

Scientific Program

Monday, March 9

Oral Session I: Retrovirus Infections – Part I

Chairpersons: J.C. Martin and A. Holý

- 8:30am Welcome – Erik De Clercq
 Stephen L. Sacks
- 8:45 Plenary Speaker – R.F. Schinazi
 “In Vitro Evaluation of Combination Therapies”
 Veterans Administration Medical Center, Decatur, GA, USA
- 9:15 1. New Approaches For Synthesizing Antiviral Nucleosides.
 D.C. Liotta
 Emory University, Atlanta, GA, USA
- 9:30 2. Synthesis and Anti-HIV and Anti-HBV Activity of Enantiomerically Pure Oxathiolane Nucleosides.
 C.K. Chu, J.W. Beach, L.S. Jeong, A. Alves, R.F. Schinazi, C.-N. Chang, S.-L. Doong, and Y.-C. Cheng
 The University of Georgia, Athens, GA; Emory School of Medicine, VA Medical Center, Atlanta, GA; and Yale School of Medicine, New Haven, CT, USA
- 9:45 3. Optically Active Isodideoxynucleosides: A New Family of Potential Anti-HIV Agents.
 V. Nair, Z.M. Nuesca, D.F. Purdy, T.B. Sells, and L.B. Zintek
 The University of Iowa, Iowa City, Iowa, USA
- 10:00 4. Potent and Selective Inhibition of HIV-1 and HIV-2 Replication by a Novel Class of Bicyclams Targeted at Viral Uncoating.
 E. De Clercq, N. Yamamoto, R. Pauwels, M. Baba, D. Schols, H. Nakashima, J. Balzarini, Z. Debyser, B.A. Murrer, D. Schwartz, D. Thornton, G. Bridger, S. Fricker, G. Henson, M. Abrams, and D. Picker
 Katholieke Universiteit Leuven, Leuven, Belgium; Johnson Matthey Technology Centre, Reading, UK; and Johnson Matthey Pharmaceutical Research, West Chester, PA, USA
- 10:15 Break

- 10:45 5. HIV-1 Specific Phenylacetamide Derivatives: A Novel Class of Reverse Transcriptase Inhibitors with Potent and Selective Antiviral Activity *In Vitro*.
R. Pauwels, K. Andries, Z. Debyser, P. Van Daele, D. Schols, M.A.C. Janssen, J. Desmyter, E. De Clercq, and P.A.J. Janssen
Katholieke Universiteit Leuven, Leuven, Belgium; and Janssen Research Foundation, Beerse, Belgium
- 11:00 6. Combinations of AZT and Analogs of TIBO Act Synergistically to Inhibit HIV-1 Infection *In Vitro*.
R.W. Buckheit, Jr., J. Germany-Decker, E.L. White, L. Ross, L.B. Allen, and W.M. Shannon
Southern Research Institute, Birmingham, AL, USA
- 11:15 7. AZT is Not Synergistic with Either ddI, ddC, or Carbovir at Their Proposed Site of Action, the Reverse Transcriptase.
E.L. White, L.J. Ross, W.B. Parker, and W.M. Shannon
Southern Research Institute, Birmingham, AL, USA
- 11:30 8. Cooperativity of a HIV-1 Protease Inhibitor (SKF 108922) with AZT in Acute and Chronic HIV-1 Infections *In Vitro*.
D.M. Lambert, H. Bartus, G.B. Dreyer, T.D. Meek, B.W. Metcalf, and S.R. Petteway, Jr.
SmithKline Beecham Pharmaceuticals, King of Prussia, PA, USA
- 11:45 9. Biochemical Characterization of HIV-1 Reverse Transcriptases with Mutations Associated with DDI Resistance and Collateral AZT Sensitivity.
P.A. Furman, J.L. Martin, B.A. Larder, and J.E. Wilson
Burroughs Wellcome Co., Research Triangle Park, NC, USA; and Wellcome Research Laboratories, Beckenham, Kent, UK
- 12:00 10. Rapid Emergence of HIV-1 Resistant to Non-nucleoside Inhibitors of Reverse Transcriptase.
J.W. Mellors, G.E. Dutschman, G.-J. Im, E. Tramontano, S.R. Winkler, and Y.-C. Cheng
Yale University School of Medicine, New Haven, CT; and the Veterans Administration Medical Center, West Haven, CT, USA
- 12:15 11. Poly r(A) Reverse Transcriptase (³H) SPA, a New Enzyme Assay System.
M. Lemaitre, T. Phan, M.J. Downes, K.B. Williams, and N.D. Cook
Rhone-Poulenc Rorer Central Research, Vitry, France, and Amersham International PLC, Cardiff Laboratories, Cardiff, Wales, UK

12:30 Lunch

Oral Session II: Herpesvirus Infections – Part I

Chairpersons: H.J. Field and B. Öberg

- 2:00pm Plenary Speaker – L.B. Townsend
“Benzimidazole Ribonucleosides: Design, Synthesis, and Evaluation as Agents for Human Cytomegalovirus Infections”
The University of Michigan, Ann Arbor, MI, USA
- 2:30 12. Benzimidazole Ribonucleosides: A New Class of Antivirals with Potent and Selective Activity Against Human Cytomegalovirus.
J.C. Drach, L.B. Townsend, M.R. Nassiri, S.R. Turk, L.A. Coleman, R.V. Devivar, G. Genzlinger, E.D. Kreske, T.E. Renau, A.C. Westerman, C. Shipman, Jr., K.K. Biron, R. Dornsife, and E.R. Kern
University of Michigan, Ann Arbor, MI; Burroughs Wellcome Co., Research Triangle Park, NC; and University of Alabama at Birmingham, Birmingham, AL, USA
- 2:45 13. Synthesis and Antiviral Activity of Novel 5-Ethyl- and 5-Vinyl-2'-deoxyuridine Analogues.
E.E. Knaus, R. Kumar, and L.I. Wiebe
University of Alberta, Edmonton, Alberta, Canada
- 3:00 14. Preliminary Characterization of HSV-1 Protease by Expression in E. Coli
I.C. Deckman, P.J. McCann III, M.E. Hagen, and F. Liu
Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ; and University of Chicago, Chicago, IL, USA
- 3:15 15. Patterns of Susceptibility to Acyclovir and Foscarnet in 209 Herpes Simplex Virus (HSV) Isolates
S. Safrin, A. Elbaggari, and J. Mills
San Francisco General Hospital, University of California, San Francisco, CA, USA
- 3:30 16. Sequential Varicella Zoster Virus Isolates from an AIDS Patient: Phenotypic and Genetic Evidence for Evolution of Drug Resistance at the Thymidine Kinase and DNA Polymerase Loci
S.C. Stanat, C.L. Talarico, S. Safrin, and K.K. Biron
Burroughs Wellcome Co., Research Triangle Park, NC; and Uni-

versity of California, San Francisco, CA, USA

- 3:45 17. SDZ-HSV-863: A Human Monoclonal Antibody to HSV-1 and HSV-2 (gD-Ib) which Attenuates Acute Infection, Neurogenic Cutaneous Lesion Formation and the Establishment of Viral Latency.
P. Lake, A. Alonso, J. Subramanyam, and B. Nottage
Sandoz Research Institute, East Hanover, NJ, USA
- 4:00 18. Phosphorylation of Herpes Simplex Virus (HSV) Thymidine Kinase (TK)-Specific Nucleosides: Effects of Protein-Binding, Exogenous Thymidine (dT), and The De Novo Pathway (dnp)
R.J. Wanklin, B.A. Rennie, D.M. Lyster, H. Dougan, and S.L. Sacks
University of British Columbia and TRIUMF, Vancouver BC, Canada
- 4:15 19. Metabolism and Pharmacokinetics of the Acyclovir Prodrug BW 256U87 in Cynomolgus Monkeys.
P. de Miranda and T.C. Burnette
Burroughs Wellcome Co., Research Triangle Park, NC, USA

Poster Session I: Retroviruses

4:30-6:30pm

20. Synthesis and Antiviral Properties of Carbocyclic 3'-Oxa-2',3'-dideoxyguanosine.
S.W. Schneller, X. Chen, and E. De Clercq
University of South Florida, Tampa, FL; and Katholieke Universiteit Leuven, Leuven, Belgium
21. Synthesis and Structure-Activity Relationships in a Novel Class of Polyamines that Inhibit HIV-1 and HIV-2 Replication.
G. Bridger, B. Murrer, D. Schwartz, D. Thornton, S. Fricker, G. Henson, M. Abrams, D. Picker, N. Yamamoto, H. Nakashima, M. Baba, R. Pauwels, and E. De Clercq
Johnson Matthey Technology Centre, Reading, UK; Johnson Matthey Pharmaceutical Research, West Chester, PA, USA; and Katholieke Universiteit Leuven, Leuven, Belgium
22. Synthesis and in vitro anti-HIV activity of 2',3'-dideoxy-2',3'-methanonucleosides and of 3'-deoxy-2',3'-(difluoromethano)thymid-

ine.

