

Saturday, July 24

08:30 – 12:00 **Morning Workshops**

- Betaherpesviruses Satellite** Room 270, Gardner Hall
Chairs: Laura Hertel, Tim Sparer
- *Herpes Simplex Virus Satellite** Gardner Concert Hall
Chairs: David Bloom, Roger Everett, James Hill, Sandra Weller
- 12:00 – 13:00 **A box lunch will be provided for registered satellite workshop attendees.** Outside Kingsbury Hall
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13:00 – 17:00 **Afternoon Workshops**

- 13:00 – 16:30 **Interventions Satellite** Gardner Concert Hall
Chairs: Clyde Crumpacker, David Knipe
- Varicella-Zoster Virus Satellite** Kingsbury Hall Auditorium
Chairs: Allison Abendroth, Ann Arvin, Jeffrey Cohen, Scott Schmid
- Veterinary Herpesviruses Satellite** Room 270, Gardner Hall
Chairs: Herman Favoreel, Clinton Jones
- 18:00 – 21:00 **Barbeque Dinner** Fort Douglas Bandstand

*This year's HSV Satellite Workshop is dedicated to our friend, mentor and esteemed colleague, Dr. Priscilla Ann Schaffer - December 29, 1941 – November 18, 2009.

Priscilla was instrumental in initiating the HSV Satellite workshops, and she co-hosted the first HSV workshop at the 2006 IHW in Seattle, Washington. We are grateful for her leadership, mentorship and dedication to the study of HSV and all those in the HSV field.

Sunday, July 25

08:15 – 08:30 **Opening Remarks** Kingsbury Hall Auditorium

08:30 – 10:30 **Session 1:
Gene Expression I** Kingsbury Hall Auditorium

Chairs: Ian Mohr, Rozanne Sandri-Goldin

- 08:30 – 09:00 **Keynote Talk**
Does HSV hijack the HDAC/CoREST/REST/LSD1 repressor to silence itself in sensory ganglia? Interference with silencing has profound effect on the outcome of infection in the mouse
Bernard Roizman, The University of Chicago, USA
- 09:00 – 09:15 Systemic Analysis of Viral and Cellular miRNA Targets in Cells 1.01
Latently Infected with Human γ -Herpesviruses through RISC
Immunoprecipitation Assays
*L. Dölken, G. Malterer, F. Erhard, S. Kothe, C.C. Friedel, G. Suffert,
L. Marcinowski, N. Motsch, S. Barth, M. Beitzinger, D. Lieber, S.M. Bailer,
R. Hoffmann, Z. Ruzsics, E. Kremmer, S. Pfeffer, R. Zimmer,
U.H. Koszinowski, F. Grässer, G. Meister, J. Haas*
- 09:15 – 09:30 Down-regulation of the cellular protein ATRX in herpes simplex 1.02
virus 1 infected cells
L. Jurak, M.F. Kramer, J.M. Pesola, M. Mayuri, L.B. Silverstein, D.M. Coen
- 09:30 – 09:45 KSHV ORF57 protein interacts with the cellular export adaptor protein, 1.03
UIF, to enhance nuclear export of viral intronless mRNAs
B. Jackson, A. Whitehouse
- 09:45 – 10:00 Identification of UAP56-interaction as a conserved feature of cytomegaloviral 1.04
mRNA export that is required for efficient replication of HCMV
B. Zielke, R. Mueller, A. Giede-Jeppe, M. Thomas, T. Stamminger
- 10:00 – 10:15 Reactivation of latent HSV-1 results in a unique program of viral lytic 1.05
gene expression.
J. Kim, M. Kobayashi, M.V. Chao, I. Mohr, A. Wilson
- 10:15 – 10:30 HCMV pUL29/28 differentially regulates gene expression through 1.06
binding cellular p53 and NuRD complex
J.P. Savaryn, K. Faust, S.S. Terhune
- 10:30 – 11:00 **Coffee Break** Outside Kingsbury Hall

Sunday, July 25

11:00 – 12:30 **Session 2A:** Kingsbury Hall Auditorium
Gene Expression II

Chairs: John Blaho, Rona Scott

- 11:00 – 11:15 An Endogenous Rate-Amplifier in IE2 Gene Expression Provides a Fitness Advantage for HCMV 1.07
M. Wong, C. Bolovan-Fritts, R. Dar, A. Womack, N. Moorman, M. Simpson, T. Shenk, L. Weinberger
- 11:15 – 11:30 Formation of the Herpes Simplex Virus VP16 transactivator complex on viral IE promoters requires the nuclear lamina 1.08
L. Silva, T. Kristie, S.J. Triezenberg, D.M. Knipe
- 11:30 – 11:45 ICP0 targets RNF8 for degradation via phosphorylation dependent interaction with the FHA domain of RNF8 1.09
M.S. Chaurushiya, C.E. Lilley, S. Ticau, C. Boutell, M.D. Weitzman
- 11:45 – 12:00 Functional characterisation of RING-finger residues required for ICP0's ability to interact with cellular ubiquitin conjugating enzymes. 1.10
E. Vanni, D. Gatherer, C. Boutell
- 12:00 – 12:15 PMA Induced HCMV MIE Enhancer Activation via PKC-Delta, CREB, and NF- κ B De-Silences the MIE Genes in Quiescently Infected Human Pluripotent NT2 Cells 1.11
X. Liu, J. Yuan, A.W. Wu, P.W. McGonagill, C. Galle, J.L. Meier
- 12:15 – 12:30 All Core Histones (H2A, H2B, H3.3, and H4) are mobilized During Infection with Herpes Simplex Virus Type I (HSV) 1.12
K. Conn, M. Hendzel, L. Schang
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11:00 – 12:30 **Session 2B:** Gardner Concert Hall
Pathogenesis I

