

# Retroviruses

## Session 1 ENVELOPE / ENTRY / FUSION

MONDAY 5/19/2008, 7:30 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
1	Gregory	Specific membrane targeting of Gag is sufficient for Env recruitment to budding virions	10
2	Bhakta	Functional analysis of intracellular targeting motifs within HIV-1 envelope cytoplasmic domain	10
3	Kirby	High resolution crystal structure of the Fab fragment of KD-247, a humanized anti-V3 monoclonal antibody that inhibits HIV-1 entry	10
4	Pique	A multiprotein receptor for HTLV-I entry—The HTLV-I SU mimics VEGF165 to bind heparin sulfates and neuropilin 1 promote virus entry	10
5	Diehl	Species-specific differences in receptor utilization by MPMV envelope glycoprotein	10
6	Mazari	Receptor isolation and characterization of a novel FLV envelope with high titers on human osteosarcoma cell lines	10
7	Haim	Soluble CD4 and CD4-mimetic compounds induce metastable activation of the HIV-1 envelope glycoproteins	10
8	Kassa	Transitions to and from the CD4-bound conformation are modulated by a change in the HIV-1 gp120 inner domain	10
9	Federspiel	The unique HGHG motif of the ASLV transmembrane glycoprotein hinge region is a determinant of the low-pH dependent envelope conformation triggering required for efficient entry	10
10	Liu	ENTV requires a very acidic pH for fusion and cell entry	10
11	Hout	The host cell translation elongation factor EF1 $\alpha$ stimulates HIV-1 uncoating	10
12	Yoshida	A CD63 mutant blocks X4 HIV-1 entry by CXCR4 trafficking alternation	10

## Session 2 RESTRICTION FACTORS I (TRIM)

TUESDAY 5/20/2008, 9:00 AM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
13	Uchil	TRIM E3 ligases interfere with early and late stages of the retroviral life cycle	10
14	Sawyer	Genetic variation in TRIM5-like genes	10
15	Kootstra	The effect of TRIM5 polymorphisms and regulatory polymorphism in CyPA on the clinical course of HIV-1 infection	10
16	Newman	Convergent evolution of TRIM5-CypA in two distinct primate lineages	10
17	Hatzioannou	Primate lentivirus susceptibility to TRIM5 proteins	10
18	Towers	TRIM5, cyclophilin A and the Red Queen	10
19	Campbell	HIV-1 induces the formation and dissipation of rhesus TRIM5 $\alpha$ cytoplasmic bodies	10

20	Okura	Identification of MLV escape mutants naturally selected by TRIM5 $\alpha$	10
21	Lindemann	Restriction of FVs by primate TRIM5 $\alpha$	10
22	Takeuchi	Cyclophilin A affects SIV replication positively in monkey but negatively in human cells	10
23	Takemura	Cyclophilin A-dependent restriction of HIV-1 in somatic HeLa cell clones	10
24	Qi	Identification of a cyclophilin A-dependent restriction of HIV-1 infection of nondividing cells	10

**Session 3 PATHOGENESIS / HTLV**

TUESDAY 5/20/2008, 2:00 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
25	Jones	Molecular complexes involved in HTLV-III Env-mediated entry are distinct from, but overlap with, those involved in HTLV-I and HTLV-II entry	10
26	Andresen	The HTLV-I p13 <sup>II</sup> protein binds to Tax, inhibits Tax dependent transcription and decreases viral replication	10
27	Lairmore	HTLV-I p30 binds ATM kinase, activates DNA damage signaling and enhances retroviral vector integration	10
28	Fukumoto	In vivo genetic mutations define predominant functions of the HTLV p12 <sup>I</sup> protein	10
29	Green	HTLV-I Hbz promotes T-lymphocyte proliferation in culture and tumor growth in NOD/SCID $\gamma$ C <sup>-</sup> -(NOG) mice	10
30	Feuer	HTLV-I infection of human CD34 <sup>+</sup> HPCs recapitulates adult T cell leukemia/lymphoma (ATL) development in humanized NOD/SCID mice	7
31	Crawford	Role of HBZ in HTLV-I leukemogenesis in humanized SCID mice	7
32	Ratner	T-cell activation promotes HTLV tumorigenesis in inflammation-associated cancer	10
33	Koenig	Global analysis and characterization of host-factors which regulate early stage HIV-1 replication	10
34	Contreras	Activation of HIV transcription in latently infected PBMCs from HAART treated patients using hydroxamic acid—Involvement of P-TEFb	10
35	Sato	SIV replication and evolution of viral escape variants in an animal with unusually potent humoral immune responses	10
36	Jolicoeur	Generation of a novel inducible model of AIDS in mice	10
37	Rethwilm	Post-transcriptional regulation of FV gene expression involves an alternative way of nuclear RNA export compared to other retroviruses	10

