6th
COLORADO
ALPHAHERPESVIRUS
LATENCY SYMPOSIUM

Vail, Colorado

May 18-21, 2016

To convene researchers active in alphaherpesvirus latency
To discuss current advances in a relaxed venue
Dear Colleagues,

It is with great pleasure that I welcome you to the 6th symposium of the Colorado Alphaherpesvirus Latency Society. Each year since 2011, we have assembled to discuss current advances in alphaherpesvirus latency in the relaxed setting of this quiet mountain community. The Christiania Lodge with the help of the Tivoli Lodge is again graciously providing our accommodations. CALS’ success is a tribute to the continued collaboration of individuals from around the world with the common goal of eradicating disease produced by alphaherpesvirus reactivation through understanding the molecular mechanisms underlying establishment, maintenance and reactivation from latency. This year 68 investigators, who have authored over 2,866 PubMed listed publications, have traveled 130,076 miles to attend the 2-day symposium consisting of 30 oral presentations by established investigators. We are pleased to have James Eberwine from The University of Pennsylvania give our plenary talk entitled Adult Human and Mouse Neuronal Cell Transcriptome Variability: Insights into Cell Identity and Function. His presentation continues our theme of inviting speakers outside virology to help us see latency in a different light.

As you can see from the figure to the right, when a word frequency visualization program is applied to all the presentation titles, the majority of talks concern HSV-1, but significant advances in HSV-2, VZV, BHV and PRV latency research will also be presented. Again this year, posters presented by graduate students and postdoctoral fellows will be viewable throughout the meeting and succinctly summarized in 3-minute oral presentations. Please take time to encourage this next generation of alphaherpesvirologists during the formal Friday poster session. Our Friday night fireside open forum continues to be a place to discuss topics submitted during the meeting that have not been addressed in formal presentations. This meeting is a work in progress; please let me know how CALS can better serve the alphaherpesvirus latency community.

Funding for this conference was made possible [in part] by an NIH R13 from the National Institute on Aging based on the unique attributes of our Society as well as our overall goal to mentor postdoctoral fellows. I also wish to recognize and thank financial supporters who help keep our symposium affordable: Affymetrix eBioscience (a part of Thermo Fisher Scientific), Agilent Technologies, Inc., Bully Ranch, Cellular Dynamics International (a Fujiﬁlm Company), The Christiania Lodge, Colorado Mountain Express, FedEx (store #2004), Genewiz, Integrated DNA Technologies, Molly’s Spirits, Research Products International, Rocky Mountain SIMS, Thermo Fisher Scientiﬁc, Tivoli Distributing Company, Tivoli Lodge, Walmart (store #4288), and private donations provided by The VZV Foundation and a personal contribution from Don Gilden.

Finally, this 6th symposium of the Colorado Alphaherpesvirus Latency Society is amazing. The meeting completely filled with two brief email notices, and our work is followed by the general public as well as patient advocacy groups. Clinical observations increase the association of alphaherpesviruses with new diseases, and molecular findings advance basic cell biology. CALS has become an important forum to present new findings, establish new collaborations, explore new ideas, and train young investigators.

I am honored to be part of this robust, growing, diverse and exciting family. Special thanks goes to Nick, Bridget, Gabriela and Don for their great suggestions, tireless efforts and continued support.

Enjoy CALS 2016
Colorado Alphaherpesvirus Latency Symposium
May 18-21, 2016
Christiania Lodge
Vail, Colorado

Wednesday, May 18
7:00 pm dinner: Bully Ranch

Thursday, May 19
7:00 – 8:00 am breakfast & poster set up: Christiania Lodge
8:00 – 8:10 am Welcome: Randy Cohrs
8:10 – 10:10 am Session I: Clinical
10:10 – 10:30 am break
10:30 – 12:30 pm Session II: Host interactions
12:30 – 2:00 pm lunch / free time
2:00 – 4:00 pm Session III: Neurons
4:00 – 4:15 pm break
4:15 – 5:15 pm Plenary talk: James Eberwine
5:15 – 6:15 pm Music by Tamara Goldstein & Don Gilden
6:45 pm group photograph
7:00 pm dinner: Up the Creek