Chairs: Ann Arvin, Veijo Hukkanen

- 11:00 – 11:15 In vivo impact of the murine cytomegalovirus major immediate-early enhancer 2.01
A. Fink, K.A. Kropp, J. Podlech, E. Isern, A. Angulo, P. Ghazal, M.J. Reddehase
- 11:15 – 11:30 Mining the MCMV Genome 2.02
L.M. Smith, A.R. McWhorter, L.L. Masters, B. Chan, G.R. Shellam, A.J. Redwood
- 11:30 – 11:45 Down-regulation of MHC class I by the Marek's disease virus (MDV) UL49.5 gene product affects virulence in a haplotype-specific fashion 2.03
K.W. Jarosinski, K. Osterrieder

Sunday, July 25

11:45 – 12:00	Prime-boost immunization with DNA and inactivated virus is highly protective against acute and recurrent herpes simplex virus type 2 disease <i>C.S. Morello, M.S. Levinson, K.A. Kraynyak, D.H. Spector</i>	2.04
12:00 – 12:15	The Cold Sore Susceptibility Gene 1 (CSSG1) <i>J.D. Kriesel, M.R. Hobbs, B.B. Jones, B.E. Otterud, N. Matsunami, M.F. Leppert, C.A. St. Pierre, E.A. Kurt-Jones, R.W. Finberg</i>	2.05
12:15 – 12:30	Autophagy inhibitor increase HSV-1 replication in the eyes, but not in cultured ocular tissues or cells <i>M. Zhang, J. Covar, B. Marshall, S.S. Atherton</i>	2.06

11:00 – 12:30	Session 2C: Glycoproteins and Entry I	Room 270, Gardner Hall
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Chairs: Gabriella Campadelli-Fiume, Gus Kousoulos

11:00 – 11:15	HSV gH/gL associates indirectly with liposomes via an interaction with the fusion protein gB <i>T.M. Cairns, J.C. Whitbeck, M. Samanta, H. Lou, E.E. Heldwein, R.J. Eisenberg, G.H. Cohen</i>	3.01
11:15 – 11:30	Ig-like V-type domain of PILR α is critical for HSV-1 membrane fusion activity <i>Q. Fan, R. Longnecker</i>	3.02
11:30 – 11:45	Quantitative analysis of HSV-2 glycoprotein B conformations in transfected and infected cells <i>M. Muggeridge</i>	3.03
11:45 – 12:00	Myelin-Associated Glycoprotein Associates with gB and is Involved in Membrane Fusion during Neurotropic Herpesvirus Infection <i>T. Suenaga, F. Arisawa, T. Satoh, P. Somboonthum, Y. Kawaguchi, Y. Mori, H. Arase</i>	3.04
12:00 – 12:15	HHV-6 glycoprotein complex formation is required for the folding and trafficking of the complex, gH/gL/gQ1/ gQ2 and its cellular receptor binding <i>H. Tang, H. Oyaizu, K. Yamanishi, Y. Mori</i>	3.05
12:15 – 12:30	HCMV UL78 is required for efficient viral replication in clinically relevant cell types. <i>C.M. O'Connor, T. Shenk</i>	3.06
12:30 – 14:00	Lunch	Olpin Union
13:00 – 13:45	*Understanding NIH Funding <i>Christopher Beisel, NIH/NIAID, USA</i>	Olpin Union Theater

*Please eat before the meeting. No food or beverages will be served or allowed in the theater.

Sunday, July 25

14:00 – 16:05 **Session 3:** Kingsbury Hall Auditorium
Glycoproteins and Entry II

Chairs: Rosalyn Eisenberg, Lindsey Hutt-Fletcher

- 14:00 – 14:30 **Keynote Talk**
Structures, Interactions and Inhibition of Epstein Barr Virus Entry Glycoproteins
Theodore Jardetzky, Stanford University, USA
- 14:30 – 14:50 Crystal structure of the gH/gL complex – a conserved herpesvirus fusion regulator. 3.07
T.K. Chowdary, T.M. Cairns, D. Atanasiu, G.H. Cohen, R.J. Eisenberg, K. Heldwein
- 14:50 – 15:05 HCMV particles lacking gB can enter fibroblasts expressing gB. 3.08
P.T. Wille, A.L. Vanarsdall, C.C. Wright, M.K. Isaacson, T. Compton, D.C. Johnson
- 15:05 – 15:20 Hyperactive glycoprotein B mutations augment fully retargeted HSV infection 3.09
H. Uchida, J. Chan, K. Nakano, H. Kwon, W.F. Goins, I. Kumagai, M. Kuroki, P. Grandi, J.B. Cohen, J.C. Glorioso
- 15:20 – 15:35 Insertion of herpes virus glycoprotein B fusion peptides induces target membrane curvature 3.10
U.E. Maurer, T. Zeev-Ben-Mordehai, J.T. Huiskonen, T.M. Cairns, B.P. Hannah, C.J. Whitbeck, R.J. Eisenberg, G.H. Cohen, K. Grünewald
- 15:35 – 15:50 Reversible, low pH-triggered changes in the antigenic and trimeric conformation of HSV gB are associated with viral entry and membrane fusion 3.11
S.J. Dollery, C.R. Siekavizza-Robles, A.V. Nicola
- 15:50 – 16:05 c-Cbl interacts with myosin IIA to regulate bleb associated macropinocytosis of KSHV in endothelial cells 3.12
M. Valiya Veettil, S. Sadagopan, N. Kerur, S. Chakraborty, B. Chandran
- 16:05 – 16:30 **Coffee Break** Outside Kingsbury Hall
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16:30 – 17:45 **Session 4:** Kingsbury Hall Auditorium
DNA Replication and Maturation I

