

Final Program

Thirteenth International Conference on Antiviral Research

Sponsored by the
International Society for Antiviral Research

Renaissance Harborplace Hotel
Baltimore, Md., USA

April 16–21, 2000

Monday, April 17

Oral Session I: Retrovirus Infections I

Chairpersons: John C. Martin and George J. Galasso

- 8:30am Welcome - John C. Martin, President, ISAR
George J. Galasso, Chair, Local Organizing Committee
- 8:45 Plenary Speaker
Robert C. Gallo, Institute of Human Virology, Baltimore, Md., USA
“Pathogenesis of HIV Infections”
- 9:15 1. L-Enantiomers of 2'- and 3'-Azido-2',3'-Dideoxy-5-Fluorocytidine: Stereospecific Synthesis and Antiviral Activity.
G. Gosselin, J.-F. Griffon, L. Hollecker, J.-L. Imbach, M. Bryant, R.F. Schinazi, and J.-P. Sommadossi. CNRS-Université Montpellier II, France; Novirio Pharmaceuticals, Cambridge, Mass.; Emory University and VA Medical Center, Decatur, Ga.; and University of Alabama at Birmingham, Birmingham, Ala., USA.
- 9:30 2. Establishment of a CCR5-Expressing T-lymphoblastoid Cell Line Highly Susceptible to R5 HIV-1.
M. Baba, H. Miyake, M. Okamoto, Y. Iizawa, and K. Okonogi. Kagoshima University, Kagoshima; Takeda Chemical Industries, Osaka, Japan.
- 9:45 3. Increased Pyrophosphorolysis of Mutant HIV RT Enzymes Correlates with Decreased Processivity.
L.K. Naeger, N.A. Margot, and M.D. Miller. Gilead Sciences, Foster City, Calif., USA.
- 10:00 Break
- 10:30 4. Viral Entry as the Primary Target of Anti-HIV Activity of Chicoric Acid and its Tetra-Acetyl Esters.
C. Pannecouque, W. Pluymers, V. Fikkert, N. Neamati, C. Marchand, T.R. Burke, Jr., Y. Pommier, E. De Clercq, Z. Debyser, and M. Witvrouw. Rega Institute for Medical Research, K.U. Leuven, Leuven, Belgium; and National Cancer Institute, Bethesda, Md., USA.
- 10:45 5. Importance of Stereochemistry in the Design and Selection of Resistance Mutations to D4-Nucleosides.
R.F. Schinazi, B. Pai, S. Schlueter-Wirtz, S.A. Martin, P.M. Tharnish, D.C. Liotta, C.K. Chu, J.L. Hammond, and J.W. Mellors. Emory University/VAMC, Atlanta, Ga.; Pharmasset, Inc, Tucker, Ga.; University of Georgia, Athens, Ga.; and University of Pittsburgh/VAMC, Pittsburgh, Pa., USA.
- 11:00 6. Inhibition of HIV-1 Replication by the Cre-loxP Hammerhead Ribozyme.
H. Takaku, Y. Habu, T. Takeuchi, Y.N. Miyano-Kurosaki, Y. Tamura, and K. Takai. Department of Industrial Chemistry and High Technology Research Center, Budanuma, Narashino, Chiba, Japan.

- 11:15 7. Highly Polar, Water-Soluble Prodrugs of the HIV Protease Inhibitor Amprenavir: A New Approach Toward a More Compact Dosing Regimen.
A. Spaltenstein, C. Baker, Y. Graynunez, I. Kaldor, W. Kazmierski, D. Reynolds, R. Tung, P. Wheelan, and E. Furfine. Glaxo Wellcome, Inc., Research Triangle Park, N.C.; and Vertex Pharmaceuticals, Cambridge, Ma., USA.
- 11:30 8. HIV-1 RT Mutations in Patients After 24 Weeks of Tenofovir Disoproxil Fumarate (formerly PMPA Prodrug) Therapy.
M.D. Miller; N.A. Margot, R. Mills, and I. McGowan. Gilead Sciences, Foster City, Calif., USA.
- 11:45 9. Prevention of Mucosal HIV Transmission by Topical Anticellular Substances that Target the HIV-Infected Lymphocytes in Seminal Fluid.
S. Baron, D. Nguyen, J. Poast, and M.W. Cloyd. University of Texas Medical Branch, Galveston, Tex., USA.
- 12:00 Lunch

Oral Session II: Herpesvirus Infections I

Chairpersons: Karen K. Biron and Paul D. Griffiths

- 1:30pm Plenary Speaker
Michael G. Rossmann, Purdue University, West Lafayette, Ind., USA
“Inhibition of Rhinoviruses and Enteroviruses by Capsid-Binding Antiviral Compounds”
- 2:00 “Gertrude B. Elion Award for Scientific Excellence”
to be presented by John C. Martin, President, ISAR
- 2:15 10. Spiropentane Analogues of Nucleosides: Chemistry and Antiviral Activity.
J. Zemlicka, H.-P. Guan, Y.-C. Cheng, J.C. Drach, and E.R. Kern. Wayne State University School of Medicine, Detroit, Mich.; University of Michigan, Ann Arbor, Mich.; and University of Alabama School of Medicine, Birmingham, Ala., USA.
- 2:30 11. Antiviral Activity of D- and L-Enantiomers of Cyclohexenyl Guanine.
G. Andrei, J. Wang, R. Snoeck, E. De Clercq, and P. Herdewijn. Rega Institute for Medical Research, K.U. Leuven, Leuven, Belgium.
- 2:45 12. Inhibition of Cellular Cyclin-Dependent Kinases as a Possible Mechanism of Action for Pyrrolo[2,3-*d*]pyrimidine Nucleoside Analogs.
D.L.Evers, J.M. Breitenbach, K.Z. Borysko, L.B. Townsend, and J.C. Drach. University of Michigan, Ann Arbor, Mich., USA.
- 3:00 13. A comparison of the SCID-hu Retinal Implant and Thy/Liv Implant Models for Determining the Efficacy of Antiviral Therapies Against Human Cytomegalovirus Replication.
D.J. Bidanset, R.J. Rybak, J. Palmer, C.B. Hartline and E.R. Kern. The University of Alabama School of Medicine, Birmingham, Ala., USA.
- 3:15 14. Emergence of Ganciclovir-Resistant Cytomegalovirus Disease Among Solid Organ Transplant (SOT) Recipients.
A.P. Limaye, L. Corey, D.M. Koelle, C.L. Davis, and M. Boeckh. University of Washington; and Fred Hutchinson Cancer Research Center, Seattle, Wash., USA.
- 3:30 15. Novel and Potent Anti-EBV Compound, L-I-OddU Dependents its Activity on EBV Thymidine Kinase.
T. Kira, S. Shigeta, and Y.-C. Cheng. Fukushima Medical University, Fukushima, Japan; and Yale University, New Haven, Conn., USA.
- 3:45 16. 1263W94 Inhibits the Phosphorylation of EBV DNA Polymerase Processivity Factor BMRF1 by EBV Protein Kinase BGLF4.
E. Gershburg, C. Talarico, M. Davis, P. Sethna, and J.S. Pagano. University of North Carolina, Chapel Hill; and Glaxo Wellcome, Inc., Research Triangle Park, N.C., USA.

Poster Session I: Retrovirus Infections I

4:00 – 6:00pm

17. 4-Alkoxy-Substituted 1-Benzyl-2-Phenyl-Benzimidazoles as NNRTIS: Synthesis and Biological Activity.

