Lectures at Foreign Universities and Research Institutes

2 November 1970	"Interferon inducers", National Institutes of Health, Bethesda, Maryland, USA (host : Dr. R.M. Friedman).
3 November 1970	"Structural requirements of synthetic polynucleotides for induction of interferon", The Johns Hopkins University Medical School, Baltimore, Maryland, USA (hosts: Dr. W.A. Carter and Prof. Dr. P.O.P. Ts'o).
5 November 1970	"Mechanism of interferon induction by synthetic polynucleotides". Experimental Station, Central Research & Development Department, E.I. du Pont de Nemours & Company, Wilmington, Delaware, USA (host: Dr. R.Z. Lockart, Jr.).
18 May 1972	"New perspectives in the clinical application of interferon and interferon inducers", The M. Sklodowska-Curie Institute of Oncology, Warsaw, Poland (host: Prof. Dr. D. Shugar).
19 May 1972	"Biochemical aspects of the induction and action of interferon", Polish Academy of Sciences, Institute of Biochemistry and Biophysics, Warsaw, Poland (host: Prof. Dr. D. Shugar).
23 May 1972	"Recent studies on mechanism of induction and action of interferon", Czechoslovak Academy of Sciences, Institute of Virology, Bratislava, Czechoslovakia (host : Dr. L. Borecky).
22 June 1972	"The mechanism of interferon induction by synthetic double-stranded polynucleotides", Institut du Radium, Fondation Curie, Orsay, France (host : Dr. E. De Maeyer).
4 April 1975	"Interactions among polynucleotides as monitored by interferon induction", National Institutes of Health (NIH), Bethesda, Maryland, USA (hosts: Dr. P.F. Torrence & Dr. B. Witkop).
5 June 1975	"Synthetische polynucleotiden als inductoren van interferon en/of inhibitoren van de reverse transcriptase", Universiteit van Nijmegen, The Netherlands (host : Dr. H.P.J. Bloemers).
4 September 1975	"Synthetic polynucleotides as inducers of interferon and/or inhibitors of reverse transcriptase", Molecular Biology Department, Miles Laboratories, Elkhart, Indiana, USA (host: Dr. B. Janik).
8 September 1975	"Antiviral activity of novel nucleoside analogs", National Institutes of Health (NIH), Bethesda, Maryland, USA (host : Dr. P.F. Torrence).
10 September 1975	"Interferon induction by RNAs, double- and triple-stranded", Roswell Park Memorial Institute, Buffalo, New York, USA (host: Prof. Dr. W.A. Carter).
23 October 1975	"Les polynucléotides synthétiques en tant qu'inducteurs d'interféron et/ou inhibiteurs de la rétrotranscriptase", Institut de Cancérologie et d'Immunogénétique (ICIG), Villejuif, France (host : Prof. Dr. C. Jasmin).
28 November 1975	"Mécanisme d'induction de l'interféron par des polynucléotides synthétiques", Institut National de la Recherche Agronomique (Station de Recherches de Virologie et d'Immunologie), Thiverval-Grignon, France (host : Dr. R. Scherrer).

8 October 1976	"Polynucleotides as inducers of interferon", Tufts University School of Medicine, Boston, Massachusetts, USA (host: Prof. Dr. B.D. Stollar).
15 October 1976	"Polynucleotides as inducers of interferon", University of Cincinnati, Cincinnati, Ohio, USA (host: Prof. Dr. A.M. Bobst).
28 June 1978	"Development of new antivirals", Experimental Station, Central Research & Development Department, E.I. du Pont de Nemours & Company, Wilmington, Delaware, USA (host: Dr. R.Z. Lockart Jr).
29 March 1979	"Antiviral chemotherapy: selective anti-herpes agents", Department of Antiviral Chemotherapy, Research and Development Laboratories, Astra Läkemedel AB, Södertälje, Sweden (host: Dr. E. Helgstrand).
11 June 1979	"Reverse transcriptase inhibitors", Institut für Pharmazie und Lebensmittelchemie der Friedrich-Alexander Universität, Erlangen-Nürnberg, Federal Republic of Germany (host: Prof. Dr. O. Dann).
10 October 1979	"New anti-herpes agents", Memorial Sloan-Kettering Cancer Center, New York, N.Y., USA (host: Prof. Dr. J.J. Fox).
11 October 1979	"Anti-herpes chemotherapy", Department of Pharmacology, Yale University School of Medicine, New Haven, Connecticut, USA (host: Prof. Dr. W.H. Prusoff).
11 March 1980	" <u>E</u> -5-(2-Bromovinyl)-2'-deoxyuridine: a potent and selective anti-herpes agent", Beecham Pharmaceuticals (Chemotherapeutic Research Centre), Brockham Park, Betchworth, Surrey, England (host: Dr. D. Planterose).
26 June 1980	"Perspectives of nucleoside analogues in the chemotherapy of viral diseases", Central Research Institute for Chemistry of the Hungarian Academy of Sciences, Budapest, Hungary (hosts: Prof. Dr. L. Ötvös & Dr. J. Sagi).
5 November 1980	"New developments in antiviral chemotherapy", Wissenschaftliche Abteilung, Robugen GmbH, Pharmazeutische Fabrik, Esslingen/Neckar, Federal Republic of Germany (hosts: Dr. E. Mauz & Dr. B. Hempel).
29 January 1981	"Antiviral chemotherapy: state of the art", Forschung Grünenthal GmbH, Aachen, Federal Republic of Germany (hosts: Dr. P. Jacobi & Dr. R. Hörhammer).
23 February 1981	"Bromovinyldeoxyuridine and other selective antiviral drugs", Institut für Pharmazie und Lebensmittelchemie der Friedrich-Alexander Universität, Erlangen-Nürnberg, Federal Republic of Germany (host: Prof. Dr. O Dann).
10 April 1981	"Nieuwe ontwikkelingen op het gebied van antivirale middelen", Medische Microbiologie, Rijksuniversiteit Groningen, The Netherlands (host : Prof. Dr. J.B. Wilterdink).
29 April 1981	"Recent developments in antiviral chemotherapy", Department of Chemistry, The University of Birmingham, England (hosts: Dr. R.T. Walker & Prof. Dr. A.S. Jones).
30 April 1981	"New developments in antiviral chemotherapy", Department of Pathology, Addenbrooke's Hospital, University of Cambridge, England (hosts: Dr. H.J. Field & Prof. Dr. P. Wildy).

"Selective antiviral drugs", National Institutes of Health (NIH), Bethesda, 11 May 1981 Maryland, USA (host: Dr. P.F. Torrence). 14 May 1981 "Selective antiviral drugs with therapeutic potential", The Wellcome Research Laboratories, Burroughs Wellcome Co., Research Triangle Park, North Carolina, USA (host: Dr. L. Beacham). 15 May 1981 "New antiherpesvirus agents", Division of Clinical Pharmacology, The Johns Hopkins University School of Medicine, Baltimore, Maryland, USA (host: Prof. Dr. P.S. Lietman). 3-4 June 1981 "BVDU, E-5-(2-bromovinyl)-2'-deoxyuridine, review: - Antiviral activity in vitro - Antiviral activity in vivo - Mechanism of action - Pharmacology and toxicology - Clinical efficacy", Searle Research and Development (G.D. Searle & Co.), Sophia Antipolis, France (host: Dr. A.J. Hale). 29 June 1981 "Recent advances in antiviral chemotherapy", Division of Infectious Diseases, Department of Medicine, Beth Israel Hospital, Harvard Medical School, Boston, Massachusetts, USA (host: Prof. Dr. C. Crumpacker). 18 August 1981 "Selective antiviral drugs", Syntex Research, Palo Alto (Dr. D.A. Eppstein), and Stanford University School of Medicine, Stanford, California, USA (host: Prof. Dr. T.C. Merigan). 21 August 1981 "Strategies in the design of antiviral drugs", Faculty of Medicine, The University of Alberta, Edmonton, Alberta, Canada (hosts: Prof. Dr. M.J. Robins and Prof. Dr. A.R.P. Paterson). 24 August 1981 "Antiviral potentials of bromovinyldeoxyuridine", Searle Research Development (G.D. Searle & Co.), Chicago, Illinois, USA (hosts: Prof. Dr. D. Azarnoff and Dr. H. Schoepke). 26 August 1981 "Antiviral potentials of E-5-(2-halogenovinyl)pyrimidine nucleosides", Department of Pharmacology, Yale University School of Medicine, New Haven, Connecticut, USA (hosts: Dr. H.S. Allaudeen and Prof. Dr. W.H. Prusoff). 8 September 1981 "New developments in antiviral research", Institute of Virology, Natural Environment Research Council, Oxford, England (hosts: Dr. D.C. Kelly and Dr. T.W. Tinsley). 2 November 1981 "Antiviral potentials of bromovinyldeoxyuridine", Bereich Medizin (Charité) der HumboldtUniversität, Berlin, D.D.R. (host: Prof. Dr. H.A. Rosenthal). 4 November 1981 "Therapeutic potentials of antiherpetic drugs", Forschungszentrum Molekularbiologie und Medizin, Akademie der Wissenschaften der DDR, Berlin-Buch, D.D.R. (hosts: Prof. Dr. P. Langen and Prof. Dr. W. Zschiesche).

"Antiviral potentials of (E)-5-(2-bromovinyl)-2'-deoxyuridine (BVDU)", Searle Research and Development, G.D. Searle, High Wycombe, Bucks, England (host:

12 May 1982

Dr. B.M. Richards).

4 August 1982	"Selective antiherpes drugs: therapeutic potentials for the treatment of herpes simplex and varicella zoster virus infections", Behringwerke AG, Marburg, Federal Republic of Germany (hosts: Dr. J. Hilfenhaus and Dr. R.F. Mauler).
24 August 1982	"Therapeutic potentials of BVDU [(\underline{E}) -5-(2-bromovinyl)-2'-deoxyuridine] in the treatment of herpesvirus infections", Department of Medicine, The University of British Columbia, Vancouver, British Columbia, Canada (host : Dr. S.L. Sacks).
26 August 1982	"Antiviral potential of bromovinyldeoxyuridine (BVDU) and other 5-substituted pyrimidine nucleoside analogues", Alberta Heritage Foundation for Medical Research, The University of Alberta, Edmonton, Alberta, Canada (host: Prof. Dr. M.J. Robins).
30 August 1982	"Antiviral drugs: recent developments", Department of Animal, Dairy and Veterinary Sciences, College of Agriculture, Utah State University, Logan, Utah, USA (host: Prof. Dr. R.W. Sidwell).
1 September 1982	"Therapeutic potentials of BVDU [(\underline{E}) -5-(2-bromovinyl)-2'-deoxyuridine] in the treatment of herpesvirus infections", Department of Pediatrics, University of Utah School of Medicine, Salt Lake City, Utah, USA (host : Dr. E.R. Kern).
14 September 1982	"Strategies in the design of antiviral drugs", Roche Research Lecture Programme, Roche Products Limited, Welwyn Garden City, England (hosts: Dr. R.W. Lambert, Dr. M.J. Hall and Dr. C.H. Hassall).
22 November 1982	"Selective antiherpes agents", Yamasa Shoyu Co. Research Laboratories, Araoicho, Choshi, Chiba, Japan (hosts : Dr. H. Machida and Dr. A. Kuninaka).
22 November 1982	"Recent progress in antiviral chemotherapy", Department of Microbiology, School of Medicine, Chiba University, Inohana, Chiba, Japan (host: Prof. Dr. T. Kuwata).
27 November 1982	"Design of nucleoside analogues as selective antiviral agents", Aichi Cancer Center Research Institute, Chikusa-ku, Nagoya, Japan (host : Dr. K. Ono).
29 November 1982	"Recent developments in antiherpes chemotherapy", Fukushima Medical College, Fukushima, Japan (host : Prof. Dr. S. Shigeta).
30 November 1982	"Recent developments in antiviral chemotherapy", Tohoku University School of Medicine, Sendai, Japan (host: Prof. Dr. N. Ishida).
3 December 1982	"Antiviral potentials of bromovinyldeoxyuridine (BVDU)", Department of Pediatrics, UCLA School of Medicine, University of California, Los Angeles, California, USA (host: Prof. Dr. Y. Bryson).
6 December 1982	"Strategies for the design of antiviral drugs", Texas College of Osteopathic Medicine, North Texas State University, Fort Worth, Texas, USA (host: Prof. Dr. L.B. Allen).
6 December 1982	"Selective antiherpes agents", Department of Microbiology and Immunology, North Texas State University, Fort Worth, Texas, USA (host: Prof. Dr. E.F. Harris, Chairperson).

6 December 1982 "Strategies for the design of antiviral drugs", Research and Development Microbiology, Alcon Laboratories, Fort Worth, Texas, USA (host: Dr. B.A. Schlech, Director). 7 December 1982 "Selective antiherpes agents", Department of Biological Sciences, North Texas State University, Denton, Texas, USA (host: Dr. Y.C. Chen). 7 December 1982 "Selective antiherpes agents", Wadley Institutes of Molecular Medicine, Dallas, Texas, USA (host: Dr. N.O. Hill, President). 8 December 1982 "Nucleoside and polynucleotide analogues as antiviral agents", Department of Microbiology, The University of Texas Medical Branch, Galveston, Texas, USA (host: Prof. Dr. S. Baron, Chairperson). 9 December 1982 "Development of inhibitors of herpes simplex virus replication", Department of Microbiology, The University of Alabama in Birmingham, Birmingham, Alabama, USA (host: Prof. Dr. R.J. Whitley). "Strategies in the design of antiviral agents", Southern Research Institute, 10 December 1982 Birmingham, Alabama, USA (host: Dr. J.A. Montgomery, Senior Vice-President). 8 February 1983 "Targets for the design of antiviral drugs", Pfizer Central Research, Sandwich, Kent, England (host: Dr. W.D. Butt, Director). 21 March 1983 "Strategies in the design of antiviral agents", National Institute of Mental Health, National Institutes of Health, Bethesda, Maryland, USA (host: Dr. G.L. Cantoni, Chief, Laboratory of General and Comparative Biochemistry). 22 March 1983 "Strategies in the design of antiviral agents", Smith Kline and French Laboratories, Research and Development, Philadelphia, Pennsylvania, USA (host: Dr. H.S. Allaudeen). 25 March 1983 "Therapeutic potentials of bromovinyldeoxyuridine", Children's Hospital Medical Center, University of Washington, Seattle, Washington, USA (host: Prof. Dr. L. Corey). 28 March 1983 "Antiviral activity of 5-substituted 2'deoxyuridines", College of Pharmacy, University of Michigan, Ann Arbor, Michigan, USA (hosts: Prof. Dr. L.B. Townsend, Chairman, and Prof. Dr. J.C. Drach). 29 March 1983 "Therapeutic potentials of bromovinyldeoxyuridine", Hutzel Hospital, School of Medicine, Wayne State University, Detroit, Michigan, USA (host: Prof. Dr. A.M. Lerner, Chief). 30 August 1983 Round Table Discussion on the Use of Animal Models in the Evaluation of Antiherpes Agents, Sandoz Forschungsinstitut, Vienna, Austria (host: Dr. H. Bachmayer, Head of the Department of Virology). "New trends in antiviral chemotherapy", Instituto de Quimica Medica, Consejo 4 October 1983 Superior de Investigaciones Cientificas, Madrid, Spain (host : Dr. F.G. De las Heras). 23 February 1984 "Therapeutic potentials of bromovinyldeoxyuridine", Institut für Virologie der

Universität zu Köln, Köln, Federal Republic of Germany (host: Prof. Dr. H.J.

Eggers, Director).

2 April 1984	Round Table Discussion on New Leads in the Development of Antiviral Agents, Schering Corporation, Bloomfield, New Jersey, USA (host: Dr. G.H. Miller, Director of Antibiotic Screening and Evaluation).
3 April 1984	"Promises and failures of antiviral chemotherapy", Department of Microbiology, School of Medicine, New York University, New York, USA (host: Prof. Dr. R.J. Klein).
4 April 1984	"Recent developments on bromovinyldeoxyuridine, a selective antiherpes agent", Department of Pharmacology and Experimental Therapeutics, The Johns Hopkins University School of Medicine, Baltimore, Maryland, USA (host: Prof. Dr. P.S. Lietman).
5 April 1984	"Promises and pitfalls of antiherpes drugs", Department of Microbiology, The Milton S. Hershey Medical Center, The Pennsylvania State University, Hershey, Pennsylvania, USA (host: Prof. Dr. F. Rapp, Chairman).
6 April 1984	"Targets for the antiviral and antitumor action of nucleoside analogs", Smith Kline and French Laboratories, Research and Development, Philadelphia, Pennsylvania, USA (host: Dr. H.S. Allaudeen).
16 April 1984	"Potency and selectivity of bromovinyldeoxyuridine as an anti-herpes agent", Marjorie B. Kovler Viral Oncology Laboratories, Committee on Virology, The University of Chicago, Chicago, Illinois, USA (host: Prof. Dr. B. Roizman, Chairman).
17 April 1984	"Targets for antiviral agents", The Upjohn Company, Kalamazoo, Michigan, USA (host: Dr. H.E. Renis).
1 August 1984	"Targets for antiviral and antitumour agents", Department of Biochemical Pharmacology, Institute of Cancer Research, Belmont, Sutton, Surrey, England (host: Prof. Dr. K. Harrap, Department Head).
14 September 1984	"Targets for the development of new antiviral agents", Toyo Jozo Research Laboratories, Mifuku Ohito-cho, Togata-Gun, Shizuoka-ken, Japan (hosts: Dr. K. Fujimoto, Director New Business Development, and Dr. J. Murase, Director Medicinal Research Laboratories).
28 September 1984	"Antiviral potentials of 5-chloroethyldeoxyuridine in comparison with 5-bromovinyldeoxyuridine", Sandoz Forschungsinstitut, Vienna, Austria (hosts: Dr. B. Rosenwirth and Dr. H. Bachmayer, Head of the Department of Virology).
9 October 1984	"Recent developments in antiviral chemotherapy", Université des Sciences et Techniques du Languedoc, Montpellier, France (host : Prof. Dr. B. Lebleu).
11 December 1984	"Recent developments on antiherpetic drugs", Robert Koch Höhrsahl, Bereich Medizin (Charité) der Humboldt-Universität, Berlin, D.D.R. (host : Prof. Dr. H.A. Rosenthal).
12 December 1984	"Recent developments in antiviral therapy", Robert Koch-Institut, Berlin, Federal Republic of Germany (host: Prof. Dr. H. Diringer).