Chairs: William Ruyechan, Steven Triezenberg

- 16:30 – 16:45 The histone variant H2AX is required for the replication of herpes simplex virus genome 4.01
B.J. Placek, S.L. Berger
- 16:45 – 17:00 The UL12 subunit of the HSV-1 recombinase directly interacts with cellular HRR proteins 4.02
N. Balasubramanian, S. Marques, A.J. Schumacher, S. Weller

Sunday, July 25

17:00 – 17:15	The existence of the human cytomegalovirus quasispecies as revealed by high throughput sequencing <i>N. Renzette, B. Bhattacharjee, L. Gibson, T.F. Kowalik</i>	4.03
17:15 – 17:30	Investigation of the potential role of DNA and RNA structural elements in the lyric origin of the Epstein-Barr virus <i>A.J. Rennekamp, P. Wang, P.M. Lieberman</i>	4.04
17:30 – 17:45	Interaction of Kaposi's sarcoma-associated herpesvirus ORF59 with oriLyt is dependent upon binding with K-Rta. <i>C.C. Rossetto, G.S. Pari</i>	4.05
17:45 – 19:00	Dinner	Olpin Union
18:30 – 19:30	*IHW Meeting on Meetings	Olpin Union Theater

*Please eat before the meeting. No food or beverages will be served or allowed in the theater.

19:00 – 21:00	Poster Session 1	4th and 6th Floor, Rice Eccles Stadium
	Gene Expression	1.01 – 1.12, 1.19 – 1.26
	Pathogenesis	2.01 – 2.06, 2.18 – 2.30
	Glycoproteins and Entry	3.01 – 3.12, 3.18 – 3.28
	DNA Replication and Maturation	4.01 – 4.27
	Assembly and Egress	5.18 – 5.37
	Virus/Cell Interactions	7.24 – 7.39
	Immunology	8.19 – 8.37
21:00 – 23:00	After Poster Dance Party	Rice Eccles Stadium

Monday, July 26

08:30 – 10:30 **Session 5:** Kingsbury Hall Auditorium
Assembly and Egress I

Chairs: David Johnson, Thomas Mettenleiter

- 08:30 – 09:00 **Keynote Talk**
Early and late steps in Herpesvirus egress
Joel Baines, Cornell University, USA
- 09:00 – 09:15 Nuclear egress of Herpes simplex virus-1 and murine Cytomegalovirus studied by cryo-electron and soft X-ray microscopy/tomography 5.01
C. Hagen, K. Grünewald
- 09:15 – 09:30 VP1/2 is an Alpha-Herpesvirus Microtubule Motor Receptor 5.02
S.V. Zaichick, G.H. Tyson, P.J. Sollars, G.E. Pickard, G.A. Smith
- 09:30 – 09:45 Cytoplasmic transport and tegumentation during Herpes simplex virus 1 assembly 5.03
R. Bauerfeind, K. Döhner, M. Sandbaumhüter, M. Cappucci, J. Schipke, A. Binz, B. Sodeik
- 09:45 – 10:00 Herpes simplex virus acquires its final envelope from tubular endosomes 5.04
M. Hollinshead, C. Gonzalez-Lopez, C. Sayers, G.L. Smith, G. Elliott
- 10:00 – 10:15 Tracking nuclear herpes capsids: Transport modes and whereabouts 5.13
J.B. Loesing, Z. Ruzsics, U.H. Koszinowski
- 10:15 – 10:30 Three-Dimensional Visualization of Gammaherpesvirus Life Cycle in Host Cells by Electron Tomography 5.06
Z. Zhou, L. Peng, S. Ryazantsev, R. Sun
- 10:30 – 11:00 **Coffee Break** Outside Kingsbury Hall
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11:00 – 12:30 **Session 6A:** Kingsbury Hall Auditorium
Virus/Cell Interactions I

Chairs: James Hill, James Smiley

- 11:00 – 11:15 Transcriptome analysis of the effects of Varicella-Zoster virus infection in an epidermal differentiation model 7.01
I. Dry, R.K. Kanda, D. Frampton, M. Jones, M. Singh, A. Kanhere, E. O'Toole, J. Breuer
- 11:15 – 11:30 E2F1, a cellular transcription factor that stimulates cell cycle progression, stimulates productive infection of alpha-herpesviruses. 7.02
A. Workman, C. Jones

Monday, July 26

11:30 – 11:45	Exonuclease activity of the herpes simplex virus type 1 UL12.5 protein is not required for mitochondrial DNA depletion <i>B.A. Duguay, J.R. Smiley</i>	7.03
11:45 – 12:00	ICP0 dismantles microtubule networks in herpes simplex virus infected cells <i>M. Liu, E.E. Schmidt, W.P. Halford</i>	7.04
12:00 – 12:15	Characterisation of the involvement of SUMO E3 Ligases, PIAS1 and PIAS4, during HSV-1 infection and intrinsic anti-viral defence. <i>K. Grant, R.D. Everett, C. Boutell</i>	7.05
12:15 – 12:30	The alphaherpesvirus serine/threonine kinase Us3 disrupts PML nuclear bodies <i>M. Jung, R.L. Finnen, B.W. Banfield</i>	7.06

11:00 – 12:30	Session 6B: Latency I	Gardner Concert Hall
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Chairs: Stacey Efstathiou, John Sinclair