Friday, May 20
7:00 – 8:00 am breakfast: Christiania Lodge
8:00 – 10:00 am Session IV: Immune response
10:00 – 10:20 am break
10:20 – 12:20 pm Session V: Mechanism
12:20 – 2:00 pm lunch / business meeting: Christiania Lodge
2:00 – 5:00 pm Session VI: Poster presentations
  2:00 – 2:45 pm Oral overview
  2:45 – 5:00 pm Poster viewing
5:00 free time
7:00 pm dinner: Alpenrose
Following dinner round table discussion: Christiania Lodge

Saturday, May 21
7:00 breakfast: Christiania Lodge
Thursday morning, May 19

7:00  breakfast & poster setup: Christiania Lodge

8:00  Welcome: Randy Cohrs

Session I: Clinical. Moderator: Todd Margolis

8:10  Don Gilden
Granulomatous vasculitis: one virus, three phenotypes

8:30  Don Gilden
Successful antiviral treatment after 6 years of chronic progressive VZV brain infection

8:50  Maria Nagel
Burning mouth syndrome associated with varicella zoster virus

9:10  Padma Srikanth
Varicella Zoster Virus infection: a report from a tertiary care center in Chennai, India

9:30  Jeffrey Cohen
Severe herpes zoster: more than bad luck

9:50  Judy Breuer
Intrahost diversity provides insight into VZV pathogenesis

10:10 coffee break

Session II: Host interactions. Moderator: Anne Cliffe

10:30  Nancy Sawtell
Long term latent HSV infection associated with behavioral deficits

10:50  Edouard Cantin
HSV induced neurocognitive impairment in latently infected mice

11:10  Richard Thompson
Infection of neurons from the body surface is characterized by initial entry into the latent program followed by regulated de novo VP16 expression and transactivation dependent emergence into the lytic cycle in a subset

11:30  Clinton Jones
The canonical wnt/b-catenin signaling pathway is active in in sensory neurons of calves latently infected with bovine herpesvirus 1

11:50  Angus Wilson
Control of host microRNA expression during HSV-1 infection

12:10  Jim Goodrich
The response of RNA polymerase II transcription to HSV-1 infection

12:30  lunch / free time
Thursday afternoon, May 19

Session III: Neurons. Moderator: Donna Neumann

2:00 Ron Goldstein
A scalable and easily manipulated experimental model for study of varicella-zoster virus latency

2:20 David Bloom
Evaluation of a differentiated human iPSC neuron model of HSV latency

2:40 Susanne Himmelein
Anatomical preparation and characterization of human vestibular ganglia in the context of vestibular neuritis

3:00 Homayon Ghiasi
Interrelationship of primary virus replication in the eye, level of latency and time to reactivate in the trigeminal ganglia of latently infected mice

3:20 Robert Hendricks
Critical role for sympathetic corneal nerves in primary and reactivated herpes stromal keratitis

3:40 Andrea Bertke
Sympathetic neuronal pathways differentially regulate HSV1 and HSV2 genital infection

4:00 coffee break

4:15 Plenary Talk. James Eberwine with introduction by Todd Margolis
Adult human and mouse neuronal cell transcriptome variability: Insights into cell identity and function

5:15 Music by Tamara Goldstein & Don Gilden

6:45 group photograph

7:00 dinner: Up the Creek
Friday morning, May 20

7:00 breakfast: Christiania Lodge

Session IV: Immune response. Moderator: David Knipe

8:00 Greg Smith  
TLR3 promotes latency by rapidly protecting CNS neurons from HSV-1 infection

8:20 Patrick Stuart  
CD28 defective mice display reduced latency, increased genome load, reduced CD8+ T cells in trigeminal ganglia

8:40 David Tscharke  
Making HSV more visible to CD8+ T cells increases lesion size but does not alter latency

9:00 Paul “Kip” Kinchington  
The influence of expression on CD8+ T cell immunodominance, priming and ganglionic retention during latency of HSV-1 in the murine C57Bl6 model

9:20 Dan Carr  
Mice vaccinated with a mutant HSV-1 deficient in the nuclear location signal of ICP0 (0ΔNLS) are highly resistant to subsequent HSV-1 challenge in comparison to naive mice or mice vaccinated with a HSV gD-2 subunit

