

## Retroviruses

### Session 1 ENTRY

TUESDAY 5/24/2005, 7:30 PM

J. Silver / D. Sanders

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
1	Vogan	Crystal structure of the unliganded, fully glycosylated SIV gp120 core protein	10
2	Xiang	Functional mimicry of an HIV-1 coreceptor by a neutralizing monoclonal antibody	10
3	Miyauchi	The rotational phase of the localized region of gp41 membrane-spanning domain $\alpha$ -helix affected the Env biogenesis	10
4	Elleder	The receptor for the subgroup C ASLVs, TVC, is related to mammalian butyrophilins, members of the immunoglobulin superfamily	10
5	Zhang	A tumor necrosis factor receptor family protein serves as a cellular receptor for the macrophage-tropic equine lentivirus	10
6	Li	An essential function of cell receptor in FMLV infection is reduction of a disulfide bond in the receptor binding domain of Env	10
7	Davey	Real-time entry kinetic assay indicates requirement for actin rearrangement and lipid-rafts in ecotropic MLV membrane fusion	10
8	Lehmann	Virus surfing along filopodia is driven by myosin II	10
9	Melikian	Imaging individual retroviral fusion events reveals hemifusion as a true intermediate of virus-cell membrane fusion	10
10	Mueller	Dynamics of rapid events in HIV-1 entry analyzed by dual-color single virus tracing	10

### Session 2 RESTRICTION FACTORS

WEDNESDAY 5/25/2005, 9:00 AM

V. KewalRamani / J. Stoye

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
11	Perez-Caballero	Human TRIM5 $\alpha$ domains responsible for retrovirus restriction activity and specificity	10
12	Hope	Cell biology of TRIM5 $\alpha$	10
13	Towers	Localization of endogenous TRIM5 in human and simian cells	10
14	Sebastian	Arsenic counteracts retroviral restriction by TRIM5 orthologues in a cell type-specific manner	10
15	Stremlau	Modulation of retroviral uncoating by TRIM5 $\alpha$	10
16	Yap	Restriction of HIV-1 by a collection of Trim-cyclophilin A fusion proteins	10
17	Newman	Characterization of a chimpanzee-derived HIV-1 clone with expanded tropism	10
18	McKnight	The role of Tripartite Motif proteins in Lv2 restriction	10

19	Goujon	SIV <sub>MAC</sub> Vpx counteracts an anti-lentiviral activity specifically present in human dendritic cells	10
20	Naghavi	Overexpression of fasciculation and elongation protein $\zeta$ -1 (FEZ1) induces a postentry block to retroviruses in cultured cells	10
21	Baumann	Early HIV-1 replication block by a short form of the SR-related protein CPSF6	10
22	Valente	Human cellular factors that restrict HIV infection	10

**Session 3 POSTER SESSION I**

WEDNESDAY 5/25/2005, 2:00 PM

<b>#</b>	<b><u>Iname</u></b>	<b><u>Title</u></b>	<b><u>Talk Length</u></b>
23	Dittmar	Determinants of HIV-1 resistance to membrane-anchored gp41-derived peptides	
24	Koyanagi	A truncated form of CD63-deletion mutant blocks X4-HIV-1 entry through dislocation of CXCR4	
25	Toparceanu	Effects of the therapy with glucocorticoids / antiretrovirals in HIV-infected patients	
26	Lobritz	Mutations in the HIV-1 V3 loop confer sensitivity to entry inhibitors and correlate to co-receptor avidity and fitness	
27	Garcia	In vitro suppression of HIV-1 replication by measles virus	
28	Jeeninga	Construction of a minimal HIV-1 variant that selectively replicates in leukemic T cell lines—Towards a new virotherapy approach	
29	Münk	In vivo targeting of MLV(HIV) pseudotype vectors to T lymphocytes in a transgenic mouse model	
30	Srinivasakumar	HIV-1 based gene delivery systems using Rev-response element from SIVMac239	
31	Farley	Dynamics of transduction of human cells by EIAV vectors—The importance of cell	
32	Mulky	Tethering decay promoting ARE-binding proteins to HIV-1 mRNA triggers viral RNA decay and inhibits replication	
33	Hizi	Peptides derived from the reverse transcriptase of HIV-1 as novel inhibitors of the viral integrase	
34	Hombrouck	Multiple mutations in HIV-1 integrase confer resistance to the pyranodipyrimidine V-	
35	Adamson	Viral resistance to PA-457, a novel inhibitor of HIV-1 maturation—Insights into the drug target and mechanism of action	
36	Boulanger	Inhibitory effect of betulinic derivative PA-457 on Gag precursor assembly and virus-like particle release by recombinant Gag-expressing cells	
37	Li	Determinants of activity of the HIV-1 maturation inhibitor PA-457 map to the Gag protein CA-SP1 domain	
38	Sakalian	PA-457 inhibits maturation of the HIV-1 Gag precursor assembled in vitro	
39	Ako-Adjei	The retroviral CA domain dictates virion size, morphology and the co-assembly of Gag into virus like particles	