11:00 – 11:15	Infection of differentiated human neural stem cells with varicella zoster virus <i>S. Pugazhenti, S. Nair, K. Velmurugan, R. Mahalingam, R.J. Cohrs, M.A. Nagel, D. Gilden</i>	6.01
11:15 – 11:30	In vivo conditional depletion of latent death-tagged murine cytomegalovirus <i>S. Scheller, C.O. Simon, B. Kühnappel, J. Podlech, M.J. Reddehase, N.K. Grzimek</i>	6.02
11:30 – 11:45	Experimental human cytomegalovirus latency in cultured CD14+ monocytes: IL6-mediated reactivation. <i>D. Hargett, T. Shenk</i>	6.03
11:45 – 12:00	Regulation/Maintenance of HCMV latency by the LUNA Protein <i>L.R. Keyes, M. Soland, M. Bego, S. St. Jeor</i>	6.04
12:00 – 12:15	Use of a novel MHV68 marker virus in vivo defines a proportion of germinal center and memory B cells that express LANA throughout chronic infection <i>M.S. Nealy, C.B. Coleman, H. Li, S.A. Tibbetts</i>	6.05
12:15 – 12:30	Viral Induction of the Warburg Effect is Required For Maintenance of KSHV Latency in Endothelial Cells <i>T. Delgado, P. Carroll, A. Punjabi, M. Lagunoff</i>	6.06

Monday, July 26

11:00 – 12:30 **Session 6C:** Room 270, Gardner Hall
Assembly and Egress II

Chairs: William Britt, Ulrich Koszinowski

- 11:00 – 11:15 Disulfide bonds in Herpes Simplex Virus Type 1 Capsids and Portal Rings 5.07
R. Szczepaniak, J. Jadwin, S.K. Weller
- 11:15 – 11:30 RASCAL is a new human cytomegalovirus-encoded protein localizing to 5.08
the nuclear lamina and in cytoplasmic vesicles at late times post-infection
L. Hertel, M.S. Miller, L. Pennell, W.E. Furlong, M. Geadah
- 11:30 – 11:45 Role of the torsion dystonia gene product Torsin A in HSV-1 nuclear egress 5.09
M.L. Maric, R.J. Ryan, P. Gonzalez-Alegre, R.J. Roller
- 11:45 – 12:00 Roles of Us3 phosphorylation on HSV-1 gB in its endocytosis and pathogenesis 5.10
T. Imai, J. Arii, A. Kato, K. Sagou, Y. Kawaguchi
- 12:00 – 12:15 VZV, HSV-1 and PRV ORF66/US3 kinases target a common but novel residue 5.11
of the nuclear matrix protein Matrin 3 to regulate its cellular distribution
P.R. Kinchington, A. Erazo, M.B. Yee
- 12:15 – 12:30 The Role of the ER Chaperone BiP, SUN-Domain Proteins and Dynein in 5.12
Altering Nuclear Morphology during Human Cytomegalovirus Infection.
N.J. Buchkovich, T.G. Maguire, J.C. Alwine
- 12:30 – 14:00 **Lunch** Olpin Union
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14:00 – 16:00 **Session 7:** Kingsbury Hall Auditorium
Immunology I

Chairs: Anthony Cunningham, Klaus Frueh

- 14:00 – 14:30 **Keynote Talk**
Cytomegalovirus immunoevasin reveals the physiological role of “missing self”
recognition in NK cell dependent virus control in vivo
Stipan Jonjic, University of Rijeka, Croatia
- 14:30 – 14:45 Two human cytomegalovirus genes prevent the expression of the NK cell 8.01
activating ligand ULBP3 during lytic infection
*N. Bennett, O. Ashiru, F. Morgan, Y. Pang, G. Okecha, R. Eagle, M. Armstrong,
G. Wilkinson, J. Trowsdale, J. Sissons, M.R. Wills*
- 14:45 – 15:00 Noncytotoxic inhibition of cytomegalovirus replication through NK cell 8.02
protease granzyme M-mediated cleavage of viral protein pp71
R. van Domselaar, L.E. Philippen, R. Quadir, E.J. Wiertz, J.A. Kummer, N. Bovenschen

Monday, July 26

15:00 – 15:15	CD8+ T cell memory inflation occurs during CMV infection in the absence of virus replication <i>C. Snyder, K. Cho, E. Bonnett, J. Allen, <u>A. Hill</u></i>	8.03
15:15 – 15:30	Varicella zoster virus inhibits the NFkB pathway during infection of dendritic cells: Identification of ORF61 as a modulator of NFkB activity <i>E. Sloan, R. Henriquez, P. Kinchington, B. Slobedman, A. Abendroth</i>	8.04
15:30 – 15:45	Varicella Zoster Virus Infection Induces STAT3 phosphorylation: Phospho-STAT3 is Required for Virulence in Skin Xenografts <i>N. Sen, X. Che, J. Ptacek, J. Rajamani, L. Zerboni, A.M. Arvin</i>	8.05
15:45 – 16:00	Two pathways of autophagocytosis contribute to HSV1 antigen presentation on MHC class I <i>K. Radtke, L. English, M. Chemali, D. Leib, C. Norbury, R. Lippé, M. Desjardins</i>	8.06
16:00 – 16:30	Coffee Break	Outside Kingsbury Hall

16:30 – 17:45	Session 8A: Glycoproteins and Entry III	Kingsbury Hall Auditorium
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Chairs: Gary Cohen, Martin Muggeridge

16:30 – 16:45	VP1-2 function in nuclear entry; evidence that VP1-2 dysfunction renders entry dependent upon cell division <i>P. O'Hare, F. Abaitua, M. Bolstad</i>	3.13
16:45 – 17:00	Kinesin-1 is required for nuclear targeting of incoming herpes simplex virus capsids and viral gene expression <i>J. Janus, K. Radtke, K. Döhmer, A. Wolfstein, T. Koithan, F. Büttner, S. Schmidt, <u>B. Sodeik</u></i>	3.14
17:00 – 17:15	The fate of Epstein-Barr virus is different in a B cell and an epithelial cell <i>S. Valencia, L. Hutt-Fletcher</i>	3.15
17:15 – 17:30	Temporal associations of KSHV glycoproteins and receptors (integrins and x-CT) with lipid rafts during endothelial cell infection <i>S. Chakraborty, M. Valiya Veettil, <u>B. Chandran</u></i>	3.16
17:30 – 17:45	HCMV-Regulated Paxillin via Integrin/Src-Mediated Signaling Pathway in Monocytes Links Cellular Pathogenic Motility to the Process of Viral Entry <i>M.T. Nogalski, G.C. Chan, A.D. Yurochko</i>	3.17