H. Maag, M.F. Barker, and E.J. Prisbe
Syntex Research, Palo Alto, CA, USA

23. N-3 Derivatives of Azido- or Fluoro-Dideoxythymidine: Synthesis and Biological Activities.
D. Grierson, C. Monneret, M. Lemaitre, M. Maillard, D. Adams, C. Goulaouic, F. Begassat, A. Bugnicourt, C. Ferrieux, C. Rombi, E. Pacaud, D. Thierry, E. Gluckman, and A. Zerial
CNRS, Gif-sur-Yvette, France; Institut Curie, Paris, France; Rhone-Poulenc-Rorer Central Research, Vitry, France; and Hopital Saint-Louis, Paris, France
24. Synthesis, Anti-HIV Activity and Cytotoxicity of Derivatives of 5-hydroxymethyldeoxyuridine.
S.V.P. Kumar, A.L. Stuart, J. Qualtiere, G. Tourigny, L.F. Qualtiere, and V.S. Gupta
University of Saskatchewan, Saskatoon, Sk., Canada
25. The Synthesis and Evaluation of Hypericin and Analogs of Hypericin.
G.A. Kraus, H.W. Kim, T. Cotton, L. Raser, and S. Carpenter
Iowa State University, Ames, IA, USA
26. A Convenient Method for the Synthesis of 2',3'-Dideoxynucleosides.
P. Serafinowski, and E. Dorland
Institute of Cancer Research, Sutton Surrey, UK
27. Synthesis and Anti-HSV-1 Activity of 5-Substituted 2'Deoxyuridines.
P. Wigerinck, R. Snoeck, P. Claes, P.C. Maudgal, E. De Clercq, and P. Herdewijn
Katholieke Universiteit Leuven, Leuven, Belgium
28. The Enzymatic Synthesis of Antiviral Nucleosides.
N. Hicks, C.N. Huard, and D.W. Hutchinson
University of Warwick, Coventry, UK
29. Antiviral Activity of 9-{2-(Phosphonomethoxy)ethoxy} Purines Against HIV, FIV, and Visna Virus.
R.M. Perkins, A. Immelman, L. Elphick, D.M. Duckworth, M.R. Harnden, M.D. Kenig, D.N. Planterose, and A.G. Brown
SmithKline Beecham Pharmaceuticals, Great Burgh, UK; and Diagen GmbH, Dusseldorf, Germany

30. Comparison of Rauscher and LP-BM5 MuLV for Assessing Anti-AIDS Drugs In Vitro.
M.G. Hollingshead, L.B. Allen, R.W. Buckheit, Jr., and L. Westbrook
Southern Research Institute, Birmingham, AL, USA

31. Differential Inhibitory Effects of the (S)- and (R)-Enantiomers of 9-(3-Fluoro-2-Phosphonylmethoxypropyl) Purine Derivatives on Retrovirus Replication In Vitro and In Vivo.
J. Balzarini, J. Jindrich, A. Holy, and E. De Clercq
Katholieke Universiteit Leuven, Leuven, Belgium; and Czechoslovak Academy of Sciences, Praha, Czechoslovakia

32. Selenoorganic Compounds Useful as Anti-HIV Inhibitors.
M. Lemaitre, Y. Lelievre, M. Evers, and N. Dereu
Rhône-Poulenc Rorer Central Research, Vitry, France

33. New Potential Anti-HIV Prodrugs in the D4T Series.
M. Lemaitre, Y. Henin, C. Pierlot, A. Tartar, and C. Sergheraert
Rhône-Poulenc Rorer Central Research, Vitry, France; and Institut Pasteur de Lille, Lille, France

34. Combination Chemotherapy: Antiviral Activity of AZT in Combination with Other Anti-HIV Agents.
R.W. Buckheit, Jr., J. Germany-Decker, L.B. Allen, M. Hollingshead, and W.M. Shannon
Southern Research Institute, Birmingham, AL, USA

35. Combination Studies with Antiviral Compounds to Prevent Reactivation of Latent HIV-1 in OM-10.1 Cells.
P.M. Feorino, S.T. Butera, T.M. Folks, and R.F. Schinazi
Emory University School of Medicine, Atlanta, GA; Veterans Affairs Medical Center, Decatur, GA; and Centers for Disease Control, Atlanta, GA, USA

36. Synthesis and Anti-HIV Activity of 2-Substituted, 6-Benzyl-Pyrimidine Derivatives.
P. La Colla, M.E. Marongiu, A. Pani, M. Artico, A. Mai, and S. Massa
Universita di Cagliari, and Universita di Roma, Italy

37. Anti-HIV-1 Activity of Rev and Gag Phosphorothioate Oligodeoxynucleotides in Chronically and Acutely Infected Cells.
P. La Colla, M.E. Marongiu, A. Pani, A. Cascino, S. De Blase, and M. Santoro

Universita di Cagliari, Italy; and Universita di Napoli, Italy

38. Modulatory Effect of N-Acetyl-Cysteine (NAC) on HIV-1 Multiplication in Chronically and Acutely Infected Lymphocytes.
P. La Colla, M.E. Marongiu, A. Pani, G. Piras, E. Tramontano
Universita di Cagliari, Italy
39. Accurate Quantitation of HIV DNA and RNA Sequences Using Quantitative Competitive Polymerase Chain Reaction (QC-PCR).
M. Piatak, K.-C. Luk, M. McGrath, B. Williams, and J. Lifson
Genelabs, Inc., Redwood City, CA; University of California, San Francisco, CA; San Francisco General Hospital, San Francisco, CA; and Applied Imaging, Inc., Santa Clara, CA, USA
40. Measurement of Association and Dissociation Rate Constants of HIV Protease Inhibitors Using Stopped-Flow Fluorescence.
E.S. Furfine, E. D'Souza, K. Ingold, J.J. LeBan, D.J.T. Porter, T. Spector, and J.E. Reardon
Wellcome Research Laboratories, Research Triangle Park, NC, USA; and Wellcome Research Laboratories, Beckenham, UK
41. Synthesis and HIV-1 Reverse Transcriptase Inhibition of 3'Azido-3',5'-Dideoxythymidine 5'-Methylphosphonic Acid Diphosphate.
G.A. Freeman, J.L. Rideout, and W.H. Miller
Burroughs Wellcome Co., Research Triangle Park, NC, USA
42. Broad-Spectrum Antiviral Activity of Polyoxometalates Against Human Immunodeficiency Virus and Other Enveloped Viruses.
N. Yamamoto, E. De Clercq, D. Schols, R. Pauwels, H. Nakashima, J. Balzarini, M. Baba, M. Hosoya, R. Snoeck, J. Neyts, G. Andrei, Z. Debyser, B.A. Murrer, B. Theobald, G. Bossard, S. Fricker, G. Henson, and M. Abrams
Katholieke Universiteit Leuven, Leuven, Belgium; Johnson Matthey Technology Centre, Reading, UK; and Johnson Matthey Pharmaceutical Research, West Chester, PA, USA
43. Novel Polyanionic Albumin Derivatives are Potent and Selective In Vitro Inhibitors of HIV, FIV, and SIV Cell Fusion and Giant Cell Formation.
R.W. Jansen, G. Molema, D. Schols, R. Pauwels, E. De Clercq, and D.F.K. Meijer
University Centre for Pharmacy, Groningen, The Netherlands; University of Leuven, Leuven, Belgium
44. Cellular Metabolism and Enzymatic Phosphorylation of (2R,5R)-9-

[2,5-Dihydro-5-(phosphonomethoxy)-2-furanyl]adenine
(D4AMPI), An Anti-HIV Agent.

H.-T. Ho, S. Konrad, K. Woods, B. Luh, P. Misco, C. Kim, M.
Hitchcock, and H. De Boeck
Bristol-Myers Squibb Company, Wallingford, CT, USA

45. Clinical Applications of In Vitro Susceptibility Testing of HIV-1 to Zidovudine (AZT).
B. Conway, D. Ko, N. Hawley-Foss, L.G. Fillion, D.W. Cameron,
and F.J. Diaz-Mitoma
University of Ottawa, Ottawa, Canada
46. HIV Reverse Transcriptase: Kinetics of Incorporation of Nucleo-
tide Analogs into Heteropolymeric Template-Primers.
J.E. Reardon
Wellcome Research Labs, Research Triangle Park, NC, USA
47. Metabolism of Carbovir in CEM Cells.
W.B. Parker, B.J. Bowdon, L.M. Rose, S.C. Shaddix, R. Vince,
W.M. Shannon, and L.L. Bennett, Jr.
Southern Research Institute, Birmingham, AL, USA
48. In Vitro Selection of Human Immunodeficiency Virus Type 1 Re-
sistant to 3'-Azido-3'-Deoxythymidine.
F. Dianzani, G. Antonelli, O. Turriziani, E. Riva, and D. Guanmu
University "La Sapienza", Rome, Italy
49. Cell Membranes, Cell Fusion and Phospholipids: New Targets and
Novel Inhibitors of HIV-1.
D. Kinchington, T. O'Connor, S. Galpin, B. Swords, and C. Mc-
Guigan
Medical College of St. Bartholomew's Hospital, London, UK; and
University of Southampton, Southampton, UK
50. Loss of Synergy in AZT-resistant Primary Isolates of HIV.
S.W. Cox, J.A. Albert, and B. Wahren
Karolinska Institute, Stockholm, Sweden
51. Regions of HIV Reverse Transcriptase Involved in Resistance to
Several Nnucleoside Inhibitors.
V.V. Sardana, E.A. Emini, L. Gotlib, D.J. Graham, D.W. Line-
berger, W.J. Long, A.J. Schlabach, J.A. Wolfgang, and J.H. Con-
dra
Merck Sharp & Dohme Research Laboratories, West Point, PA,
USA

52. Characterization of the dNTP Binding Sites on HIV-1 Reverse Transcriptase Using ¹H NMR.
G.R. Painter, A.E. Aulabaugh, and P.A. Furman
Burroughs Wellcome Co., Research Triangle Park, NC, USA

53. Anti-Human Immunodeficiency Virus Activity of a Novel Synthetic Peptide, T22 ([Tyr^{5,12},Lys⁷]polyphemusin II) – A Possible Inhibitor for Virus-Cell Fusion.
H. Nakashima, M. Masuda, T. Murakami, Y. Koyanagi, M. Waki, A. Matsumoto, N. Fujii, and N. Yamamoto
Tokyo Medical and Dental University School of Medicine, Tokyo, Japan; Kyoto University, Kyoto, Japan; and Seikagaku Corp., Tokyo, Japan

