIS, WS, Centro Nacional de Pesquisa da Vida Selvagem

Em nome do Comité Internacional de Direcção, bem-vindo à 26ª Conferência Anual Internacional sobre Raiva nas Américas (RITA)!

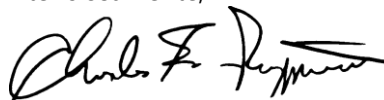
A RITA é um grande evento internacional, oferecendo uma diversidade de temas biomédicos de investigação relacionadas com a raiva, incluindo o controle, diagnóstico, ecologia, economia, epidemiologia, fisiopatologia, filogenia, tratamento de prevenção e outros aspectos virológicos desta zoonose, incidindo sobre os seres humanos, animais domésticos e selvagens, extraído de um grupo de especialistas de renome mundial, tanto nas Américas e do Velho Mundo.

Agradecemos a todos os nossos patrocinadores para seu apoio amável e os organizadores locais para todos os seus esforços valentes.

Estou ansioso para um programa emocionante, a partilha de saberes, renovar amizades de longa duração, iniciando projectos de colaboração, e fazer novas amizades, em um local bonito cênica ocidental anunciando o equinócio de outono.

Desfrutar, aprender, compartilhar - Pax Vobiscum!

Atenciosamente,



Charles E. Rupprecht, VMD, MS, PhD

Presidente, Comité Internacional de Direcção
RITA, Inc.

ACKNOWLEDGEMENTS

The Local Organizing Committee would like to thank everyone who gave their time and energy to help plan and organize RITA26 and make it a great success! In particular, we would like to express our sincere gratitude to the people below for their involvement:

- 🐾 **Administration and organization:** Julie Elser, Samantha Richards
- 🐾 **Translation:** Rodrigo Garces Torres , Brody Hatch, Luis Lecuona
- 🐾 **Website:** Brody Hatch, Samantha Richards
- 🐾 **Program:** Richard Chipman, Kathy Nelson
- 🐾 **Logo design:** Katie Clonan, Colorado State University, Department of Art and Art History, graphic design student



AGRADECIMIENTOS

El Comité Organizador Local quisiera agradecer a todos los que aportaron su tiempo y energía para ayudar planear y organizar la RITA26 y que esta sea un gran éxito! En particular, nos gustaría expresar nuestro más sincero agradecimiento a las siguientes personas por estar involucradas:

- 🐾 **Administración y organización:** Julie Elser, Samantha Richards
- 🐾 **Traducción:** Rodrigo Garces Torres , Brody Hatch, Luis Lecuona
- 🐾 **Sitio Web:** Brody Hatch, Samantha Richards
- 🐾 **Programa:** Richard Chipman, Kathy Nelson
- 🐾 **Diseño de logo:** Katie Clonan, Colorado State University, Departamento de Arte e Historia del Arte, estudiante de diseño gráfico



AGRADECIMENTOS

O Comitê Organizador Local gostaria de agradecer a todos os que deram o seu tempo e energia para ajudar a planejar e organizar RITA26 e torná-lo um grande sucesso! Em particular, gostaríamos de expressar nossa sincera gratidão às pessoas abaixo por seu envolvimento:

- 🐾 **Administração e organização:** Julie Elser, Samantha Richards
- 🐾 **Tradução:** Rodrigo Garces Torres , Brody Hatch, Luis Lecuona
- 🐾 **Website:** Brody Hatch, Samantha Richards
- 🐾 **Programa:** Richard Chipman, Kathy Nelson
- 🐾 **Logotipo:** Katie Clonan, Colorado State University, Departamento de Arte e História da Arte, estudante de desenho gráfico

RITA26 LOCAL ORGANIZING COMMITTEE

Stephanie Shwiff (Chair)
Tim Algeo
Rich Chipman
Julie Elser
Amy Gilbert
Brody Hatch
Gail Keirn
Luis Lecuona
Margie Lyness
Kathy Nelson
Toni Piaggio
Samantha Richards
Kurt VerCauteren

RITA26 SCIENTIFIC PROGRAM COMMITTEE

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Timothy Algeo
Jesse Blanton
Rosely Cerqueira de Oliveira
Peter Costa
Dennis Donovan
Christine Fehlner-Gardiner
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Craig Hooper
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Thomas Müller
Kathy Nelson
Laura Robinson
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Steven Shwiff
Louise Taylor
Fernando Vargas Pino
Marco Vigilato
Rodney Willoughby

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National Center of Diagnostic Services in
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Wildlife Services
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Zootechnics, State University of São Paulo
(UNESP)
Botucatu, São Paulo, Brazil

Ivanete Kotait
Vencofarma Laboratory of Brazil
Londrina, Paraná State, Brazil

GEORGE M. BAER LATIN AMERICAN INVESTIGATOR AWARD

The George M. Baer Latin American Investigator Award is given to a researcher from a Latin American country for outstanding work in the field of rabies research.

GEORGE M. BAER, MPH, DVM (1936-2009)

Dr. George Martin Baer, one of the founding members of the Rabies in the Americas Conference, died on June 2, 2009, in Mexico City, Mexico. He was an eminent virologist, veterinarian and public health scientist, with a strong affection for the developing world. Dr. Baer was born in London, England, but grew up in New Rochelle, New York where he became an accomplished equestrian and began a lifelong love of animals. He attended Cornell University where he obtained an undergraduate degree in agricultural sciences in 1954 and a degree in veterinary medicine in 1959. He earned a Master's degree in Public Health from the University of Michigan at Ann Arbor in 1961. Thereafter, Dr. Baer started his career in public health at the US Centers for Disease Control & Prevention and was assigned to the New York State Health Department in Albany where he focused on brucellosis, psittacosis and rabies. In 1964, he worked at CDC's Southwest Rabies Investigations Laboratory in Las Cruces, New Mexico on bat rabies. From 1966 to 1969, he was a consultant to the Pan American Health Organization (PAHO) in Mexico. Based on his efforts, he helped lay the groundwork for Mexico's public health programs against rabies, an effort he continued throughout the rest of his professional life. In 1969, he returned to Atlanta and became head of the CDC Rabies Laboratory. With his team of researchers, he developed a method for the immunization of wildlife, for which he was credited as the "Father of Oral Rabies Vaccination". His considerable expertise made him one of the foremost international experts in this arena. Of his more than 100 publications, his 1991 book, *The Natural History of Rabies*, remains a definitive reference in the field. After retirement from CDC, he founded a diagnostic laboratory in Mexico City and remained a member of the Mexican International Steering Committee for the Rabies in the Americas Conference.

For his multiple contributions, not the least of which focused on relevant technology transfer to the developing world, the International Steering Committee of the Rabies in the Americas Conference voted unanimously to name the annual prize for the best submitted abstract from a Central/South American scientist in his honor: the George M. Baer Latin American Investigator Award.

CONGRATULATIONS! • ¡FELICIDADES! • PARABÉNS!



Dr. Patricia Arias-Orozco (El Salvador)

Winner of the 2015 George M. Baer Latin American Investigator Award
Presented on behalf of the
International Steering Committee
In recognition of her contribution to rabies research at the 26th Rabies in the Americas International Conference

See her presentation on Tuesday,
October 6, 2015 at 10:30 AM



Ganadora del Premio George M. Baer, 2015 al Joven Investigador Latinoamericano otorgado a nombre del Comité Directivo Internacional
En reconocimiento a su contribución en investigación de rabia en la 26va Conferencia Internacional de Rabia en las Americas