- G. Pürstinger, M. Witvrouw, C. Pannecouque, J. Balzarini, and E. De Clercq. Rega Institute for Medical Research, Leuven, Belgium; and Universität Innsbruck, Innsbruck, Austria.
18. Synthesis and Metabolic Study of 1*H*,3*H*-oxazolo[3,4-*a*]benzimidazoles, a New Class of Non-Nucleoside HIV-1 RT Inhibitors.
A. Chimirri, E. De Clercq, A.M. Monforte, P. Monforte, C. Pannecouque, A. Rao, M. Witvrouw, and M. Zappalà. Università di Messina, Italy; Rega Institute for Medical Research, Leuven, Belgium; and Università di Catanzaro "Magna Graecia", Italy.
 19. Anti-HIV-1 Activity of a Novel Nonnucleoside Reverse Transcriptase Inhibitor of HIV-1 (SJ3366 a Pyrimidinedione Analog) used in Combination with other Inhibitors of HIV-1 Replication.
J.D. Russell, S. Palmer, R.W. Buckheit, J.-W. Lee, H.-H. Lee, J.-W. Oh, H.-S. Kwon, S.-G. Chung, and E.-H. Cho. Southern Research Institute, Frederick, Md., USA; and Samjin Pharmaceutical Co., Ltd., Seoul, Korea.
 20. Phosphorylation of anti-HIV Nucleotides AZT, d4T and ddNTP by Nucleoside Diphosphate Kinase.
D. Deville-Bonne, B. Schneider, P. Meyer, R. Sarfati, B. Canard, J. Janin, and M. Véron. Unité de Chimie Organique, Institut Pasteur, Paris; and CNRS, Marseille, France.
 21. Anti-HIV-1 Activity of PMEA, PMPA (9-(2-phosphonylmethoxypropyl)adenine) and AZT against HIV-1 Subtypes A, B, C, D, E, F, G and O.
S. Palmer, R.W. Buckheit, H. Gilbert, N. Shaw, and M.D. Miller. Southern Research Institute, Frederick, Md.; and Gilead Sciences, Foster City, Calif., USA.
 22. Antiviral Amino Acid Carbamate Derivatives of AZT.
C.R. Wagner, S.-L. Chang, G. Griesbraber, T.W. Abraham, T. Garg, H. Song, and C.L. Zimmerman. University of Minnesota, Minneapolis, Minn., USA.
 23. Quaternary Ammonium Salts Inhibiting HIV Replication *in vitro*.
C. Pannecouque, V. Fikkert, D. Schols, E. De Clercq, and M. Witvrouw. Rega Institute for Medical Research, K.U. Leuven, Leuven, Belgium.
 24. Total Synthesis of the Natural Products Inophyllum B, Cordatolide A, B and their Analogues 11-demethyl Cordatolide A and B. Non-Nucleoside Inhibitors of HIV-1 Reverse Transcriptase.
L. Wang, Q. Gao, X.-T. Liang, X.-H. Chen, X.-Q. Zhang, and H.-S. Chen. Institute of Materia Medica, Institute of Medicinal Biotechnology, Peking Union Medical College & Chinese Academy of Medical Sciences, Beijing, China.
 25. Electrostatic Potential Surfaces of Nucleosides and Nucleotides: Correlations with Inhibitors of HIV Reverse Transcriptase.
V. Nair and T. Mickle. The University of Iowa, Iowa City, Iowa, USA.
 26. Synthesis of Aminoacids Derivatives as Rev-RRE Binding Inhibitors, using Solid Phase Combinatorial Chemistry.
G. Jimenez-Bueno, C. Simons, and I.H. Gilbert. Cardiff University, Cardiff, U.K.
 27. Naphthoquinones as Antiviral Agents.
D.G. Bourke, J.A.V. Coates, M.P. Collis, I.T. Crosby, P.J. de Bruyn, P.L.C. Keep, M.L. Rose, and

- A.D. Robertson. Monash University, Parkville; and AMRAD Operations Pty., Ltd., Richmond, Victoria, Australia.
28. Does the 2-methylthiomethyl Substituent Really Confer High Anti-HIV-Activity to S- DABOs? T. Marceddu, C. Musiu, A.G. Loi, A. Mai, M. Artico, M. Bryant, J.-P. Sommadossi, and P. La Colla. Novirio Pharmaceuticals, Cambridge, Mass., USA; Università di Cagliari; Università “La Sapienza” di Roma, Rome, Italy; and University of Alabama at Birmingham, Birmingham, Ala., USA.
 29. Different Adamantane Derivatives Inhibit HIV-1 Replication *In Vitro*. M. Bourchteine, A. Serbin, T. Khakhulina, and Alissa Boukrinskaya. AIDS Prevention Center “Antivich”; Health Research and Development Foundation; and D.I. Ivanovsky Institute of Virology; Moscow, Russia.
 30. Recognition and Inhibition of HIV Integrase by Novel Dinucleotides. V. Nair, M. Taktakishvili, N. Neamati, and Y. Pommier. The University of Iowa, Iowa City, Iowa; and National Cancer Institute, Bethesda, Md., USA.
 31. Intermolecular Interactions of the Pr55^{gag} Polyprotein and the Processed Matrix and Capsid Proteins of HIV-1. A.-D. Ellenrieder, R. Böttcher, B. Kattenbeck, H. Wolf, and S. Modrow. Institute for Medical Microbiology and Hygiene, Regensburg, Germany.
 32. The Activity of Mg²⁺ and Poly r(A-U) against HIV-1. M.R. Nassiri, J.M. Jamison, J. Gilloteaux, C.-c. Tsai, and J.L. Summers. Lake Erie College of Osteopathic Medicine, Erie, Pa.; Summa Health System/NE Ohio University College of Medicine, Rootstown, Ohio; and Kent State University, Kent, Ohio, USA.
 33. Temacrazine Inhibits Initiation of HIV-1 Transcription. J.A. Turpin, L. Pallansch, C. Michejda, W.C. Chlody, W.G. Rice, and R.W. Buckheit, Jr. Southern Research Institute; Achillion Pharmaceuticals, Frederick, Md.; and National Cancer Institute – Frederick Cancer Research and Development Center, Frederick, Md., USA.
 34. A Highly Potent NNRTI Possessing Potential Dual Activity Against HIV-1 Reverse Transcriptase and a Post-Attachment Intermediate. C. Lackman-Smith, K. Watson, J.A. Turpin, L.A. Pallansch, S. Kodihalli, S.-G. Chung, E.-H. Cho, and R.W. Buckheit, Jr. Serquest-Southern Research Institute, Frederick, Md., USA; and Samjin Pharmaceutical Co., Ltd., Seoul, Korea.
 35. Suppression of TNF- α - and HIV-1 gp120-induced Neural Cell Death by an Anti-Inflammatory Alkaloid, Cepharanthine. M. Okamoto, M. Ono, and M. Baba. Kagoshima University, Kagoshima; and Kaken Shouyaku Co., Tokyo, Japan.
 36. Intracellular Metabolism of 3-Methyl-CycloSal-D4TMP and 3-Methyl-CycloSal-AZTMP: Same Concept but Different Antiviral Outcome. J. Balzarini, T. Knispel, L. Naesens, E. De Clercq, and C. Meier. Rega Institute for Medical Research, K.U. Leuven, Leuven, Belgium; and University of Hamburg, Hamburg, Germany.