54. Clinical Correlates of “In Vitro” HIV-1 Resistance to Zidovudine. Results of the Multicentre Canadian AZT Trial (MCAT).
J. Singer, J.S.G. Montaner, M.T. Schechter, J. Ruedy, M. Fanning, C. Tsoukas, M.V. O’Shaughnessy, and M. Wainberg
Canadian HIV Trials Network, Vancouver, British Columbia, Canada

55. Identification of Nucleotide Binding Site of HIV-1 Reverse Transcriptase.
N. Cheng, B. Merrill, G. Painter, L. Frick, and P. Furman
Burroughs Wellcome Co., Research Triangle Park, NC, USA

56. Sequence Variations in the Reverse Transcriptase of HIV-1 from AZT-treated Patients Map to the Binding Site of a Postulated HIV-1 RT Model.
P. Leventis, C.A. Stein, K. Broadhurst, B. Lindborg, G.G. Jackson, and J.S. Oxford
The London Hospital Medical College, London, UK; and Medivir, Huddinge, Sweden

57. Quinobene, A New Synthetic Sulfonated Dye with Potent Anti-HIV Activity.
D.J. Clanton, R. Haugwitz, and J.P. Bader
National Cancer Institute, Bethesda, MD, USA

58. Non-nucleoside Inhibitors of an Early Stage of HIV Reproduction.
J.P. Bader
National Cancer Institute, Bethesda, MD, USA

59. Development of a Human Immunodeficiency Virus-1 In Vitro DNA Synthesis System to Study Reverse Transcriptase Inhibitors.

K. Borroto-Esoda and L.R. Boone
Wellcome Research Laboratories, Research Triangle Park, NC,
USA

60. Intracellular Transport of HIV-1 Matrix Protein p17 as a Target for AIDS Chemotherapy.
A.G. Bukrinskaya, G.K. Vorkounova, J.J. Tentsov, D.I. Ivanovsky
Central Institute of Advanced Training of Physicians, Moscow, Russia
61. Retroviral Vectors Expressing Antisense and Ribozyme RNA Directed Against HIV-1 *TAT* can Inhibit HIV-1 Replication.
K.M.S. Lo, M.A. Biasolo, G. Dehni, G. Palu, and W.A. Haseltine
Dana Farber Cancer Institute, Boston, MA, USA
62. Preclinical Development of Biological Response Modifiers Intended for Use in the Treatment of HIV Infection and Associated Disorders.
S.L. Lard, M.A. Ussery, and J.C. Ramsey
U.S. Food and Drug Administration, Rockville, MD, USA
63. Antiviral Efficacy of 9-(2-Phosphonylmethoxyethyl)-2,6-Diaminopurine (PMEDAP) Upon Oral Administration to Moloney Murine Sarcoma Virus (MSV)-Infected Mice.
L. Naesens, J. Neyts, J. Balzarini, and E. De Clercq
Katholieke Universiteit Leuven, Leuven, Belgium
64. Anti-HIV Activity of 5-hydroxymethyldeoxyuridine In Vitro and In Vivo.
V.S. Gupta, A.L. Stuart, S.V.P. Kumar, E. De Clercq, J. Qualtiere, R.M. Cozens, J.K. Lazdins, and L.F. Qualtiere
University of Saskatchewan, Saskatoon, SK, Canada; Ciba-Giegy Ltd, Basle, Switzerland; and Katholieke Universiteit Leuven, Leuven, Belgium
65. Didox and an Analog are Effective Against Retrovirus in a Murine Model (FeLV).
D.L. Mills, H.L. Elford, B. van't Riet, and S.R. Webb
Virginia Commonwealth University, Richmond, VA; and Molecules for Health, Richmond, VA, USA
66. Antiviral Phosphate Prodrugs.
A. Glazier, C. Kwong, J. Rose, R. Buckheit, B. Korba, M. Abou-

Donia, E. Smith, and G.E. Wright
Drug Innovation and Design, Inc., Newton, MA; Southern Research Institute, Birmingham, AL; Georgetown University, Rockville, MD; Duke University, Durham, NC; and University of Massachusetts, Worcester, MA, USA

67. Comparative Pharmacology of a Group of Polyoxometalates Possessing Broad-Spectrum Antiviral Activity.
S. Fricker, B. Theobald, P. Ash, G. Bossard, and E. De Clercq
Johnson Matthey Technology Centre, Reading, UK; Johnson Matthey Pharmaceutical Research, West Chester, PA, USA; and Katholieke Universiteit Leuven, Leuven, Belgium
68. A Rapid, Simple and Sensitive HPLC-system for Simultaneous Analysis of AZT and its Mono-, Di- and Triphosphate Derivatives Following Cellular Delivery with Neoglycoproteins.
G. Molema, R.W. Jansen, J. Visser, and D.K.F. Meijer
Groningen University, Groningen, The Netherlands
69. Plasma and Cerebrospinal Fluid (CSF) Pharmacokinetics of Dideoxy-purine Nucleosides in Rhesus Monkeys.
M.E. Hawkins, F.M. Balis, K. Murakami, H. Mitsuya, and D.G. Poplack
National Institutes of Health, Bethesda, MD, USA; and Sanyo-Kokusaku Pulp Co., Yamaguchi, Japan
70. Open Study of Ribavirin Treatment in Patients with HIV Infection in Stage III and IV.
R. Ruiz-Illescas, L. Teran, and M. Garibay-Valencia
Hospital Regional, ISSSTE, Mexico City, Mexico
71. Immunologic Evaluation in PGL Patients with Ribavirin Treatment. An Open Multicentric Trial.
V.E. Vazquez, L.P. Campos, C.C. Soler, I.R. Ruiz, V.M. Garibay, and C.V. Fortuno
Unidad Investigacion biomedica de Occidente, Guadalajara, Jal. Mexico; U. Investigaciones Biomedicas, Mexico City, Mexico; and H.R. 2o de Noviembre, ISSSTE, Mexico City, Mexico
72. Comparative Clinical Trial of Ribavirin and Zidovudine in HIV-Infected Pediatric Patients. Mexican Experience.
M. Gorbea, G. Perez, J. Paquentin, and V. Fortuno
Hospital La Raza, Mexico City, Mexico
73. Virological Identification of Three Subgroups of Patients During

Extended Treatment with Zidovudine.

K. Broadhurst, M. Lowdell, A. Ball, P. Levantis, G.E. Forster,
B.T. Goh, B. Colvin, G.G. Jackson, and J.S. Oxford
London Hospital Medical College, London, U.K.

Tuesday, March 10

Oral Session III: Retrovirus Infections – Part II

Chairpersons: C.A. Laughlin and D.K.F. Meijer

- 8:30am Plenary Speaker – R.L. Tolman
 “Synthetic HIV Vaccines”
 Merck, Sharp, & Dohme, Rahway, NJ, USA
- 9:00 74. Three-dimensional structure of a ternary complex of human immunodeficiency virus-1 reverse transcriptase, a monoclonal antibody Fab fragment, and double-stranded DNA
 E. Arnold, A. Jacobo-Molina, R.G. Nanni, A.D. Clark, Jr., R.L. Williams, X. Lu, J. Ding, A. Zhang, A.L. Ferris, P. Clark, and S.H. Hughes.
 Rutgers University, Piscataway, NJ; and National Cancer Institute, Frederick MD, USA
- 9:15 75. Selective Inhibition of Moloney Murine Leukemia Virus Cycle at the Integration Step by the Netropsine-Intercalating Hybrid Molecule NET-OPC.
 F. Subra, J.F. Mouscadet, M. Lavignon, C. Roy, and C. Auclair
 INSERM, Institut Gustave Roussy, Villejuif, France
- 9:30 76. Characterization of Phosphorylation of HIV Reverse Transcriptase.
 N. Cheng, B. Merrill, M. Campa, C. Ohmstede, and P. Furman
 Burroughs Wellcome Co., Research Triangle Park, NC, USA
- 9:45 77. On a Chemotherapeutic Approach Using Neutral Anti-HIV Nucleoside 5'-Phosphates as Potential Prodrugs of Their Parent Nucleotides.
 J.-L. Imbach, F. Puech, A. Pompon, I. Lefebvre, and G. Gosselin
 U.M.R., Synthelabo-CNRS-USTL, Montpellier, Cedex, France
- 10:00 78. Anti-SV40 and Anti-HIV-1 TAT Activity of Natural and Modified Oligonucleotides.
 G. Palú, M. Grigolon, B. Maschera, M.L. Capobianco, A. Garbesi, F.P. Colonna, and F. Arcamone
 University of Padova, Padova, Italy; ICoCEA-CNR, Ozzano Emilia (Bologna), Italy; Menarini Ricerche Sud, Firenze, Italy
- 10:15 Break