Su presentación será el martes 6 de octubre de 2015 a las 10:30 AM

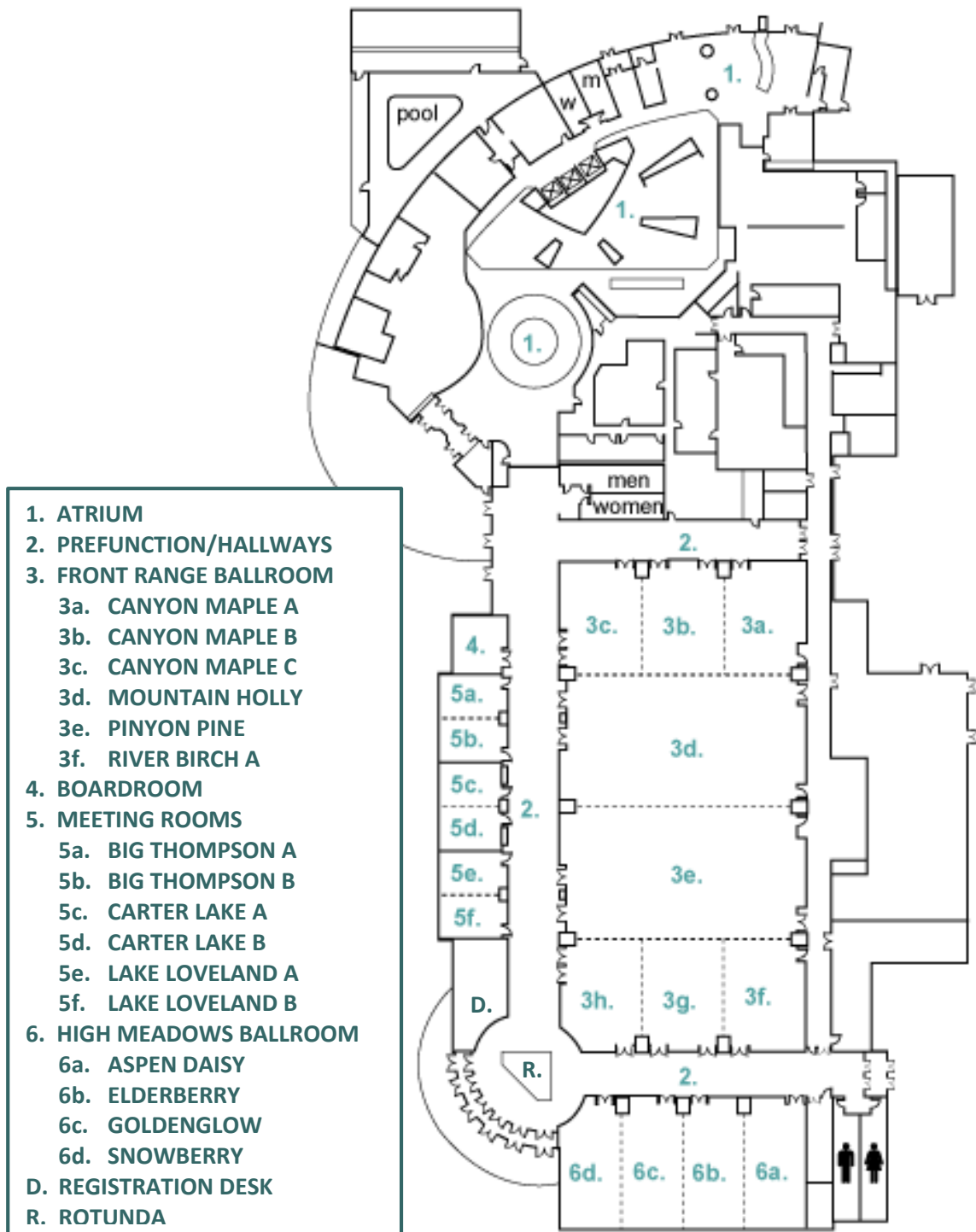


Vencedor do 2015 George M. Baer latino-americana Prêmio de Investigador Apresentado em nome do Comitê de Direção Internacional
Em reconhecimento de sua contribuição para a pesquisa da raiva no 26ª Conferência Internacional de Raiva nas Américas

Veja sua apresentação na terça-feira, 6 de outubro, 2015 às 10:30

RITA26 will be in the Front Range Ballroom (sections 3e.f.g.h) unless otherwise noted:

EMBASSY SUITES LOVELAND - MAIN LEVEL



Time	Sun, Oct 4	Mon, Oct 5	Tue, Oct 6	Wed, Oct 7	Thu, Oct 8	Fri, Oct 9
8:00 AM		Registration <i>(Registration Desk)</i>	Registration <i>(Registration Desk)</i>	Registration <i>(Registration Desk)</i>		Webinar: Symposium on Human Rabies Prevention and Treatment <i>(All Welcome, but Must be Pre-Registered)</i>
8:15						
8:30						
8:45						
9:00 AM	Registration <i>(Registration Desk)</i>	Opening Remarks	Keynote Address #2	Oral Session: Wildlife Rabies	Oral Session: Communication and Cultural Aspects of Rabies	
9:15		Keynote Address #1				
9:30						
9:45		Oral Session: Lyssavirus Diagnostics and Emerging Technologies	Oral Session: Pathogenesis and Molecular Epidemiology			
10:00 AM			George Baer Award Presentation		Oral Session: Oral Rabies Vaccine & Rabies Control	
10:15						
10:30						
10:45		Break & Poster Session with Authors Present <i>(Rotunda & 6d)</i>	Oral Session: Regional and Transboundary Updates			
11:00 AM						
11:15			Break & Poster Session <i>(Rotunda & 6d)</i>	Break & Poster Session <i>(Rotunda & 6d)</i>	Break & Poster Session <i>(Rotunda & 6d)</i>	
11:30		Oral Session: Economics of Rabies Control	Rabies "Ted Talks"	Oral Session: Oral Rabies Vaccine & Rabies Control <i>(Continued)</i>	Organizing Committee for RITA27: Belém, Brazil	
11:45						
12:00 PM						
12:15			Closing Ceremony			
12:30						
12:45	Rabies Challenge <i>(Rotunda)</i>	Lunch <i>(Steering Committee Lunch - Invitation Only, 5a/5b)</i>	Lunch <i>(Steering Committee Lunch - Invitation Only, 5a/5b)</i>	Lunch		
1:00 PM						
1:15						
1:30		NWRC Tour <i>(Must be Pre-Registered)</i>				
1:45						
2:00 PM						
2:15	Oral Session: Human Rabies and	Oral Session: Immunology and	Oral Session: Bats and Lyssavirus: Host			
2:30						
2:45						

3:00 PM	Partners for Rabies Prevention (PRP) Meeting <i>(All Welcome) (6c/6d)</i>	Prophylaxis	Vaccines	and Virus Diversity	North American Rabies Management Planning Meeting <i>(Invitation Only)</i>	
3:15						
3:30		Break & Poster Session <i>(Rotunda & 6d)</i>	Break & Poster Session <i>(Rotunda & 6d)</i>	Break & Poster Session <i>(Rotunda & 6d)</i>		
3:45						
4:00 PM			25 Years of Oral Rabies Vaccination in the U.S.	Oral Session: Rabies in Domestic Animals		Oral Session: Epidemiology and Modeling
4:15						
4:30						
4:45						
5:00 PM						
5:15						
5:30						
5:45						
6:00 PM	Welcome Reception and Opening Ceremony <i>(Dining Area in the Atrium)</i>		Gala Dinner and Auction <i>(3d)</i>			
6:15						
6:30						
6:45						
7:00 PM						
7:15						
7:30						
7:45						
8:00 PM						
8:15						
8:30		Buses to Fort Collins <i>(See Daily Program for More Details)</i>		Buses to Fort Collins <i>(See Daily Program for More Details)</i>	Buses to Fort Collins <i>(See Daily Program for More Details)</i>	
8:45						
9:00 PM						
9:15						
9:30						
9:45						
10:00 PM						

GENERAL INFORMATION

CONFERENCE REGISTRATION

REGISTRATION DESK IN ROTUNDA

Visit the conference registration desk for information, messages and help with translation. Hours of operation are: Sunday 9:00 AM – 4:00 PM and Monday – Wednesday 8:00 AM – 4:00 PM

SPEAKER READY ROOM

LAKE LOVELAND B (5f ON MAP)

All oral presentation files must be dropped off here the evening before a morning session and by 10:00 AM before an afternoon session. This room will be open with conference AV staff: Sunday 3:00 – 8:00 PM, Monday – Wednesday 7:00 AM – 12:00 PM and 3:00 – 8:00 PM, and Thursday 7:00 AM – 12:00 PM. If you cannot get your file to the Speaker Ready Room ahead of time, please see your session Moderators to make other arrangements.

POSTER SESSIONS

SNOWBERRY ROOM (6d ON MAP)

Be sure to visit the poster presentations on display starting Monday at 9:00 AM. Posters will be displayed through the Thursday morning break. The official poster session with authors present is Tuesday 11:00 – 11:45 AM (morning break). Poster setup times are: Sunday 1:00 – 8:00 PM and Monday 7:00 – 9:00 AM. Please remove your poster by noon on Thursday.