**KEYNOTE SPEAKER I:** Jan Svoboda

TUESDAY 5/20/2008, 7:30 PM

**Session 4 POSTER SESSION I**

TUESDAY 5/20/2008, 8:30 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
38	Alfadhli	Membrane-binding characteristics of the HIV-1 matrix protein	
39	Aoki	Functional substitution of the myristoylation signal of HIV-1 Gag with phospholipase C $\delta$ 1 pleckstrin homology domain	

40	Apolonia	Non-integrating lentiviral vectors display lower transcription activity than their integrating counterparts
41	Andresdottir	Transmission of antigenic escape variants of MVV by natural routes
42	Arriagada	Role of capsid SUMOylation in nuclear entry of MoMLV
43	Schaal	Elucidating the splicing regulatory network across HIV-1 exon 5
44	Tozser	Amino acid preferences of retroviral proteases for amino-terminal positions in a type-1 cleavage site
45	Bartholomeeusen	Analysis of the interaction between the HIV-1 tethering factor LEDGF/p75 and its cellular interaction partner POGz
46	Belzile	Cytoplasmic recruitment of the DDB1-CUL4A <sup>DCAF1</sup> E3 ubiquitin ligase by HIV-1 Vpr
47	Benachenhou	Modular structure of vertebrate retroviral LTRs allows novel ORFs and other adaptations—Detection of single LTRs in genomic data
48	Bérubé	Investigating the TRIM5 restriction defect in D17 cells
49	Beyer	Interaction of ribosomal proteins with MMTV Gag in the nucleus
50	Bialuk	Analysis of p12 isoforms from ex vivo samples of HTLV-I infected individuals
51	Boeras	HIV in genital fluids during heterosexual transmission
52	Boeras	Restriction of HBRV/MMTV Gag gene expression
53	Bouchard	In vitro molecular evolution of TRIM5 $\alpha$
54	Iecellier	The Gag protein of the PFV provides an entry route to the host miRNA pathway
55	Bulliard	Structure/function analysis of the N-terminal moiety of APOBEC3G in HIV-1, HVB and Alu inhibition
56	Parolin	Analysis of the carboxy-terminal region of the FIV nucleocapsid protein
57	Cano	Targeting INI1 transdominant negative mutant S6 to subnuclear compartments and its effect on inhibition of HIV-1 particle production
58	Cano	A Sin3a/HDAC1 complex is incorporated into HIV-1 but not SIV virions and specifically modulates HIV-1 replication
60	Carthagena	Implication of TRIM5 proteins in interferon-induced anti-retroviral response
61	Cattoglio	Retroviral integration into the human genome is biased by specific subsets of transcription factor binding sites
62	Cecchinato	HTLV-II induces a persistent infection in the gastro-intestinal tract of rhesus macaques
63	Chan	Chimeric RSV Gag assembles as an integral membrane protein
64	Chatterjee	The chromodomain of Tf1 integrase is critical for integration and target site selection
65	Chin	The viability and replication fitness of HIV-1 intersubtype recombinants
66	Khan	Functional properties of naturally occurring truncated forms of HIV-1 Vif
67	Christiansen	The spacer domain of Ty3, a retrotransposon in <i>S. cerevisiae</i> , contributes to particle morphogenesis, efficiency of polyprotein processing, and Ty3 transposition

68	Jolicoeur	HIV Nef blocks maturation of CD4 <sup>+</sup> thymic T cells by altering CD4/Lck coreceptor function
69	Chukkapalli	Basic residues in the matrix domain of HIV-1 Gag have opposing roles in membrane binding
70	Clark	Construction of a MPMV Gag-GFP fusion—Visualization of viral capsid assembly and transport in live cells
71	Contreras	PKC- $\delta$ is required in human macrophages for completion of HIV-1 reverse transcription
72	Costa	Nef alleles from SIVmac239 are able to interact in cells with Alix/AIP-1 and rescue a HIV-1 late domain-deficient phenotype
73	Dang	Polyubiquitylation of APOBEC3G is not required for Vif-triggered proteasomal turnover
74	Dapp	Demonstration of a dual mechanism for mutagenic ribonucleosides in decreasing viral infectivity and inducing HIV-1 mutagenesis
75	Das	Multimerization and IN1-interaction of INI1 and its effect on HIV-1 integrase activity in vitro
76	De Rocquigny	NCp7 chaperoning activity for the second strand transfer during HIV-1 DNA synthesis
77	Boulanger	Vif protein counteracts the negative effect of 3-O-(3',3'-dimethylsuccinyl)-betulinic acid (DSB) on HIV-1 virus-like particle assembly, a function which requires the integrity of its zinc-binding domain
78	Planelles	Vif causes G2 arrest via cullin 5-mediated ubiquitination of a cellular protein that is not an APOBEC3 family member
79	Diamond	Characterization of novel host factors involved in HIV integration using genome-wide siRNA and yeast two-hybrid screens
80	Diaz-Griffero	Second-site revertants on the surface of the B-box 2 domain restore the antiretroviral activity of TRIM5 $\alpha_{rh}$ with effector function defects
81	Diaz-Griffero	A human TRIM5 $\alpha$ B30.2/SPRY domain mutant gains the ability to restrict and prematurely uncoat B-tropic MLV
82	Dilley	The role of Alix and the LYPSL motif in RSV budding
83	Dong	Postentry restriction of HIV-1 infection in human monocytes
84	Dong	Filamin A is involved in HIV-1 assembly through direct interaction with Gag
85	Dou	Striking similarities between myristoylated, monomeric Gag and non-myristoylated Gag
86	Duclair	RNA aptamers targeted to HIV-1 protease—Characterization, in vitro efficacy and specificity
87	Bouamr	Potent block of HIV-1 in early steps of morphogenesis by an N-terminal fragment of Alix
88	Ebina	The integrase of Tf1 targets the promoter of <i>fbp1</i> by forming a complex with the transcription factor Atf1p and target DNA
89	Elleder	Identification of a potent and new reverse transcriptase inhibitor scaffold from an expandable pharmacophore library
90	Eugenin	Mechanisms of gap junctions mediated HIV-bystander killing in astrocytes
91	Figueiredo	The microtubule network regulates rhesus TRIM5 $\alpha$ dynamics and turnover and supports rhesus TRIM5 $\alpha$ -restriction of HIV-1