Monday, July 26

16:30 – 17:45 **Session 8B:** Gardner Concert Hall
Pathogenesis II

Chairs: Jeffrey Cohen, Deborah Spector

- 16:30 – 16:45 A novel human cerebral artery explant model to study VZV vasculopathy 2.07
M. Nagel, I. Traktinskiy, Y. Azarkh, B. Kleinschmidt-DeMasters, A. Choe, R. Cordery-Cotter, R. Cohrs, D. Gildea
- 16:45 – 17:00 A trypsin-like serine protease is involved in PRV invasion through the basement membrane barrier in porcine nasal respiratory mucosa 2.08
S. Glorieux, H.W. Favoreel, H.J. Nauwynck
- 17:00 – 17:15 HSV impedes migration of infected Langerhans cells by inducing apoptosis and upregulating E-Cadherin 2.09
F. Puttur, M. Fernandez, R. White, B. Roediger, A.L. Cunningham, W. Weninger, C. Jones
- 17:15 – 17:30 Accelerated rejection of allograft hearts from latently infected donors is associated with formation of pre-transplant tertiary lymphoid structures 2.10
S. Orloff, Y. Hwee, C. Kreklywich, T. Ando, P. Smith, I. Messaoudi, D.N. Streblow
- 17:30 – 17:45 Human CMV-infected lymphatic endothelial cells impairs lymphangiogenesis 2.11
T. Tabata, L. Pereira
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16:30 – 17:45 **Session 8C:** Room 270, Gardner Hall
DNA Replication and Maturation II

Chairs: Paul Lieberman, Gregory Pari

- 16:30 – 16:45 ATR but not ATM is required in lytic infection by herpes simplex virus 4.06
X. Lu, S.J. Triezenberg
- 16:45 – 17:00 ATR and ATRIP are required for efficient HSV-1 infection even though ATR signaling is disabled 4.07
K.N. Mohni, C.M. Livingston, S.K. Weller
- 17:00 – 17:15 Association of IRS1, TRS1 and UL114 with the human cytomegalovirus DNA polymerase 4.08
B.L. Strang, D.M. Coen
- 17:15 – 17:30 pp71 (UL82) and pUL97 tegument proteins temporally regulate the activation of host DNA damage responses during HCMV infection 4.09
S. Kwak, X. E, M. Pickering, T.F. Kowalik
- 17:30 – 17:45 UL84-independent replication of human cytomegalovirus strain TB40/E clone 4 4.10
D.J. Spector
- 17:45 – 19:00 **Dinner** Olpin Union

Monday, July 26

19:00 – 21:30

Poster Session 2

4th and 6th Floor, Rice Eccles Stadium

Gene Expression	1.27 – 1.46
Pathogenesis	2.07 – 2.11, 2.31 – 2.43
Glycoproteins and Entry	3.13 – 3.17, 3.29 – 3.43
Assembly and Egress	5.01 – 5.17, 5.38 – 5.46
Latency	6.01 – 6.06, 6.28 – 6.42
Virus/Cell Interactions	7.01 – 7.06, 7.40 – 7.50
Immunology	8.01 – 8.06, 8.38 – 8.50

Tuesday, July 27

08:30 – 09:00 **Priscilla Schaffer Lecture** Kingsbury Hall Auditorium

Chair: Sandra Weller

Questions of Human Cytomegalovirus Coexistence

Felicia Goodrum, University of Arizona, USA

09:00 – 10:15 **Session 9:
Latency II** Kingsbury Hall Auditorium

Chairs: Bala Chandran, David Knipe

09:00 – 09:15 Marek's disease virus (MDV) telomere-mediated integration occurs at the telomere termini and is crucial for tumor formation and reactivation 6.07
B.B. Kauffer, K. Jarosinski, N. Osterrieder

09:15 – 09:30 The Latent Human Herpesvirus-6A and 6B Genome Specifically Integrates in Telomeres of Human Chromosomes In Vivo and In Vitro 6.08
J.H. Arbuckle, M.M. Medveczky, J. Luka, S.H. Hadley, D. Ablashi, T.C. Lund, J. Tolar, A. Luegmayr, K.D. Meirleir, J.G. Montoya, A.L. Komaroff, P.F. Ambros, P.G. Medveczky

09:30 – 09:45 HSV-1 strains KOS and 17syn+ exhibit striking differences in histone modifications and transcription during latency in mouse dorsal root ganglia 6.09
Z.L. Watson, D.L. Kwiatkowski, N.V. Giordani, D.C. Bloom

09:45 - 10:00 Viral IL-10 expressed by human cytomegalovirus during the latent phase of infection modulates myeloid cell differentiation 6.10
S. Avdic, A. Abendroth, B. Slobedman

10:00 - 10:15 Latent infection with human cytomegalovirus results in regulation of the secretome that alters T cell responses and maintains genome carriage 6.11
E. Poole, G. Mason, S. McGregor Dallas, J. Sowerby, M. Wills, J. Sinclair