13 December 1984	Round Table Discussion on Antiviral Potentials of Bromovinyldeoxyuridine, Merz & Co. GmbH, Frankfurt am Main, Federal Republic of Germany (host: Dr. L.H. Bonacker, Vice-President).
15 January 1985	"Antiviral potential of pyrimidine and purine carbocyclic nucleoside analogues", Glaxo Group Research Ltd., Greenford, Middlesex, England (host: Dr. J.M. Cameron).
27 February 1985	"Recent developments on antiviral agents", Institut für Immunologie und Onkologie, Bayer AG Pharma-Forschungszentrum, Wuppertal, Federal Republic of Germany (hosts: Dr. G. Streissle and Prof. Dr. H.D. Schlumberger).
25 March 1985	"Strategies in designing antiherpetic drugs", Gustav-Embden-Zentrum der Biologischen Chemie, Klinikum der Johann Wolfgang Goethe Universität, Frankfurt/Main, Federal Republic of Germany (host: Prof. Dr. P. Chandra).
26 March 1985	"Inhibitors of reverse transcriptase and retrovirus replication", Paul-Ehrlich-Institut, Frankfurt/Main, Federal Republic of Germany (host: Prof. Dr. H.D. Brede, President of the Paul-Ehrlich Institute).
28 March 1985	"New developments in antiviral chemotherapy", Wissenschaftliche Abteilung, Robugen GmbH, Pharmazeutische Fabrik, Esslingen/Neckar, Federal Republic of Germany (hosts: Dr. E. Mauz and Dr. B. Hempel).
4 June 1985	Discussion on assay systems for the evaluation of antiviral agents against high hazard viral infections, US Army Medical Research Institute of Infectious Diseases (USAMRIID), Fort Detrick, Frederick, Maryland, USA (host: Dr. P.G. Canonico, Chief, Department of Antiviral Studies).
5 June 1985	"New trends in antiviral chemotherapy", Pharmaceutical Research and Development Division, Bristol-Myers Company, Syracuse, New York, USA (host: Dr. C. McLaren).
6 June 1985	Discussion on the clinical development of antiviral agents, Science and Technology Group, Bristol-Myers Company, New York, New York, USA (hosts: Dr. J.A. Vida, Director of Licensing, and Dr. G. Vita, President of Bristol-Myers Research and Development).
20 June 1985	Discussion on the role of S-adenosylhomocysteine hydrolase in the antiviral activity of nucleoside analogues, Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague, Czechoslovakia (host: Dr. A. Holý).
23 September 1985	"Recent developments in antiviral chemotherapy", Molecular Biology Seminar Series, The University of Kansas, Lawrence, Kansas, USA (host: Prof. Dr. M.P. Mertes).
25 September 1985	"Recent developments in antiviral chemotherapy", Sterling-Winthrop Research Institute, Rensselaer, New York, USA (hosts: Dr. G. Diana and Dr. M.J. Otto).
26 September 1985	"Recent developments in antiviral chemotherapy", Infectious Disease Division, Department of Medicine, Beth Israel Hospital, Harvard Medical School, Boston, Massachusetts, USA (host: Prof. Dr. C. Crumpacker).
3 October 1985	Discussion on the world-wide industrial development of bromovinyldeoxyuridine, VEB-Berlin Chemie, Humboldt-Universität, Akademie der Wissenschaften der

DDR, Berlin, DDR (hosts: Dr. G. Hüttel, Prof. Dr. H.A. Rosenthal and Prof. Dr. P. Langen). 16 January 1986 "Perspectives d'avenir sur les antiviraux", Groupe d'Etude et de Recherche sur l'Herpès (G.E.R.H.), Paris, France (hôtes : Dr. B. Audeval, Secrétaire, et Prof. Dr. B. de Thé, Président du Groupe d'Etude et de Recherche sur l'Herpès). 21 January 1986 Discussion on the molecular and pharmacological aspects of protein-nucleic acid interactions (with Prof. Dr. J.W. Lown, Prof. Dr. J.-L. Imbach, Dr. O. Kennard and Prof. Dr. C. Paoletti), Laboratoire de Pharmacologie Moléculaire, Institut Gustave-Roussy, Villejuif, France (host: Prof. Dr. C. Paoletti). 10 February 1986 Discussion the development of adenosine on new analogues (phosphonylmethoxyalkyl derivatives) as antiviral agents, Science and Technology Group, Bristol-Myers Company, New York, New York, USA (hosts: Dr. J.A. Vida, Director of Licensing, and Dr. G. Vita, President of Bristol-Myers Research and Development). 11 February 1986 "Broad-spectrum anti-DNA virus activity of acyclic adenosine phosphonate analogues", Pharmaceutical Research and Development Division, Bristol-Myers Company, Syracuse, New York, USA (host: Dr. C. McLaren). 5 March 1986 Discussion of the therapeutic use of phosphonylmethoxyalkyl derivatives of adenosine as antiviral agents, Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague, Czechoslovakia (Host: Dr. K. Sebesta, Director of the Institute of Organic Chemistry and Biochemistry). 14 March 1986 "Recent developments in antiviral chemotherapy, particularly towards retrovirus infections", Sandoz Forschungsinstitut, Vienna, Austria (host: Dr. B. Rosenwirth). "New developments in antiviral chemotherapy", Department of Experimental 11 April 1986 Oncology and Virology, Roche Research Center, Hoffmann-La Roche Inc., Nutley, New Jersey, USA (host: Dr. I.S. Sim, Head of Antiviral Chemotherapy). "Recent developments in antiviral chemotherapy", jointly organized by the 24 April 1986 Czechoslovak Chemical and Medical Societies, Prague, Czechoslovakia (hosts: Dr. K. Sebesta, Director of the Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, and Prof. Dr. B. Korych, Faculty of Medicine, Charles' University). 12 May 1986 Discussion on the structure-activity relationship of 5-substituted 2'-deoxyuridines, Department of Physiological Sciences, College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada (host: Prof. Dr. V.S. Gupta). 13 May 1986 "Recent developments in antiviral chemotherapy", Ortho Pharmaceutical (Canada) Ltd., Don Mills, Toronto, Ontario, Canada (host : Dr. D. Ilse, Director, Pharmaceutical Research Department). 14 May 1986 "New developments in the search for selective antiviral agents", Department of Pharmacology, Yale University School of Medicine, New Haven, Connecticut, USA (host: Prof. Dr. W.H. Prusoff). 15 September 1986 Discussion on the ophthalmic use of bromovinyldeoxyuridine, Dr. Mann Pharma,

Berlin-West, Federal Republic of Germany (hosts: Dr. O. Riel, Marketing Director,

and Dr. E. Schwalbe-Riel, Managing Director).

"New developments in antiviral chemotherapy", Gemeinsames Chemisches und Biologisches Kolloquium, Fachbereich Biologie/ Chemie, Osnabrück, Federal Republic of Germany (host: Prof. Dr. F. Seela, Laboratorium für Organische und Bioorganische Chemie).

15 December 1986 "New developments in antiviral agents: (S)-HPMPA analogues and 2',3'-dideoxynucleoside analogues", Pharmaceutical Research and Development Division, BristolMyers Company, Wallingford, Connecticut, USA (host: Dr. J.C. Martin, Associate Director of Anti-Infective Chemistry).

17 December 1986 Discussion on the development of new phosphonate derivatives of purine and pyrimidine nucleosides, Science and Technology Group, Bristol-Myers Company, New York, New York, USA (hosts: Dr. J.A. Vida, Director of Licensing, and Dr. G. Vita, President of Bristol-Myers Research and Development).

21 January 1987 "Review of the current research on antiviral agents", Pasteur Vaccins, Paris, France (Hosts: Dr. M. Girard, Scientific Director, and Mrs. M.-J. Lecomte, Chairman of Pasteur Vaccins).

27 January 1987 "New developments in antiviral chemotherapy", Hoechst Pharma-Synthese, Hoechst Aktiengesellschaft, Frankfurt am Main, Federal Republic of Germany (hosts: Dr. M. Rösner, Prof. Dr. R. Geiger and Prof. Dr. W. Bartmann, Director, Hoechst Pharma-Synthese).

23 February 1987 "New targets for new antiviral agents", Centre International de Recherches Dermatologiques (CIRD), Sophia Antipolis, Valbonne Cédex, France (hosts: Dr. J.C. Jamoulle, Dr. B. Shroot and Prof. Dr. H. Schaefer, Director CIRD).

13-14 April 1987 Planning of Bayer Centenary Conference on "A Second Century of Anti-Infective Chemotherapy", Chicago, Illinois, USA (host: Prof. Dr. G.G. Jackson, Keeton Professor of Medicine, The University of Illinois at Chicago).

24 April 1987 "New trends in antiviral chemotherapy", R. & S. Antiinfectives, Farmitalia Carlo Erba, Milano, Italy (hosts: Dr. C. Battistini, Dr. F. Arcamone and Dr. R. Roncucci, Director of Research and Development).

9 June 1987 "Nieuwe bestanddelen actief tegen het AIDS virus", Scientific Development Group, Organon, Oss, The Netherlands (hosts: Dr. H.C.J. Ottenheijm, Director of the Bio-Organic Chemistry R & D Laboratories, and Dr. K. Wiedhaup, Director of Research and Development).

"Antiviral drug development: new antiviral agents active against the AIDS virus", Arzneimittelsynthese, Hauptlaboratorium, BASF Aktiengesellschaft, Ludwigshafen, Federal Republic of Germany (hosts: Dr. B. Janssen, Dr. J.-U. Bliesener, and Dr. H.U. Schenck, Director).

25 July 1987 Planning of Bayer Centenary Conference on "A Second Century of Anti-Infective Chemotherapy", Zürich, Switzerland (host: Prof. Dr. G.G. Jackson, Keeton Professor of Medicine, The University of Illinois at Chicago).

29 July 1987 "Trends in the research of antiviral agents", Clinical Hospital Center (Center of Medical Sciences) of the University of Zagreb, Yugoslavia (host: Prof. Dr. G. Piljac, Director of the Center of Medical Sciences).

27 August 1987 "Clinical aspects of antiviral agents", Westmead Hospital, Sydney University Hospitals, Sydney, New South Wales, Australia (host: Dr. A.L. Cunningham, Head of the Virology Department, Institute of Clinical Pathology and Medical Research). 31 August 1987 "Recent trends in antiviral chemotherapy", Institute of Molecular and Cell Biology, National University of Singapore, Kent Ridge, Singapore (host: Dr. Y.H. Tan, Director of the Institute of Molecular and Cell Biology). 2 November 1987 "New developments in antiviral chemotherapy", Pharmaceutical Research and Development Division, Bristol-Myers Company, Wallingford, Connecticut, USA (host: Dr. J.C. Martin, Associate Director of Anti-Infective Chemistry). 3 November 1987 "New developments in anti-AIDS virus chemotherapy", Pharmacology, Yale University School of Medicine, New Haven, Connecticut, USA (host: Prof. Dr. W.H. Prusoff). 4 November 1987 "New anti-HIV (human immunodeficiency virus) agents", National Institutes of Health (Building 1), Bethesda, Maryland, USA (hosts: Dr. C. Laughlin, Antiviral Substances Program Officer and Dr. G.J. Galasso, Associate Director for Extramural Affairs). 5 November 1987 Discussion on the development of 2',3'-dideoxynucleoside analogues as anti-AIDS virus drugs, Science and Technology Group, Bristol-Myers Company, New York, New York, USA (host: Dr. J.A. Vida, Director of Licensing). 6 November 1987 "New developments in antiviral chemotherapy", University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, Piscataway, New Jersey, USA (host: Prof. Dr. V. Stollar). 7 January 1988 Discussion on new leads in the development of antiviral drugs, Efamol Ltd., Woodbridge Meadows, Guildford, Surrey, England (hosts: Dr. B. Reynolds, Dr. C. Stewart and Dr. D.F. Horobin, Chief Executive Officer). 4 February 1988 "Recent trends in antiviral chemotherapy", Institut für Immunologie und Virologie der Universität Zürich, Universitätsspital, Zürich, Switzerland (host: Prof. Dr. O. Haller). 25 March 1988 "Chemotherapy of AIDS", Departamento de Microbiologia e Immunologia, Faculdad de Farmacia y Bioquimica, Universidad de Buenos Aires (lecture delivered in Mar del Plata), Argentina (host: Prof. Dr. R.A. de Torres). 15 April 1988 "New antiviral agents active against the AIDS virus", Department of Pharmaceutical Chemistry, School of Pharmacy, University of California, San Francisco, California, USA (host: Prof. Dr. R.H. Shafer, Professor of Chemistry and Pharmaceutical Chemistry). "Development of new selective anti-HIV compounds", Pharmaceutical Research 4 May 1988 Center (Pharma Forschungszentrum), Bayer AG, Wuppertal, Federal Republic of Germany (hosts: Dr. G. Streissle and Prof. Dr. H.D. Schlumberger). 7 June 1988 "Sulfated polysaccharides: review of their antiviral properties", Institut Choay, Paris, France (host: Dr. J. Choay, President). 7 July 1988 "Anti-HIV agents with clinical potential", Inaugenal Meeting of the Medical

Research Council (MRC) AIDS Directed Programme Committee, MRC Head

MRC Laboratory of Molecular Biology, Cambridge). 19 August 1988 Discussion on the development of new antiviral agents, and in particular anti-HIV agents, Central Research Institute for Chemistry of the Hungarian Academy of Sciences, Budapest, Hungary (hosts: Dr. I. Szinai, Dr. J. Sagi, Dr. J. Béres and Prof. Dr. L. Ötvös). 6 September 1988 "Recent developments antiviral chemotherapy", of in Department Microbiology/Immunology, College of Medicine, Northeastern Ohio Universities, Rootstown, Ohio, USA (host: Prof. Dr. J.J. Docherty, Chairman of the Department of Microbiology/Immunology). 23 October 1988 "Nouveaux médicaments antiviraux en cours de développement, spécialement pour le traitement du S.I.D.A.", Congrès des Phar-maciens du Nord - Pas-de-Calais, Faculté de Pharmacie, Lille, France (host : Prof. Dr. M. Debaert). 26 October 1988 Discussion on the development of sulfated polysaccharides as anti-AIDS drugs, Organon International B.V. (Pharma Division), Oss, The Netherlands (hosts: Dr. F. den Hollander, Dr. H.C.J. Ottenheijm and Dr. K. Wiedhaup, Director of Research and Development). 27 October 1988 "Trends in de ontwikkeling van antivirale middelen", Openingssymposium van de Nederlandse Vereniging voor Farmaceutische Wetenschappen, Utrecht, The Netherlands (host: Prof. Dr. D.K.F. Meijer, Rijksuniversiteit Groningen). 4 November 1988 "Recent progress with the phosphonylmethoxyalkylpurine and -pyrimidine derivatives", Pharmaceutical Research and Development Division, Bristol-Myers Company, Wallingford, Connecticut, USA (host: Dr. J.C. Martin). 30 November 1988 Discussion on anti-HIV research and strategies, Rhône-Poulenc (Centre de Recherches de Vitry), La Croix de Berny, France (host : Dr. A. Zerial) 30 November 1988 "Les antiviraux en développement", Assemblée Générale de la Société Française de Chimie Thérapeutique, Faculté de Pharmacie, Paris, France (host : Prof. Dr. M. Miocque, Président de la Société de Chimie Thérapeutique). 5 December 1988 "Recent approaches towards the chemotherapy of HIV infection" & "Table ronde sur les antiviraux en développement", Strasbourg Research Center, Merrell Dow Research Institute, Strasbourg, France (host: Dr. S. Halazy). "New perspectives for the chemotherapy of AIDS", Biochemical Research Center, 12 December 1988 Boehringer Mannheim GmbH, Penzberg, Federal Republic of Germany (host: Dr. E. Koch) "Recent developments in anti-AIDS chemotherapy", Sandoz Research Institute, 27 February 1989 Vienna, Austria (hosts: Prof. Dr. B. Rosenwirth and Dr. P. Dukor, Director of Research and Development).

"New developments on chemotherapy for AIDS", Lilly Research Laboratories,

Lilly Corporate Center, Indianapolis, Indiana, USA (hosts: Dr. S.R. Jaskunas, Head of Molecular Biology Research, and Dr. C. Lopez, Director of Virology Program).

13 March 1989

Office, Park Crescent, London, England (hosts: Dr. M.J. Gait and Dr. M.F. Perutz,

14 March 1989 Round Table discussion on antiviral activity of nucleoside analogues with Staff Members of Lilly Research Laboratories, Lilly Corporate Center, Indianapolis, Indiana, USA (host: Dr. S.R. Jaskunas, Head of Molecular Biology Research). 14 and 15 March Board of Directors Meeting of the International Society for Antiviral Research, Southern Research Institute, Birmingham, Alabama, USA (participants: A.K. Field, 1989 G.J. Galasso, E.R. Kern, W.M. Shannon and R.J. Whitley). 16 March 1989 "New perspectives for the chemotherapy of AIDS", Wilson Hall, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, USA (host: Dr. J.S. Driscoll, Chief, Laboratory of Medicinal Chemistry, Developmental Therapeutics Program, Division of Cancer Treatment). 17 March 1989 Round Table discussion on the synthesis of oligonucleotides (2-5A analogues) and dideoxynucleoside pyridinium derivatives with the research group of Dr. P.F. Torrence, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland, USA (host: Dr. P.F. Torrence, Laboratory of Biomedical Chemistry). "Leading compounds for the chemotherapy of AIDS and their mechanism of 6 April 1989 action", Laboratory of Molecular Biology (LMB), Medical Research Council (MRC), Cambridge, England (hosts: Dr. M.J. Gait and Dr. M.F. Perutz). "Recent developments on anti-HIV chemotherapy", Division of Tumor and Virus 21 April 1989 Research, Ciba-Geigy Ltd, Basle, Switzerland (host: Dr. J. Lazdins). 13 June 1989 Discussion on development of anti-HIV drugs for the treatment of AIDS, Sandoz Forschungsinstitut, Vienna, Austria (hosts: Prof. Dr. B. Rosenwirth and Prof. P. Dukor, Director of the Sandoz Forschungsinstitut). 14 June 1989 "Perspectives for the chemotherapy of AIDS", Austrian Chemical Society, Institut für Organische Chemie, Technische Universität (Erzherzog Johann Universität), Graz, Austria (host: Prof. Dr. H. Griengl). "The Rega Institute for Medical Research: European Community (EC) centralized 4 September 1989 facility and concerted action for design, synthesis and evaluation of new antiviral compounds against AIDS", EC Project Management Group on Basic Research AIDS, Istituto Superiore di Sanità, Rome, Italy (host: Prof. Dr. G.B. Rossi). 20 September 1989 Discussion on the development of sulfated polysaccharides (i.e.dextran sulfate) as potential anti-AIDS drugs, Pfeifer & Langen, Dormagen, Köln, Federal Republic of Germay (host: Dr. H. Giehring, Hauptverwaltung). 28 September 1989 "New antiviral agents with clinical potential", Festkolloquium (aus Anlass des 65. Geburtstages under der Emeritierung von Prof. Dr. H.A. Rosenthal), Bereichs Medizin (Charité) der Humboldt-Universität zu Berlin, German Democratic Republic (host: Prof. Dr. H.A. Rosenthal, Direktor des Institutes für Virologie). 21 November 1989 "Antiviral approaches to the chemotherapy of AIDS", International Scientific Committee Meeting on Antivirals, Farmitalia Carlo Erba, Milan, Italy (host: Dr. R. Roncucci, Director of Research and Development).