40	Alfadhli	In vitro analysis of HIV-1 gag protein assembly
41	Auerbach	A novel assembly region in the N-terminal domain of MoMLV capsid protein
42	Hu	Coassembly and functional complementation of HIV-1 and HIV-2 Gag
43	Keller	In RSV the sequence spanning the CA-SP-NC border is important for Gag particle morphology
44	Lee	Capsid is an important determinant for functional complementation of MLV and SNV Gag polyproteins
45	Crist	Effects of dimerizing and trimerizing zipper motifs on HIV-1 Gag particle assembly
46	Fossé	Specific interactions between HIV-1 nucleocapsid protein and the TAR element
47	Gorelick	Mutagenesis of conserved carbonyl-containing amino acids in HIV-1 NC Zn <sup>2+</sup> -
48	Ulbrich	The puzzling role of nucleic acids in the assembly of MPMV capsids in vitro
49	Cartellieri	The N-terminal Gag domain is required for FV particle export
50	Dalton	Membrane binding properties of RSV and HIV-1 MA, and analysis of RSV lipid
51	Dorweiler	Role of the PTAP motif and phosphoinositides in HTLV-I Gag targeting and virus
52	Gomez	Mobility and trafficking of HIV-1 p55 in living cells using fluorescence recovery after photobleaching and a photoactivatable GFP
53	Johnson	Quantitative study of retroviral assembly and budding using correlative fluorescence microscopy and scanning electron microscopy
54	Kenney	Substitution of heterologous NESs for the RSV Gag NES interferes with virus
55	Kenney	Initial evidence for Gag-Gag interactions in the nucleus
56	Khurana	Antibodies against the tetraspanin CD9 decrease HIV-1 release
57	Mazurov	Mobilization and transfer of HTLV-I in the context of the immunological synapse
58	Muriaux	Intracellular budding of infectious HIV-1 particles
59	Ono	HIV-1 Gag domains involved in the susceptibility of virus particle production to PIP <sub>2</sub> perturbation
60	Sandrin	Intracellular vs. cell surface assembly of retroviral pseudotypes is determined by the localization of the viral glycoprotein, its capacity to interact with Gag and expression of the Nef protein
61	Sherer	Retroviral budding from actin-rich filopodia
62	Thali	HIV-1 exits through tetraspanin-enriched microdomains (TEMs)
63	Aoki	Suppression of HIV-1 release through CD63-overexpressed plasma membrane
64	Bobardt	Cooperation of sulfated CCR5 and proteoglycans for successful HIV-1 entry
65	Denton	Fusion activity of the HIV-1 envelope glycoprotein is a major determinant of viral infectivity independent of co-receptor

66	Esté	Inhibition of coreceptor independent cell to cell HIV-1 transmission
67	Holtkotte	Selection of a replication-competent HIV variant encoding C-terminally truncated Env—Insight into the role of the HIV-Env C-terminus
68	Johnson	Interaction of antibodies and native Env trimers by whole-virion surface plasmon
69	Matsuda	The role of the additional glycine residue within a conserved GXXXG motif of the membrane-spanning domain of HIV-1
70	Moore	Efficiency of HIV-1 cell binding and entry mediate differences in fitness between two diverse HIV-1 isolates
71	Jiang	Coreceptor-dependent requirement for HIV-1 core maturation in virus entry
72	Bupp	Characterizing library-selected FeLV Env proteins—Interactions with MLV 4070A Env and a receptor cloning strategy
73	Courgnaud	Envelope intra-individual variations within the receptor-binding domain (RBD) of HTLV and STLV natural isolates as detected by a new pan-PTLV RBD amplification
74	Delos	Role of tryptophans and calcium in the interaction between Tva and the receptor binding domain of the ASLV envelope protein
75	Lindemann	Analysis and function of prototype FV envelope N-glycosylation
76	OU	Membrane fusion—Roles of the pre-membrane region of MLV envelope protein
77	Sanders	MLV Env processing and consequent conformational changes
78	Campbell	Membrane targeted GFP proteins are incorporated into HIV virions and can be used to identify virions that have entered the host cell cytoplasm
79	Balasundaram	Anatomy of a nucleoporin required for retrotransposition—From form to function
80	Cutino	Early recessive blocks to HIV-1 infection in rabbit cells
81	Davis	Role of the MA protein in HIV-1 core function
82	De Rijck	The HIV-1 DNA-flap stimulates both the efficiency and the kinetics of lentiviral vector transduction
83	Thomas	Efficiency of HIV-1 reverse transcription and integration
84	Klein	Factors involved in infection of non-dividing cells by FIV
85	Murakami	Characterization of HIV-1 matrix mutants—Effects on an early stage of infection
86	Oshier	A novel post-entry determinant of macrophage-tropism maps to the HIV-1 Gag
87	PION	Analysis of HIV-1 replication in dendritic cells identifies restrictions early in the viral life cycle
88	Yang	Assessing the role of $\alpha$ -helix 3 of CA in HIV-1 uncoating
89	Lopez-Vergès	TM-gp41 prevents the inhibition of HIV-1 replication induced by Luman, a transcription factor regulated by intramembrane proteolysis
90	Marchant	Lv2 is a saturable restriction factor that depends on an endocytic route of entry