10:15 – 10:30 **Presentation of IHW 2011** Kingsbury Hall Auditorium

10:30 – 11:00 **Coffee Break** Outside Kingsbury Hall

Tuesday, July 27

11:00 – 12:30 **Session 10A:** Kingsbury Hall Auditorium
Gene Expression III

Chairs: Julie Kerry, Timothy Kowalik

- 11:00 - 11:15 A HCMV encoded microRNA results in the reduced expression of a pro-apoptotic factor. 1.13
E.A. Murphy, Z. Khan, B. Garcia, T. Shenk
- 11:15 - 11:30 Identification of novel microRNA-like molecules generated from herpesvirus and host tRNA transcripts 1.14
T.A. Reese, J. Xia, L. Johnson, X. Zhou, W. Zhang, H.W. Virgin
- 11:30 - 11:45 The HSV virion host shutoff (Vhs) endoribonuclease (UL41) reaches at least some of its mRNA cut sites by scanning from the 5' cap 1.15
L.A. Shiflett, J. Sadek, G. Read
- 11:45 - 12:00 The HSV-1 virion host shutoff protein promotes translation of viral late gene transcripts in a cell-type specific manner. 1.16
B. Dauber, J.R. Smiley
- 12:00 - 12:15 Coordinated co-translational mRNA degradation by the KSHV SOX protein and the cellular Xrn1 ribonuclease 1.17
S. Covarrubias, M. Gaglia, B. Glaunsinger
- 12:15 - 12:30 Evidence for a role of PML in mediating the SUMOylation of the human cytomegalovirus regulatory protein IE1p72 1.18
N. Tavalai, J. Langenhan, T. Stamminger
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11:00 – 12:30 **Session 10B:** Gardner Concert Hall
Immunology II

Chairs: Keith Jerome, Scott Tibbetts

- 11:00 - 11:15 Detailed Kinetic Analysis of Herpes Simplex Virus-2 Shedding Episodes in the Genital Tract 8.07
J.T. Schiffer, A. Magaret, A. Wald, L. Corey
- 11:15 - 11:30 Recombinant human heat shock protein-70 complexed with a multi-valent HSV-2 peptide repertoire elicits a CD4+ and CD8+ T cell response in humans 8.08
A. Wald, D. Koelle, K. Fife, T. Warren, K. LeClair, R. Chiciz, S. Monks, D.L. Levey, C. Musselli, P.K. Srivastava
- 11:30 - 11:45 T cells engineered with a CMV-specific chimeric immunoreceptor 8.09
F. Full, M. Lehner, M. Mach, H. Abken, W. Holter, A. Ensser
- 11:45 - 12:00 The latency associated proteins LUNA and UL138 are targets for the CD4+ T cell response 8.10
G.M. Mason, S. Jackson, G. Brown, E. Poole, J. Sinclair, M. Wills

Tuesday, July 27

12:00 - 12:15	Human cytomegalovirus immunoevasion proteins gpUS2, gpUS6 and gpUS11 cooperate with gpUS3 to impair MHC class I antigen presentation by infected cells <i>J. Hesse, K. Besold, B. Plachter</i>	8.11
12:15 - 12:30	Inhibition of TcR signaling by HSV-1 VP11/12 <i>M. Aubert, D.D. Sloan, Z. Chen, M.J. Wagner, H. Saffran, L. Jing, J. Haas, D.M. Koelle, J.R. Smiley, K.R. Jerome</i>	8.12
12:30 - 14:00	Lunch	Olpin Union

14:00 - 16:00	Session 11: Virus/Cell Interactions II	Kingsbury Hall Auditorium
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Chairs: Richard Longnecker, Philip Pellett

14:00 - 14:30	Keynote Talk Regulation of Cellular and Viral Genes by HCMV microRNAs <i>Jay Nelson, Oregon Health & Science University, USA</i>	
14:30 - 14:45	Inhibition of CaMKK blocks HCMV-induced glycolytic activation and severely attenuates production of viral progeny. <i>J.K. McArdle, J. Munger</i>	7.07
14:45 - 15:00	Human cytomegalovirus infection alters the MAM calcium signaling junction complex. <i>A. Zhang, C.D. Williamson, H. DeSilva, K. Brown, Y. Hathout, A.M. Colberg-Poley</i>	7.08
15:00 - 15:15	HCMV circumvents the detrimental effects of oxidative stress and amino acid deprivation in HFFs <i>A.J. Clippinger, T.G. Maguire, J.C. Alwine</i>	7.09
15:15 - 15:30	Differential regulation of homology-directed repair at I-SceI induced DNA breaks during the permissive and semi-permissive life cycle of HCMV <i>A.S. Kulkarni, E.A. Fortunato</i>	7.10
15:30 - 15:45	Differential degradation of specific PML isoforms by ICP0 via SUMO-dependent and -independent mechanisms <i>D. Cuchet, J. Murray, H. Sirma, J. Heeren, A. Bartelt, R.D. Everett</i>	7.11
15:45 - 16:00	Autophagy and endoplasmic reticulum stress during varicella and zoster reactivation. <i>J.E. Carpenter, W. Jackson, E. Henderson, C. Grose</i>	7.12
16:00 - 16:30	Coffee Break	Outside Kingsbury Hall

Tuesday, July 27

16:30 – 17:45 **Session 12A:** Kingsbury Hall Auditorium
Latency III

Chairs: David Bloom, Nancy Sawtell

- 16:30 – 16:45 The JMJD2 family of histone demethylases cooperate with LSD1 to modulate repressive chromatin during HSV lytic infection and reactivation from latency 6.12
Y. Liang, J.L. Vogel, T.M. Kristie
- 16:45 – 17:00 LAT-HVEM-LIGHT inter-relationship controls T cell exhaustion and increase of latency in HSV-1 infected mice 6.13
S.J. Allen, P. Hamrah, K.R. Mott, A.A. Chentoufi, G.J. Freeman, A.H. Sharoe, C. Jones, L. BenMohamed, R. Ahmed, S.L. Wechsler, C.F. Ware, H. Ghiasi
- 17:00 – 17:15 Productive infection with HSV1 and HSV2 is regulated differentially in specific types of neurons 6.14
A.S. Bertke, S.M. Swanson, K. Apakupakul, A. Ma, T.P. Margolis
- 17:15 – 17:30 Recruitment of the Polycomb repressive complex 2 to the HSV-1 genome during establishment of latent infection 6.15
A.R. Cliffe, D.M. Knipe
- 17:30 – 17:45 HSV-1 miRNA expression at the single cell level in human trigeminal ganglia 6.16
K. Held, A. Junker, K. Dornmair, E. Meinl, T. Brandt, D. Theil, T. Derfuss
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16:30 – 17:45 **Session 12B:** Gardner Concert Hall
Virus/Cell Interactions III