- 10:45 79. A TAT Inhibitor (Ro 24-7429): The Single-dose Study in Humans.
P.S. Lietman, R. Ginsberg, L. Lewis, M.-C. Hsu, J. Massarella, M.
Molle, L. Nerhood, B. Petty, S. Reece, W. Soo, and S. Tam
The Johns Hopkins University School of Medicine, Baltimore, MD;
and Hoffmann-LaRoche, Nutley, NJ, USA
- 11:00 80. Bone Marrow Stimulatory Cytokines Modulate the Anti-HIV Ac-
tivity of Nucleoside Analogues in Cultures of Monocyte/Macro-
phages.
C.F. Perno, A. Folli, Z. Hao, D.A. Cooney, D.G. Johns, S. Broder,
R. Calio, and R. Yarchoan
National Cancer Institute, Bethesda, MD, USA; and University of
Rome "Tor Vergata", Italy
- 11:15 81. Acyclic Nucleoside Phosphonate Analogues Markedly Enhance
Natural Killer Activity in Mice.
V. Del Gobbo, C.F. Perno, E. Balestra, F. Sesa, J. Balzarini, E. De
Clercq, J. Jindrich, A. Holy, N. Villani, and R. Calio
II University of Rome "Tor Vergata", Italy; Katholieke Univer-
siteit Leuven, Leuven, Belgium; and Czechoslovak Academy of
Sciences, Prague, Czechoslovakia
- 11:30 82. Reversal of Established FeLV-FAIDS Infection after Adoptive
Transfer of Activated Lymphocytes in Combination with AZT and
Alpha Interferon.
N.S. Zeidner, C.K. Mathiason-DuBard, and E.A. Hoover
Colorado State University, Fort Collins, CO, USA
- 11:45 83. Inhibition of the 3' to 5' exonuclease activity of mammalian DNA
polymerase δ by 3'-azido-3'-deoxythymidine 5'-monophosphate
(AZTMP).
E.G. Bridges, A.G. So, C.K. Tan, and J.P. Sommadossi
University of Alabama at Birmingham, Birmingham, AL; and Uni-
versity of Miami School of Medicine, Miami, FL, USA
- 12:00 84. Examination of Toxicity of DDC, DDI, and D4T as Related to
Their Effects on Peripheral Neurons Using a Rat PC-12 Pheochro-
mocyoma Cell Line as Model.
J.P. Sommadossi and M.Y. Xie
University of Alabama at Birmingham, Birmingham, AL, USA
- 12:15 85. Blockade of Function and Expression of Erythropoietin-Receptor
(Ep-R) by Zidovudine (AZT).
K.C. Agrawal, S.R. Gogu, and J.S. Malter
Tulane University School of Medicine, New Orleans, LA, USA

12:30 Lunch

Oral Session IV: Respiratory Virus Infections

Chairpersons: W.M. Shannon and K. Andries

- 2:00pm 86. A Comparison of the Compound Binding Sites on Human Rhinovirus-14 and -1a; Examination of Rigid Analogues of Win 54954. G.D. Diana, J.P. Mallamo, D.C. Pevear, and F.J. Dutko
Sterling Winthrop Pharmaceutical Research Division, Rensselaer, NY, USA
- 2:15 87. Selective Anti-Human Rhinovirus Activity of Disoxaril Analogues. P. La Colla, M.E. Marongiu, A. Pani, M. Artico, A. Mai, S. Massa, and F. Corelli
Universita di Cagliari, Universita di Roma, Farmaco Chimico Tecnologico, Universita di Siena, Italy
- 2:30 88. Inhibition of Influenza A and B Viruses by 2'-Fluoronucleosides, Mechanism of Action on Virus Replication. M. Tisdale, J. Tuttle, G. Appleyard, M. Ellis, S. Daluge, D. Nelson, W. Miller, and T. Krenitsky
The Wellcome Research Laboratories, Beckenham, UK; and Burroughs Wellcome Co., Research Triangle Park, NC, USA
- 2:45 89. Reduction of Respiratory Syncytial Virus (RSV) Shedding in African Green Monkeys Treated with SP303. K.F. Soike, J.-Y. Zhang, and L.R. Meyerson
Tulane Regional Primate Research Center, Covington, LA; and Shaman Pharmaceutical, Inc., San Carlos, CA, USA
- 3:00 90. Combined Antiviral and Antimediator Treatment for Common Colds. J.M. Gwaltney, Jr.
University of Virginia Health Sciences Center, Charlottesville, VA, USA
- 3:15 91. Efficacy of Oral WIN 54954 for the Prophylaxis of Experimental Rhinovirus Infection. R.B. Turner and F.G. Hayden
Medical University of South Carolina, Charleston, SC; and University of Virginia, Charlottesville, VA, USA

- 3:30 92. Prophylactic Efficacy of WIN 54954 in Prevention of Experimental Human Coxsackievirus A21 Infection and Illness.
G.M. Schiff, J.R. Sherwood, E.C. Young, and L.J. Mason
James N. Gamble Institute of Medical Research, Cincinnati, OH, USA
- 3:45 93. Suppression of Human Papillomavirus Type 16 E7 Expression in Human Keratinocytes by Alpha Interferons.
J.D. Gangemi, M.A. Khan, and L. Pirisi
University of South Carolina, Columbia, SC, USA
- 4:00 94. Anticarbhydrate Monoclonal Antibodies Inhibit Flavi- and Bunyaviruses: Molecular Aspects
H.A. Blough, D. Kefauver, D. Hack, T.P. Monath, H. Clausen, and J.-S. Hansen
National Naval Medical Center, Bethesda, MD; U.S. Army Medical Research Institute of Infectious Diseases, Frederick, MD, USA; and Hvidovre Hospital, Denmark

Poster Session II: Herpesvirus Infections

4:30-6:30pm

95. Synthesis and Antiviral Activity of Some New S-Adenosyl-L-Homocysteine Derivatives.
P. Serafinowski, E. Dorland, K.R. Harrap, J. Balzarini, and E. De Clercq
Institute of Cancer Research, Sutton, Surrey, U.K.; and Katholieke Universiteit Leuven, Leuven, Belgium
96. Rapid, Convenient, Synthesis of γ -Emitting, No-Carrier-Added (NCA) 1-(β -D-Arabinofuranosyl)-5(E)-(2-radiohalogenovinyl) uracil Probes for the Detection of Herpes Simplex Virus (HSV)-Specified Thymidine Kinase In Vitro and In Vivo.
H. Dougan, B.A. Rennie, R.J. Wanklin, D.M. Lyster, C. Vo, and S.L. Sacks
TRIUMF and University of British Columbia, Vancouver, BC, Canada
97. BRL 44385: Selective Anti-herpesvirus Activity and Mode of Action.
A.G. Brown, T.H. Bacon, M.R. Boyd, S.J. Darlison, K. Martin, D. Sutton, and R.A. Vere Hodge

SmithKline Beecham Pharmaceuticals, Epsom, Surrey, UK

98. Use of Stepwise Linear Regression Combined with Analysis of Covariance to Analyze Drug Combination Interactions.
S. Chiu, S. Michelson, V.R. Freitas, E.B. Fraser-Smith, and R.C. Schatzman
Syntex Research, Palo Alto, CA, USA
99. In Vitro Efficacy of Ganciclovir Alone or in Combination with Zidovudine Against Human Cytomegalovirus.
V.R. Freitas, E.B. Fraser-Smith, S. Chiu, S. Michelson, and R.C. Schatzman
Syntex Research, Palo Alto, CA, USA
100. Human Monoclonal Anti Cytomegalovirus (CMV) Antibody (MSL-109): Enhancement of In Vitro Foscarnet Induced Inhibition of CMV Replication.
M.A. Nokta, M.D. Tolpin, P.I. Nadler, and R.B. Pollard
The University of Texas Medical Branch, Galveston, TX; and Sandoz Research Institute, East Hanover, NJ, USA
101. Mechanisms of Inhibition of HSV-1 Infectivity by Anionic Liposomes.
K. Konopka, C.E. Larsen, and N. Duzgunes
University of the Pacific, San Francisco, CA; and Drexel University, Philadelphia, PA, USA
102. 4-Hydroxy-3-(hydroxymethyl)-2-methylenecyclopentyl Purines and Pyrimidines, a New Class of Anti-herpesvirus Agents.
W.A. Slusarchyk, A.K. Field, J.A. Greytok, P. Taunk, A.V. Toumari, M.G. Young, and R. Zahler
Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ, USA
103. Comparative Study of Polyamine Pools in HCMV-, MCMV-, and GPCMV-Infected Mammalian Cells.
L.M. Rose, P.W. Allan, G. Arnett, E.L. White, and W.M. Shannon
Southern Research Institute, Birmingham, AL, USA
104. Anti-Herpesvirus Activity of a Xylomannan isolated from the Red Seaweed *Nothogenia fastigiata*.
E. Damonte, H. Kim, H. Haines, M.C. Matulewicz, A. Cerezo, and C.E. Coto

Universidad de Buenos Aires, Argentina

105. Benzimidazole Ribonucleosides: Design, Synthesis, and Evaluation of 2-Chloro-5,6-diiodo-1-(β -D-ribofuranosyl)benzimidazole, an Analog of TCRB.
R. Zou, E.D. Kreske, J.C. Drach, and L.B. Townsend
The University of Michigan, Ann Arbor, MI, USA
106. Benzimidazole Ribonucleosides: Design, Synthesis, and Antiviral Evaluation of some TCRB Analogs.
R.V. Devivar, Etsuko Kawashima, E.D. Kreske, J.C. Drach, and L.B. Townsend
University of Michigan, Ann Arbor, MI, USA
107. Benzimidazole Ribonucleosides: Cytotoxicity of TCRB and BDCRB to Human Cells.
M.R. Nassiri, S.R. Turk, M.P. Petrillo, J.P. Robinson, R.V. Devivar, L.B. Townsend, and J.C. Drach
University of Michigan, Ann Arbor, MI; and Purdue University, West Lafayette, IN, USA
108. Benzimidazole Ribonucleosides: In Vitro Immune Function Effects of TCRB.
M.R. Nassiri, D.E. Lopatin, N. Van Poperin, L.B. Townsend, and J.C. Drach
University of Michigan, Ann Arbor, MI, USA
109. Benzimidazole Ribonucleosides: Antiviral Activity and Cytotoxicity of Combinations of TCRB with Ganciclovir, Acyclovir, and Zidovudine.
S.R. Turk, M.S. Ludwig, E.D. Kreske, M.N. Prichard, M.R. Nassiri, C. Shipman Jr., L.B. Townsend, and J.C. Drach
University of Michigan, Ann Arbor, MI, USA
110. Benzimidazole Ribonucleosides: Mode of Action of TCRB in HCMV-Infected Cells.
S.R. Turk, J.M. Black, K.Z. Borysko, C.A. Edwards, M.R. Nassiri, L.B. Townsend, and J.C. Drach
University of Michigan, Ann Arbor, MI, USA
111. Structure-Activity Relationships of New Inhibitors of S-Adenosyl-methionine Decarboxylase and Their Effect on the Replication of Human Cytomegalovirus.
J.D. Rose, W.B. Forrister, Jr., T.H. Moss, III, E.L. White, G. Arnett, L.M. Rose, W.M. Shannon, and J.A. Secrist, III

