Trilateral Seminar on R&D Policies Related to Emerging and Re-emerging Infectious Diseases

Appendices

Trilateral Seminar on R&D Policies Related to Emerging and Re-emerging Infectious Diseases

A – Participants

Chinese Participants

Dr. Wu Guanling, Chinese co-chair
Professor, Department of Pathogen Biology
Nanjing Medical University

Dr. Cao Wuchun
Professor of Epidemiology
Deputy Director Institute of Microbiology and Epidemiology
Academy of Military Medical Sciences (AMMS)

Dr. Chen Xianyi
Director General, Department of Health Emergency Response
Ministry of Health

Dr. Wang Ning
Professor of Epidemiology and Statistic Associate director,
National Center for AIDS/STD Prevention and Control

Dr. Wen Yu-Mei
Academician, Chinese Academy of Engineering
Professor of Microbiology
Director, Institute of Medical Microbiology
Key Laboratory Medical Molecular Virology
Shanghai Medical College, Fudan University

Dr. Wu Haiwei
Department of Pathogen Biology
Nanjing Medical University

Dr. Xu Jianguo
Professor of Microbiology,
Director, State Key Laboratory for Infectious Disease Prevention and Control
National Institute for Communicable Diseases Control and Prevention
Chinese Center for Diseases Control and Prevention

Prof. Zeng Yi
Institute for Prevention and Control of Viral Diseases, CDC

Distinguished Guests

Prof. Zhu Zuoyan
Vice President
National Natural Science Foundation of China (NSFC)

Dr. Zhang Zuowen
Division Director, Department of Life Sciences
National Natural Science Foundation of China (NSFC)

Ms. Bai Ge
Deputy Director General, Bureau of International Cooperation

Ms. Chen Huai
Division Director, Bureau of International Cooperation
National Natural Science Foundation of China (NSFC)

Korean Participants

Dr. Hae-Kwan Cheong, M.D., Korean co-chair
Professor, Department of Social Medicine
Sungkyunkwan University School of Medicine

Dr. Bo Youl Choi, M.D.
Professor, Department of Preventive Medicine
Hanyang University College of Medicine

Dr. Byung-Chul Chun, M.D.
Assistant Professor, Department of Preventive Medicine
Medical College, Korea University

Dr. Jin-Han Kang, M.D.
Professor, Department of Pediatrics
Catholic University

Dr. Moran Ki, M.D.
Associate Professor, Department of Preventive Medicine
School of Medicine, Eulji University

Dr. Joung Soon Kim, M.D.
Professor emeritus, School of Public Health
Seoul National University

Dr. Duk Hyoung Lee, M.D.
Director, Department of Infectious Disease Control
Korea Center for Disease Control and Prevention (KCDC),
Ministry of Health and Welfare (MOHW)

Dr. Hyun-Sul Lim, M.D.
Professor, Department of Preventive Medicine
Dongguk University College of Medicine

Dr. Ok Park, M.D.
Medical Officer, West Pacific Regional Office, WHO
Public Health Research Officer, Korean Center for Disease Control

Dr. Baik-Lin Seong
Professor, Department of Biotechnology
Yonsei University

Distinguished Guests

Dr. Jong Hyun Rhie
Head, Department of International Cooperation
Korea Science and Engineering Foundation (KOSEF)

Mr. Kilsu Park
Program Manager, Team of International Programs 1
Korea Science and Engineering Foundation (KOSEF)

Mr. Jong-Hoon Kim
Ph.D. Student
University of Michigan, Ann Arbor

U.S. Participants

Dr. Gerald Keusch, M.D., US co-chair
Professor and Associate Dean for Global Health Initiative
School of Public Health
Boston University

Dr. Ruth L. Berkelman, M.D.
Rollins Chair and Director, Center for Public Health Preparedness and Research
Rollins School of Public Health
Emory University

Dr. David R. Challoner, M.D.
Foreign Secretary, Institute of Medicine, The National Academies
Professor and Vice President Health Affairs Emeritus
University of Florida

Laurie Garrett
Senior Fellow for Global Health
Council on Foreign Relations

Dr. Margaret A. Hamburg, M.D.
Senior Scientist
NTI Global Health and Security Initiative

Dr. Donald A. Henderson, M.D., M.P.H.
Dean Emeritus, Johns Hopkins University School of Hygiene and Public Health
Professor of Medicine and Public Health, University of Pittsburgh
Center for Biosecurity, University of Pittsburgh Medical Center

Dr. Mark Klempner, M.D.
Associate Provost Research
Boston University Medical Center

Dr. Marcelle Layton, M.D.
Assistant Commissioner
New York City Health Department
Bureau of Communicable Disease

Dr. Marc Lipsitch
Associate Professor
Departments of Epidemiology and of Immunology & Infectious Diseases
Harvard School of Public Health

Dr. Mark Miller
Associate Director for Research
Director, Division of International Epidemiology and Population Studies (EPS)
National Institutes of Health

Dr. J. Thomas Ratchford
Distinguished Visiting Professor
Director, Science and Trade Policy Program
National Center for Technology & Law
George Mason University School of Law

Dr. P. Frederick (Fred) Sparling, M.D.
Emeritus Chairman of Medicine
Department of Medicine
UNC Medical Center

Mr. Alexander P. De Angelis
National Science Foundation (retired)
Rapporteur

Distinguished Guest

Dr. Frances C. Li
Program Coordinator for East Asia and Pacific
Office of International Science and Engineering
National Science Foundation (NSF)

Executive Secretary to the Seminar:

Dr. William A. Blanpied
Senior Research Scholar
National Center for Technology and Law
George Mason University

Trilateral Seminar on R&D Policies Related to Emerging and Re-emerging Infectious Diseases

B – Biosketches

Chinese Biosketches

Cao Wuchun

Affiliation: Institute of Microbiology and Epidemiology，
Academy of Military Medical Sciences (AMMS)

Affiliation Address:
20 Dong-Da Street, Fengtai District
Beijing 100071, P. R. China

Educational Background:

1985: M.D., Shandong Medical University, Jinan, China
1993: M.Sc., Mahidol University, Bangkok, Thailand
1996: Ph.D., Erasmus University, Rotterdam, The Netherlands

Academic Appointment:

1986-1990: Assistant Researcher,
Shandong Academy of Medical Sciences, China
1996-1998: Postdoctoral fellow,
Academy of Military Medical Sciences, China
1998-2001: Associate Professor,
Institute of Microbiology and Epidemiology, AMMS, China
2000-2001: Visiting Scholar, Kalolinska Institute, Sweden
2001-present: Professor of Epidemiology,
Institute of Microbiology and Epidemiology, AMMS, China

Selected Publications:

1. Long-term SARS-coronavirus excretion from a patient cohort, China. Emerg Infec Dis, 2004;10(10):1841-1843
2. VDR and NRAMP1 gene polymorphisms in susceptibility to pulmonary tuberculosis among Chinese Han population: a case-control study. Int. J. Tub. Lung Dis. 2004;8(4):428-434
3. Naphthoquine phosphate and its combination with artemisine. Acta Tropica. 2004;89:375-381
4. Probing the structure of the SARS coronavirus using scanning electron microscopy. Antiviral Therapy. 2004;9(2):169-171
5. Prevalence of *Anaplasma phagocytophila* and *Borrelia burgdorferi* in *Ixodes persulcatus* Ticks from Northeastern China. Am. J. Trop. Med. Hyg. 2003;68(5):547-550
6. Ehrlichiae and ehrlichial diseases in china. Ann N Y Acad Sci. 2003;990:45-53

7. *Ixodes sinensis*: Competence as a vector to transmit the Lyme disease spirochete *Borrelia garini*i. Vector Borne Zoonotic Dis. 2003 3(1):39-44
8. Granulocytic Ehrlichiae in *Ixodes persulcatus* ticks from an area in China where Lyme disease is endemic. J. Clin. Microbiol, 2000;38(11):4208-4210
9. Identification of *Ehrlichia chaffeensis* by nested PCR in ticks from southern China. J Clin Microbiol, 2000;38(7):2778-2780
10. Efficacy of invermectin in the treatment of *Wuchereria bancrofti* infection: a model-based analysis of trial results. Parasitology 1999;119:385-394
11. Risk factors for human cysticercosis morbidity: a population-based case-control study. Epidemiol Infect. 1997;119:231-235
12. Ivermectin for the chemotherapy of bancroftian filariasis: a meta-analysis of the effect of single treatment. Trop. Med. Intern. Health 1997;2(4):393-403
13. Case-control study on risk factor of SARS among health care workers. Chin J Epidemiol. 2004;25(9):741-744
14. Molecular epidemiology of hantavirus carried by hosts in northern suburb of Beijing.Chin J Epidemiol. 2004;25(5):421-424
15. Using geographical information system to study the association between epidemic areas and main animal hosts of hemorrhagic fever with renal syndrome in China. Chin J Epidemiol. 2004;25(11):929-933
16. A case-control study on natural-resistance-associated macrophage protein 1 gene polymorphisms and susceptibility to pulmonary tuberculosis. Chin Prev Med. 2003;37(6):408-411

Chen Xianyi

Director General
Department of Health Emergency Response
Ministry of Health
No.1 Xizhimenwai Nanlu
Beijing P.R.China 100044

Birth date: October 5, 1956
Birthplace: Hubei province

Working Experience:

December 1982-March 1983, worked in Chinese Health Care Committee.

June 1985-October 1994, worked in the Bureau of Health Care, Ministry of Health

November 1994- June 1995, June 1996-March 1997, worked in the Bureau of Health Care, Ministry of Health as Deputy Director General

June 1995- June 1996, worked in Tibetan Autonomous Prefecture of Aba, Sichuan Province as Chief Assistant

April 1997- March 2004, worked in Department of Diseases Control, Ministry of Health as Deputy Director General.

April 2004- worked in Department of Health emergency response, Ministry of health Director General

Wang Ning

Chinese Center for Disease Control and Prevention
National Center for STDs/AIDS Control and Prevention
27 Nanwei Road, Xuanwu District, Beijing, China 100050

Education

Shanghai Medical University, Shanghai, China
Ph. D. in Public Health, 1995

Johns Hopkins University, School of Public Health, Baltimore, MD, the United States
Postdoctoral Fellowship in Epidemiology, 2002

Nanjing Railway Medical College, Nanjing, China
M.S. in Preventive Medicine, 1988

Bangbu Medical College, Bangbu, China
M.D. in Clinical Medicine, 1982

Professional Experience

Chinese Center for Disease Control and Prevention, National Center for STDs/AIDS Control and Prevention, Beijing, China
Deputy Director, Professor, 2003 – present

- Oversee the Divisions of Epidemiology, Behavioral Intervention and Education, Vaccine and Viral Correlates, Policy and Information Studies, and the National Reference Laboratory
- Program Director and Co-Principal Investigator of the China Integrated Programs for Research on AIDS (CIPRA) and the Xinjiang Program of the CTU

The Southeast University, School of Public Health, Nanjing, China
Dean, Professor, 2003 – present

Nanjing Railway Medical College, School of Public Health, Nanjing, China
Teaching Assistant, Lecturer, Professor, Dean, seriatim, 1982 – 2000

Professional Association

PRC Ministry of Health HIV/AIDS Experts Consultative Committee
Member, 2004 – present
China International Tourist Health Association
Member, 2004 – present
Chinese Association of Epidemiology, CPMA
Steering Member, 1998 – present
Chinese Preventive Medicine Association (CPMA)

Steering Member, 1996 – present
Jiangsu Provincial Society of preventive Medicine, CPMA
Vice President, 1992 – 2004
Railway Society of Preventive Medicine, CPMA
Steering Member, 1992 – 2004
Nanjing Society of Preventive Medicine, CPMA
Steering Member, 1992 – 2004
The Southeast University, China, Scientific Committee
Steering Member, 2000 – 2004
Nanjing Municipal Association of Epidemiology
Secretary General, 1994 – 2004
Society of Mycoplasmology, Chinese Microbiological Association
Steering Member, 1992 – present
International Epidemiological Association (IEA)
Member, 1988 – present
International Organization of Mycoplasmology (IOM)
Member, 1988 – present
Chinese Microbiological Association
Member, 1986 – present

Honors

PRC State Council Outstanding Achievements Award, 2000
PRC Ministry of Education, Young Expert with Outstanding Contribution, 2002
PRC Ministries of Health, Public Security, Education and Broadcasting, Film and Television Joint National Award for Achievements in STDs & HIV/AIDS Control in China, 1999
Jiangsu Provincial Government Outstanding Teacher Awards, 1992 – 1994, 1996 – 1998
Jiangsu Provincial Government Scientific Progress Achievements Award, Third Prize, 1996
PRC Ministry of Health Scientific Progress Achievements Award, Third Prize, 1995
PRC Ministry of Railway, Scientific Progress Achievements Award, Third Prize, 1989
The Chinese Preventive Medicine Association, the Golden Medal of Research, 1992

Selected Peer-Reviewed Publications

Wang, Ning. "HIV/AIDS Epidemic in China and the World: the *Status Quo* and Challenges," *Science and Technology Review*. 2005: 23(7): 4~8.
Wang, Ning, et al. "Study on Single Mucleotide Polymorphisim of TIGR Pene in Primary Open-angle Glaucoma Patterns," *National Medical Journal of China*. 2005: 82(11): 743~747.
Wang, Ning, et al. "MSM and HIV/STDs Control in China," *Sexually Transmitted Infections*, 2005 (in press).
Wang, Ning, et al. "Risk of HIV/AIDS in China: Subpopulations of Special Importance," *Sexually Transmitted Disease*, 2005.

Wang, Ning, et al. "STD/HIV and Heterosexual Risk amongst Miners in Townships of Yunnan Province, China," *AIDS Patients Care and STDs*, 2005 (in press).
Wang, Ning, et al. "Heterosexual Transmission of HIV in China: A Systematic Review of Behavioral Studies in the Past Two Decades." *Sexually Transmitted Disease*. 2005: 32 (5):270~280.
Wang, Ning, et al. "Lessons for Buildings the Modern Combinative Mechanism of Clinic and Prevention from Public Health Emergencies." *Journal of Chinese Rural Health Service Administration*. 2004: 24(10): 12~14.
Wang, Ning, et al. "A Feasibility Study of the Combinative Mechanism of Clinic and Prevention in Hangzhou, China," *Chinese Journal of Preventive Medicine*, 2004: 5(6): 466~468.
Wang, Ning. "The *Status Quo* of the HIV/AIDS Prevention and Control Work and the Challenges thereof in China," *Chinese Journal of Preventive Medicine*. 2004: 38(5): 291~293.
Wang, Ning. "Chapter 17: Theoretical Epidemiology" "Chapter 21: Regression Models and Modeling in Epidemiology," *Modern Epidemiology*. Chinese Medical Science Publishing, 2001.
Wang, Ning. "Chapter 22: Epidemiology on Sexually Transmitted Diseases" "Chapter 23: Epidemiology on acquired immunodeficiency syndrome (Chapter 23)," *Advanced Epidemiology*. Shanghai Educational Publishing, 2000.
Wang, Ning. "Chapter 8: Mathematical Model of Epidemiology (Chapter 8)" "Chapter 13: Seroepidemiology," *Epidemiology*. Chinese Medical Science Publishing, 1999.
Wang, Ning. *Gerontology and Preventive Medicine*. Chinese Science Publishing House, 1998.
Wang, Ning. "Methodological problems on injury Epidemiology," *Chinese Journal of Epidemiology*: 2000: 21(5): 372.
Wang, Ning, et al. "Molecular epidemiological study on transmission routes of ureaplasma infections," *Chinese Journal for STDs & AIDS Prevention and Control*: 1999: 5(4): 172.
Wang, Ning, et al. "Study on risk factors of urogenital infection of ureaplasma Urealyticum," *Chinese Journal for Disease Control & Prevention*: 1999: 3(3): 157.
Wang, Ning, et al. "Grouping and typing of Ureaplasma urealyticum by random amplified Polymophic," *Chinese Journal of Epidemiol*: 1997: 18(4-A): 31.
Wang, Ning et al. *Seroepidemiological study on the infections of Mycoplasma and chlamydia in immoral persons and healthy controls in ten areas of China*. 7th International Congress for Infectious Diseases: Hong Kong, June, 1996.
Wang, Ning, et al. "Epidemiological study on ureaplasma urealyticum infections in the female genital tract," *Modern Preventive Medicine*: 1995; 22(4): 215.
Wang, Ning, et al. "A study on serotypes of U.urealyticun isolated from different populations," *Chinese J Epidemiology*. 1995: 16(4): 207.
Wang, Ning, et al. "Clinical epidemiological study on adverse prenatal overcomes: Association with prenatal Mycoplasma infection," *Chinese Journal of Family Plan*. 1995: 6(1): 5.
Wang, Ning, et al. "Study on serotypes 1 to 14 Ureaplasma urealyticum infection in different populations," *Chinese Journal of Epidemiol*. 1995: 16(4): 207.

Wang, Ning, et al. *Association of Mycoplasma hominis and Ureaplasma urealyticum with pelvic inflammatory disease after intrauterine operations*. Shanghai International Epidemiological Association Congress: 1995.
Wang, Ning. "Meta-analysis on the relationship between genitourinary mycoplasmas and non-gonococcal urethritis." *Chinese Journal of Epidemiol*. 1995: 16(2-B): 86.
Wang, Ning, et al. Third trimester endocervical infection and treatment of M. hominis and U. urealyticum: A prospective controlled study in Nanjing, China. Shanghai International Epidemiological Association Congress. 1995.
Wang, Ning, et al. *Microorganism in endometrium and pelvic inflammatory disease associated with intrauterine device*. The Beijing International Symposium on Fertility Regulation. Beijing, China: May 21~25, 1995.
Wang, Ning, et al. *Association of Mycoplasma hominis and Ureaplasma urealyticum with pelvic inflammatory disease after intrauterine operation*. Prepared for the 13th Scientific Meeting of International Epidemiological Association, Sydney, Australia: September, 1993.
Wang, Ning, et al. "Seroepidemiological survey on Mycoplasma hominis infection in healthy persons from 21 local areas in China" "Incidence of Mycoplasma hominis and Ureaplasma urealyticum infections in women with intrauterine operation" "Association of prenatal genital Mycoplasmal infections with adverse pregnancy outcomes," *IOM Letters Vol. 2: P.294, 298, 299*: Program and Abstracts of the 9th International Congress of the IOM, Ames, IW, the United States: 1992.
Wang, Ning, et al. "Epdemiological study on Mycoplasmas colonization and infection in the female genital tract," *Chinese Journal of Epidemiology*. 1992: 13(6): 368~371.
Wang, Ning, et al. "Detection of Ureaplasma urealyticum and Mycoplasma hominis by using PCR and DNA probe," *Chinese Journal of Infectious Disease*. 1992: 16: 263~266.
Wang, Ning, et al. Genital mycoplasmas infection in 92 sexual immoral women. J Nanjing Railway Medical College 1992: 11(2): 100~103.
Wang, Ning, et al. "A study of genital mycoplasma colonization in the female genital tract," *Chinese Journal of Obstet & Gynecol*. 1991: 26(6): 372~374.
Wang, Ning, et al. "Hormonal status and Mycoplasma colonization in female genital tract," *Chinese Journal of Microecol*. 1991: 3(1): 45~48.
Wang, Ning, et al. "Frequency of Seroreactors to Legionella amongst the patients with pulmonary infections," *Chinese J Tuberculosis & Respiratory Diseases*. 1991: 14(2): 79~82.
Wang, Ning, et al. "Hormonal status and Mycoplasma colonization in female genital tract," *Chinese Journal of Microecol*. 1991: 3(1): 45.
Wang, Ning, et al. "A study of genital mycoplasma colonization in the female genital tract," *Chinese Journal of Obstet & Gyneco*. 1991: 26(6): 372.
Wang, Ning, et al. "Background prevalence of antibody against Mycoplasma pneumoniae in Nanjing" "Mycoplasma infections in females in China" IOM *Letters Vol. 1: p.465, 465*: Program and Abstracts of the 8th International Congress of the IOM. Istanbul, Turkey: 1990.
Wang, Ning, et al. "Background prevalence of antibody against Mycoplasma pneumoniae in Nanjing," *Chinese Journal of Public Health*. 1990: 6(12): 537.

Wang, Ning, et al. "Study on seasonality of legionella pneumophila serotypes 1-8 infections," *Chinese Journal of Epidemiology*. 1990: 11(2): 68~73.
Wang, Ning, et al. "A survey of 5 species (12 serogroups) legionella infections in domestic animals and poultry in Nanjing district," *Chinese J Veterinary Medicine*: 1989: 15(4): 7~9.

Past and On-Going Research Projects

- Chinese Integrated Programs for the Research on AIDS (CIPRA): Epidemiology of HIV/AIDS and STDs, funded by the United States National Institutes of Health (NIH)
  2002~2007
  Assignment: Principal Investigator
- Epidemiology of HIV/AIDS in China: the Structure, Impact and Disease Control Policy Research on Bridge Populations, funded by the PRC Ministry of Science and Technology "the Tenth Five Year Planning Advanced Programs Fund"
  2004~2007
  Assignment: Principal Investigator
- The Epidemiological Dynamic Model of HIV/AIDS Transmission and Prevalence amongst Intravenous Drug Users (IDUs) in China, funded by the PRC Ministry of Grand Programs Fund"
  2004~2007
  Assignment: Principal Investigator
- Long-term typhoid Vi vaccine efficacy in a randomized, double-blind and placebo-controlled trial of typhoid fever Vi vaccine, funded by the International Vaccine Institute
  Baoying, Jiangsu Province, China, 2001~2002
  Assignment: Principal Investigator
- Control of rotavirus gastroenteritis in China: standard operating procedures for sentinel hospital-based surveillance, jointly funded by the International Vaccine Institute and the Centers for Disease Control and Prevention
  2001~2002
  Assignment: Principal Investigator
- Surveillance on the mutation and recombination of influenza virus A between the human and domestic fowls, funded by the Committee of Science & Technology of Jiangsu Province
  1999~2001
  Assignment: Principal Investigator
- Molecular epidemiological study on tuberculosis distribution in railway population in China, funded by the PRC Ministry of Railway
  1999~2001
  Assignment: Principal Investigator
- Molecular epidemiological study on pathogens of pneumonia in infants, funded by the Committee of Science and Technology of Jiangsu Province
  1997~1999
  Assignment: Principal Investigator

- Clinical epidemiological study on the relation between intrauterine infections of Mycoplasmas and adverse prenatal outcomes, funded by the Chinese National Natural Science Foundation
  1997~1999
  Assignment: Principal Investigator
- Surveillance and prevention to HIV/ADIS prevalence in railway population in China, funded by the PRC Ministry of Railway
  1996~1998
  Assignment: Principal Investigator
- Epidemiological studies on urogenital Mycoplasmal infections, funded by the Chinese National Natural Science Foundation
  1991~1994
  Assignment: Principal Investigator
- Epidemiological studies on the relation between intrauterine infections of Mycoplasmas, Chlamydia, Bacteria L—form, Anaeobe and pregnancy outcomes, funded by the Chinese National Family Planning Commission
  1989~1992
  Assignment: Principal Investigator
- Seroepidemiological Studies on Legionellosis in Railway Population of China, funded by the PRC Ministry of Railway
  1987~1989
  Assignment: Principal Investigator

Wen Yu-Mei

Personal Data

Born:	Jan 16,1934, Shanghai, China
Married	Married to Ning ,Shoubao, Dec.25, 1958
Current major positions:	Professor and Scientific Chair, Key laboratory of Molecular Virology, Shanghai Medical College, Fudan University Director, Institute of Medical Microbiology, Fudan University
Address: Office	Institute of Medical Microbiology 138 Yi Xue Yuan Road Shanghai, 200032

Education

1981-82:	Fogarty Fellow, Hepatitis Viruses Section, Laboratory of Infectious Diseases, NIAID, National Institutes of Health, Bethesda, MD, USA
1980:	WHO Fellow: WHO Viral Hepatitis Collaborating Center, London School of Hygiene and Tropical Medicine, London, UK
1963-64:	Research Fellow at Department of Microbiology and Immunology, Chinese Academy of Medical Sciences
1956-57:	Graduate program: Department of Microbiology. Shanghai Second Medical College
1951-56:	Undergraduate study in Medicine: Shanghai First Medical College

Professional Career

1999	Elected Member of the Chinese Academy of Engineering
2001-2006	Honorary Chairman, Chinese Society for Microbiology
1991-	Member, Advisory Board on Viral Hepatitis, Ministry of Health
1998-2001	Committee Member, EBNIC (European Biotechnology Node for Interaction with China)
2001-	Committee member, EFBIC (European Focus on Biotechnology in China)
1999-2004	Evaluation panel, European commission for INCO-DEV
2001-	Advisory board on SARS, Shanghai Bureau of Hygiene
2003-	Advisory board on Avian Flu, Shanghai Agricultural Commission

Wu Guanling

Personal Data

Born:	January 3, 1940, Nanjing, Jiangsu Province, China
Married:	Married to Yuan,Xiaoru, August,10,1965
Current major positions:	Professor and Senior Supervisor, Department of Pathogen Biology Research Laboratory of Molecular Immunoparasitology Nanjing Medical University

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Department of Pathogen Biology
Nanjing Medical University
140 Hanzhong Road
Nanjing, Jiangsu 210029
P.R.China

Education

1985-1986	WHO Fellowship, Division of Geographic Medicine, University Hospitals of Cleveland and Case Western Reserve University, Cleveland, Ohio, USA
1962-1965	Graduate Program of Medical Parasitology, Nanjing Medical College, Nanjing, China
1957-1962	Undergraduate study in Medicine, Nanjing Medical College

Professional Career

2004-	Member**,** the Expert's Advisory Board of Life Science Department, NSFC
2003-	Member, Appraisal Committee of National Outstanding Young Scientist Fund 2002-Visiting Professor, Zhejiang University School of Medicine
2002-	Deputy Chief-editor," Chinese Journal of Parasitology and Parasitic Diseases
2000-2003	Member and group leader, Reviewing Committee (Preventive medicine), National Natural Science Foundation of China(NSFC), Beijing
1999.8-	Deputy Chief-editor," Chinese Journal of Schistosomiasis Control", Wuxi, China