91	Mortuza	A structural comparison of the NTD of capsids from N- and B-tropic MLV
92	Naghavi	Identification of cellular genes with antiretroviral activity
93	Berthoux	Cyclophilin A and restriction of HIV-1 in old world monkeys
94	Chatterji	Contribution of capsid and cyclophilin A to HIV-1 infection in human and nonhuman primates
95	Powell	SIV Nef can modulate cyclosporin A sensitivity and host restriction in the context of an HIV-1 chimera
96	Sokolskaja	Human TRIM5 $\alpha$ and cyclophilin A independently modulate HIV-1 infectivity

Keynote Lecture: Wes Sundquist

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**Session 4 ASSEMBLY I**

WEDNESDAY 5/25/2005, 8:45 PM

H. Gottlinger / J. Lingappa

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
97	Aiken	Mechanism of action of the HIV-1 maturation inhibitor 3-O-(3',3'-dimethylsuccinyl)-betulinic acid	10
98	Phillips	Interaction between the C-terminal part of p10 and the CA domain of RSV Gag is required for immature assembly	10
99	Figueiredo	Efavirenz affects the late stages of HIV-1 replication	10
100	Nuga	Non random packaging of host RNAs in MoMLV	10
101	Rein	Identities of cellular mRNAs packaged in psi- HIV-1 and MLV particles	10
102	Ott	Proteomic and biochemical analysis of HIV-1 produced from monocyte-derived macrophages	10

**Session 5 ASSEMBLY II**

THURSDAY 5/26/2005, 9:00 AM

C. Carter / W. Mothes

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
103	Waheed	Mechanism of action of amphotericin B methyl ester (AME) on HIV-1 replication—Isolation of AME-resistant mutants	10
104	Stansell	Basic residues in MPMV Gag matrix domain modulates virus membrane	10
105	Briggs	Cryo-electron tomography of authentic HIV-1—Implications for the mechanism of core assembly	10
106	Datta	Effects of inositol hexakisphosphate on oligomerization of recombinant HIV-1 Gag	10
107	Perlman	Identification of a calcium-dependent assembly pathway for HIV-1 Gag	10
108	Johnson	Retroviral assembly causes both homologous and heterologous envelope glycoproteins to cluster at budding sites	10
109	Dong	HIV-1 assembly is impaired in human cells genetically deficient in AP-3 function	10

110	Bouamr	Mutants of Hrs protein carrying an intact coil-coil region efficiently interfere with HIV-1 Gag particle production	10
111	Chung	Functional requirement for AIP1/ALIX in HIV-1 release in the absence of TSG101	10
112	Finzi	MHC-II molecules enhance HIV-1 assembly and budding to late endosomal	10
113	Jin	Visualization of Gag complexes interaction with actin filaments during retrovirus assembly and budding	10
114	Suomalainen	Trafficking of HIV-1 Pr55gag between the plasma membrane and internal	10
115	Sandmeyer	Host genes and replication of Ty3, a retroviruslike element in <i>S. cerevisiae</i>	10