HOTEL BUSINESS CENTER

ACROSS FROM ELEVATORS NEAR FITNESS CENTER

Hours of operation: 24 hours/day

SUNDAY, OCTOBER 4

9:00 AM – 4:00 PM

REGISTRATION

ROOM: REGISTRATION DESK IN ROTUNDA

1:00 – 3:00 PM

RABIES CHALLENGE

ROOM: MEET IN ROTUNDA

3:00 – 5:30 PM

PARTNERS FOR RABIES PREVENTION (PRP) MEETING (All Welcome)

ROOM: 6C/6D (Goldenglow/Snowberry)

6:00 – 8:30 PM

WELCOME RECEPTION & OPENING CEREMONY

ROOM: Dining Area in the Atrium

Festivities will include cocktails, appetizers, opening remarks and a wood carving demonstration

EXHIBIT AREA

PREFUNCTION/HALLWAYS (#2 ON MAP)

Be sure to visit the sponsors and vendors booths starting Sunday at 6:00 PM for the Welcome Reception. Please take the opportunity to thank the exhibitors and sponsors who helped make this event possible.

MONDAY, OCTOBER 5

8:00 AM – 4:00 PM

REGISTRATION

ROOM: REGISTRATION DESK IN ROTUNDA

9:00 – 9:15 AM

OPENING REMARKS

Richard Chipman & Larry Clark

*United States Department of Agriculture
Wildlife Services*

9:15 – 9:45 AM

KEYNOTE ADDRESS

OP01: THE INTERFACE BETWEEN COMMUNITY ECOLOGY AND GENETICS IN UNDERSTANDING RABIES DYNAMICS AND APPROACHES TO SUCCESSFUL CONTROL IN MESO-CARNIVORES

Samantha Wisely

*Department of Wildlife Ecology and Conservation,
University of Florida (United States)*

9:45 – 11:15 AM

LYSSAVIRUS DIAGNOSTICS AND EMERGING TECHNOLOGIES

Moderators: Christine Fehlner-Gardiner & Susan Moore

*Canadian Food Inspection Agency (Canada) &
Kansas State University (United States)*

OP02: EVALUATION OF A NOVEL SEROLOGICAL TEST FOR DETECTING RABIES VIRUS ANTIBODIES IN BATS

Xiaoyue Ma

*Centers for Disease Control and Prevention
(United States)*

OP03: THE EFFECT OF TEMPERATURE AND DURATION OF SAMPLE STORAGE ON RABIES NEUTRALIZING ANTIBODY STABILITY

Stephanie Gatrell

Kansas State University (United States)

OP04: PRODUCTION OF RABIES POLYCLONAL ANTIBODY AS REAGENT FOR THE DIRECT RAPID IMMUNOHISTOCHEMICAL TEST (DRIT)

Daria Manalo

*Research Institute for Tropical Medicine
(Philippines)*

OP05: DEVELOPMENT OF QUANTITATIVE REVERSE TRANSCRIPTION PCR ASSAYS FOR THE DIAGNOSIS OF RABIES

Yu Li

*Centers for Disease Control and Prevention
(United States)*

OP06: MASS SPECTROMETRY BASED DIAGNOSIS OF RABIES VIRUS INFECTION IN CLINICAL SAMPLES

Subbian Satheshkumar Panayampalli

*Centers for Disease Control and Prevention
(United States)*

OP07: CEREBROSPINAL FLUID METABOLOMICS RAPIDLY DISCRIMINATES RABIES FROM OTHER INFLAMMATORY BRAIN DISEASES

Rodney Willoughby

Children's Hospital of Wisconsin (United States)

11:15 – 11:45 AM

BREAK & POSTER SESSION

ROOM: Break (Rotunda) & Posters (6d/Snowberry)

11:45 AM – 12:45 PM

ECONOMICS OF RABIES CONTROL

Moderators: Steven Shwiff & Thomas Müller

Texas A&M University (United States) & Friedrich Loeffler Institute (Germany)

OP08: BIOECON: AN AGENT-BASED STOCHASTIC SIMULATION MODEL FOR WILDLIFE POPULATION AND DISEASE MANAGEMENT WITH AN APPLICATION TO CANINE RABIES

Aaron Anderson

USDA, Wildlife Services, National Wildlife Research Center (United States)

OP09: AN APPLIED EXAMPLE OF RABIESECON: A SPREADSHEET-BASED TOOL FOR EVALUATING THE ECONOMICS OF RABIES CONTROL PROGRAMS

Charisma Atkins

Centers for Disease Control and Prevention (United States)

OP10: TOWARD CANINE RABIES ELIMINATION: A COMPARISON OF THREE PROJECT SITES

Brody Hatch

USDA, Wildlife Services, National Wildlife Research Center (United States)

OP11: REASSESSMENT OF THE BURDEN OF CANINE RABIES AND ITS VALUE TO ADVOCACY EFFORTS

Louise Taylor

Global Alliance for Rabies Control (United Kingdom)

12:45 – 2:15 PM

LUNCH

Steering Committee Lunch - Invitation Only
ROOM: 5a/5b (Big Thompson A & B)

2:15 – 3:30 PM

HUMAN RABIES AND PROPHYLAXIS

Moderators: Rodney Willoughby & Rosely Cerqueira de Oliveira

Children's Hospital of Wisconsin (United States) & Academy of Medicine of Brasília (Brazil)

OP12: RANPIRNASE INHIBITS RABIES VIRUS REPLICATION IN VITRO

Todd Smith

Centers for Disease Control and Prevention (United States)

OP13: RABIES OUTBREAK INVOLVING FOUR TRANSPLANT RECIPIENTS IN KUWAIT AND SAUDI ARABIA

Rodney Willoughby

Children's Hospital of Wisconsin (United States)

OP14: HIGH RISK IN SILENCE: MASSIVE PEP RESPONSE FOR HUMAN RABIES OUTBREAKS IN APPARENTLY NEW AREAS

Sergio Recuenco-Cabrera

National Institute of Health (Peru)

OP15: EPITOPE ANALYSIS TO PREDICT RABIES VIRUS (RABV) SENSITIVITY TO HUMAN MONOCLONAL ANTIBODIES

William Thomas

University of Massachusetts Medical School (United States)

OP16: DEVELOPMENT OF ANTI-RABIES MABS FOR POST-EXPOSURE PROPHYLAXIS

Eric Tsao

Synermore Biologics Co. (United States)

3:30 – 4:00 PM

BREAK & POSTER SESSION

ROOM: Break (Rotunda) & Posters (6d/Snowberry)

4:00 – 6:00 PM

25 YEARS OF ORAL RABIES VACCINATION IN THE UNITED STATES

Moderator: Laura Robinson

Texas Department of State Health Services (United States)

OP17: EARLY CONCEPTUAL DEVELOPMENT OF ORAL RABIES VACCINATION IN NEW YORK STATE

Robert Rudd

New York State Department of Health (United States)

OP18: FIRST OPERATIONAL USE OF V-RG IN EUROPE

Florence Cliquet

ANSES Laboratory for Rabies and Wildlife (France)

OP19: DEVELOPMENT OF A VACCINIA-RABIES GLYCOPROTEIN (V-RG) RECOMBINANT VIRUS VACCINE WITHIN NORTH AMERICA: AN HISTORICAL RETROSPECTIVE

Charles Rupprecht

The Wistar Institute (United States)

OP20: WILDLIFE ORV PRODUCTS AND PROGRAMS IN THE UNITED STATES: A MANUFACTURER'S PERSPECTIVE

Joanne Maki

Merial – A SANOFI Company (United States)

OP21: CURRENT ORV LANDSCAPE IN THE U.S. AND THOUGHTS ON THE FUTURE

Richard Chipman

USDA, Wildlife Services, National Rabies Management Program (United States)

6:00 PM

ADJOURN

7:00 – 11:30 PM

BUSES TO DOWNTOWN FORT COLLINS

If interested, meet outside hotel entrance to visit beautiful and historic Old Town Fort Collins for dinner and fine craft brews on your own. Buses will leave hotel at 7:00 & 8:00 PM and leave Fort Collins at 10:30 and 11:30 PM to return to the hotel. If you need a taxi, please call 1-970-224-2222.



Story Behind the 2015 RITA Logo

Posted by Gail Keirn, USDA APHIS Public Affairs Specialist, on June 4, 2015

Come this October, Katie Clonan is looking forward to seeing the fruits of her labor all over Fort Collins, Colorado. That's because Katie is the winner of the 2015 Rabies in the Americas (RITA) logo contest. Her logo will be showcased on t-shirts, banners, and other paraphernalia shared with attendees of the 26th annual RITA conference from October 4-8 in Fort Collins.

"This is the first time the international Rabies in the Americas conference has been held in Colorado," notes Dr. Stephanie Shwiff, one of several USDA-Animal and Plant Health Inspection Service (APHIS) National Wildlife Research Center (NWRC) scientists helping to plan the event. "We're excited to host the conference with our colleagues in the Wildlife Services National Rabies Management Program and other members of the RITA planning committee. One of my favorite tasks so far has been partnering with Colorado State University's (CSU) Department of Art and Art History to sponsor a logo contest."