37. Treatment of Human T-Lymphoid Cell Lines with Pharmacological Relevant Cytarabine Concentrations Results in Decreased CD4 Expression and Reduced HIV-1 Susceptibility. B. Gröschel, A. Kaufmann, J. Cinatl, H.W. Doerr, and J. Cinatl Jr. Johann Wolfgang Goethe University, Frankfurt/M., Germany.
38. Effects of ADA on Intracellular Nucleoside Triphosphate Pools and Implications for use in Combination Therapy. M.A. Ussery, H. Zhang, O.L. Wood, C. Pannecouque, E. De Clercq, and M. Witvrouw. Innogenetics, Inc., Alpharetta, Ga.; FDA, Rockville, Md., USA; and Rega Institute for Medical Research, Leuven, Belgium.
39. Structure-Activity Relationship Studies of Nucleoside Analogs with Anti-HIV Activity using Structure-Activity Maps. R.R. Parakulam, M.L. Lesniewski, and C.-c. Tsai. Kent State University, Kent, Ohio, USA.
40. High Cellular Uptake of Lipophilic Oligonucleotide Prodrugs. J.-L. Imbach, J.-C. Bologna, J.-C. Bres, T. Lioux, I. Lefebvre, J.-J. Vasscur, E. Vives, and F. Morvan. Universite de Montpellier II, Montpellier, France.
41. *In Vitro* Cytotoxicity of Adefovir (ADV) Mediated by the Human Renal Organic Anion Transporter 1 (hOAT1) is Efficiently Reduced in the Presence of Various Nonsteroidal Anti-Inflammatory Drugs (NSAIDs). T. Cihlar, A.S. Mulato, E.S. Ho, and D.C. Lin. Gilead Sciences, Foster City, Calif., USA.
42. HIV Drug Resistant Quasispecies Analysis in Plasma, PBMC and Viral Isolates from HAART Experienced Patients. F. Baldanti, S. Paolucci, D. Lilleri, M. Zavattoni, E. Cattaneo, L. Dossena, and G. Gerna. IRCCS Policlinico S. Matteo, Pavia, Italy.
43. A Continuous Time-Resolved Fluorescence Assay for Human Immunodeficiency Virus Reverse Transcriptase to Determine Enzymatic Mechanisms of Resistance. G.B. Roberts, R. Ferris, K.L. Weaver, S.A. Short, L. Boone, J.H. Chan, D.J.T. Porter, and E.S. Furine. Glaxo Wellcome, Inc.; Research Triangle Park, N.C., USA.
44. Sensitivity of Mutant HIV-1 rRT to DABOs. C. Musiu, T. Marceddu, A.G. Loi, A. Mai, M. Bryant, J.-P. Sommadossi, and P. La Colla. Novirio Pharmaceuticals, Inc., Cambridge, Mass., USA; Università di Cagliari; Università “La Sapienza” di Roma, Rome, Italy; and University of Alabama at Birmingham, Birmingham, Ala., USA.
45. Inhibition of HIV Reverse Transcriptase Inhibitor- and Protease Inhibitor-Resistant Molecular Clones of HIV by the Biological Response Modifier, Ampligen. W.E. Robinson, Jr.; B.R. McDougall, and R.J. Essey. University of California, Irvine, Calif., USA.
46. Mixed Dose Effect Analysis of a Biological Response Modifier (Ampligen) with 14 FDA-Approved Anti-HIV Agents. W.E. Robinson, Jr., B.R. McDougall, and R.J. Essey. University of California, Irvine, Calif., USA.

47. Unusual Resistance Profile of Conocurvone, an Early-Stage Inhibitor of HIV-1 Replication. M. Kearney, L.A. Pallansch, S. Cox, J. Coates, and R.W. Buckheit. Southern Research Institute, Frederick, Md., USA; and AMRAD Operations Pty Ltd., Victoria, Australia.
48. Genotypic and Phenotypic Analysis of HIV-1 from Patients Experiencing Virological Failure While on Combination Therapy Containing Two Nucleoside Reverse Transcriptase Inhibitors (NRTIs) and the NNRTI, Emivirine (EMV, MKC-442): 48 Week Follow Up. C. Klish, J. Harris, K. Borroto-Esoda, L. Fang, and B. McCreedy. Triangle Pharmaceuticals, Inc., Durham, N.C., USA.
49. The Evolution of HIV-1 Resistance Mutations in Two French Couples. S. Palmer, V. Hellmann, R. Shafer, L. Pallansch, T.C. Merigan, R.W. Buckheit, and D. Vuitton. Southern Research Institute, Frederick, Md.; Stanford University, Stanford, Calif., USA; and Université de Franche-Comte, Besancon, France.
50. Treatment Naïve HIV-1 Infected patients Respond Immunologically when Administered HE2000; Results from a Phase I/II Clinical Trial. J. Frincke, N. Onizuka-Handa, D. Stickney, C. Ahlem, and C. Reading. Hollis-Eden Pharmaceuticals, Inc., San Diego, Calif., USA.
51. The Vaginal Environment: Studying Parameters Which Influence Microbicide Cytotoxicity. B.J. Catalone, F.C. Krebs, S.R. Miller, D. Malamud, M.K. Howett, and B. Wigdahl. Penn State College of Medicine, Hershey, Pa.; University of Pennsylvania School of Dental Medicine; and Biosyn, Inc., Philadelphia, Pa., USA.
52. Sensitivity of HIV-1-susceptible Immune Cell Targets to Topical Microbicides Nonoxynol-9 (N-9), C31G, and Sodium Dodecyl Sulfate (SDS). S.R. Miller, F.C. Krebs, B.J. Catalone, D. Malamud, M.K. Howett, and B. Wigdahl. Penn State College of Medicine, Hershey; University of Pennsylvania School of Dental Medicine; and Biosyn, Inc., Philadelphia, Pa., USA.
53. Sodium Dodecyl Sulfate (SDS) and C31G as Effective Microbicidal Alternatives to Nonoxynol-9 (N-9): Comparative Cytotoxicity in Primary Human Vaginal Keratinocytes. F.C. Krebs, S.R. Miller, B.J. Catalone, P.A. Welsh, D. Malamud, M.K. Howett, and B. Wigdahl. Penn State College of Medicine, Hershey, Pa.; University of Pennsylvania School of Dental Medicine; and Biosyn, Inc., Philadelphia, Pa., USA.
54. Novasomes and Sodium Dodecyl Sulfate (SDS) Enhance the Microbicidal Efficacy of Nonoxynol-9. F.C. Krebs, B.J. Catalone, S.R. Miller, D.C. Wright, M.K. Howett, and B. Wigdahl. Penn State College of Medicine, Hershey, Pa.; and Novavax, Inc.; Rockville, Md., USA.
55. National Cancer Institute: Connections with Commercial Partners for Technology Development. B. Gabrielsen, K. Carroll, T. Stackhouse, H. Symonds, S. Amoroso, K. Maurey, and K. Sybert. National Cancer Institute – Frederick Cancer Research and Development Center; Bethesda, Md., USA.

Tuesday, April 18

Oral Session III: Respiratory Virus Infections I

Chairpersons: Frederick G. Hayden and Robert W. Sidwell

- 8:30am Plenary Speaker
Richard T. Johnson, Johns Hopkins School of Public Health and Hygiene, Baltimore, Md., USA
“Slow Virus Infections of the CNS”
- 9:00 56. NMS03, A Potent Inhibitor of Respiratory Syncytial Virus (RSV) Infection In Vitro and In Vivo.
S. Shigeta, S. Mori, K. Kimura, and M. Terada. Fukushima Medical University; and Nissui Food Product, Co., Fukushima, Japan.
- 9:15 57. VP14637: A Sub-nanomolar Inhibitor of Respiratory Syncytial Virus.
D.C. Pevear, T.M. Tull, R. Drenzo, T.J. Nitz, and M.S. Collett. ViroPharma Incorporated, Exton, Pa., USA.
- 9:30 58. Design, Synthesis and Activity of Substituted Pyrrolidine Influenza Neuraminidase Inhibitors.
C. Zhao, C. Maring, M. Sun, K. Stewart, V. Stoll, Y., Xu, Y. Gu, A. Krueger, T. Herrin, H. Sham, W.G. Laver, D. Madigan, A. Kennedy, W. Kati, D. Montgomery, A. Saldivar, D. Kempf, and W. Kohlbrenner. Abbott Laboratories, Abbott Park, Ill., USA; and Australian National University, Canberra, Australia.
- 9:45 59. Novel Amino Acid Inhibitors of Influenza Neuraminidase.
W.M. Kati, C. Maring, G. Wang, D. Montgomery, V. Giranda, V. Stoll, W.G. Laver, and D. Norbeck. Abbott Laboratories, Abbott Park, Ill., USA; and Australian National University, Canberra, Australia.
- 10:00 Break
- 10:30 60. The Neuraminidase Inhibitor Oseltamivir is Efficacious Against A/Hong Kong/156/97 (H5N1) and H9N2 Influenza Viruses.
I.A. Leneva, N. Roberts, and R.G. Webster. St. Jude Children’s Research Hospital, Memphis, Tenn., USA; Roche Discovery Welwyn, Roche Products, Ltd., Welwyn Garden City, U.K.; University of Tennessee, Memphis, Tenn.; and Russian Chemical @ Pharmaceutical institute, Moscow, Russia.
- 10:45 61. A New Class of Cyclopentane Derivatives with Potent Inhibitory Activity Against Influenza A and B Viruses in Cell Culture.
D.F. Smee, A.C. Morrison, J.H. Huffman, D.L. Barnard, P.C. Wagaman, K. Bush, and R.W. Sidwell. Utah State University, Logan, Utah; R.W. Johnson Pharmaceutical Research Institute, La Jolla, Calif., and Raritan, N.J., USA.
- 11:00 62. *In Vivo* Influenza-Inhibitory Effects of the Orally Administered Cyclopentane Neuraminidase Inhibitor RWJ-270201.