**Session 6 POSTER SESSION II**

THURSDAY 5/26/2005, 2:00 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
116	Takaori-Kondo	Ubiquitination of APOBEC3G by an HIV-1 Vif-Cullin5-ElonginB-ElonginC complex is essential for Vif function	
117	Xiao	Hijacking Cullin5-Ring E3 ligase by HIV/SIV Vif through a novel HCCH motif to suppress antiviral APOBEC proteins	
118	Burnett	APOBEC3G packaging into HIV-1 virus like particles is RNA-dependent and requires the NC basic linker	
119	Cen	The relationship between the cytoplasmic distribution of human APOBEC3G and its viral incorporation into HIV-1	
120	Mangeat	Characterization of the mechanism of APOBEC3G packaging into retroviral particles	
121	Anderson	APOBEC3G impedes HIV-1 before nuclear entry in target cells	
122	Andresdottir	Mutations in the Vif gene of MVV have different phenotypes, indicating more than one function of Vif	
123	Auclair	Low resolution structural mapping of HIV-1 Vif	
124	Bach	APOBEC siRNA transgenic genomic and proteomic profile	
125	Bishop	Investigations into the specificity of APOBEC mediated anti-viral functions	
126	Hache	The retroviral hypermutation domain of APOBEC3F and APOBEC3G	
127	Huang	Mechanism of a single domain antiviral protein APOBEC3C degradation, insight into Vif recognition of APOBEC3 family proteins	
128	Doohar	Kinetics of HIV-1 Gag progression through assembly intermediates can be altered with consequence for virion production	
129	Kvaratskhelia	Mapping HIV-1 Gag interactions with inositol pentakisphosphate and nucleic acids	
130	leao	HIV-1 assembly and release requires Niemann Pick type C protein	
131	Newman	Understanding HP68, a host factor acting in HIV-1 capsid assembly, using recombinant protein	

132	Roy	Association of RNA helicase A with the Gag protein of HIV-1
133	Cartellieri	Determination of the relative amount of Gag and Pol proteins in FV particles
134	Peters	RNA and protein requirements for the incorporation of Pol protein into FV particles
135	Kaplan	Ordered processing of the HIV-1 GagPol precursor is influenced by the context of the embedded viral protease
136	Saadatmand	Regulation of the incorporation of Pol into HIV-1
137	Alce	APOBEC3G interacts with the class E vacuolar protein sorting machinery and stimulates HIV-1 release
138	Dilley	In RSV the LYPST motif in p10 is important for efficient virus spread
139	Eastman	The role of ubiquitin ligases and the VPS class E machinery in retroviral egress
140	Ehrlich	Mimicry of the Hrs Tsg101 recruitment function confers new membrane-binding properties on HIV-1 Gag
141	Kaasch	Testing exosomal transfer of retroviral proteins
142	Luttge	FIV release mechanisms may be similar to HIV-1, including ESCRT-associated late domain function
143	Medina	The functionally exchangeable L domains in RSV and HIV-1 Gag direct particle release through pathways linked by Tsg101
144	Larsen	Ty3 virus-like particle assembly
145	Mura	Determinants of the late block induced by enJS56A1
146	Konsavage, Jr.	Mechanisms underlying the activity profile of RSV integrases that are improved for processing but impaired for joining
147	Lavigne	Effect of chromatin modifications on HIV-1 integration—In vitro studies
148	Parissi	Structure-function relationship studies of HIV-1 integrase—Identification of the active oligomer and new inhibitors
149	Ramcharan	Mutagenesis of the C-terminal domain of HIV-1 integrase and its interaction with DNA
150	Bradley	Structural basis for DNA compaction and LEM binding by barrier to autointegration factor (BAF)
151	Katz	Cellular protein Daxx interacts with ASV integrase and viral DNA to repress viral transcription
152	Suzuki	Functional organization of BAF and LAP2 $\alpha$ in the MoMLV preintegration complex
153	Turlure	Characterization of the DNA-binding region of LEDGF/p75
154	Debyser	Validation of LEDGF/p75 as an important co-factor of lentiviral integration
155	Daniel	Role of the non homologous end-joining pathway in post-integration repair
156	Daniel	Inhibition of HIV-1 replication by caffeine and caffeine-related methylxanthines

157	Mulder	Effect of the absence of Rad18 on viral infection
158	Diamond	Division of labor within HIV-1 integrase complexes
159	Ebina	The chromodomains in the integrases of LTR-retrotransposons Maggy and Tf1 direct integrase to specific forms of chromatin
160	Holman	Symmetrical base preferences surrounding HIV-1 and ASLV but not MLV integration
161	Kim	Genome-wide analysis of HIV-1 integration sites using a high-throughput assay
162	Nowrouzi	The FV integration pattern
163	Leem	Tf1, an LTR-retrotransposon of <i>S. pombe</i> recognizes specific sequences in pol II promoters as targets for integration
164	Roth	Modifying MLV integrase to alter target site selection through protein-protein
165	Studamire	The influence of chromatin structure on MoMLV integration target site distribution
166	Dong	Site-directed integration using HIV-1 containing engineered integrase fusion proteins in human cells
167	Diaz-Griffero	Role of the N-terminal domain of TRIM5 $\alpha_{th}$ and TRIMCyp in HIV-1 restriction
168	Dodding	Intracellular localization of TRIM5 $\alpha$ and TRIM-Cyp fusion proteins
169	Gorter	Trim5 $\alpha$ is involved in post-entry restriction of HIV-1 in monocyte-derived
170	Hatzioannou	Kinetics and localization of HIV-1 restriction by Owl monkey TRIM-Cyp
171	Keckesova	Restriction of zoonotic lentiviruses by primate TRIM5 alleles
172	Lee	Rhesus TRIM5 $\alpha$ imposes an early reverse transcription block on cell membrane fusion or endocytotic routes of HIV-1 infection
173	Saenz	Restriction of FIV by rhesus and human TRIM5a
174	Serhan	Cellular and biochemical analysis of TRIM5 $\alpha$
175	Jern	Recent retroviral integration patterns in the human and chimpanzee genomes—Transmissions from other primates to chimpanzees
176	Lenz	Infectivity of HERV-K in humans and rhesus macaques during recent evolutionary
177	Indik	Infection of human breast cell lines with MMTV
178	Dudley	Generation of a lymphomagenic MMTV requires loss of negative regulation and acquisition of a T-cell enhancer
179	Duelli	Proliferating hybrids generated from bystander cells by an exosome-like virus
180	Xian	Insertional activation of novel proto-oncogenes by ALV
181	Yi	Mutations affecting Gag-MA protein of AbMLV and MoMLV cause defects that suggest a conserved role of Gag in the two viruses
182	Bennasser	Evidence that HIV-1 encodes a siRNA and a suppressor of RNA silencing