"New developments in the search for effective anti-HIV agents", Pharmaceutical Research and Development Division, Bristol-Myers Company, Wallingford,

4 December 1989

Chemistry). 6 December 1989 "New developments in the chemotherapy of AIDS", Oncogen, Seattle, Washington, USA (hosts: Dr. P. Senter, Dr. M. Gorman, General Manager, and Dr. G. Todaro, Scientific Director). 17 January 1990 "In search of an effective chemotherapy for AIDS", School of Pharmaceutical Sciences, Showa University, Hatanodai, Shinagawa-ku, Tokyo, Japan (host: Prof. Dr. T. Miyasaka). 17 January 1990 "Current trends in antiviral chemotherapy", Mitsubishi Kasei Corporation, Marunouchi 2-chome, Chiyoda-ku, Tokyo, Japan (hosts: Dr. S. Katada, Dr. K. Ohtsu and Dr. H. Ishikawa, Managing Director). "Chemotherapy of HIV infections", Aichi Cancer Center Research Institute, 18 January 1990 Tashiro-cho, Chikusa-ku, Nagoya, Japan (host: Dr. K. Ono). 20 January 1990 "New lead compounds in antiviral chemotherapy", Tanabe Seiyaku Company, Kashima 3-chome, Yodogawa-ku, Osaka, Japan (host: Dr. Y. Iwasawa, General Manager). 22 January 1990 "In search of an effective chemotherapy for AIDS", Fukushima Medical College, Hikarigaoka, Fukushima, Japan (host: Prof. Dr. S. Shigeta, Chairman of the Department of Bacteriology). 22 January 1990 Discussions on the future of antiviral chemotherapy with Dr. N. Ishida (President of Intelligent Cosmos Research, Sendai) and his Excellence, Tokuma Utsunomiya [Member of the House of Councillors (National Diet (Senate) of Japan), and President of Minophagen Pharmaceutical], Shimizu, Chiyoda-ku, Tokyo, Japan. 2-4 March 1990 Program Committee Meeting Third International Conference on Antiviral Research (Brussels, Belgium, April 22-27, 1990), National Institutes of Health, Bethesda, Maryland, USA (hosts: Prof. Dr. R.J. Whitley, President of the International Society for Antiviral Research and Dr. G.J. Galasso, Adjunct-Director of the National Institutes of Health). 22 March 1990 Discussion sur le développement de dérivés de l'héparine comme agents anti-HIV et antiviraux, Institut Choay, Sanofi Recherche Centre Choay, Gentilly, France (host: Dr. Jean Choay, Director). "Nouveaux développement dans nos recherches sur les produits anti-HIV", Institut 23 March 1990 Curie, Paris, France (host: Dr. Pierre Demerseman). 3 April 1990 "New developments in search for effective anti-HIV agents", and discussions on the design and development of new anti-HIV compounds, Sandoz Forschungsinstitut, Vienna, Austria (hosts: Prof. Dr. B. Rosenwirth, Prof. H. Gstach and Prof. Dr. P. Dukor). 4-7 June 1990 University of South Carolina Distinguished Lecturer in Biomedical Sciences, University of South Carolina, Columbia, South Carolina, USA. "The design and development of magic bullets - historical perspectives in 4 June chemotherapy" (host: Prof. Dr. J. David Gangemi, School of Medicine).

Connecticut, USA (host: Dr. J.C. Martin, Associate Director of Antiinfective

5 June "Drug design and discovery - the chemistry and biochemistry of antiviral nucleosides" (host: Prof. Dr. R. Bruce Dunlap, College of Science and Mathematics). 6 June "Pre-clinical drug development - the biochemistry, pharmacology, and molecular biology of nucleoside antimetabolites" (host: Prof. Dr. Sandra H. Berger, College of Pharmacy). 7 June "Clinical evaluation of new antivirals and anti-cancer agents - therapeutic activity and toxicity" (host: Prof. Dr. William P. Schmidt, Richland Memorial Hospital). 8 June "New developments in AIDS therapy and future directions" (host: Prof. Dr. J. David Gangemi, Richland Memorial Hospital). 8 June 1990 Executive Committee Meeting of the International Society for Antiviral Research, University of Alabama, Birmingham, Alabama, USA (hosts: Prof. Dr. Earl R. Kern and Prof. Dr. R.J. Whitley). 14 June 1990 "New perspectives for the treatment of herpes- and retrovirus infections", Jahrestagung der Österreichischen Gesellschaft für Chemotherapie, Hörsäle der Kopfklinik der Universität Innsbruck, Innsbruck, Austria (host: Prof. Dr. B. Rosenwirth, Sandoz Forschungsinstitut, Vienna, Austria). 3 October 1990 "Recent developments in the search for new anti-HIV drugs", Center for Biologics Evaluation and Research (CBER), Food and Drug Administration (FDA), National Institutes of Health (NIH), Bethesda, Maryland, USA, 3 October 1990 (host: Dr. William M. Egan, Chief of the Biophysics Laboratory). 10 October 1990 Round Table presentation on "New leads in the development of anti-HIV agents", Sandoz Forschungsinstitut, Vienna, Austria (host: Prof. Dr. B. Rosenwirth). 10 October 1990 "Recent developments in the antiviral therapy of AIDS", Institut für Organische Chemie der Universität Wien, Vienna, Austria (host: Prof. Dr. E. Zbiral). 20 November 1990 "Anti-HIV chemotherapy", Centre de Recherche de Vitry-Alfortville, Rhône-Poulenc Santé, Vitry sur Seine Cedex, France (host: Dr. A. Zerial, Head Anti-HIV Unit Biology Department). 29 November 1990 "Nouvelles approches pour la chimiothérapie des infections à HIV et CMV", Centre de Biophysique Moléculaire du Centre National de la Recherche Scientifique (CNRS), Université d'Orléans, Orléans, France (host: Prof. Dr. M. Monsigny, Directeur du CNRS). 1 December 1990 "Ribavirin combination with purine 2',3'-dideoxynucleosides (The place of ribavirin in the therapy of HIV infection)", World AIDS Day, The Royal College of Physicians of Ireland, Dublin, Ireland (host: Dr. R.A. Smith, Vice President ICN Pharmaceuticals). 25 January 1991 Discussion on "Clinical development of new dextran sulfate derivatives as anti-HIV agents" with Prof. P.S. Lietman (Division of Clinical Pharmacology), The Johns Hopkins University School of Medicine, Baltimore, Maryland, USA (host: Prof. Dr. P.S. Lietman, Director of Clinical Pharmacology). 26 January 1991 Program Committee Meeting of the Fourth International Conference on Antiviral

Research, National Institutes of Health, Bethesda, Maryland (host: Dr. G.J. Galasso,

Associate Director NIH).

18 March 1991 Discussions on the activity of modified (acylated) heparin derivatives against retrovirus infections in vitro and in vivo, Centre Choay, Sanofi Recherche, Gentilly Cedex, France (host: Dr. J. Choay, President Choay Center). 5 April 1991 Discussion on the systemic (oral and parenteral) treatment of varicella-zoster virus (VZV) infections in immunocompromised patients, Berlin-Chemie AG, Berlin, Germany (host: Prof. Dr. sc. K. Kaufmann, Direktor für Forschung, Berlin-Chemie). 9 April 1991 "Combination of ribavirin with dideoxyinosine (DDI) in the treatment of HIV infections", Round Table on Ribavirin, ICN Pharmaceuticals, Amsterdam, The Netherlands (host: Dr. L.J. Lewandowski, Vice President, Medical Affairs, ICN Pharmaceuticals). 15 April 1991 "Present situation in the field of antivirals", followed by discussions on strategies towards the development of antiviral drugs, Sandoz Forschungsinstitut, Vienna, Austria (hosts: Prof. Dr. B. Rosenwirth and Prof. Dr. H. Bachmayer). 17 April 1991 Antiviral (anti-HIV) activity of bicyclam derivatives and polyoxometalates (Johnson Matthey Materials Technology Division), Ciba-Geigy AG, Basel, Switzerland (host: Dr. M. Clausen, Director of Licensing). 18 April 1991 Antiviral (anti-HIV) activity of bicyclam derivatives and polyoxometalates (Johnson Matthey Materials Technology Division), Glaxo International House, Ealing London, England (host: Dr. M.G. Grey, International Licensing Director). 22 April 1991 Antiviral (anti-HIV) activity of bicyclam derivatives and polyoxometalates (Johnson Matthey Materials Technology Division), Smith Kline Beecham, King of Prussia, Pennsylvania, USA (host: Dr. S.R. Petteway). 23 April 1991 Antiviral (anti-HIV) activity of bicyclam derivatives and polyoxometalates (Johnson Matthey Materials Technology Division), Eli Lilly Laboratories, Indianapolis, Indiana, USA (host: Dr. C. Lopez). 24 April 1991 Antiviral (anti-HIV) activity of bicyclam derivatives and polyoxometalates (Johnson Matthey Materials Technology Division), Sandoz Forschungsinstitut, Vienna, Austria (host: Prof. Dr. B. Rosenwirth). 14 May 1991 "New developments in the search of anti-HIV agents", Laboratoire de Chimie de Coordination, Centre National de la Recherche Scientifique (CNRS), Toulouse, France (host: Prof. Dr. B. Meunier). 20 May 1991 Discussions on the antiviral activity/toxicity profile of (S)-1-(3-hydroxy-2phosphonylmethoxypropyl)cytosine (BMY-41671), Pharmaceutical Research Institute, Bristol-Myers Squibb, Wallingford, Connecticut, USA (host: Dr. J.A. Vida, Vice-President of Licensing). 22 May 1991 "Nucleoside and non-nucleoside analogues: therapeutic potential for the treatment of retrovirus and herpesvirus infections", Boehringer Ingelheim Pharmaceuticals Research and Development, Ridgefield, Connecticut, USA (hosts: Dr. M.R. Matteo and Dr. V.J. Merluzzi).

"New developments in antiviral chemotherapy", Department of Chemistry, University of South Florida, Tampa, Florida, USA (host: Prof. Dr. S.W. Schneller,

Department of Chemistry).

28 May 1991

11 July 1991

Antiviral (anti-HIV) activity of bicyclam derivatives and polyoxometalates (Johnson Matthey Materials Technology Division), Medical Research Division, Lederle Laboratories, American Cyanamid Company, Pearl River, New York, USA (host: Dr. F.P. Tally, Executive Director, Infectious Disease & Molecular Biology Research).

12 July 1991

"New advances in research on anti-HIV agents", Biomedical Research, Materials Technology Division, Johnson Matthey, West Chester, Pennsylvania, USA (host: Dr. D.H. Picker, Vice-President).

10 September 1991

"Bicyclams and polyoxometalates as inhibitors of HIV replication", presentation in cooperation with G. Henson, M. Abrams and D. Picker, Johnson Matthey Pharmaceutical Research, West Chester, Pennsylvania, USA, at the Pharmaceutical Research Division, Warner-Lambert Company, Ann Arbor, Michigan, USA (host: Dr. Richard F. Haff, Vice-President).

11 September 1991

"Novel leads in the development of antiviral compounds for the therapy of retroviral and herpes virus infections", Department of Chemistry, Oakland University, Rochester, Michigan, USA (host: Prof. Dr. R.C. Taylor).

19-20 November 1991 Discussion with Dr. J.C. Martin and Dr. M. Riordan (Gilead Sciences, Foster City, California, USA) on the development of (*S*)-1-(3-hydroxy-2-phosphonylmethoxyypropyl)cytosine (HPMPC) for the treatment of herpesvirus infections, Bethesda, Maryland, USA (hosts: Dr. J.C. Martin and Dr. M. Riordan, Vice-President and President, Gilead Sciences).

6 December 1991

"Overzicht van de antivirale geneesmiddelen gebruikt in de behandeling van herpesvirusinfecties", Boerhaave Cursus over de Kliniek en Behandeling van Herpesvirus Infecties, Faculteit der Geneeskunde, Rijksuniversiteit Leiden, The Netherlands (host: Prof. Dr. R. van Furth, Voorzitter Boerhaave Cursus).

8 February 1992

"Perspectives des antiviraux", Service des Maladies Infectieuses, Hôpital Bichat Claude-Bernard, Paris, France (hosts: Dr. C. Leport and Prof. Dr. J.-L. Vildé, Chef de Service).

24 February 1992

Discussion on "Anti-HIV Activity of Bicyclam Derivatives", Johnson Matthey Materials Technology Division (West Chester, Pennsylvania, USA), Basel, Switzerland (host: Dr. G.W. Henson, Manager Preclinical and Clinical Development).

25 February 1992

Discussion of Research Project on "Anti-HIV Activity of Macrocyclic Polyamines", Johnson Matthey Materials Technology Division - Sandoz Forschungsinstitut Vienna, Sandoz Pharma, Basel, Switzerland (host: Dr. R. Datema, Director of Preclinical Development).

14 March 1992

Discussions on "Development of phosphonylmethoxyalkylpurines and -pyrimidines (HPMPC, PMEA, etc.) as therapeutic agents against viral diseases", Gilead Sciences, Foster City, California, USA (hosts: Dr. J.C. Martin, Vice President, Research and Development, and Dr. M. Riordan, Chief Executive Officer, Gilead Sciences).

10 April 1992

Discussion on "New leads for the development of anti-HIV compounds", Centre de Gentilly, Centre de Toulouse, Sanofi Recherche, Gentilly, Paris, France (hosts: Dr. M. Pascal & Dr. J.-P. Maffrand, Directeurs Scientifiques).

"Update on development of new anti-HIV agents", Genta Incorporated, General 21 May 1992 Atomics Court, San Diego, California, USA (host: Dr. D.H. Picker, Senior Vice President Research and Development). 22 May 1992 Discussions on the perspectives for the clinical use of new anti-HIV agents, Vyrex Corporation Research and Development, La Jolla, California, USA (hosts: Dr. S.S. Hendler & Dr. R. Sanchez). 26 June 1992 "New perspectives for the treatment of HIV-1 infections", Korea Research Institute of Chemical Technology, Daejeon, Korea (hosts: Dr. Chong-Kyo Lee, Dr. Zaesung No and Dr. Yung Bog Chae, President). 27 July 1992 "Perspectives for the development of new anti-HIV and other antiviral agents", Central Research Laboratories, Ajinomoto Co., Suzuki-cho, Kawasaki, Japan (hosts: Dr. K. Izawa and Dr. H. Shiragami, Process Development Laboratories, Ajinomoto Co.). 29 July 1992 "New inhibitors of HIV replication", Department of Microbiology, School of Medicine, Tokyo Medical and Dental University, Bunkyo-ku, Tokyo, Japan (hosts: Dr. H. Nakashima and Prof. Dr. N. Yamamoto, Chairman of the Department of Microbiology). 31 July 1992 "The problem of HIV-1 resistance to HIV-1-specific reverse transcriptase inhibitors", Discussion on the development of HEPT derivatives for the treatment of HIV infections, Research Center, Mitsubishi Kasei Corporation, Kamoshida-cho, Midori-ku, Yokohama, Japan (hosts: Dr. S. Yuasa and Dr. K. Ohtsu, Director of Pharmaceuticals Laboratory). 1 August 1992 "New perspectives for the treatment of HIV infections", Department of Microbiology, Fukushima Medical College, Fukushima, Japan (hosts: Dr. M. Baba and Prof. Dr. S. Shigeta, Chairman of the Department of Microbiology). 27 August 1992 "New antiviral agents effective against HIV (human immunodeficiency virus", Baxter Healthcare Corporation Applied Sciences, Technology Park, Round Lake, Illinois, USA (host: Dr. Steven F. Josephs). 28 August 1992 "New candidate compounds for the treatment of human immunodeficiency virus (HIV) infections", Department of Medicinal Chemistry and Pharmacognosy, School of Pharmacy and Pharmacal Sciences, Purdue University, West Lafayette, Indiana, USA (host: Prof. Dr. Mark Cushman, Professor of Medicinal Chemistry). 21 September 1992 "New chemical approaches to the chemotherapy of HIV infections", Department of Chemistry (Henry Eyring Building), The University of Utah, Salt Lake City, Utah, USA (hosts: Prof. Dr. W.G. Bentrude and Prof. Dr. P.J. Stang, Chairman of the Department of Chemistry). 22 September 1992 "New approaches towards the chemotherapy of HIV infections", Center for AIDS Research, Stanford University Medical Center, Stanford, California, USA (host: Prof. Dr. T.C. Merigan, Chairman of the Center for AIDS Research at Stanford). 23 September 1992 "Antiviral activity profiles of nucleosides and nucleotides", Gilead Sciences, Foster

City, California, USA (hosts: Dr. N. Bischofberger, Dr. J.C. Martin and Dr. M.

Riordan, President and Chief Executive Officer of Gilead Sciences).

5 October 1992 "Anti-HIV activity of bicyclams: virology, mechanism of action and resistance", Sandoz Forschungsinstitut, Vienna, Austria (host: Dr. R. Datema, Director, Antiretroviral Therapy Program). 8 January 1993 Program Committee Meeting of the Sixth International Conference on Antiviral Research, National Institutes of Health, Bethesda, Maryland (host: Dr. G.J. Galasso, Associate Director NIH). 8 February 1993 "Strategies to prevent or overcome resistance of HIV to antiviral drugs (i.e. bicyclams"), Meeting on Preclinical Development of Bicyclam Derivatives, Sandoz Forschung, Basel, Switzerland (host: Dr. R. Datema, Sandoz Forschungsinstitut, Vienna, Austria). 18 March 1993 "New developments in the search for anti-HIV agents", Department of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, The University of Illinois at Chicago, Illinois, USA (host: Dr. P.S. Mohan, Assistant Professor of Medicinal Chemistry and Hans Vahlteich Research Scholar). 19 March 1993 Discussions on the development of acyclic nucleoside phosphonates (HPMPC, PMEA and their derivatives) and prodrugs thereof, Gilead Sciences, Foster City, California, USA (host: Dr. John C. Martin, Executive Vice President for Research and Development). 20 April 1993 "Tour d'horizon (point de vue) à propos des différentes molécules à explorer en fonction de diverses cibles pour la chimiothérapie du SIDA", Agence Nationale de Recherches sur le SIDA (ANRS), Paris, France (host: Prof. Dr. J.-P. Lévy, Directeur de l'ANRS). 30 April 1993 Discussion on the development of bicyclam JM3100 (SDZ 282-791) and cyclosporine derivative SDZ 211-811 as anti-HIV agents, Antiretroviral Agents Meeting, Sandoz Research Institute, Venice (host: Dr. M. Tolpin, Director Clinical Research, Sandoz USA). 12 May 1993 "New developments in the chemotherapy of herpesvirus infections", Pharma-Synthese, Hoechst Aktiengesellschaft, Frankfurt am Main, Germany (hosts: Dr. I. Winkler and Prof. Dr. G. Seibert, Head of Research Antiinfectives). 20 May 1993 "The search for a drug cure for HIV infection", Association of Clinical Biochemists Wales Region on "The HIV Epidemic", University Hospital of Wales, Cardiff, Wales (host: Dr. Rhys John, University Hospital of Wales, Cardiff). "Chemotherapy of herpesvirus infections", Department of Ophthalmology, 21 May 1993 University of Bristol, Bristol, United Kingdom (hosts: Dr. M. Berry and Prof. Dr. D.L. Easty, Professor of Ophthalmology). Discussions on Antiviral Drug Discovery and Development, Avid Therapeutics 22 September 1993 Inc., University City Science Center, Philadelphia, Pennsylvania, USA (hosts: Dr. E.J. Thomas, Executive Vice President, and Dr. F.H. Anthony, President). "Recent progress with anti-HIV agents, particularly reverse transcriptase 23 September 1993 inhibitors", Materials Technology Division, Johnson Matthey Inc., West Chester, Pennsylvania, USA (host: Dr. G.W. Henson, Director).

Discussions on the Development of Bicyclams as Anti-HIV Drugs, Materials Technology Division, Johnson Matthey Inc., West Chester, Pennsylvania, USA

24 September 1993

(hosts: Dr. G.W. Henson and M. Abrams, Biomedical Research Worldwide Manager).

12 October 1993

"Antiviral therapy, competition of BVDU versus other antivirals", Discussions on the role of BVDU in Antiviral Therapy, Berlin-Chemie Aktiengesellschaft, Berlin, Germany (hosts: Prof. Dr. K.-D. Kaufmann and Prof. Dr. A. Giachetti, A. Menarini, Firenze, Italy).

22 November 1993

"Non-nucleoside reverse transcriptase inhibitors of human immunodeficiency virus type 1", Gilead Sciences, Foster City, California, USA (host: Dr. J.C. Martin, Executive Vice President for Research and Development).

23 November 1993

"Current state of development of antiviral agents, in particular against herpes- and retroviruses", Genta Inc., General Atomics Court, San Diego, California, USA (host: Dr. D.H. Picker, Senior Vice President of Research and Development).