R.W. Sidwell, D.F. Smee, K.W. Bailey, J.H. Huffman, D.L. Barnard, M.-H. Wong, K. Bush, and Y.S. Babu. Utah State University, Logan, Utah; The R.W. Johnson Pharmaceutical Research Institute, Raritan, N.J.; and BioCryst Pharmaceuticals, Inc., Birmingham, Ala., USA.

- 11:15 63. Cross Resistance of Influenza Virus Mutants to NA Inhibitors: Zanamivir, GS4071, and RWJ-270201.
L.V. Gubareva, R.G. Webster, and F.G. Hayden. University of Virginia, Charlottesville, Va.; and St. Jude Children's Research Hospital, Memphis, Tenn., USA.
- 11:30 64. Age Related Differences in Virus Titers in Patients in Influenza Trials of Oseltamivir, A Novel Oral Influenza Therapy.
ADME Osterhaus, J.S. Oxford, H. Jackson, and P. Ward. Erasmus University, The Netherlands; and Roche Global Development, U.K.
- 11:45 65. Oral Oseltamivir in Experimental Human Influenza B Virus Infection: Lack of Resistance Emergence.
F.G. Hayden, P. Ward, and N. Roberts. University of Virginia, Charlottesville, Va., USA; and Roche Global Development, Welwyn, U.K.

12:00 Lunch

Oral Session IV: Hepadnavirus Infections

Chairpersons: Koen Andries and Catherine A. Laughlin

- 1:30 Plenary Speaker
Yves Pommier, National Cancer Institute, Bethesda, Md., USA
"The HIV Integrase as a Target for Antiviral Drug Development"
- 2:00 66. Dendrimers. Novel Antiviral Structures.
G. Holan, B.R. Matthews, B. Korba, E. De Clercq, M. Witvrouw, E. Kern, R. Sidwell, D. Barnard, and J. Huffman. Biomolecular Research Institute, Melbourne, Australia; Georgetown University, Rockville, Md., USA; Rega Institute, Leuven, Belgium; University of Alabama, Birmingham, Ala.; and Utah State University, Logan, Utah, USA.
- 2:15 67. Anti-Hepatitis B Specific β -L-2'deoynucleosides.
M.L. Bryant, G. Gosselin, R.F. Schinazi, J.-L. Imbach, and J.-P. Sommadossi. Novirio Pharmaceuticals, Cambridge, Mass., USA; University de Montpellier II, France; Emory University and VA Medical Center, Decatur, Ga.; and University of Alabama at Birmingham, Birmingham, Ala., USA.
- 2:30 68. Inhibitory Activity of New Nucleoside Analogs on Wild Type and YMDD Mutants of the Hepadnavirus Reverse Transcriptase.
B. Seignères, C. Pichoud, S. Germon, P. Furman, C. Trépo, and F. Zoulim. INSERM, Lyon, France; and Triangle Pharmaceuticals, Durham, N.C., USA.
- 2:45 69. Comparison of the Anti-HBV Activities of Lamivudine, Adefovir, Famciclovir, Lobucavir,

and Emtricitabine Against Wild-type and Lamivudine-Resistant HBV Polymerases *In Vitro*. X. Xiong, H. Yang, C.E. Westland, K. Das, S.G. Sarafinos, E. Arnold, and C.S. Gibbs. Gilead Sciences, Foster City, Calif.; and CABM, Rutgers University, Piscataway, N.J., USA.

- 3:00 70. Cellular Pharmacology of β -L-thymidine (L-dT, NV-02B) and β -L-2'-deoxycytidine (L-dC, NV-02C) in HepG2 Cells and Primary Rat, Monkey and Human Hepatocytes. L. Placidi, B. Hernández, E. Cretton-Scott, A. Faraj, M. Bryant, J.-L. Imbach, G. Gosselin, C. Pierra, D. Dukhan, and J.-P. Sommadossi. University of Alabama at Birmingham, Birmingham, Ala.; Novirio Pharmaceuticals, Cambridge, Mass.; and University de Montpellier II, France.
- 3:15 71. The Trimeric Mouse System: A Model for HCV Infection and Evaluation of Antiviral Drugs. E. Ilan, R. Eren, O. Nussbaum, I. Lubin, D. Terkieltaub, O. Ben-Moshe, Y. Arazi, S. Berr, J. Gopher, A. Kitchinzky, D. Shouval, E. Galun, Y. Reisner, and S. Dagan. XTL Biopharmaceuticals, Kiryat Weizmann, Rehovot; Hadassah University Hospital, Jerusalem; and the Weizmann Institute of Science, Rehovot, Israel.
- 3:30 72. Mutations in the Woodchuck Hepatitis B Virus (WHV) Genome that Confer Resistance to Lamivudine and Penciclovir. B. Korba, K. Tatti, F. Wells, J. Gerin, and R. Schinazi. Georgetown University, DMVI, Rockville, Md.; and Emory University, VAMC, Decatur, Ga., USA.
- 3:45 73. Viral Dynamics Analysis of HBV Clearance Under Different Antiviral Treatment Regimens Using a Mathematical Model. M. Tsiang, G.K.K. Lau, L. Cheeseman, A. Murray, and C.S. Gibbs. Gilead Sciences, Foster City, Calif., USA; and Queen Mary Hospital, Hong Kong.

Poster Session II: Respiratory, Hepadnavirus, Papillomavirus Infections

4:00 – 6:00pm

74. Inhibition of Influenza Neuraminidases by RWJ-270201: Mechanistic Analysis and Comparison to Zanamivir and GS4071. E.Z. Baum, K. Andries, R. Willebrords, L. Ly, and K. Bush. R.W. Johnson Pharmaceutical Research Institute, Raritan, N.J., USA; and Janssen Research Foundation, Beerse, Belgium.
75. A Pharmacodynamic Evaluation of a Murine Model of Influenza Predicts efficacy for Once Daily Dosing of RWJ-270201, a Novel Neuraminidase Inhibitor. G.L. Drusano, S.L. Preston, D. Smee, K. Bush, K. Bailey, and R. Sidwell. Albany Medical College, Albany, N.Y.; Utah State University, Logan, Utah; and The R.W. Johnson Pharmaceutical Research Institute, Raritan, N.J., USA.
76. New Approaches for the Inhibition of Influenza Neuraminidase. C. Maring, C. Zhao, K. Stewart, V. Stoll, W. Kati, D. Madigan, M. Sun, Y. Xu, A. Kennedy, Y. Gu, A. Krueger, T. Herrin, W.G. Laver, A. Saldivar, D. Montgomery, S. Muchmore, D. Kempf, and W. Kohlbrenner. Abbott Laboratories, Abbott Park, Ill., USA; and Australian National University, Canberra, Australia.