Southern Research Institute, Birmingham, AL, USA

112. Mechanism of Inhibitory Effect of Polyanionic Polymers on Human Cytomegalovirus Infectivity.
J. Neyts, R. Snoeck, D. Schols, J. Balzarini, and E. De Clercq
Katholieke Universiteit Leuven, Leuven, Belgium
113. Mutant Varicella-Zoster Virus Thymidine Kinase: Clinical Resistance Correlates with Enzyme Impairment.
G.B. Roberts, J.A. Fyfe, S. Stanat, K. Biron, R. Gaillard, and S. Short
Wellcome Research Labs, Research Triangle Park, NC, USA
114. Comparison of Ganciclovir Sensitivity of Cytomegalovirus (CMV) Isolated from Marrow Transplant Recipients at Diagnosis and During Treatment of CMV Pneumonia.
M.A. Slavin, C.A. Gleaves, and R.A. Bowden
Fred Hutchinson Cancer Research Center, Seattle, WA, USA
115. Spontaneous Reactivation of Thymidine Kinase Deficient (TK⁻) Herpes Simplex Virus (HSV) Infection Without Acyclovir (ACV) Pressure in a Patient with the Acquired Immunodeficiency Syndrome (AIDS).
J.J. Sasadeusz, B.A. Rennie, and S.L. Sacks
University of British Columbia, Vancouver B.C., Canada
116. Interaction of the Carbocyclic Analog of 2'-deoxyguanosine (CdG) with Herpes Simplex Virus Type I (HSV) Thymidine Kinase (TK).
P.W. Allan, W.B. Parker, and L.L. Bennett, Jr.
Southern Research Institute, Birmingham, AL, USA
117. Interaction of 5-methoxymethyldeoxyuridine Triphosphate with DNA Polymerases: Effects of the 5-substituent and Comparison with the Deoxycytidine Derivative.
A.L. Stuart, V.S. Gupta, and P.J. Aduma
University of Saskatchewan, Saskatoon, Canada
118. Effect of CTC-23 on the Replication of Herpes Simplex Virus Type 1 in Human Fibroblast Cells.
S. Chatterjee, P. Burns, R.J. Whitley, and E.R. Kern
University of Alabama School of Medicine, Birmingham, AL, USA
119. Molecular Effects of Papaverine on Human Cytomegalovirus Replication.
D. Millinoff, I. Boldogh, and T. Albrecht

The University of Texas Medical Branch, Galveston, TX, USA

120. Nucleotide Analogue-9(4-Hydrophosphoryl-2-Oxabutyl)-Guanine; Ribavirine (ICN) and Tromantadine (Virus-Mertz) as Effective Inhibitors TK⁻ and PAA^R Strains of the HSV-1 In Vitro.
G.A. Galegov, A.A. Khorlin, V.M. Shobukhov, E.Y. Grammaticova, and N.F. Pravdina
The D.I. Ivanovsky Institute of Virology, the USSR Academy of Medical Sciences, Moscow, USSR
121. HSV-1 Polymerase Activity is Stimulated In Vitro by Complex Formation with UL42, its Accessory Protein.
J.T. Stevens, M. Bifano, M.G. Cordingley, and R.K. Hamatake
Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ, USA
122. A Rational Approach to the Development of Antiviral Combined Chemotherapy by Reduction in Nucleoside Triphosphate Levels.
S.N. Pancheva
Bulgarian Academy of Sciences, Sofia, Bulgaria
123. Activity of Penciclovir and Acyclovir in DBA/2 Mice Infected Intraperitoneally with HSV-1 (SC16).
M.R. Boyd, D. Sutton, and R.J. Ashton
SmithKline Beecham Pharmaceuticals, Epsom, Surrey, UK
124. Immunotherapy of Herpetic Recurrence and Protective Immunity to Acute HSV Infection by Interleukin 2-fused Glycoprotein D.
Y. Fujisawa, M. Hazama, A. Mayumi-Aono, S. Hinuma, and M. Nakao
Takeda Chemical Industries, Ltd., Osaka, Japan
125. Treatment of Herpes Simplex Virus Type 2 Infections in Mice with Murine and Humanized Monoclonal Antibodies (MABS)
E.R. Kern, P.E. Vogt, M.S. Co, S. Kohl, and R.J. Whitley
University of Alabama at Birmingham, Birmingham, AL; Protein Design Laboratories, Mountain View, CA; and University of California at San Francisco, San Francisco, CA, USA
126. Role of NK Cells and Interferon in Immunomodulator/Biological Response Modifier (BRM)-Mediated Resistance Against HSV-2 and MCMV Infection in Immunosuppressed Mice.
S.C. Kunder, K.M. Kelly, L. Wu, and P.S. Morahan
Medical College of Pennsylvania, Philadelphia, PA, USA

127. Efficacy of HPMPC and DHPG in the Treatment of Murine Cytomegalovirus Infection in Severe Combined Immune Deficiency (SCID) Mice.
J. Neyts, J. Balzarini, L. Naesens, and E. De Clercq
Katholieke Universiteit Leuven, Leuven, Belgium
128. Efficacy of BMS-180194 Against Opportunistic Cytomegalovirus Infection in Immunocompromised Mice.
H. Yang, R. Drain, C. Franco, and J. Clark
Bristol-Myers Squibb Co., Wallingford, CT, USA
129. A Phase I/IIA Study of a Human Monoclonal Anti-Cytomegalovirus Antibody in Patients with AIDS.
R.B. Pollard, M.A. Nokta, P. Pappas, M. Holloway, M.J. Borucki, D.L. Wood, A.M. Zitelli, M.D. Tolpin, P.I. Nadler, and R.J. Whitley
University of Texas Medical Branch, Galveston, TX; University of Alabama, Birmingham, AL; and Sandoz Research Institute, East Hanover, NJ, USA
130. Assessment of a Selective Inhibitor of HSV Thymidine Kinase (TK) as Therapy for Experimental Recurrent Genital Herpes.
N. Bourne, F.J. Bravo, R.L. Tolman, J.D. Karkas, and L.R. Stanberry
Children's Hospital Research Foundation, Cincinnati, OH; and Merck, Sharp, and Dohme Research Laboratories, Rahway, NJ, USA
131. Effect of Indomethacin on Recurrent Genital HSV-2 Infection in the Guinea Pig.
N. Bourne, C.J. Harrison, D.F. Bratcher, and D.I. Bernstein
Children's Hospital Research Foundation, Cincinnati, OH; Creighton University, Omaha, NE; and the Gamble Institute of Medical Research, Cincinnati, OH, USA
132. Evaluation of HPMPC Therapy for Primary and Recurrent Genital Herpes in the Guinea Pig.
F.J. Bravo and L.R. Stanberry
Children's Hospital Research Foundation, Cincinnati, OH, USA
133. Treatment of Genital Herpes Simplex Virus Infections of Mice and Guinea Pigs with Fanciclovir, an Oral Prodrug of Penciclovir.
J. Palmer, P.E. Vogt, and E.R. Kern
University of Alabama at Birmingham, Birmingham, AL, USA

134. Antiviral Activity of a Series of Cobalt Containing Complexes against Herpesvirus Infection In Vitro and In Vivo.
P.E. Vogt, C.B. Hartline, T.P. Gerchow, and E.R. Kern
University of Alabama at Birmingham, Birmingham, AL, USA

135. Antiviral Activity of Piracetam.
Y.M. Centifanto
Tulane University School of Medicine, New Orleans, LA, USA

136. Efficacy of Topical Preparations Containing Lithium Against Herpes Simplex Virus Infections in the Mouse.
M.D. Winther and T.J. Hill
Scotia Pharmaceuticals Limited, Guildford, UK; and University of Bristol, Bristol, UK

137. Efficacy of Single and Combination CTC 23 and Trifluorothymidine Topical Ocular Therapy on HSV-1-induced Stromal Disease in the Rabbit.
E.C. Dunkel, P.A. Geary, Q. Zhu, and D. Pavan-Langston
Harvard Medical School, Boston, MA, USA

138. Efficacy of Topical Treatment with BV-araU Cream Against Cutaneous Infection with Herpes Simplex Type 1 in Shaved Mice.
H. Machida, K. Ijichi, N. Ashida, and S. Varia
Yamasa Shoyu Co., Ltd., Choshi, Japan; and Bristol-Myers Squibb Pharmaceutical Institute, New Brunswick, NJ, USA

139. Phenotype of Ganciclovir-Resistant Mutants of Murine Cytomegalovirus.
Y. Minamishima, K. Kumura, and N. Shimada
Miyazaki Medical College, Japan; and Nippon Kayaku Co., Ltd., Kita-ku, Tokyo, Japan

140. Correction of Herpes Simplex Virus-Induced Dyslipidemia by Antiviral Chemical Preparations.
V.I. Votyakov, T.V. Amvrosieva, E.V. Serebryakova, O.T. Andreeva, M.P. Samarina, A.B. Cheschevik, and A.Y. Chekina
Byelorussian Res. Inst. Epidem. & Microbiol., Minsk, Byelorussia