1995.12-2000.10	Vice Chairman, Standing Committee of Jiangsu Branch, Chinese Medical Association
1995-2002	Vice president, Chinese Academy of Preventive Medicine, Jiangsu Branch
1995.6-2002.3	Vice Chairman, Jiangsu Red Cross
1994.4-	Vice Chairman, Standing Committee, The Society of Tropical Medicine and Parasitology, Chinese Medical Association(CMA)
1994-1997	Member, Reviewing Committee (immunology), NSFC
1993.9-2000.8	President, Jiangsu Province Hospital affiliated with Nanjing Medical University & Dean, the 1st College of Clinical Medicine,NMU
1993.1-12	Coopted member, The Steering Committee on Schistosomiasis,WHO/TDR
1992.12-2002.2	Vice President, Nanjing Medical University,Nanjing,China
1992-	Member and Vice Chairmen, the Expert's Advisory Board of Schistosomiasis Control, the Ministry of Health, China
1990-	Professor, Nanjing Medical University
1989-1994	Adjunct Faculty Member, the International Health Institute, Brown University, Providence, RI, USA
1986-1988	Dean, Graduate Programs, Nanjing Medical University (NMU)
1986-1990	Associate Professor, Nanjing Medical University
1965-1986	Assistant, Lecturer Nanjing Medical College

Wu Hai-Wei

Associate Professor of Pathogen Biology,
Key Lab of Modern Pathogen Biology
Nanjing Medical University,
140 Hanzhong Rd,
Nanjing, Jiangsu, 210029
P. R.China

Education

Medical School	Nanjing Medical College, Nanjing, P R China Pediatrics, Medical Doctor, July 1991,
Graduate School	Nanjing Medical University, Parasitolgoly, Master, Fundamental Medicine, July 1994 Nanjing Medical University, Molecular and Immuno-parasitology, PhD, July,1997

Postgraduate Training

Postdoctoral Fellowship	University of California, Berkeley, Berkeley, CA 94720 Molecular and Cell Biology, Lab research on transcription regulation of HIV,2000-2001
Postdoctoral Research Associate	Brown University, Providence, RI 02906, International Health, laboratory and field research on schistosomiasis vaccine development and epidemiology, 2001-2003

Academic Appointments

Assistant Professor, Human Parasitology	Nanjing Medical University, 1997- 2000
Associate Professor, Pathogen Biology	Nanjing Medical University, 2000- present

Honors and Awards

Project "Isotypic antibody responses of a population in an endemic area of schistosomiasis japonica and their epidemiological significance" (one of the major participants)	National Award on Science and Technology Proceeding, Bureau of Public Health, 1999 Award on Science and Technology Proceeding, Department of Science and Technology, Jiangsu Province, PR China, 2000
Project "Construction and application of a Schistosoma japonicum cDNA library" (one of the major participants)	Award on Science and Technology Proceeding, Department of Public Health, Jiangsu Province, PR China, 1999
Project " The characterization and antigenic epitope analysis of the mitochondria related protein" (one of the major participants)	Award on Nature Science researches, Department of Education, Shangdong Province PR China, 2002
Award of the Top Ten Youth Teachers for Excellent Service	Nanjing Medical University, 2004

Grants

Current Projects as a P.I,:

"Evaluation of schistosomiasis endemic using serum prevalence investigation and the development of S.j diagnosis technology" the Chinese "Shi Wu" Tackle Key Problem Plan (2004BA718B50), 2004 – 2006, RMB1,300,000

"The development of a immuno-diagnostic method of C. parum" the Jiangsu Key Lab of Modern Pathogen Biology Fund, 2004-2006, RMB20,000

"Schistosomiasis japonica vaccine development" the Qin Lan Award for Promising Young Scientists in Jiangsu, 2000-, RMB40,000

"The sero-epidemiology model of schistosomiasis japonica" the Jiangsu Preventive Medcine Fund (Y200410), 2004 - 2005, RMB10,000

"Epitope analysis of M and S Protein of SARS" the Najing Scientific Devolopment Fund (03-6), 2003- 2005, RMB60,000

Xu Jianguo

Personal Data

Born:	April 19, 1952, Pinglu, Shanxi Province, China
Married:	Married to Bai, Qingjun, August 8, 1980
Current major positions:	Professor and Director, National Institute of Communicable Diseases Control and Prevention (China CDC) State Key Laboratory for Infectious Disease Prevention and Control

Address: Office

National Institute of Communicable Diseases
Control and Prevention(China CDC)
P O Box 5
Changping
Beijing 102206
P.R.China

Education

1976.9	Graduated from Shanxi Medical College
1982.4	Graduated from Chinese Academy of Medical Sciences As Master of Medicine
1993.10	Graduated from Chinese Academy for Preventive Medicine As Doctor of Medicine
1985.1-1986.7	Postdoctoral research fellow, Center for Vaccine Development, University of Maryland, School of Medicine, USA
1986.7-1987.10	Postdoctoral research fellow, Department of Microbiology, University of Georgia, USA.

Professional Career

1994.10 – present	Professor of Microbiology, National Institute of Communicable Diseases Control and Prevention, China Center for Diseases Control and Prevention
1995 – present	Chairman,Chinese Association for Etiology of Zoonosis.
2005 – present	Chairman, Consulting Committee for Diarrheal Disease, Ministry of Health, P R China.
2001 – present	Vice President, Chinese Society for Microbiology
1999 – present	Member of Standing committee, China Society for Preventive Medicine

Zeng Yi

Zeng Yi was born in March 8, 1929, graduated from Shanghai First medical college in 1952 and used to work as research fellow in UK in 1974-1975 and in France in 1987. Since 1973 I have been mainly working on the relationship between EB virus and nasopharyngeal carcinoma (NPC). A series of viro-immunological techniques for early diagnosis of NPC have been established and widely used in hospitals and NPC field studies. By using these techniques early diagnosis of NPC detection rate increased from 20-30% to 80-90% and many patient's lives have been saved. NPC can be predicted 5-10 years before the onset of disease by serological markers. Cell lines from well differentiated and poorly differentiated NPC were firstly established in my laboratory, EB virus DNA and protein exist in these cell lines. I demonstrated for the first time that under the synergetic effect of TPA and butyrate, human nasopharyngeal mucosa infected with EB virus developed into undifferentiated carcinoma in nude mice. This provides a direct evidence to prove the etiologic role of EB virus in NPC development and also provides a model for studying the multiple factors of etiology and mechanism of NPC development. I also demonstrated that HPV alone or HPV+TPA can induce malignant transformation of human embryonic esophageal epithelial cells. Since 1984 I have been working on serology and molecular epidemiology of HIV and AIDS. It demonstrated that HIV had been transmitted into China in 1982 through blood product factor VIII from USA, the first HIV-1 strain in China was isolated in 1987. Serological and molecular epidemiology of HIV/AIDS was also studied. The HIV 1+2 rapid diagnostic kits have also been developed. Some Chinese medicinal herbs were found to inhibit the HIV-1 replication in vitro and in chimpanzees, also SIV in monkey. Now it is widely used for treatment of AIDS patients in high risk areas. I am also working on HIV vaccine by using AAV and adenovirus as vector (CIPRA). I am Academician of Chinese Academy of Sciences, Foreign member of France National Academy of Medical Sciences and Foreign member of Russian Academy of Medical Sciences. Now I am working on SARS vaccine and antisars virus drugs.

I was the former director of Institute of Virology, former President of Chinese Academy of Preventive Medicine and Member of Executive Board of International Union of Microbiological Society (2000-2002). Now I am the chief scientist of National Center for Prevention and Control of AIDS, President of Chinese Foundation for Prevention of STD and AIDS, President of China Preventive Medicine Association, Dean of College of Life Science and Bioengineering, Beijing University of Technology and Member of

WHO Expert Advisory Panel on Cancer, Member of Steering Committee of Asia Pacific Leadership Forum on HIV/AIDS and Development (APLF).

Publications: 401 in Chinese and English.

Awards: more than 20.

Korean Biosketches

Hae-Kwan Cheong

Date of Birth July 31, 1957
Place of Birth Sangju, Gyeongbuk, Korea
Nationality Korean

Office address Department of Social Medicine
Sungkyunkwan University School of Medicine
300 Cheoncheon-dong
Suwon, Gyeonggi-do, 440-746, Korea

Present Academic & Hospital Appointments

Professor
Department of Social Medicine, Sungkyunkwan University School of Medicine

Education

1976 - 1982 M.D. from College of Medicine, Seoul National University, Seoul, Korea
1983 - 1989 Master of Public Health from School of Public Health, Seoul National University, Seoul, Korea
1991 - 1995 Doctor of Public Health from School of Public Health Seoul National University, Seoul, Korea

Career

1982 - 1985 Resident, Department of Family Medicine, Seoul National University Hospital, Seoul, Korea
1985 - 1988 Military Service in Korean Army (Army Physician, Captain)
1988 - 1991 Incheon Clinic, Incheon, Korea
1991 - 1994 Resident, Department of Preventive Medicine, School of Public Health, Seoul National University, Seoul, Korea
1992 - 1994 Fulltime Lecturer, College of Medicine, Dongguk University, Gyeongju, Korea
1994 - 1998 Assistant Professor, College of Medicine, Dongguk University, Gyeongju, Korea
1998 - 2004 Associate Professor, College of Medicine, Dongguk University, Gyeongju, Korea
2001 - 2003 Director, Health Promotion Center, Dongguk University Gyeongju Hospital, Gyeongju, Korea
2004 - 2005 Professor, College of Medicine, Dongguk University, Gyeongju, Korea
2005 - Present Professor, Sungkyunkwan University School of Medicine, Suwon, Korea

Lisensure Doctor of Medicine (#23655)
Ministry of Health and Social Welfare, Korea, February 1982

Specialty Certification

1986 Korean Board of Family Medicine (#806)
1994 Korean Board of Preventive Medicine (#471)
2000 Korean Board of Occupational Medicine (#371)

Funded Grants

Development of noninvasive diagnostic method of bone marrow hypocellularity among workers chronically exposed to solvents. Korean Research Foundation, 2000-2001

Epidemiological study on the establishment of surveillance system in Creutzfeldt-Jakob disease. Ministry of Health and Welfare, 2001-2003

A Study on the Mode of Transmission of Aseptic Meningitis. Korean Research Foundation, 2001-2003

Professional Affiliations

The Korean Medical Association: Regular member since 1982
The Korean Academy of Family Medicine: Regular member since 1986
The Korean Society of Occupational Medicine: Regular member since 1988
The Korean Society of Epidemiology: Regular member since 1990
The Korean Society for Preventive Medicine: Regular member since 1994
International Commission for Occupational Health (#C2418): Regular member since 1995, Board member of Neurotoxicology and Psychophysiology Committee since June 1998
International Society for Environmental Epidemiology: membership since July 2000
The Korean Society of Neurology, Associate member since 2002

Scientific Presentations

Cheong HK, Hu H, Schwatrz J, Bellinger D, Schnaas L, Gonzalez-Cossio T, Peterson K, Aro A, Hernandez-Avila M. *The Relationship of Maternal Bone Lead and Umbilical Cord Blood Lead at Birth to Changes in Early Childhood Mental Development between 12 and 24 Months of age.* Presented at ***ISEE 2000 (International Society for Environmental Epidemiology)***, August 2000, Buffalo, NY, U.S.A.

Cheong HK, Chung JH, Park SK, Parj BC, Kim JH, Lee JY, Na BK, Kim WJ, Kim YS, Ryu SJ, Hwang SH, Lee SD. *Outbreak of Measles in Youngju, Gyeongbuk, 2000*. Presented at ***the Annual Meeting of Korean Society of Preventive Medicine***, Oct 2000, Sokcho, Korea

Cheong HK, Park BC, Kim DS. *Evaluation of Measles Vaccine Effectiveness in a Community Outbreak.* Presented at ***the 52th Annual Meeting of Korean Society of***

Preventive Medicine, Oct 2000, Sokcho, Korea

Cheong HK, Cho S, Kim KS, Jin Y, Kim E, Kang SK, Kim Y. *High Signal Intensity on Magnetic Resonance Imaging as a Predictor of Neurobehavioral Performance of Workers Exposed to Manganese*. Presented at ***the 8th International Symposium on the Neurobehavioral Effects and Methods in Environmental and Occupational Health***, June 2002, Brescia, Italy

Cheong HK, Park SK, Kim SY, Kim JW, Bae GR, Lee SW, Park O, Lee KH, Jeong EK, Yang BK. *Incidence and Mortality of Creutzfeldt-Jakob Disease in Korea by Nationwide Surveillance*. Presented at ***the Annual Meeting of Korean Soc Neurol***, Oct 2002, Seoul, Korea

Cheong HK. *Human Studies on Manganese Exposure and Effects.* Presented at ***ICOH 2003***, Feb 2003, Iguasu, Brazil

Cheong HK, Choi JK, Kim EA, Choi SB, Seo JI, Choi DS, Kim JR. *Toxic Hepatitis Outbreak in an Industrial Waste Incineration Facility*. Presented at ***ICOH 2003***, Feb 2003, Iguasu, Brazil

Park SK, Cheong HK, Ki MR, Sohn YM, Kim H. *Assessment of the Availability of Health Insurance Data for the Epidemiologic Study of Childhood Aseptic Meningitis.* Presented at ***the 11th Federation Meeting of Korea Basic Medicine Scientists***, April 17, 2003, Seoul, Korea

Cheong HK, Park SK, Kim SK, Kim JW, Bae GR, Lee SW, Park O, Lee KH, Jeong EK, Yang BK, Kim YS. *Establishment of National Surveillance System on the Creutzfeldt-Jakob Disease*. Presented at ***the 11th Federation Meeting of Korea Basic Medicine Scientists***, April 17, 2003, Seoul, Korea

Cheong HK, Park SK, Ki M, Kim H. *Epidemiology of Aseptic Meningitis in Korea.* Presented at ***Minisymposium at the 55th annual Meeting of Korean Society of Preventive Medicine***, Oct 25, 2003, Pyeongchang, Korea

Park SK, Cheong HK, Kim H, Kim OJ, Bae GR, Sohn YM. *Case-control Study on the Mode of Pediatric Aseptic Meningitis.* Presented at ***the 55th annual Meeting of Korean Society of Preventive Medicine***, Aug 25, Pyeongchang, Korea

Cheong HK, Kim H, Park SK, Bae GR, Kim OJ. *Aseptic Meningitis in Children and Drinking Water Turbidity in Urban Communities in Korea.* Presented at ***the 131st Annual Meeting of APHA***, Nov 19, 2003, San Francisco, USA

Publications

Yun JK, Kim YI, Yoo KY, Kang HC, Cheong HK. *An Epidemiologic Investigation on the Outbreak of Diarrheal Illness in an Urban Slum Area in Seoul.* Seoul J Med 1980;21(4): 371-379 [Korean]

Kim JS, Chung HK, Chung HW, Lee SS, Kim JK, Lee WY, Byun HK. *A Study on Leptospiral Infection among Healthy Young Men, a Special Group by Leptospira Isolation from Blood Culture in an Endemic Area of Korean Hemorrhagic Fever.* Korean J Epidemiol 1986;8(1):174-181 [Korean]

Kim YH, Bang S, Kim JS, Heo Y, Chung HK, Ahn MY, Lee JK, Ku CI, Kim H, Kwon SM, Chang WH. *An Epidemiologic Characteristics of Dysentery Outbreak in a Rural Area.* Korean J Epidemiol 1986;8(2):330-336 [Korean]

Kim JS, Kim JS, Heo Y, Chung HW, Lee WY, Han YC, Byun HG, Suh JD, Chung HK. *Epidemiologic Characteristics of Leptospiral Infection in Healthy Population in Special Services and Their Neighboring Civilians in Korea.* Korean J Epidemiol 1987;9(2):264-270 [Korean]

Kim JS, Lee WY, Chung HW, Han YC, Byun HK, Heo Y, Kim JS, Ahn MY, Cheong HK, Lee JK, Seo JD, Sung CM. *A Study on the Epidemiologic Characteristics and Preventive Measures of Hemorrhagic Disorders in Korea.* A Report to Ministry of Culture and Education, Seoul, School of Public Health, Seoul National University, 1988 [Korean]

Lim HS, Cheong HK, Kim JS, Oh HC, Rhie DM, Kim HH. *An Epidemiologic Investigation on an Outbreak of Anthrax Occurred in Gyeongju by Eating Dead Cow's Meat.* Korean J Prev Med 1994;27(4):693-710 [Korean]

Lim HS, Cheong HK, Choi BS, Kim IJ. *An Epidemiological Survey on the Outbreak of Cholera in Pohang on 1995.* J Regional Development [Korean]

Cheong HK, Jung C, Ha KI, Lim HS. *An Epidemiological Investigation of an Outbreak of Rubella Occurred in a Male High School in Kyongju.* Korean J Epidemiol 1998;20(1):32-38 [Korean]

Perez HL, Cheong HK, Yang JS, Osterman-Golkar S. *Simultaneous Analysis of Hemoglobin Adducts of Acrylamide and Glycidamide by Gas Chromatography-Mass Spectrometry.* Anal Biochem 1999;274(1): 59-68

Kim Y, Lee NR, Sakai T, Kim KS, Yang JS, Park S, Lee CR, Cheong HK, Moon Y. *Evaluation of Exposure to Ethylene Glycol Monoethyl Ether Acetates and Their Possible Haematological Effects on Shipyard Painters.* Occup Environ Med 1999;56(6): 378-382

Kim Y, Kim JW, Ito K, Hisanaga N, Cheong HK, Kim KS, Moon Y. *Positron Emission Tomography (PET) in Differentiating Manganism from Idiopathic Parkinsonism.* J Occup Health 1999;41: 91-94

Lim HS, Cheong HK, Kim JY, Kim JR, Sakai K, Hisanaga N. *Development of Lipoma among Residents Exposed to Glass Fiber Waste.* Korean J Epidemiol 1999;21(2): 159-175 [Korean]

Kim Y, Kim KS, Yang JS, Park IJ, Kim E, Jin Y, Kwon KR, Chang KH, Kim JW, Park SH, Lim HS, Cheong HK, Shin YC, Park J, Moon Y. *Increase in Signal Intensities on T1-weighted Magnetic Resonance Images in Asymptomatic Manganese-exposed Workers*. Neurotoxicology 1999;20(6): 901-908

Park BC, Cheong HK, Lim HS Kim DS, Kim DH. *Epidemiological Investigation of a Mumps outbreak in a middle school in Pohang, Korea.* Korean J Epidemiol 2000;22(2):148-158 [Korean]

Park SK, Kim JH, Lee JY, Na BK, Cheong HK. *Comparative Epidemiologic Survey of the Measles in Two Primary Schools.* Korean J Prev Med 2001;34(2):131-140 [Korean]

Lim HS, Cheong HK, Kim JR, Kim IJ, Ha KI. *An Epidemiologic Study on Sudden Deaths of Cattle Occurred in Kyongju City.* Korean J Epidemiol 2001;23(1):59-68 [Korean]

Park BC, Cheong HK, Park SK. *Evaluation of Measles Vaccine Effectiveness in a Community Outbreak.* Korean J Prev Med 2002;35(1):33-40 [Korean]

Yang M, Jang JY, Kim S, Lee SM, Chang SS, Cheong HK, Lee E, Kang DH, Kim H, Kawamoto T, Shin HD. *Genetic Effects on Urinary 1-Hydroxypyrene Levels in a Korean Population.* Carcinogenesis 2003;24(6):1085-1089

Jang JY, Kim SY, Lee SM, Chang SS, Cheong HK, Lee E, Kang DH. *Sources of Polycyclic Aromatic Hydrocarbon Exposure in Non-occupationally Exposed Koreans*. Environ Mol Mutagen 2003;42(4):250-257

Kim JS, Lim HS, Cho SI, Cheong HK, Lim MK, Lee WY. *Health Impact of Agent Orange Exposure among Korean Vietnam Veterans*. Ind Health 2003;41(3):149-157

Park SK, Cheong HK, Ki MR, Sohn YM, Kim H. *Assessment of the Availability of Health Insurance Data for the Epidemiologic Study of Childhood Aseptic Meningitis*. Korean J Prev Med 2003;36(4):349-358 [Korean]

Bang MR, Lim HS, Cheong HK, Han YR, Jung C. *Evaluation of the Field Management Training Program in Dongguk Univeristy, 2002*. J Korean Public Health Assoc 2003;29(1):17-25 [Korean]

Lee JS, Kim JH, Na BK, Yoon S, Kim JA, Lee JY, Kang C, Park SK, Cheong HK, Kim WJ. *Seroepidemiologic study of measles outbreak in a primary school, Youngduk*. Infect Chemother 2003;35(6):416-422 [Korean]

Kim SH, Cheong HK, Jung C, Lee SJ, Cho SM, Ko JT, Kim MK, Jeoung EY, Bae SH. *An Epidemiologic Investigation of Aseptic Meningitis Occurred in Pohang City: 1997~2002*. Korean J Pediatr Infec Dis [Korean]

Kim HJ, Cheong HK, Jung C, Lee KM, Ji YM, Kim WD, Lee DS, Kim DK, Choi SM. *Clinical and Virologic Study of Aseptic Meningitis*. Korean J Pediatr 2004;47(4):392-398 [Korean]

Cheong HK, Choi DS, Park KU, Yun HJ, Kim JR, Ha KI, Yang SO, Kim Y. *Quantitative Assessment of Magnetic Resonance Imaging for the Noninvasive Evaluation of Bone Marrow Cellularity of Workers with Long-term Exposure to Solvents*. Ind Health 2004;42(2):179-188

Kim YG, Park MH, Park JW, Song JH, Sim SG, Lee JH, Lee HY, Yun DI, Jung SH, Min YS, Bae GR, Jung C, Lim HS, Cheong HK. *Depressive Disorders among Hansen Disease Patients Living in a Collective Farm, Gyeongju*. J Korean Agricultural Med [Korean]

Cheong HK, Bae GR, Jeong JH, Park SK, Park BC, Kim JH, Lee JY, Na BK, Kim WJ. *Outbreak of Measles among School Ages in Yeongju in 2000*. Korean J Epidemiol 2004;26(1):69-80 [Korean]

Bo Youl Choi

Date of Birth 11/8/1957
Place of Birth Seoul, Korea
Nationality Korean

Office address #17 Haengdang-dong, Seongdong-gu, Seoul 133-791, Korea

Present Academic & Hospital Appointments

Professor, M.D., Ph.D.
Department of Preventive Medicine
Hanyang University College of Medicine

Education

1983 BS degree in Medicine, Hanyang University College of Medicine
1985 1 year Internship training in Hanyang University Hospital
1987 3 year Residency training in Preventive Medicine, Hanyang University College of Medicine
1987 Master of Public Health degree, School of Public Health, Seoul National University
1990 Doctor of Medical Science degree, Graduate School, HanyangUniversity

Career

1983 Assistant, Preventive Medicine, Hanyang University College of Medicine
1986 Full-time Instructor, Preventive Medicine, Hanyang University College of Medicine
1990 Adjunct Assistant Professor, Preventive Medicine, Hanyang University College of Medicine
1994 Associate Professor, Preventive Medicine, Hanyang University College of Medicine
1999 Professor, Preventive Medicine, Hanyang University College of Medicine

Lisensure

1983 MD, Ministry of Health and Welfare, Korea
1987 Board of Preventive Medicine, Ministry of Health and Welfare, Korea

Funded Grants

1. A Cohort Study for Korean Genomic Epidemiology Research based on Multi-Center Collaboration., 2004-2010
2. Field Management Training Program for Medical Doctors in Public Health Field.,

2004-2005

3. Development of Master Plan for Serum Bank of Korea Center for Disease Control and Prevention, 2004-2005

Professional Affiliations

1. Korean Medical Association - Member (1983)
2. Korean Society of Preventive Medicine(KSPM) - Member (1983), Auditor of KSPM (2004)
3. Korean Society of Epidemiology – Member(1983), Editor of Korean Journal of Epidemiology(2004)
4. Korean Public Health Association - Member (1983)

Major Research Interests

1. Infectious Disease Epidemiology
2. Cardiovascular Disease Epidemiology

Scientific Presentations

1. The Epidemiology of Acute Pyelonephritis in South Korea, 1997–1999 Am. J. Epidemiol., 160: 985 - 993. (2004)
2. Prevalence of the metabolic syndrome and its association with cardiovascular diseases in Korea. J Korean Med Sci. 19(2):195-201. (2004)
3. A seroprevalence study of poliovirus antibody among primary schoolchildren in Korea. Epidemiol Infect. 132(2):351-5. (2004)
4. Rubella seroprevalence in Korean children. J Korean Med Sci. 18(3):331-6. (2003)
5. Risk Analysis of Aseptic meningitis after Measles-Mumps-Rubella Vaccination in Korean Children by Using a Case-Crossover Design. American Journal of Epidemiology 157(2):158-165(2003)
6. Rubella Antibody Loss Rates in Korean Children. Epidemiol. Infect. 129:557-564(2002)
7. The influence of portion size data on the agreement of classification of individuals according to nutrient estimates by food frequency questionnaire in a rural area of Korea. Nutrition Research 22:271-281(2002)
8. Dietary Factors and Gastric Cancer in Korea; a case-control study. Int J Cancer 97:531-535(2002)
9. Association between Helicobacter pylori infection and the risk of gastric cancer among the Korean People; a case-control study. J of Gastroenterology 36:816-822(2001)
10. A comparative study on serologic profiles of virus hepatitis B. World J Gastroenterology 7(1):107-110(2001)
11. The changing epidemiology of hepatitis A in children and the consideration of

active immunization in Korea Yonsei Medical Journal, (2000)
12. Expression of cell-cycle regulators, cyclin E and P21 waf1/cip1 Potential prognostic markers for gastric cancer. European J. of Surgical Oncology, 25:157-163(1999)

Publications

1. Korean Society of Preventive Medicine. Preventive Medicine, Seoul Korea, 2004
2. Korea Center for Disease Control and Prevention. Communicable Disease Control in School, 2004
3. Korea National Institute of Health, Manual of Investigation for Adverse Event Following Immunization, 2001

Byung-Chul Chun

Date of Birth	Aug. 9, 1964
Place of Birth	Seoul, Korea
Nationality	Korea (Republic of)
Office address	Department of Preventive Medicine, Medical College, Korea University Anam Dong, Sungbuk Gu, Seoul 136-705, Korea

Present Academic & Hospital Appointments

Assistant Professor of Medicine, Medical College, Korea University

Education

1983-1989	College of Medicine, Korea University (MD)
1994-1997	School of Public Health, Seoul National University (MPH)
1997-2001	Graduate School, Korea University (PhD)
2003. July 7th-18th.	London School of Hygiene and Tropical Medicine (Course certificate of Introduction to infectious disease modeling and its applications)

Career

1989-1992	Public Health Doctor
1992-1993	Internship training, Korea University Medical Center (Anam Hospital)
1994-1997	Residency of Preventive Medicine, Korea University
1998-2000	Fulltime Instructor, Medical College, Konyang University
2000-2001	Assistant Professor, Medical College, Konyang University
2001- present	Assistant Professor, Medical College, Korea University

Lisensure

1989 Korean License of Medical Doctor (No. 39721)

Specialty Certification

2001 Korean Board of Preventive Medicine Certificate (No. 525)

Funded Grants (within 3 years, selected)

1. Development of Control Strategies for New Emerging Infectious Diseases with Modelling and Simulation of New Epidemics. Funded by Korean Centers for Diseases Control (2004-2005)
2. Evaluation and improvement strategy for communicable diseases surveillance system. Funded by Korean Centers for Diseases Control (2003)

3. Epidemiology and Development of Control Policy for Zoonoses including CJD. Funded by Korean Centers for Diseases Control (2003)
4. Improvement of STD surveillance system and construction of gonococcal isolates surveillance system. Funded by Korean Centers for Diseases Control (2004)
5. Development of core competencies for public health workforce funded by Korean Centers for Diseases Control (2002)
6. Evaluation of Field Epidemiology management training program by Korean Centers for Diseases Control (2003-2004)
7. Development of competency-based curricula and learning methods on medical informatics for improving quality of health care. Funded by Korean Research Fund(2002)
8. Development of Korean Medical Subject Headings and Autonomic Indexing system. Funded by Ministry Health & Welfare(2003-2004)

Honors and Awards

1. 1999 Minister Official Commendation of Ministry of Health & Welfare for meritorious service to control epidemics
2. 2001 Best Poster Award of 3rd Cyber-Medical Conference by Korean Academy of Medical Science
3. 2003 Best Presentation Award of Asia-Pacific Medical Informatics Conference by Asia-Pacific Medical Informatics Association

Major Research Interests

Epidemiology of Infectious Diseases (modelling, surveillance, vaccine, influenza, zoonoses, methodology)
Public Health Informatics (standard, data mining, simulation)

Scientific Presentations (within 2 years, selected)

1. Chun BC, Choi SW, Hwang D, Park K, Lee J, Lee BK, Development of learning objectives and competencies of medical informatics education in medical curriculum-experience and results in Korea. Proceedings of the World Congress on Medical Informatics, 11th, San Francisco, American Medical Informatics Association, (2004) 1555
2. Chun BC. Microbial risk assessment for emerging infectious diseases in Korea-in case of influenza pandemic. Japan-Korea Joint Seminar on Epidemiology Proceedings, 2003 4th conference proceedings, Seoul (2003) 20-22
3. Chi WJ, Kang BK, Yeon S, Choi YJ, Lee, SE Chun BC, Cheong H, Park SC, Kim MJ. Prevalence and risk factors for colonization with methicillin-resistant Staphylococcus auresus on initial visit in the department of otolaryngology of a thertiary care hospital. East-Asian Conference on Infection control and prevention Conference Proceedings, 2nd Conference, Seoul, EACIC, (2003) 32 .
4. Kim MJ, Kim S, Heo J, Lee G, Lee J, Sohn JW, Jung S, Chun BC. Clinical validity

of the Mycobacterium growth indicator tube combied with duplex polymerase chain reaction assay in diagnosis of tuberculosis』, Annual interscience conference on antimicrobial agents and chemotherapy Proceedings, 43rd conference proceeding, Chicago, American Society for Microbiology, (2003) 191 .