92	Foster	Mechanism of HIV-1 Nef downregulation of MHC1
93	Friew	analysis of intracellular interactions between APOBEC3G, RNA and HIV-1 Gag using biomolecular fluorescence complementation
94	Fryrear	Novel domains regulate subcellular localization of HTLV-I Tax
95	Galla	Cellular restriction of retrovirus particle mediated mRNA transfer
96	Gallo	Nuclear-cytoplasmic shuttling of rhTRIM5 $\alpha$
97	Gao	DNA damage blocks integration of the yeast retrotransposon Ty5
98	Gao	Factors that determine hotspots for recombination during HIV-1 replication
99	Garforth	The effect of K65A substitution in the $\beta$ 3- $\beta$ 4 loop of HIV-1 reverse transcriptase on mismatched primer extension
100	Garforth	Utilization of a deoxynucleoside diphosphate substrate by HIV-1 reverse transcriptase—Inorganic phosphate dependent phosphorolysis as a potential mechanism of AZT resistance
101	Garg	Radiolabeling, pharmacoscintigraphic evaluation and antiretroviral efficacy of stavudine loaded $^{99m}\text{Tc}$ labeled galactosylated liposomes
102	Garvey	Comparison of kinetics of two-metal binding HIV-1 integrase inhibitors inhibiting recombinant enzyme versus preintegration complex
103	Gummuluru	Cell-type and envelope glycoprotein dependent restriction of MLV by mouse APOBEC3
104	Grandgenett	HIV-1 synaptic complexes—Uncovering mechanisms associated with concerted integration
105	Groom	The role of viral factors in translation of HIV-1 RNA
106	Gudmundsdottir	Cell tropisms of MVV is determined at the level of transcriptional or mRNA regulation

**Session 5 RNA EXPORT, ASSEMBLY**

WEDNESDAY 5/21/2008, 9:00 AM

<b>#</b>	<b><u>Iname</u></b>	<b><u>Title</u></b>	<b><u>Talk Length</u></b>
107	Moore	HIV-1 RNA dimerization—Investigations into its subcellular localization and export requirements	10
108	Nitta	Identification and characterization of a cis-acting transport element required for export of unspliced RNA in JSRV	10
109	Checkley	Localization of Ty1 RNA and VLP assembly sites in <i>S. cerevisiae</i>	10
110	Ako-Adjei	Gag proteins follow a common assembly pathway independent of the RNA export pathway	10
111	Reed	HIV-1 capsid assembly intermediates contain P-body proteins that are required for efficient HIV-1 virion promotion	10
112	Sandmeyer	Multiple Ty3 subdomains mediate nuclear pore interactions	10
113	Life	Mutations in the amino-terminus of FV Gag disrupt morphology and infectivity, but not targeting of assembly	10
114	Gudleski	Structural analysis of RSV Gag polyprotein in complex with nucleic acids	10

115	Crist	Assembly properties of Gag-Zipper chimeras	10
116	Burns	Two X-ray crystal structures of MMLV capsid protein suggest a potential mechanism for virion maturation	10
117	Craven	Second-site suppressors of CA CTD mutations provide insights into the early steps of capsid assembly	10