77. Pitfalls in the Biochemical Evaluation of Influenza Neuraminidase Inhibitors.
W.M. Kati, A. Saldivar, C. Maring, D. Madigan, Y. gu, M. Sun, A. Krueger, and C. Zhao. Abbott Laboratories, Abbott Park, Ill., USA.
78. Oseltamivir Treatment of Experimental Influenza A/Texas/36/91 (H1N1) Virus Infection in Humans: Selection of a Novel Neuraminidase Variant.
L.V. Gubareva, C.Y. Tai, D.B. Mendel, J. Ives, J. Carr, N.A. Roberts, and F.G. Hayden. University of Virginia, Charlottesville, Va.; Gilead Sciences, Inc., Foster City, Calif., USA; and Roche Discovery Welwyn, Welwyn Garden City, U.K.
79. Virological Assessment *in vitro* and *in vivo* of an Influenza H1N1 Virus with a H274Y Mutation in the Neuraminidase Gene.
J. Carr, J. Ives, N. Roberts, L. Kelly, R. Lambkin, J. Oxford, C.Y. Tai, D. Mendel, and F. Hayden. Roche Discovery Welwyn, Welwyn Garden City, U.K.; Retroscreen, Ltd.; Gilead Sciences, Foster City, Calif.; and University of Virginia, Charlottesville, Va., USA.
80. Characterization of an Influenza A Virus Variant Selected *in vitro* in the Presence of the Neuraminidase Inhibitor, GS4071.
Z.M. Wang, C.Y. Tai, and D.B. Mendel. Gilead Sciences, Foster City, Calif., USA.
81. Studies on the Mechanism by which Mutations at His274 Alter Sensitivity of Influenza A Virus Neuraminidase Type 1 to GS4071 and Zanamivir.
Z.M. Wang, C.Y. Tai, and D.B. Mendel. Gilead Sciences, Foster City, Calif., USA.
82. Generation and Characterization of a Mutant of Influenza A Virus Selected with the Neuraminidase Inhibitor RWJ-270201.
S. Bantia, S. Ananth, L. Horn, C. Parker, U. Gulati, P. Chand, Y. Babu, and G. Air. BioCryst Pharmaceuticals, Inc., Birmingham, Ala.; University of Oklahoma Health Sciences Center, Oklahoma City, Okla., USA.
83. Antiinfluenza and Anti-HSV Activity of the Aminocaproic Acid Derivative Acemin.
V.P. Lozitsky, A.S. Fedchuk, L.I. Zubareva, and T.L. Gridina. Ukrainian Mechnikov Research Institute of Emerging Infections, Odessa, Ukraine.
84. In Vitro Efficacy of 2,7-Dialkylamino-[1,8]-naphthyridines Against Influenza Viruses A and B.
M. Schmidtke, Ch. Hoock, J. Reichert, M. Dahse, and E. Birch-Hirschfeld. Friedrich-Schiller-University of Jena, Hans Knöll-Institute for Natural Product Research, Jena, Germany.
85. Utilization of Alpha 1-Acid Glycoprotein Levels in the Serum as a Parameter for *In Vivo* Assay of Influenza Virus Inhibitors.
M.-H. Wong, D.L. Barnard, M.K. Jackson, D.F. Smee, R.A. Burger, and R.W. Sidwell. Utah State University, Logan, Utah, USA.
86. In Vitro and In Vivo Anti-Influenza A Virus Activity of Antisense Phosphorothioate Oligonucleotides Containing 2'-O-methylnucleosides (Gap-ODNs).
T. Abe, T. Mizuta, T. Hatta, T. Yokota, and H. Takaku. Chiba Institute of Technology, Chiba; and Rational Design Laboratories, Fukushima, Japan.

87. XTT and WST-1 – Two Highly Sensitive Tetrazolium Reduction Assays for Screening of Anti-Influenza Agents in MDCK Cells.
R. Klöcking, U. Jeske, I. Faust, A. Sauerbrei, M. Schacke, and P. Wutzler. Friedrich Schiller University Jena, Institute for Antiviral Chemotherapy, Erfurt, Germany.
88. β -L-Thymidine and β -L-2'-deoxycytidine are Potent, Selective and Specific Anti-Hepatitis B Virus Agents.
A. Faraj, A.G. Loi, L. Cui, M.Y. Xie, M. Bryant, E.G. Bridges, A. Juodawlkis, C. Pierra, D. Dukhan, G. Gosselin, J.-L. Imbach, R.F. Schinazi, B. Pai, B. Korba, P. Marion, and J.-P. Sommadossi. University of Alabama at Birmingham, Birmingham, Ala.; Novirio Pharmaceuticals, Cambridge, Mass.; University de Montpellier II, France; Emory University and VA Medical Center, Decatur, Ga.; Georgetown University, Rockville, Md.; and Stanford University, Stanford, Calif., USA.
89. β -L-2'-Deoxynucleosides as Potent Anti-HBV Agents (Part I): Large-Scale Stereospecific Synthesis of β -L-2'-Deoxyadenosine.
D. Dukhan, C. Pierra, M. Bryant, J.-P. Sommadossi, J.-L. Imbach, and G. Gosselin. Novirio-CNRS-Université Montpellier II, France; Novirio Pharmaceuticals, Cambridge, Mass.; and University of Alabama at Birmingham, Birmingham, Ala., USA.
90. β -L-2'-Deoxynucleosides as Potent Anti-HBV Agents (Part II): Large-Scale Stereospecific Syntheses of β -L-2'-Deoxycytidine and β -L-Thymidine.
C. Pierra, D. Dukhan, M. Bryant, J.-P. Sommadossi, J.-L. Imbach, and G. Gosselin. Novirio-CNRS-Université Montpellier II, France; Novirio Pharmaceuticals, Cambridge, Mass.; and University of Alabama at Birmingham, Birmingham, Ala., USA.
91. Antiviral Activity of β -L-thymidine and β -L-2'-deoxycytidine in the Woodchuck Model of Chronic Hepatitis B Infection.
E.G. Bridges, A. Juodawlkis, A. Faraj, B. Tennant, B. Korba, R.F. Schinazi, T. Barnett, G. Gosselin, J.-L. Imbach, C. Pierra, D. Dukhan, J.-P. Sommadossi, and M. Bryant. Novirio Pharmaceuticals, Cambridge, Mass.; University of Alabama at Birmingham, Birmingham, Ala.; Cornell University, Ithaca, N.Y.; Georgetown University, Rockville, Md.; Emory University and VA Medical Center, Decatur, Ga.; USA; and University de Montpellier II, France.
92. Ara-A-5'-phenyl Methoxy Alaninyl Phosphate as a Prodrug of the Adenine arabinoside-monophosphate: Synthesis and Anti Viral Evaluation.
C. Ballatore, C. McGuigan, E. De Clercq, and J. Balzarini. Cardiff University, Cardiff, U.K.; and Rega Institute for Medical Research, Leuven, Belgium.
93. *In Vitro* Screening and Mechanistic Studies of Anti-HBV Compounds.
M. Huang, J. Troxell, M. Wenzel, S. Halliday, L. Pallansch, J. Secrist, and R. Buckheit. Southern Research Institute, Frederick, Md.; and Birmingham, Ala., USA.
94. Anti-HBV and HIV Activities of Chinese Herb Qing Yang Can (QYC).
H. Chen, X. Chen, X. Zhang, Q. Mu, Y. Sheng, and Q. Zhou. Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences, Beijing; and Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, China.