5. Chun BC, Lee SW, Shin YH. Epidemiology of recent re-emerging Shigellosis in Korea. Proceeding of 16th World Congress of Epidemiology(2002.08), Montreal, International Epidemiology Association, (2002)
6. Chun BC, Ji JD, Choi YS. Is the definition of chronic fatigue syndrome relevant to Korean chronic fatigue cases?, Proceeding of 16th World Congress of Epidemiology, Montreal, International Epidemiology Association, (2002).
7. Kim M, Park D, Sohn JW, Jung K, Lee H, Chae S, Chun BC, Cheong H, Kim W, Park S, Lee J, Eom J, Hwang B, Lee Y, Lee J. A prospective randomized controlled study to determine the optimal duration of antituberculosis therapy for tuberculous cervical lymphadenitis. Annual interscience conference on antimicrobial agents and chemotherapy Proceedings, 2003 43rd conference proceeding, Chicago, American Society for Microbiology, (2003) 416 .

Publications (within 2 years, selected)

1. Yoo YO, Jeong EK, Park O, Chun BC. Sentinel surveillance system for pediatric communicable diseases. *Korean J Epidemiol* 2004;26(2):32-42
2. Chun BC. Epidemiology of Zoonotic Diseases. *Korean J Med Association* 2004; 47(11):1019-1034.
3. Chun BC. Epidemiology of SARS. *Infection and Chemotherapy* 2003;35(supp2): s76-s92
4. Park SC. Choeng HJ, Sohn JW, Choi SJ, Eom JS, Woo HJ, Chun BC, Kim WJ. Efficacy of influenza vaccination among chronic ill patients:retrospective case-control study. *Infection and Chemotherapy* 2004;36(4):207-212
5. Cheong HJ, Sohn JW, Choi SJ, Eom JS, Woo HJ, Chun BC, Kim WJ, Park SC. Factors influencing decision regarding influenza vaccination: a survey of healthcare workers in one hospital. *Infection and Chemotherapy* 2004;36(4):213-218
6. Kim MJ, Sohn JW, Park DW, Park SC, Chun BC. Characterization of a lipoprotein common to Legionella species as a urinary broad-spectrum antigen for diagnosis of Legionnaires. *Journal of Clinical Microbiology* 2003: 41(7): 2974-2979 .
7. Choi SW, Chun BC, Hwang DH, Kim J, Moon YJ. What should be educated to the students at schools of public health in health informatics? *Korean J Med Inform* 2003; 9(supp 2): s245-s247.
8. GC Han, Lee EJ, Lee JH, Park SN, Lee HY, Jeon EJ, Lee HL, Chun BC et al. The study of standardization for a Korean Adaptation of self-report measure of dizziness. *J Korean Balance Society* 2004;3(2):307-325
9. Kim JS, Chun BC. Association of Internet addiction with health protmotion lifestyle profile and perceived health status in adolescents. *J Prev Med Public Health* 2005;38(1):53-60

Jin-Han Kang

Date of Birth 17th Nov. 1952
Place of Birth Seoul
Nationality Republic of Korea

Office address Bupyong-gu Bupyong-dong #665 Incheon, Korea

Present Academic & Hospital Appointments

Professor of pediatric department in The Catholic University of Korea
Senior faculty staff of pediatric infectious diseases in Our Lady of Mercy Hospital

Education

1. Graduated from The College of Medicine of The Catholic University of Korea in 1977
2. Trained (intern and residence ship) from St. Mary Hospital since 1977 to 1982
3. Obtained doctoral degree from The Catholic University of Korea in 1977

Career

1. Executive Director of Infectious Diseases Committee in Korean Society of Pediatrics since 2000
2. Vice president of the Korean Society of Infectious Diseases since 2003
3. Vice Chairman of Advisory Committee of Immunization Practice in Korea since 2004
4. A position of consultant for KFDA since 1997

Specialty Certification

Special board of Pediatrics in Korea

Funded Grants

1. Study on harmonization guideline for clinical investigation of combined vaccines, funded by KFDA
2. Clinical study of Infanrix(immunogenicity and tolerance. Phase 4 study), funded by GSK
3. Hospital based genotype surveillance of Rotavirus in children under 5 years of age in Korea, funded by MSD
4. Clinical trial of Rota-Teq(phase 3 study), funded by MSD
5. Clinical bridging study of Tetraxim(phase 3 study), funded by Aventis-Pasteur

Honors and Awards

Academic Award for Age specific Seroepidemiological Study of Diphtheria in Korea by The Korean Society of Infectious Diseases in 2000

Professional Affiliations

Korean Society of Infectious Diseases
Korean Society of Pediatric Infectious Diseases
Korean Society of Pediatrics

Major Research Interests

1. Clinical Vaccinology, especially concerned with DTaP vaccines
2. Epidemiology and Pathogenesis of EBV

Scientific Presentations

Pediatric Infectious Diseases

Publications

1. Antimicrobial activities of teicoplanin against gram-positive cocci. Infect and Chemother. 2003;35:439-45
2. Epidemiological study of pneumococcal nasal carriage and serotypes among Korean children. Korean J Pediatr 2004;47:611-16
3. Follow-up of children with chronic hepatitis B virus infection. Korean J Pediatr Infect Dis 2004;11:73-80
4. Urinary tract infection in febrile infants with pyuria. Korean J Pediatr Infect Dis 2004;11:90-100
5. The etiology of Kawasaki diseases; Infectous aspects. Korean J Pediatr Cardiol 2004;8:296-99
6. C-reactive protein level in measles. Eur J Pediatr 2004;163:414-5
7. Changing hepatitis A epidemiology and the need for vaccination in Korea. Asian Pacific J Allergy and Immunol 2004;22:237-42
8. Penicillin resistant distribution and in-vitro susceptibility of oral antibiotics against S. pneumoniae, isolated from pediatric patients with community acquired respiratory infections in Korea. Korean J Pediatr 2005;48:40-8

Moran Ki

Office Address

Department of Preventive Medicine, Eulji University School of Medicine,
143-5, Yongdu-Dong, Jung-Gu, Daejeon, 301-832, South Korea

Education

Ph. D Mar. 1997 - Feb. 2000
Department of Preventive Medicine, Hanyang University, College of Medicine, Seoul, Korea
Dissertation: Rubella Antibody Seroprevalence and Related Factors –Findings from Three Consecutive Follow-up Surveys (1993, 1996, 1999) on Elementary School Students in Kyonggi Province, Korea

MPH Mar. 1994 - Feb. 1996
Department of Epidemiology, Graduate School of Public Health
Seoul National University, Seoul, Korea
Thesis: Positive rate and False-positive rate of Cervix cytology screening in Kyonggi-do, Korea

M.D Mar. 1985 - Feb. 1991
Hanyang University, College of Medicine, Seoul, Korea

Experience

Associate Professor
Department of Preventive Medicine
Eulji University, School of Medicine, Korea Apr. 2005 – present

Research Fellow
Department of Epidemiology
School of Public Health, University of Michigan Sep.2002 – Jul.2004

Assistant Professor
Department of Preventive Medicine
Eulji University, School of Medicine, Korea Apr. 2001 – Mar.2005

Full Time Instructor
Department of Preventive Medicine
Eulji University, School of Medicine, Korea Oct. 1998 – Apr. 2001

Visiting Scholar
Division of Epidemiology, Statistics and Prevention Research (DESPR)

National Institute of Child Health & Human Development (NICHD),
NIH July 1998 – Aug.1998

Research Professor
Department of Preventive Medicine, Hanyang University
Institute for Community Health, Korea Mar. 1998 – Sep. 1998

Residency
Department of Preventive Medicine
Hanyang University, College of Medicine, Korea Mar. 1995 – Feb. 1998

Assistant Teacher
Department of Preventive Medicine
Hanyang University, College of Medicine, Korea Mar. 1994 – Feb. 1998

Industry Health Manager
Department of Industrial & Occupational Medicine
Incheon Jung-Ang General Hospital, Korea Oct. 1993 – Feb. 1994

General Physician
Young-yang County Hospital and Bucheon Clinic, Korea Mar. 1992 – July 1993

Rotating Internship
Hanyang University Hospital, Korea Mar. 1991 – Feb. 1992

Research Areas of Interest

- Infectious Disease Epidemiology
- Genetic Epidemiology
- Epidemiologic Methods
- Vaccine Trials

Activities

- A regular member of International Epidemiologic Association May. 2002 - present
- A regular member of Korean Society for Preventive Medicine Mar. 1994 - present
- A regular member of Korean Epidemiological Society Mar. 1994 - present
- A member of the National Epidemiologic Investigation Committee
  April 1998 - present
- A member of the Epidemiologic Investigation Committee of Vaccine Adverse Events in Daejeon City Dec. 1998 - present
- A member of the National Evaluation Committee on Biologic Product
  Mar 2002 - present

PUBLICATIONS

Submitted Papers

1. Batmunkh N, Ki M, Seong JC, Kilgore PE, Bresee JS, Clemens JD. National trends in diarrheal-associated mortality, Seoul Korea, 1990 through 2000.

2. Brown P, Ki M, Foxman B. Acute pyelonephritis among adults-Cost of illness and considerations for the economic evaluation of therapy. Pharmacoeconomics 2004 (in press)

Published Papers

1. Lee WY, **Ki M**, Oh JK, Lee JK, Kim MB, Choi BY. Incidence of complication and societal cost of measles on Korea, 2000. Korean Journal of Epidemiology. 2004 Dec; 26(2):71-80. (Correspondence)

2. **Ki M,** Park T, Choi BY, Foxman B. The epidemiology of acute pyelonephritis in South Korea, 1997-1999. Am J Epidemiol. 2004 Nov 15;160:985-93.

3. Jee YM, Cheon DS, Kim KS, Lee SH, Yoon JD, Lee SW, Go U, Yang BK, **Ki M**, Choi BY, Cho HW. A seroprevalence study of poliovirus antibody among primary schoolchildren in Korea. Epidemiol Infect. 2004 Apr;132(2):351-5. (English)

4. Park T, **Ki M**, Yi SG. Analysis of vaccine adverse effects using the case-crossover design. Statistics in Medicine. 2004 Jun 30;23(12):1871-83. (English)

5. **Ki M**, Park T. TWO AUTHORS REPLY (Respond to Farrington. Re: "Risk Analysis of Aseptic Meningitis after Measles-Mumps-Rubella vaccination in Korean Children by using a Case-Crossover Design") Am J Epidemiol. 2004; 159: 718-720.

6. **Park SK, Cheong HK, Ki M, Son YM, Kim H.** Assessment of the Availability of Health Insurance Data for Epidemiologic Study of Childhood Aseptic Meningitis. Korean Journal of Preventive Medicine 2003; 36(4): 349-358.

7. Ahn MJ, Choi JH, Lee YY, Choi IY, Kim IS, Yoon SS, Park SY, Kim BK, Suh C, Son HJ, Jung CW, Lee JH, Sung JM, Im SA, Oh D, Jung SY, Yoon HJ, Cho KS, Lee JA, Yuh YJ, Kim SR, **Ki M**. Outcome of adult severe or very severe aplastic anemia treated with immunosuppressive therapy compared with bone marrow transplantation: multicenter trial. Int J Hematol. 2003 Aug;78(2):133-8.

8. **Ki M**, Choi BY, Kim MH, Shin YJ, Park T. Rubella seroprevalence in Korean children. Journal of Korean Medical Science. 2003;18:331-336.

9. **Ki M**, Park T, Yi SG, Oh JK, Choi BY. Risk Analysis of Aseptic Meningitis after Measles-Mumps-Rubella vaccination in Korean Children by using a Case-

Crossover Design. Am J Epidemiol. 2003;157(2): 158-165.

10. **Ki M**, Choi BY, Kim MH, Shin YJ, Park T. Rubella antibody loss rates in Korean children. Epidemiology and Infection. 2002;129:557-564.

11. Ahn MJ, Park CK, Choi JH, Lee WM, Lee YY, Choi IY, Kim IS, Lee WS, **Ki M**. Clinical Significance of Microvessel Density in Multiple Myeloma Patients, Journal of Korean Medical Science. 2001;16(1):45-50.

12. Choi JH, Ahn MJ, **Ki M**, Oh HS, Lee YY, Choi IY, Kim IS. Clinical Prognostic Factors and Treatment Outcome of Aggressive Non-Hodgkin's Lymphoma in Elderly Patients. Cancer Research and Treatment. 2001;33(4):324-328.

13. Na BK, Go UY, Lee JY, **Ki M** et al. Seroepidemiology of Mumps IgG antibody on primary school children in Kyonggi Province, 1996 and 1999. Korean J of Infect Dis 2001;33(3):157-164. (Korea)

14. Fang JN, Jin XA, Cui LH, Quan ZU, Jin CJ, **Ki M**, Kim MK, Choi BY. Distribution of risk factors for cardiovascular disease in adolescents of Korean-Chinese and Han-Chinese in Yanbian Area. Literature and Information of Preventive Medicien. 2001;7(3):233-235. (Chinese)

15. Fang JN, Jin CJ, Cui LH, Quan ZU, Choi BY, **Ki M**, Park H. A Comparative Study on Serologic profiles of Virus Hepatitis B. World Journal of Gastroenterology. 2001;7(1):107-110.

16. Fang JN, Jin CJ, Cui LH, Quan ZU, **Ki M**, Kim MK, Choi BY. Blood lipid profiles and its related factors in adolescents of Korean-Chinese and Han-Chinese in Yanbian Area. Chin J Contr Chron Non-commun Dis. 2001;9(1):3-5. (Chinese)

17. **Ki M**, Kim MH, Shin YJ, Choi BY. MMR Immunization Rate and Related Factors – Findings from Repeated Surveys (1996, 1999) on Elementary school Students in Kyonggi Province, Korea. Journal of the Korean Pediatric Society. 2001;44(4):375-388. (Korean)

18. Kim MH, **Ki M**, Hur YJ, Choi BY. An Epidemiologic Investigation on Mumps Outbreak in Cheju-do, 1998. Korean Journal of Preventive Medicine. 2001;34(1):89-99. (Korean)

19. Sohn YM, Rho HO, Park MS, Park JH, Choi BY, **Ki M**, Jang WI. Changing epidemiology of Hepatitis A in children and consideration of active immunization in Korea. Yonsei Medical Journal. 2000;41(1):34-39.

20. Ahn MJ, Kim H, Kim IS, Park JK, **Ki M**, Park CK. p53 Protein Expression and its Prognostic Importance in Patients with Nodal non-Hodkin's Lymphoma.

Journal of Korean Medical Science. 2000;15(1):59-64.

21. Fang JN, Cui LH, Jin CJ, Choi BY, **Ki M** et al., HBV Prevalence among Korean in Korea, Korean Chinese in China and Chinese in China. Chin J Prev Med. 2000;34(2):97. (Chinese)

22. **Ki M**, Choi BY, Kim MK, Kim KR, Bang KN, Kang YJ. Lipid Profiles and Related Factors in Adolescent. Korean Journal of Preventive Medicine. 2000;33(1):83-90. (Korean)

23. Lee JS, **Ki M**, Sohn YM. Adverse Events Associated with MMR vaccination in Korea -Prospective Study Using Telephone Surveillance Method- Korean Journal of Pediatric Infectious Disease. 2000;7(2):183-192. (Korean)

24. Kim MH, Park JK, **Ki M**, Hur YJ, Choi BY, Kim JS. Evaluation of the completeness of Case Reporting during the 1998 Cheju-do Mumps Epidemic, Using Capture-recapture Methods. Korean Journal of Preventive Medicine. 2000;33(3):313-322. (Korean)

25. Jang SJ , Park YW, Park MH, Lee JD, Lee YY, Jung TJ, Kim IS, Choi IY, **Ki M**, Choi BY, Ahn MJ. Expression of Cell-cycle Regulators, Cyclin E and p21WAF1/CIP1, Potential Prognostic Markers for Gastric Cancer. European Journal of Surgical Oncology. 1999;25:157-163.

26. **Ki M**, Choi BY, Kim MK, Bang KN, Xu CY, Ahn DH, Kang YJ. Relationship between Adolescent Obesity and Socioeconomic Status of Parents: In Seoul, Yangpyoung, and Yanbian Area. Korean Journal of Preventive Medicine. 1999;32(1):9-16. (Korean)

27. Ahn MJ, Kim BH, Jang SJ, Hong EK, Lee WM, Baik HK, Park HK, Lee CB, **Ki M**. Expression of Cyclin D1 and Cyclin E in Human Gastric Carcinoma and its Clinicopathologic Significance. Journal of Korean Medical Science.1998;13(5):513-518.

28. Song JC, Lee WY, Kwon YJ, **Ki M**, Lee SJ, Park SB, Nahm JH. Association between Musculoskeletal Subjective Symptoms and the MMPI Profile of Female VDT Operators. The Journal of the Korean Occupational Environmental Medicine. 1998;10(4):599-609. (Korean)

29. Kim MK, **Ki M**, Bang KN, Kim KR, Choi BY, Kwon YJ, Lee SS, Kim C, Kang YJ. The Effect of Parental Socioeconomic Status on the Nutrient Intake of Urban and Rural Adolescents. Korean Journal Community Nutrition. 1998;3(4):542-555. (Korean)

30. Rho HO, Sohn YM, Park MS, Choi BY, Bang KN, **Ki M**, Kim JH. A Seroepidemiologic Study of Hepatitis A Virus in the Healthy Children and

Adolescent in Kyonggi-do Province. (Korean Journal of Pediatric Infectious Disease. 1997;4:232-239. (Korean)

31. Lee SY, Choi BY, Shin YJ, Bang KN, **Ki M**, Park HB, Yoon JD, Lee KC, Youn BJ. A Seroepidemiologic Study of Hepatitis B Vaccination Program - in Elementary School Student from Kyonggi-do Province- Korean Journal of Pediatric Infectious Disease. 1997;4(2):240-256. (Korean)

32. **Ki M**, Choi BY, Shin YJ, Park HB, Youn BJ, Han JS. A Seroepidemiologic Study on Rubella antibody in Pregnant Women in Kyonggi-do. Korean Journal of Preventive Medicine. 1997;30(2):279-292. (Korean)

33. Kim HS, Kwon YJ, **Ki M**, Hong SO, Song JC, Choi BY. Correlation between Obesity Indices and Blood Pressure. Journal of the Korean Society of Hypertension. 1997;3(2):91-101. (Korean)

34. Choi BY, Shin YJ, Son JI, **Ki M**, Oh YW, Bang KN, Park HB, Kim JS, Choi IS. Epidemiological Study on the Mumps Epidemic -In one Primary School in Hwasung-kun, Kyonggi-do- Korean Journal of Epidemiology. 1995;17(1):105-115. (Korean)

Awards

Scholarship of Ministry of Labor Mar. 1995 – Feb. 1997

Best Paper Award: Oct.1997
The first best paper award of the Lee Seongkwan Academy prize by Korean Society for Preventive Medicine, "A Seroepidemiologic Study on Rubella antibody in Pregnant Women in Kyonggi-do." Korean Journal of Preventive Medicine. 1997;30(2):279-292

Best Paper Award: Oct.2000
The fourth best paper award of the Lee Seongkwan Academy prize by Korean Society for Preventive Medicine, "Evaluation of the completeness of Case Reporting during the 1998 Cheju-do Mumps Epidemic, Using Capture-recapture Methods" Korean Journal of Preventive Medicine. 2000;33(3):313-322.

Research Projects

- Korea Research Foundation(KRF) Sep. 2004 – Aug. 2005
    - PI: Risk factors and characteristics of causative organisms for neonatal sepsis: case-control study
- Korea Science and Engineering Foundation (KOSEF) Apr. 2004 – Mar. 2005
    - PI: Incidence rate and associated risk factors of Neonatal Sepsis, Korea, 1997-1999

- Korea Research Foundation (KRF) Apr. 2002 – Mar. 2003
    - PI: Seroepidemiology on Hepatitis B virus in elementary school student cohort in Gyonggi Province, Korea
- Korea Research Foundation (KRF) Sep. 2001 – Aug. 2003
    - Co I: A Study on the Mode of Transmission of Aseptic Meningitis
- National Institute of Health (NIH), Korea May. 2001 – Nov. 2001
    - PI: MMR vaccine effectiveness in elementary school student cohort, which had a measles epidemic
- Food and Drug Administration (FDA), Korea Mar. 2001 – Dec. 2001
    - PI: Risk Analysis of Aseptic Meningitis after Measles, Mumps and Rubella (MMR) vaccine
- Korea Science and Engineering Foundation (KOSEF) Sep. 2000 – Aug. 2001
    - PI: Development and Evaluation of a School-based Sentinel Surveillance System
- Korea Research Foundation (KRF) Nov. 1999 – Oct. 2000
    - PI: Rubella antibody seroprevalence and related factors -repeated surveys (93, 96, 99 years) on Kyonggi province elementary school students-
- Ministry of Health and Welfare (MHW) Jan.1999 – Dec.1999
    - Co PI: Development of National Communicable Disease Internet Information System
- Ministry of Health and Welfare (MHW) Dec.1998 – Dec.1999
    - Co I: Development of strategy for national vaccine program stabilization and Vaccine adverse event surveillance system
- Ministry of Health and Welfare (MHW) May.1998 – April1999
    - Co I: Evaluation of National Vaccination Program

Joung Soon Kim

Affiliation: Professor Emeritus of Epidemiology, School of Public Health, Seoul National University

Education

1954-1960: College of Medicine. Seoul National University. M. D.
1962-1967: School of Hygiene and Public Health, The Johns Hopkins University. MPH (Epidemiolgy) & DrPh (Pathobiology)
1982-1985: Teacher's Training Center, Medical School, New South Wales Univ. Master of Education

Training

1960-1961: Swedish Hospital, Minneapolis. Internship
1961-1962: Denver General Hospital. Resident, Internal Medicine
1964, July-November: New York Metropolitan City Hospital. Resident, Internal Medicine
1971-1972: Saint Agnes Hospital, Baltimore. Resident, Internal Medicine
1967 March-September: Hooper Foundation, Medical School, San Francisco, California. Post-doctorate Fellowship (Institute of Medical Research in Malaysia)

Professional Experience

1966-2001: School of Public Health, Seoul National University, Professor of Epidemiology
1979-1987: Korean Epidemiological Society: President
1985-1993: Visiting Professor of Epidemiology, School of Public Health, Hawai Univ.
1992-1994: School of Public Health, Seoul National. Dean
1994-1995: Korean Society for Preventive Medicine. President
1994-1997: Health research Committee, WPRO, WHO. Committee member
1994-Present: Committee of Korean National Immunization Program, KCDC. Chairperson
1996-2001: Korean Anti-AIDS Federation; President

Qualification and Awards

1960: Certificate of ECFMG
1960: Korean License for Medial Practice
1972: American Board of Preventive Medicine
1992: Korean Board of Preventive Medicine
1985: Dongbaek Medal, Order of Civil Merit, Korean Government

1993: Outstanding International Graduate Award in Science/Research. Alumni Association, The Johns Hopkins Univ.
2001: Aquamarine Stripes Medal, Order of Service Merit, Korean Government

Authorships

1984: Epidemiology, Principles and Methods (Korean), Shin Kwang Publishing Co. New Editions in years of 1987, 1990, and 2000.
1991: Epidemiology of Infectious Diseases (Korean), Shin Kwang Publishing Co.
1992: Hospital Infections; Epidemiology and its Control, Soo Moon Sa Publishing Co.
1994: Epidemiology of Chronic Diseases and Injuries (Korean), Shin Kwang Publishing Co.
2001: Korean's Health and Disease Patterns (Korean), Shin Kwang Publishing Co.