**Session 6 POSTER SESSION II**

WEDNESDAY 5/21/2008, 2:00 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
118	Haedicke	The role of FEZ1 (fasciculation and elongation protein zeta-1 in retroviral infection of brain cells	
119	Hahn	Targeting HIV-1 Gag into the DRiP-pathway enhances MHC class I antigen presentation and CD8 <sup>+</sup> T cell activation	
120	Harmon	HIV envelope induction of the G- $\alpha_q$ signaling pathway is required for virus entry	
121	Hartl	AZT resistance of SFV reverse transcriptase is based on the excision of AZTMP in the presence of ATP	
122	Hartl	Solution structure of a monomeric SFV protease	
123	Zhang	Selective degradation of APOBEC3G by HIV-1 Vif	
124	Henning	ERM family members moesin and ezrin are natural determinants of retroviral infectivity	
125	Herrmann	HIV-1 gp120 interacts with the voltage gated potassium channel BEC1	
126	Heslin	A single amino acid substitution in a region of HERV-K Gag with similarity to HIV Gag abrogates infectivity of a HERV-K provirus in the human genome	
127	Hogg	Biochemical analysis of HIV messenger RNP assembly	
128	Hogue	The relative contributions of Gag capsid and nucleocapsid domains in Gag multimerization	
129	Hussein	Selection of the HIV-1 dimerization initiation signal	
130	Huthoff	A structure model of the APOBEC3G dimer	
131	Iha	Molecular chaperon inhibitor as a new therapeutic candidate for adult T-cell leukemia	
132	Ilina	Mutations in the p51 thumb subdomain of HIV-1 reverse transcriptase (RT) provide resistance to acylgydrazone inhibitors of RT ribonuclease H activity	
133	Ilinskaya	A tyrosine based motif and cellular adaptor proteins regulate HTLV-I envelope trafficking	
134	Ivanova	Transcriptional repressor CTCF mRNA up-regulation coincides with the induction of anti-HIV-1 responses in CD4 <sup>+</sup> T cells	
135	Takaori-Kondo	HIV-1 Vif causes G2 cell cycle arrest via the p53 pathway	
136	Jern	Role of APOBEC3 in retrovirus evolution and genetic diversity	
137	Jin	A mouse-like block for pre-dependent HIV Gag in human cells	
138	Jones	Dissecting the nucleic acid chaperone activity of HIV-1 Gag	

139	Jonsson	Two mutations in the Vif gene of MVV have different phenotypes, indicating more than one function of Vif
140	Kassa	Identification of HIV-1 envelope glycoprotein variant resistant to cold inactivation
141	Katzman	Development of a high-throughput screening assay for identifying novel stimulators of the nonspecific nuclease activity of HIV-1 integrase
142	Kaufmann	Rec, a protein of the human endogenous retrovirus K (HERV-K(HML-2)) interacts with the human testis zinc finger protein (TZFP)
143	Kelley	Mutant HIV-1 RTs with modified dNTP binding pockets effects on polymerase kinetics and viral transduction
144	Kennedy	Kconf or Kcat—Elucidating the specific role of HIV-1 reverse transcriptase Q151 in mismatch extension
145	Popik	Exosomes mediate intercellular transfer of APOBEC3 proteins and corresponding mRNAs
146	King	Modulation of the NMDA receptor during HIV-Tat induced neuronal apoptosis
147	King	Efficient mismatch extension by HIV-1 reverse transcriptase during forced copy choice recombination
148	Menéndez-Arias	Mechanistic basis of zidovudine hypersusceptibility and lamivudine resistance conferred by deleting codon 69 in the reverse transcriptase-coding region of HIV-1
149	Koyanagi	HIV-1 Vpr in mitochondria impairs neuronal progenitor cell differentiation
150	Kloke	Generation of an SIV <sub>smm</sub> PBJ-derived vector system for transduction of quiescent cells
151	Ko	HTLV-III human retrovirus genome encodes several accessory proteins
152	Kula	A tagged-RNA proteomic approach coupled to real-time monitoring of protein-RNA association in living cells for the identification of proteins involved in HIV-1 RNA biogenesis, processing and export
153	Belshan	Biochemical profiles of HIV nucleoprotein complexes purified by velocity gradient centrifugation
154	Harris	Analyses of the 2 APOBEC3 genes of artiodactyls indicate that the 7 human homologs arose by frequent recombination prior to primatification
155	Carpenter	Secondary structural analysis of the EIAV RRE—Identification of a conserved RNA structural motif required for high affinity Rev binding in both EIAV and HIV-1
156	Lee	Restriction of HIV-1 nuclear entry suggests a role of nuclear pore associated factors
157	Akari	HIV-1 Vif protein packaged in virions augments viral infectivity by a novel mechanism—Implication of p33 Gag intermediate
158	Leem	Retrotransposon Tf1 is targeted to Pol II promoters by transcription activators
159	Lenassi	HIV protein Nef is released from cells with exosomes
160	Leonard	Mechanism by which HIV Nef disrupts the intracellular trafficking of host proteins
161	Phillips	In vitro assembly properties of SIV <sub>MAC</sub> Gag protein
162	Lochmann	Nucleolar trafficking of the retroviral Gag protein—Implications for genomic RNA packaging
163	Logue	Characterization of the cytidine deaminase APOBEC3A