9 December 1993

"Recent developments on the chemotherapy of HIV infections", Forschungsleitung, Hoechst Aktiengesellschaft, Hoechst, Frankfurt, Germany [hosts: Dr. W. Scheibitz & Dr. U.-H. Felcht, Mitglied des Vorstands (President Research & Development)].

27 January 1994

"Search for antiviral compounds effective against the human immunodeficiency virus", Centre National de la Recherche (CNRS), Reconnaissance et Interaction Moléculaire (Réactivité des Molécules Fluorées), Centre d'Etudes Pharmaceutiques de Châtenay-Malabry (hosts: Dr. M. Langlois, Dr. J.-P. Bégué, Directeur de Recherche, CNRS).

31 January 1994

"Development of new antiviral, anti-AIDS and anticancer agents", Norsk Hydro Research Center Porsgrunn, Oslo, Norway (hosts: Dr. M.L. Sandvold, Dr. F. Myhren, and Dr. E.O. Strutz, Director of Technology and Development).

11 February 1994

"Current developments in AIDS research: what to expect from HIV chemotherapy", Department of Virology, Institut für Mikrobiologie und Hygiene, Klinikum der Albert-Ludwigs-Universität Freiburg, Germany (host: Prof. Dr. O. Haller, Director of the Institut für Mikrobiologie und Hygiene).

11 August 1994

"New leads in the development of anti-HIV drugs", Central Research Laboratories, Ajinomoto Company, Kawasaki, Japan (host: Dr. K. Izawa, Director, Process Development Laboratories).

26 September 1994

Discussion on the development of bicyclams as anti-HIV drugs, Sandoz Forschungsinstitut, Vienna, Austria (host: Dr. R. Datema, Director Research and Development).

14 October 1994

"New achievements with HIV inhibitors", Biochem Thérapeutique Inc., Biochem Pharma Inc., Laval, Quèbec, Canada (host: Dr. Tarek S. Mansour, Director of Medicinal and Developmental Chemistry, and Dr. G. Dionne, President of BioChem Therapeutic).

25 October 1994

"Les cibles virales et les stratégies thérapeutiques" (invited plenary lecture). Les Journées Scientifiques du Pôle Universitaire Européen (President: Prof. Dr. Edmond Fischer), Interface Chimie Biologie, Les Antiviraux, Faculté de Médecine, Université Montpellier I, France (host: Prof. Dr. J.-L. Imbach, Université Montpellier II).

3 November 1994

"New developments on anti-HIV chemotherapy", Istituto di Ricerche di Biologia Moleculare (IRBM) P. Angeletti, Pomezia (Roma), Italy (host: Dr. J. Jiricny, Director).

7-8 November 1994

Discussions on the development of acyclic nucleoside phosphonates [Cidofovir (VistideTM) and bis-POM-PMEA] for the treatment of herpes- and retrovirus infections, Gilead Sciences, Foster City, California, USA (hosts: Dr. Norbert Bischofberger, Vice-President of Organic Chemistry, and Dr. John C. Martin, Executive Vice President, Research and Development).

9 November 1994

General discussions and summation from a researcher's viewpoint on "Antisense drug strategies", Genta Virology Summit Meeting, Genta Incorporated, San Diego, California, USA (host: Dr. Donald H. Picker, Senior Vice President of Research and Development).

11 November 1994

"Recent advances in the chemotherapy of AIDS", Department of Chemistry & Biochemistry, Brigham Young University, Provo, Utah, USA (host: Prof. Dr. Morris J. Robins, J. Rex Goates Professor of Chemistry).

13 December 1994

"CMV antivirals" (lecture given jointly with Dr. J. Neyts), Rhône-Poulenc Rorer Recherche-Développement, Centre de Recherche de Vitry-Alfortville, Vitry sur Seine, France (host: Dr. N. Dereu, Director Medicinal Chemistry Department).

21 March 1995

"New anti-herpesvirus agents (Nieuwe anti-herpes middelen)", Minisymposium "Nieuwe ontwikkelingen in de diagnostiek en het beleid van herpesvirusinfecties", Academisch Ziekenhuis Maastricht, Nederland (The Netherlands) (host: Prof. Dr. C. Bruggeman).

29 June 1995

Discussions on therapeutic usefulness of guanosin octed based oligonucleotides (hosts: Dr. R.F. Rando, Dr. P. Cossum and Dr. J.M. Chubb, President, Triplex Pharmaceutical Corporation, Woodlands, Texas, USA). Discussions on therapeutic usefulness of bicyclams and acyclic nucleoside phosphonates (i.e. HPMPC), Rhône-Poulenc Rorer, Vitry sur Seine, Paris, France (hosts: Dr. A. Bousseau, Dr. N. Dereu and Dr. H. Fliri, Director Anti-Infective Research).

27 September 1995

Discussions on phase III clinical study of bis(POM)PMEA (Adefovir Dipivoxil) for the treatment of AIDS with different investigators, Gilead Sciences (Foster City, California, USA), Copenhagen, Denmark (hosts: Dr. H. Jaffe, Dr. M. Hitchcock and Dr. J.C. Martin, Executive Vice President for Research & Development, Gilead Sciences).

5-6 October 1995

Scientific Advisory Council Meeting, Abbott Laboratories, Abbott Park, Illinois, USA (host: Dr. A.S. Rosenthal, Vice President, Pharmaceutical Discovery).

30 October 1995

"Molecular targets for and activity spectrum of antiviral agents" and "The potential of non-nucleoside reverse transcriptase inhibitors for the treatment of human immunodeficiency virus type 1 infections", Mitsubishi Chemical Corporation Yokohama Research Center, Kamoshida, Aoba-ku, Yokohama, Japan (host: Dr. M. Ubasawa, Research and Development Division).

1 November 1995

"New developments in the treatment of HIV infections", Division of Human Retroviruses, Center for Chronic Viral Diseases, Faculty of Medicine, Kagoshima University, Sakuragaoka, Kagoshima, Japan (host: Dr. Masanori Baba, Professor).

15 November 1995 "Targets and trends in antiviral chemotherapy", Biomedical Primate Research Centre (BPRC), Rijswijk, The Netherlands (host: Prof. Dr. B. Rosenwirth). 22 November 1995 "New perspectives for the chemotherapy of HIV infection", Institut für Pharmazeutische Chemie, Leopold-Franzens-Universität, Innsbruck, Austria (host: Prof. Dr. G. Heinisch, President, Österreichische Pharmazeutische Gesellschaft). 6-8 March 1996 Meeting of the Scientific Advisory Council, Abbott Laboratories, Abbott Park, Illinois, USA (host: Dr. A.S. Rosenthal, Divisional Vice President, Pharmaceutical Discovery). 18 March 1996 "Resistance aux antiviraux", Méthodes Expérimentales et Cliniques d'Evaluation des Agents Anti-infectieux", Module "Antiviraux" de l'Enseignement Approfondi, Faculté de Médecine, Université Bichat-Claude Bernard, Paris (hosts: Prof. Dr. C. Carbon, Médecine Interne, C.H.U. Bichat-Claude Bernard et Prof. Dr. F. Morinet, Service de Microbiologie, Hôpital Saint Louis, Paris). 17 April 1996 "Perspectives for antiviral chemotherapy", Discussions on the development of BVDU (Brivudin) as an antiviral drug, Menarini Ricerche Sud, Firenze, Italy (host: Prof. Dr. A. Giachetti, Director of Drug Discovery). "Perspectives for the chemotherapy of HIV infections", Institut Català de la Salut, 22 April 1996 Hospital Universitari "Germans Trias i Pujol", Badalona, Barcelona, Catalonia, Spain (host: Dr. B. Clotet/Dr. L. Ruiz, Retrovirology and HIV Unit). Discussions on the development of acyclic nucleoside phosphonates (i.e. HPMPC, 24 April 1996 cHPMPC, PMEA, PMEG, Bis(POM)PMEA, PMPA) for the treatment of DNA virus [i.e. herpes (HSV, VZV, CMV, ...) and papillomaviruses] and retrovirus (i.e. HIV) infections (hosts: Dr. J.C. Martin, Chief Executive Officer, and Dr. Norbert Bischofberger, Vice President Research, Gilead Sciences). "The development of anti-HIV agents", Rational Drug Design Laboratories, 4-1-1 25 May 1996 Misato, Matsukawa, Fukushima, Japan (host: Dr. Kiyoshi Okazaki, General Manager of Rational Drug Design Laboratories). 5 June 1996 "Development of new anti-HIV agents and strategies to cope with the HIV drug resistance problem", Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Buenos Aires, Argentina (host: Prof. Dr. Celia E. Coto, Laboratorio de Virologia, Departemento de Quimica Biologica). 29 July 1996 Distinguished Biomedical Lecture on "New Developments in Anti-HIV Chemotherapy", Madren Center, Medicinal Chemistry Symposium, Chemistry Department, Greenville Hospital System and Clemson University Biomedical Cooperative, Clemson, South Carolina, USA (host: Prof. Dr. J.D. Gangemi). 31 July 1996 Development of antiviral and anticancer agents, Scientific Advisory Board Meeting, Triangle Pharmaceuticals, Durham, North Carolina, USA (host: Dr. Phillip A. Furman, Vice President Research). "The art of antiviral drug development", Gilead Sciences, Foster City, California, 13 September 1996 USA (host: Dr. J.C. Martin, President, Chief Executive Officer). 3-4 October 1996 Scientific Advisory Council Meeting, Abbott Laboratories, Illinois, USA (host: Dr.

A.S. Rosenthal, Divisional Vice President, Pharmaceutical Discovery).

30 October 1996

"New developments in the search for an effective chemotherapy of HIV infections", Departamento de Química Orgánica, Universidade de Santiago de Compostela, Santiago de Compostela, Spain (host: Prof. Dr. F. Fernandez-Gonzalez).

31 October 1996

"Therapeutic potential of acyclic nucleoside phosphonates as antiviral agents", Departamento de Química Orgánica, Universidade de Santiago de Compostela, Santiago de Compostela, Spain (host: Prof. Dr. F. Fernandez-Gonzalez).

9 December 1996

Presentations on "Drugs for the Treatment of AIDS" to Vector Securities, Business Week, Furman Selz, Treatment Issues Newsletter, Edelman Public Relations, New York, NY, USA (host: Mariann L. Caprino, Vice-President of Edelman Healthcare Worldwide).

8 January 1997

Discussions on the development of anti-HIV agents (i.e. MKC-442) and treatment management for HIV disease, Scientific Advisory Board Meeting, Triangle Pharmaceuticals, Durham, North Carolina, USA (host: Dr. Phillip A. Furman, Vice President, Research).

15 January 1997

"Le traitement de l'infection à HIV: Nouvelles recherches et perspectives", le Département des Maladies Infectieuses du Centre Hospitalier de Luxembourg, le Laboratoire de Rétrovirologie et le Centre de Recherche Public-Santé (hosts: Dr. R. Hemmer, Dr. F. Schneider, Dr. V. Arendt, Dr. J.-C. Schmit, Dr.T. Staub, Dr. D. Hansen-Koening, Président du CRP-Santé).

6-7 March 1997

Infectious Diseases Research Scientific Advisory Council Meeting, Abbott Laboratories, Abbott Park, Illinois, USA (host: Dr. Alan S. Rosenthal, Vice President Pharmaceutical Discovery, Abbott).

9 April 1997

Discussions on the development of RPR-111423 for the treatment of cytomegalovirus (CMV) infections, Rhône-Poulenc Rorer Recherche-Développement, Advisory Meeting held in Atlanta, Georgia, USA (at the occasion of the Tenth International Conference on Antiviral Research, 6-11 April 1997).

23 April 1997

Perspectives for the therapy of retrovirus infections ("Perspectieven voor de therapie van retrovirusinfecties"). Voorjaarsvergadering van de Nederlandse Vereniging voor Medische Microbiologie en de Nederlandse Vereniging voor Microbiologie, Werkgroep Klinische Virologie, Lunteren, Nederland (host: Dr. G.J.J. van Doornum, Gemeentelijke Geneeskundige en Gezondheidsdienst Amsterdam).

30 April 1997

"Antiviral chemotherapy: status and future development", Rigshospitalet, Copenhagen, Denmark (host: Danish Society for Infectious Diseases and Janssen-Cilag, Dr. Henrik Abrahamsen, Product Manager).

6 May 1997

"New perspectives for the treatment of HIV infections", Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic (host: RN Dr. A. Holý, Dr. Sc., Director of the Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences).

7 May 1997

"Towards an effective chemotherapy of (DNA) virus infections", Academy of Sciences, Society for Clinical Microbiology, Microbiological Society and Purkyne Society, Prague, Czech Republic (host: RN Dr. A. Holý, Dr.Sc., Director of the Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences).

27 May 1997 "New perspectives for the chemotherapy of AIDS", College of Pharmacy, The University of Georgia, Athens, Georgia, USA (host: Prof. Dr. C.K. Chu, Professor of Medicinal Chemistry).

28 May 1997 Discussions on "Development of antiviral agents", Scientific Advisory Board, Triangle Pharmaceuticals, Durham, North Carolina, USA (host: Prof. Dr. P.A. Furman, Vice President of Research and Chief Scientific Officer).

21 June 1997 "Discovery and therapeutic potential of Cidofovir", European Symposium, Pharmacia & Upjohn (France), Roma, Italy (host: Dr. L. Lamezec, Chef de Groupe Anti-Infectieux, Pharmacia & Upjohn France).

16-17 July 1997 Research & Strategy Discussions, Grand Pow Wow, Gilead Sciences, Foster City, California, USA (host: Dr. Norbert Bischofberger, Vice President, Research).

29 July 1997 "New trends in the search for anti-HIV agents", Discussions on new "nonnucleoside reverse transcriptase inhibitors (NNRTIs)" with Dr. Jong-Chan Son (Principal Research Scientist), Korea Research Institute of Chemical Technology (KRICT), Taejon, Korea (host: Dr. Chong-Kyo Lee, Principal Investigator, KRICT).

1 August 1997 "New opportunities in the development of antiviral agents", Samsung Fine Chemicals, Daekyung Bldg., Taepyung-Ro, Chung-Ku, Seoul, Korea (hosts: Dr. Kwang Sik Park, General Manager Pharmaceutical Division and Dr. Young K. Park, President Samsung Fine Chemicals).

AMD 3100 blocks HIV infection through interaction with the HIV coreceptor CXCR4 (fusin), Discussions on the development of anti-HIV and anticancer agents, AnorMED Scientific Advisory Board Meeting, Galiano Island, British Columbia (B.C.), Canada (hosts: M.J. Abrams, President, and G.W. Henson, Vice Executive President, AnorMED, Langley, B.C., Canada).

> Targets for anti-HIV agents (with particular emphasis on HIV-cell fusion, HIV reverse transcriptase and HIV protease), HIV Strategic Advisory Board Meeting, Agouron Pharmaceuticals, Chicago, Illinois, USA (host: Dr. Peter Johnson, Chief Executive Officer and President, Agouron Pharmaceuticals Inc.).

> "Perspectives for the chemotherapy of AIDS: Is there a cure at the horizon", Lecture delivered at the Doctor honoris causa (Honorary Doctor) Award Ceremony, University of Athens, Greece (Promotor: Prof. N. Kolocouris, Professor of Pharmacy; Prof. G. Papaioannou, Head of the Department of Pharmacy; Prof. C.A. Dimopoulos, Rector of the University of Athens).

> "Ligt er met de nieuwe behandelingsmethoden een genezing van aids in het verschiet? (Can the new treatment strategies lead to a cure from AIDS?)", Sectie Geneeskunde van de Koninklijke Nederlandse Akademie van Wetenschappen, Het Trippenhuis, Amsterdam, The Netherlands (host: Prof. Dr. R.S. Reneman, Voorzitter van de Afdeling Natuurkunde).

> Infectious Diseases Scientific Advisory Council Review, Pharmaceutical Products Division, Abbott Laboratories, meeting held in La Paloma, Tucson, Arizona, USA (host: Dr. J.J. Plattner, head of Abbott's Infectious Disease Research Division).

> "Drug-resistant mutants", lecture delivered at the Viral Hepatitis Peer Group Meeting on "Novel Treatments for Hepatitis", Royal College of Physicians,

9 August 1997

25 August 1997

24 October 1997

27 October 1997

6-7 November 1997

27 November 1997

London, England (host: Prof. Arie Zuckerman, Dean of the Royal Free Hospital School of Medicine).

1-2 December 1997

Research aspects for viral diseases, Workshop Infectious Diseases, Research Novartis Pharma AG, Basel, Switzerland (hosts: Dr. Reto Naef, Unit Head Basel Research, and Dr. Anis Mir, Head Research Planning).

14 December 1997

Scientific Advisory Board Meeting (Triangle Pharmaceuticals, Inc.) held at Mauna Lani, Kona, Big Island, Hawaii, USA (hosts: Dr. P.A. Furman, Vice President Research and Chief Scientific Officer, and Dr. D.W. Barry, Chairman and Chief Executive Officer, Triangle Pharmaceuticals, Inc.).

10 March 1998

The 1998 Sir Henry Hallett Dale Memorial (Burroughs Wellcome Fund) Lecture "Antiviral drug discovery and development", The John Hopkins University School of Medicine, Baltimore, Maryland, USA (host: Prof. Dr. Paul S. Lietman, Wellcome Professor of Clinical Pharmacology and Director of the Division of Clinical Pharmacology).

11 March 1998

"Bicyclams (i.e. AMD 3100): inhibition of HIV replication through interference with the interaction of HIV with its coreceptor CXCR4 (fusin)", The John Hopkins University School of Medicine, Baltimore, Maryland, USA (host: Prof. Dr. Paul S. Lietman, Wellcome Professor of Clinical Pharmacology and Director of the Division of Clinical Pharmacology).

3 April 1998

"Inhibitory effects of cidofovir (HPMPC, Vistide®) on the development of hemangiomas and hemangiosarcomas in rats and mice", and discussions on the development of adefovir (PMEA) and apropovir (PMPA) for the treatment of HIV and HBV infections, Gilead Sciences, Foster City, California, USA (hosts: Dr. N. Bischofberger, Senior Vice President Research, and Dr. J.C. Martin, Chief Executive Officer, Gilead Sciences).

4 April 1998

"New developments in antiviral drug research", LXR Biotechnology Inc., Richmond, California, USA (host: Dr. D.H. Picker, President and Chief Operating Officer of LXR Biotechnology Inc.).

8 April 1998

Discussions on the potential use of NNRTIs (non-nucleoside reverse transcriptase inhibitors) for the treatment of HIV infections, Chiron Technologies, Emeryville, California, USA (meeting held in San Diego) (host: Dr. P. Olson, Vice President, Project Management & Planning, Chiron Corporation).

15 April 1998

"New developments in the treatment of HIV infections", Biochemisches Institut der Universität Zurich, Department of Pharmacy ETH Zurich, Zurich, Switzerland (hosts: Prof. Dr. M. Nonella, President, Chemischen Gesellschaft, and Prof. Dr. G. Folkers, Head of the Department of Pharmacy, ETH Zurich).

16 April 1998

"New developments in the treatment of HIV infections", Croatian Academy of Sciences and Arts, Zagreb, Croatia (hosts: Prof. Dr. M. Mintas, Faculty of Chemical Engineering and Technology, University of Zagreb, and Prof. Dr. I. Padovan, President of the Croatian Academy of Sciences and Arts).

30 April 1998

Chimiothérapie antivirale (Antiviral chemotherapy), Cours de Virologie Systématique, Centre d'Enseignement de l'Institut Pasteur, Paris, France (host: Dr. J.-D. Poveda, Directeur adjoint du Centre de Biologie Médicale Spécialisée, Institut Pasteur).