I. Overview on Korean's Health Level and Disease Patterns; Epidemiologic Transition in Korea
II. Infectious Diseases; Epidemiologic Characteristics and Control Strategies
III. Chronic Diseases and Injuries; Epidemiologic Characteristics and Control strategies

1990-1998: Co-authorships for three other public health textbooks, SNU Publishing Co.
1969-2002: Over 200 original papers published in various academic journals mostly on occurrence and prevalence of diseases peculiar to Korean communities in Korea and North-east China, and curricula of teaching public health in Korea

Duk Hyoung Lee

Date of Birth	25 January 1957
Place of Birth	JINHAE CITY, KOREA
Nationality	KOREAN
Office address	Korea Center for Disease Control and Prevention (KCDC) Ministry of Health and Welfare (MOHW) 5 Nokbun-dong, Eunpyung-gu, Seoul 122-701, KOREA

Present Academic & Hospital Appointments

Director of Infectious Disease Control Department, KCDC
Ministry of Health and Welfare, KOREA

Education

03/75 – 02/81	M.D. Seoul National University College of Medicine (SNUCM)
03/84 – 02/89	Ph D. Preventive Medicine, Seoul National University Graduate School
02/92 – 02/93	Visiting Scholar to the Leonard Davis Institute of Health Economics University of Pennsylvania

Career

04/84 – 09/87	Teaching & Research Assistant, Preventive Medicine, SNUCM
09/87 – 03/94	Joined the MOHW, served as medical officer mostly in the area of communicable disease control and prevention
03/94 – 09/01	Division director in communicable disease control, health resources, disease control
09/01 – 12/03	Director of National Masan TB Hospital, MOHW
12/03 – 04/04	Director of Incheon Airport National Quarantine Station, MOHW
04/04 – present	Director of Infectious Disease Control Department, KCDC, MOHW

Honors and Awards

06/01	Medal of Merit from the President, for contribution in the establishment of the National Cancer Center

Hyun-Sul Lim

Date of Birth	July 15, 1952
Place of Birth	Seoul, Korea
Nationality	Korea
Office address	Department of Preventive Medicine 707 Seokjang-Dong, Gyeongju-si Gyeongsangbuk-Do 780-714, Korea

Present Academic appointments

Professor, Chief of Department of Preventive Medicine, College of Medicine, Dongguk University

Education

1971 - 1973	College of Natural Sciences, Seoul National University, Pre-med
1973 - 1978	College of Medicine, Seoul National University, M.D.
1978 - 1981	School of Public Health, Seoul National University, MPH
1981 - 1986	College of Medicine, Seoul National University, Ph.D

Training

1980 - 1983	Resident in Preventive Medicine, School of Public Health, Seoul National University
1986 - 1989	Resident in Family Medicine, Seoul National University Hospital

Professional Career

1990 - 1994	Assistant Professor of Preventive Medicine, College of Medicine, Dongguk University
1994 - 1999	Associate Professor of Preventive Medicine, College of Medicine, Dongguk University
1999 - Present	Professor of Preventive Medicine, College of Medicine, Dongguk University
1999 – 2000	Visiting Scientist, Environmental Epidemiology Services, Department of Veterans Affairs, USA
2004 – 2006	President of Korean Society of Epidemiology
2004 – 2008	A Member of A Committee, National Academy of Medicine of Korea

Qualification Certified

Korean Medical License for Practice, Ministry of Health and Social Welfare, 1978

Korean Board of Preventive Medicine (# 327, 1983)
Korean Board of Family Medicine (# 2090, 1989)
Korean Board of Occupational Medicine (# 63, 1997)

Professional Affiliations

The Korean Medical Association: Regular member since 1978
The Korean Society for Preventive Medicine: Regular member since 1979
The Korean Society of Epidemiology: Regular member since 1979
The Korean Academy of Family Medicine: Regular member since 1986
The Korean Society of Occupational Medicine: Regular member since 1997
American Public Health Association: Regular member since 2000

Scientific Articles

1. Investigation of Health Hazards in the Underground Storage facilities of Ginger Roots. J Prev Med Public Health 2002;35(1):72-75.
2. Epidemiologic Investigation on an Outbreak of Cholera in Gyeongsangbuk-do, Korea, 2001. J Prev Med Public Health 2002;35(4):295-304.
3. Green Tobacco Sickness on tobacco Harvesters in a Korean Village. Korean Journal of Epidemiology 2002;24(1):29-36.
4. Outbreak of Salmonellosis Misdiagnosed with Amebiasis in Gumi City and Chilgok County, Korea. Korean Journal of Epidemiology 2002;24(1):54-62.
5. Study on the Patterns of Helicopter Emergency Medical Services in Ullung Island. Korean J Rural Med 2002;27(1):115-123.
6. Occupational Diseases among Health Care workers Approved by Korea Labor Welfare Corporation. Korean J Occup Environ Med 2003;15(2):196-204.
7. Diagnosis and management of green tobacco sickness. Journal of the Korean Medical Association 2002;45(8):1027-1035.
8. A Case of Gastroenteritis Associated with Gastric Trichuriasis. J Korean Med Sci 2003;18(3):429-432.
9. Impact of Agent Orange Exposure among Korean Vietnam Veterans. Industrial Health 2003;41(3):149-157.
10. Survey on the Symptoms Related to Hair Dyeing among University Freshmen. J Prev Med Public Health 2003;36(3):223-229.
11. Status of the Occupational Health and Safety Programs of Several Hospitals in Korea. Korean J Occup Environ Med 2003;15(4):351-363.
12. Study on the Health-related Behaviors of Residents from Rural Areas. Korean J Rural Med 2003;28(2):31-48.
13. Relationship between reflective light and traffic accidents involving power-tillers Korean. J Rural Med 2003;28(2):61-70.

14. Prevalence and Risk Factors of Green Tobacco Sickness among Korean Tobacco Harvesters. J Prev Med Public Health 2004;37(1):37-43.
15. Evaluation of Field Epidemiology Specialist Training Program Based on the Satisfaction and the Changes of Educational Needs. J Prev Med Public Health 2004;37(1):80-87.
16. A Study on the Occupational Hazards Associated with Chronic Renal Failure. Korean J Occup Environ Med 2004;16(1):25-36.
17. Pulmonary Asbestos and Non-Asbestos Fiber Concentrations in Autopsied Inhabitants in Pohang, Korea. Industrial Health 2004;42(2):163-170.
18. Airborne Asbestos and Non-Asbestos Fiber Concentrations in Non-Occupational Environments in Korea. Industrial Health 2004;42(2):171-178.
19. Status on Influenza Vaccination for the Residents in Some Rural Communities Korean. J Rural Med 2004;29(1):121-131.
20. Analysis of Transmission Mode of Confirmed Shigellosis in Gyeongju, Korea. Korean Journal of Epidemiology 2004;26(1):1-16.
21. Epidemiological Characteristics and Changes of Prevalence for Green Tobacco Sickness among Korean Tobacco Harvesters. Korean Journal of Epidemiology 2004;26(1):39-49.
22. Epidemiologic Investigation into an Outbreak of Typhoid Fever Recognized by Electronic Data Interchange in Gyeongsangbuk-do, 2003. Korean Journal of Epidemiology 2004;26(1):59-68.
23. Smoking Behaviors and Its Relationships with Other Health Behaviors among Medical Students J Prev Med Public Health 2004;37(3):238-245.
24. A case of intermediate syndrome of organophosphate poisoning after dermal exposure Korean J Occup Environ Med 2004;16(3):329-335.
25. Case series for occupational dermatosis in a factory treated liquid waste mixtures Korean. J Occup Environ Med 2004;16(3):336-351.
26. Epidemiologic Investigation into the Outbreak of Acute Hemorrhagic Conjunctivitis in Gyeongju-City, South Korea, in 2002. J Prev Med Public Health 2004;37(4):312-320.
27. Urinary Cotinine Concentrations of Cases with Green Tobacco Sickness. Korean J Occup Environ Med 2004;16(4):413-421.
28. Health Hazards of Farming and Fishing in Korea. Korean J Rural Med 2002;27(1):197-215.

Ok Park

Date of Birth	March 6, 1971
Place of Birth	Jeonju, Korea
Nationality	Korean

Office address	Communicable Diseases Surveillance and Response (CSR) WHO Western Pacific Regional Office (WPRO) P. O. Box 2932 1000 Manila, Philippines

Present Academic & Hospital Appointments

9/2000-1/2005	Public Health Research Officer, Div. of Infectious Disease Surveillance, Department of Infectious Disease Investigation and Surveillance, Korea Center for Disease Control and Prevention, Seoul, Republic of Korea
2/2005-	Medical Officer, Communicable Disease Surveillance and Response, Div. of Combating Communicable Diseases, Western Pacific Regional Office

Education

09/1999-02/2003	PhD, Infectious Disease, Internal Medicine, Korea University Graduate School, Seoul, Korea
09/1997-08/1999	Master, Infectious Disease, Internal Medicine, Korea University Graduate School, Seoul, Korea
03/1996-4/2000	Residency, Department of Internal Medicine, Korea University Medical Center, Seoul, Korea
03/1995-02/1996	Internship, Korea University Medical Center, Seoul
03/1989-02/95	M.D., Korea University, College of Medicine

Career

03/2000-08/2000	Fellowship, Div. of Infectious Disease, Department of Internal Medicine, Korea University Medical Center, Seoul, Korea

Lisensure

1995	License for Medicine

Specialty Certification

2000	Certificate for Internal Medicine

Honors and Awards

2004 Prize for Excellent Poster Presentation "Molecular Analysis on Circumsporozoite protein of Re-emergent Vivax Malaria in ROK", Korean Society for Infectious Diseases

Professional Affiliation

2004 Member of the Faculty, Korean Society for Nosocomial Infection Control

Publications

1. Lee SK, Park SK, Kim YT, Park O, Lee HJ, Seo K. Status of National Antenatal Hepatitis B Screening and Neonatal Immunization Program in Korea. *Korean J Mat Child Health* 2004;8(2):175-183 Korean
2. Yoo YO, Jeong EK, Park O, Chun BC. Sentinel Surveillance System for Pediatric Communicable Diseases. *Korean J Epidemiol*. 2004 Dec;26(2):32-42. Korean
3. Park O. Incidence, Epidemiological Characteristics and Surveillance System of Creutzfeldt-Jakob Disease in Korea. *Korean J Agricultural Med* 20012;26(1):177-184
4. Lee JS, Park O, Woo HJ, Jung HJ, Kim WJ, Kim MJ, Park SC. A Longitudinal Molecular Epidemiologic Study of Methicillin-resistant *Staphylococcus aureus* (MRSA) Isolates from a University Hospital. *Korean J Infect Dis*. 2001 Feb;33(1):32-39. Korean
5. Yu CW, Park CW, Hwang BY, Song JY, Park O, Sohn JW, Cheong HJ, Kim WJ, Kim MJ, Park SC. Clinical Features and Prognosis of Community-acquired Pneumonia in the Elderly Patients. *Korean J Infect Dis*. 2000 Jun;32(3):212-218. Korean
6. Sohn JW, Kim CH, Park O, Cheong HJ, Kim WJ, Kim MJ, Park SC, Kim SI, Kim YK. A randomized, phase II, dose-ranging trial of metampicillin/sulbactam (Mepicin) in the treatment of acute pyelonephritis. *Korean J Infect Dis*. 2000 Apr;32(2):135-140. Korean
7. Park O, Park KH, Kim CH, Park SC, Kim WJ, Jung HJ, Sohn JW, Lee CK, Kim SI, Kim MJ. A Surveillance on Nosocomial Acquisition of *Clostridium difficile* and Comparative Analysis of 3 Molecular Typing Methods including Pulsed-Field Gel Electrophoresis, Arbitrarily Primed Polymerase Chain Reaction, and Ribotyping. *Korean J Infect Dis*. 1999 Oct;31(5):371-381. Korean

Baik Lin Seong

Date of Birth 1955. 3. 28.
Place of Birth Korea
Nationality Korean

Office address Department of Biotechnology, College of Engineering
Yonsei University, 134 Shinchon-dong, Seodaemun-gu,
Seoul 120-749, KOREA

Present Academic & Hospital Appointments

Professor, Yonsei University

Education

Sep.82-Dec.87	PhD, Dept of Biology, MIT, USA
Mar.77-Feb.79	Dept of Biological Science, KAIST, KOREA
Mar.73-Feb.77	BS in Pharmaceutical Chemistry Seoul National University, KOREA

Career

Mar. 98-Now	Delegate and Advisor to Korean Government, Biological Weapons Convention (BWC) Ad Hoc Group Meeting, UN Conference, Geneva
Feb. 98- Now	Professor, Department of Biotechnology, College of Engineering, Yonsei University
Mar. 2000 – Now	CEO, Protheon, Seoul, Korea
Feb.96- Feb. 98	Board of Directors, Hanil Group
May.93-Aug.97	Director, Institute of Biological Sciences Hanhyo Institutes of Technology, KOREA
Sep.92-Mar.93	Research Scientist Aviron, Mountain View, California, USA
May.88-Sep.92	Postdoctoral research assistant Dunn School of Pathology, Univ. Oxford, UK

Specialty Certification

Pharmacist

Funded Grants

1. Controlling Strategies on Bioterror Agents (Ministry of Science and Technology, Korean Government)

2. Frontier Research on Human Genome (Ministry of Science and Technology, Korean Government)
3. Strategic Research Initiatives on Emerging and Reemerging Viruses (Ministry of Human Welfare, Korean Government)
4. Nanotechnology Research Grant (Ministry of Science and Technology, Korean Government)
5. Frontier Research on Microbial Genome (Ministry of Science and Technology, Korean Government)

Honors and Awards

Oct. 2001. Hantaan Research Award (Hantaan Biomedical Foundation)
Apr 2002 Best 30 Research of Excellence
(Korea Science and Engineering Foundation)

Professional Affiliations

American Society for Microbiology (1993 - now)
Society for General Microbiology (1994 - now)
AAAS (American Association for the Advancement of Science) (1999 - now)

Major Research Interests

Live influenza vaccine development
Reverse genetics of negative-stranded RNA viruses
RNA-mediated molecular chaperones for in vivo protein folding
High-throughput protein expression technology

Scientific Presentations

Genetically engineered live influenza vaccine: Combination of conventional and reverse genetic approach. The 7th China-Korea Joint Symposium on Bioscience and Biotechnology. Qingdao, Shangdong Nov. 11-12, 2004

Basic Science Coorporation Joint Symposium
Live Influenza Vaccine : Prophylactic and Therapeutic Potential
The Japan-Korea Basic Science Coorporation Joint Symposium
Nov 17 - 19, 2004

Characterization of Immunogenic Properties of Cold-Adapted Influenza Vaccine
The World Influenza Vaccination Conference 2004. May 24-26, Lisbon. Portugal

Control of influenza: Development of live vaccine (2004)
Infection and Chemotherapy Symposium. May 1, 2004. Seoul, Korea

Live influenza vaccine: Prophylactic and therapeutic potential (2004)
Symposium on Basic Medical Sciences. May 7, 2004. Seoul, Korea

Aminoacyl tRNA synthetase as RNA-mediated intra-molecular chaperone (2004)
2004 International Conference on Aminoacyl tRNA synthetase, Seoul, Korea

Recent Progresses on Live Influenza Vaccine Development
2003 International Meeting of the Federation of Korean Microbiological Societies Oct. 23-24, Seoul, Korea

Defense Strategies on Respiratory Bioterror Agents
The Threat of WMD and the Security of the Korean Peninsula . Hwarangdae International Symposium. Oct. 23-24, 2003 The Military Academy, Seoul, Korea

Control of avian influenza: Defense strategies on respiratory bioterror agent.
2003 International Meeting of the Microbiological Society of Korea. May 2-3, Chunchon, Korea

A New Strategy for Protein Folding in vivo. Biocatalysis 2003, Feb. 25-26, 2003, Kyungju, Korea

Solubility/Secretion enhancer system for production of functional proteins
Cambridge Healthtech Institute 5th Annual Conference on Genomic Partnering. Feb. 23-24, 2002. Santa Clara, CA

Cisperone: A New Strategy for Protein Folding in vivo. 2nd KIAS Symposium on Protein Structure and Function. Sept. 26-28, 2002. Seoul, Korea

Studies on the immunogenicity of CTB-malaria CTL epitope fusion protein
Scientific Meeting of the Biochemical Society of Korea, Korea

Control of influenza: Live vaccine development. 51th Annual Convention of the Pharmaceutical Society of Korea. Oct. 17-18, 2002 Osong, Korea

Combination of conventional and reverse genetic approach for an improved influenza vaccine. The 6th Japan-Korea International Symposium on Microbiology
Nov. 7-9, 2002. Osaka, Japan

Genetically engineered live influenza vaccine: Combination of conventional and reverse genetic approach. Hantaan Research Award Lecture, 33rd Annual meeting of the Korean Society of Virology. Nov.1, 2001, Seoul, Korea

Influencing the influenza virus: Combination of conventional and reverse genetic approach for development of live influenza vaccine. Korea-U.S. Forum on Emerging Infectious Diseases. Apr. 12-13. Washington D.C., USA

Publications

Kyung-Soon Park, Hyo-Young Yang, Sueung-Il Lee, SungKeun Kim, Eui-Joong Kim, Baik Lin Seong, Wongi Seol, and Jin-Soo Kim (2005) Identification and use of zinc finger transcription factors that increase production of recombinant proteins in yeast and mammalian cells. *Biotechnol. Prog. In press*

1. K-H Kim and B. L. Seong (2003) Pro-apoptotic Function of Hepatitis B Virus X Protein is Mediated by Interaction with c-FLIP and Enhancement of Death-inducing Signal. *EMBO J*. 22(9) 2104- 2116

K-H Kim, K-H Lee, H-Y Chang, S-H Ahn, S. Tong, Y-J Yoon, B. L. Seong, S-I Kim, and K-H Han (2003) Evolution of Hepatitis B Virus Sequence from a Liver Transplant Recipient with Rapid Breakthrough despite Hepatitis B Immune Globulin Prophylaxis and Lamivudine Therapy. *J. Med. Virol.* 71, 367-375

K-S Park, Y.Ahn, J-A Kim, M-S, Yun, B. L. Seong and K-Y Choi (2002)
Extracellular zinc stimulates ERK-dependent activation of p21Cip/WAF1 and inhibits proliferation of colorectal cancer cells. *Brit. J. Pharmacol*. 137, 597 - 607.

K-Y Lee, B. L. Seong and K-H Kim (2002)
Soluble factor mediated differentiation of CD4+CD8+ thymocytes to single positives in vitro. *Differentiation* Oct;70(8):410-21

K-Y Lee, J.H. Yoon, M. Kim, S, Roh, Y-S Lee, B.L. Seong and K-H Kim (2002)
A dipalmitoyl peptide that binds SH3 domain disturbs intracellular signal transduction and inhibits tumor growth in vivo. *Biochem. Biophys. Res. Comm*., 296, 434 – 442.

H. W. Song, S. I. Choi, and B. L. Seong (2002) Engineered recombinant enteropeptidase catalytic subunit : Effect of N-terminal modification *Arch. Biochem. Biophys*. 400, 1, 1-6.

K-Y Lee, E. Chun and B. L. Seong (2002) Investigation of antigen delivery route *in vivo* and immune-boosting effects mediated by pH-sensitive liposomes encapsulated with K^b-restricted CTL epitope. *Biochem. Biophys. Res. Comm*. 292, 682-688.

K-Y Lee, E. Chun N. Y. Kim and B. L. Seong (2002) Characterization of HLA-A2 restricted epitopes, conserved in both Hantaan and Sin Nombre virus, in Hantaan-infected patients *J. Gen. Virol*. 83, 1131-1136

S. I. Choi, H. W. Song, J. W. Moon, and B. L. Seong (2001) Recombinant enterokinase light chain with affinity tag: Expression from Saccharomyces cerevisiae and its utilities in fusion protein technology. *Biotechnol. Bioeng*. 75, 718-724

K. H Lee, J. W. Youn, H. J. Kim, and B. L. Seong (2001) Idetification and characterization of mutations in the high growth vaccine strain of influenza virus. *Arch. Virol.* 146, 369-377.

J. Lee, S.I. Choi, J.S. Jang, K.R. Chang, J.W. Moon, C.S. Bae, D.S. Yang, and B.L. Seong (1999) Novel secretion system of recombinant *Saccharomyces cerevisiae* using the N-terminus of human interleukin-1b as secretion enhancer. *Biotechnol. Prog*. 15, 884-890.

H-K Cheong, C. Cheong, Y.S. Lee, B.L. Seong, and B-S Choi (1999) Three dimensional structure of the panhandle RNA of influenza virus A studied by NMR spectroscopy. *Nucl. Acids Res.* 27, 1392-1397.

S.W. Lee, J.W. Youn, B.L. Seong and Y.C. Sung (1999) IL-6 induces long-term protective immunity against a lethal challenge of influenza virus. *Vaccine* 17, 490-496

U.S. Biosketches

Ruth L. Berkelman

Position Title

Rollins Professor of Public Health Preparedness

Education and Training

Institution and Location	Degree	Year(s)	Field of Study
Princeton University, Princeton, NJ	A.B.	1970-1973	
Harvard Medical School, Boston, MA	M.D.	1973-1977	
Cambridge Hospital		1977-1978	Internal Medicine
Mass General Hospital, Boston, MA		1978-1980	Pediatrics
Emory University Hospital, Atlanta, GA		1984-1985	Internal Medicine

A. Positions and Honors.

Positions and employment

1980 – 1982	EIS Officer, Hospital Infections Program, National Center for Infectious Diseases, Centers for Disease Control and Prevention (CDC)
1983 – 1986	Chief, Epidemiologic Studies Branch, Division of Surveillance and Epidemiologic Studies, Epidemiology Program Office, CDC
1986 – 1988	Director, Division of Surveillance and Epidemiologic Studies, CDC
1988 - 1992	Chief, Surveillance Branch, Division of HIV/AIDS, CDC
1992 - 1997	Deputy Director, National Center for Infectious Diseases, CDC
1995 - 2000	Assistant Surgeon General (Retired, 2000)
1998 - 2000	Senior Advisor to the Director, CDC
2001- Present	Clinical Professor, Department of Epidemiology, Rollins School of Public Health; Emory University; joint appointment, Department of Global Health
2002- Present	Rollins Professor and Director, Center for Public Health Preparedness and Research, Rollins School of Public Health, Emory University
2002- Present	Joint appointment, Emory School of Medicine
2003- Present	Member, Board of Life Sciences, NAS
2003- Present	Member, Forum on Emerging Infections, Institute of Medicine
2004- Present	Chair, Public and Scientific Affairs Board, American Society of Microbiology

Honors

2003- Present	National Associate, National Academies of Science
2004-Present	Elected to membership, National Academies of Science, Institute of Medicine

Selected peer-reviewed publications (in chronological order).

1. **Berkelman RL**, Lewin S, Allen JR. Pseudobacteremia attributed to contamination of povidone-iodine with Pseudomonas cepacia. *Ann Intern Med* 1981;95:32-6.
2. **Berkelman RL**, Martin D, Graham DR. Streptococcal wound infections caused by a vaginal carrier. *JAMA* 1982;247:2680-2.
3. **Berkelman RL**, Godley J, Weber JA, Anderson RL, Lerner AM, Petersen NJ, Allen JR. Pseudomonas cepacia peritonitis caused by contamination of automatic peritoneal dialysis machines. *Ann Intern Med* 1982;96:456-8.
4. **Berkelman RL**, Holland BW, Anderson RL. Increased bactericidal activity of dilute preparations of povidone-iodine solutions. *J Clin Microbiol* 1982;15:635-9.
5. Goodman RA, **Berkelman RL**. Physicians, vital statistics and disease reporting. *JAMA* 1987;258:379-81.
6. Thacker SB, **Berkelman RL**. Public Health Surveillance in the United States. *Epidemiol Rev.* 1988;10:164-90.
7. **Berkelman RL**, Guinan M, Thacker SB. What is the health impact of day care attendance on infants and preschoolers? *Public Health Rep* 1989;104:101-3.
8. Thacker SB, **Berkelman RL**, Stroup DF. The science of public health surveillance. *J Public Health Policy* 1989;10:187-203.
9. Chorba TL, **Berkelman RL**, Safford SK, Gibbs NP, Hull HF. Mandatory reporting of infectious diseases by clinicians. *JAMA* 1989;262:3018-26.
10. Berkelman RL, Curran JW, Darrow W, Dondero T, Morgan M. Monitoring the U.S. AIDS epidemic. Science 1989;245:908.
11. **Berkelman RL**, Curran JW. Epidemiology of AIDS and HIV infection: an update. *Epidemiologic Reviews* 1989;11:222-8.
12. Beral V, Peterman T, **Berkelman R,** Jaffe H. AIDS-associated non-Hodgkins lymphoma. *Lancet* 1991;337:805-09.
13. Buehler JW, **Berkelman RL,** Stehr-Green JK. The completeness of AIDS surveillance. *J AIDS* 1992;5:257-64.
14. Ciesielski CA, Marianos D, Ou C-Y, Dumbaugh R, Witte J, **Berkelman RL**. Transmission of human Immunodeficiency virus in a dental practice. *Ann Intern Med* 1992;116:798-805.
15. **Berkelman RL**. Emerging infectious diseases in the United States, 1993. *J Infect Dis* 1994;170:272-7.
16. Bryan RT, Pinner RW, Gaynes RP, Peters CJ, Aguilar JR, **Berkelman RL**. Addressing emerging infectious disease threats: a prevention strategy for the United States; executive summary. *MMWR* 1994;43 (No.RR-5).
17. **Berkelman RL**, Bryan RT, Osterholm MT, LeDuc JW, Hughes JM. Infectious disease surveillance: a crumbling foundation. (Policy Forum) *Science* 1994;264:368-70.
18. **Berkelman, RL,** Pinner RW, Hughes JM. Addressing emerging microbial threats in the United States. *JAMA* 1996;275:315-17.