164	Luttge	Selection for FIV resistance to a dominant-negative mutant of TSG101
165	MALBEC	An RNA interference-based genetic screen to identify cellular proteins important for TRIM5-mediated restriction
166	Maldarelli	Variation in the level of HIV-1 viremia in patients suppressed on antiretroviral therapy
167	Courgnaud	TRIM5 $\alpha$ restriction of different SIVs
168	Mandal	Regulation of HIV-1 <i>vif</i> mRNA splicing by multiple competing cellular factors is required for efficient virus replication in cells expressing high levels of APOBEC3G
169	Martinez	The kinesin KIF4 regulates intracellular trafficking and stability of the HIV-1 Gag polyprotein
170	Masse	Role of chromatin remodeling complexes in controlling HIV-1 expression in primary CD4 <sup>+</sup> T cells
171	Mathew	The role of INI1 and interferon signaling in HIV-1 replication
172	McEwan	Characterization of retroviral restriction and TRIM5 amongst felids
173	Costa	HIV-1 Nef protein binds the MB1MB2 sub-domains of the central V region of the cellular protein Alix/AIP-1
174	Meredith	Evidence of a U5 RNA suppressor of HIV-1 reverse transcription
175	Dudley	HIV Rev and HTLV Rex enhance expression from the MMTV Rem-responsive element after nuclear export
176	Michailidis	Novel inhibition mechanism and potent antiviral activity of translocation-deficient reverse transcriptase inhibitors
177	Miyagi	Physiological level of APOBEC3F does not have anti viral activity against HIV-1
178	Miyauchi	A relationship between the kinetics of HIV-cell fusion and resistance to gp41-derived inhibitory peptides
179	Blanchard	High CpG islands density areas favor the integration of PERV
180	Mulder	Vif, APOBEC3G, recombination and drug resistance
181	Mulky	Molecular characterization of CPSF6-358 antiviral function
182	Müllner	Identification of the Rem responsive element of MMTV
183	Kirchhoff	Two types of PAP fragments in semen form amyloid fibrils enhancing HIV infection and reducing viral sensitivity to microbicides
184	Muntean	PIASy expression modulates B, N, and NB-tropic MLV viral transduction

**Session 7 RESTRICTION FACTORS II (APOBEC / Vif)**

WEDNESDAY 5/21/2008, 7:30 PM

<b>#</b>	<b><u>Iname</u></b>	<b><u>Title</u></b>	<b><u>Talk Length</u></b>
185	Okeoma	Cell-intrinsic and virion packaged APOBEC3 are critical for in vivo restriction of MMTV	10
186	Bishop	Investigating the mechanisms of APOBEC-mediated restriction of HIV-1	10
187	Han	APOBEC3G requires an endogenous cofactor to block HIV-1 replication	10

188	Shindo	Identification and validation of candidate APOBEC3G-interacting proteins	10
189	Harris	Evolution of HIV-1 isolates that use a novel Vif-independent mechanism to resist restriction by human APOBEC3G	10
190	Schmitt	Mutations within highly conserved SLQYLA motif of Vif results in a less pathogenic SHIV in macaques and accumulates G to A mutations in the viral genome	10
191	Matsuo	Structural studies of the deaminase domain of APOBEC3G	10
192	Xiong	Structural insight into the HIV Vif SOCS box and its role in human E3 ubiquitin ligase assembly	10
193	Lee	In vitro and ancient in vivo hypermutation of HERV-K by APOBEC3 proteins	10
194	Wolf	Identification of the DNA binding factor responsible for PBS-mediated restriction of MLV	10
195	Niewiadomska	The role of P bodies in retroelement replication, and the antiviral activities of APOBEC3 proteins	10
196	Zhang	Anti-microRNA activity of APOBEC3G and its family members in processing body (P-body)	10

**Session 8 BUDDING AND Vpu**

THURSDAY 5/22/2008, 9:00 AM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
197	Freed	Functional replacement of a retroviral late domain by ubiquitin fusion	10
198	Goettlinger	Efficient rescue of HIV-1 budding defects by a Nedd4-like ubiquitin ligase	10
199	Carlton	Differential roles for Alix and ESCRT-III in cytokinesis and HIV-1 release	10
200	Morales	Dissecting the role of cellular factors in retroviral budding via heterodimerizer-mediated virus-host protein interaction	10
201	Kieffer	VPS4 contains two distinct MIT binding modes required for HIV-1 budding	10
202	Von Schwedler	HIV-1 requires late domains to bud and replicate in T cells and macrophages	10
203	Ehrlich	PI(4,5)P <sub>2</sub> hydrolysis and IP3-receptor-gated CA <sup>2+</sup> release regulate HIV-1 Gag exocytosis	10
204	Neil	Tetherin restricts retrovirus release and is antagonized by HIV-1 Vpu	10
205	Guatelli	The interferon-induced protein BST-2/CD317 restricts release of virus particles from infected cells and is down-regulated from the cell surface by HIV-1 Vpu	10
206	Bieniasz	Towards a mechanism for tetherin-mediated inhibition of retrovirus release	10
207	Ruiz	Overlapping tyrosine and dileucine based sorting motifs mediate HIV-1 subtype C Vpu protein trafficking and function	10
208	Hauser	Subcellular distribution and functional analysis of Vpu proteins from subtype B and C isolates of HIV-1	10