As part of their spring semester course in illustration, more than thirty CSU graphic design students each created a logo for use on conference promotional materials. Katie, a junior Fine Arts major, won the contest including a \$500 prize donated by the RITA planning committee. Her simple, elegant design includes silhouettes of paw prints, a bat wing, and a human hand. Colorado State University is managing the conference and everything, including the prize money and the logo items, will be paid for from attendee registration fees and sponsor donations.

"Given this is an international conference and attendees work on a variety of rabies issues, I wanted to make sure that each attendee could relate to the logo in some way. I not only drew inspiration from the animals affected by rabies, but also the human side of the story," notes Katie. "I learned so much during this process about rabies and how it still impacts people around the world. I wanted my design to reflect that."

<http://blogs.usda.gov/2015/06/04/rabies-research-and-prevention-subject-of-students-winning-logo/#sthash.dz25gDF0.dpuf>

TUESDAY, OCTOBER 6

8:00 AM – 4:00 PM

REGISTRATION

ROOM: REGISTRATION DESK IN ROTUNDA

9:00 – 9:30 AM

KEYNOTE ADDRESS

OP22: SIGNIFICANCE OF ANTI-RABIES VIRUS ANTIBODIES IN HEALTHY BATS: EVIDENCE OF REPEATED, SUB-INFECTIOUS EXPOSURES TO RABIES VIRUS?

Richard Bowen

*Department of Biomedical Sciences,
Colorado State University (United States)*

9:30 – 10:30 AM

PATHOGENESIS AND MOLECULAR EPIDEMIOLOGY

Moderators: Alan Jackson & Ivanete Kotait

*University of Manitoba Health Sciences Centre
(Canada) & Vencofarma Laboratory of Brazil (Brazil)*

OP24: REPLICATION PROPERTIES OF TAIWAN FERRET BADGER RABIES VIRUS IN MICE

Ai-Ping Hsu

*Animal Health Research Institute, Council of
Agriculture (Taiwan)*

OP25: GENOMIC MOLECULAR EPIDEMIOLOGY OF RACCOON RABIES USING NEXT GENERATION SEQUENCING

Susan Nadin-Davis

Canadian Food Inspection Agency (Canada)

OP26: RECOGNITION OF A NOVEL RABIES VIRUS VARIANT IN GREY FOX

Rene Edgar Condori Condori

*Centers for Disease Control and Prevention
(United States)*

OP77: CRITICAL APPRAISAL OF THE MILWAUKEE PROTOCOL FOR RABIES: THIS FAILED APPROACH SHOULD BE ABANDONED

Alan Jackson

*University of Manitoba Health Sciences Centre
(Canada)*

10:30 – 11:00 AM

GEORGE M. BAER LATIN AMERICAN INVESTIGATORS AWARD

Presented by: Charles Rupprecht

*President, International Steering Committee
RITA, Inc.*

OP27: CANINE RABIES IN EL SALVADOR 2005-2014: SPATIAL ANALYSIS OF CONTROL AND THE INFLUENCE OF SOCIAL DETERMINANTS

Patricia Arias-Orozco

Ministry of Health of El Salvador (El Salvador)

11:00 – 11:45 AM

BREAK & OFFICIAL POSTER SESSION WITH AUTHORS PRESENT

ROOM: Break (Rotunda) & Posters (6d/Snowberry)

Please take this time to visit the posters and ask questions of the authors

11:45 AM – 12:45 PM

RABIES “TED TALKS”

Moderator: Richard Chipman

USDA, Wildlife Services, National Rabies Management Program (United States)

This symposium (modeled after TED Talks) is designed to engage, energize and generate spirited discussion long after the session has ended. We have invited 6 speakers to give 8-minute presentations on a novel idea, technology, technique or philosophy under the general theme of “Making it Work Better: Rabies Prevention, Control and Elimination in the 21st Century.”

OP28: ARE WE ‘BATTY’ TO CONSIDER RABIES PREVENTION AND CONTROL AMONG THE CHIROPTERA?

Charles Rupprecht

The Wistar Institute (United States)

OP29: MONITORING OF ORV CAMPAIGNS – ESSENTIAL OR A WASTE OF TIME AND MONEY?

Thomas Müller

Friedrich Loeffler Institute (Germany)

OP30: THAT WAS THEN, THIS IS NOW – PARADIGM SHIFTS SINCE I STARTED WORKING IN RABIES

Christine Fehlner-Gardiner

Canadian Food Inspection Agency (Canada)

OP31: ORAL VACCINATION OF DOGS AGAINST RABIES; UBI ERAS?

Ad Vos

IDT Biologika (Germany)

OP32: WILDLIFE SERVICES AND 10 BILLION OTHER PEOPLE

Larry Clark

USDA, Wildlife Services, National Wildlife Research Center (United States)

OP33: ARE YOU PROTECTED FROM RABIES? WHY HUMAN RABIES VACCINES ARE NOT ENTIRELY PROTECTIVE AND RABIES POST-EXPOSURE PROPHYLAXIS (PEP) CAN FAIL

Craig Hooper

Thomas Jefferson University (United States)

12:45 – 2:15 PM

LUNCH

Sponsors Lunch - Invitation Only

ROOM: 5a/5b (Big Thompson A & B)

2:15 – 3:30 PM

IMMUNOLOGY AND VACCINES

Moderators: Craig Hooper & Zhen Fu

Thomas Jefferson University (United States) & University of Georgia (United States)

OP34: IMPACT OF MALT1, AN UPSTREAM MEDIATOR OF NF- κ B AND IMMUNE CELL ACTIVATION, ON RABIES VIRUS DISEASE

Elodie Kip

Ghent University (Belgium)

OP35: A TH1-TYPE IMMUNE RESPONSE AND LIMITED CHANGES IN BLOOD-BRAIN BARRIER INTEGRITY ARE REQUIRED FOR EFFICIENT CLEARANCE OF RABV FROM CNS TISSUE

Aurore Lebrun

Thomas Jefferson University (United States)

OP36: THE IMPORTANCE OF VIRUS NEUTRALIZING ANTIBODIES (VNA) IN CLEARING RABIES VIRUS FROM THE CNS

Zhen Fu

University of Georgia (United States)

OP37: IMMUNOGENICITY OF SINGLE SHOT VACCINATION WITH TRIGAS AND GNRH IN RACCOONS AND COYOTES

Amy Gilbert

USDA, Wildlife Services, National Wildlife Research Center (United States)

OP38: EFFECTOR FUNCTIONS OF MONOCLONAL ANTIBODIES DURING RABIES VIRUS INFECTION

Charles Rupprecht

The Wistar Institute (United States)

3:30 – 4:00 PM

BREAK & POSTER SESSION

ROOM: Break (Rotunda) & Posters (6d/Snowberry)

4:00 – 5:15 PM

RABIES IN DOMESTIC ANIMALS

Moderators: Jennifer House & Juan Montano

Colorado Department of Public Health and Environment (United States) & National Center of Diagnostic Services in Animal Health/SENASICA (Mexico)

OP39: FORGERIES OF PET EXPORT RABIES SEROLOGY REPORTS

Elizabeth McQuade

Kansas State University (United States)

OP40: PAN-AFRICAN RABIES CONTROL NETWORK (PARACON): A UNIFIED APPROACH TO CANINE-RABIES ELIMINATION IN AFRICA

Louis Nel

Global Alliance for Rabies Control (South Africa)

OP41: RABIES PREVENTION AND CONTROL AND DOG POPULATION MANAGEMENT STRATEGIES IN REMOTE NORTHERN ONTARIO FIRST NATION COMMUNITIES

Catherine Filejski

*Ontario Ministry of Health and Long-Term Care
(Canada)*

OP42: EVALUATION OF DOG POPULATIONS AND CANINE RABIES VACCINATION COVERAGE, UGANDA 2013

Ryan Wallace

*Centers for Disease Control and Prevention
(United States)*

OP43: INTEGRATING DOG POPULATION MANAGEMENT INTO RABIES ELIMINATION PROGRAMMES AROUND THE WORLD

Emelie Fogelberg

World Animal Protection (United Kingdom)

5:15 PM

ADJOURN

6:00 – 10:30 PM

GALA DINNER & AUCTIONS

ROOM: 3d (Mountain Holly)

Join us for a Silent Auction, Live Auction, cocktails, a Western-themed dinner and live local music by Finnders & Youngberg. Suggested attire is casual Western (cowboy boots, shirts and jeans).

RITA AUCTIONS!

Every year at RITA, a fundraiser is held during the gala dinner! Money raised from a silent and live auction helps support the George M. Baer Award and cover expenses associated with RITA Inc. and the annual conference.