183	Gao	Enrichment of HIV-1 recombinants through the RNAi inhibition
184	Senserrich	RNA interference of p53 blocks HIV-1 replication without affecting virus-envelope
185	Beliakova-Bethell	Mapping domains targeting Ty3 mRNA to perinuclear clusters
186	Jeeninga	Proteomic analysis of HIV-1 infected cells
187	Myers	Revealing retroviral recombination
188	Myers	STAR—High throughput subtyping tool for classifying HIV-1 and hepatitis B virus
189	Sato	Phage display selection on whole virions using a synthetic antibody repertoire
190	Tozser	Specificity studies on a deltaretrovirus protease
191	Troyer	Relationship of genetic diversity and CTL escape to HIV-1 fitness during disease progression
192	Wu	Development of a Rev-dependent expression vector

Keynote Lecture: Robert Craige

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**Session 7 POSTENTRY**

THURSDAY 5/26/2005, 8:45 PM

A. Fassati / G. Kalpana

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
193	Joshi	Aptamers directed to HIV-1 reverse transcriptase and short hairpin RNAs directed to HIV-1 genome can access reverse transcription complexes and potently block	10
194	Zielske	The SUMO pathway counteracts HIV infection of primary macrophages	10
195	Dismuke	Evidence for a role of CA in HIV-1 nuclear import and preintegration complex function	10
196	Parent	Multiple importin- $\beta$ family members are involved in nuclear entry of the RSV Gag	10
197	Cimarelli	Challenging the impermeability of the nuclear membrane to oncoretroviral infection—Efficient transduction of human macrophages with a F-MLV-derived vector	10
198	Kalpana	Specific INI1/hSNF5-mediated recruitment of components of Sin3A-HDAC1 complex into HIV-1 virions and its requirement for early events of replication	10

**Session 8 INTEGRATION / BIOINFORMATICS**

FRIDAY 5/27/2005, 9:00 AM

A. Engelman / E. Poeschla

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
199	Li	Physical analysis of HIV-1 integrase nucleoprotein complexes that mediate concerted integration in vitro	10
200	Leis	Identification of amino acids residues on the HIV-1 and RSV subsites surfaces that are responsible for specific recognition of the LTR termini	10
201	Llano	Identification of LEDGF domains responsible for chromatin binding and tethering of lentiviral integrase (IN) proteins	10
202	Cherepanov	Structure of the integrase-binding domain in LEDGF/p75	10

203	Ciuffi	LEDGF/p75 targets HIV DNA integration to LEDGF-responsive genes	10
204	Arnaud	Specific integration process of an endogenous retrovirus in <i>Drosophila</i> genome	10
205	Bushman	Retroviral DNA integration—contrasting distributions for newly inserted and endogenous ASLVs	10
206	Mavilio	Integration of retroviral vectors into the human genome—A molecular follow-up of patients treated with genetically modified T-lymphocytes and stem cell transplantation	10
207	Skalka	Histone H2AX is phosphorylated at sites of retroviral DNA integration, but is dispensable for post-integration repair	10
208	Yoder	The DNA repair genes XPB and XPD defend cells from HIV integration	10
209	Blomberg	Counting on fingers and nucleotides—Tracing retroviral evolution through structural features	10
210	Myers	Large-scale analysis of structural variation in HIV-1 protease	10