**Session 9 TRANSCRIPTION, RNA PACKAGING, RT**

THURSDAY 5/22/2008, 2:00 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
209	Marchand	Resistance mutations to translocation-deficient reverse transcriptase inhibitors (TDRTIs) lead to discrimination of the inhibitor and decreased replication capacity	10

210	Skasko	Compensatory role of HIV central polypurine tract sequence for kinetically disrupted reverse transcription	10
211	Harrich	Purification of cellular factors important for HIV-1 late DNA synthesis	10
212	Nikolenko	HIV-1 reverse transcriptase connection domain mutations reduce template RNA degradation and enhance NRTI excision	10
213	Thomas	HIV-1 NC mutations cause premature reverse transcription	10
214	Bruce	The cellular sulfonation pathway contributes to a step coincident to MLV and HIV DNA integration	10
215	Hokello	Coordinated activation of HIV transcriptional elongation and initiation is mediated by T-cell receptor signaling	10
216	Young	The cellular transcription factor ZASC1 modulates MLV and HIV infection	10
217	Houck-Loomis	The MoMLV pseudoknot—A novel pH-dependent riboswitch	10
218	Uberla	Enhancement of HIV-1 genomic RNA encapsidation by nuclear events	10
219	Sun	Retrovirus-specific differences in protein-nucleic acid interactions—Implications for genomic RNA packaging	10
220	L'Hernault	Functional analysis of the stem-loop 1 of the HIV-2 RNA leader	10
221	Sakuragi	Complete coincidence of genome dimerization and recombination efficiencies of HIV-1	10

**KEYNOTE SPEAKER II:** John Wills

THURSDAY 5/22/2008, 7:30 PM

**Session 10 POSTER SESSION III**

THURSDAY 5/22/2008, 8:30 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
222	Neagu	TRIM5-mediated restriction in the context of cell-to-cell transfer of HIV-1	
223	Neagu	HIV-1 inhibition by TRIM5-cyclophilin A fusion proteins engineering of human components	
224	DeStefano	A new application of aminoglycoside antibiotics for treatment of HIV infection—Potent antiviral activity in cell culture and alteration in frameshifting by the common antibiotic gentamicin	
225	Neil	K5, a membrane bound E3-ubiquitin ligase from HHV8, overcomes tetherin-mediated retroviral restriction	
226	Noursadeghi	Studying the effects of HIV-1 infection of human macrophages on innate immune responses to co-infecting pathogens	
227	Nowak	Identifying amino acid residues that contribute to the cellular-DNA binding site on retroviral integrase	
228	Kotler	Deamination in 3D—Intra- and intersegmental transfer of APOBEC3G cytidine deaminase	
229	Ohishi	Effects on genomic RNA dimerization by maturation of structural precursor protein "Gag" in HIV-1	
230	Ohmine	Examining the potency of TRIM5 $\alpha$ -mediated late-phase restriction against lentiviral replication in a panel of TRIM5 $\alpha$ variants	

231	Singh	A novel model for assembly of retroviral cores
232	Perez-Caballero	Evidence for inhibition of ancient primate ERVs by APOBEC3 but not TRIM5 proteins
233	Perkovic	FV protein Bet inhibits cytoplasmic solubility of human APOBEC3
234	Pertel	TRIM5 $\alpha$ contributes to the type 1 interferon response against HIV-1
235	Planelles	Studies of HIV-1 latency in a novel ex-vivo system that uses PBMC
236	Poleshko	siRNA screening identifies host factors that maintain retroviral epigenetic silencing
237	Post	NC nucleic acid chaperone activity and RNase H cleavage block nonspecific (+) DNA priming
238	Prchal	Functional and structural study of budding defective mutants of MPMV matrix protein
239	Rai	Regulation of HIV-1 Gag mediated virus like particle assembly by Annexin-2
240	R RAO	HIV-1 clade-specific differences in the induction of neuropathogenesis
241	Recchia	Gene expression programs are instrumental in directing integration of gammaretroviral vectors in the human genome
242	Ciminale	Temporal regulation of HTLV-I expression following viral reactivation
243	Rits	$\alpha$ interferon increases TRIM5 $\alpha$ expression and influences HIV-1 replication
244	Rodriguez	XMRV establishes an efficient spreading infection and exhibits an enhanced transcriptional activity in prostate cells
245	Rold	Proteasomal degradation of TRIM5 $\alpha$ during retrovirus restriction
246	Ronen	Lentiviral integration site selection—Targeting by LEDGF/p75 and histone methylation
247	Ruprecht	HERV-K(HML-2) RNA transcripts are selectively packaged in retroviral particles produced by the human germ cell tumor line Tera-1 and originate from a provirus on chromosome 22q11.21
248	Russell	Distinct determinants within APOBEC3G and APOBEC3F interact with separate regions of HIV-1 Vif
249	Bacharach	Basal budding and replication of the MLV are independent of the Gag L-domains
250	Sakuma	Rhesus monkey TRIM5 $\alpha$ restricts HIV-1 production in a cell line-dependent manner
251	Ikeda	Further characterization of rhesus monkey TRIM5 $\alpha$ -mediated late restriction
252	Bouaziz	NMR structure of the C-terminal domain of p6, evidences for an interaction with Vpr
253	Sampaio	Virus release and maturation is a Nef-dependent mechanism in SIV from chimpanzee (SIVcpz)
254	SATO	Tetraspanin proteins on HIV-1 virion modulate its infectivity
255	Schaller	A role for the RING and B-box2 in the block to reverse transcription by TRIM5 and TRIMCyp
256	Schlaberg	XMRV, a novel retrovirus, its replication in cultured cells and its detection and distribution in human prostate cancer