19. Pinner RW, Teutsch SM, Simonsen L, Klug LA, Graber JM, Clark MJ, **Berkelman RL.** Trends in infectious diseases mortality in the United States. *JAMA* 1996;275:189-93.
20. **Berkelman RL.** The public health response to emerging infectious diseases: are current approaches adequate? In: (eds. Greenwood B, De Cock K) New & Resurgent Infections Predictions, Detection and Management of Tomorrow's Epidemics, John Wiley & Sons Ltd, West Sussex, England, 1998, Chapter 15,183-197.
21. **Berkelman RL**. The emergence and resurgence of bacterial infectious diseases. In: (eds. Hausler WJ, Sussman M) Topley & Wilson's Microbiology and Microbial Infections, Ninth Edition, Vol. 3. Edward Arnold (Publishers) Ltd., London, 1998, Chapter 11, 167-173.
22. Pinner RW, Koo D, **Berkelman RL.** Surveillance of Infectious Diseases. In: (ed. Lederberg J) Encyclopedia of Microbiology, Second Edition, Vol. 4. Academic Press, 2000, 506-525.
23. **Berkelman RL**. Public Health Priorities for Responding to Bioterrorism In: (eds. Knobler SL.) Biological Threats and Terrorism, National Academy Press, Washington, DC, 2002, 178-181.
24. **Berkelman RL**, Stroup DF, Buehler JW. Public Health Surveillance. In: (eds. Detels R.) Oxford Textbook of Public Health, Fourth Edition. Chapter 6.16, 759-778. Oxford University Press,Oxford, 2002, Vol. 2.
25. **Berkelman RL.** Human illnesses associated with veterinary vaccines. *Clinical Infectious Diseases* 2003;37:407-14.
26. Buehler, JW, **Berkelman, RL**, Hartley, DM, Peters, CJ. Syndromic Surveillance and Bioterrorism-related Epidemics. *Emerging Infectious Diseases* 2003; 9:1197-1204.
27. Greensides, DR, **Berkelman RL**, Lansky A, Sullivan PS. Alternative HIV Testing Methods among populations at high risk for HIV infection. *Public Health Reports* 2003; 118:531-539.
28. Fleischauer AT, Silk BJ, Schumacher M, Komatsu K, Santana S, Vaz V, Wolfe M, Hutwagner L, Cono J, **Berkelman R**, Treadwell T. The Validity of Chief Complaint and Discharge Diagnosis in Emergency Department-based Syndromic Surveillance. *Acad Emerg Med.* 2004, Vol. 11, No. 12, 1262-1267.
29. Buehler JW, **Berkelman RL**, Hartley, DM, Peters, CJ. Syndromic surveillance and bioterrorism-related epidemics (Letter). *Emerging Infectious Diseases* 2004; 10:1334-1335.

Research Support.

Ongoing Research Support

Cook-Deegan (PI) – Duke 9/03-Present
NIH # 1U54-AI057157-02
Southeastern Regional Center for Excellence in Biodefense

Policy, Ethics, and Law Core

Aim 1: Identify and rank for debate and discussion the range and nature of ethical and policy issues that will be encountered while conducting research on emerging infections and biodefense as well as issues relating to clinical care and public health policy.
Aim 2: Analyze and debate a selected set of the issues that pose barriers to good research, the delivery of quality clinical care and public health policy related to biodefense and emerging diseases.
Aim 3: Provide guidance and consulting services to those involved in the Southeastern Regional Center of Excellence for Biodefense and Emerging Diseases (SERCEB).
Role: Consultant

Stephens (PI) 09/01/03 –02/29/08
NIH # 124646 PROJ CD3
Southeast Regional Centers for Excellence in Biodefense
High Containment Microbial Science and Biosafety Training Program
(a program within the SERCEB consortium)

In order to meet the need for trained personnel in current and future BSL 3 and BSL 4 laboratories and in order to the expand the biodefense capabilities of the United States in response to the growing threat of bioterrorism, the goals of the SERCEB High Containment Microbial Science and Biosafety Program are to:

- Enhance the design, conduct and analysis of BSL-3/4 research and other select agent protocols;
- Enhance the development of competitive grant applications in biodefense research;
- Provide a standard of training and recognition to allow the graduate to successfully compete for positions in biodefense research and to supervise work in BSL-3 and 4 facilities;
- Provide graduates with a core fund of knowledge and experience in order that they may serve as research mentors to students, fellows, and other trainees.

O. Wayne Rollins Foundation 01/02-12/04
Center for Public Health Preparedness and Research

The purpose of the grant is to initiate a center to prepare public health professionals and others in the community to address emerging infectious diseases, including bioterrorism, and other public health threats, through training and education, research and policy development, and community service.

U90/CCU424256-01 09/04-8/05
CDC
EMORY A-CPHP
The purpose of this grant is to provide training in public health preparedness (e.g., surveillance, epidemiology) to GA public health professionals currently working in

either a local or the state health department. Additionally, a supplement is aimed to provide similar training to public health professionals in Puerto Rico.
Role: Consultant

Completed Research Support

290000011/TASK ORDER 2 Green (PI) 10/01/02-09/30/03
AHRQ
Predicting Healthcare use Resulting from Terrorism: Tools to Aid State Planning"

The objective of this project is to identify categories of illness and health care use that increased or decreased in association with terrorist attacks of 2001, both in geographic areas in proximity to the attacks and nationwide, so that health service needs in the event of future terrorist events can be better anticipated. The project is based on analysis of claims from a large, national health insurance provider. I am serving as a consultant medical epidemiologist to the project and am contributing to the development of the analytic strategy and interpretation of the results.
Role: Co-Investigator

Frankel, (PI) 9/01-8/02
CDC
Paul Coverdell Stroke Registry

The objective of the project is to develop a statewide stroke registry to track the impact of strokes and the availability of stroke treatment with the aim of improving the quality of care for stroke victims.

Woods (Duke University) PI 09/03 – 08/04
Southeastern Center for Emerging Biological Threats (SECEBT)
Detection of West Nile Virus Infection among a Cohort of Febrile Patients Presenting for Emergency Care in the Southeastern United States.

The objective of this research was to assess the incidence of illness in febrile patients presenting to an emergency department in an urban city hospital attributable to West Nile virus infection, and to assess more accurately the clinical spectrum of disease associated with West Nile virus infection.
Role: Co-Principal Investigator

Miner (PI) 07/02-07/04
Project #A1002-21/21
Academic Center for Public Health Preparedness
Centers for Public Health Preparedness, Centers for Disease Control and Prevention.

The purpose of this grant is to provide training in public health preparedness (e.g., surveillance, epidemiology) to GA public health professionals currently working in either a local or the state health department. Additionally, a supplement is aimed to provide similar training to public health professionals in Puerto Rico.
Role: Co-Investigator

William A. Blanpied

William A. Blanpied is Visiting Senior Research Scholar in the Science and Trade Policy Program at George Mason University. Prior to his retirement from the federal government in January 2003 he had been, since 1983, Senior International Analyst at the National Science Foundation (NSF), except for the period from July 1999 through August 2002 when he served as Director of the NSF Tokyo Regional Office in the US Embassy. He also currently serves as a Senior Advisor to the Global Emerging Technologies Institute (GETI).

Blanpied joined NSF in 1976 as Program Manager for Ethics and Human Values in Science and Technology. Subsequently, he served as Head of the Office of Special Projects in the Office of the Director before joining the Division of International Programs (since 2001 the Office of International Science and Engineering) in 1983. Prior to his service with NSF, he held faculty appointments in the physics departments at Case Western Reserve, Yale, and Harvard Universities, where his research interests were in experimental particle physics. While at Harvard, he established and served as first editor of an international newsletter that has since evolved into the quarterly journal, *Science, Technology and Human Values*. He left Harvard in 1974 to become Head of the Division of Public Sector Programs at the American Association for the Advancement of Science (AAAS), where he was among those responsible for instituting the annual AAAS budget analysis and the series of annual meetings which have evolved into the AAAS Science and Technology Policy Colloquia.

Blanpied received his BS degree from Yale University in 1955 and his PhD in physics from Princeton University in 1959. He is a Fellow of the American Association for the Advancement of Science and the American Physical Society. From 1987 to 1989 he was on leave of absence from NSF as Scholar in Residence at the Graduate School of International Relations and Pacific Studies at the University of California, San Diego, and was an Adjunct Professor at George Mason University's International Institute from 1991 to 1996. He is the author or co-author of three books, and has published numerous articles and reviews in the professional literature on physics, history of science, international science, and science policy, including both its national and international aspects.

In April 2003 Blanpied was designated as an International Affiliated Fellow of the National Institute for Science and Technology Policy in Tokyo. During the Fall 2003 semester he was a Visiting Professor in the School of Public Policy and Management at Tsinghua University, Beijing. In April 2005, he presented a short course on Science and Technology Policy at the Institute of Policy and Management at the Institute of Policy and Management of the Chinese Academy of Sciences in Beijing, and organized a tour of US and Japanese researchers to nanoscience and technology centers in China in October 2005.

David Reynolds Challoner

David Reynolds Challoner was born January 31, 1935, and raised in Green Bay, Wisconsin. He graduated from Lawrence College in Appleton, Wisconsin cum Laude in 1956. He received his M.D. cum Laude from Harvard Medical School in 1961, having taken a year's leave of absence as a Research Fellow in the Department of Biochemistry at Cambridge University in England. His post-graduate training included an internship and residency in internal medicine at Columbia Presbyterian Hospital in New York City, a chief medical residency and endocrinology fellowship at the University of Washington in Seattle, and research training as a Research Associate at the National Heart Institute in Bethesda.

His first academic appointment in 1967 was at the Indiana University School of Medicine where he rose to the rank of Professor of Internal Medicine. He subsequently served as Dean and Professor of Medicine at the St. Louis University School of Medicine from 1975 to 1982, University of Florida Vice President for Health Affairs and Chairman of the Board of Directors of the Shands Hospitals from 1982-1998, and currently holds the position of Interim Chair for the Department of Health Policy & Epidemiology and Vice President for Health Affairs Emeritus.

Dr. Challoner's scientific career has included research in endocrinology and metabolism resulting in over thirty scientific publications. His clinical specialty is in internal medicine with a subspecialty interest in endocrinology.

His honors have included election to Phi Beta Kappa and Alpha Omega Alpha, the national medical honorary, the American Society for Clinical Investigation, and the Association of American Physicians. He was awarded the Harvard Medical Alumni Award in 1961 and the Lawrence University Distinguished Alumni Award in 1987. He was the recipient of the American Medical Association's Dr. William Beaumont Award in 1982 for "outstanding contributions to the profession of medicine by a physician under the age of 50."

Among his governing board responsibilities are, or have been, service as a member of the Board of Trustees of Lawrence University in Appleton, Wisconsin, and the Board of Directors of Cordis Corporation in Miami, Florida.

He has held leadership and health policy positions in many national organizations including the Association of American Medical Colleges where he holds Distinguished Service Membership, the American Medical Association where he served as Chairman of the Section on Medical Schools, and the American Federation for Clinical Research which he served as President. He has been elected a member of the Institute of Medicine of the National Academy of Sciences where he served as Chairman of the Membership

Committee, member of the Governing Council and currently serves as its Foreign Secretary.

He has been instrumental in the founding of the InterAcademy Medical Panel, the first global organization of the world's medical academies and currently serves as its Co-Chair. Its purpose is to increase the participation of the world's medical academies in local, regional, and global civil society.

His science policy positions includes appointment by President Reagan to Chair the President's Committee on the National Medal of Science from 1988-90. He served on the Advisory Committee to the Director of the National Institutes of Health, and the National Academies' umbrella Committee on Science, Engineering and Public Policy (COSEPUP), and currently serves on the Governing Board of the National Research Council.

He was married to Jacklyn Anderson in 1958 and they have three children, David, Laura and Britt and seven grandchildren.

Alexander P. De Angelis

Expertise: Science, technology, and international affairs

EXPERIENCE

February 1, 2005: retired from Federal service

August 1996-February 2005: Program Coordinator, East Asia and Pacific Program, NSF. Responsible for scientific and technological relations with China, Japan, Korea, Mongolia, Taiwan, Southeast Asia, Australia, New Zealand, and the Islands of the Pacific.

December 1995-August 1996: Program Coordinator, Japan Program, NSF.

December 1993-November 1995: Director, Office of Japan Affairs (OJA), National Research Council (NRC). Addressed policy issues surrounding a changing U.S.-Japan relationship in science and technology, promoted better relationships between the technical communities in the two countries through dialogue on issues of mutual concern, and served as a resource to the Academy complex and the broader U.S. science and engineering communities on Japanese science and technology. Major studies included:1) a broad overview study of U.S.-Japan scientific and technical relations from defense technology relations to industrial technological competitiveness with the objective of creating a framework for competing and cooperating with Japan in science and technology; and 2) bilateral studies with Japan in engineering education, innovation, and the rights and responsibilities of multinational corporations.

June 1989 - December 1993: Senior Program Manager, then Director, Japan Program, National Science Foundation (NSF). Responsible for a broad range of grants programs to provide American researchers with the ability to access Japan's science and technology. Managed budget of approximately $2 million and a staff of five in Washington, D.C., and six in Tokyo. Served as Divisional Liaison to the Directorate for Biology and as coordinator for the Human Frontier Science Program. Also served as de facto executive secretary of the Task Force on Access under the U.S.-Japan Agreement on Science and Technology. Represented NSF in trilateral negotiations (U.S.-Tokyo-European Community) in Tokyo, Brussels, and Washington related to the establishment of international cooperation in Intelligent Manufacturing Systems.

June 1986 - June 1989: Head, Tokyo Regional Office, NSF, U.S. Embassy, Tokyo, Japan Coordinated scientific cooperation with Japan and represented NSF interests in China, Hong Kong, Taiwan, Korea, Philippines, and other parts of Asia.

January 1986 - June 1986: NSF Visiting Fellow, Ministry of Education, Tokyo. Studied the role of the Ministry of Education and other Japanese government agencies in science and technology and also government-industry cooperation. First American intern in a major Japanese science or education agency.

1981 - January 1986: Program Director, China Program, NSF. Helped forge scientific and technical relationship with China following the establishment of diplomatic relations.

1973-1981: Professional Associate, Committee on Scholarly Communication with the People's Republic of China, National Academy of Sciences. Participated in developing the first sustained interactions between the United States and the People's Republic of China since the early 1950s, working closely with the Department of State, the National Security Council, and the White House Science Office. Represented the China Committee at conference on Chinese science and technology held in the Organisation for Economic Co-operation and Development (OECD) headquarters in Paris (1976).

LANGUAGES Fluent in Japanese, Chinese, and Italian, conversant in German

EDUCATION Graduate studies in Chinese and Japanese language and literature, Cornell University, 1969-1972; M.A. from Seton Hall University in Asian Studies, 1969, and B.A. from New York University in biology in 1967. Received the Douglas MacArthur Fellowship from the City of New York (1965-66) for study in Japan. The fellowship annually supported exchange of one college student from New York City and one from Tokyo under the auspices of the Tokyo-New York Sister City Affiliation. Spent one year at International Christian University, Mitaka, Japan. 1963: graduated from Oyster Bay High School, Oyster Bay, New York.

PERSONAL

Born January 13, 1945, Greencastle, Northern Ireland, to Alexander A. De Angelis, Corporal, U.S. Army Air Corps, and Mary Rodgers of the Royal Ulster Fire Brigade. Left Ireland for America at age of fifteen months on U.S. Army troop transport ship. Grew up in Oyster Bay, Long Island. Enjoyed basketball and playing clarinet in the school band. President of the student organization in senior year. Married in 1969 to Ildiko Pogany. Father of two children: Roxana, born February 3, 1979, and Juliana, born December 19, 1984.

Laurie Garrett

Senior Fellow for Global Health
Council on Foreign Relations

Pulitzer Prize winner and expert on global health with a particular focus on newly emerging and re-emerging diseases; in-depth knowledge of public health and its effects on foreign policy and national security.

Expertise:
Global health systems; chronic and infectious diseases; bioterrorism.

Experience:
Health and science writer, *Newsday*; visiting fellow, Harvard Public School of Health (1992-93); science correspondent, National Public Radio; Department of Food & Agriculture, State of California; science reporter, KPFA Radio Station. Freelance reporter and correspondent for *Foreign Affairs, Esquire, Vanity Fair, The Los Angeles Times, The Washington Post*, and *Current Issues in Public Health*. Frequent guest on ABC Nightline, The Charlie Rose Show, the Lehrer NewsHour, BBC (TV and radio), NPR, CBC (Canada), ABC (Australia), CNN, and a host of other broadcast outlets.

Selected Publications:
"Betrayal of Trust: The Collapse of Global Public Health" (Hyperion Press, August 2000); "Microbes vs. Mankind – Headline Series Monograph" (Foreign Policy Association, 1996); "The Coming Plague: Newly Emerging Diseases in a World Out of Balance" (Farrar Straus & Giroux, October 1994); "How Did This Happen? Terrorism and the New War" (contributor, 2001); "Epidemic! The World of Infectious Diseases" (contributor, 1999); "Diseases in Evolution: Global Changes and the Emergence of Infectious Diseases" (1994); "AIDS: Prevention through Education, A World View" (contributor, 1992); "AIDS in the World: A Global Report" (contributor, 1992); "AIDS: The Women" (contributor, 1988); various articles in scholarly journals including *The Responsive Community* (Winter 2001/2002), *Journal of Urban Health* (2001).

Education:
Ph.D. (honorary), Wesleyan Illinois University and University of Massachusetts, Lowell; B.A., University of California, Santa Cruz

Honors:
Newsday Publisher's Award for Outstanding Specialty Reporting (2003); First Prize in the 2002 Medical Book Competition of the British Medical Association, "Betrayal of Trust"; George C. Polk Award for Best Book of 2000, "Betrayal of Trust" (2000); Madeleine Dane Ross Award for Best Reporting in Any Media on the Human Condition, Overseas Press Club of America, "Betrayal of Trust" (2000); Newsday Publisher's Award for Outstanding Specialist Reporting "AIDS in Africa" (2000); Public Health

Hero Award, NYC Department of Health (2000); George C. Polk Award for International Reporting, “Crumbled Empire, Shattered Health” (1998); finalist, Pulitzer Prize for Beat Reporting, “Crumbled Empire, Shattered Health” (1998); Named ‘Champion of Prevention’ by the Centers of Disease Control and Prevention (1997); 18th Annual Joseph Mountin Lecturer for the Centers for Disease Control and Prevention (1997); winner, Pulitzer Prize for Explanatory Journalism, “Ebola” (1996); finalist, Pulitzer Prize for International Reporting, “Ebola” (1996); Presidential Citation, American Public Health Association (1996); Alumna of the Year, University of California, Santa Cruz (1996); Regents’ Lecturer, University of California (1996); Madeleine Dane Ross Award for Best Reporting in Any Media on the Human Condition, Overseas Press Club of America, “Ebola” (1996); Distinguished Achievement Award, Educational Press Association of America (1996); Newsday Publisher’s Award, Best Beat Reporter (1995); American Association for the Advancement of Science Special Citation for Outstanding Journalism (1995); Times Mirror Journalist of the Year (1996); Bob Considine Award of the Overseas Press Club of America (1995); National Press Club (1982); Award of Excellence from the National Association of Black Journalists (1989); George Foster Peabody Broadcasting Award (1977); Armstrong Award in Broadcast Journalism (1978).

Donald A. Henderson

D.A. Henderson is Professor of Public Health and Medicine at the University of Pittsburgh and Resident Fellow of the Center for Biosecurity of the University of Pittsburgh Medical Center. He is Dean Emeritus of the Johns Hopkins School of Public Health and a Founding Director (1998) of the Hopkins Center for Civilian Biodefense Strategies. From November 2001 through April 2003, he served as Director of the Office of Public Health Emergency Preparedness and, later, as Principal Science Advisor, in the Office of Secretary of the Department of Health and Human Services.

Dr. Henderson's previous positions include: Associate Director of the Office of Science and Technology Policy, Executive Office of the President (1990-93); Dean of the Faculty of the Johns Hopkins School of Public Health (1977-90); and Director of the World Health Organization's global smallpox eradication campaign (1966-77).

In 2002, he received the Presidential Medal of Freedom, the nation's highest civilian honor. He is the recipient also of the National Medal of Science; the National Academy of Sciences' Public Welfare Medal; and the Japan Prize, shared with two colleagues. He has received honorary degrees from 16 universities and special awards from 19 countries.

Dr. Henderson serves as an advisor to many organizations in the United States and abroad. His roles in this capacity include: Chairman of the Technical Advisory Group on Vaccines of the Pan American Health Organization; Chairman of the National Advisory Council on Public Health Emergency Preparedness; Chairman of the WHO ad hoc Orthopoxvirus Advisory Committee. He is a Member of the Institute of Medicine; a Fellow of the American Academy of Arts and Sciences; an Honorary Fellow of the National Academy of Medicine of Mexico; an Honorary Fellow of the Royal College of Physicians of London; an Honorary Member of the Royal Society of Medicine; and is a Fellow of a number of professional medical and public health societies.

Dr. Henderson is a member of the editorial board for the peer-reviewed journal, *Biosecurity and Bioterrorism: Biodefense Strategy, Practice and Science.* Additionally, he has authored more than 200 articles and scientific papers, 31 book chapters, and is coauthor of the renowned *Smallpox and Its Eradication* (Fenner F, Henderson DA, Arita I, Jezek A, and Ladnyi ID. 1988. Geneva: World Health Organization), the authoritative history of the disease and its ultimate demise.

Dr. Henderson, a Lakewood, Ohio native, graduated from Oberlin College, from the University of Rochester School of Medicine, and the Johns Hopkins School of Hygiene and Public Health. He served as medical resident at the Mary Imogene Bassett Hospital in Cooperstown, New York.

Margaret A. Hamburg

The Nuclear Threat Initiative (NTI) is a charitable organization working to reduce the global threats from nuclear, biological, and chemical weapons. Dr. Hamburg began her service with NTI as the founding Vice President for Biological Threats, developing the strategic plan and grant-making portfolio in that area, as well as the creation of the Global Health and Security Initiative to address the broad range of biological threats to health. Before joining NTI, Dr. Hamburg was the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, which includes the role of principal policy advisor to the Secretary. Prior to this, she served for almost six years as the Commissioner of Health for the City of New York. Dr. Hamburg's accomplishments in that role included the creation of the first public health bioterrorism preparedness program in the nation. She completed her internship and residency in Internal Medicine at the New York Hospital/Cornell University Medical Center and is certified by the American Board of Internal Medicine. Dr. Hamburg is a graduate of Harvard/Radcliffe College and Harvard Medical School. She has been elected to membership in the Institute of Medicine/National Academy of Sciences, the New York Academy of Medicine, the Council on Foreign Relations, and is a Fellow of the American Association for the Advancement of Science and of the American College of Physicians. Dr. Hamburg is a former member of the Harvard College Board of Overseers and is currently on the Board of The Rockefeller Foundation, Rockefeller University, The Trust for America's Health, and Henry Schein, Inc, Doctors of the World and Sidwell Friends School. She serves on numerous advisory boards and committees, including the Central Intelligence Agency's Intelligence Science Board, the U.S. Secretary of Health and Human Services' Council on Public Health Preparedness, and is a member of the Scientific Advisory Committee of the Communicable Disease Surveillance and Response Department of the World Health Organization.

Gerald Tilden Keusch

Position Title

Assistant Provost for Global Health
Associate Dean for Global Health

Education and Training

Institution and Location	Degree	Year(s)	Field of Study
Columbia College, New York, N.Y.	A.B.	1958	Pre-Med/Art
Harvard Medical School, Boston, MA	M.D.	1963	Medicine

Positions and Honors.