141. Selection of the Acetal 2-Amino-9-[3-(isopropoxymethoxy) propoxy]purine (BRL 55792) as an Oral Prodrug of the Anti-herpesvirus Agent 9-(3-Hydroxypropoxy)guanine (BRL 44385).
M.R. Harnden, R. Ashton, M.R. Boyd, L.J. Jennings, and D. Sutton
SmithKline Beecham Pharmaceuticals, Great Burgh, Epsom, Surrey, UK

142. Metabolic Disposition of BW 256U87, the L-Valyl Ester of Acyclovir, in the Rat.
T.C. Burnette and P. de Miranda
Burroughs Wellcome Co., Research Triangle Park, NC, USA

143. Amino Acid Esters of Acyclovir as Oral Prodrugs.
L. Beauchamp, G.F. Orr, P. de Miranda, T. Burnette, and T.A. Krenitsky
Burroughs Wellcome Co., Research Triangle Park, NC, USA

144. Pharmacokinetics of 1-(β -D-arabinofuranosyl)-5(E)-(2-[125 I]-iodovinyl)uracil, ([125 I]) IVaraU), Following Intravenous and Subconjunctival Injection in New Zealand White (NZW), Rabbits.
W. Liu, R.J. Wanklin, and S.L. Sacks
University of British Columbia, Vancouver BC, Canada

145. New Non-Invasive Diagnostic Method for Herpes Simplex Virus Encephalitis (HSVE) by Chemiluminescent Study.
S. Kamei, T. Takasu, T. Tezuka, and K. Shimizu
Nihon University School of Medicine, Tokyo; and Jichi Medical School, Tochigi, Japan

146. A Flow Cytometric Analysis of the Effects of Ganciclovir on the Expression of Cytomegalovirus (CMV) Immediate Early Antigen in Peripheral Blood Mononuclear Cells (PBMC) Obtained from Patients Suspected of CMV Related Disease.
J.J. McSharry, D. Herman, D. Conti, N. Lempert, and S. Remick
Albany Medical College, Albany, NY, USA

147. Oral Ribavirin for the Prevention of Recurrences in Genital Herpes.
M.F.A. Carvajal, G.M.E. Palacio, and V.M. Garibay
Civil Hospital, Puebla City, Mexico

148. Evaluation of Oral and Topical Administration of Ribavirin in Herpes Zoster.
R. Flores-Guerrero, F.J. Dorantes, M. Garibay-Valencia, V. Fortuno-Cordova, and M.E. Palacio-Gonzalez
Hospital General de Mexico, SSA, Mexico City, Mexico

149. Systemic Application of the Interferon Inducer (ds RNA) for the Treatment of HSV-infection.
N.N. Nossik, L.A. Lavrukhina, M.A. Samgin, and K.M. Kudratullaev
The D.I. Ivanovsky Institute of Virology, Moscow; and Moscow Medical Academy, Moscow, Russia

150. Effect of Ganciclovir on Cytomegalovirus Disease in Renal Transplant Recipients.
K. Meigata, R. Hondo, S. Inoue, H. Sugimoto, T. Nagao, H. Uchi-
da
University of Tokyo, Tokyo, Japan; and Institute of Public Health,
Tokyo, Japan

Wednesday, March 11

Oral Session V: Minisymposium – Molecular Targets/Gene Expression

Chairpersons: J.S. Pagano and A.K. Field

- 9:00 B. Roizman
 “What do Herpes Simplex Virus Genes do? Novel Targets for Antiviral
 Chemotherapy”
 University of Chicago, Chicago, IL, USA
- 9:30 R.A. Lamb
 “Influenza Viruses and their Ion Channel Activities”
 Northwestern University, Evanston, IL, USA
- 10:00 Break
- 10:30 J. Karn
 “Control of HIV Gene Expression by the RNA-Binding Proteins Tat and
 Rev”
 Laboratory of Molecular Biology, Cambridge, UK
- 11:00 C.W. Dieffenbach
 “Receptor Targeted Therapy for Coronavirus Infection”
 Uniformed Services University of the Health Sciences, Bethesda, MD,
 USA
- 11:30 Discussion
- 12:00 **ISAR Business Meeting**

Thursday, March 12

Oral Session VI: Herpesvirus Infections – Part II

Chairpersons: M.G. Myers and E.R. Kern

- 8:30am Plenary Speaker – K. Biron
 “Drug Resistant Viruses: Tools for Drug Design”
 Burroughs Wellcome Co., Research Triangle Park, NC, USA
- 9:00 151. Effects of Fanciclovir in a Murine Model of Encephalitis Induced
 by Intranasal Inoculation of Herpes Simplex Virus Type 1.
 S.E. Goldthorpe, M.R. Boyd, and H.J. Field
 Cambridge University, Cambridge, UK; and SmithKline Beecham
 Pharmaceuticals, Epsom, Surrey, UK
- 9:15 152. Neurologic Sequelae of Experimental Neonatal HSV-2 Infection.
 F.J. Bravo, C. Mani, W.S. Ball, C.V. Vorhees, L.R. Stanberry,
 D.I. Bernstein, and M.G. Myers
 Children’s Hospital and Research Foundation, Cincinnati, OH;
 and the Gamble Institute for Medical Research, Cincinnati, OH,
 USA
- 9:30 153. The SCID Mouse Model for Evaluation of Antiviral Agents Against
 Murine Cytomegalovirus (MCMV).
 D.F. Smee, J.L.B. Morris, J.R. Mead, and R.W. Sidwell
 Utah State University, Logan, UT, USA
- 9:45 154. MSL-109 and DHPG Single and Combination Therapy during
 HCMV-induced Chorioretinitis in the Rabbit.
 E.C. Dunkel, M.D. Tolpin, D. Freitas, Q. Zhu, and D. Pavan-
 Langston
 Eye Research Institute, Harvard Medical School, Boston, MA; and
 The Sandoz Research Institute, East Hanover, NJ, USA
- 10:00 155. The Successful Treatment of Calves Experimentally Infected with
 Bovine Rhinotracheitis Virus (BHV-1) by Means of (S)-1-(3-Hy-
 droxy-2-phosphonylmethoxypropyl) Cytosine (HPMPC) During
 Acute and Reactivated Infections.
 S.E. Gilliam and H.J. Field
 Cambridge University, Cambridge, UK
- 10:15 Break
- 10:45 156. Lack of Efficacy of a Topical Human Leukocyte Interferon-Non-

oxynol-9 Preparation in the Treatment of Recurrent Genital Herpes
A. Langenberg, G. Valsecchi, C. Winter, M. Remington, A. Dunne, J. Benedetti, and L. Corey
University of Washington, Seattle, WA, USA

11:00 157. A Randomized Comparative Trial of High vs. Standard Dose Oral Acyclovir on First Episode Genital Herpes Infections.
A. Wald, J. Benedetti, M. Remington, G. Davis, and L. Corey
University of Washington, Seattle, WA; and Burroughs Wellcome Co., Research Triangle Park, NC, USA

11:15 158. Prevention of Cytomegalovirus (CMV) Disease After Allogeneic Marrow Transplant by Ganciclovir Prophylaxis.
J.M. Goodrich, R. Bowden, C. Keller, and J.D. Meyers
Fred Hutchinson Cancer Research Center, Seattle, WA, USA

11:30 159. Quantification of Viral Nucleic Acids.
J.C. Fox, P.D. Griffiths, and V.C. Emery
Royal Free Hospital School of Medicine, London, UK

11:45 160. Novel Synthetic Approaches to Acyclic Phosphonate Analogues of Nucleotides. Structure-Activity Studies
A. Holý, H. Dvořáková, J. Jindřich, P. Alexander, I. Rosenberg, M. Otmar, J. Balzarini, R. Snoeck, and E. De Clercq
Czechoslovak Academy of Sciences, Praha, Czechoslovakia; and Katholieke Universiteit Leuven, Leuven, Belgium

12:00 **Joel Meyers Memorial Lecture** – Treatment of CMV Infections in the immunocompromised host.
Raleigh Bowden
Fred Hutchinson Cancer Research Center, Seattle, WA, USA

Sponsored by the Wellcome Foundation Ltd. (Beckenham, UK)

12:30 Lunch

Oral Session VII: Retrovirus and Hepadnavirus Infections

Chairpersons: P.S. Lietman and R.J. Whitley

2:00pm Plenary Speaker – D.L. Tyrrell
“Treatment Strategies for Hepatitis B”
University of Alberta, Edmonton, Canada

2:30 161. Mechanism of Action of Antiviral Agents Targeted Against Duck

Hepatitis B Virus Supercoiled DNA.