27 May 1998	Discussions on current and future trends in antiviral chemotherapy and the implications for development of virus-drug resistance, BioMérieux Medical Direction, Marcy-L'Etoile, Venissieux, Lyon, France (host: Dr. S. Lafont, Medical Director).
12 June 1998	Discussions and presentations on new drugs and strategies for the treatment of HIV and HBV infections, Scientific Advisory Board Meeting, Triangle Pharmaceuticals, Durham, North Carolina (host: Dr. P.A. Furman, Vice President Research).
1 July 1998	What will the epidemiological situation for HIV infection be in 2005? Future therapeutic standards. Advisory Review Meeting on HIV Therapeutic Vaccines. Pasteur Mérieux Connaught, Geneva, Switzerland (hosts: Prof. Dr. S. Plotkin, Chairman, formerly Medical and Scientific Director, and Dr. R. El Habib, HIV Project Leader at Pasteur Mérieux Connaught).
20 July 1998	"New trends in the development of anti-HIV agents", Department of Pharmaceutics and Pharmaceutical Chemistry, College of Pharmacy, The University of Utah, Salt Lake City, Utah, USA (hosts: Prof. Dr. AH. Ghanem and Prof. Dr. William I. Higuchi, head of the Department of Pharmaceutics and Pharmaceutical Chemistry).
14 August 1998	"Development of bicyclams as anti-HIV drugs", AnorMed Scientific Advisory Board Meeting, Edgewater Lodge, Whistler, B.C., Canada (hosts: Dr. M.J. Abrams, President, CEO, and Dr. G.J. Henson, COO, AnorMed).
2 September 1998	Round table panel discussion on novel HIV therapies designed to eradicate residual reservoirs of HIV infected cells in patients under HAART (highly active antiretroviral threapy), New York City, New York, USA (host: Hoechst Marion Roussel Project Management, Frankfurt am Main, Deutschland GmbH).
4 September 1998	"New developments in the search for effective anti-HIV chemotherapy", Frontiers in Antiviral and Anticancer Research, Symposium to honor Professor William H. Prusoff, Yale University School of Medicine, New Haven, Connecticut (host: Prof. Dr. Yung-chi Cheng, Henry Bronson Professor of Pharmacology, Yale University).
21 October 1998	"Perspectives en chimiothérapie antivirale", Encéphalites infectieuses de l'immunodéprimé, Sixième Journée de Pathologie Infectieuse et Tropicale de Paris Nord, Paris, France (host: Dr. Yves Cohen, Centre de Recherche en Pathologie Infectieuse et Tropicale, Hopitaux Avicenne - Jean Verdier, Bobigny, France).
26 October 1998	"New perspectives for the chemotherapy of HIV infection", National Yang-Ming University, Taipei, Taiwain, Republic of China (host: Prof. Wu-Tse Liu).
27 October 1998	"New strategies for the chemotherapy of cancer", National Health Research Institutes (NHRI), Taipei, Taiwan, Republic of China (host: Dr. Ming-Chu Hsu, Director of Biotechnology and Pharmaceutical Research, NHRI).
27 October 1998	Round table discussion on the development of anti-HIV, antiHBV, and anti-cancer agents, Institute of Biomedical Sciences (IBMS), Academia Sinica, Taipei, Taiwan, Republic of China (hosts: Dr. Kenneth K. Wu, Director, and Dr. Tsann-Long Su, Deputy Director, IBMS).
28 October 1998	Discussion on the preclinical development of antiviral agents, Development Center for Biotechnology (DCB), Taipei, Taiwan, Republic of China (hosts: Dr. Weichen Tien, President, and Dr. Shou-Hsiung Pai, Vice President, DCB).

28 October 1998

"New perspectives for the chemotherapy of HBV infections", National Taiwan University Hospital, Hepatitis Research Center, Department of Internal Medicine, National Taiwan University (hosts: Prof. Ding-Shinn Chen and Prof. Pei Jer Chen).

10 December 1998

Discussions on the development of new antiviral, including anti-HIV, agents, School of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta, Georgia, USA (hosts: Prof. Dr. Katherine Seley, Prof. Dr. Stewart Schneller and Prof. Dr. Leon Zalkow).

12 December 1998

Discussions on the development of new antiviral, including anti-HIV and anti-HBV, agents, Triangle Pharmaceuticals, Inc., Scientific Advisory Board (SAB) Meeting, St. Thomas, Virgin Islands, USA (host: Dr. Phillip A. Furman, Chief Scientific Officer, Vice-President Research, Triangle Pharmaceuticals).

17 February 1999

Discussions on the development of MKC-442 (Emivirine, CoactinonTM) as an anti-HIV drug, Pharmaceuticals and Diagnostics, Mitsubishi Chemical Corporation, Tennoz Central Tower, Shinagawa-ku, Tokyo, Japan (hosts: Dr. Takehiro Takagi, General Manager Business Development, and Dr. Kenichiro Nakao, General Manager, Licensing and Planning, International Operations Department, Mitsubishi Chemical Corporation).

18 February 1999

Discussions on the development of HIV-cell fusion inhibitors such as T22 ([Tyr^{5,12}, Lys⁷]-polyphemusin II), Tokyo Medical and Dental University School of Medicine, Bunkyo-ku, Tokyo, Japan (host: Prof. Dr. Naoki Yamamoto).

18 February 1999

"New developments in anti-HIV chemotherapy", AminoScience Laboratories, Process Research and Development, Ajinomoto Co., Inc., Suzuki-cho, Kawasaki-ku, Kawasaki, Japan (host: Dr. Kunisuke Izawa, General Manager, Process and Development, Ajinomoto).

7 May 1999

Discussions and assistance at the thesis defense (Dr. Sciences) of S. Barthélémy on "Conception de dérivés phénoliques symmétriques conjugués: synthèse et étude de l'activité sur des pathologies impliquant le stress oxydant", Université Paul Sabatier, Toulouse, France (Chairman of the Jury: Prof. Armand Lattes; Promoter: Prof. Serge Labidalle).

13 May 1999

"Molecular targets and compounds for anti-HIV therapy, with special emphasis on reverse transcriptase and protease inhibitors" in the scope of a graduate course on "Medicinal Chemistry: Drug Design and Development", Department of Chemistry, University of Patras, Patras, Greece (hosts: Prof. Dr. Dionissios Papaioannou and Prof. Dr. John Matsoukas).

25-27 May 1999

Pharmaceutical Discovery Scientific Advisory Council Meeting, Abbott Laboratories, Abbott Park, Illinois, USA (hosts: Dr. Daniel W. Norbeck, Vice President Pharmaceutical Discovery and Dr. Alan S. Rosenthal, Vice President Pharmaceutical Discovery and Scientific Affairs, Abbott).

21 June 1999

"New perspectives for the treatment of HIV infections", Specialty Laboratories, Santa Monica, Los Angeles, California, USA (host: Dr. James B. Peter, Chairman of Specialty Laboratories).

22 June 1999

Scientific Advisory Board Meeting, Triangle Pharmaceuticals, meeting held at the Rancho Bernardo Inn, San Diego, California, USA (host: Dr. Phillip A. Furman, Chief Scientific Officer, Triangle Pharmaceuticals).

3 July 1999 Brivudin Expert Meeting, Discussion on the development of brivudin (BVDU) as antiviral drug for the treatment of herpes zoster in immunocompetent individuals, Berlin-Chemie, Menarini, Rome, Italy (host: Dr. R. Brinkman, Brivudin-Team, Berlin-Chemie). 13 July 1999 Discussions on antiviral potential of iminosugars (i.e. N-nonyl-deoxy-nojirimycin), for the treatment of HBV and HCV infections, Synergy Pharmaceuticals, Inc./Oxford Glycobiology Institute, Oxford, United Kingdom (host: Prof. Dr. R.A. Dwek, Director, Oxford Glycobiology Institute). 21, 22 July 1999 Annual Scientific Pow Wow meeting, Gilead Sciences, Foster City, California, USA (host: Dr. N. Bischofberger, Senior Vice-President Research, Gilead Sciences). 29 July 1999 Scientific Advisory Board Meeting, AnorMED, Langley, British Columbia, Canada (host: Dr. Michael Abrams, President and Chief Executive Officer, AnorMED). 5 November 1999 "Antiviral Drug Strategies", Plenary Lecture presented at the Consejo Superior de Investigaciones Científicas at the occasion of the 25th Anniversary of the Instituto de Química Médica, Madrid, Spain (hosts: Dra. Mª T. Garcia López, Directora del Instituto de Química Médica, and Dr. César Nombela Cano, Presidente del Consejo Superior de Investigaciones Científicas). 15-17 November 1999 Scientific Advisory Council Meeting, Abbott Laboratories, Abbott Park, Illinois, USA (host: Dr. Daniel W. Norbeck, Vice-President, Pharmaceutical Discovery, Abbott Laboratories). 10 December 1999 Informal Scientific Advisory Board meeting, Triangle Pharmaceuticals (Durham, NC), Kapalua, Maui, Hawaii, USA (hosts: Dr. P.A. Furman, Vice President Research and Dr. D.W. Barry, Chairman and Chief Executive Officer, Triangle Pharmaceuticals). 13 December 1999 Discussions on the preclinical and early clinical development of anti-HIV agents, AIDS ReSearch Alliance, West Hollywood, California, USA (hosts: Dr. Andrew Korotzer, Director of Scientific Communications, Dr. Stephen J. Brown, Director of Clinical Research, and Gregory S. Britt, Chief Executive Officer, AIDS ReSearch Alliance). Program Committee Meeting, planning of the 13th International Conference on 6-7 January 2000 Antiviral Research, Baltimore, Maryland, USA, to be held on 16-21 April 2000, Baltimore, Maryland, USA. 14 April 2000 Foreign Jury Member, Public Thesis Defense of Wilco Keulen "Evolution of drug-resistant HIV-1 variants", University of Utrecht [Universitair Medisch Centrum (UMC)], Utrecht, The Netherlands (hosts: Prof. J. Verhoef, Dr. C.A.B. Boucher, Dr. B. Berkhout, promoters). 19 April 2000 Discussions on in vitro and in vivo models for assessing antiviral activity of novel fatty acid conjugates, Protarga, Inc., Conshohocken, Pennsylvania, USA (host: Dr. Charles Swindell, Senior Vice President, Research & Development, Protarga).

> Discussions on the development of antivirals, anti-cancer agents and antiinfectives, The Annual Grand Pow Wow meeting of Gilead Sciences, Foster

19-20 July 2000

City, California, USA (host: Dr. N. Bischofberger, Senior Vice-President Research, Gilead Sciences).

27 July 2000

Discussions, Annual Scientific Advisory Board Meeting, AnorMED Inc., Langley, British Columbia, Canada (host: Dr. M. Abrams, President and Chief Executive Officer, AnorMED).

8 September 2000

Discussions on the development of HCV (hepatitis C virus) and HIV integrase inhibitors, Gilead Sciences, Foster City, California, USA (hosts: Dr. Max Hensley, Vice President for Intellectual Property and Dr. Bill Lee, Vice President of Research and Pharmaceutical Development).

21 September 2000

"A crusade for drugs to conquer viruses: a personal reflection", at the occasion of the proclamation of doctor honoris in Pharmacy, University of Ferrary, Italy (hosts: Il Rettore, Prof. F. Conconi, Il Preside de Facolta, Prof. J.P. Pollini, and Professors S. Manfredini and P.G. Baraldi).

23 October 2000

"The history of Brivudin", Brivudin Meeting, Berlin-Chemie, Menarini Group (hosts: Mr. H. Nelde, Prof. A. Giachetti, Dr. B. Stubinski, Berlin-Chemie AG).

6-9 November 2000

Northern Arizona University (NAU), Department of Chemistry, Flagstaff, Arizona, USA.

Burroughs Wellcome Visiting Professor in the Microbiological Sciences, Burroughs Wellcome Foundation, administered by the American Society of Microbiology.

6 November 2000

"Highlights in development of antiviral agents", CHM 152 class (Prof. Dr. H. Gunderson) presentation, Room 224, Chemistry Building.

"Antiviral agents: from chemistry to biology and medicine", CHM 235 (Prof. Dr. E. Civitello) presentation, Room 225, Chemistry Building.

Minicourse # 1 "The chemotherapy of herpes virus infections" (Prof.Dr. P.F. Torrence), Room 130, Biology-Biochemistry Building.

7 November 2000

"Antiviral activity of thymidine analogues: brivudin, stavudine", CHM 235 (Prof. Dr. J. MacDonald) presentation, Room 130, Biology-Biochemistry Building.

"Antiviral activity of acyclic nucleoside phosphonates", CHM 151 (Prof. Dr. J. Wettaw) presentation, Room 225, Chemistry Building.

"Discovery of NNRTIs (non-nucleoside reverse transcriptase inhibitors)" as anti-HIV agents, CHM 151 (Prof. Dr. J. Wettaw) presentation, Room 225, Chemistry Building.

"Discovery of bicyclams as anti-HIV agents acting through blocking of CXCR4, the co-receptor for HIV entry into cells", CHM 151 (Prof. Dr. W. Hildebrandt) presentation, Room 225, Chemistry Building.

Minicourse # 2A "The chemotherapy of influenza virus infection" (Prof. Dr. P.F. Torrence), Room 130, Biology-Biochemistry Building.

Minicourse # 2B "The chemotherapy of hepatitis B infection" (Prof. Dr. P.F. Torrence), Room 130, Biology-Biochemistry Building.

8 November 2000

"Combined gene therapy/chemotherapy for treatment of cancer" (Dr. D. Stearns), Room 106

"Bromovinyldeoxyuridine in the treatment of HSV-1 and VZV infections", CHM 152 (Dr. C. Hartzell), Room 224, Chemistry Building.

"Nucleoside and non-nucleoside analogues as anti-HIV agents", CHM 151 (Dr. B. Cruickshank), Room 123, Liberal Arts Building (IITV course).

"Reverse transcriptase as target for anti-HIV agents", CHM 151 (Dr. B. Cruickshank), Room 130, Biology-Biochemistry Building.

"Thymidylate synthetase as target for antitumor agents", CHM 238 (Prof. Dr. P.F. Torrence), Room 224, Chemistry Building. Minicourse # 3 "Molecular targets for chemotherapy of human immunodeficiency virus (HIV) infection" (Prof. Dr. P.F. Torrence). Lecture s"Chemotherapy of human immunodeficiency virus (HIV) infection" (Prof. Dr. P.F. Torrence), Room 130, Biology-Biochemistry Building. Seminar "Acyclic nucleoside phosphonates as antiviral and antitumor agents" 9 November 2000 (Prof. Dr. P.F. Torrence), Room 130, Biology-Biochemistry Building. 14 December 2000 Scientific discussions on antiviral research, ISAR (International Society for Antiviral Research) Leadership Retreat, Reston, Virginia, USA (host: Leaders of the International Society for Antiviral Research). Program Committee Meeting, planning of the 14th International Conference on 14 December 2000 Antiviral Research, Reston, Virginia, USA, to be held on 8-12 April 2001, Seattle, Washington, USA. 3 February 2001 "New developments in the chemotherapy of HIV infections and AIDS", Chiba Institute of Technology, Department of Industrial Chemistry, Chiba, Japan (host: Prof. Dr. Hiroshi Takaku). 4 February 2001 "The dawn of antiviral chemotherapy: the Leuven-Fukushima connection", Ceremonial meeting in honor of Professor Shiro Shigeta at his election to President of Fukushima Medical University, Fukushima, Japan (hosts: Prof. M. Baba, Kagoshima University; Prof. M. Ito, Yamanishi University; and Prof. K. Takahashi, Fukushima Medical College). 5 February 2001 "New developments in the chemotherapy of HIV infections", AIDS Research Center, National Institute of Infectious Diseases, Toyama, Shinjuku-ku, Tokyo, Japan (host: Prof. Dr. Yoshiyuki Nagai, Director, AIDS Research Center). 22 March 2001 "Recent developments in anti-HIV chemotherapy", Medical Lecture Series, sponsored jointly by the Department of Internal Medicine and the Department of Chemistry, University of Iowa, Iowa City, Iowa, USA (host: Prof. Dr. Vasu Nair, University of Iowa Foundation Distinguished Professor). 29 April 2001 Research on antiviral therapy, Infectious Disease Therapeutic Area (IDTA), Antiviral Preclinical Research Advisory Meeting, Novartis, Vienna, Austria (host: Dr. Neil S. Ryder, Programme Head Novartis Forschungsinstitut GmbH). 19-20 June 2001 Introductory presentations on antivirals against herpes- and hepatitisviruses and discussions on antivirals (against herpesvirus, respiratory viruses, human immunodeficiency virus, hepatitis B virus and hepatitis C virus). Antiviral Meeting to evaluate current and future trends in viral diseases, AstraZeneca, Shrigley Park, Nr Macclesfield, Cheshire, United Kingdom (host: Dr. Keith Williams, Global Product Director, AstraZeneca). 18-19 July 2001 Annual Scientific Advisors (POW-HOW) Meeting, Gilead Sciences, Foster City, California, USA (hosts: John C. Martin, Chief Executive Officer, and

Norbert Bischofberger, Senior Vice President).