The auctions are possible thanks to the generosity of conference participants from around the world that donate a variety of items such as: books, crafts, paintings, sweets, curios, t-shirts, hats, etc. Big, small, serious and funny — it's all good and we want it!

Thanks to your tremendous support both in donating items and willingness to purchase these often "unique" donations we have raised thousands of dollars for a worthy cause!

We encourage you to continue supporting this quest. Bring your donations to the registration desk during the conference and bring your wallets to the gala dinner!

On behalf of the International Steering Committee and RITA26 Organizing Committee, we thank you for your continued support of this traditionally fun-filled event!



WEDNESDAY, OCTOBER 7

8:00 AM – 4:00 PM

REGISTRATION

ROOM: REGISTRATION DESK IN ROTUNDA

9:00 – 10:45 AM

WILDLIFE RABIES

Moderators: Jane Megid & Amy Gilbert

*Faculty of Veterinary Medicine and Animal Science
at São Paulo State University (Brazil) &
USDA, Wildlife Services, National Wildlife Research
Center (United States)*

OP44: RABIES CASE IN A WILD ANIMAL (LYNX) IN THE STATE OF SINALOA, AND ATTACK ON A HUMAN

Miguel Iguala-Vidales

Rabies Laboratory/InDRE, Mexican Ministry of Health (Mexico)

OP45: A TEN-YEAR ASSESSMENT OF RACCOON DENSITY ON CAPE COD, MASSACHUSETTS; WHAT HAVE WE LEARNED?

Brian Bjorklund

USDA, Wildlife Services, Massachusetts (United States)

OP46: IDENTIFICATION OF A DISTINCT GENETIC VARIANT OF RABIES VIRUS PROBABLY MAINTAINED BY CANID POPULATIONS IN PARAGUAY

Silvana Favoretto

Pasteur Institute of São Paulo (Brazil)

OP47: RABIES ECOLOGY IN ALASKA, CHALLENGES AND OPPORTUNITIES

Karsten Hueffer

University of Alaska Fairbanks (United States)

OP48: SPATIAL SPREAD OF SKUNK RABIES IN NORTHERN COLORADO, USA

Kim Pepin

USDA, Wildlife Services, National Wildlife Research Center (United States)

OP49: RABIES IN AGGRESSOR CARNIVORES OF NUEVO LEON, MEXICO

Efren Jaramillo-Reyna

State Laboratory of Public Health/Ministry of Health of Nuevo Leon (Mexico)

OP50: USING RACCOON (PROCYON LOTOR) DENSITY DATA AND REMOTELY-SENSED LANDSCAPE INFORMATION TO DEVELOP A HABITAT CONNECTIVITY-BASED RABIES RISK MODEL

Timothy Algeo

USDA, Wildlife Services, National Rabies Management Program (United States)

10:45 – 11:15 AM

ORAL RABIES VACCINE AND RABIES CONTROL

Moderators: Dennis Donovan & Fernando Vargas Pino

Ontario Ministry of Natural Resources (Canada) & Zoonosis Program, Ministry of Health (Mexico)

OP51: EFFICACY OF VARIABLE DOSE ONRAB DELIVERY IN STRIPED SKUNKS (MEPHITIS MEPHITIS)

Amy Gilbert

USDA, Wildlife Services, National Wildlife Research Center (United States)

OP52: THE CAPE COD ORAL RABIES VACCINATION PROGRAM – WHERE ARE WE NOW?

Monte Chandler

USDA, Wildlife Services, Massachusetts (United States)

11:15 – 11:45 AM

BREAK & POSTER SESSION

ROOM: Break (Rotunda) & Posters (6d/Snowberry)

11:45 AM – 12:45 PM (CONTINUED)

ORAL RABIES VACCINE AND RABIES CONTROL

Moderators: Dennis Donovan & Fernando Vargas Pino

Ontario Ministry of Natural Resources (Canada) & Zoonosis Program, Ministry of Health (Mexico)

OP53: SKUNKS' MOVEMENTS AND FLIGHT LINES FOR ORAL RABIES VACCINATION

Chad Blass

USDA, Wildlife Services, National Wildlife Research Center (United States)

OP54: CONTROL AND ELIMINATION OF RABIES IN THE BALTIC STATES

Emmanuelle Robardet

French Agency for Food Environmental and Occupational Health & Safety (ANSES) (France)

OP55: VALIDATION OF A CHALLENGE MODEL FOR RED FOXES – WHAT IS THE BEST PARAMETER TO EXPRESS INFECTIVITY?

Conrad Freuling

Friedrich Loeffler Institute (Germany)

OP56: MONGOOSE RESEARCH BY USDA WILDLIFE SERVICES IN PUERTO RICO, 2011 – 2015: IMPLICATIONS FOR ORAL RABIES VACCINATION

Are Berentsen

USDA, Wildlife Services, National Wildlife Research Center (United States)

12:45 – 2:15 PM

LUNCH

2:15 – 3:30 PM

**BATS AND LYSSAVIRUS:
HOST AND VIRUS DIVERSITY**

Moderators: Charles Rupprecht & Luis Lecuona

*The Wistar Institute (United States) &
USDA, International Services (Mexico)*

OP57: ADAPTATION OF THE HEMATOPHAGOUS
BAT (DESMODUS ROTUNDUS) TO CLIMATIC AND
DEMOGRAPHIC CHANGES IN THE STATE OF
HIDALGO

Guillermo Hernandez Mejia

Hidalgo State Committee of Animal Health (Mexico)

OP58: ENVIRONMENTAL NICHE MODELLING OF
COMMON VAMPIRE BATS IN THE MEXICAN
PLATEAU: NEW INSIGHTS INTO THE
MACROECOLOGICAL LIMITING FACTORS

Alejandro Zaldivar Gomez

Mexico State Laboratory of Public Health (Mexico)

OP59: HOME RANGE, FORAGING FIDELITY AND
FEEDING BEHAVIOR OF THE COMMON VAMPIRE
BAT (DESMODUS ROTUNDUS) IN AN
AGRICULTURAL LANDSCAPE IN GUATEMALA

Amy Gilbert

*USDA, Wildlife Services, National Wildlife Research
Center (United States)*

OP61: DETECTION AND DIVERSITY OF EUROPEAN
BAT LYSSAVIRUSES

Lorraine McElhinney

Animal and Plant Health Agency (United Kingdom)

OP80: A GLYCOPROTEIN G ELISA AS AN
ALTERNATIVE TO THE NIH POTENCY TEST OF
HUMAN RABIES VACCINES

Françoise Guinet-Morlot

Sanofi Pasteur (France)

3:15 – 3:45 PM

BREAK & POSTER SESSION

ROOM: Break (Rotunda) & Posters (6d/Snowberry)

3:45 – 5:30 PM

EPIDEMIOLOGY AND MODELING

Moderators: Jesse Blanton & Timothy Algeo

*Centers for Disease Control and Prevention
(United States) & USDA, Wildlife Services, National
Rabies Management Program (United States)*

OP62: ESTIMATION OF HUMAN AND CANINE
RABIES DEATHS IN HAITI UTILIZING COUNTRY-
SPECIFIC DATA; A COMPARISON OF THREE
ESTIMATION METHODS

Cuc Tran

*Centers for Disease Control and Prevention
(United States)*

OP63: EPIDEMIOLOGY AND MOLECULAR CHARACTERIZATION OF RABIES IN CUBA FROM 2003 TO 2014

Yanislet Cordero Aguiar

Pedro Kouri Institute of Tropical Medicine (Cuba)

OP64: RACCOON CONTACT NETWORKS AND RABIES TRANSMISSION DYNAMICS

Meggan Craft

University of Minnesota (United States)

OP65: RABIES RESPONSE: A NOVEL APPROACH TO HUMAN AND DOMESTIC ANIMAL EXPOSURE SURVEILLANCE IN GEORGIA

Amanda Feldpausch

Georgia Department of Public Health (United States)

OP66: LANDSCAPE RISK FACTORS FOR PARALYTIC RABIES ON CATTLE IN SOUTH OF STATE OF MEXICO, MEXICO

Alejandro Zaldivar Gomez

Mexico State Laboratory of Public Health (Mexico)

OP67: ONE HEALTH: RABIES SURVEILLANCE AND EPIDEMIOLOGY IN MINNESOTA

Joni Scheftel

Minnesota Department of Health (United States)

5:30 PM

ADJOURN

7:00 – 11:30 PM

BUSES TO DOWNTOWN FORT COLLINS

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THURSDAY, OCTOBER 8

9:00 – 10:15 AM

COMMUNICATION AND CULTURAL ASPECTS OF RABIES

Moderators: Louise Taylor & Peter Costa

*Global Alliance for Rabies Control (United Kingdom)
& One Health Commission (United States)*