**Session 9 POSTER SESSION III**

FRIDAY 5/27/2005, 2:00 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
211	Agopian	Functional analysis of primary HIV-1 Nef alleles from brain and lymphoid tissues	
212	Alexander	Endothelial cells promote HIV-1 replication in suboptimally stimulated memory T cells in a Nef- and Vpr-dependent manner	
213	Bond	Apoptotic peptides derived from HIV-1 Nef induce lymphocyte depletion in mice	
214	Costa	Binding between Nef and GagPol is a conserved function within Lentiviruses and might be important for virus infectivity	
215	Hrecka	Nef proteins from diverse groups of primate lentiviruses downmodulate CXCR4 to inhibit migration to SDF-1 chemokine	
216	Krautkraemer	HIV-1 Nef alters the lipid composition of the viral envelope	
217	Michel	The HIV Nef protein establishes superinfection resistance by a dual strategy to down-modulate cell surface CD4 and CCR5	
218	Raney	Molecular analysis of the activation of Pak2 by HIV Nef	
219	Yang	Nef enhances c-Cbl phosphorylation in HIV-infected CD4 <sup>+</sup> T lymphocytes	
220	Indik	A novel auxiliary protein REM encoded by MMTV	
221	Bouaziz	Structural studies of complexes formed between Vpr, the HIV-1 regulatory protein and peptides containing the WxxF motif	
222	Datta	HTLV-I p30 <sup>II</sup> mediates a delay in cell cycle G2 exit	
223	Jacquot	Binding of HIV-1 Vpr to the nucleoporin hCG1 is required for efficient viral replication in non-dividing cells	

224	Peloponese	HTLV-I Tax interacts with the Ran-GTP network and induces centrosome amplification in primary cells
225	Sheleg	Involvement of telomerase and HTLV-I Tax genes in transformation of primary
226	Hout	The transmembrane domain of Vpu contributes to the pathogenicity of the SHIV <sub>KU-1bMC33</sub> in pig-tailed macaques
227	Pacyniak	Intermolecular interactions of the subtype B and C Vpu proteins results in the restriction of the intracellular transport of the subtype C Vpu to the cell plasma
228	Covaleda	Interaction of the EIAV S2 protein with OS-9
229	Münk	The <i>envelope</i> gene of pathogenic SHIV89.6P does not confer acute pathogenicity upon SIVagm
230	Caporale	Natural transmission of JSRV in lambs and adult sheep—Implications for the pathogenesis of ovine pulmonary adenocarcinoma
231	Debacq	B cell trafficking in BLV infected sheep
232	Flory	Molecular signaling mechanisms involved in lentiviral-induced acute lethal
233	Zhou	HIV induces CD4 <sup>+</sup> cell death at early stages of the viral life cycle
234	Cen	Blocking Vif neutralization action by APOBEC3G-derived peptides
235	Huthoff	Predicted secondary structures of the APOBEC proteins
236	Jonsson	Porcine APOBEC3 restricts HIV-1
237	Khan	Vif may be more than a molecular adapter—Two groups of Vif mutants can be identified based on the presence or absence of dominant negative properties
238	Lovsin	Towards the physiological role of APOBEC3
239	Mansky	Vpr-mediated incorporation of UNG2 into HIV-1 virions—Modulation of the virus mutation rate is not related to UNG catalytic activity
240	Opi	Role of APOBEC3G oligomerization for anti-viral activity
241	Paillart	Specific binding of Vif to the 5'-untranslated region of HIV-1 genomic RNA
242	Santa-Marta	HIV-1 Vif protein blocks the cytidine deaminase activity of B-cell specific aid and APOBEC3G by a similar mechanism of action
243	Strebel	Identification of a novel, degradation-independent effect of HIV-1 Vif on human APOBEC3G
244	Turelli	Innate inhibition of HTLV replication by APOBEC cytidine deaminases
245	Zheng	Determinants for the cross-reactivity of HIV-1 Vif with human APOBEC proteins
246	Apolloni	Tat stimulates HIV-1 reverse transcriptase activity in vitro
247	Balakrishnan	Analyzing HIV-1 recombination mechanisms using a cell culture based system
248	Bampi	New insights into the roles of reverse transcriptase and nucleocapsid protein in the genetic variability of HIV-1