Chairs: Adam Geballe, David Lieb

- 16:30 – 16:45 “Activated” STAT3 proteins – a paradoxical consequence of inhibited Jak-STAT signalling in MCMV-infected cells 7.13
M. Trilling, J. Rashidi-Alavijeh, V. Le, H. Hengel
- 16:45 – 17:00 HCMV pUL27 alters the host cell cycle through degradation of cellular Tip60 acetyltransferase during infection 7.14
J. Reitsma, J.P. Savaryn, K. Faust, S.S. Terhune
- 17:00 – 17:15 Nuclear body formation and PML body alteration by cytomegalovirus protein UL35 7.15
J. Salsman, L. Frappier
- 17:15 – 17:30 Human cytomegalovirus infection dysregulates the canonical wntless-T-cell factor signaling pathway in human cytotrophoblasts 7.16
M. Angelova, J. Warner, K. Zvezdaryk, M. Ferris, C.A. Morris, D.E. Sullivan
- 17:30 – 17:45 Subcellular Trafficking of the HCMV pp71 (ppUL82) Tegument Protein 7.17
L. Westgard, R. Smith, B. Bilbrey, O.J. Semmes, J. Kerry

Tuesday, July 27

16:30 – 17:45 **Session 12C:** Room 270, Gardner Hall
Assembly and Egress III

Chairs: Joel Baines, Gregory Smith

16:30 – 16:45	The C-terminus of HSV1 pUL36 is required for secondary envelopment and nuclear targeting of incoming capsids <i>J. Schipke, K. Rode, C. Nagel, R. Bauerfeind, A. Binz, B. Sodeik</i>	5.39
16:45 – 17:00	Nucleo-cytoplasmic transport of herpesviral proteins – a genome-wide analysis <i>V. Hofer, O. Melanie, C. Nagel, B. Sodeik, Z. Ruzsics, U. Koszinowski, J. Haas, S. Bailer</i>	5.14
17:00 – 17:15	Analysis of the localization and trafficking properties of the HSV-2 tegument protein Us2 <i>B.B. Roy, B.W. Banfield</i>	5.15
17:15 – 17:30	The Efficient Incorporation of Glycoprotein H/L into Virions Relies on the Function of Glycoprotein M in HSV-1 <i>Y. Ren, S. Bell, C. Crump</i>	5.16
17:30 – 17:45	Separate transport of HSV capsids, glycoproteins and cellular cargo in neuronal axons <i>T.W. Wisner, C.C. Wright, A. Snyder, D.C. Johnson</i>	5.17
17:45 – 19:00	Dinner	Olpin Union

19:00 – 21:30 **Poster Session 3** 4th and 6th Floor, Rice Eccles Stadium

Gene Expression	1.13 – 1.18, 1.47 – 1.56
Pathogenesis	2.12 – 2.17, 2.44 – 2.55
Latency	6.07 – 6.27, 6.43 – 6.49
Virus/Cell Interactions	7.07 – 7.23, 7.51 – 7.53
Immunology	8.07 – 8.18, 8.51 – 8.57
Interventions, Treatment and Prevention	9.01 – 9.37

Wednesday, July 28

08:30 – 10:30 **Session 13:** Kingsbury Hall Auditorium
Pathogenesis III

Chairs: Klaus Osterrieder, Lenore Pereira

- 08:30 – 09:00 **Keynote Talk**
Modulation of Innate Immune Pathways by KSHV
Blossom Damania, University of North Carolina at Chapel Hill, USA
- 09:00 – 09:15 IL-10 is critical in modulating accrual of CNS lesions during long term 2.12
HSV latency/reactivation cycles
R.G. Walker, R.L. Thompson, N.M. Sawtell
- 09:15 – 09:30 Herpesvirus infection of human dorsal root ganglion xenografts in 2.13
immunodeficient mice: comparison of early events in HSV-1 and
VZV neuropathogenesis
L. Zerboni, J. Rajamani, P. Sikka, A. Arvin
- 09:30 – 09:45 Quantification of EBV genomes in both B and non-B cells in the blood 2.14
using Immuno-FISH
S. Calattini, I. Sereti, P. Scheinberg, H. Kimura, R.W. Childs, J.L. Cohen
- 09:45 – 10:00 Overexpression of host or CMV viral chemokines leads to an alteration of 2.15
salivary gland dissemination
T.E. Sparer, T. Masi, M. Miller-Kittrell
- 10:00 – 10:15 Hearing loss in a murine model of CMV infection in the developing brain 2.16
R.D. Bradford, G.B. Bantug, S. Jonjic, W.J. Britt
- 10:15 – 10:30 Competition not complementation in a model of mixed cytomegalovirus infection 2.17
A. McWhorter, L. Smith, L. Masters, B. Chan, G. Shellam, A.J. Redwood
- 10:30 – 11:00 **Coffee Break** Outside Kingsbury Hall
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11:00 – 12:30 **Session 14A:** Kingsbury Hall Auditorium
Immunology III