OP68: DEVELOPING A TRANSPARENT COUNTRY RISK CLASSIFICATION SYSTEM TO GUIDE PRE-TRAVEL RABIES VACCINATION RECOMMENDATIONS

Jesse Blanton

*Centers for Disease Control and Prevention
(United States)*

OP69: IMPLEMENTATION OF THE PROJECT: HEALTH AND EDUCATION FOR THE CONTROL OF WILDLIFE RABIES, CEARÁ, BRAZIL

Danielle Araujo

*Center for Rabies Research, University of Sao Paulo
(Brazil)*

OP70: DEVELOPMENT OF TOOLS TO AID THE TRANSITION OF RABIES CONTROL ACTIVITIES FROM FEDERAL TO PROVINCIAL JURISDICTION IN CANADA

Christine Fehlner-Gardiner

Canadian Food Inspection Agency (Canada)

OP71: TECHNOLOGICAL TOOLS FOR STRENGTHENING HUMAN RABIES PROPHYLAXIS IN THE AMERICAS REGION

Marco Vigilato

Pan American Health Organization (Peru)

OP72: VAMPIRE BAT COMMUNITY COMMUNICATION AND OUTREACH VIDEO

Hunter Bodenchuk

*Texas A&M AgriLife Extension-Wildlife Services
(United States)*

10:15 – 11:15 AM

REGIONAL AND TRANSBOUNDARY UPDATES

Moderators: Lorraine McElhinney & Marco Vigilato

*Animal and Plant Health Agency (United Kingdom)
& Pan American Health Organization (Peru)*

OP73: CANADA

OP74: UNITED STATES

OP75: MEXICO

OP76: BRAZIL

11:15 – 11:45 AM

BREAK & POSTER SESSION

ROOM: Break (Rotunda) & Posters (6d/Snowberry)

11:45 AM – 12:30 PM

ORGANIZING COMMITTEE RITA27

OP78: PRESENTATION OF RITA27 IN BELÉM, BRAZIL (2016)

Pedro Vasconcelos

Director of Evandro Chagas Institute and RITA27 Coordinator (Brazil)

12:30 – 12:45 PM

CLOSING CEREMONY

Stephanie Shwiff & Charles Rupprecht

RITA26 & RITA, Inc. (United States)

12:45 PM

ADJOURN

1:30 – 5:00 PM

TOUR OF THE NATIONAL WILDLIFE RESEARCH CENTER (NWRC) IN FORT COLLINS

(MUST BE PRE-REGISTERED)

Meet just outside the Rotunda Entrance; bus leaves at 1:30 PM and will return at 5:00 PM

The NWRC is the research arm of the US Department of Agriculture (USDA) Animal and Plant Health Inspection Service's (APHIS) Wildlife Services (WS) program. The Center is the federal institution devoted to resolving problems caused by the interaction of wild animals and society. The Center applies scientific expertise to the development of practical methods to resolve these problems and to maintain the quality of the environments shared

with wildlife.

NWRC is headquartered on the Foothills Research Campus of Colorado State University (CSU) in Fort Collins, CO. Approximately two-thirds of NWRC's 150-person staff is located in Fort Collins; the remainder of the highly specialized staff are located throughout the United States, and address regional wildlife damage management problems related to agriculture, natural resources, property, and human health and safety.

2:00 – 6:00 PM

NORTH AMERICAN RABIES MANAGEMENT PLANNING MEETING (INVITATION ONLY)

Same room as RITA Sessions

7:00 – 11:30 PM

BUSES TO DOWNTOWN FORT COLLINS

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FRIDAY, OCTOBER 9

8:30 AM – 12:00 PM

SYMPOSIUM ON HUMAN RABIES PREVENTION AND TREATMENT

Moderators: Peter Costa & Charles Rupprecht

One Health Commission (United States) & The Wistar Institute (United States)

Overview: This half-day rabies symposium and webinar broadcast will consist of presentations from rabies experts and provide a forum for discussion. The conference will bring together internationally recognized experts in rabies from academia, private and public health disciplines. There is no cost to attend, but space is limited to the first 100 registrants. Webinar attendance is unlimited.

Learning Objectives: At the conclusion of the symposium, participants will be able to:

- Describe the burden of human rabies and problems contributing to human rabies prevention
- Differentiate methods for human rabies surveillance and diagnosis
- Cite at least two examples of public health strategies to minimize human exposures to rabies virus
- Understand methods for ensuring human rabies vaccine potency
- Appreciate future challenges and opportunities for potential therapy

Who Should Attend: Physicians, Nurses Practitioners, Nurse Technicians, Medical professionals, Medical students, Health Educators, Pharmacists, Pharmacy Technicians, Epidemiologists, Laboratorians, DOs, Veterinarians, Veterinarian Technicians, Veterinary Students

Continuing Education: This program 833-18637 is approved by the AAVSB RACE to offer a total of 1.50 CE Credits (1.50 max) being available to any one Veterinarian: and/or 1.50 Veterinary Technician CE Credits (1.50 max).

Where: Embassy Suites, River Birch Room (3f/g/h on hotel map)

Cost: None. This Symposium and Webinar is FREE of charge.

Registration: Please visit www.onehealthcommission.org/rabiessymposium to register or Google "symposium on human rabies" and look for the One Health Commission website. Even though there is no cost, you must register, as in person attendance at the Embassy Suites is limited to 100 people. See a preliminary agenda on the next page and on the website above.

Sponsors: Colorado State University, Grifols, Kedrion Biopharma, Merial, One Health Commission, Sanofi Pasteur

TIME	TOPIC	PRESENTER
8:30 – 9:00 AM	Registration and Coffee	
9:00 – 9:10 AM	Welcome	Peter Costa, MPH, MCHES, One Health Commission, Apex, NC
9:10 – 9:30 AM	A Primer on Human Rabies Pre- & Postexposure Prophylaxis	C.E. Rupprecht, VMD, MS, PhD, Professor (Adjunct), The Wistar Institute, Philadelphia, PA
9:30 – 9:50 AM	Public Health Challenges in Rabies Prevention and Animal Management	Jennifer House, DVM, MPH, State Public Health Veterinarian, Department of Public Health & Environment, Denver, CO
9:50 – 10:10 AM	Plato’s Cave: Shadows or Reality – What Are Future Diagnostic Targets For Human Rabies?	Richard Franka, DVM, PhD, MPH, Director, OIE Reference Laboratory for Rabies, Centers for Disease Control & Prevention, Atlanta, GA
10:10 – 10:30 AM	Care of Human Rabies – Time for a Randomized Clinical Trial	Rodney Willoughby, MD, Professor, Children’s Hospital of Wisconsin, Milwaukee, WI
10:30 – 10:40 AM	Break	
10:40 – 11:00 AM	Human Rabies Vaccines and Alternate Potency Assays	Robin Levis, PhD, Deputy Director, Office of Vaccines Research and Review, Food & Drug Administration, Silver Spring, MD
11:00 – 11:20 AM	The Importance of Virus Neutralizing Antibodies (VNA) in Clearing Rabies Virus From the CNS: Can VNA Be Used For Clinical Therapy?	Zhen F. Fu, DVM, PhD, Professor, Veterinary Virologist, University of Georgia, Athens, GA
11:20 – 11:40 AM	Roundtable Discussion	
11:40 – 11:50 AM	Additional Questions from the Audience	
11:50 – NOON	Evaluation and Adjourn	Peter Costa, MPH, MCHES, One Health Commission, Apex, NC

POSTER SESSIONS

SNOWBERRY ROOM (6d ON MAP)

Be sure to visit the poster presentations on display starting Monday at 9:00 AM. Posters will be displayed through the Thursday morning break. The official poster session with authors present is Tuesday 11:00 – 11:45 AM (morning break). Poster setup times are: Sunday 1:00 – 8:00 PM and Monday 7:00 – 9:00 AM. Please remove your poster by noon on Thursday.