95. Preclinical Evaluation of Two Human Anti-HBV Monoclonal Antibodies in Two Animal Models for HBV Infection.
E. Ilan, R. Eren, O. Nussbaum, I. Lubin, D. Terkieltaub, O. Ben-Moshe, Y. Arazi, S. Berr, J. Gopher, A. Kitchinzky, D. Shouval, E. Galun, Y. Reisner, and S. Dagan. XTL Biopharmaceuticals, Kiryat Weizmann, Rehovot; Hadassah University Hospital, Jerusalem; and the Weizmann Institute of Science, Rehovot, Israel.
96. Optimizing the Detection of Hepatitis B Virus (HBV) Covalently Closed Circular DNA (cccDNA): A Potential Marker for Assessing the Effectiveness of Antivirals.
M. Singh, A. Dicaire, M. Krajden, C. Luscombe, and S.L. Sacks. Viridae Clinical Sciences, Inc.; and The BC Centre for Disease Control Society, Vancouver, B.C., Canada.
97. The Recombinant HBV Baculovirus as an Improved Model for the In Vitro Assessment of Antihepadnaviral Compounds.
W. Delaney IV, D. Colledge, R. Edwards, J. Torresi, R. Chin, T. Shaw, T. Miller, H. Isom, T. Bock, M. Manns, C. Trautwein, and S. Locarnini. Victorian Infectious Diseases Reference Laboratory, North Melbourne, Australia; Penn State College of Medicine, Hershey, Pa.; and Medizinische Hochschule, Hannover, Germany.
98. Inhibition of the Replication of the DNA Polymerase M550V Mutation Variant of Human Hepatitis B Virus by Adefovir, Tenofovir, L-FMAU, DAPD, Penciclovir and Lobucavir.
C. Ying, E. De Clercq, W. Nicholson, P. Furman, and J. Neyts. Rega Institute for Medical Research, K.U. Leuven, Leuven, Belgium; and Triangle Pharmaceuticals, Durham, N.C., USA.
99. Establishment of a Cell Based Assay for Evaluation of Compounds Against HCV NS2-3 Protease Activity.
M. Wenzel, J. Troxell, R. Buckheit Jr., and M. Huang. Southern Research Institute, Frederick, Md., USA.
100. Mechanism of Action Study of Ribavirin on Surrogate Hepatitis C Animal Virus — Bovine Viral Diarrhea Virus.
J. Troxell, M. Wenzel, R. Buckheit, Jr., and M. Huang. Serquest, Southern Research Institute, Frederick, Md., USA.
101. Ribavirin (RBV) Represses Guanylate Nucleotide Pools but Elevates Pyrimidine Pools in Mouse Lymphoma ML1210 Cells as Measured by Capillary Electrophoresis (CE).
H.C. Vo, K. O'Brien, B. Conway, D.D.Y. Chen, and S.L. Sacks. Viridae Clinical Sciences, Inc.; and The University of British Columbia, Vancouver, B.C., Canada.
102. Inhibition of Measles Virus Replication by 5'-Nor Carbocyclic Nucleoside Analogs.
D.L. Barnard, V. Stowell, K.L. Seley, V.R. Hedge, S.W. Schneller, and R.W. Sidwell. Utah State University, Logan, Utah; and Auburn University, Auburn, Ala., USA.
103. Use of Cotton Rats for Preliminary Testing of Potential Measles Virus Antivirals.
P.R. Wyde, E. Guzman, E. De Clercq, J. Neyts, A. Matsuda, K. Chetty, and B.E. Gilbert. Baylor College of Medicine, Houston, Tex., USA; The Rega Institute for Medical Research, Katholieke Universiteit Leuven, Belgium; and Hokkaido University, Sapporo, Japan.

104. In Vitro Inhibitory Effects of Combinations of Picornavirus Replication Inhibitors.
L. Nikolaeva and A.S. Galabov. Bulgarian Academy of Sciences, Sofia, Bulgaria.
105. Development of Resistance to Disoxaril in Cocksackievirus B1 Infected Newborn Mice.
I. Nikolova and A.S. Galabov. Bulgarian Academy of Sciences, Sofia, Bulgaria.
106. Effect of 6-Azacytidine to Experimental Adenoviral Infection.
V.V. Zarubaev, V.P. Sukhinin, N.S. Dyachenko, and L.N. Nosach. Influenza Research Institute, St. Petersburg, Russia; and Microbiology and Virology Institute, Kiev, Ukraine.
107. Activity of Zn-finger Inhibitors Against the Arenaviruses Junin, Tacaribe and Pichinde.
E.B. Damonte, C.C. García, and N.A. Candurra. Universidad de Buenos Aires, Buenos Aires, Argentina.
108. Extracts from Stevia Rebaudiana is a Potent Anti-Rotavirus Inhibitor In Vitro and In Vivo.
K. Takahashi, S. Mori, N. Sato, and S. Shigeta. Fukushima Medical University, Fukushima, Japan; and JBB Stevia Research Institute.

Wednesday, April 19

Oral Session V: Mini-Symposium – New Therapies for Respiratory Virus Infections

Chairpersons: Leroy B. Townsend and Richard J. Whitley

- 8:30am Peter Palese, Mount Sinai School of Medicine, New York, N.Y., USA
“Molecular Targets for Influenza Virus”
- 9:00 Choung Kim, Gilead Sciences, Inc., Foster City, Calif., USA
“Design and Synthesis of Influenza Neuramidase Inhibitors”
- 9:30 Robert A. Sidwell, Utah State University, Logan, Utah, USA
“In Vitro and In Vivo Studies Using Influenza Viruses”
- 10:00 Break
- 10:30 Frederick G. Hayden, University of Virginia, Charlottesville, Va., USA
“Clinical Studies for Influenza Neuramidase Inhibitors”
- 11:00 Ronald B. Turner, Medical University of South Carolina, Charleston, S.C., USA
“Clinical Studies of Pleconaril”
- 11:30 Amy Patick, Agouron Pharmaceuticals, Inc., San Diego, Calif., USA
“Design and Development of an Inhibitor for Rhinovirus Protease”
- 12:00 Larry Corey, Seattle, Wash., USA
Invitation to 14th ICAR
- 12:15 ISAR Business Meeting
- 1:00 Lunch

Free Afternoon

Thursday, April 20

Oral Session VI: Retrovirus Infections II

Chairpersons: Erik De Clercq and Charles W. Flexner

- 8:30am Plenary Speaker
Robert F. Silicano, Johns Hopkins University, Baltimore, Md., USA
“Dynamics of HIV Replication”
- 9:00 109. The Novel NNRTI SJ-3366 Inhibits HIV-1 Through Multiple Mechanisms of Action: Effects on Reverse Transcriptase and Virus Attachment.
R.W. Buckheit, Jr., J.T. Turpin, S.-G. Chung, and E.-H. Cho. Southern Research Institute, Frederick, Md., USA; and Samjin Pharmaceutical Co., Ltd., Seoul, Korea.
- 9:15 110. Tenofovir Exhibits a Highly Favorable Profile in the Experimental Cell Culture Models for Renal Tubular Toxicity.
T. Cihlar, D.C. Lin, and E.S. Ho. Gilead Sciences, Foster City, Calif., USA.
- 9:30 111. Alkylglycerol Foscarnet Analogs Active Against Drug-Resistant HIV-1 are Orally Bioavailable in Mice.
K.Y. Hostetler, K.N. Wright, M.F. Gardner, and J.R. Beadle. VA Medical Center and University of California, San Diego, La Jolla, Calif., USA.
- 9:45 112. Novel Peptides Inhibit HIV-1 Replication in SCID Mice: Relevance of the SCID Mouse Model for Human Trials.
P.L. Black, D.M. Lambert, R.F. Schinazi, and M.A. Ussery. QuadPharma, Inc., Decatur, Ga.; Trimeris, Inc., Research Triangle Park, N.C.; VA Medical Center and Emory University School of Medicine, Atlanta, Ga.; and Innogenetics, Inc., Alpharetta, Ga., USA.
- 10:00 Break
- 10:30 Plenary Speaker
Thomas J. Matthews, Trimeris, Inc., Durham, N.C., USA
“Inhibitors of HIV Fusion”
- 11:00 113. Antiretroviral Therapy During Primary Immunodeficiency Virus Infection can Induce Persistent Suppression of Virus Load and Protection from Heterologous Challenge in Rhesus Macaques.
B. Rosenwirth, P. ten Haaf, W.M.J.M. Bogers, I.G. Nieuwenhuis, H. Niphuis, E.-M. Kuhn, N. Bischofberger, J.L. Heeney, and K. Überla. Biomedical Primate Research Center, Rijswijk, The Netherlands; Gilead Sciences, Inc., Foster City, Calif., USA; and University of Leipzig, Leipzig, Germany.
- 11:15 114. Effects in Macaques of SHIV Infection and HAART on the Expression of P-gp and Cellular Kinases.
S. Jorajuria, P. Clayette, N. Dereuddre-Bosquet, J. Larghero, H. Thiebot, O. Neildez, B. Boson, P. Sellier, B. Vaslin, R. Le Grand, and D. Dormont. CEA, Service de Neurovirologie, CRSSA, Fontenay-aux-Roses; and SPI-BIO, Massy, France.