249	Bibillo	Processivity as a measure of DNA polymerase efficiency
250	Chang	Replacement of the RSV PPT with PPTs from other viruses affects the cleavage of the PPT/U3 junction by RSV reverse transcriptase
251	Chen	Comparison of the genetic recombination rates of HIV-1 in macrophages and T
252	DeStefano	HIV-RT binds specific primer-template sequences with very high affinity
253	Götte	Effects of changes in the trajectory of the bound nucleic acid substrate of HIV-1 RT
254	Jamburuthugoda	Kinetic evidence for the interaction of HIV-1 reverse transcriptase with the 3'-OH of the incoming dNTP
255	Julias	Combining mutations in HIV-1 reverse transcriptase with mutations in the HIV-1 PPT affects RNase H cleavages involved in PPT utilization
256	Klarmann	Effects of tyrosine analogs a position 115, the steric gate of HIV-1 reverse
257	Mandal	Replication defects of F61 substitution mutations in HIV-1 reverse transcriptase are a combined result of defects in enzyme function, processivity and strand displacement synthesis
258	Miles	HIV-1 containing a randomized PPT can undergo replication and is integrated
259	Mitchell	Synthesis, processing and composition of the virion-associated HTLV-I reverse transcriptase
260	Mulky	Residues in the p51 subunit $\beta$ 7- $\beta$ 8 loop of HIV-1 reverse transcriptase are essential for viral replication
261	Narayanan	Evaluation of the helix destabilizing activity of HIV-1 nucleocapsid protein at an amino acid level
262	Wu	Stability of local nucleic acid structure is a critical determinants of HIV-1 NC nucleic acid chaperone activity during the minus-strand transfer step in reverse transcription
263	Oh	Mutations in the U5 sequences adjacent to the PBS do not affect tRNA cleavage by RSV RNase H but do cause aberrant integrations
264	Purohit	A role for DNA 3' end directed secondary cleavages in strand transfer by HIV RT
265	Skasko	Mechanistic differences in RNA dependent DNA polymerization and fidelity between MLV and HIV-1 reverse transcriptases
266	Song	Stimulation of HIV-1 minus strong stop transfer by genomic RNA sequences downstream of PBS
267	Very	Correlation of nucleotide pool imbalances by reverse transcriptase inhibitors with increased HIV mutagenesis
268	Wapling	Mutations that abrogate HIV-1 reverse transcriptase dimerization affect reverse transcriptase maturation
269	Wei	Defective replication in HIV-1 using non-tRNA <sup>Lys3</sup> primers for reverse
270	Berro	Acetylated Tat regulates HIV-1 splicing through its interaction with the splicing regulator, p32

271	Gatignol	RNA interference against the cellular TAR RNA binding protein, TRBP, decreases HIV-1 expression and replication
272	Haaland	Role of 7SK snRNA in regulation of HIV-1 Tat function and P-TEFb activity
273	Burke	In vitro model of HIV latency in primary human cells
274	Mok	The efficiency and stability of HIV-1 proviral gene expression after infection
275	Tyagi	The Notch signaling factor CBF-1 specifically represses transcription from the HIV LTR by stimulating histone deacetylation
276	Dakessian	Tissue specificity of the JSRV long terminal repeat
277	Kelly	Persistence of pre-integration transcription from non-integrated HIV-1 DNA in cultured human macrophages
278	Maitra	CCAAT-displacement protein is truncated during mammary differentiation to regulate MMTV expression
279	Bean	Randomization and selection experiments to study RNA elements important for genome packaging in RSV
280	Lanchy	Are translation and encapsidation of HIV-2 RNA regulated by a long distance base pairing interaction?
281	Rizvi	Relative contribution of sequences at the 5' and 3' end of the FIV genome towards RNA packaging
282	Uberla	Influence of the R-region on packaging of the SIV genome
283	Badorrek	Flexible by design—The minimal dimerization active sequence (MiDAS) for the
284	Kovaleski	Interaction between HIV-1 Gag and human lysyl-tRNA synthetase—Implications for the tRNA packaging complex

Keynote Lecture: Beatrice Hahn

FRIDAY 5/27/2005, 7:30 PM

**Session 10 ACCESSORY GENES**

FRIDAY 5/27/2005, 8:45 PM

T. Hope / P. Jolicoeur			
<b>#</b>	<b><u>Iname</u></b>	<b><u>Title</u></b>	<b><u>Talk Length</u></b>
285	Kirchhoff	HIV-2 and most SIV Nef proteins inhibit responsiveness of T cells to activation	10
286	O'Neill	Structural plasticity of HIV-1 Nef in the activation of p21-activated kinase 2	10
287	Goettlinger	Dynamin 2 is specifically required for the infectivity enhancement function of Nef	10
288	Stephens	Substitution of the viroporin of the Vpu in SHIV with that of M2 of influenza A results in a virus that is sensitive to inhibitors of the M2 ion channel and is pathogenic for pig-tailed macaques	10
289	Martin	The recycling endosome is critical for Vpu-mediated enhancement of HIV-1 particle	10
290	Binette	Detailed analysis of the mechanism underlying HIV-1 Vpu-mediated CD4	10