257	Shah	HIV-1 Vpu mediates the downregulation of the natural killer co-activating ligand, NTB-A, and protects primary HIV-infected T-cell blasts from killing by Nk cells
258	Shang	Role of the specific amino acids of HIV-1 gp41 membrane-spanning domain in viral infectivity
259	Suzuki	Interferon- $\omega$ 1 is a powerful inhibitor for HIV-1 infection
260	Shirakawa	Protein kinase A-mediated phosphorylation antagonizes the degradation of APOBEC3G by HIV-1 Vif
261	Ciminale	Remodeling of mitochondrial function by the p13 protein of HTLV-I promotes accumulation of reactive oxygen species and cell death
262	Skoko	HIV host factor BAF binds DNA in two modes and packs single DNA molecules in stable condensates
263	Smith	Three amino acid changes are sufficient for broad-spectrum nucleoside analog resistance in HIV-2
264	Sondgeroth	Identification of intersubtype breakpoints in a highly recombinogenic region of HIV-1 Gag
265	SOTO RIFO	HIV-1 and HIV-2 display major differences in viral gene expression at the translational level
266	Specht	Nef may allow HIV-1 to escape HLA-C mediated immune control by efficient modulation of CD4 and the MHC-II-associated invariant chain
267	Mangeat	Arsenic relocalizes APOBEC3G to high molecular mass complexes in primary blood derived dendritic cells
268	Stansell	Characterization of replication-competent SIV variants deficient in sites for O-linked carbohydrate attachment
269	Hofmann	Encapsidation of APOBEC3C is not mediated by its Zn <sup>2+</sup> -finger but by an unknown factor interacting with the largest cavity proximal from the active site
270	Taylor	TFII-I—An unrecognized link between cholesterol metabolism and HIV transcription
271	Urano	Identification of the carboxy-terminal domain of bromodomain containing 4 as a specific silencer of HIV-1 replication
272	Valente	Inhibition of HIV-1 mRNA 3' end cleavage by eIF3f
273	Valentini	Inhibition of HIV-1 integration by an inhibitor of the histone acetyl transferases
274	Valeri	Effects of HTLV-I pX open reading frame transcripts function in maintenance of viral load in vivo
275	Cherepanov	Functional and structural characterization of integrase from a spumaretrovirus
276	Votteler	POSH and ALIX cooperate to facilitate HIV-1 budding
277	Vozzolo	Identification of host factors required for HIV-1 replication by forward chemical genetics
278	Waheed	Mechanism of anti-HIV activity of amphotericin B methyl ester (AME)—Inhibition of assembly/release exhibits Vpu-dependence
279	Zhou	Anchoring a non-neutralizing anti-HIV-1 gp41 antibody onto lipid rafts of the plasma membrane blocks cell-free and DC-mediated HIV-1 infection as well as transcytosis of HIV-1 through intestinal epithelial monolayer
280	Wang	Restriction of HIV-1 replication by human APOBEC3H

281	Wapling	Characterization of mutations that prevent and restore HIV-1 reverse transcriptase dimerization
282	Wendelsdorf	Inhibition of mitochondrial DNA polymerase- $\gamma$ activity by nucleoside reverse transcriptase inhibitors—Using a computational model to test a toxicity hypothesis
283	Weng	Tetraspanins in HIV-1 producer cells repress virus induced cell-cell fusion
284	Wohrl	Structural characterization of the eukaryotic transcription factors NELF E and DSIF, involved in the regulation of HIV transcription
285	Rumlova	Solution structure of N-terminal domain of MPMV capsid protein and its intramolecular interactions essential for a core assembly and virus infectivity
286	Wiley	Both cell surface associated and exosome-associated HIV-1 particles can contribute to dendritic cell-derived HIV-1 trans infection
287	Yamamoto	Identification of cellular interactors to MoMLV integrase using tandem affinity purification—Mass spectrometry analysis
288	Tachedjian	N348I in the connection domain of the HIV-1 reverse transcriptase confers zidovudine/NNRTI dual resistance
289	Zhang	A critical region in potent anti-viral cytidine deaminases mediates specific RNA binding and HIV-1 inhibition
290	Zhen	The role of HIV-1 matrix domain in the virion packaging of RNAs
291	Zielonka	Multiple APOBEC3 genes are present in non primate mammals