POSTERS: LYSSAVIRUS DIAGNOSTICS AND EMERGING TECHNOLOGIES

PP01: EVALUATION OF HISTOPATHOLOGICAL CHANGES AND THE PRESENCE OF INCLUSIONS IN DIFFERENT FRAGMENTS OF CENTRAL NERVOUS SYSTEM OF HORSES NATURALLY INFECTED BY RABIES VIRUS

Samira Maria Achkar

Pasteur Institute of São Paulo (Brazil)

PP02: DETECTION OF RABIES VIRUS ANTIGEN BY RAPID IMMUNOHISTOCHEMISTRY TEST: EXPERIENCE OF THE PASTEUR INSTITUTE – BRAZIL

Fernanda Guedes

Pasteur Institute of São Paulo (Brazil)

PP03: EVALUATION OF SAMPLE CONCENTRATIONS IN THE ACCURACY OF THE RABIES VIRUS ISOLATION IN N2A CELL CULTURE

Keila Iamamoto

Pasteur Institute of São Paulo (Brazil)

PP04: NEW POTENTIAL DIAGNOSTIC TOOL FOR RABIES

Iana Suly Santos Katz

Pasteur Institute of São Paulo (Brazil)

POSTERS: HUMAN RABIES AND PROPHYLAXIS

PP06: FACTORS WHICH SHARPENS THE KILLER BITES OF RABIES IN PAKISTAN

Zaheer Hussain

University of the Punjab (Pakistan)

PP08: A COMBINATION TREATMENT WITH MOUSE MONOCLONAL ANTIBODY AND ADENOVIRUS BICISTRONICALLY EXPRESSING PORCINE INTERFERON- α AND INTERFERON- γ ENHANCED PROTECTION AGAINST LETHAL PERIPHERAL RABIES CHALLENGE IN MICE

Ha-Hyun Kim

Animal and Plant Quarantine Agency (South Korea)

PP09: NEUTRALIZATION OF NORTH AMERICAN RABIES ISOLATES BY R172, A HUMAN MONOCLONAL ANTIBODY COCKTAIL

Heidi Smith

University of Massachusetts Medical School (United States)

PP11: HUMAN CASE OF RABIES IN THE STATE OF CHIHUAHUA FROM A SKUNK BITE

Miguel Iguala-Vidales

Rabies Laboratory/InDRE, Mexican Ministry of Health (Mexico)

PP12: PREVENTION OF SYLVATIC HUMAN RABIES IN THE AMERICAS

Marco Vigilato

Pan American Health Organization (Peru)

PP13: HUMAN ANTI-RABIES CARE IN THE FEDERAL DISTRICT, A QUANTITATIVE ASSESSMENT OF THE NOTIFICATIONS AFTER THE SYSTEMATIZATION IN SINAN

Ana Martins

Health Department of the Federal District (Brazil)

POSTERS: PATHOGENESIS AND MOLECULAR EPIDEMIOLOGY

PP14: RABIES VIRUS IN SALIVARY GLAND AND ORGANS FROM NATURALLY INFECTED RUMINANTS

Camila Appolinario

Faculty of Veterinary Medicine and Animal Science at São Paulo State University (Brazil)

PP15: PATHOGENICITY OF RABIES VIRUS ISOLATED FROM THE MAIN RABIES RESERVOIRS IN BRAZIL

Iana Suly Santos Katz

Pasteur Institute of São Paulo (Brazil)

PP16: BRAIN GENE EXPRESSION PROFILE OF VARIANT 2 STREET RABIES VIRUS IN INFECTED MICE

Jane Megid

Faculty of Veterinary Medicine and Animal Science at São Paulo State University (Brazil)

PP44: ANALYSIS OF THE VIRULENCE AND PATHOGENESIS OF STREET RABIES VIRUS STRAINS ASSOCIATED WITH EPTESICUS BATS

Iana Suly Santos Katz

Pasteur Institute of São Paulo (Brazil)

POSTERS: IMMUNOLOGY AND VACCINES

PP17: RABIES VACCINATION OF PUPPIES - HOW YOUNG IS TOO YOUNG...?

Scott Bender

Navajo Nation (United States)

PP18: RVNA TITER OF 0.5 IU/ML IN DOGS AND CATS SHOULD BE ALLOWED IN LIEU OF ROUTINE VACCINATION

Rolan Davis

Kansas State University (United States)

PP19: FERTILITY CONTROL FOR THE MANAGEMENT OF FREE-ROAMING DOGS: RESEARCH UPDATE

Doug Eckery

*USDA, Wildlife Services, National Wildlife Research Center (United States)***PP20:** COMPARATIVE EVALUATION IN SITU OF THE IMMUNE RESPONSE TH17 PROFILE IN CASES OF HUMAN RABIES TRANSMITTED BY DOG AND VAMPIRE BATS

Elaine Fernandes

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*Faculty of Veterinary Medicine and Animal Science
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*Faculty of Veterinary Medicine and Animal Science
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Ellen Elizabeth Laurindo

*Department of Animal Health/Ministry of
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Maria Susana Moreno Fernandez

Coahuila State Laboratory of Public Health (Mexico)

LOCAL DINING OPTIONS

BREAKFAST: Complimentary cooked-to-order breakfast is included in your stay at the Embassy Suites Loveland - Hotel, Spa & Conference Center. The hotel also has Caffaina's where you can enjoy Starbucks coffee, hot and cold beverages, and quick snacks.

LUNCH: Enjoy lunch in the hotel at the Rocky River Bar & Grille, offering American fare in an inviting and casual atmosphere. Or get outside and enjoy the sunshine by walking to lunch. There are 7 restaurants within a 7-minute walk of the hotel (see Map 1).

DINNER: Enjoy dinner in the hotel at the Rocky River Bar & Grille, or visit Downtown Fort Collins for many restaurants options (see Map 2). The RITA conference will be offering bus service to Fort Collins Monday, Wednesday and Thursday night. Buses will leave the hotel at 7:00 & 8:00 PM and leave Fort Collins at 10:30 & 11:30 PM to return to the hotel. Bus



service will not run on Tuesday, the night of the RITA Gala Dinner. If you need a taxi, please call 1-970-224-2222.

If you would like to visit Fort Collins in your own vehicle, please follow these directions and refer to Map 2 for restaurants once you get there.

- 📍 Go north on Interstate 25 for approximately 11 miles (18 km)
- 📍 Get off at Exit 269B
- 📍 Turn right at the bottom of the exit ramp onto Highway 14W (East Mulberry Street)
- 📍 Stay on East Mulberry Street for 4 miles (6.5 km) until it intersects with College Avenue
- 📍 Turn right on College Avenue
- 📍 Most of the restaurants are off College Avenue, between Olive Street and LaPorte Avenue

OPCIONES LOCALES PARA TOMAR ALIMENTOS

DESAYUNO: Un desayuno complementario caliente esta incluido en el costo de la habitación del Embassy Suites Loveland - Hotel, Spa & Conference Center. El hotel también cuenta con la cafetería Caffeina's donde usted puede disfrutar café de Starbucks, otras bebidas calientes y frías y pequeños bocadillos.

COMIDA: Disfrute su comida en dentro del hotel en el Rocky River Bar & Grille, que le invita a disfrutar su servicio en una atmósfera casual. Si lo prefiere salga y disfrute del sol mientras camina para tomar su comida, Hay 7 restaurantes a una distancia de 7 minutos caminando desde el hotel (Vea el Mapa 1).

CENA: Disfrute de su cena en el hotel en el Rocky River Bar & Grille, o visite el centro de Fort Collins para conocer muchas opciones de restaurantes (Vea el Mapa 2). La organización de la Conferencia de la RITA les ofrecerá servicio de autobuses a Fort Collins el lunes, miércoles y jueves en la noche. Los autobuses partirán del hotel a las 7:00 & 8:00 PM y regresarán de Fort Collins a las 10:30 & 11:30 PM para volver al hotel. No habrá servicio de autobús el martes por la noche, ya que ese día se realizará la Cena de Gala de la RITA. Si necesita un taxi, por favor llame al 1-970-224-2222.

Si usted prefiere visitar Fort Collins en su propio vehículo, por favor siga estas direcciones y consulte el Mapa 2 para ubicar los restaurantes una vez que llegue.