Positions and Employment

1963-1965	Intern and Resident in Medicine, State University of New York at Buffalo, Buffalo NY
1965-1967	U.S.P.H.S. Research Associate, National Institutes of Health, SEATO Medical Research Laboratory/Bangkok, Thailand
1967-1969	NIH Research Fellow in Infectious Diseases, New England Medical Center, Boston, MA
1969-1970	Chief Resident, Infectious Diseases, New England Medical Center, Boston, MA
1970-1978	Assistant Professor to Professor of Medicine, Mt. Sinai School of Medicine, NY, NY
1879-1998	Professor of Medicine, Chief Division of Geographic Medicine and Infectious Diseases, Tufts-New England Medical Center, Boston, MA
1998-2003	Associate Director for International Research and Director, Fogarty International Center, National Institutes of Health, Bethesda, MD
2004-present	Assistant Provost and Associate Dean for Global Health, Professor of Medicine and International Health, Boston University Medical Center and School of Public Health

Other Experience and Professional Memberships

National Research Council/National Academy of Sciences: Committee on International Relations, World Food and Nutrition Study Team #9, 1975-1977; Food and Nutrition Board, Committee on International Nutrition Programs, 1975-1979; Subcommittee on Interactions of Nutrition and Infection, 1971-1982, Chairman, 1977-1982; Subcommittee on Nutrition and Diarrheal Diseases Control, 1984-1989; Roundtable on Science and Technology for Sustainability, 2003-; Taskforce on Linking Knowledge to Action for Sustainable Development, 2004-; National Academy of Engineering, Grainger Foundation Prize Committee

Institute of Medicine, National Academy of Sciences: Elected Member, Institute of Medicine, 2002 Advisory Committee on Health Biomedical Research and

Development,1981-1983; Committee On Issues and Priorities for New Vaccine Development, 1982-1986; Board on Global Health, 1999-present; Forum on Microbial Threats, 2004-

National Institutes of Health: NIDDK, U.S.-Japan Malnutrition Panel Advisory Committee, 1984; Panel Member, 1987-1999; Chairman, 1994-1999; NIAID, Bacteriology and Mycology Study Section 1, 1990-1994; Chair, Special Emphasis Panel, "Research for the Development of Vaccines, Adujvants, Therapeutics, Immunotherapeutics, and Diagnostics for Biodefense and SARS, 2004; Chair, Indo-US Vaccine Action Program (US Delegation), 2004-

World Health Organization: Advisory Committee on Tobacco and Health, 1999-2001; Advisory Committee on Health Research, 1999-2003; Expert Advisory Panel on Health Science and Technology, 2001-present

Agency for International Development (USAID): Nutrition Collaborative Research Support Program, External Evaluation Panel, 1983-1988; Consultative Group on Vaccine Development, 1989-1993; Chairman 1991-1993

Others:

African-American Fund for AIDS Research and Education, Scientific Advisory Board, 1989-1994
American Society for Microbiology, Taxonomy Subcommittee on Gram-negative Rods, 1980-1983
Visiting Physician, Clinical Research Center, M.I.T., Cambridge, MA 1980 - 1990.
Advisory Committee, U. S. Army Medical Research and Development Command, Subcommittee on Bacterial Diseases, Walter Reed Army Institute of Research, 1983-1998
Editorial Board, The Journal of Infectious Diseases, 1984-1985
Post-doctoral Fellowship Review Committee, The Medical Foundation, Inc., Boston, MA 1980-1985
Board of Directors, International Nutrition Foundation for Developing Countries, Boston, MA 2003-present
Accreditation Council for Graduate Medical Education, Prereview Committee for Internal Medicine Subspecialty Residency Programs (Infectious Diseases), 1995-1999.
Harvard Medical Alumni Council, 1996-1999.
Infectious Diseases Society of America, Councillor, 1999-2001, Society Awards Committee 2004-
Member, Tropical Medicine Interest Group, The Wellcome Trust, 1998-2003
Director, Multilateral Initiative on Malaria Secretariat, 1999-2002
Advisory Committee on Health Research, World Health Organization, 2001-2003
Bill and Melinda Gates Foundation, Founding Board for the Global Alliance to Improve Nutrition, 2002-2003
Bill and Melinda Gates Foundation, Grand Challenges in Global Health, Scientific Advisory Board, 2003-
Environmental Health Perspectives, Associate Editor, 2005-present

Co-Chair, Health for All, World Life Sciences Forum, 2005

Professional Societies:

American Association for the Advancement of Science
American Federation for Clinical Research
American Society for Clinical Investigation
Association of American Physicians
American Society for Microbiology
New York Academy of Sciences
Infectious Disease Society of America; Councillor, 1998-2002
Massachusetts Infectious Diseases Society, Treasurer 1987-1991, President 1992-1995

Other Diplomas and Awards:

Diplomate, American Board of Internal Medicine, 1972; Subspecialty Board in Infectious Disease, American Board of Internal Medicine, 1972
Career Scientist Award, Health Research Council of the City of New York, 1973-1976
Research Career Development Award, NIAID, NIH, 1974-1979
Squibb Award for Infectious Disease Research, Infectious Diseases Society of America, 1981
Maxwell Finland Lecture Award Infectious Diseases Society of America, 1997
Edward K. Barsky Award, Physicians Forum/Physicians for Social Responsibility, 2000
Bristol Award, Infectious Diseases Society of America, 2002

Named Lectures (Selected):

Heath-Clark Lecturer, University of London, School of Hygiene and Tropical Medicine, 1991
Maurice Segal Lecturer, Tufts University School of Medicine, 1997
Harry Dascomb Lecturer, Lousiana State University School of Medicine, 1999
William Kirby Lecturer, University of Washington, Seattle, 1999
Wesley W. Spink Lecturer, University of Minnesota Medical School, 2000
Herbert Waxman Lecturer, Albert Einstein Medical Center (Philadelphia), 2000
Jesse D. Ibarra Lecturer in International Health, Texas A&M Health Systems, 2000
Bailey K. Ashford Lecturer, University of Puerto Rico, 2002
Maurice Segal Lecturer, Tufts University School of Medicine (2^{nd} time), 2002
Commencement speaker, Tulane University School of Public Health, 2003
AOA Visiting Professor and Lecturer, State University of New York at Stony Brook, 2004
Lecturer, International Forum, University of Illinois (Chicago), 2004
Global Health Lecture Series, Duke University, 2005

Selected peer-reviewed publications (in chronological order)
(Publications selected from 208 peer-reviewed publications)

Keusch, G.T., Rahal, J.J., Weinstein, L., Grady, G.F. Biochemical effects of cholera enterotoxin. I. Oxidative metabolism in the infant rabbit. Am. J. Physiology 218:703, 1970

Keusch, G.T., Grady, G.F., Mata, L.J., McIver, J.M. The pathogenesis of Shigella diarrhea. 1. Enterotoxin production by Shigella dysenteriae I. J. Clin. Invest. 51:1212, 1972.

Keusch, G.T., Jacewicz, M., Levine, M.M., Hornick, R.B., Kochwa, S. Pathogenesis of Shigella diarrhea. Serum anti-cytotoxin antibody response produced by toxigenic and "non-toxigenic" *S. dysenteriae* 1. J. Clin. Invest. 57:194, 1976.

Keusch, G.T., Jacewicz, M. Pathogenesis of Shigella diarrhea. VII. Evidence for a cell membrane toxin receptor involving B1 linked N-acetylglucosamine. J. Exp. Med. 146:535, 1977.

Donohue-Rolfe, A., Keusch, G.T., Edson, C., Thorley-Lawson, D., Jacewicz, M. Pathogenesis of Shigella diarrhea. IX. Simplified high yield purification of Shigella toxin and characterization of subunit composition and function by the use of subunit specific monoclonal and polyclonal antibodies. J. Exp. Med. 160:1767-1781, 1984.

Farthing, M.J.G., Keusch, G.T., Carey, M.C. Effects of bile and bile salts on growth and membrane lipid uptake by *Giardia lamblia*: possible implications for pathogenesis of intestinal disease. J. Clin. Invest. 76:1727-1732, 1985.

Lev, B., Ward, H., Keusch, G.T., Pereira, M.E.A. Lectin activation in *Giardia lamblia* by host protease: A novel host-parasite interaction. Science 232:71-73, 1986.

Jacewicz, M., Clausen, H., Nudelman, E., Donohue-Rolfe, A., Keusch, G.T. Pathogenesis of shigella diarrhea. XI. Isolation of a shigella toxin binding glycolipid from rabbit jejunum and HeLa cells and its identification as globotriaosylceramide. J. Exp. Med. 163:1391-1404, 1986.

Seidah, N.G., Donohue-Rolfe, A., Lazure, C., Auclair, F., Keusch, G.T., Chretien, M. Complete amino acid sequence of *Shigella* toxin B-chain. A novel polypeptide containing 69 amino acids and one disulfide bridge. J. Biol. Chem. 261:13928-13931, 1986.

Calderwood, S.B., Auclair, F., Donohue-Rolfe, A., Keusch, G.T., Mekalanos, J.J. Nucleotide sequence of the iron-regulated Shiga-like toxin genes of *Escherichia coli*. Proc. Nat. Acad. Sci. 84: 4364-4368, 1987.

Ward, H.D., Alroy, J., Lev, B.I., Keusch, G.T., Pereira, M.E.A. Analysis of surface carbohydrates of *Giardia lamblia*: Detection of N-acetyl-D- glucosamine as the only saccharide moiety and identification of two distinct subsets of trophozoites by lectin binding. J. Exp. Med. 167:73-88, 1988.

Kandel, G., Donohue-Rolfe, A., Donowitz, M., Keusch, G.T. Pathogenesis of Shigella diarrhea. XVI. Selective targetting of Shiga toxin to villus cells of rabbit jejunum explains the effect of the toxin on intestinal transport. J. Clin. Invest. 84:1509-1517, 1989.

Hart, P.J., Monzingo, A.F., Donohue-Rolfe, A., Keusch, G.T., Calderwood, S.B., Robertus, J. Crystallization of the B chain of Shiga-like toxin 1 from *Escherichia coli*. J. Mol. Biol. 218:691-694, 1991.

Mobassaleh, M., Koul, O., Mishra, K., McCluer, R.H., Keusch, G.T. Developmental regulation of intestinal Gb3 galactosyltransferase and -galactosidase control Shiga toxin receptors. Am. J. Physiol. 267:G618-624, 1994.

Ortega-Barria, E., Ward, H.D., Keusch, G.T., Pereira, M.E.A. Growth inhibition of the intestinal parasite Giardia lamblia by a dietary lectin is associated with arrest of the cell cycle. J Clin Invest 94:2283-88, 1994.

Jacewicz, M.S., Mobassaleh, M., Acheson, D.W.K., Donohue-Rolfe, A., Balasubramanian, K.A., Keusch, G.T. Maturational regulation of globotriaosyl-ceramide, the Shiga-like toxin 1 receptor, by butyrate in intestinal epithelial lines. J Clin Invest 96:1328-1335, 1995.

Jacewicz M, Acheson DWK, Binion DG, West GA, Lincicome L, Fiocchi C, Keusch GT. Responses of human intestinal microvascular endothelial cells to Shiga toxins 1 and 2 and pathogenesis of hemorrhagic colitis. Infect Immun 67:1439-1444, 1999.

Cevallos AM, Bhat, N, Verdon R, Hamer, DH, Stein B, Tzipori S, Pereira M, Keusch GT, Ward HD. Mediation of *C. parvum* infection in vitro by mucin-like glycoproteins defined by a neutralizing monoclonal antibody. Infect Immun 68:5167-5175, 2000.

Breman JG, Egan A, Keusch GT. The intolerable burden of malaria: a new look at the numbers. Am J Trop Med Hyg 64(1-2 Suppl):iv-vii, 2001.

Keusch GT, Medlin CA. Tapping the power of small institutions. Nature 422: 561-562, 2003.

Buekens, P, Keusch GT, Belizan J, Bhutta Z. Evidenced based global health. JAMA 291:2639-41, 2004.

Keusch GT. Intellectual Property and Licensing Impacts on Global Public Goods for Health: Options for public sector and academic leadership. IP Strategy Today 10:1-22, 2004.

Hofman K, Primack A, Keusch GT, Hrynkow S. Addressing the growing burden of trauma and injury in low- and middle-income countries. Am J Public Health 95:13-17, 2005.

Research Support.

Grand Challenges in Global Health, Bacillus Spores as Vaccine Delivery Systems, Co-Investigator, July 1, 2005-June 30, 2010. This project will create heat stable childhood vaccines by engineering protective antigens into naturally heat-resistant bacterial spores, focusing on DTP and rotavirus as model vaccines.

Mark Steven Joel Klempner

Date and Place of Birth

January 18, 1949
Utica, New York

Citzenship United States

Education:

June l966 -	Graduated from High School
l966-l969 -	Tulane University - University Scholar (did not graduate)
l969-l973 -	M.D. Cornell University Medical College

Chronology of Employment:

1973 - l974 -	Intern, Massachusetts General Hospital, Boston, MA
1974 -1975 -	Resident, Massachusetts General Hospital, Boston, MA
1975 -1978 -	Clinical Associate, National Institutes of Health, National Institute of Allergy and Infectious Disease, Laboratory of Clinical Investigation, Bethesda, MD
1976 -1978 -	Infectious Disease Consultant, U.S. Navy Medical Center, Bethesda, MD
1978 -1983 -	Assistant Professor of Medicine, Tufts University School of Medicine, Boston, MA
1978 -1983 -	Assistant Physician, New England Medical Center, Boston, MA
1982 - 2001	Director, Laboratory of Host Defense Evaluations
1983 -1988	Associate Professor of Medicine, Tufts University School of Medicine, Boston, MA
1983 - 2001	Physician, New England Medical Center, Boston, MA
1983 - 1988	Associate Professor, Department of Microbiology & Molecular Biology, Tufts University School of Medicine, Boston, MA
1989 - 2001	Professor of Medicine, Tufts University School of Medicine, Boston, MA
1989 - 2001	Professor of Microbiology & Molecular Biology, Tufts University School of Medicine, Boston, MA
1990	Visiting Scientist, National Institutes of Heath, Rocky Mountain Laboratories, Hamilton, Montana
1995 - 1998	Vice-Chairman for Scientific Affairs, Department of Medicine, New England Medical Center, Tufts University School of Medicine, Boston, MA
1995 - 1998	Chairman, New England Medical Center Research Council, Tufts-New England Medical Center, Boston, MA
1996 -2001	Louisa C. Endicott Professor of Medicine, Tufts University School of Medicine, Boston, MA
1999-2000	Visiting Scientist, The Charles Stark Draper Laboratory, Cambridge, MA

2001-2003	Assistant Provost for Research, Boston University Medical Campus, Boston University and Boston Medical Center, Boston, MA
2001-	Conrad Wesselhoeft Professor of Medicine, Boston University School of Medicine, Boston, MA
2001-	Vice-Chair for Research, Department of Medicine, Boston University School of Medicine, Boston, MA
2002-	Associate Editor, New England Journal of Medicine, Boston MA
2003-	Associate Provost for Research, Boston University Medical Campus, Boston University and Boston Medical Center, Boston, MA
2003-	Professor of Microbiology, Boston University School of Medicine
2003-	Director-National Emerging Infectious Diseases Laboratories (NBL) Boston University Medical Center

Board Certfication:

Diplomat -	National Board of Medical Examiners, 1974
Diplomat -	American Board of Internal Medicine, 1976
Diplomat -	American Board of Internal Medicine, Subspecialty - Infectious Diseases, 1978

Societies:

American Association for the Advancement of Science
Phi Eta Sigma
Alpha Omega Alpha
American College of Physicians - Associate
American College of Physicians - Member
American College of Physicians - Fellow
American Society of Microbiology
Infectious Diseases Society of America - Member
Infectious Diseases Society of America - Fellow
American Federation for Clinical Research
American Society for Clinical Investigation
American Board of Medical Specialties
International Immunocompromised Host Society - Member
Association of Subspecialty Professors, Council Member, Founding Member
Association of Subspecialty Professors, Secretary-Treasurer
Association of Subspecialty Professors, President-elect
Association of Subspecialty Professors, President
Federated Council of Internal Medicine-Steering Committee Member
Federated Council of Internal Medicine-Chairman
Association of American Physicians
Accreditation Council for Graduate Medical Education
Residency Review Committee for Internal Medicine

Editorial:

Editor in Chief, Medical Knowledge Self Assessment in the Subspecialty of Infectious Diseases (MKSAP-ID)
Editorial Board, American Journal of Medicine
Associate Editor, Yearbook of Infectious Diseases
Editorial Board, Antimicrobial Agents & Chemotherapy
Editorial Board, Journal of Spirochetal & Tick Borne Diseases
Reviewer for Journal of Infectious Diseases, Journal of Clinical Investigation, New England Journal of Medicine, Journal of Leukocyte Biology, Inflammation, Journal of Immunology, Journal of Biochemical and Biophysical Methods, Journal of Membrane Biology, Blood, American Review of Respiratory Disease, Clinical Infectious Diseases, Chest, Infectious Diseases in Clinical Practice, Antimicrobial Agents and Chemotherapy, Infection and Immunity
Editorial Board, Frontiers in Bioscience
Editorial Board, Section editor, Current Infectious Disease Reports, Current Science
Associate Editor, New England Journal of Medicine.

Honors:

Tulane University Scholar
Teagle Scholar - Cornell University Medical College
Dean William Mecklenburg Polk Prize in Medicine - Cornell University Medical College
Excellence in Teaching Award - Tufts University School of Medicine
NIH, NIAID, Microbiology & Infectious Diseases Research Committee Study Section
Irving S. and Charlotte K. Paley Visiting Professor, Boston University
American Board of Internal Medicine - Subspecialty Board on Infectious Diseases
American Board of Internal Medicine - Chairman, Subspecialty Board on Infectious Diseases
NIH-NIAMS - Special Study Section - Lyme Borreliosis
American Board of Internal Medicine - Board of Directors
Samuel Killian Visiting Professor, State University of NY at Syracuse School of Medicine
John Hancock Advisors- Scientific Advisory Board
Abbott Laboratories - Scientific Advisory Council
American Board of Internal Medicine, Chairman, Written Evaluations Coordinating Committee
Lyme Disease Foundation-Scientific-Medical Advisory Committee
American Society of Clinical Investigation
Infectious Diseases Society of America-1994 Squibb Award
Infectious Diseases Society of America-1996 Abbott Award
R.W. Johnson Visiting Professor, Vanderbilt University School of Medicine
Excellence in Teaching Citations-Tufts University School of Medicine

Winans Visiting Professor-Southwestern Medical Center, University of Texas and Baylor University
Editor-MKSAP-Infectious Diseases
Deans' Visiting Lecturer, Cornell University Medical College
Association of American Physicians
Best Doctors in America-General Internal Medicine
Louisa C. Endicott Professor of Medicine, Tufts University School of Medicine
B.H.Kean Visiting Professor, Cornell University Medical College
ClinTrial Inc., President and Founder
Best Doctors in America-Infectious Diseases
Who's Who in America
Association of Subspecialty Professors, President
Keynote Speaker-Cornell University Medical College 25th Class Reunion
Popular Mechanics National Furniture Contest-2nd Prize
Boston's Best Doctors-General Internal Medicine
Excellence in Teaching Award for 1998-Tufts University School of Medicine
Accreditation Council for Graduate Medical Education-Residency Review Committee for Internal Medicine (RRC-IM)
Oliver Smith Award for Clinical Excellence-New England Medical Center-TUSM
SRU Biosystems- Chief Medical Advisor
Eli Lilly and Company-Scientific Advisory Board
Best Doctors in America-2000-2001
Conrad Wesselhoeft Professor of Medicine, Boston University School of Medicine
Charles D. Tourtellotte Lectureship, Temple University School of Medicine
Vincent Pons Award for Excellence in Clinical Research, University of California at San Francisco School of Medicine.
Best Doctors in America- Internal Medicine and Infectious Diseases 2002
Best Doctors in America- Internal Medicine and Infectious Diseases 2003-4
Associate Editor, New England Journal of Medicine
University of Massachusetts Medical School, Massachusetts Biologic Laboratories-Advisory Board
New England Regional Center of Excellence in Emerging Infectious Diseases-Scientific Advisory Board
IDEAS-Boston 2004-Innovators of New England-Boston Globe

Research Interests:

Normal and abnormal leukocyte (phagocyte) function
Host-Bacterial interactions
Molecular Pathogenesis of Bacterial Infections
Pathogenesis of Lyme disease
Natural History and Treatment of Lyme Disease
Vaccine Development and Immune senescence
Proteomics-Technology development and biomedical applications
Sensor Technology Development

Recent Teaching, Invited & Honorary Lectures:

2001 Medical Grand Rounds Speaker, Jordan Hospital, Plymouth, MA

2001 Charles D. Tourtellotte Lectureship, Temple University School of Medicine, Philadelphia, PA

2001 Board of Overseers Plenary Speaker, Boston University School of Medicine, Boston, MA

2001 Microbiology and Infectious Diseases Research Seminar Speaker, Boston Univeristy School of Medicine, Boston, MA

2001 Program in Bioengineering and Bioinformatics Seminar Speaker, Boston Univeristy School of Engineering, Boston, MA

2001 Medical Grand Rounds Speaker, Anna Jacques Hospital, Newburyport, MA

2001 Speaker, Research Opportunities in Neuroborreliosis, NINDS, NIH, Warrenton, VA

2001 Plenary Speaker, 11 Annual Diseases of Summer Conference, South County Hospital, Wakefield, RI

2002 American Society for Microbiology, Autoimmunity in Lyme Disease, Annual General Meeting, Salt Lake City, Utah

2002 Vincent Pons Lecture-Politics and Infectious Diseases Research: Lyme Disease as a Model, University of California at San Francisco School of Medicine.

2002 Plenary Lecture- IX International Conference on Lyme borreliosis and other tick-borne diseases. New York, NY

2002 Board of Visitors, Conflicts of Interest in Academic Research, Boston University School of Medicine

2002 Board of Visitors, Research Update at BUSM

2003 Plenary Speaker, Bioastronautics Investigators Workshop, Galveston, TX.

2003 Grand Rounds Speaker, Lawrence General Hospital, Lawrence, MA

2003 Plenary Speaker, Massachusetts Biotechnology Annual Conference, Boston, MA

2003 Neurology Grand Rounds Speaker, Boston Medical Center, Boston, MA

2003 Mini Medicine Course, Boston University Medical Center, Boston, MA

2003 Medical Grand Rounds, Boston University Medical Center, Boston, MA

2003 Meet the Professor, Tick Borne Diseases, Infectious Diseases Society of America National Meeting, San Diego, CA

2003 Medical Grand Rounds, North Shore Medical Center, Salem Hospital, Salem, MA

2003 Visiting Professor, Medical Grand Rounds, New York University Medical Center, New York, NY

2003 Speaker, Medical Exchange Club, Boston, MA

2004 Board of Visitors Panel Discussion-Biodefense, Boston University School of Medicine, Boston, MA

2004 Guest Speaker- The Breakfast Club of Boston, Boston, MA

2004 Research Seminar Speaker-Emerging Infectious Diseases Research, Novartis Institute for Biomedical Research, Cambridge, MA

2004 Plenary Speaker, Bioastronautics Investigators Workshop, Montgomery, TX

2004 IDEAS Boston 2004, Plenary Speaker-Innovators in New England-Boston Globe

2004 Keynote Lecture, French-American Innovation Day, Boston, MA

2004 Visiting Professor, Presbyterian Hospital, Dallas, TX

2004 Plenary Speaker, Mini Med Course, Boston University, Boston, MA

2004 Grand Rounds, Eastern Maine Medical Center, Bangor Maine

2004 Plenary Speaker, Greater Boston Chamber of Commerce Life Sciences Forum, Boston MA

2004 Meet the Professor, Lyme Disease, Infectious Diseases Society of America National Meeting, Boston, MA

2004 Plenary Speaker, Infectious Diseases 2004 Board Review Course, McLean, VA

2004 Plenary Speaker, American Chemical Society, Burlington, MA

2004 Panelist, Boston University Symposium on Substance Abuse, Boston, MA

Recent Publications

Lin B, Hu LT, Eskildsen M, Short SA and Klempner MS. Functional Testing of a Putative Oligopeptide Permease (Opp) Protein of *Borrelia burgdorferi*: a Complementation Model in *opp*$^-$ *Escherichia coli*. Biochem Biophys Acta. 1499:222-231, 2001.

Lin B, Noring R, Steere AC, Klempner MS and Hu L. Soluble CD14 levels in the serum, synovial fluid and cerebrospinal fluid of patients with various stages of Lyme disease. J Inf Dis. 181:1185-8, 2001.

Mark S. Klempner MD , Christopher H. Schmid PhD, Linden Hu MD, Allen C. Steere MD, Gary Johnson, Bilaal McCloud BS, Richard Noring BS, and Arthur Weinstein MD. Intralaboratory Reliability of Serologic and Urine Testing for Lyme Disease. Amer J Med.110:217-219, 2001.

Mark S. Klempner, M.D., Linden Hu, M.D. Janine Evans, M.D. Christopher H. Schmid, Ph.D., Gary Johnson, Richard Trevino, Lona Norton M.S., Lois Levy, LICSW, Diane Wall, R.N., John McCall, Mark Kosinski, M.A.., and Arthur Weinstein, M.D. Two Controlled Trials of Antibiotic Treatment in Patients with Persisting Symptoms and a History of Lyme Disease. NEJM 345:85-92. 2001

Hu LT and Klempner MS. Update on the Prevention, Diagnosis and Treatment of Lyme Disease. Advances in Internal Medicine:46,247-275, 2001.

Bo Lin, J. Michael Kidder, Richard Noring, Allen C. Steere, Mark S. Klempner, Linden Hu. Differences in Synovial Fluid Levels of Matrix Metalloproteinases Suggest Separate Mechanisms of Pathogenesis in Lyme Arthritis before and after Antibiotic Treatment. J Inf Dis 184:174-80, 2001.

Klempner, MS, Schmid, CH, Johnson G, Weinstein A. Reliability of the Lyme Urine Antigen Test for Lyme Disease (Letter). Amer J Med.110: 2001.

Weinstein A and Klempner MS. Treatment of Patients With Persisting Symptoms and a History of Lyme Disease (Letter). NEJM 345: 1424-1425, 2001

Klempner, MS. Controlled Trials of Antibiotic Treatment in Patients with Post-Treatment Chronic Lyme Disease. Vector Borne and Zoonotic Diseases, Volume 2, Number 4, 2002

Richard F. Kaplan, Ph.D., Richard P. Trevino, B.S., Gary M. Johnson, Lois Levy, M.S.W., Rhea Dornbush, Ph.D., Linden T. Hu, M.D., Janine Evans, M.D., Arthur Weinstein, M.D., Christopher H. Schmid, Ph.D., Mark S. Klempner, M.D: Cognitive Functioning in Patients with Persistent Symptoms and a History of Lyme Disease: A Placebo Controlled Antibiotic Treatment Study. Neurology 60:1916-1922, 2003

Zhihui Zhao, Hernan Chang, Mark S Klempner, Selective Up-regulation of Human Matrix Metalloproteinase-9 (MMP-9) Expression in Erythema migrans Skin Lesions of Acute Lyme Disease in Humans. J Infect Dis:188:1098-1104, 2003.

Xing-Guo Wang, J Michael Kidder, Joanna P. Scagliotti, Mark S. Klempner, Richard Noring and Linden T. Hu. Analysis of Differences in the Functional Properties of the Substrate Binding Proteins of the *Borrelia burgdorferi* Oligopeptide Permease (OppA) Operon. J Bacteriol 186:51-60, 2004

Fleming R, Marques AR, Klempner MS, Schmid C, Dally LG, Martin D and Philipp MT. Pre- and post-treatment assessment of the C_6 test in patients with persistent symptoms and a history of Lyme borreliosis. Eur J Clin Microbiol Infect Dis. 23(8):615-8, 2004.

Klempner MS and Shapiro DS. Crossing the Species Barrier: One Small Step To Man, One Giant Leap To Mankind". N Engl J Med 350: 1171-1172, 2004.