- 11:30 115. Expression and Function of P-glycoprotein in HIV-1 Infected Patients Receiving Protease Inhibitor.
J.M. Huraux, Ph. Bossi, O. Legrand, A.M. Faussat, F. Bricaire, C. Katlama, J.P. Marie, H. Agut, and V. Calvez. Pitié-Salpêtrière Hospital & Hematology, Paris, France.
- 11:45 116. Accumulation of HIV-1 Gag and Gag-Pol Processing Intermediates in the Presence of Non-peptidomimetic HIV-1 Protease Inhibitors.
R.R. Speck, X.-F. Yu, and C. Flexner. The Johns Hopkins University, Baltimore, Md., USA.
- 12:00 Lunch

Oral Session VII: Herpesvirus II, Papillomavirus Infections

Chairpersons: Hugh J. Field and Earl R. Kern

1:30pm Plenary Speaker

Lawrence R. Stanberry, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA
"The Studies of HSV Vaccines in Commercial Development"

2:00 117. Inhibition of Herpes Simplex Virus (HSV) Entry by a Non-Homologous Peptide.
C.R. Brandt and H. Bultmann. University of Wisconsin Medical School, Madison, Wis., USA.

2:15 118. Particular Characteristics of the Anti-Herpesvirus Activity of (1'S,2'R)-9-[[1',2'-bis(hydroxymethyl)cycloprop-1'-yl]methyl]guanine (A-5021).
J. Neyts and E. De Clercq. Rega Institute for Medical Research, K.U. Leuven, Leuven, Belgium.

2:30 119. Inhibitors of Cellular Cyclin-Dependent Kinases as Antivirals.
L.M. Schang, A. Bantly, A. Rosenberg, and P.A. Schaffer. University of Pennsylvania School of Medicine, Philadelphia, Pa., USA.

2:45 120. Anatomical Distribution of HSV-1 During Antiviral Chemotherapy.
H.J. Field and A.M. Thackray. Centre for Veterinary Science, Cambridge, U.K.

3:00 121. Novel Bicyclic Fluorescent Nucleosides as Potent and Selective Inhibitors of VZV.
C. McGuigan, C.J. Yarnold, G. Jones, S. Velázquez, H. Barucki, A. Brancale, G. Andrei, R. Snoeck, E. De Clercq, and J. Balzarini. Cardiff University, Cardiff, U.K.; and Rega Institute for Medical Research, Leuven, Belgium.

3:15 122. Surveillance for Resistant Herpes Simplex Virus Type 1 (HSV-1): A Collaborative Survey in the US of the General Population with Recurrent Herpes Labialis.
R.J. Boon; T.H. Bacon; K. Geiringer; S. Khan, M. Schultz, D.C. Bradford, and C. Hodges-Savola. SmithKline Beecham Consumer Healthcare, Weybridge, U.K.; Glaxo Wellcome, Research Triangle Park, N.C.; Pegus Research, Inc. Salt Lake City, Utah; and ViroMed Laboratories, Minneapolis, Minn., USA.

3:30 123. Transformation of Human Vaginal Xenografts by Human Papillomavirus Type II: Prevention of Infection with a Microbicide from the Alkyl Sulfate Chemical Family.
M.K. Howett, D. Malamud, P.A. Welsh, L.R. Budgeon, M.G. Ward, E.B. Neely, S.D. Patrick, J. Weisz, and J.W. Kreider. M.S. Hershey Medical Center, Pennsylvania State University College of Medicine, Hershey, Pa.; and Biosyn, Inc., Philadelphia, Pa., USA.

Poster Session III: Herpesvirus, Poxvirus Infections

4:00-6:00pm

124. The Dendrimer BRI2999 Inhibits the Early Stages of Herpes Simplex Virus Replication.
Y. Gong, C. Luscombe, D. Leung, P. Crosson, G. Holan, and S.L. Sacks. Viridae Clinical Sciences, Inc.; and Starpharma Limited, Vancouver, B.C., Canada.

125. A Thio Derivative of 5'-noraristeromycin: Enantiomeric Synthesis and Biological Properties. S.R. Das and S.W. Schneller. Auburn University, Auburn, Ala., USA.
126. Antiherpetic Activity and Mode of Action of 2-thio-5-alkyl-pyrimidine Nucleoside Analogues. S. Mori, S. Shigeta, S.K. Konno, K. Tomita, T. Nagata, H. Kato, T. Wakayama, N. Koike, and M. Saneyoshi. Fukushima Medical University, Fukushima; Tukuba Research Laboratory, Toagosei, Co., Tsukuba; and Teikyo University of Science and Technology, Yamanashi, Japan.
127. Synthesis, Antiviral Evaluation and Structure Activity Relationships of Novel 5-Ethyl Analogs of 2'-Deoxyuridine, 1- β -D-Arabinofuranosyl Uracil and Uridine. R. Kumar, M. Nath, R. Blush, and S.K. Sharma. University of Alberta, Edmonton, AB, Canada.
128. Design, Synthesis and Evaluation of New Antiviral Nucleosides. A. Brancale, C. McGuigan, E. De Clercq, and J. Balzarini. Cardiff University, U.K.; and Rega Institute for Medical Research, Leuven, Belgium.
129. The Antiviral Activity Exerted by Vaccinia Virus on the Growth of Herpes Simplex Virus In BS-C-1 Cells. E. Katz and K. Keywan. Hebrew University – Hadassah medical School, Jerusalem, Israel.
130. The Effect of Fanciclovir (FCV) on Herpes Simplex Virus Type 1 (HSV-1) Corneal Disease, Latency and Reactivation in the Rabbit Eye Model. J.M. Loutsch, B. Sainz, Jr., M.E. Marquart, X. Zheng, H.K. van der Keyl, J.M. Hill, and R. Tal-Singer. LSU Eye Center, New Orleans, La.; and SmithKline Beecham Pharmaceuticals, Collegeville, Pa., USA.
131. Orofacial Herpes Simplex Virus Type 1 (HSV-1) Infection in Mice: A Model for Herpes Labialis. J. Palmer, R.J. Rybak, and E.R. Kern. The University of Alabama School of Medicine, Birmingham, Ala., USA.
132. In Vitro and In Vivo Activity of N,N'-Bisheteryl Derivatives of Dispirotripiperazine. M. Schmidtke, R. Egerer, A. Stelzner, and V. Makarov. Friederick Schiller University, Jena, Germany; State Scientific Center of the Russian Federation NIOPIK, Moscow, Russia.
133. Effects of Guanosine Nucleoside Analogues on Cell Death During HSV Infection *in vivo* and *in vitro*. M.M. Shaw and H.J. Field. Centre for Veterinary Science, Cambridge, U.K.
134. Antiviral Susceptibility of Penciclovir Resistant Mutants Derived from Herpes Simplex Virus Type 1 in Various Cell Lines. J.H. Kim, P.K. Bae, H.S. Kim, J.K. Ahn, and C.K. Lee. Korea Research Institute of Chemical Technology, Chungnam National University, Taejeon, Korea.
135. Cross Susceptibility Patterns and Neuro-Virulence of Acyclovir-Resistant Herpes Simplex Virus (HSV) Isolates Collected in a National Surveillance Study. E.A. Harden, R.J. Rybak, C. Hartline, J.W. Gnann, C.A. Hodges-Savola, N.T. Wetherall, E.R. Kern, and The Task Force on Herpes Simplex Virus Resistance. The University of Alabama School of Medicine, Birmingham, Ala., and ViroMed Laboratories, Minneapolis, Minn, USA.