Chairs: Barry Rouse, Domenico Tortorella

- 11:00 – 11:15 BST2/Tetherin enhances macrophage entry of human cytomegalovirus 8.13
K. Viswanathan, K. Frueh
- 11:15 – 11:30 HSV Modulates Epithelial Cell Defensins through TLR Dependent and 8.14
Independent Pathways
E. Fakioglu, T. Segarra, B.C. Herold
- 11:30 – 11:45 Murine cytomegalovirus M45 blocks Toll-like receptor and Interleukin-1 8.15
receptor-dependent NF-kappaB activation by targeting NEMO for degradation
P. Fliss, C. Mack, W. Brune

Wednesday, July 28

11:45 – 12:00	HSV-2 Triggers Paradoxical Effects on Human Immature Dendritic Cells: A Novel Immune Evasion Strategy <i>M. Stefanidou, V. Mas Casullo, J.B. Trepanier, S. Rosenbaum, S. Wilson, P.M. Mesquita, A. Fernandez- Sesma, B. Herold</i>	8.16
12:00 – 12:15	Species-specific adaptation of CMV TRS1-mediated evasion of Protein Kinase R <i>G. Brennan, S. Child, A. Geballe</i>	8.17
12:15 – 12:30	The latency-promoting HCMV gene product pUL138 potentiates TNFR1 expression <i>V. Le, M. Trilling, H. Hengel</i>	8.18

11:00 – 12:30	Session 14B: Virus/Cell Interactions IV	Gardner Concert Hall
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Chairs: Bruce Banfield, Andrew Yurochko

11:00 – 11:15	Reconstruction of the Complete HCMV Genome in a BAC: Repression of RL13 and UL128 Locus is Required for Propagation of Genetically-Intact Virus <i>R.J. Stanton, K. Baluchova, D.J. Dargan, C. Cunningham, O. Sheehy, S. Seirafian, B.P. McSharry, M.L. Neale, J. Davies, P. Tomasec, A.J. Davison, G.W. Wilkinson</i>	7.18
11:15 – 11:30	HCMV US28 Signal Transduction in Virus Infected Cells Occurs via Chemokine-Dependent and Chemokine-Independent Pathways <i>W.A. Zagorski, J.M. Brennamen, D.L. Avery, W.E. Miller</i>	7.19
11:30 – 11:45	IL-6 in Human Cytomegalovirus secretome promotes angiogenesis and survival of endothelial cells through the stimulation of survivin. <i>P. Caposio, D.N. Streblow, S. Botto, C.N. Kreklywich, P.P. Smith, J.A. Nelson</i>	7.20
11:45 – 12:00	Human Cytomegalovirus IE72 protein interacts with the transcriptional repressor hDaxx to regulate LUNA gene expression during lytic infection <i>M. Reeves, D. Woodhall, T. Compton, J. Sinclair</i>	7.21
12:00 – 12:15	Elongin B interacts with HCMV pp71 and is required for efficient viral lytic replication <i>J. Hwang, R.T. Saffert, R.F. Kalejta</i>	7.22
12:15 – 12:30	Acetyl-CoA carboxylase: A host-cell metabolic target of HCMV infection whose activity is required for viral replication <i>C. Spencer, X. Schafer, J. Munger</i>	7.23

12:30 – 14:00	Lunch	Olpin Union
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14:00 – 14:30	VZV Foundation Lecture	Kingsbury Hall Auditorium
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Chair: Charles Grose

**Skin test to detect delayed type hypersensitivity to VZV antigen may predict an
incidence of Herpes Zoster in elder people**
Koichi Yamanishi, National Institute of Biomedical Innovation, Japan

Wednesday, July 28

14:30 – 15:45 **Session 15:** Kingsbury Hall Auditorium
Interventions, Treatment and
Prevention

Chairs: Don Coen, Jennifer Moffat

- 14:30 – 14:45 DNA vaccine delivery by short, densely-packed microprojection arrays 9.01
protects against vaginal HSV-2 challenge
*A.S. Kask, X. Chen, C. McNeilly, G. Fernando, J. Marshak, L. Dong, M. Saracino,
C. Jarrahan, D. Chen, M. Kendall, D.M. Koelle*
- 14:45 – 15:00 Herpes simplex virus 2 (HSV-2) ICP0-deficient viruses are avirulent and elicit 9.02
nearly sterilizing immunity against wild-type HSV-2
W. Halford, E. Gershburg, S. Gershburg, A. Wilber, B. Rakowski
- 15:00 – 15:15 The novel Anti-Cytomegalovirus Compound AIC246 targets the viral Terminase 9.03
T. Goldner, H. Ruebsamen-Schaeff, H. Zimmermann, P. Lischka
- 15:15 – 15:30 Salmonella-mediated delivery of RNase P-based ribozymes for inhibition of 9.04
cytomegalovirus gene expression and replication in human cells
Y. Bai, H. Li, G. Vu, H. Gong, S. Umamoto, T. Zhou, S. Lu, F. Liu
- 15:30 – 15:45 The 6-Aminoquinolone WC5 Inhibits HCMV Replication at an Early Stage by 9.05
Interfering with the Transactivating Activity of Viral IE2 Protein
B. Mercorelli, G. Muratore, E. Sinigalia, G. Gribaudo, O. Tabarrini, G. Palu', A. Loregian
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15:45 – 16:15 **Subak-Sharpe Lecture** Kingsbury Hall Auditorium

Chair: Roger Everett

Multifunctional HSV Regulatory Proteins
Neal DeLuca, University of Pittsburgh, USA

16:15 – 16:30 **Handover** Kingsbury Hall Auditorium

18:30 – 23:00 **Banquet at "This is the Place" Heritage Park**

18:30 **Private bus transfers will depart from the Marriott Hotel and Heritage Center.**