W.R. Premasiri, D. Moir, M. Klempner, N. Krieger, G. Jones, L.D. Zeigler. Characterization of the Surface Enhanced Raman Scattering (SERS) of Bacteria. J Physical Chem (in press)

G. Wormser, R. Kaslow, J. Tang, K. Wade, D. Liveris, I. Schwartz, M. Klempner. "Association of Human Leukocyte Antigen (HLA) Class II Alleles with Genotype of *Borrelia Burgdorferi* in Patients with Early Lyme Disease" J Infect Dis (in press).

Books and Recent Editorships

Phagocytes & Disease, M.S. Klempner, B. Styrt, J.L. Ho. Kluwer Academic Publishers, Inc., Lancaster, United Kingdom, 1989.

Editor-in-Chief, Medical Knowledge Self Assessment Program (MKSAP) in the Subspecialty of Infectious Diseases, Infectious Diseases Society of America, American College of Physicians, Philadelphia, PA 1998.

Current Infectious Disease Reports, Section Editor, Skin, Soft Tissue, Bone and Joint Infections, Current Science, Phila. PA, 1999.

Associate Editor-New England Journal of Medicine, Boston, MA-2002

Associate Editor-New England Journal of Medicine, Boston, MA-2003

Marcelle Layton

Marcelle C. Layton, MD, is the Assistant Commissioner for the Communicable Disease Program at the New York City Department of Health. She received her medical degree at Duke University and completed residency training in internal medicine at State University of New York Health Sciences Center in Syracuse, NY. She has also completed fellowship training in infectious disease at Yale University School of Medicine and was an Epidemic Intelligence Service officer with the Centers for Disease Control and Prevention.

Dr. Layton has participated as a member in the Institute of Medicine's Forum on Emerging Infections, the Center for Civilian Biodefense (which was formerly at Johns Hopkins School of Hygiene and Public Health) and the Executive Session on Domestic Preparedness of John F. Kennedy School of Government, Harvard University.

Dr. Layton is a frequent lecturer at local, national and international conferences on topics related to bioterrorism preparedness and emerging infectious disease issues. She played a key role in New York City's public health response to the appearance of West Nile virus in 1999 and following the attacks on the World Trade Center and intentional anthrax release in 2001. Dr. Layton has been recognized for her outstanding contributions to public health and has been the recipient of the 1999 Public Health Association of New York City Special Merit Award and the 2000 Sloan Public Service Award.

Marc Lipsitch

Address: Department of Epidemiology
Harvard School of Public Health
677 Huntington Avenue
Boston, MA 02115

Date and Place of Birth November 15, 1969, New Haven, CT, USA

Education:

Yale University, B.A., Philosophy, 1991 (summa cum laude)
University of Oxford, D. Phil, Zoology, 1995

Postdoctoral Training:

1995-1999, Biology, Postdoc with Dr. Bruce Levin, Emory University

Academic Appointments:

2004-present	Associate Professor, Department of Epidemiology, Harvard School of Public Health
1999-2004	Assistant Professor, Department of Epidemiology, Harvard School of Public Health
1997-1999	Visiting Scientist, Respiratory Diseases Immunology Section, Centers for Disease Control and Prevention

Honors and Distinctions:

1991	Phi Beta Kappa, Yale College
1992-1995	Rhodes Scholar, University of Oxford, England
2002	Ellison Medical Foundation New Scholar in Global Infectious Disease
2002	PhRMA Foundation Research Starter Award in Health Outcomes
2002	ICAAC Young Investigator Award, American Academy of Microbiology

Major Professional Service:

2003-2004	US Department of Defense Defense Science Board Task Force on SARS Quarantine
2000, 2002	National Institutes of Health, National Center for Research Resources, Special Emphasis Panel, Centers of Biomedical Research Excellence

Editorial Board:

Associate Editor, *American Journal of Epidemiology*, 2002-present
Associate Faculty Editor, *Emerging Themes in Epidemiology*, 2004-present

Professional Societies:

Society for Epidemiologic Research
American Society for Microbiology
National Center for Science Education
Union of Concerned Scientists

Other Public Service:

Member, WHO Working Group on SARS Epidemiology and Modeling
Consultant and invited speaker for three public meetings, FDA Center for Veterinary Medicine (topic: regulation of antimicrobial drugs in veterinary medicine)
Member, WHO Pneumococcal Vaccine Trials Nasopharyngeal Carriage Study Group
Temporary Advisor, WHO. Priorities for Pneumococcal and Hib Vaccine Development and Introduction. Geneva, Switzerland, February 1999

Scientific Committees

4th International Symposium on Pneumococci and Pneumococcal Diseases, Helsinki, Finland, May 2004
5th International Symposium on Pneumococci and Pneumococcal Diseases, Alice Springs, Australia, May 2006

Grant Reviewer

2003, 2004	Research Fund for the Control of Infectious Disease (RFCID), Hong Kong Semi-Autonomous Region, China
2003	UK Medical Research Council
2003-5	Wellcome Trust (UK)

Invited Talks (since 8/2003)

8/03:	European Society for Evolutionary Biology, Annual Meeting, Leeds, UK
2/04:	Harvard Center for Basic Research in the Social Sciences, Cambridge, MA
4/04:	Harvard Medical School, Program in Biochemistry and Molecular Pharmacology, Friday Seminar, Boston, MA
4/04:	US Naval Medical Research Center, Silver Spring, MD
4/04:	Society for Healthcare Epidemiology of America, Annual Meeting, Philadelphia, PA
4/04:	University of Michigan, School of Public Health, MACEPID annual retreat, Keynote Speaker
5/04:	4th International Symposium on Pneumococci and Pneumococcal Diseases, Helsinki, Finland
6/04:	Schering-Plough Symposium, Harvard School of Public Health, Boston, MA
6/04:	Institute of Medicine meeting on Pandemic Influenza, Washington, DC
6/04:	National Academy of Sciences (US) / Royal Society (UK), Frontiers of Science Meeting, Hinxton, UK
7/04:	Ellison Medical Foundation Scientific Advisory Board, Woods Hole, MA
10/04:	National Institutes of Health, NIGMS: MIDAS Consultation, Atlanta, GA

11/04: Fundacion Lilly (Spain), 6th International Symposium: Evolution of Infectious Diseases, El Escorial, Spain
2/05: Library of Congress, Washington DC
3/05: Institut Pasteur and Sanofi Pasteur: Vaccine Pressure and *Neisseria meningitidis*, Annecy, France
4/05: Department of Population and International Health, Johns Hopkins School of Public Health
5/05: 3rd Annual Ecology and Evolution of Infectious Disease Conference, Colorado State University, Ft. Collins, CO
6/05: Global Health Security Action Group, London, UK
6/05: Harvard School of Public Health Alumni Weekend, Boston
6/05: Society for Epidemiologic Research Annual Meeting, Toronto

Major Research Interests:

Population biology of pathogens and infectious disease. Antimicrobial resistance. Mathematical modeling. Effects of vaccination and antimicrobial treatment on the population biology of *Streptococcus pneumoniae.* Development of methods for analyzing infectious disease data.

Research Support:

Past funding

Years	Funding Source	PI/ Co-PI	Title
1997-9	NIH (F32)	PI	Population Genetics of Bacterial Infection and Treatment
1997-9	Smith-Kline Beecham	Co-PI	Effects of Antiviral Usage on Resistance in Herpes Simplex Virus, Type 1
2002	PhRMA Foundation	PI	Planning and Assessing Antimicrobial Cycling and Other Interventions to Control Resistance in Hospitals

Current funding

Years	Funding Source	PI/ Co-PI	Title
2001-6	NIH (R01)	PI	Vaccination and the Evolutionary Dynamics of Pneumococci 1R01 AI48935-01
2001-6	NIH (R01)	Co-I	Drug Resistance in Tuberculosis: Genetics and Dynamics 1R01 AI51929-01
2002-6	Ellison Foundation	PI	Antibiotic Resistance in *Streptococcus pneumoniae*: Transmission Dynamics and Consequences for Public Health
2003-5	NIH (R21)	PI	Epidemiologic Methods for Resistant Nosocomial Infections 1 R21 AI055825
2004-8	NIH (R01)	Co-I	Optimizing HIV care in less developed countries

Teaching Experience

Full Courses

Date	Title	Institution	Experience
2001 2002 2003 2005	Epidemiology 260d: Mathematical Models of Infectious Diseases	HSPH	Instructor Developed course
2000-1	ID267-268 (full-year ID Epidemiology Seminar)	HSPH	Co-instructor
2001 2002	ID 267ab	HSPH	Instructor
2005	ID 293: Inference in Infectious Disease Epidemiology	HSPH	Instructor Developed course
2005	Infectious Disease Epidemiology	Summer School on Modern Methods in Biostatistics and Infectious Disease Epidemiology	Instructor Developed course

Participation:

Date	Title	Institution	Experience
2000 2001 2002 2004	Modern Microbe Hunters	HMS	Course participant (one lecture each year)
2002 2003	HST Microbiology	HMS	Course Participant
2000 2001 2002	Epidemiology 225c	HSPH	Course participant (one lecture each year)
2000	Epidemiology 205ab	HSPH	Supervised student project (Frank Williams)
2001 2002 2003 2004	EPI 201a	HSPH	Course Participant (2 lectures)
2001 2002 2003 2004	EPI 200a	HSPH	Course Participant (1 lecture)
2001 2002 2003 2004	PII 250b	HSPH	Course Participant (1 lecture)
2002 2003	Probabilistic Risk Analysis	HSPH Continuing Ed	Course Participant (1 lecture)

2004			
2002	BPH 219	HSPH	Course Participant (1 lecture)
2002 2003 2004	RDS 281	HSPH/FAS	Course Participant (1 lecture)

School and Departmental Service

2000-1 Admissions committee, Infectious Disease Epidemiology
Steering Committee, Interdisciplinary Program in the Epidemiology of Infectious Disease
Seminar Coordinator, Interdisciplinary Program in the Epidemiology of Infectious Disease

2001-2 Admissions committee, Infectious Disease Epidemiology
Steering Committee, Interdisciplinary Program in the Epidemiology of Infectious Disease
Seminar Coordinator, Interdisciplinary Program in the Epidemiology of Infectious Disease
Departmental Retreat co-leader
Interviewer, Biology in Public Health (BPH) program

2002-3 Admissions committee, Infectious Disease Epidemiology
Steering Committee, Interdisciplinary Concentration in the Epidemiology of Infectious Disease
Seminar Coordinator, Interdisciplinary Concentration in the Epidemiology of Infectious Disease
HSPH Epidemiology and Biostatistics Divisional Planning Committee
Interviewer, Biology in Public Health (BPH) program

2003-4 Admissions committee, Infectious Disease Epidemiology
Steering Committee, Interdisciplinary Concentration in the Epidemiology of Infectious Disease
Seminar Coordinator, Interdisciplinary Concentration in the Epidemiology of Infectious Disease
HSPH Allston Planning Committee
HSPH Information Technology Advisory Committee
Interviewer, Biology in Public Health (BPH) program

2004-5 Admissions committee, Infectious Disease Epidemiology
Steering Committee, Interdisciplinary Concentration in the Epidemiology of Infectious Disease
Seminar Coordinator, Interdisciplinary Concentration in the Epidemiology of Infectious Disease
HSPH Information Technology Advisory Committee
Interviewer, Biology in Public Health (BPH) program

Bibliography

Peer-reviewed articles

23. Ebert D, Lipsitch M, Mangin KL. The effect of parasites on host population density and extinction: Experimental epidemiology with *Daphnia* and six microparasites. *The American Naturalist* 2000; 156: 459-77.
24. Lipsitch M. Measuring and interpreting associations between antibiotic use and penicillin resistance in *Streptococcus pneumoniae*. *Clinical Infectious Diseases*. 2001; 32:1044-54.
25. Francis KP, Yu J, Bellinger-Kawahara C, Joh D, Hawkinson MJ, Xiao G, Purchio TF, Caparon MG, Lipsitch M, Contag PR. Visualizing Pneumococcal Infections in the Lungs of Live Mice Using Bioluminescent *Streptococcus pneumoniae* Transformed with a Novel Gram-Positive lux Transposon. *Infection and Immunity* 2001; 69: 3350-3358.
26. Lipsitch M. The Rise and Fall of Antimicrobial Resistance. *Trends in Microbiology*. 2001; 9: 438-44.
27. Bonten MJM, Austin D, Lipsitch M. Understanding the Spread of Antibiotic Resistant Pathogens in Hospitals: Mathematical Models as Tools for Control. *Clinical Infectious Diseases* 2001; 33: 1739-1746.
28. Malley R, Lipsitch M, Stack A, Saladino R, Fleisher GR, Thompson CM, Briles DE, Anderson P. Intranasal immunization with killed unencapsulated whole cells prevents colonization and invasive disease by capsulated pneumococci. *Infection & Immunity* 2001; 69: 4870-3.
29. Lipsitch M. Interpreting Trials of Pneumococcal Conjugate Vaccines: A Statistical Test to Detect Vaccine-Induced Increases in Carriage of Non-Vaccine Serotypes. *American Journal of Epidemiology* 2001; 54: 85-92.
30. Lipsitch M, Davis G, Corey L. Potential Benefits of a Serodiagnostic Test for Herpes Simplex Virus, Type 1 (HSV-1) to Prevent Neonatal HSV-1 Infection. *Sexually Transmitted Diseases* 2002; 29: 399-405.
31. Lipsitch, M., M.H. Samore. Antimicrobial Use and Antimicrobial Resistance: A Population Perspective. *Emerging Infectious Diseases* 2002; 8: 347-354.
32. Fisman DM, Lipsitch M, Hook EM III, Goldie SM. Projection of the future dimensions and cost of the genital herpes simplex type 2 epidemic in the United States. *Sexually Transmitted Diseases* 2002; 29: 608-622.
33. Harris AD, Samore MH, Lipsitch M, Kaye KS, Perencevich E, Carmeli Y. Control-group selection importance in studies of antimicrobial resistance: Examples applied to *Pseudomonas aeruginosa*, Enterococci, and *Escherichia coli*. *Clinical Infectious Diseases.* 2002; 34: 1558-63.
34. Lipsitch M, Sousa AO. Natural selection for resistance to tuberculosis. *Genetics* 2002; 161: 1599-1607.
35. Lipsitch M, Bergstrom CT, Antia R. Effect of Human Leukocyte Antigen Heterozygosity on Infectious Disease Outcome: The Need for Allele-Specific Measures. *BMC Medical Genetics* 2003; 4:2.
36. McCormick AW, Whitney CG, Farley MM, Lynfield R, Harrison LH, Bennett NM, Schaffner W, Reingold A, Hadler J, Cieslak P, Samore MH, Lipsitch M. Geographic Diversity and Temporal Trends of Antimicrobial Resistance in

Streptococcus pneumoniae in the United States. *Nature Medicine* 2003; 9(4):424-30.

37. Malley R, Henneke P, Morse SC, Cieslewicz MJ, Lipsitch M, Thompson CM, Kurt-Jones E, Paton JC, Wessels MR, Golenbock DT. Recognition of pneumolysin by Toll-like Receptor 4 confers resistance to pneumococcal infection. *Proc Natl Acad Sci USA* 2003; 100: 1966-1971.
38. Lipsitch M, Murray MB. Multiple equilibria: Tuberculosis transmission require unrealistic assumptions. *Theoretical Population Biology* 2003; 63: 169-70.
39. Lipsitch M, Cohen T, Cooper B, Robins JM, Ma S, James L, Gopalakrishna G, Chew SK, Tan CC, Samore MH, Fisman D, Murray M. Transmission dynamics and control of severe acute respiratory syndrome. *Science* 2003; 300: 1966-1970.
40. Trzcinski K, Thompson CM, Lipsitch M. Construction of otherwise isogenic serotype 6B, 7F, 14 and 19F capsular variants of *Streptococcus pneumoniae* strain TIGR4. *Applied and Environmental Microbiology* 2004; 69**:** 7364-7370.
41. Cooper B, Lipsitch M. The analysis of hospital infection data using hidden Markov models. *Biostatistics* 2004; 5:223-237.
42. Perencevich EN, Fisman DN, Lipsitch M, Harris AD, Morris JG, Smith D. Projected Benefits of Active Surveillance for Vancomycin Resistant Enterococcus in ICU Settings. *Clinical Infectious Diseases* 2004; 38: 1108-15.
43. Trzcinski K, Thompson CM, Lipsitch M. Single-step capsular transformation and acquisition of penicillin resistance in *Streptococcus pneumoniae*. *Journal of Bacteriology* 2004; 186: 3447-52.
44. Teklehaimanot HD, Teklehaimanot A, Schwartz J, Lipsitch M. Alert threshold algorithms and malaria epidemic detection. *Emerging Infectious Diseases* 2004; 10: 1220-1226.
45. Laine C, Mwangi T, Thompson CM, Obiero J, Lipsitch M, Scott JA. Age-Specific IgG and IgA to Pneumococcal Protein Antigens in a Population in Coastal Kenya. *Infection and Immunity 2004*; 72(6):3331-5.
46. Bergstrom C, Lo M, Lipsitch M. Ecological theory suggests that antimicrobial cycling will not reduce antimicrobial resistance in hospitals. *Proc Natl. Acad Sci USA* 2004; 101(36):13285-90.
47. Teklehaimanot HD, Lipsitch M, Teklehaimanot A, Schwartz J. Weather-based prediction of *Plasmodium falciparum* malaria in epidemic-prone regions of Ethiopia I. Patterns of lagged weather effects reflect biological mechanisms. *Malaria Journal* 2004, 3:41.
48. Teklehaimanot HD, Schwartz J, Teklehaimanot A, Lipsitch M. Weather-based prediction of *Plasmodium falciparum* malaria in epidemic-prone regions of Ethiopia II. Weather-based prediction systems perform comparably to early detection systems in identifying times for interventions. *Malaria Journal* 2004, 3:44.
49. Mills CE, Robins JM, Lipsitch M. Transmissibility of 1918 pandemic influenza. *Nature* 2004; 432: 904-6.
50. Lipsitch M, Whitney CG, Zell E, Kaijalainen T, Dagan R, Malley R. Age-Specific Incidence of Invasive Pneumococcal Disease by Serotype: Are Anticapsular Antibodies the Primary Mechanism of Protection against Invasive Disease? *PLoS Medicine* 2005; 2:e15.

51. Huang SS, Finkelstein JA, Lipsitch M. Modeling community and individual level effects of child care on pneumococcal carriage. *Clinical Infectious Diseases* 2005; 40: 1215-22.
52. Trzcinski KP, MacNeil A, Klugman KP, Lipsitch M. Capsule homology does not increase the frequency of transformation of linked penicillin binding proteins PBP1a and PBP2x in *Streptococcus pneumoniae. Antimicrobial Agents and Chemotherapy* 2005; 49: 1591-2.
53. Malley R, Trzcinski K, Srivastava A, Thompson CM, Anderson PW, Lipsitch M. CD4+ T cells mediate antibody-independent acquired immunity to pneumococcal colonization. *Proc Natl Acad Sci U S A* 2005; 102: 4848-53.
54. Dagan R, Givon-Lavi N, Fraser D, Lipsitch M, Siber GR, Kohberger R. Serum Serotype-Specific Pneumococcal Anticapsular Immunoglobulin G Concentrations after Immunization with a 9-Valent Conjugate Pneumococcal Vaccine Correlate with Nasopharyngeal Acquisition of Pneumococcus. *J Infect Dis*. 2005 Aug 1;192(3):367-376.
55. Trzcinski K, Thompson C, Malley R, Lipsitch M. Antibodies to conserved pneumococcal antigens correlate with, but are not required for, protection against pneumococcal colonization induced by prior exposure in a mouse model. *Infection & Immunity* 2005; in press.

Peer-reviewed article (group author)

1. O'Brien KL, Nohynek H, and the WHO Pneumococcal Vaccine Trials Carriage Working Group. Report from a WHO Working Group: standard method for detecting upper respiratory carriage of *Streptococcus pneumoniae*. Pediatric Infectious Disease Journal 2003; 22: 133-40.

Non peer-reviewed publications

(a) Book Chapters

1. Lipsitch M, Levin BR. 1997. The within-host population dynamics of anti-bacterial chemotherapy: conditions for the evolution of resistance. Pp. 112-127 in Ciba Foundation Symposium No. 207: *Antibiotic Resistance: Origins, Evolution, Selection and Spread*. Chichester, UK: John Wiley & Sons.
2. Bangham C, Anderson R, Baquero F, Bax R, Hastings I, Koella J, Lipsitch M, McLean A, Smith T, Taddei F, Levin B. 1999. Evolution of infectious diseases: The impact of vaccines, drugs and social factors. Chapter 13 (pp. 152-160) in *Evolution in Health and Disease*, ed. S.C. Stearns. Oxford: Oxford University Press.
3. Lipsitch M, Bergstrom CT. Modeling of antibiotic resistance in the ICU. Chapter 18, pp. 231-43 in *Infection Control in the ICU Environment*, ed. R.A. Weinstein and M. Bonten. Kluwer Press. 2002.
4. Lipsitch M. Vaccination against *Haemophilus influenzae* and *Streptococcus pneumoniae*: a problem in virulence management. Chapter 26 in *Virulence Management: The Adaptive Dynamics of Pathogen-Host Interactions*, ed. U. Dieckmann, H. Metz, M.Sabelis & K. Sigmund. Cambridge: Cambridge University Press. 2002.

5. Lipsitch M. Antibiotic resistance: Strategies for managing resistance. Vol. 1, pp. 57-61 in *The Oxford Encyclopedia of Evolution*, ed. M. Pagel. Oxford University Press. 2002.
6. Dagan R, Lipsitch M. Ecological Effects of Vaccines and Antibiotics. Chapter 18 in *The Pneumococcus*, ed. E. Tuomanen, T. Mitchell, D. Morrison, B. Spratt. Washington, DC: ASM Press. 2004.

(b) Non-peer reviewed journal articles

1. Levin BR, Antia R, Berliner E, Bloland P, Bonhoeffer S, Cohen M, DeRouin T, Fields PI, Jafari H, Jernigan D, Lipsitch M, McGowan JE, Mead P, Nowak M, Porco T, Sykora P, Simonsen L, Spitznagel J, Tauxe R, Tenover F. 1998. Resistance to antimicrobial chemotherapy: A prescription for research and action. *American Journal of the Medical Sciences* 315: 87-94.
2. Lipsitch M. Evolution in health and disease (meeting report). *Trends in Microbiology* 1997; 5: 303-4.
3. Lipsitch M. Fifty Years of Antimicrobials: Past Perspectives and Future Trends, ed. P.A. Hunter, G.K. Darby, and N.J. Russell. (review) *Quarterly Review of Biology* 1997; 71: 570-571.
4. Lipsitch M. Modelling the AIDS Epidemic: Planning, Policy and Prevention, ed. E.H. Kaplan and Margaret L. Brandeau. (review) *Quarterly Review of Biology* 1995; 70: 123.
5. Lipsitch M. Microbiology: Bacterial Population Genetics and Disease. *Science* 2001; 292:59-60.
6. Lipsitch M, Singer RS, Levin BR. Antibiotics in Agriculture: When is it Time to Close the Barn Door*?* *Proceedings of the National Academy of Sciences, USA* 2002*:* 99:5752-4.
7. Lipsitch M. Antibiotic Resistance – the Interplay between Antibiotic Use in Animals and Human Beings (contribution to a "Forum"). *Lancet Infectious Diseases* 2003; 3: 51.
8. Lipsitch M, Bergstrom CT. Real-time tracking of control measures for emerging infections [commentary]. *American Journal of Epidemiology* 2004;160(6):517-9.
9. Halloran ME, Lipsitch M. Infectious disease modeling contributions to the American Journal of Epidemiology [commentary]. *American Journal of Epidemiology* 2005; 161: 997-8.
10. Lipsitch M. Pandemic flu: We are not prepared. Medscape General Medicine. 2005; 7(2). http://www.medscape.com/viewarticle/502709.
11. Lipsitch M. Ethics of rationing the flu vaccine. [letter]. Science. 2005 Jan 7;307(5706):41.

(c) Popular Articles

1. Lipsitch, M. 1993. Genetic Tug-of-War May Explain Many of the Troubles of Pregnancy. *The New York Times*, July 20, p. B6.
2. Lipsitch, M. 1995. Fears Growing over Bacteria Resistant to Antibiotics. *The New York Times*, September 12, p. C1.
3. Popular articles on the evolution-creationism debate in *School Board News, The Forward,* and *The Emory Report*.
4. Lipsitch, M. 2003. Prepare Now for the Return of SARS. Project Syndicate, syndicated to *Straits Times*, *Taiwan Times*, *Daily Times* (Pakistan) and http://www.project-syndicate.org/commentaries/commentary_text.php4?id=1269&lang=1.

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Bethesda, MD 20892 USA

Education:

- Yale University School of Medicine. New Haven, CT. 8/85-5/90. M.D., 1990, Thesis: "Isolation of a New Retroviral Serotype from the South Pacific and Human T-Cell Lymphotropic Virus Type I from Chilean Tropical Spastic Paraparesis Patients." Supervisors: Robert Shope, MD, DC Gajdusek, MD

- Amherst College. Amherst MA. 9/79-5/83. BA, Magna Cum Laude in Human Ecology (interdisciplinary-anthropology/economics/biology), Neuroscience, and Biology. Sigma Xi. John W. Simpson Fellow. Senior honors thesis: "The Cultural Ecology of African Pastoralist Societies, Considerations for Development." Supervisor: Deborah Gewertz, PhD

Clinical Experience:

- Yukon-Kuskokwim Delta Regional Hospital, Bethel, AK. 6/97-present. Clinic and ward attending in internal medicine/family practice regional hospital primarily servicing Native Americans (~120 hours per year).
- Southeast Region Kaiser Permanente, Atlanta, GA 7/94-6/96. Weekend and evening attending at urgent care facility.
- Yale New Haven Hospital/ Hospital of St. Raphael. New Haven, CT. Internal medicine residency program 6/90-6/92. International clinical experience in Peru, Spain, Chile, Papua New Guinea, Thailand, Nicaragua and Cuba.

Professional License/Certification

- Licensed physician in GA number 035477.
- Certified by the American Board of Internal Medicine since 1994 (recertified 2004).