136. Characterization of Acyclovir-Resistant Herpes Simplex Virus Collected by The Task Force on Herpesvirus Resistance.
M.G. Davis, A. Root, C.L. Talarico, W.K. Lawrence, K.K. Biron, and The Task Force on Herpesvirus Resistance. Glaxo Wellcome, Inc., Research Triangle Park, N.C., USA.
137. Herpes Simplex Virus Type 1 (HSV-1) Variants Arising after Selection with an Antiviral Carrageenan.
E.B. Damonte, M.J. Carlucci, and L.A. Scolaro. Universidad de Buenos Aires, Buenos Aires, Argentina.
138. Virus Replication in Brain Tissues of Mice Infected Intracerebrally with a Avirulent Drug-Resistant Mutant of HSV-1.
C.-K. Lee, J.H. Kim, P.K. Bae, and H.S. Kim. Korea Research Institute of Chemical Technology, Taejon, Korea.
139. Keratinocyte Organotypic Cultures as a Model for Studying Viral Infections.
R. Snoeck, G. Andrei, E. De Clercq, and C. De Wolf-Peeters. Rega Institute for Medical Research and Pathology Department, U.Z., K.U. Leuven, Leuven, Belgium.
140. Antiviral Activity of Different Anti-herpesvirus Compounds on Keratinocyte Organotypic Cultures Infected with Herpes Simplex Virus and Varicella-Zoster Virus.
G. Andrei, R. Snoeck, E. De Clercq, and C. De Wolf-Peeters. Rega Institute for Medical Research and Pathology Department, U.Z., K.U. Leuven, Leuven, Belgium.
141. Phospholipid Prodrugs of Antiviral Nucleosides: Synthesis and Activity of Octadecyloxyethyl, -propyl and -butyl esters of Ganciclovir Phosphonoformate.
J.R. Beadle, N. Rodriguez, K.A. Aldern and K.Y. Hostetler. VA Medical Center, San Diego; and the University of California, San Diego, La Jolla, Calif., USA.
142. Development and Validation of a PCR-based Assay for the Quantification of Human Cytomegalovirus (HCMV) DNA in Samples of Frozen Whole Blood, Plasma, Urine, and Semen and the Employment of the Assay in the Development of the HCMV Inhibitor 1263W94.
W.J. Harris, V. Manohitharajah, A. Walters, G. Darby, and W. Snowden. Glaxo Wellcome Research and Development, Stevenage, U.K.
143. Virological, Clinical, and Ophthalmologic Features of Cytomegalovirus Chorioretinitis after Hematopoietic Stem Cell Transplantation.
F. Crippa, L. Corey, G. Sale, E.L. Chuang, and M. Boeckh. Fred Hutchinson Cancer Research Center; and University of Washington, Seattle, Wash., USA.
144. Suppression of Constitutive NF- κ B Activity in Cytomegalovirus Infected Retinal Glial Cells Inhibits Virus Replication and Virus-induced Upregulation of Interleukin 8.
S. Margraf, M. Bittoova, J.-W. Vogel, H.-W. Doerr, and J. Cinatl Jr. Johann Wolfgang Goethe University, Frankfurt/M., Germany.
145. Comparison of Drug Susceptibilities of Clinical Isolates of Cytomegalovirus (CMV) for BAY43-9695, BAY38-4766 and Ganciclovir (GCV).
J. McSharry and G. Drusano. Albany Medical College, Albany, N.Y., USA.

146. Characterization of Drug Resistance-Associated Mutations in the Human Cytomegalovirus DNA Polymerase.
M. Mousavi-Jazi, A. Linda, B. Wahren, and M. Brytting. Swedish Institute for Infectious Disease Control; and MTC, Karolinska Institute, Solna, Sweden.
147. Phenotypic and Genotypic Resistance Pattern of Human Cytomegalovirus Isolates Obtained from Vitreous and Urine Samples of AIDS Patients with CMV-retinitis.
J.-U. Vogel, A. Spielhofen, S. Maass, H.O. Gumbel, H.W. Doerr, and J. Cinatl Jr. Johann Wolfgang Goethe University, Frankfurt/M, Germany.
148. Phenotypic and Genotypic Characterization of Antiviral Drug-Resistant Cytomegalovirus in Transplant Recipients.
N. Lurain, K. Kapell, D. Kohn, E. Robert, B. Yen-Lieberman, K. Pursell, E. Garrity, M. Arens, S. Bhorade, J. Bremer, and V. Yeldandi. Rush Medical College, Chicago, Ill.; Cleveland Clinic, Cleveland, Ohio; University of Illinois Chicago Medical Center, Chicago, Ill; Loyola University Medical Center, Maywood, Ill.; and Washington University, St. Louis, Mo., USA.
149. Structure-Activity Relationships of (*E*)-5-(2-Bromovinyl) Uracil and Related Pyrimidine L-Nucleosides as Antiviral Agents for Varicella Zoster Virus.
Y.S. Choi, L. Li, S. Grill, E. Gullen, C.S. Lee, G. Gumina, Y.-C. Cheng, and C.K. Chu. The University of Georgia, Athens, Ga.; and Yale University School of Medicine, New Haven, Conn., USA.
150. Synthesis, Properties and Anti-EBV Activity of a New Series of 3'-modified *CycloSal*-BVDUMP Pronucleotides.
A. Meerbach, P. Wutzler, A. Lomp, and C. Meier. Friedrich-Schiller-University of Jena, Erfurt; University of Hamburg, Germany.
151. Antiviral Activity of the Non-nucleoside Analogue CMV423 in Lymphoblast Cells Infected with Human Herpesvirus 6.
L. Naesens, L. De Bolle, G. Andrei, R. Snoeck, C. Roy, C. Nemecek, M. Otto, and E. De Clercq. Rega Institute for Medical Research, K.U. Leuven, Leuven, Belgium; Rhone-Poulenc Rorer, Vitry/Seine, France; Rhone-Poulenc Rorer, Collegeville, Pa., USA.
152. A Flow Cytometric Assay System for Determining Antiviral Drug Efficacy against Lymphotropic Herpesviruses.
M.C. Long, L.D. Alexander, S.L. Williams, D.J. Bidanset, and E.R. Kern. The University of Alabama School of Medicine. Birmingham, Ala., USA.
153. Development of a Moderate Throughput Assay Using TaqMan PCR Technology to Identify Inhibitors of Human Herpesvirus 8 (HHV-8).
S. Halliday, R. Ptak, P. Ward, J. Secrist, R. Buckheit, Jr., and T. Fletcher III. Southern Research Institute, Frederick, Md., USA.
154. Efficacy of 2-Amino-7-[1,3-dihydroxy-2-propoxy)methyl]purine for the Treatment of Vaccinia (Orthopox-) Virus Infections in Mice.
J. Neyts and E. De Clercq. Rega Institute for Medical Research, Leuven, Belgium.

Friday, April 21

Oral Session VIII: Late Breaker Presentations

Chairpersons: Paul S. Lietman and John A. Secrist III

8:30am Plenary Speaker

W. Ian Lipkin, University of California, Irvine, Calif., USA
“West Nile Story”

9:00 155. Chimeric Yellow Fever 17D-Japanese Encephalitis (ChimeriVax™-JE) Vaccine: Preclinical Effectiveness and Safety Testing in Rhesus Monkeys.
K. Draper, K. Soike, I. Levenbook, F. Guirakhoo, and T.P. Monath. Sierra Biomedical, Sparks, Nev.; Tulane Regional Primate Center, Covington, La.; and OraVax, Inc., Cambridge, Mass., USA.

9:15

9:30

9:45

10:00 Break

10:30

10:45

11:00

11:15

11:30

11:45

12:00 Conference Adjourns