S.A. Locarnini, S. Bowden, G. Ning, G. Tachedjian, X. Hong, and J. Newbold

Fairfield Hospital, Fairfield, Victoria, Australia; and University of North Carolina, Chapel Hill, NC, USA

- 2:45 162. Inhibition of Hepatitis B Virus Replication by Microalgal Extracts.
B.E. Korba, P. Behrens, and K.B. Schwarz
Georgetown University, Rockville, MD; Martek Corp., Columbia, MD; and Johns Hopkins University Hospital, Baltimore, MD, USA
- 3:00 163. Identification and Metabolism Studies of the Active Stereo Isomer Responsible for Anti-Hepatitis B Virus from (+) 2',3'-Dideoxy-3'-Thiacytidine.
C.-N. Chang, S.-L. Doong, J.H. Zhou, C.K. Chu, and Y.C. Cheng
Yale University School of Medicine, New Haven, CT; and The University of Georgia, Athens, GA, USA
- 3:15 164. Controlled Trials of Nucleoside Analogs in Chronic Carriers of Woodchuck Hepatitis Virus.
J.L. Gerin, B.E. Korba, P. Cote, W.E. Hornbuckle, and B.C. Tennant
Georgetown University, Rockville, MD; and Cornell University, Ithaca, NY, USA
- 3:30 165. Experimental Therapy of Immunodeficiency-Inducing Feline Retroviruses with Phosphonylmethoxyethyl Adenine (PMEA).
E.A. Hoover, M.S. Philpott, J.P. Ebner, and N.S. Zeidner
Colorado State University, Fort Collins, CO, USA
- 3:45 166. Suppression of Murine Retroviral Disease as a Model for AIDS by 2',3'-Dideoxy-2',3'-didehydrothymidine (D4T).
R.W. Sidwell, K.J. Okleberry, R.A. Burger, R.P. Warren, and J.D. Morrey
Utah State University, Logan, UT, USA
- 4:00 167. Virological Identification of Three Subgroups of Patients During Extended Treatment with Zidovudine.
K. Broadhurst, M. Lowdell, A. Ball, P. Levantis, G.E. Forster, B.T. Goh, B. Colvin, G.G. Jackson, and J.S. Oxford
London Hospital Medical College, London, UK
- 4:15 168. The Virologic Effect of High Dose Recombinant Soluble CD4 (rsCD4) in HIV + Individuals.
T. Schacker, R. Coombs, A. Collier, I. Fox, E. Eggert, K. Nelson,

and L. Corey
University of Washington, Seattle, WA; and Biogen, Inc., Cambridge, MA, USA

Poster Session III: Respiratory Viruses, Hepadnaviruses, Togaviruses, Other.

4:30-6:30pm

169. Synthesis and Properties of 8-Benzyl-4-dimethylaminoimidazo [1,5- α]-1,3,5-triazines, Isosters of Antirhinoviral Purines.
B. Golankiewicz and P. Januszczyk
Polish Academy of Sciences, Poznan, Poland
170. In Vitro Evaluation of Novel Azolylalkoxy Heterocycles as Potential Antipicornavirus Agents.
M.L. Tempest, C.A. Koski, R.G. Micetich, and M. Daneshtalab
SynPhar Laboratories, Inc., Edmonton, Alberta, Canada
171. Novel Generation of Heteroarylthio, Sulfoxy, or Sulfonyl Alkyl Azoles as Antipicornavirus Agents.
M. Daneshtalab, R.G. Micetich, D.Q. Nguyen, C.M. Ha, H.T. Luu, M.L. Tempest, and C. Koski
SynPhar Laboratories, Inc. Edmonton, Alberta, Canada
172. A Comparison of the In Vitro Antiviral Potency of 2-Thio-6-Azauridine with Ribavirin and Selenazofurin Against Selected Positive- and Negative-Stranded RNA Viruses.
J.J. Kirsi, B. Gabrielsen, J.T. Rankin, W.M. Shannon, T.P. Monath, and J.W. Huggins
Southern Research Institute, Birmingham, AL; and Army Medical Research Institute of Infectious Diseases, Fort Detrick, Frederick, MD, USA
173. Search for Antiviral Compounds Against Influenza and Some Other Viruses Causing Respiratory Diseases.
G.M. Ryazantseva, N.A. Zamyatina, L.L. Firstova, and A. Kirchenstein
Latvian Academy of Sciences, Riga, Latvia
174. Differential Effects of Capsid-binding Antivirals on the Adsorption of Rhinoviruses.
K. Andries, B. Dewindt, K. Van Eemeren, J. Snoeks, and R. Willebrords

Janssen Research Foundation, Beerse, Belgium

175. Antiviral Activity of Protease Inhibitors on the Replications of Ortho- and Paramyxoviruses.
M. Hosoya, S. Mori, and S. Shigeta
Fukushima Medical College, Fukushima, Japan
176. Mode of Action of SP-303 Against Respiratory Syncytial Virus (RSV).
D.L. Barnard, J.H. Huffman, R.M. Nelson, J.L.B. Morris, A.C. Gessaman, R.W. Sidwell, and L.R. Meyerson
Utah State University, Logan, UT; and Shaman Pharmaceuticals, Inc., San Carlos, CA, USA
177. LY217896: Studies on the Mechanism of Antiviral Activity.
J.M. Colacino, G.M. Birch, and J.C. Tang
Lilly Research Laboratories, Indianapolis, IN, USA
178. Some Correlations Between Rimantadine-Sensitive and Rimantadine Resistant Influenza Virus clones in the General Populations of Drug-Sensitive Viruses.
V.A. Kalnina, N.V. Gorodkova, and M.K. Indulen
Latvian Academy of Sciences, Riga, Latvia
179. Development of Influenza Virus A (H3N2) Mutants Resistant to Mopyridone and Study of Their M1 Protein Antigenic Structure.
S. Uzunov, A.S. Galabov, M.L. Khristova, L. Wassilewa, D. Bucher, I.G. Kharitononkov, and E. Nikolova
Bulgarian Academy of Sciences, Sofia, Bulgaria; USSR Academy of Medical Sciences, Moscow, Russia; and The New York Medical Higher School, Valhalla, NY, USA
180. Antiviral Effect of the Combination – Yeast Enzyme Complex and Rimantadin.
A. Uzunova, and P. Petkov
Bulgarian Academy of Sciences, Sofia, Bulgaria
181. Inhibition of Influenza A and B Viruses Reproduction by Di- and Tripeptides Similar to N-Termini of HA2 Viral Polypeptides.
V.I. Bubovich, N.A. Zamyatina, and A. Kirchenstein
Latvian Academy of Sciences, Riga, Latvia
182. Antiviral and Immunomodulating Activities of Polysacchrides Extracted from Medicinal Fungi and Herbs.
H. Chen, Z. Li, J.-D. Jiang, J. Li, F. Zhang, X. Tang, and X. Zhang

Chinese Academy of Medical Sciences, Beijing, China

183. Protective Immune Responses in Animals Vaccinated With the FHN Subunit Vaccine for Control of Human Parainfluenza-3 Virus.
R.J. Brideau, N.L. Oien, D.R. Thomsen, F.L. Homa, D.J. Lehman, L.L. Roof, and M.W. Wathen
The Upjohn Company, Kalamazoo, MI, USA
184. Potent Therapeutic and Prophylactic Efficacy of F-PAB in Mice Infected with Human Enteroviruses.
M. Agoh, T. Mizuno, Y. Agoh, N. Satoh, and T. Kurimura
Maruishi Pharmaceutical Co., Ltd., Osaka, Japan; and Osaka University, Osaka, Japan
185. Investigation on IRS-19 (Sarbach, France) in Influenza A Virus Infection in Mice and Humans.
O.I. Kubar, L.S. Safonova, S.L. Firsov, L.E. Nikitina, E.A. Br-janeeva, T.I. Ogli, and T.V. Bubeneva
Pasteur Institute, St. Petersburg, Russia
186. Treatment of Respiratory-Syncytial Viral Infection in Children of Early Ages with Ribovirin in Aerosol.
S.G. Cheshik, R.V. Vartanyan, and L.A. Ivanova
The D.I. Ivanovsky Institute of Virology, Moscow, Russia
187. Abitylguanide: Adenovirus Reproduction Inhibitor Efficient in the Treatment of Epidemic Keratoconjunctivitis (EKC).
A.S. Galabov, P. Vassileva, V. Vassileva, N. Arshinkov, V. Karabasheva, and D. Pencheva
Bulgarian Academy of Sciences, Sofia, Bulgaria; Medical Academy, Sofia, Bulgaria; and Varna Medical School, Varna, Bulgaria
188. Identification and Intracellular Location of Poliovirus Eclipse particles and the Influence of Chloroquine and R 78206.
R. Vrijssen, P. Kronenberger, O. Ofori-Anyinam, and A. Boeye
Vrije Universiteit Brussel, Brussels, Belgium
189. Aryl- α -D-Galactosaminides Inhibit the Ability of Rotavirus to Bind to and to Infect Susceptible Cells.
J.H. Gilbert and M.E. Schaefer
Glycomed, Inc., Alameda, CA, USA
190. Antiviral Drug Screening Against Hepatitis A Virus and the Effects of Selected Potential Anti-HAV Agents.

K.A. Keith, C.M. Cox, B.J. Bowdon, and W.M. Shannon
Southern Research Institute, Birmingham, AL, USA

191. Use of a Filter Binding Sample Preparation Method for the PCR Detection of Hepatitis B Virus (HBV) in Cell Culture or in Human Sera and for the Demonstration of the Anti-HBV Activity of Two Halogenated Pyrimidine Nucleoside Analogs.
K.A. Staschke, J.M. Colacino, and C.-H. Lee
Lilly Research Laboratories, Indianapolis, IN; and Indiana University School of Medicine, Indianapolis, IN, USA
192. Antiviral Strategies in Chronic Hepatitis B Virus Infection: Inhibition of Duck Hepatitis B Virus Replication In Vitro by Pyrimidine Analogs.
S.A. Locarnini, T. Shaw, and D.S. Bowden
Macfarlane Burnet Centre for Medical Research and Virology Laboratories, Fairfield Hospital, Fairfield, Victoria, Australia
193. Inhibitory Effects of Phosphonate Nucleotide Analogues on Human Hepatitis B Virus DNA Synthesis.
T. Yokota, K. Konno, S. Shigeta, A. Holy, J. Balzarini, and E. De Clercq
Fukushima Medical College, Fukushima, Japan; Institute of Organic Chemistry and Biochemistry, Praha, Czechoslovakia; and Katholieke Universiteit Leuven, Leuven, Belgium
194. Genetic Alterations in the Gene Encoding the Major Hepatitis B Surface Antigen: DNA and Immunological Analysis of Recurrent HBsAg Derived from Monoclonal Antibody-treated Liver Transplant Patients.
G. McMahon, P.H. Ehrlich, Z.A. Moustafa, L.A. McCarthy, D. Dottavio, M.D. Tolpin, P.I. Nadler, and L. Ostberg
Sandoz Research Institute, East Hanover, NJ, USA
195. Ribavirin Therapy for Chinese Patients with Chronic Hepatitis C.
S.-D. Lee, M.J. Tong, G.-H. Lo, M.-H. Ho, R.-H. Lu, Y.-T. Tsai, and K.-J. Lo
Veterans General Hospital, and National Yang-Ming Medical College, Taipei, Taiwan, R.O.C.; and Huntington Memorial Hospital, Pasadena, CA, USA
196. Interferon Alfa-2b Therapy for Chinese Patients with Acute Post-transfusion Hepatitis C.
S.-D. Lee, S.-J. Hwang, and K.-J. Lo
Veterans General Hospital, and National Yang-Ming Medical Col-

lege, Taipei, Taiwan, R.O.C.