9:40 David Davido  
Mutations in HSV-1 ICP6 impair pathogenesis in mice and constitute a potential vaccine against HSV-1

10:00 coffee break

Session V: Mechanism. Moderator: Catherine Sadzot

10:20 Victor Hsia  
Volatile organic compound released upon Herpes Simplex Virus Type -1 acute infection modulates membrane potential of human neuron-like cells and represses subsequent viral infection

10:40 Philip Krause  
Novel functions of Herpes Simplex Virus ICP27 in regulating host pre-mRNA processing

11:00 Charles Grose  
Autophagy facilitates transport of VZV particles without degradation following VZV reactivation

11:20 Moriah Szpara  
Neuronal differentiation impacts host responses to HSV infection in vitro

11:40 Matthew Taylor  
Role for superinfection exclusion during neuroinvasive alphaherpesvirus spread

12:00 Kamel Khalili  
Gene editing strategy for suppressing HSV-1 replication

12:20 lunch / business meeting: Christiania Lodge
Friday afternoon, May 20

Session VI: Poster presentations. Moderators: Martine Aubert and David Davido

2:00 Oral overviews

Poster 1 Laura Benjamin
The use of imaging to explore the association of VZV reactivation and surrogate markers of stroke and stroke subtype

Poster 2 Leonardo D’Aiuto
New human neuronal progenitor cells (NPCs)-based drug screening platform for CNS HSV-1 infections

Poster 3 Kevin Egan
HSV-1 replication kinetics and immune response in the Lip Scarification model of infection

Poster 4 Robert Figliozzi
Zebrafish as Models of Alpha Human Herpes Virus Infection and Latency

Poster 5 Dallas Jones
VZV-mediated regulation of the PD-1:PD-L1 pathway in human T cells

Poster 6 Marielle Lebrun
Role of Varicella Zoster virus ORF9p in the secondary egress: importance of its interaction with the cellular Adaptin Protein-1

Poster 7 Jennifer Lee
HSV-1 ICP0 regulates the structure of latent viral chromatin

Poster 8 Lora McClain
Exploring the mechanism of action of the antiherpetic alkloid trans-dihydrolycoricidine (R430)

Poster 9 Chandra Menendez
HSV-1 activity persists in a unique region of the brain during latency and is associated with a loss in resident T cell function

Poster 10 Elena Moraitis
Mechanisms of Varicella zoster virus related cerebral arteriopathy

Poster 11 Julian Scherer
Two-color herpesvirus discriminate inoculum from progeny

Poster 12 Shannan Washington
Deletion of the HSV-1 Ctcf binding motif Ctrl2 enhances the acute infection at the expense of latency in the mouse

2:45 Poster viewing

5:00 free time

7:00 dinner – Alpenrose

Following dinner - round table discussion (optional): Christiania Lodge
Saturday morning, May 21

7:00  breakfast: Christiania Lodge

          Departure

Discussants

Martine Aubert
Nicholas Baird
Mark Challberg
Anna Cliffe
Elisabeth Cohen
Randall Cohrs
Seth Frietze
Thomas Goodwin
Ken Jones
Benedikt Kaufer
Peter Kennedy
David Knipe
Katherine Lee
Ravi Mahalingam
Todd Margolis
Satish Mehta
Donna Neumann
Duane Pierson
Joel Rovnak
Catherine Sadzot
Scott Schmid
Deepak Shukla
Vicki Traina-Dorge
Jim Treybig
Brian Wigdahl
Leigh Zerboni
We thank the following for their support of the 2016 CALS

NIA - NIH
Affymetrix eBioscience, A part of Thermo Fisher Scientific
Agilent Technologies, Inc.
Bully Ranch
Cellular Dynamics International, a Fujifilm Company
The Christiania Lodge
Colorado Mountain Express
Don Gilden
FedEx, store #2004
Genewiz
Integrated DNA Technologies
Molly’s Spirits
Research Products International
Rocky Mountain SIMS
Thermo Fisher Scientific
Tivoli Distributing Company
Tivoli Lodge
VZV Foundation
Walmart, store #4288