## Session 11 ACCESSORY PROTEINS

FRIDAY 5/23/2008, 9:00 AM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
292	Transy	Dual action of the Cu4A-DDB1 <sup>DCAF1</sup> ubiquitin ligase complex in Vpr activity	10
293	Srivastava	Lentiviral Vpx accessory factor targets VprBP/DCAF1 substrate adaptor for cullin 4 E3 ubiquitin ligase to enable macrophage infection	10
294	Cimarelli	Deciphering SIV <sub>SM</sub> /HIV-2 Vpx function in the infection of macrophages and dendritic cells	10
295	Gramberg	Vpx counteracts an inhibitory factor during SIV infection of primary cells	10
296	Pertel	SIV <sub>MAC</sub> Vpx protects HIV-1 from the type 1 interferon response	10
297	Fritz	Direct evidence of HIV-1 Vpr oligomerization in living cells by two photon fluorescence correlation spectroscopy and fluorescence lifetime imaging	10
298	Planelles	HIV-1 Vpr upregulates ligands for the NK cell activating receptor NKG2D on the surface of infected cells, a process that is dependent on DCAF-1 and ATR	10
299	Wen	The HIV-1 protein Vpr as a mediator of ubiquitination	10
300	Mertz	MMTV encodes a functional nuclear signal peptide product from either envelope or REM messenger RNA	10
301	Kirchhoff	Protective Nef functions in natural SIV infection	10
302	Wonderlich	Nef recruits Ap-1 and $\beta$ -COP to promote degradation of MHC-I molecules	10

303 Stolp

HIV-1 Nef interferes with triggered actin remodeling to affect cell motility

10

**Session 12 INTEGRATION**

FRIDAY 5/23/2008, 2:00 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
304	Pandey	Mechanisms of HIV-1 concerted integration as related to strand transfer inhibition and drug resistance	10
305	Li	In-gel FRET analysis and visualization of stable complexes of HIV-1 integrase with viral DNA	10
306	Hare	Structural basis for the high affinity integrase-LEDGF interaction	10
307	Kvaratskhelia	Cellular cofactor LEDGF/p75 profoundly affects HIV-1 integrase subunit-subunit interactions	10
308	Engelman	The role of the LEDGF/p75 PWWP domain in HIV-1 infection and integration	10
309	Meehan	LEDGF/p75 proteins with alternative chromatin tethers are functional HIV cofactors	10
310	De Rijck	Transportin-SR2 imports HIV into the nucleus	10
311	Yan	The SET complex regulates balance between chromosomal integration and suicidal autointegration during HIV-1 infection	10
312	Wang	DNA bar coding and pyrosequencing to analyze integration site patterns in patients treated for SCID-x1 using integrating vectors	10
313	Brady	De novo integration site selection by a resurrected HERV-K differs significantly from the pattern of fixed HERVs in the human genome	10
314	Chow	Integration site preference of XMRV, a new human retrovirus associated with prostate cancer	10
315	Palmarini	Revealing the history of animal domestication and migrations using ERVs	10

**Session 13 CELL BIOLOGY / CELL-CELL TRANSMISSION**

SATURDAY 5/24/2008, 9:00 AM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
316	Roan	The cationic properties of SEVI underlie its ability to markedly enhance HIV infection	10
317	Janas	Productive infection of HIV-1 in dendritic cells requires fusion-mediated viral entry	10
318	McDonald	Mature dendritic cells sequester HIV in a specialized, surface-accessible intracellular compartment prior to trans-infection	10
319	Wang	Disruption of cytoskeleton prevents dendritic cell-mediated HIV-1 transmission to CD4 <sup>+</sup> T cells via virological synapses	10
320	Nikolic	Actin filaments and microtubules are required for efficient HIV transfer from dendritic cells to T cells via infectious synapses	10
321	Bauby	TIP47 promotes the efficient release of infectious HIV-1 from the assembly compartment of macrophages	10
322	Jouvenet	Visualizing the biogenesis of individual HIV-1 virions in live cells	10

323	Derse	Exploring the mechanisms of cell-to-cell transmission of retroviruses—Quantitative measurement of HIV-1 and HTLV-I infection/replication in coculture	10
324	Krementsov	Tetraspanins regulate cell-to-cell transmission of HIV-1	10
325	Ilewellyn	Role of uropods in HIV-1 replication	10
326	Rudnicka	Quantitative and qualitative assessment of the diverse modes of HIV-1 cell-to-cell transfer	10
327	Huebner	Induction of HIV assembly, endocytic transfer, and infection at T cell virological synapses	10