27 July 2001	Scientific Advisory Board Meeting, AnorMED (Langley, British Columbia, Canada), held at Semiahmoo Resort, Blaine, Washington (USA) [hosts: AnorMED executive team (Dr. M. Abrams, Dr. G. Henson, Dr. G. Bridger)].
15 November 2001	Charting Pathways to Future Infectious Disease Treatment Therapies, Infectious Disease Expert Summit Meeting, Novartis, O'Hare, Chicago, Illinois, USA (host: Dr. Stephan A. Billstein, Executive Director, Novartis Pharmaceutical Corporation).
3 December 2001	Discussions on the potential usefulness of bicyclic (furopyrimidine) nucleoside analogues (BCNAs) in the treatment of varicella-zoster virus (VZV) infections, Berlin-Chemie AG (Menarini), Berlin, Germany (host: Dr. B. Stubinski, Berlin-Chemie).
5-6 December 2001	Program Committee Meeting of the 15th International Conference on Antiviral Research (Prague, Czech Republic, 17-21 March 2002), Hyatt Regency Reston, Virginia, USA.
6 February 2002	Discussion on candidate anti-HIV microbicides. NIH (National Institutes of Health) FY 2004 Plan for HIV-Related Research, Microbicides Research Area of Emphasis, Crystal City Hilton, Virginia, USA (chair: Dr. Fulvia di Marzo Veronese, Office of AIDS Research, Office of the Director, National Institutes of Health).
24-25 July 2002	Discussions on the development of antiviral drugs, Annual Scientific Advisory Board Meeting, Gilead Sciences, Inc., Foster City, California, USA (host: Dr. John C. Martin, President and Chief Executive Officer, and Dr. Norbert Bischofberger, Executive Vice President, Gilead Sciences, Inc.)
26 July 2002	Discussions on the development of bicyclam derivatives as clinically effective drugs for multiple indications, AnorMED Inc. Annual Scientific Advisory Board Meeting, Langley, British Columbia, Canada (host: M.J. Abrams, President and Chief Executive Officer of AnorMED Inc.).
27 August 2002	Expert Advice on "Future directions in HIV therapy", UBS Warburg, London, UK (host: Dr. Andrew Kocen, European Pharmaceutical Research, UBS Warburg).
27 May 2003	Anti-HIV (AIDS) therapies: targets and approaches, Dottorato di Ricerca in Scienze Farmaceutiche, Dipartimento Farmacochimico Tossicologico e Biologico, Università degli Studi di Palermo, Palermo, Sicily, Italy (hosts: Prof. Dr. Girolamo Cirrincione and Prof. Dr. Anna Maria Almerico).
28 May 2003	Anti-HIV (AIDS) therapies: targets and approaches, Dottorato di Ricerca in Scienze Farmaceutiche, Dipartimento Farmaco-Chimico Facoltà di Farmacia, Università degli Studi di Messina, Messina, Sicily, Italy (host: Prof. Dr. Alba Chimirri).
29 May 2003	Anti-HIV (AIDS) therapies: targets and approaches, Dottorato di Ricerca in Scienze Farmaceutiche, Facoltà di Farmacia, Università degli Studi di Catania, Catania, Sicily, Italy (host: Prof. Dr. Giuseppe Ronsisvalle).
18-19 June 2003	"Current status of antivirals development", presented at a special brainstorming meeting on "Smallpox: Transforming Biological Information into New

Therapies" at the National Academies of the United States, Washington DC, USA (host: Dr. Bruce Alberts, President of the National Academy of Sciences, USA). 10 July 2003 Discussion on "European Vigilance Network for the Management of Antiviral Drug Resistance (viRgil)", Network of Excellence, Institut National de la Santé et de la Recherche Médicale (INSERM), Paris, France (host: Prof. Fabien Zoulim, INSERM-Lyon). 24 July 2003 Discussions on the development of bicyclam derivatives as clinically effective drugs for multiple indications, AnorMED Inc. Annual Scientific Advisory Board Meeting, Langley, British Columbia, Canada (host: M.J. Abrams, President, and Dr. G.J. Bridger, Vice President Research, AnorMED Inc.). 28-31 July 2003 Scientific Advisory Board Meeting, discussions on the development of antiviral agents, Gilead, Foster City, California, USA (host: Dr. J.A. Martin, Chief Executive Officer and President, and Dr. N. Bischofberger, Executive Vice President, Research and Development). 3 November 2003 Discussant, Novartis Foundation Discussion Meeting on "Drugs for Developing World Diseases: Translating New Molecular Targets into Candidates for Development", Novartis Foundation, London, United Kingdom (Chairman: Prof. Trevor Jones, Association of the British Pharmaceutical Industry). 12 December 2003 Attendance of Sir Thomas Smith's Feast, Queens College, Cambridge, United Kingdom (hosts: Dr. Hugh Field and Dr. Murray Milgate, Fellows of Queens College). 15 December 2003 "New anti-HIV drug developments", Second Workshop on Antiviral Modified Nucleosides, Auditorium della Gazzetta del Sud, Messina, Italy (hosts: Prof. G. Romeo, Universita degli Studi di Messina and Dott. Piero Ortega, Fondazione Bonino-Pulejo). 16 June 2004 Discussion of scientific research projects, Z-Cube Scientific Advisory Board meeting, Grand Hotel Eden, Lugano, Switzerland [hosts: Dr. Claudio Semeraro, Executive Director and Dr. Roberto Rettani, President, Z-Cube (Zambon Group)]. 22 July 2004 AnorMED Inc. Annual Scientific Advisory Board Meeting, Langley, British Columbia, Canada (hosts: M.J. Abrams, President, and Dr. G.J. Bridger, Vice President Research, AnorMED Inc.). 27-28 July 2004 Gilead Scientific Advisory Board Meeting, Gilead, Foster City, California, USA. Discussion of Research and Development Programs (hosts: J.C. Martin, President and Chief Executive Officer; N. Bischofberger, Executive Vice President Research & Development; William Lee, Senior Vice President Research). 26 August 2004 Discussions on the development of new antiviral agents, Anacor Pharmaceuticals, Palo Alto, California, USA (hosts: Dr. Jake Plattner, Vice-President, and Dr. David Perry, Chief Executive Officer). 27 August 2004 "Interferon (inducers): a never-ending story", lecture delivered at the occasion of the Festschrift honoring Thomas C. Merigan, Bridging Generations Toward an

Understanding of Infectious Disease Pathogenesis, Clark Center for Biomedical

Engineering and Sciences, Stanford University School of Medicine, Stanford, California, USA. 13 October 2004 Z-Cube (Zambon Group) Scientific Advisory Board Meeting, Grand Hotel Eden, Lugano, Switzerland (Chairman: Prof. Dr. Renato Dulbecco; host: Dr. Claudio Semeraro). Lecture and discussions on "Antivirals and antiviral strategies", Clavis Pharma, 20 October 2004 Oslo, Norway (hosts: Dr. Finn Myhren, Dr. Marit Liland Sandvold and Dr. Tom Pike, Chief Executive Officer). 6 November 2004 Participant in the capacity of Editor of Antiviral Research, Elsevier Editors' Conference on "Partnerships for Quality Science", Elsevier, Valparaiso Palace Hotel, Majorca, Spain (Conference Chairman: Prof. Peter van der Vliet, Editorin-Chief of Biochimica Biophysica Acta). 18 November 2004 BioVitas Scientific Advisory Board (SAB) Meeting, Hotel Principe di Savoia, Milan, Italy (host: Gabriele M. Cerrone, Chairman BioVitas Capital, New York, USA). Discussions, Advisory Board Meeting, Institute of Organic Chemistry and 20-21 November 2004 Biochemistry (IOCB), Academy of Sciences of the Czech Republic, Prague, Czech Republic (host: Dr. Zdenek Havlas, Director, IOCB). 22 November 2004 "The acyclic nucleoside phosphonates (ANPs): past, present and future", Institute of Organic Chemistry and Biochemistry (IOCB), Academy of Sciences of the Czech Republic, Prague, Czech Republic (host: Prof. Dr. Anthonin Holý, Former Director, IOCB). Z-Cube (Zambon Group) Scientific Advisory Board Meeting, Grand Hotel 5 May 2005 Eden, Lugano, Switzerland (Chairman: Prof. Dr. Renato Dulbecco; host: Dr. Claudio Semeraro). 11 July 2005 Scientific discussions, Scientific Advisory Board Meeting, Fermavir Research, Inc., New York, New York, USA (host: Dr. G. Henson, Chief Executive Officer, Fermavir Research). 26-27 July 2005 Gilead Scientific Advisory Board Meeting, Gilead, Foster City, California, USA. Discussion of Research and Development Programs (hosts: N. Bischofberger, Executive Vice President Research & Development; and Dr. W.A. Lee, Senior Vice President Research). 9 September 2005 BioVitas Scientific Advisory Board (SAB) Meeting, Hotel D'Inghilterra, Rome, Italy (host: Gabriele M. Cerrone, Chairman BioVitas Capital, Rome, Italy, and New York, USA). 26 October 2005 Z-Cube (Zambon Group) Scientific Advisory Board Meeting, Grand Hotel Eden, Lugano, Switzerland (Chairman: Prof. Dr. Renato Dulbecco; host: Dr. Claudio Semeraro). 9 November 2005 "Antiviral drugs and antiviral strategies", Shandong University, Jinan, P.R. China (hosts: Prof. Xinyong Liu, Dean of the Department of Organic Chemistry, and Prof. Yun Zhang, Vice-President, Shandong University, Jinan, P.R. China).

9 November 2005 "Antiviral drugs for the treatment of HIV infections (AIDS)", Shandong University, Jinan, P.R. China (hosts: Prof. Xinyong Liu, Dean of the Department of Organic Chemistry, and Prof. Yun Zhang, Vice-President, Shandong University, Jinan, P.R. China). "Antiviral drugs for the treatment of hepatitis B and C", Shandong University, 10 November 2005 Jinan, P.C. China (hosts: Prof. Xinyong Liu, Dean of the Department of Organic Chemistry, and Prof. Yun Zhang, Vice-President, Shandong University, Jinan, P.R. China). 11 November 2005 "Antiviral drugs and antiviral strategies", Institute of Materia Medica, Chinese Academy of Medical Sciences, Beijing, P.R. China (hosts: Prof. Wu Song, Deputy Director, Institute of Materia Medica, and Prof. Du Guanhua, President, Institute of Materia Medica, Beijing, P.R. China). 16 November 2005 Scientific discussions collaborations between Rega Institute (K.U.Leuven) and Institute of Organic Chemistry and Biochemistry (IOCB), Czech Academy of Sciences, Praha, Czech Republic (hosts: Prof. A. Holý, Prof. Z. Havlas, Director IOCB, and Prof. Václav Pačes, President of Czech Academy of Sciences). 12 December 2005 4AZA Bioscience Scientific Advisory Board (SAB) Meeting, Berkenhof Bierbeek, Belgium (host: Dr. Mark de Boer, Chief Executive Officer, 4AZA Bioscience). 13-14 December 2005 Science meeting prior to Meeting of the Board of Directors, FermaVir, New York, New York, USA (host: Dr. Geoffrey Henson, Chief Executive Officer, FermaVir Pharmaceuticals). Antiviral agents against avian influenza virus H5N1 (Agenti antivirali contro il 3 February 2006 virus H5N1), Fondazione Bonino-Pulejo (Messina), Universitá degli Studi di Messina, Sicily, Italy [hosts: Prof. Dr. Giovanni Romeo (Universitá di Messina) and Dr. Piero Orteca (Fondazione Bonino-Pulejo, Messinia)]. 16 March 2006 Scientific Advisory Board (SAB) Meeting, Fermavir Pharmaceuticals Inc., New York, New York, USA (host: Dr. G.W. Henson, Chief Executive Officer, Fermavir Pharmaceutical Inc.). 13 July 2006 Establishment of New Academic Research Center, Gilead Sciences and Institute of Organic Chemistry and Biochemistry (IOCB), in Prague, Czech Republic. Donation by Gilead in honor of Dr. Antonin Holý (host: Prof. Vaclav Pačes, President, Academy of Sciences, Czech Republic). 14 July 2006 "Bridging chemistry to HIV, HBV, HCV, papilloma-, adeno-, herpes-, and poxvirus infections: the phosphonate bridge". Theoretical Institutes of Faculty of Medicine, Palacky University, Olomouc, Czech Republic (hosts: Prof. A. Holý and Prof. Marian Hajduch, head of Laboratory of Experimental Medicine, Department of Pediatrics, Faculty of Medicine. 25-26 July 2006 Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City,

California, USA (hosts: J.C. Martin, President and Chief Executive Officer, N. Bischofberger, Executive Vice President Research and Development, and W.A.

Lee, Senior Vice-President Research).

26 July 2006

"The (first) years of wisdom", Board Dinner Lecture delivered at the Gilead Sciences Board of Directors, Scientific Advisors and Operating Group, Foster City, California, USA.

1 September 2006

"At Professor Antonin Holý's Memorable 70th birtday, 30 years of Holý nomics", Prague, Czech Republic. Lecture delivered at the occasion of the celebration of the 70th birthday of Antonin Holý (hosts: Prof. Vaclar Pačes,, President of Czech Academy of Sciences, and Prof. Zdenek Havlas, Director of the Institute of Organic Chemistry and Biochemistry).

28 September 2006

Z-Cube (Zambon Group) Scientific Advisory Board Meeting, Grand Hotel Eden, Lugano, Switzerland (host: Dr. Claudio Semeraro, Executive Director Z-Cube).

8 March 2007

"Discovery and development of specific antiviral agents". Lecture presented at the occasion on being awarded the degree of doctor honoris causa of Charles University in Prague (Universitas Carolina Pragensis), Czech Republic.

23 March 2007

Examination *viva* PhD thesis entitled "Molecular and biochemical studies of feline herpesvirus-1 thymidine kinase and its role in the development of effective antiviral compounds" by Islam Tohamy Mohammad, University of Cambridge, United Kingdom.

19-20 April 2007

Course on Antibacterial and Antiviral Chemotherapy, Charles University (Faculty of Medicine and Faculty of Sciences) and Czech Academy of Sciences (Institute of Organic Chemistry and Biochemistry), Prague, Czech Republic. "Introduction to eubacteria".

"Antibiotics interacting with biosynthesis of peptidoglycans: β -lactam antibiotics (penicillins, vancomycin, ...)".

"Antibiotics inhibiting protein synthesis: aminoglycosides, ... macrolides".

"Antibiotics interfering with nucleic acid biosynthesis: quinolones, sulfonamides, rifampicin".

"Antibiotics: mechanisms of development of resistance".

"Antibiotics: mechanisms of transmission of resistance".

"Antibiotics: tuberculostatics".

25 April 2007

"The bicyclam AMD3100 story: the route of discovery of a stem cell mobilizer", Univerzita Karlova Praze, 2. Lékařská Fakulta Motol, Prague, Czech Republic (host: Prof. Dr. Ondrey Hrušák, Dean of the Second Medical Faculty, Charles University, Prague).

25-26 April 2007

Course on Antibacterial and Antiviral Chemotherapy, Charles University (Faculty of Medicine and Faculty of Sciences) and Czech Academy of Sciences (Institute of Molecular Genetics), Prague, Czech Republic.

"Clinical symptoms caused by viruses (part I)".

"Clinical symptoms caused by viruses (part II)".

"Antivirals active against DNA viruses/retroviruses (preclinical/clinical/licensed) Part I (overview)".

"Antivirals active against RNA viruses (preclinical/clinical/licensed) Part II (overview)".

4 May 2007

Scientific discussions on development of antiviral agents, Gilead Sciences, Foster City, California, USA (hosts: Dr. J.C. Martin, Chief Executive Officer (CEO) and Executive President, and Dr. N. Bischofberger, Chief Scientific Officer and Executive Vice President, Gilead Sciences).

11 May 2007

Scientific Advisory Board (SAB) meeting, Z-Cube (Zambon's Corporate Venture Company), Grand Hotel Eden, Lugano, Paradiso, Switzerland (host: Dr. Claudio Semeraro, Chief Executive Officer (CEO) of Z-Cube).

17-18 May 2007

Course on Antibacterial and Antiviral Chemotherapy, Charles University (Faculty of Medicine and Faculty of Sciences) and Czech Academy of Sciences (Institute of Molecular Genetics), Prague, Czech Republic.

"Antiviral strategies (general)".

"Licensed antiviral drugs: Overview)". "Licensed anti-HIV drugs: Overview".

"Specific antiviral drugs: Brivudin for treatment of VZV infections)".

"Specific antiviral drugs: Acyclic nucleoside phosphonates (Cidofovir, Adefovir, Tenofovir): The phosphonate bridge".

26 May 2007

"Pandemic influenza and antivirals". Lecture delivered at the Fourth Giornata Siciliana di Approfondimento Infettivologico (4th Sicilian Day on Infectious Diseases), Museo Diocesano, Piazza Duomo, Catania, Sicilia, Italy (host: Senola di Specializzazione Infettive, Universita di Catania, Sicilia).

31 May-1 June 2007

Course on Antibacterial and Antiviral Chemotherapy, Institute of Genetics and Microbiology (Katedra Genetiky a Mikrobiologie), Faculty of Sciences, Charles University, Prague, Czech Republic.

"Specific antiviral drugs: Anti-influenzavirus agents".

"Specific antiviral drugs: Anti-HBV agents".
"Specific antiviral drugs: Anti-HCV agents.".
"Specific antiviral drugs: Anti-poxvirus agents".
"Specific antiviral drugs: Anti-RSV agents".

"Epilogue: The AMD-3100 story: A paradigm for drug discovery".

20 June 2007

Lecture on "The acyclic nucleoside phosphonates: the Prague-Leuven connection: how it started (in 1976) and evolved", Faculty of Biological Sciences, University of South Bohemia, České Budějovice, Czech Republic (host: Prof. RNDr. Libor Grubhoffer, Dean of the Faculty of Biological Sciences).

22 June 2007

Students' examinations, Course on "Molecular Mechanisms of Antibiotics and Antiviral Agents", Department of Genetics and Microbiology, Faculty of Sciences, Charles University, Vinična, Prague, Czech Republic (host: Prof. Dr. Jitka Forstová, Department of Genetics and Microbiology).

11-12 July 2007

Scientific (Advisory) (S(A)B) Meeting, Centre for Drug Design and Discovery (CD3), Katholieke Universiteit Leuven (K.U.Leuven), Belgium (host: Leuven Research and Development (LRD)).

17-18 July 2007

Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City, California, USA (hosts: J.C. Martin, Chief Executive Officer and N. Bischofberger, Chief Scientific Officer, Gilead Sciences).

19 September 2007

Directors' Board Meeting Fermavir, New York, New York, USA (host: Dr. Geoffrey Henson, Chief Executive Officer, Fermavir).

2-3 October 2007

Course on "Biochemistry at the Service of Medicine", Faculty of Biological Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), Ceské Budějovice, Czech Republic.

<u>Lesson 1</u>: Nucleosides *versus* nucleotides – *De novo* biosynthesis of purine mononucleotides – IMP dehydrogenase – IMP dehydrogenase inhibitors (i.e. ribavirin) – Capping of viral mRNA – Methyltransferase – Sadenosylmethionine (SAM) – Sadenosylhomocysteine (SAH) – SAH hydrolase inhibitors.

<u>Lesson 2</u>: *De novo* biosynthesis of pyrimidine mononucleotides – Orotic acid aciduria – Thymidylate synthase – Folic acid (Folate) – Folate metabolites $(N^5,N^{10}$ -methylene-FH₄, N^5N^{10} -methenyl-FH₄ – N^{10} -formyl-FH₄) – Folate antagonists [i.e. amethopterine (Methotrexate)] – Creation of a carbon-carbon bond (dUMP \rightarrow dTMP).

<u>Lesson 3</u>: Salvage reactions in the biosynthesis of purine and pyrimidine mononucleotides — Lesh-Nyhan syndrome — Catabolism of purine mononucleotides — Uric acid — Gout — Allopurinol (treatment of gout) — Catabolism of pyrimidine mononucleotides — Dihydropyrimidine dehydrogenase (DPD) — 5-Fluorouracil.

8-10 October 2007

Participation in Academic Delegation accompanying their Majesties The King and the Queen of the Belgians at the occasion of the State Visit to Ireland (Dublin and Shannon).

16-17 October 2007

Course on "Biochemistry at the Service of Medicine", Faculty of Biological Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), Ceské Budějovice, Czech Republic.

<u>Lesson 4</u>: Biosynthesis of heme, Hemoglobine, Porphyrias (porphyrinurias), Hemoglobinopathies, Sickle cell anemia.

<u>Lesson 5</u>: Glycolysis, Pentose phosphate shunt pathway, Hemolytic anemias.

<u>Lesson 6</u>: Degradation of heme, Biliverdin, Bilirubin, Direct and indirect bilirubin, Urobiline, Hepatitis, Hemolytic icterus, Obstructive icterus, Liver function tests.

25 October 2007

"Les nucléosides acycliques phosphonylées en vue des nouvelles stratégies pour le traitement du SIDA" (The acyclic nucleoside phosphonates in the scope of the treatment of human immunodeficiency virus (HIV) and other virus infections), Institut Jacque Monod, Centre National de la Recherche Scientifique, Université Pierre & Marie Curie, Université Paris 6, Paris, France (host: Prof. Dr. Michèle Reboud-Ravaux, Enzymologie Moléculaire et Fonctionnelle, FRE2852-CNRS)?

26 October 2007

Examination Thèse de doctorat de l'Université Pierre et Marie Curie: Nouveaux inhibiteurs de la dimérisation de la protéase du VIH-1: relations structure-activité, preuves mécanistiques et effets sur des protéases mutées (Ludovic Bannwarth), Université Pierre et Marie Curie, Université Paris 6, Paris, France (host: Prof. Dr. Michèle Reboud-Ravaux).

20-21 November 2007

Course on "Biochemistry at the Service of Medicine", Faculty of Biological Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), Ceské Budějovice, Czech Republic.