**Session 11 APOBEC**

SATURDAY 5/28/2005, 9:00 AM

R. Harris / K. Strebel

<b>#</b>	<b><u>Iname</u></b>	<b><u>Title</u></b>	<b><u>Talk Length</u></b>
291	Liu	Determinants of APOBEC antiviral function	10
292	Iwatani	The two zinc fingers of APOBEC3G have different roles in nucleic acid binding, deamination and anti-HIV-1 activities—Studies with highly purified enzyme	10
293	Schumacher	APOBEC3 hypermutates genomic data and inhibits Ty1 retrotransposition in yeast	10
294	Bourara	The role of APOBEC3C in the evolution of wild type HIV-1	10
295	Xu	Stoichiometry of the antiviral protein APOBEC3G in HIV-1 virions	10
296	Kleiman	The inhibition of primer tRNA <sup>Lys3</sup> annealing in HIV-1 by human APOBEC3G	10
297	Klein	Association of endogenous APOBEC3G and HP68 in capsid assembly intermediates—Implications for APOBEC packaging and function	10
298	Mehle	A novel zinc-binding motif in HIV Vif required for Cul5 binding and APOBEC3G	10
299	Takeuchi	SIVagm Vif targets a novel APOBEC-independent viral restriction factor in human cells	10
300	Münk	The FV accessory Bet protein inhibits the anti-retroviral activities of APOBEC3	10
301	Derse	HTLV-I avoids the antiviral effects of APOBEC3G by a different mechanism than HIV-	10
302	Schrofelbauer	HIV accessory protein Vpr protects the viral genome by inducing the degradation of the uracil-DNA glycosylases UNG2 and SMUG1	10

**Session 12 REVERSE TRANSCRIPTION / PATHOGENESIS**

SATURDAY 5/28/2005, 2:00 PM

M. Gotte / M. Roth

<b>#</b>	<b><u>Iname</u></b>	<b><u>Title</u></b>	<b><u>Talk Length</u></b>
303	Anthony	In vitro synthesis of long DNA products in reactions with HIV-RT and nucleocapsid protein—Formulation of conditions and analysis of the mechanism	10
304	Garforth	New insights into the mechanism of fidelity of HIV-1 reverse transcriptase	10
305	Chin	Identification of a major restriction in HIV-1 intersubtype recombination	10
306	Boyer	AZT resistance—Why do HIV-1 and HIV-2 choose different pathways?	10
307	Pathak	Mechanism for nucleoside analog-mediated abrogation of HIV-1 replication—Balance between RNase H activity and nucleotide excision	10
308	Le Grice	Exploiting nucleoside analogs which locally increase or decrease nucleic acid flexibility to understand the specificity of polypurine tract utilization	10
309	Rouzina	HIV-1 NC facilitated TAR RNA/DNA annealing is initiated through a loop-loop kissing interaction	10

310	Bhadra	A BALB/cJ congenic strain lacking endogenous <i>Mtvs</i> is resistant to infection by MMTV, TBLV and <i>V. cholerae</i>	10
311	Kreisberg	IL-2 and IL-15 production in solid lymphoid organs is necessary to render naïve CD4 T cells permissive for infection by HIV-1	10
312	Jolicoeur	Nef-mediated loss of CD4 <sup>+</sup> T cells in CD4C/HIV Tg mice is associated with increased in vivo and in vitro apoptosis but is independent of the pro-apoptotic Fas/FasL or TNFR1 pathway and is not prevented by Bcl-2	10
313	Coffin	Stable persistent viremia in HIV-1 infected patients on suppressive antiretroviral therapy is independent of therapy but strongly associated with pretreatment virus	10
314	Maldarelli	Fine structure analysis of HIV-1 sequence variation identifies invariant and highly polymorphic regions in protease and RT	10

**Session 13 RNA SYNTHESIS, EXPORT AND PACKAGING**

SUNDAY 5/29/2005, 9:00 AM

B. Felber / A. Rice

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
315	Felber	The RTE RNA export element interacts with RBM15 protein and is essential for retrotransposition	10
316	Houzet	Nuclear export and packaging of genomic RNA are two coupled processes	10
317	LeBlanc	Both Dbp5 and Tap are involved in the nuclear export of unspliced RSV RNA	10
318	Marquet	Targeting the dimerization initiation site of HIV-1 genomic RNA with aminoglycosides—From crystal to cell	10
319	Kim	Activation of transcription from latent HIV proviruses in response to cellular signals is subject to remarkably tight temporal control	10
320	Ch'ng	Biphasic expression in clones of QT-6 cells containing an ALV provirus	10
321	Rice	Regulation of the HIV Tat co-factor cycle T1 in macrophages	10
322	Williams	Maintenance of HIV latency through inhibition of transcriptional initiation and modulation of chromatin induced by NF-κB1 p50 repressor binding	10