- 📍 Tome al norte por la Interestatal 25 por aproximadamente 11 millas (18 km)
- 📍 Salga en la Salida 269B
- 📍 Gire a la derecha al final de la salida de la rampa para tomar la vía rápida 14W (East Mulberry Street)
- 📍 Manténganse en East Mulberry Street por 4 millas (6.5 km) hasta la intersección con College Avenue
- 📍 Gire a la derecha en College Avenue
- 📍 La mayoría de los restaurantes están sobre College Avenue, entre Olive Street y LaPorte Avenue

Opções de restaurantes LOCAIS

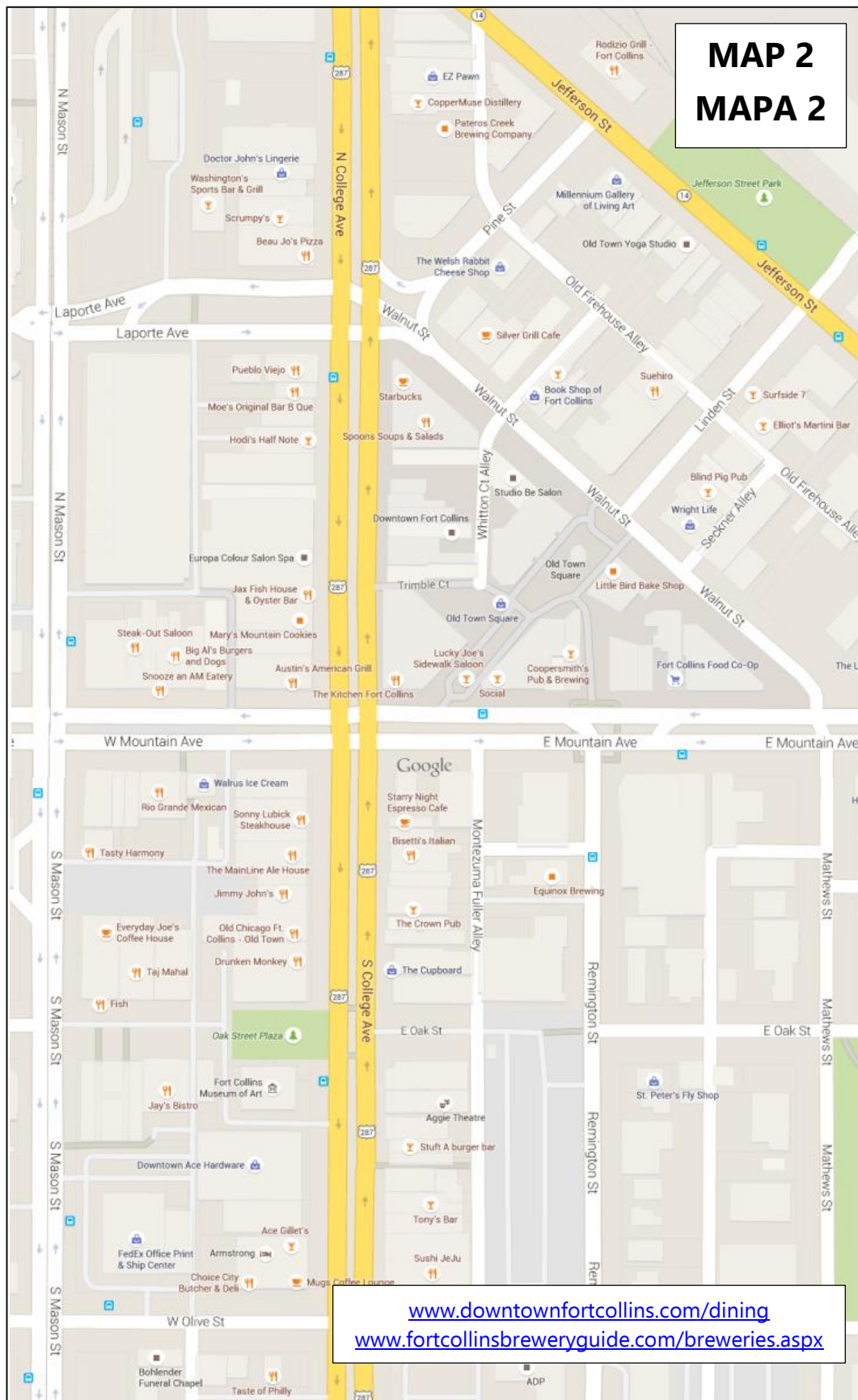
CAFÉ DA MANHÃ: O pequeno-almoço com pratos quentes sob pedido está incluído na sua estadia no Embassy Suites Loveland - Hotel, Spa & Conference Center. O hotel também tem Caffeina de onde pode desfrutar de um café Starbucks, bebidas quentes e frias e lanches rápidos.

ALMOÇO: Desfrute de um almoço no hotel no Rocky River Bar & Grille, oferecendo culinária americana em um ambiente convidativo e casual. Ou sair e desfrutar do sol, caminhando para o almoço. Há 7 restaurantes a uma caminhada de 7 minutos do hotel (ver Mapa 1).

JANTAR: Desfrute de um jantar no hotel no Rocky River Bar & Grille, ou visite Downtown Fort Collins para muitas opções de restaurantes (ver Mapa 2). A conferência RITA estará oferecendo serviço de ônibus para Fort Collins segunda-feira, quarta-feira e quinta-feira. Os ônibus sairão do hotel às 19:00 & 20:00 e deixar Fort Collins em 22:30 & 23:30 para retornar para o hotel. O serviço de ônibus não será executado na terça-feira, a noite do Jantar de Gala de RITA. Para chamar um táxi 1-970-224-2222.

Se você gostaria de visitar Fort Collins em seu próprio veículo, por favor, siga estas instruções e consulte o Mapa 2 restaurantes assim que chegar lá.

- 📍 Vá para o norte na Interstate 25 para aproximadamente 11 milhas (18 km)
- 📍 Saia na Exit 269B
- 📍 Vire à direita na parte inferior da rampa de saída para a Highway 14W (East Mulberry Street)
- 📍 Fique na East Mulberry Street por 4 milhas (6,5 km) até que ele cruza com College Avenue
- 📍 Vire à direita na College Avenue
- 📍 A maioria dos restaurantes estão fora College Avenue, entre Olive Street e Avenue LaPorte



Rocky Mountain National Park

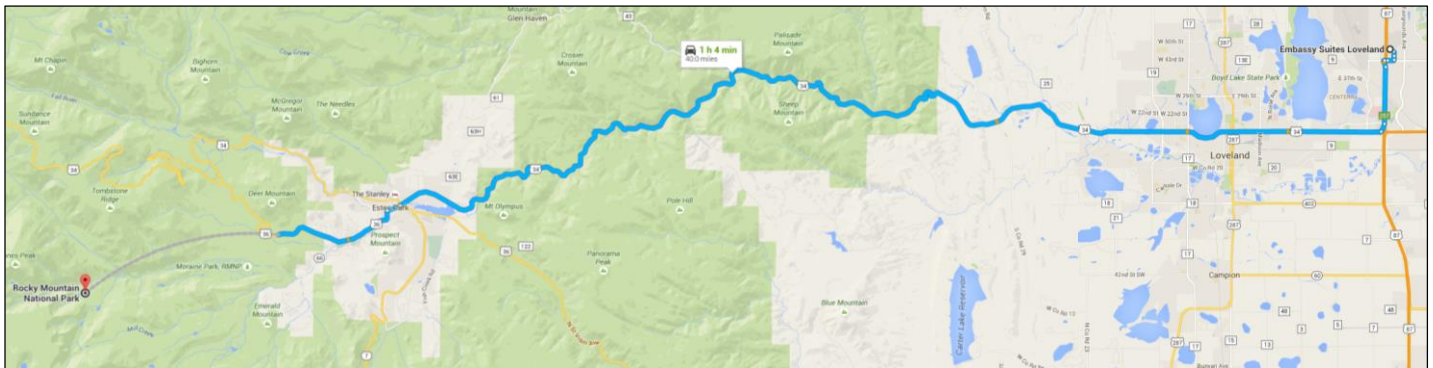
Parque Nacional de las Montañas Rocosas

Rocky Mountain National Park

Rocky Mountain National Park is located in Estes Park, Colorado approximately 40 miles (1 hour) west of the Embassy Suites Loveland, site of RITA 2015. If you'd like to visit the Park, please see the map below for driving directions from the conference hotel.

El Parque Nacional de las Montañas Rocosas está localizado en Estes Park, Colorado, aproximadamente a 40 millas (1 hora) al oeste del Hotel Embassy Suites Loveland, la sede de la RITA 2015. Si usted quiere visitar el Parque, por favor vea el mapa de abajo para obtener sencillas instrucciones para manejar desde el hotel de la conferencia.

Rocky Mountain National Park está localizado em Estes Park, Colorado aproximadamente 40 milhas (uma hora) a oeste da Embassy Suites Loveland, local de RITA 2015. Se você gostaria de visitar o Parque, consulte o mapa abaixo para direcções de condução de o hotel de conferências.



FROM: Embassy Suites Loveland
4705 Clydesdale Parkway
Loveland, CO 80538

TO: Rocky Mountain National Park
Estes Park, Colorado

South on Interstate 25 to US 34 West; follow signs to the Park.

Sur en la carretera interestatal 25 a US 34 Oeste; seguir las indicaciones hacia el Parque.

Sul na Interstate 25 para US 34 Oeste; siga as indicações para o Parque.

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