<u>Lesson 7</u>: Biosynthesis and biological role of bile acids. Biosynthesis of cholesterol.

<u>Lesson 8</u>: Gastrointestinal system: absorbance and digestion of proteins, carbohydrates and triglycerides.

<u>Lesson 9</u>: Important cycles in intermediary metabolism: citric acid cycle, γ -glutamyl transpeptide cycle (γ -GT), urea cycle, γ -aminobutyric acid (GABA) cycle.

<u>Lesson 10</u>: Neurotransmitters (acetylcholine, dopamine, noradrenaline, serotine, ...).

Lesson 11: Hormones (structure, biosynthesis, functions, mechanism of action, regulation, katabolism, pathology). 11 December 2007 Course on "Biochemistry at the Service of Medicine", Faculty of Biological Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), Ceské Budějovice, Czech Republic. Lesson 12: Vitamins (A, B, C, D, E, ...): structure, synthesis, mechanism of action, pathology associated with hypo- or hypervitaminoses. Lesson 13: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, nucleic acid synthesis inhibitors, tuberculostatics): mechanisms of action and mechanisms of resistance development and resistance transmission. Lesson 14: Clinical manifestations of viral diseases (DNA viruses, RNA viruses and retroviruses). Lesson 15: Current treatment options for human immunodeficiency virus (HIV) infections. Lesson 16: The acyclic nucleoside phosphonates in the scope of HIV, HBV and other virus infections. Lesson 17: The path to drug discovery, as illustrated by the AMD3100 story. 12 December 2007 Students' examinations. Course on "Biochemistry at the Service of Medicine", Faculty of Biological Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), Ceské Bodějovice, Czech Republic. "The antiviral and antitumor activities of acyclic nucleoside phosphonates", 13 February 2008 College of Pharmacy and Nutrition, University of Saskatchewan, Saskatoon, Saskatchewan, Canada (host: Prof. Dr. Jonathan Dimmock). 14 February 2008 The Fifth Annual D. Lorne Tyrrell Lectureship in Infection and Immunity "New perspectives for the treatment of virus (i.e. HIV, HBV and HCV) infections", The University of Alberta, Edmonton, Alberta, Canada (host: Prof. H. Ostergaard, Chair Immunology Network). 31 March 2008 Scientific Board of Directors Meeting, Inhibitex Inc., 9005 Westside Parkway, Alpharetta, Atlanta, Georgia 30004, USA. Visit to Georgia Research Alliance (host: C. Michael Cassidy, President and 1 April 2008 CEO), The Hurt Building, 50 Hurt Plaza, Atlanta, Georgia 30303, USA. Visit to and Discussions with several members of the Departments of Chemistry 1-2 April 2008 and Biology, Georgia State University, Atlanta, Georgia 30302, USA. Lecture on "Acyclic nucleoside phosphonates in the scope of the current 2 April 2008 treatment regimes for the treatment of HIV and HBV infections (host: Prof. Dr. Binghe Wang, Eminent Scholar of Georgia Research Alliance, Georgia State University, Atlanta, Georgia 30302, USA). Scientific (Advisory) (S(A)B) Meeting, Centre for Drug Design and Discovery 19-20 May 2008 (CD3), Katholieke Universiteit Leuven (K.U.Leuven), Belgium (host: Leuven

Research and Development (LRD)).

10 June 2008

"Current treatment regimens for HIV infections", Department of Chemistry (host: Prof. Dr. Fen-Er Chen), Institute of Biomedical Sciences (host: Prof. Dr. Pengyuan Yang), and Shanghai Medical College (host: Prof. Dr. Yu-Mei Wen), Fudan University, Shanghai, P.R. China.

11 June 2008

"Current treatment regimens for HIV infections: role of the acyclic nucleoside phosphonates", School of Pharmaceutical Sciences, Shandong University (Vice President: Lou Hongxiang, Professor of Natural Prodructs Chemistry) (host: Prof. Dr. Xinyong Liu, Vice Dean, Professor of Medicinal Chemistry, Director of Medicinal Chemistry Institute), Jinan, P.R. China.

19 June 2008

Scientific Advisory Board Meeting, HHV-6 Foundation, Hyatt Regency, Baltimore, Maryland, USA.

20 June 2008

"Acyclic nucleoside phosphonates for the treatment of HIV and HBV infections", National Institutes of Health (NIH), Bethesda, Maryland, USA [host: Dr. Leonid Margolis, National Institute of Child Health and Human Development (NICHD)].

29-30 July 2008

Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City, California, USA (hosts: J.C. Martin, Chief Executive Officer and N. Bischofberger, Chief Scientific Officer, Gilead Sciences).

12 September 2008

"Approches thérapeutiques antivirales" (Antiviral therapeutic approaches), Conférences sur la Virologie Fondamentale et Virologie Médicale et Moléculaire, Institut Pasteur, Paris, France (hosts: N. Tordo, J.-P. Vartanian and other leaders of this Course at the Pasteur Institute in Paris).

22 September 2008

Second Generation HCV Advisory Board Meeting, Vertex Pharmaceuticals Incorporated, Cambridge, Massachusetts, USA (meeting held in New York City, New York, USA) (host: Dr. Robert Kauffman, Senior Vice-President Clinical Development, and Meeting Moderator).

28 October 2008

Scientific Board of Directors Meeting, Inhibitex Inc., Washington Plaza, Washington DC, USA.

4-5 November 2008

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic.

<u>Lesson 1</u>: Nucleosides *versus* nucleotides – *De novo* biosynthesis of purine mononucleotides – IMP dehydrogenase – IMP dehydrogenase inhibitors (i.e. ribavirin) – Capping of viral mRNA – Methyltransferase – Sadenosylmethionine (SAM) – Sadenosylhomocysteine (SAH) – SAH hydrolase inhibitors.

<u>Lesson 2</u>: *De novo* biosynthesis of pyrimidine mononucleotides – Orotic acid aciduria – Thymidylate synthase – Folic acid (Folate) – Folate metabolites (N^5,N^{10} -methylene-FH₄, N^5N^{10} -methenyl-FH₄ – N^{10} -formyl-FH₄) – Folate antagonists [i.e. amethopterine (Methotrexate)] – Creation of a carbon-carbon bond (dUMP \rightarrow dTMP).

<u>Lesson 3</u>: Salvage reactions in the biosynthesis of purine and pyrimidine mononucleotides — Lesh-Nyhan syndrome — Catabolism of purine mononucleotides — Uric acid — Gout — Allopurinol (treatment of gout) — Catabolism of pyrimidine mononucleotides — Dihydropyrimidine dehydrogenase (DPD) — 5-Fluorouracil.

<u>Lesson 4</u>: Biosynthesis of heme, Hemoglobine, Porphyrias (porphyrinurias), Hemoglobinopathies, Sickle cell anemia.

<u>Lesson 5</u>: Glycolysis, Pentose phosphate shunt pathway, Hemolytic anemias.

18-19 November 2008

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic.

<u>Lesson 6</u>: Degradation of heme, Biliverdin, Bilirubin, Direct and indirect bilirubin, Urobiline, Hepatitis, Hemolytic icterus, Obstructive icterus, Liver function tests.

<u>Lesson 7</u>: Biosynthesis and biological role of bile acids. Biosynthesis of cholesterol.

<u>Lesson 8</u>: Gastrointestinal system: absorbance and digestion of proteins, carbohydrates and triglycerides.

<u>Lesson 9</u>: Important cycles in intermediary metabolism: citric acid cycle, γ -glutamyl transpeptide cycle (γ -GT), urea cycle, γ -aminobutyric acid (GABA) cycle.

<u>Lesson 10</u>: Neurotransmitters (acetylcholine, dopamine, noradrenaline, serotonine, ...).

2-3 December 2008

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic.

<u>Lesson 11</u>: Hormones (structure, biosynthesis, functions, mechanism of action, regulation, catabolism, pathology).

<u>Lesson 12</u>: Vitamins (A, B, C, D, E, ...): structure, synthesis, mechanism of action, pathology associated with hypo- or hypervitaminoses.

<u>Lesson 13 (part 1)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, nucleic acid synthesis inhibitors, tuberculostatics): mechanisms of action (first part).

5-7 January 2009

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic.

<u>Lesson 13 (part 2)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, antifungal agents, nucleic acid synthesis inhibitors, tuberculostatics): mechanism of action (second part).

<u>Lesson 14</u>: Mechanisms of resistance development to antibiotics. Mechanism of transfer of resistance development (transformation, conjugation, transposition, transduction).

<u>Lesson 15</u>: Viral infections (symptoms) (part 1). DNA viruses. Viral infections (symptoms) (part 2). RNA viruses.

<u>Lesson 16</u>: Antiviral agents (overview) for DNA viruses (part 1). Antiviral agents (overview) for RNA viruses (part 2).

<u>Lesson 17</u>: Current state of antiviral drugs in the treatment of AIDS (HIV infections).

<u>Lesson 18</u>: Treatment of varicella-zoster virus (VZV) infections, and herpes simplex virus (HSV) infections

Lesson 19: Acyclic nucleoside phosphonates: cidofovir, adefovir, tenofovir.

Lesson 20: The bicyclam AMD3100 story.

10-11 February 2009

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic.

Students' examinations

14 May 2009

"Discovery of the acyclic nucleoside phosphonates cidofovir, adefovir and tenofovir as antiviral drugs", Seminars "New Strategies in Pharmaceutical Research", Universität Wien, Pharmaziezentrum, Vienna, Austria (hosts: Dr. Irène Lagoja, Prof. Ernst Urban, Vice Head, and Prof. Christian Noe, Head of the Department of Medicinal Chemistry, University of Vienna).

5 June 2009

"Antiviral activity of acyclic nucleoside phosphonates (cidofovir, adefovir and tenofovir), Jihočeska Universita (University of South Bohemia), České Budějovice, Czech Republic (host: Prof. Dr. Libor Grubhoffer, Dean of the Faculty of Sciences).

23-24 June 2009

Scientific (Advisory) (S(A)B) Meeting, Centre for Drug Design and Discovery (CD3), Katholieke Universiteit Leuven (K.U.Leuven), Belgium (host: Leuven Research and Development (LRD)).

3 July 2009

(Invited) Advisor (together with Prof. Dr. Myra McClure) to the Strategic Translation Award Application on "Novel Antiviral Agents that Target HIV-1 Replication in Cellular Reservoirs", The Wellcome Trust, London, United Kingdom.

28-29 July 2009

Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City, California, USA (hosts: J.C. Martin, Chief Executive Officer and N. Bischofberger, Chief Scientific Officer, Gilead Sciences).

15 September 2009

"Anti-HIV drug strategies", Croatian Academy of Sciences and Arts, Zagreb, Croatia (host: Prof. Dr. Mladen Mintas, Professor ordinarius, University of Zagreb, Croatia).

16 September 2009

"Anti-HIV drug strategies", University of Rijeka, Croatia (host: Prof. Dr. Mladen Mintas and Prof. Krešimir Pavelić, University of Rijeka, Croaita).

28 September 2009

"Current developments on antiretrovirals: from chemistry to medicine", Symposium on Development to Antiviral Chemotherapy: From Molecule to Medicine, Marmara University, Istanbul, Turkey (host: Prof. Dr. Ilkay Küçükgüzel and Prof. Dr. Sevim Rollas, Dean of the Pharmaceutical Faculty (Eczacilik Fakültesi)).

6-7 October 2009

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

<u>Lesson 1</u>: Nucleosides *versus* nucleotides – *De novo* biosynthesis of purine mononucleotides – IMP dehydrogenase – IMP dehydrogenase inhibitors (i.e. ribavirin) – Capping of viral mRNA – Methyltransferase – S-adenosylmethionine (SAM) – S-adenosylhomocysteine (SAH) – SAH hydrolase inhibitors.

<u>Lesson 2</u>: *De novo* biosynthesis of pyrimidine mononucleotides – Orotic acid aciduria – Thymidylate synthase – Folic acid (Folate) – Folate metabolites (N^5 , N^{10} -methylene-FH₄, N^5N^{10} -methenyl-FH₄ – N^{10} -formyl-FH₄) – Folate antagonists [i.e. amethopterine (Methotrexate)] – Creation of a carbon-carbon bond (dUMP \rightarrow dTMP).

<u>Lesson 3</u>: Salvage reactions in the biosynthesis of purine and pyrimidine mononucleotides – Lesh-Nyhan syndrome – Catabolism of purine

mononucleotides – Uric acid – Gout – Allopurinol (treatment of gout) – Catabolism of pyrimidine mononucleotides – Dihydropyrimidine dehydrogenase (DPD) – 5-Fluorouracil.

<u>Lesson 4</u>: Biosynthesis of heme, Hemoglobine, Porphyrias (porphyrinurias), Hemoglobinopathies, Sickle cell anemia.

Lesson 5: Glycolysis, Pentose phosphate shunt pathway, Hemolytic anemias.

27-28 October 2009

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

<u>Lesson 6</u>: Degradation of heme, Biliverdin, Bilirubin, Direct and indirect bilirubin, Urobiline, Hepatitis, Hemolytic icterus, Obstructive icterus, Liver function tests.

<u>Lesson 7</u>: Biosynthesis and biological role of bile acids. Biosynthesis of cholesterol.

<u>Lesson 8</u>: Gastrointestinal system: absorbance and digestion of proteins, carbohydrates and triglycerides.

<u>Lesson 9</u>: Important cycles in intermediary metabolism: citric acid cycle, γ -glutamyl transpeptide cycle (γ -GT), urea cycle, γ -aminobutyric acid (GABA) cycle.

<u>Lesson 10</u>: Neurotransmitters (acetylcholine, dopamine, noradrenaline, serotonine, ...).

3-4 November 2009

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

<u>Lesson 11</u> (parts 1, 2, 3 and 4): Hormones (structure, biosynthesis, functions, mechanism of action, regulation, catabolism, pathology).

<u>Lesson 12</u>: Vitamins (A, B, C, D, E, ...) (parts 1 and 2): structure, synthesis, mechanism of action, pathology associated with hypo- and hypervitaminoses.

<u>Lesson 13 (part 1)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, nucleic acid synthesis inhibitors, tuberculostatics): mechanisms of action (first part).

10-11 November 2009

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

<u>Lesson 13 (part 2)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, antifungal agents, nucleic acid synthesis inhibitors, tuberculostatics): mechanism of action (second part).

<u>Lesson 14</u>: Mechanisms of resistance development to antibiotics. Mechanism of transfer of resistance development (transformation, conjugation, transposition, transduction).

<u>Lesson 15</u>: Viral infections (symptoms) (part 1). DNA viruses. Viral infections (symptoms) (part 2). RNA viruses.

<u>Lesson 16</u>: Antiviral agents (overview) for DNA viruses (part 1). Antiviral agents (overview) for RNA viruses (part 2).

<u>Lesson 17</u>: Current state of antiviral drugs in the treatment of AIDS (HIV infections).

Lesson 18: Treatment of varicella-zoster virus (VZV) infections, and herpes simplex virus (HSV) infections Lesson 19: Acyclic nucleoside phosphonates: cidofovir, adefovir, tenofovir. Lesson 20: The bicyclam AMD3100 story. 8 December 2009 Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science. Students' examinations Discovery of VireadTM and its therapeutic use, Gilead BeNeLux Meeting, 7 January 2010 Eindhoven, The Netherlands (host: Gilead BeNeLux). 22 February 2010 "The AMD3100 story: the path from an anti-HIV agent to a stem cell mobilizer", Division of Infection & Immunity, Windeyer Building, University College of London (UCL) (host: Prof. Dr. A. Fassati). 20-21 March 2010 International Advisory Board (IAB) meeting of the IOCB (Institute of Organic Chemistry and Biochemistry), Academy of Sciences of the Czech Republic (host: Dr. Zdenek Havlas, Director, IOCB). 1 June 2010 "The acyclic nucleoside phosphonates: a Holý Journey", Institut für Anorganische Chemie, Johannes Kepler Universität (JKU), Linz, Austria (hosts: Prof. Dr. Nobert Müller and Prof. Dr. Günther Knör). 15-16 June 2010 Scientific (Advisory) (S(A)B) Meeting, Centre for Drug Design and Discovery (CD3), Katholieke Universiteit Leuven (K.U.Leuven), Belgium (host: Leuven Research and Development (LRD)). 21-22 July 2010 Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City, California, USA (hosts: J.C. Martin, Chief Executive Officer and N. Bischofberger, Chief Scientific Officer, Gilead Sciences). Scientific Discussions, Scientific Council, Louvain Drug Research Institute 10-11 March 2011 (LDRI), Université Catholique de Louvain (UCL), Woluwé, Brussels, Belgium. 17 March 2011 "The acyclic nucleoside phosphonates: the Holý Grail", Centre de Recherche Public de la Santé (CRP-Santé), Centre Hospitalier de Luxembourg (CHL), Luxemburg. 7 April 2011 "A 40-year journey in search of selective antiviral chemotherapy", School of Pharmacy, Fudan University, Shanghai, P.R. China (host: Prof. Dr. Fen-Er Chen, Fudan Department of Chemistry, Fudan University, Shanghai, P.R. China). 4 May 2011 Celebration of Holý Trinity, Průhonice Castle, Prague, Czech Republic. "Holý Trinity" (invited lecture), in honor of Antonin Holý, Erik De Clercq and John C. Martin (host: Zdenek Havlas, Director, Institute of Organic Chemistry and Biochemistry (IOCB), Prague, Czech Republic) (in the presence of HE Renilde Loeckx-Drozdiak, Belgian Ambassador to the Czech Republic). 5 May 2011 Antonin Holý Symposium: Chemistry Meets Biology, National Technical

Library, Prague, Czech Republic.

Chairman of the Symposium (invited) (host: Zdenek Havlas, Director, IOCB, in the presence of HE Renilde Loeckx-Drozdiak, Belgian Ambassador to the Czech Republic).

16-17 May 2011

Scientific (Advisory) (S(A)B) Meeting, Centre for Drug Design and Discovery (CD3), Katholieke Universiteit Leuven (K.U.Leuven), Belgium (host: Leuven Research and Development (LRD)).

24 May 2011

Commemoration of 25 Years of Crossing the Borders of East-West-Academic-Industrial-Valorisation. A special tribute to the collaboration between Erik De Clercq, Antonin Holý and John C. Martin, celebration held at the University of Leuven, Leuven, Belgium.

14 July 2011

"A 40 year journey in the search for specific antiviral agents", Department of Chemistry, University of Hull, United Kingdom (host: Prof. Dr. S. (Steve) J. Archibald, Department of Chemistry, University of Hull).

20-21 July 2011

Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City, California, USA (hosts: J.C. Martin, Chief Executive Officer and N. Bischofberger, Chief Scientific Officer, Gilead Sciences).

August 2011

Henry Stewart Talks. The Biomedical & Life Sciences Collection. Series: Antivirals, edited by E. De Clercq. "Prospects of anti-HIV therapy and prophylaxis".

11-12 October 2011 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

<u>Lesson 1</u>: Nucleosides *versus* nucleotides – *De novo* biosynthesis of purine mononucleotides – IMP dehydrogenase – IMP dehydrogenase inhibitors (i.e. ribavirin) – Capping of viral mRNA – Methyltransferase – Sadenosylmethionine (SAM) – Sadenosylhomocysteine (SAH) – SAH hydrolase inhibitors. *Case report 1*.

<u>Lesson 2</u>: *De novo* biosynthesis of pyrimidine mononucleotides – Orotic acid aciduria – Thymidylate synthase – Folic acid (Folate) – Folate metabolites (N^5, N^{10} -methylene-FH₄, N^5N^{10} -methenyl-FH₄ – N^{10} -formyl-FH₄) – Folate antagonists [i.e. amethopterine (Methotrexate)] – Creation of a carbon-carbon bond (dUMP \rightarrow dTMP). *Case report* 2.