197. The Clinical Investigation of the Combined Treatment of PolyI:C and Thymosine on Patients with Chronic Hepatitis B.
Z.-Q. Wu and C.-L. Lu
Wuhan Institute of Virology, Academia Sinica and Wuhan Rialway Hospital, Wuhan, China
198. Treatment of Anogenital Warts with Recombinant Interferon Gamma: Results of Two Multicenter Placebo-controlled Clinical Trials.
G. Gross, K.W. Degen, G. Fierlbeck, M. Hilgarth, L. Kowalzik, H. Pfister, A. Roussaki, T. Rufli, H. Schofer, C. Stetter, and J. Brzoska
Universities of Hamburg, Dusseldorf, Tubingen, Freiburg, Erlangen, Basel, Frankfurt; Bioferon, Laupheim, Germany
199. Synthesis and In Vivo Anti-RNA-Viral Evaluation of a Phosphoramidate Derivative of 6-Azauridine; Orotidylic Acid Decarboxylase Inhibitors, Pyrazofurin, and 6-Azauridine; and 2-Thio-6-Azauridine and its Triacetate.
B. Gabrielsen, T.P. Monath, J.T. Rankin, J.W. Huggins, D.F. Kefauver, C.D. Kwong, C.A. Krauth, J.A. Secrist, III, J.H. Huffman, D.F. Smee, and R.W. Sidwell
U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD; Southern Research Institute, Birmingham, AL; and Utah State University, Logan, UT, USA
200. Syntheses of a Series of 6-Substituted Pyrimidines Including Orotidylic Acid Decarboxylase Inhibitors, and In Vitro Evaluation of Their Antiviral Efficacy.
B. Gabrielsen, J.W. Huggins, H.A. Blough, T.P. Monath, J.J. Kirsi, C.D. Kwong, L.K. Hanna, L.A. Krauth, J.A. Secrist III, and W.M. Shannon
U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD; and Southern Research Institute, Birmingham, AL, USA
201. The Effect of Glycosylation Inhibitors on the Replication of Junin Virus.
E. Damonte, A. Silber, N. Candurra, S.E. Mersich
Universidad de Buenos Aires, Argentina
202. Resistance of Sindbis Virus to Some Adamantine Compounds.
G.A. Galegov, V.L. Andronova, and N.A. Leontieva

The USSR Academy of Medical Sciences, Moscow, Russia

203. Identification and Characterization of a 47 kDa Host Protein Implicated in the Transport of Alphaherpesviruses in Infected Cells.
B.W. Banfield and F. Tufaro
University of British Columbia, Vancouver BC, Canada
204. Cellular and Humoral Factors Associated with Polyriboinosinic-Polyribocytidylic Acid (Poly I:C) Induced Resistance to Banzi Virus Encephalitis.
D.C. Barnhart, E.P. Mayer, A. Ghaffar, and J.D. Gangemi
University of South Carolina, Columbia, SC, USA
205. Comparison of the In Vivo Anti-Punta Toro Virus Activity of Ribavirin, Ribavirin Triacetate and Ribamidine in Mice.
J.H. Huffman, R.W. Sidwell, J. Gilbert, J.W. Huggins, and T. Monath
Utah State University, Logan, UT; and U.S. Army Medical Research Institute for Infectious Diseases, Frederick, MD, USA
206. Antiviral Effect of Interferon Inducers (Florenons) on Experimental Bunyavirus Infections in the Soviet Union.
L.K. Berezina, L.A. Litvinova, S.A. Lyahov, N.N. Nossik, S.A. Adronati, and D.K. Lvov
The D.I. Ivanovsky Institute of Virology, Moscow, Russia
207. Characterization of a Novel Antiviral Glycoprotein from Human Serum.
D.H. Copenhagen, I.P. Singh, A. Chopra, and S. Baron
University of Texas Medical Branch, Galveston, TX, USA
208. Antiviral Activity of Marine Plants from India.
M. Premanathan, K. Chandra, and K. Kathiresan
Centre of Advanced Study in Marine Biology, Tamil Nadu; Central Drug Research Institute, Luknow, India
209. Synthesis and Antiviral Evaluation of 1-Deaza-8-Aza and 3-Deaza-8-Aza-Purine Nucleosides.
P. La Colla, P. Franchetti, L. Cappellacci, M. Grifantini, L. Messina, M.E. Marongiu, and A. Pani
Universita di Cagliari, Scienze Chimiche, Universita di Camerino, Italy
210. On Antiviral Properties of Some Drugs and Possible Role of Virus-

- es in Formation of Cardiovascular Diseases.
T.V. Amvrosieva, V.I. Votyakov, G.V. Vladyko, and O.T. Andreeva
Byelorussian Res. Inst. Epidem. & Microbiol., Minsk, Byelorussia
211. Are Eukaryotic Topoisomerases Potential Targets for Antiviral Therapy?
B. Maschera, M. Rassu, E. Ferrazzi, M. Toni, and G. Palu
University of Padova, Padova, Italy
212. Phosphorylation of 9-(2-Phosphonomethoxyethyl) adenine and 9-(S)-(3-Hydroxy-2-phosphonomethoxypropyl) adenine by AMP (dAMP) Kinase from L-1210 Cells.
A. Merta, I. Votruba, J. Jindřich, A. Holý, T. Cihlář, I. Rosenberg, M. Otmar, and H.Y. Tchàou
Czechoslovak Academy of Sciences, Praha, Czechoslovakia
213. Quantitation of Acyclic Adenine Nucleoside Phosphonate Concentrations in Human Plasma Using High-Performance Liquid Chromatography and Fluorescence Detection.
L. Naesens, J. Balzarini, and E. De Clercq
Katholieke Universiteit Leuven, Leuven, Belgium
214. Single-Dose Pharmacokinetics of Nevirapine (BI-RG-587).
M. McLaughlin, S. Cheeseman, R. Koup, C. Bova, J. Sullivan, S. Hatttox, J. Keirns, and D. Hall
Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT; and University of Massachusetts Medical School, Worcester, MA, USA
215. Interferon-Inducing Activity of Curantyl in Volunteers.
O.I. Kubar, S.L. Firsov, V.I. Iovlev, I.E. Solovjova, and O.V. Paskonkina
Pasteur Institute, St. Petersburg, Russia
216. Adenovirus Type 5 Replication Is Inhibited By S – HPMPC In The NZ Rabbit Ocular Model.
Y.J. Gordon, E. Romanowski, T. Araullo-Cruz, and E. De Clercq
The Eye and Ear Institute of Pittsburg, Pittsburg, PA, USA; and Katholieke Universiteit Leuven, Leuven, Belgium
217. A Two Day Cytoprotection and Cytotoxicity Assay for Rapid Anti-HIV Drug Screening.
S.W. Snyder, O.S. Weislow, and T.C. Owen
Program Resources, Inc., NCI-FCRCD, Frederick, MD; and University of South Florida, Tampa, FL, USA

218. Biochemical Defects in the 2-5A Synthetase/RNase L Antiviral Pathway in Chronic Fatigue Syndrome (CSF).
R.J. Suhadolnik, N.L. Reichenbach, P.M. Hitzges, D.H. Gillispie, D.R. Strayer, and W.A. Carter
Temple University, Hahnemann University, and HEM Pharmaceuticals Corp, Philadelphia, PA, USA
219. Treatment of chronic Fatigue Syndrome (CSF) with Ampligen.
D. Strayer, D. Gillispie, D. Peterson, P. Cheney, P. Salvato, M. Loveless, R. Suhadolnic, D. Walters and W. Carter
HEM Pharmaceuticals Corp, Hahnemann and Temple University, Philadelphia, PA, University of Oregon, Portland, OR, Charlotte, NC, Incline Village NV, Houston, TX, USA

Friday, March 13

Oral Session VII: Minisymposium – New Horizons

Chairpersons: E. De Clercq and S. Shigeta

- 8:30am C. Queen
“Antibody Therapies with Humanized Murine Monoclonals”
Protein Design Labs, Mountain View, CA, USA
- 9:00 J.J. Toulme’
“Antisense Oligonucleotides”
University of Bordeaux, Bordeaux, France
- 9:30 A. Fridland
“Intracellular Nucleoside Metabolism”
St. Jude’s Children’s Research Hospital, Memphis, TN, USA
- 10:00 Break
- 10:30 P. Thorpe
“Immunotoxins as Therapeutic Agents: An Overview”
University of Texas Southwestern, Dallas, TX, USA
- 11:00 R. Desrosiers
“Animal Models for HIV”
Harvard Medical School, Southborough, MA, USA
- 11:30 J.M. Lange
“New Anti-HIV Drugs in Clinical Trials”
University of Amsterdam, Amsterdam, The Netherlands
- 12:00 Discussion
- 12:30 Conference Adjourns