<u>Lesson 3</u>: Salvage reactions in the biosynthesis of purine and pyrimidine mononucleotides — Lesh-Nyhan syndrome — Catabolism of purine mononucleotides — Uric acid — Gout — Allopurinol (treatment of gout) — Catabolism of pyrimidine mononucleotides — Dihydropyrimidine dehydrogenase (DPD) — 5-Fluorouracil. <u>Case report 3</u>.

<u>Lesson 4</u>: Biosynthesis of heme, Hemoglobine, Porphyrias (porphyrinurias), Hemoglobinopathies, Sickle cell anemia. <u>Case report 4</u>.

<u>Lesson 5</u>: Glycolysis, Pentose phosphate shunt pathway, Hemolytic anemias. <u>Case report 5</u>.

<u>Lesson 6</u>: Degradation of heme, Biliverdin, Bilirubin, Direct and indirect bilirubin, Urobiline, Hepatitis, Hemolytic icterus, Obstructive icterus, Liver function tests.

25-26 October 2011

Course on "Biochemistry at the Service of Medicine", as Visiting Professor

(Total: 7.5 h)

at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

<u>Lesson 7</u>: Biosynthesis and biological role of bile acids. Biosynthesis of cholesterol.

<u>Lesson 8</u>: Gastrointestinal system: absorbance and digestion of proteins, carbohydrates and triglycerides. <u>Case report 6</u>.

<u>Lesson 9</u>: Important cycles in intermediary metabolism: citric acid cycle, γ -glutamyl transpeptide cycle (γ -GT), urea cycle, γ -aminobutyric acid (GABA) cycle. *Case report 7*.

<u>Lesson 10</u>: Neurotransmitters (acetylcholine, dopamine, noradrenaline, serotonine, ...). *Case reports 8 and 9*.

<u>Lesson 11</u> (parts 1, 2, 3 and 4): Hormones (thyroid hormone, parathyroid hormone, insulin, glucagon, catecholamines, steroid hormones, pituitary gland hormones, hypothalamus hormones, gastrointestinal hormones: structure, biosynthesis, functions, mechanism of action, regulation, catabolism, pathology). *Case reports 10-14*.

8-9 November 2011 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

<u>Lesson 12</u>: Vitamins (A, B, C, D, E, ...) (parts 1 and 2): structure, synthesis, mechanism of action, pathology associated with hypo- and hypervitaminoses. <u>Case report 15</u>.

<u>Lesson 13 (part 1)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, antifungal agents, nucleic acid synthesis inhibitors, tuberculostatics): mechanisms of action (first part).

<u>Lesson 13 (part 2)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, antifungal agents, nucleic acid synthesis inhibitors, tuberculostatics): mechanism of action (second part).

<u>Lesson 14</u>: Mechanisms of resistance development to antibiotics. Mechanism of transfer of resistance development (transformation, conjugation, transposition, transduction).

<u>Lesson 15</u>: Viral infections (symptoms) (part 1). DNA viruses. Viral infections (symptoms) (part 2). RNA viruses.

22-23 November 2011 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

<u>Lesson 16</u>: Antiviral agents (overview) for DNA viruses (part 1). Antiviral agents (overview) for RNA viruses (part 2).

<u>Lesson 17</u>: Current state of antiviral drugs in the treatment of AIDS (HIV infections).

<u>Lesson 18</u>: Treatment of varicella-zoster virus (VZV) infections, and herpes simplex virus (HSV) infections

<u>Lesson 19</u>: Acyclic nucleoside phosphonates: cidofovir, adefovir, tenofovir.

Lesson 20: The bicyclam AMD3100 story.

<u>Lessons 21-25</u>: Clinical case reports in antiviral chemotherapy: VZV, HSV, HPV, MCV, Orf, HPV, EBV, SIV, HBV, HBV.

29-30 November 2011 Discussions, EUVIRNA Supervisory Board, Nijmegen Centre for Molecular Life Sciences, Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands (host: Prof. Frank van Kuppeveld).

Opening of the first Austria Czech NMR Research Center, European Territorial Cooperation (ETC) of the European Union between the Johannes Kepler University in Linz (JKU) and the University of South Bohemia in Ceské Budějovice (USB), Linz, Austria.

Short address (invited short communication)

"The role of tenofovir in the control (therapy and prevention) of HIV infection" (invited public lecture).

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Dean Faculty of Science.

Students' examinations

Allocution (Laudatio) at the occasion of the election of Prof. Dr. Libor Grubhoffer as Rector of the University of South Bohemia in Ceské Budějovice (host: Prof. Dr. Libor Grubhoffer).

Scientific (Advisory) (S(A)B) Meeting, Centre for Drug Design and Discovery (CD3), Katholieke Universiteit Leuven (K.U.Leuven), Belgium (host: Leuven Research and Development (LRD)).

Allocution at the funeral of Prof. Antonin Holý [former Director of the Institute of Organic Chemistry and Biochemicals (IOCB)], Prague, Czech Republic.

Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City, California, USA (hosts: J.C. Martin, Chief Executive Officer and N. Bischofberger, Chief Scientific Officer, Gilead Sciences).

"The past and present of the acyclic nucleoside phosphonates. The Holý Trinity" (invited lecture), Deutsches Krebsforschungszentrum (DKFZ), German Cancer Research Center, Advances in Infection and Cancer, Heidelberg, Germany (hosts: Prof. Dr. Otmar D. Wiestler, Chairman and Scientific Director of the DKDFZ, and Prof. Dr. Harald zur Hausen,; Former Chairman and Scientific Director of DKFZ).

"Human viral diseases: what is next for antiviral drug discovery", Korea Research Institute of Chemical Technology (KRICT), Daejeon, South Korea (host: Dr. Chong-Kyo Lee, Team Leader, Principal Research Scientist).

"Human viral diseases: what is next for antiviral drug discovery", Division of Internal Medicine, Korea University College of Medicine, Seoul, South Korea (host: Prof. Dr. Woo Joo Kim, Professor, Korea University College of Medicine (KUCM), President, Transgovernmental Enterprise for Pandemic Influenza of Korea (TEPIK).

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicích), jointly with Johannes Kepler Universität

19 December 2011

20-21 December 2011

11 June 2012

24 July 2012

31 July-1 August 2012

29-31 July 2012

17 October 2012

19 October 2012

30-31 October 2012 (Total: 7.5 h)

(Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

<u>Lesson 1</u>: Nucleosides *versus* nucleotides – *De novo* biosynthesis of purine mononucleotides – IMP dehydrogenase – IMP dehydrogenase inhibitors (i.e. ribavirin) – Capping of viral mRNA – Methyltransferase – Sadenosylmethionine (SAM) – Sadenosylhomocysteine (SAH) – SAH hydrolase inhibitors. *Case report 1*.

<u>Lesson 2</u>: *De novo* biosynthesis of pyrimidine mononucleotides – Orotic acid aciduria – Thymidylate synthase – Folic acid (Folate) – Folate metabolites $(N^5,N^{10}$ -methylene-FH₄, N^5N^{10} -methenyl-FH₄ – N^{10} -formyl-FH₄) – Folate antagonists [i.e. amethopterine (Methotrexate)] – Creation of a carbon-carbon bond (dUMP \rightarrow dTMP). *Case report* 2.

<u>Lesson 3</u>: Salvage reactions in the biosynthesis of purine and pyrimidine mononucleotides — Lesh-Nyhan syndrome — Catabolism of purine mononucleotides — Uric acid — Gout — Allopurinol (treatment of gout) — Catabolism of pyrimidine mononucleotides — Dihydropyrimidine dehydrogenase (DPD) — 5-Fluorouracil. <u>Case report 3</u>.

<u>Lesson 4</u>: Biosynthesis of heme, Hemoglobine, Porphyrias (porphyrinurias), Hemoglobinopathies, Sickle cell anemia. <u>Case report 4</u>.

<u>Lesson 5</u>: Glycolysis, Pentose phosphate shunt pathway, Hemolytic anemias. <u>Case report 5</u>.

<u>Lesson 6</u>: Degradation of heme, Biliverdin, Bilirubin, Direct and indirect bilirubin, Urobiline, Hepatitis, Hemolytic icterus, Obstructive icterus, Liver function tests.

<u>Lesson 7</u>: Biosynthesis and biological role of bile acids. Biosynthesis of cholesterol.

6-7 November 2012 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

<u>Lesson 8</u>: Gastrointestinal system: absorbance and digestion of proteins, carbohydrates and triglycerides. <u>Case report 6</u>.

<u>Lesson 9</u>: Important cycles in intermediary metabolism: citric acid cycle, γ-glutamyl transpeptide cycle (γ-GT), urea cycle, γ-aminobutyric acid (GABA) cycle. <u>Case report 7</u>.

<u>Lesson 10</u>: Neurotransmitters (acetylcholine, dopamine, noradrenaline, serotonine, ...). *Case reports 8 and 9*.

<u>Lesson 11</u> (parts 1, 2, 3 and 4): Hormones (thyroid hormone, parathyroid hormone, insulin, glucagon, catecholamines, steroid hormones, pituitary gland hormones, hypothalamus hormones, gastrointestinal hormones: structure, biosynthesis, functions, mechanism of action, regulation, catabolism, pathology). <u>Case reports 10-14</u>.

27-28 November 2012 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

<u>Lesson 12</u>: Vitamins (A, B, C, D, E, ...) (parts 1 and 2): structure, synthesis, mechanism of action, pathology associated with hypo- and hypervitaminoses. <u>Case report 15</u>.

<u>Lesson 13 (part 1)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, antifungal agents, nucleic acid synthesis inhibitors, tuberculostatics): mechanisms of action (first part).

<u>Lesson 13 (part 2)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, antifungal agents, nucleic acid synthesis inhibitors, tuberculostatics): mechanism of action (second part).

<u>Lesson 14</u>: Mechanisms of resistance development to antibiotics. Mechanism of transfer of resistance development (transformation, conjugation, transposition, transduction).

<u>Lesson 15</u>: Viral infections (symptoms) (part 1). DNA viruses. Viral infections (symptoms) (part 2). RNA viruses.

<u>Lesson 16</u>: Antiviral agents (overview) for DNA viruses (part 1). Antiviral agents (overview) for RNA viruses (part 2).

4-5 December 2012 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

<u>Lesson 17</u>: Current state of antiviral drugs in the treatment of AIDS (HIV infections).

<u>Lesson 18</u>: Treatment of varicella-zoster virus (VZV) infections, and herpes simplex virus (HSV) infections

Lesson 19: Acyclic nucleoside phosphonates: cidofovir, adefovir, tenofovir.

Lesson 20: The bicyclam AMD3100 story.

<u>Lessons 21-25</u>: Clinical case reports in antiviral chemotherapy: VZV, HSV, HPV, MCV, Orf, HPV, EBV, SIV, HBV, HBV.

18-19 December 2012

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic. Students' examinations.

Lecture delivered on "Current trends in antiviral drug development" at the University of South Bohemia, Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector of the University of South Bohemia.

May 2013

Henry Stewart Talks. The Biomedical & Life Sciences Collection.

Series: Antivirals, edited by E. De Clercq. "Key drug discovery challenges in antivirals".

4 April 2013

"Current state of the art on antiviral drug development", Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, P.R. China (host: Prof. Guanhua Du, Director, President Chinese Pharmacological Society; and Prof. Fen-Er Chen, Fudan University, Shanghai).

5 April 2013

"Dancing with molecules: antivirals", Department of Chemistry, Fudan University, Shanghai City, P.R. China (host: Prof. Fen-Er Chen, Fudan University, Shanghai).

21 May 2013

"Dancing with chemical structures: antivirals", Department of Pharmacology and Pharmacy, The University of Hong Kong (host: Prof. Dr. Paul Vanhoutte,

Chair Professor, Department of Pharmacology and Pharmacy, Li Ka Shing Faculty of Medicine, The University of Hong Kong).

31 July-1 August 2013

Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City, California, USA (hosts: J.C. Martin, Chief Executive Officer and N. Bischofberger, Chief Scientific Officer, Gilead Sciences).

6 September 2013

"Current highlights in antiviral drug development", Palacky University, Olomouc, Czech Republic (host: J. Hlavac, Professor at Palacky University).

30 September 2013

Scientific (Advisory) (S(A)B) Meeting, Centre for Drug Design and Discovery (CD3), Katholieke Universiteit Leuven (K.U.Leuven), Belgium (host: Leuven Research and Development (LRD)).

15-16 October 2013 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

<u>Lesson 1</u>: Nucleosides *versus* nucleotides – *De novo* biosynthesis of purine mononucleotides – IMP dehydrogenase – IMP dehydrogenase inhibitors (i.e. ribavirin) – Capping of viral mRNA – Methyltransferase – Sadenosylmethionine (SAM) – Sadenosylhomocysteine (SAH) – SAH hydrolase inhibitors. *Case report 1*.

<u>Lesson 2</u>: *De novo* biosynthesis of pyrimidine mononucleotides – Orotic acid aciduria – Thymidylate synthase – Folic acid (Folate) – Folate metabolites (N^5 , N^{10} -methylene-FH₄, N^5N^{10} -methenyl-FH₄ – N^{10} -formyl-FH₄) – Folate antagonists [i.e. amethopterine (Methotrexate)] – Creation of a carbon-carbon bond (dUMP \rightarrow dTMP). *Case report 2*.

<u>Lesson 3</u>: Salvage reactions in the biosynthesis of purine and pyrimidine mononucleotides — Lesh-Nyhan syndrome — Catabolism of purine mononucleotides — Uric acid — Gout — Allopurinol (treatment of gout) — Catabolism of pyrimidine mononucleotides — Dihydropyrimidine dehydrogenase (DPD) — 5-Fluorouracil. <u>Case report 3</u>.

<u>Lesson 4</u>: Biosynthesis of heme, Hemoglobine, Porphyrias (porphyrinurias), Hemoglobinopathies, Sickle cell anemia. <u>Case report 4</u>.

<u>Lesson 5</u>: Glycolysis, Pentose phosphate shunt pathway, Hemolytic anemias. <u>Case report 5</u>.

<u>Lesson 6</u>: Degradation of heme, Biliverdin, Bilirubin, Direct and indirect bilirubin, Urobiline, Hepatitis, Hemolytic icterus, Obstructive icterus, Liver function tests.

Lesson 7a: Biosynthesis and biological role of bile acids.

22-23 October 2013 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

Lesson 7b: Biosynthesis of cholesterol.

<u>Lesson 8</u>: Gastrointestinal system: absorbance and digestion of proteins, carbohydrates and triglycerides. <u>Case report 6</u>.

<u>Lesson 9</u>: Important cycles in intermediary metabolism: citric acid cycle, γ -glutamyl transpeptide cycle (γ -GT), urea cycle, γ -aminobutyric acid (GABA) cycle. <u>Case report 7</u>.

<u>Lesson 10</u>: Neurotransmitters (acetylcholine, dopamine, noradrenaline, serotonine, ...). <u>Case reports 8 and 9</u>.

<u>Lesson 11</u> (parts 1, 2, 3 and 4): Hormones (thyroid hormone, parathyroid hormone, insulin, glucagon, catecholamines, steroid hormones, pituitary gland hormones, hypothalamus hormones, gastrointestinal hormones: structure, biosynthesis, functions, mechanism of action, regulation, catabolism, pathology). *Case reports 10-14*.

4 November 2013

"Current development of antiviral agents", Shandong University, Jinan, P.R. China (host: Prof. Dr. Xinyong Liu, Director of the Institute of Medicinal Chemistry, Vice Dean of School of Pharmaceutical Sciences, Shandong University).

12-13 November 2013 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

<u>Lesson 12</u>: Vitamins (A, B, C, D, E, ...) (parts 1 and 2): structure, synthesis, mechanism of action, pathology associated with hypo- and hypervitaminoses. *Case report 15*.

<u>Lesson 13 (part 1)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, antifungal agents, nucleic acid synthesis inhibitors, tuberculostatics): mechanisms of action (first part).

<u>Lesson 13 (part 2)</u>: Antibiotics (penicillins, vancomycin, protein synthesis inhibitors, antifungal agents, nucleic acid synthesis inhibitors, tuberculostatics): mechanism of action (second part).

<u>Lesson 14</u>: Mechanisms of resistance development to antibiotics. Mechanism of transfer of resistance development (transformation, conjugation, transposition, transduction).

<u>Lesson 15</u>: Viral infections (symptoms) (part 1). DNA viruses. Viral infections (symptoms) (part 2). RNA viruses.

<u>Lesson 16</u>: Antiviral agents (overview) for DNA viruses (part 1). Antiviral agents (overview) for RNA viruses (part 2).

26-27 November 2013 (Total: 7.5 h)

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

<u>Lesson 17</u>: Current state of antiviral drugs in the treatment of AIDS (HIV infections).

<u>Lesson 18</u>: Treatment of varicella-zoster virus (VZV) infections, and herpes simplex virus (HSV) infections

<u>Lesson 19</u>: Acyclic nucleoside phosphonates: cidofovir, adefovir, tenofovir.

Lesson 20: The bicyclam AMD3100 story.

<u>Lesson 21</u>: Clinical case reports in antiviral chemotherapy: VZV, HSV, HPV, MCV, Orf, HPV, EBV, SIV, HBV, HBV.

28-29 November 2013 Lectures delivered at Palacký University, Olomouc, Czech Republic

- "Dancing with chemical formulae of antivirals: a personal account (part A)"
- "Dancing with chemical formulae of antivirals: a personal view (part B)"

- "Current trends in antiviral drug development"

(host: Prof. Dr. Petr Fryčák, Palacký University, Olomouc, Czech Republic)

11 December 2013

"Dancing with chemical formulae of antivirals: a personal account", Seoul National University, College of Pharmacy (host: Prof. Dr. Lak Shin Jeong, College of Pharmacy, Seoul National University, Seoul, Korea).

13 December 2013

"Dancing with chemical formule of antivirals: a panoramic view", Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (host: Prof. Eui-Cheol Shin, Korea Advanced Institute of Science and Technology, Daejeon, Korea).

17-18 December 2013

Course on "Biochemistry at the Service of Medicine", as Visiting Professor at the Faculty of Sciences, The University of South Bohemia (Jihočeská Universita Ceských Budějovicich), jointly with Johannes Kepler Universität (Linz, Austria), Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector, University of South Bohemia, Czech Republic.

Students' examinations.

Lecture delivered on "Current trends in antiviral drug development" at the University of South Bohemia, Ceské Budějovice, Czech Republic. Host: Prof. Dr. Libor Grubhoffer, Rector of the University of South Bohemia.

18 December 2013

"Current antiviral drug development", University of South Bohemia in Ceské Budějovice, Biology Center of the Academy of Sciences of the Czech Republic (host: Prof. Dr. Libor Grubhoffer, Rector of the University of South Bohemia in Ceské Budějovice).

11 March 2014

Scientific Discussions, Scientific Council, Louvain Drug Research Institute (LDRI), Université Catholique de Louvain (UCL), Woluwé, Brussels, Belgium.

24 March 2014

"The race in the development of DAAs (direct-acting antivirals) for treatment of hepatitis C", Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong (host: Professor Henry L.Y. Chan, Head of Division of Gastroenterology and Hepatology, Assistant Dean of Faculty of Medicine, The Chinese University of Hong Kong).

29-30 July 2014

Scientific Advisory Board (SAB) Meeting, Gilead Sciences, Foster City, California, USA (hosts: J.C. Martin, Chief Executive Officer and N. Bischofberger, Chief Scientific Officer, Gilead Sciences).