Work Experience:

US Public Health Service – Commissioned Officer since 7/92, current rank: O5 (Commander)
National Institutes of Health (NIH), Bethesda, MD
Fogarty International Center (FIC)

2/2000-present. Associate Director for Research, Office of the Director
10/2000-present Director, Division of International Epidemiology and Population Studies.
Senior advisor for international health science, research, policy and training program development for the FIC and other NIH institutes, US government and international agencies. Design international scientific initiatives for global and national priorities for the NIH and the Department of Health and Human Services Office of the Secretary. Established and direct a research division to conduct epidemiology and

policy studies. Specific areas of focus include translation/adaptation research to determine barriers to implement public health tools/biomedical advancements; vaccines, unsafe injection practices; mathematical modeling of infectious diseases (malaria, influenza, biological weapons, vaccine preventable diseases, diarrhea); disease control priorities; health economics. Active collaborations with National Institute of Child Health and Development and National Institute of Allergy and Infectious Diseases to develop novel vaccines and policies.

Accomplishments:

- Created administrative justification for novel epidemiology research division within the NIH/FIC. Recruited senior and junior scientists for new division. Create novel mechanisms for FIC to hire staff and contract scientific research. Director and supervisor to other staff scientists. Represent division at NIH Scientific Director meetings. Publish in the field of infectious diseases, vaccines, economics and international public health policy.
- Established a program in outcomes based research which integrates biomedical sciences, epidemiology, behavioral sciences and economics to help formulate appropriate international policies to reduce disease burden. Aided in establishment of partnership program with the World Bank, Bill & Melinda Gates Foundation and the World Health Organization (Disease Control Priorities Program).
- Initiated within the US Department of Health and Human Services (DHHS)/Office of the Secretary and the NIH the field of mathematical modeling/computational biology as it relates to infectious diseases and its control. Division hosted numerous meetings of senior level US Government officials from the White House, Intelligence Agencies, National Science Foundation, Depts. of Health & Human Services, Defense, Energy, Homeland Security and presented activities at a Ministers of Health summit meeting. Results of activities led to direct funding from the DHHS/OS, and contributed to the NIH/NIGMS funding >$15M for similar program (MIDAS). One of NIH representatives at USG Interagency Working Group on Infectious Diseases.
- Initiated multi-national epidemiologic and/or clinical studies on *Neisseria meningococcal* vaccine development and influenza.
- Periodic panel member to the Institute of Medicine Board on Global Health and Forum on Microbial Threats (formerly Emerging Infections). Consultant to the Bill & Melinda Gates Foundation, Rockefeller Foundation, World Health Organization, World Bank, National Academy of Sciences Marian Koshland Science Museum.

Selected Steering Committees/Task Forces:

- Secretary's Advisory Council on Public Health Preparedness Smallpox Modeling Working Group
- National Science Foundation Interagency Working Group of the Infectious Disease Informatics Coordination Committee
- Representative to White House Office of Science Technology and Policy's Committee on International Science, Engineering, and Technology (CISET) Emerging Infectious Disease Task Force
- US Department of Health and Human Services (DHSS) inter-agency consultative group for measuring and improving health systems performance

- DHHS working group member for the evaluation of health outcome metrics
- Presidential Millennium Vaccine Initiative Meeting at NIH: Promoting public private partnerships in the development of new vaccines against HIV, malaria and tuberculosis
- Bill & Melinda Gates Foundation's Global Health Diagnostics Forum
- Trans NIH Committees on Prevention and Socio-behavioral Research
- Interim Planning Committee of the International Health Metrics Network
- Clarence Moore Award Committee for Pan American Health and Education Foundation

Selected consultations and talks:

- Bill & Melinda Gates Foundation – Consultant on activities related to the introduction of new vaccines, development of programs designed to develop meningococcal, malaria vaccines and novel diagnostic tools (2000-present)
- Global Alliance for Vaccines and Immunization (GAVI) – Task force on financing, task force on research
- The Albert B Sabin Institute, 5th Annual Vaccine Colloquium, Vaccines for Developing Economies, Who Will Pay? "Economic and epidemiologic factors associated with adoption of vaccines into national vaccine programs" (Cold Spring Harbor, December, 1999)
- US Department of State Global Health Issues Workshop, "The Global Burden of Disease" (Arlington, VA, June, 2000).
- International Conference on Health Research for Development, "Globalization of Infectious Diseases" and Chairman of session – Cost Effectiveness of Health Interventions (Bangkok, October, 2000)
- "Expanding Global Vaccine Coverage Financing, Health System Infrastructure and Economic Evaluation" at the Institute of Public Health (April 2001, Cuernavaca, Mexico)
- WHO Commission on Macroeconomics and Health Steering Committee/Working Group 5 Meeting, (March 2001, Lausanne, Switzerland)
- WHO consultation on new measles vaccine candidates at Johns Hopkins School of Public Health (March 2001, Baltimore, MD)
- "Vaccine Research, Availability…and Reality: Perspectives of International Health and Humanitarian Assistance Communities" at the US Medicine Institute for Health Studies sponsored by the Department of Defense (March 2001, Washington, DC)
- "Global Immunization Initiatives" to the US National Vaccine Advisory Committee (February 2001, Washington, DC)
- World Health Organization Strategic Advisory Group of Expert Meeting on vaccines (Geneva, Switzerland , June, 2001)
- Sabin Foundation sponsored meeting at Cold Spring Harbor on Access to future vaccines, the role of intellectual property rights and biotechnology for public health goods (Cold Spring Harbor, NY, October, 2001).
- WHO clinical workshop meeting on human papilloma virus vaccines (Geneva, Switzerland, November, 2001).

- UNAIDS/WHO workshop to discuss future access to HIV vaccines (Geneva, Switzerland, November, 2001).
- Planned and hosted a consultation on the role of mathematical modeling of biological weapons to help formulate strategy and policy (Bethesda, MD, December 13-14, 2001).
- Institute of Medicine, The Impact of Globalization on Infectious Disease Emergence and Control Addressing the Challenge (Washington DC, April 17th, 2002).
- French National Institute of Medical Research (INSERM), Burden of influenza: towards a global agenda (Paris, France, May 31st, 2002)
- Chairperson and Program Committee at Pan American Health Organization Conference on Vaccines Prevention and Public Health: A Vision for the Future (Washington DC, November 25-27, 2002).
- Institute of Medicine, participant in Global Forums on Global Health and Emerging Infectious Diseases (2000-present)
- US Delegate to the Ministerial Summit for Health Research (Mexico City, Mexico, November 16-20)

Centers for Disease Control, Atlanta, GA

Detail to **Children's Vaccine Initiative, World Health Organization**, Geneva, Switzerland 6/96-2/2000. Medical Officer. Developed methodology to perform economic evaluations of vaccine preventable diseases integrating epidemiological and economic data to provide guidance to policy-makers on financing, and prioritization of vaccination options. Results of these analyses have been disseminated to global agencies, (World Bank, World Health Organization, UNICEF, the Rockefeller Foundation and the United Nations Development Program, national governments, donor organizations and industry). Outcomes of these analyses have contributed to establishing the value of vaccination in health and economic terms contributing to international and national vaccination policy decisions, led to the reduction of vaccine prices available to low-income countries and catalyzed the establishment of the Global Alliance for Vaccines and Immunization (GAVI).

Selected Consultations:

- UNICEF - prioritization of vaccine policy options (May 1997, New York City)
- US Agency for International Development - prioritization of vaccine policy options and the economic value of measles eradication (May, October, 1997, Washington DC)
- Pan American Health Organization - *Haemophilus influenzae* type B vaccine policy analysis (May, 1997, Washington DC)
- Ministry of Foreign Affairs of Denmark - vaccine policy analysis (September, 1997, Copenhagen)
- US Government Accounting Office – economics of disease eradication from the US perspective July-November, 1997, Geneva)
- World Bank - economics of disease eradication (October, 1997, Washington DC)
- Government of Moldova - Economic analysis of hepatitis B vaccine use in Moldova (March 1998)
- UNAIDS – Estimating the demand for HIV/AIDS vaccines (May 1999, Geneva)

- Government of Turkey – National immunization day for poliomyelitis eradication (June 1999)

7/92-6/96. Medical epidemiologist, **National Immunization Program**, Epidemiology and Surveillance Division. Developed study protocols to measure efficacy of vaccines (influenza, pneumococcal) and delivery programs. Conducted epidemiologic investigations related to vaccine preventable diseases including national database analysis, outbreak investigations and vaccine economic studies. Results of one study had contributed to reduction in price of vaccine to US government saving approximately $25 million annually. Consult to local and state health departments. Draft recommendations for the Advisory Committee on Immunization Practices. Review content for the American Academy of Pediatrics' Red Book.

7/92-7/94. Prevention Effectiveness Activity, **Epidemiology Programs Office**, Office of the Director. Developed methodologies to measure public health outcomes with integration of health economic data. Evaluated health outcomes in national and local prevention oriented programs including vaccine preventable illnesses, communicable and chronic disease, through modeling based on epidemiologic and economic data. Conducted nutritional, environmental and communicable disease analytical epidemiologic assessments in response to state, federal or international requests. Designed computer analytical tools and case studies to evaluate public health prevention programs and train prevention effectiveness/decision analysis.

Consultations:

- Pan American Health Organization/CDC consultant to Ministry of Health of Cuba to assess clinical, nutritional and environmental factors in epidemiologic investigation of Neuro-ophthalmitis.
- US Agency for International Development/CDC consultant to Ministry of Health, Republic of Kyrghizstan to evaluate infectious disease, maternal child health, vital statistics and nutritional surveillance systems for incorporation into self-sustaining epidemiology bulletin.
- US Agency for International Development/CDC consultant to Ministry of Health, Bolivia Data for Decision Making Project. Wrote and taught case study to teach public health officials the utility of epidemiological and economic data to plan and implement public health programs.

National Institutes of Health-Howard Hughes Medical Institute, Bethesda, MD. 1988-1990.

Laboratory of Central Nervous System Studies. Neuro- and retroviral sero-epidemiology of tropical neurological illness.

Conducted behavioral and endocrine/behavioral studies among isolated populations in Oceania. Experience with tissue culture, viral assays, serological, and molecular biological techniques. Epidemiologic field investigations in Chile and Papua New Guinea.

Armed Forces Research Institute for Medical Studies/Yale Arbovirus Research Unit. Bangkok, Thailand. 1986. Epidemiologic and laboratory studies to determine Japanese Encephalitis vaccine efficacy in children.

Cornell University Medical College. New York, NY 1984-1985. Research assistant in physiology laboratory.

The American School in Switzerland. Montagnola, Switzerland. 1983-1984. Taught secondary school science courses. Coached Swiss National Championship Girls Basketball Team.

United Nations Environmental Programs. Nairobi, Kenya. 1982. Conducted library and field research for production of guidebook on wildlife behavior.

Kenya National Museums. Nairobi, Kenya. 1982. Designed computer programs for data processing of museum's paleontology collection.

Society and Professional Memberships:

- Infectious Disease Society of America
- Commission Corps Officer Association
- Sabin Vaccine Institute, Scientific Advisory Council
- American Medical Student Association. 1986-1990. National coordinator of International Health Task Force

Reviewer: Journal of Infectious Disesases, The Lancet, JAMA, Vaccine, Health Policy and Planning, Health Affairs, Pharmacoeconomics, Bulletin of the World Health Organization, Social Science and Medicine, Health Economics, Journal of the American Public Health Association, The Wellcome Trust, Bill & Melinda Gates Foundation, Pan American Health and Education Foundation

Awards

- **Public Health Service Special Recognition Award**, 8/95 for excellence in providing technical program support for the Bolivian Ministry of Health to utilize data-based decision making in the practice of applied epidemiology, management and communications.
- **Outstanding Unit Citation** Award, 8/95 for sustained superior effort in the development and management of the Data for Decision Making (DDM) Project at CDC.
- Nomination for the CDC **Mackel Award** for work on The Cuba Neuropathy Field Investigation Team, 4/96
- Commissioned Corps Awards, **Unit commendation**, 6/96 for defining the risk of TB transmission to passengers or crew who fly on commercial aircraft with an infectious TB patient.
- Division of **Health and Human Services Honor Award nominee**, 6/96.

- **CDC/ATSDR Honor Award** for developing , testing and implementing a low-cost water storage and purification intervention that improves hygiene and prevents diarrheal diseases in communities without safe water, 6/96
- **Unit Commendation** for the Period 1/95-12/96 for epidemiologically documenting the interruption of indigenous transmission of measles in the U.S.
- **Outstanding Unit Citation** for the period 2/94-12/96 for achieving the Childhood Immunization Initiative 1996 vaccine coverage objectives and the highest immunization levels ever in the U.S.
- **Outstanding Unit Citation** approved 12-97 for developing the basis for introduction of a sequential schedule for prevention of associated poliomyelitis in the U.S.
- Nominated for US Public Health Service Commissioned Officers **Exceptional Capabilities Promotion** by the National Immunization Program, Centers for Disease Control, 1998.
- Nominated for US Public Health Service Commissioned Officers **Exceptional Capabilities Promotion** by the National Institutes of Health, 2000, 2002, 2004.
- Nominated for the Distinguished Service Medal by the NIH, 2004.

Patent:

- US Patent #07-743518 Papua, New Guinea Human T-Lymphotropic Virus

Publications:

Books and Book Chapters

1. **Miller M**, Galofre, A. (eds.) International Health Opportunities for Medical Students. Reston, VA: The American Medical Student Association, 1989.

2. **Miller MA**, Hinman, A. Cost benefit and cost effectiveness analysis of vaccine policy. In Vaccines, Third Edition. Plotkin S and Orenstein W. eds. Philadelphia: W. B. Saunders Co. 1999. Pp. 1074-88.

3. **Miller MA**, Hinman, A. Economic Analyses of Vaccine Policies. In Vaccines, Fourth Edition. Plotkin S and Orenstein W. eds. Philadelphia: W. B. Saunders Co. 2004. Pp. 1463-90.

4. Keusch GT, Bart K, **Miller M**. Immunization Principles and Vaccine Use. In Harrison's Principles of Internal Medicine, Sixteenth Edition. Kasper D, Braunwald E, Fauci A, Hauser SL, Longo D and Jameson JL eds. New York: The McGraw-Hill Companies, Inc, 2004, 713-25.

5. Simonsen L, Reichert TA, Blackwelder WC, **Miller MA**. Benefits of influenza vaccination on Influenza-related mortality among elderly in the US: an unexpected finding. In Kawaoka, Y, (ed.) International Congress Series 1263 Options for the control of influenza V (2004):163-7.

6. Simonsen L, Reichert TA, **Miller MA**. The Virtues of antigenic sin: consequences of pandemic recycling on influenza-associated mortality. In Kawaoka, Y (ed.) International Congress Series 1263 Options for the control of influenza V (2004):791-4.

7. Simonsen L, Olson DR, Viboud C, Heiman E, **Miller MA**, Reichert TA. In Pandemic influenza and mortality: past evidence and projections for the future. In Institute of Medicine's Pandemic Influenza: Assessing Capabilities for Prevention and Response. Forum on Microbial Threats series, (2004). 1-26-46.

8. **Miller MA**, Barrett S, Control Elimination and Eradication. In Jamison et al. (eds). Disease Control Priorities in Developing Countries. Oxford University Press. (in press).

9. Halsey N, Brenzel L, Fox Rushby J, Wolfson L, **Miller MA**. Vaccine preventable diseases. In Jamison et al. (eds) Disease Control Priorities in Developing Countries. Oxford University Press. (in press).

Peer review journal articles

1) Cartier L, Mora M, Araya F, Castillo J, Verdugo R, **Miller MA**, Gajdusek DC, Gibbs CJ Jr. HTLV-I Positive Spastic Paraparesis in a Temperate Zone. Lancet. 1989;8637:556-557.

2) Yanigahara R, Garruto R, **Miller MA**, Monzon M, Gibbs CJ Jr, Alpers M, Gajdusek DC. Isolation of HTLV-I from members of a remote tribe in New Guinea. New England Journal of Medicine. 1990;323(14):993.

3) Yanigahara R, Nerurkar VR, **Miller MA**, Leon-Monzon ME, Liberski P, Alpers M, Gajdusek DC. Characterization of a variant of human T-lymphrotropic virus type I isolated from a healthy member of a remote, recently contacted group from Papua, New Guinea. Proceedings of the National Academy of Sciences. 1991;88(4):1446-50.

4) Imperato-McGinley J, **Miller MA**, Wilson JD, Peterson RE, Schackleton C, Gajdusek DC. A cluster of male pseudohermaphrodites with 5a-steroid reductase deficiency in Papua, New Guinea, Journal of Clinical Endocrinology. 1991;34:293-8.

5) Niu MT, Polish LB, Robertson BH, Khanna BK, Woodruff BA, Shapiro CN, **Miller MA**, Smith JD, Gedrose JK, Alter MJ, Margolis HS. Multistate outbreak of Hepatitis A associated with frozen strawberries. Journal of Infectious Diseases. 1992;166:518-24.

6) Nerukar V, **Miller M**, Leon-Monzon M, Ajdukiewicz A, Jenkins C, Sanders R, Godec M, Garruto R. and Gajdusek DC. Failure to isolate human T cell lymphotropic virus type I and to detect variant-specific genomic sequences by polymerase chain reaction in Melanesians with indeterminate Western immunoblot. Journal of General Virology, 73:1805-10

7) Effectiveness in Disease and Injury Prevention: Physical Activity and the Prevention of Coronary Heart Disease. Morbidity and Mortality Weekly Report. 1993. 42:669-72.

8) Epidemic neuropathy -- Cuba, 1991-1994. Morbidity and Mortality Weekly Report. 1994. 43(10):183-192.

9) **Miller M**, Mintz, Eric, Modelling Prevention Effectiveness: An Interactive Model to Assess Public Health Prevention Programs. In "A Practical Guide to Prevention Effectiveness: Decision and Economic Analyses" Haddix A (ed). Atlanta: US Department of Health and Human Services. 1994:67-173.

10) Exposure of passengers and flight crew to Mycobacterium tuberculosis on commercial aircraft, 1992-1995. Morbidity and Mortality Weekly Report. 1995. 44:137-40.

11) Influenza and pneumococcal vaccination levels in persons > 65 years of age: 1973-1993. Morbidity and Mortality Weekly Report. 1995:506-515.

12) The Cuba Neuropathy Field Investigation Team. Epidemic optic neuropathy in Cuba: Clinical characterization and risk factors. New England Journal of Medicine. 1995;333:1176-82.

13) **Miller M**, Sutter R, Strebel P, Hadler S. Cost-effectiveness of integrating inactivated poliomyelitis vaccine into the routine US vaccination schedule. Journal of the American Medical Association. 1996;276:967-71.

14) **Miller M**, Valway S, Onoroto I. Tuberculosis risk after exposure on airplanes. Tubercle and Lung Disease. 1996;77:414-9.

15) Glass RI, Bresee JS, Parashar U, **Miller M**, Gentsch JR. Rotavirus vaccines at the threshold. Nature Medicine. 1997;3(12):1324-5.

16) The CVI Task Force on Strategic Planning. The CVI Strategic Plan Managing Opportunity and Change: A Vision of Vaccination for the 21st Century. Geneva: The Children's Vaccine Inititiative, 1997.

17) **Miller MA**. An assessment of the value of *haemophilus influenzae* type B conjugate vaccine in Asia. Pediatric Infectious Disease Journal 1998; Oct (Supl3):S152-9.

18) **Miller MA**, Redd SC, Hadler S, Hinman A. A model to estimate the potential economic benefits of measles eradication for the United States. Vaccine, 1998; 20:1917-22.

19) **Miller MA**. Considerations for adding pneumonia and influenza vaccines to public health programs. Vaccine 1999; 17:S95-8.

20) **Miller MA**, Williams WW, Redd S. Measles in the United States adult population 1985-1995. American Journal of Preventive Medicine, 1999; 17:114--9.

21) **Miller MA**, Pisani E. The cost of unsafe injections. Bulletin of the World Health Organization, 1999; 77:808-11.

22) **Miller MA**, Wenger J, Rosenstien N, Perkins B. Evaluation of meningococcal meningitis control strategies for the meningitis belt in Africa. Pediatrics Infectious Disease Journal 1999; 18:1051-9.

23) **Miller MA**. Introducing a deterministic model to estimate global measles disease burden. Journal of International Infectious Diseases, 2000; 4:14-20.

24) **Miller MA**, McCann L. Policy analysis of the use of hepatitis b, *Haemophilus influenzae* type B-, Streptococcus pneumoniae- conjugate and rotavirus vaccines in national immunization schedules. Health Economics, 2000; 9:19-35.

25) Lieu TA, Ray GT, Black SB, Butler JC, Klein JO, Breiman RF, **Miller MA** Shinefield HR. Projected cost-effectiveness of pneumococcal conjugate vaccination of healthy infants and young children. Journal of the American Medical Association, 2000; 283:1460-8.

26) **Miller MA**, Flanders, D. A model to predict the probability of hepatitis b and *Haemophilus influenzae* type b vaccines into national immunization programs. Vaccine, 2000; 18:2223-2230.

27) **Miller MA,** Kane M. Routine hepatitis b immunization in India: Cost-effectiveness assessment. Indian Journal of Pediatrics, 2000; 67:299-300.

28) Freeman P, Miller M Scientific Capacity building to improve population health: Knowledge as a global public good. WHO Commission on Macroeconomics and Health, Working Group 2: Global Public Goods. http://www.cmhealth.org/docs/wg2_paper3.pdf, 2001.

29) Binka F, Cash R, Chen L, Claeson M, Dare L, Doyal L, Evans T, Germain A, Horton R, Jones D, Kilima P, **Miller M**, Narasimhan V, Pablos-Mendez A, Ramsay S, Reddy KS, Sanders D, Suwanwela C, Thankappan KR, Wibulpolprasert S. An open letter to the Executive Board of WHO. Lancet. 2003 Jan 18;361(9353):194.

30) Parashar UD, Hummelman EG, Bresee JS, **Miller MA**, Glass RI. The global illness and deaths caused by rotavirus disease in children. Emerging Infectious Disease. 2003; 9:565-72.

31) Reichert TA, Sharma A, Simonsen L, Saito R, **Miller M**. Influenza and the winter increase in mortality in the United States, 1959-99. American Journal of Epidemiology 2004 160(5):492-502.

32) Forsyth KD, Campins-Marti M, Caro J, Cherry JD, Greenberg D, Guiso N, Heininger U, Schellekens J, Tan T, von Konig CH, Plotkin S for the Global Pertussis Initiative. New

pertussis vaccination strategies beyond infancy: recommendations by the global pertussis initiative. Clin Infect Dis. 2004 Dec 15;39(12):1802-9.

33) **Miller MA**, Shahab CK. Review of the cost effectiveness of immunization strategies for the control of epidemic meningococcal meningitis. Pharmacoeconomics 2005:23:333-43.

34) Simonsen L, Reichert TA, Viboud C, Blackwelder WC, Taylor RJ, **Miller MA**. Impact of Influenza Vaccination on Seasonal Mortality in the US Elderly Population. Arch Intern Med. 2005 Feb 14;165(3):265-72.

35) Stein DM, Robbins J, **Miller MA**, Schneerson R. Is the presence of antibodies to the capsular polysaccharide of *Neisseria meningitidis* group B and *Eschericia coli* K1 asociated with immunopathology? Vaccine. 2005 Aug 25; [Epub [Epub ahead of print].

36) Viboud C, Freeman-Grais R, Simonsen L, **Miller MA** for the Multi-national Influenza Seasonal Mortality Study. Multi-national impact of the 1968 Hong-Kong influenza pandemic: evidence for a smoldering pandemic. J Infect Dis. 2005;192(2):233-48..

37) Breman JG, Rosen JB, Manclark C, Meade BD, Hermann K, Collins WE, Lobel HO, Saliou P, Roberts JM, Campaore P, Miller M. The role of malaria on the serologic response to measles and diphtheria-tetanus-whole cell pertussis vaccines. in (press).

Published abstracts, letters and presentations:

1. Yanigahara R, Garruto RM, **Miller MA**, Jenkins CL, Liberski PP, Gajdusek DC. HTLV-I infection among the Hagahai of Papua, New Guinea: Isolation of Type C Retroviruses from T-cell Cultures. Abstract published in Third Annual Retrovirology Conference, Hawaii, February12-14, 1990.

2. **Miller MA**, Imperato-McGinley J, Paterson R, Gajdusek DC, Garruto RM. Male pseudohermaphroditism caused by 5α reductase deficiency in the Simbari Anga of Papua, New Guinea. Abstract in the American Journal of Physical Anthropology. 1990;81(2):269.

3. Garruto RM, Yanigahara R, **Miller MA**, Monzon M, Liberski PP, Gajdusek DC, Jenkins CL, Alpers MP. Virus isolation confirms serological data of high prevalence of HTLV-I infection in New Guinea. Abstract in the American Journal of Physical Anthropology. 1990;81(2):226.

4. Cartier L, Mora C, Araya J, Castillo R, Verdugo R, Monzon M, **Miller M**, Gibbs C, Gajdusek DC. Subacute encephalomyelopathy associated with HTLV-I: pseudobulbar paralysis and mental deterioration. Abstracts of the Forty-second Annual meeting of the American Academy of Neurology, Miami, April 28-May3. Neurology, 1990, 40:4 (April), suppl. 1:373.

5. **Miller M**, Valway S, Onorato I. Assessing Tuberculin Skin Test Conversion after Exposure to Tuberculosis on Airplanes. Abstracts of the 121st Annual Meeting of the American Public Health Association, San Francisco, October 24-28, 1993.

6. **Miller MA**, Teutsch S. Modeling the Impact of the Clinical Laboratory Improvement Amendment of 1988 (CLIA-88) on Sexually Transmitted Disease Clinics. American Journal of Epidemiology. 139(11) supplement: 71.

7. **Miller M**, Quick, R, Mintz, E, Tauxe, R, Teutsch, S. Solid stools for solvent citizens: An effective solution to prevent diarrhea in developing countries. Abstracts of the Thirty Fourth Annual meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, Orlando, October 4-7 1994.

8. **Miller M**, Tachdjian R, Heath K, Strikas R, Williams W. Influenza vaccination amongst persons >= 65: Who are we missing? Abstract accepted for Prevention 95 conference, New Orleans, March 30-April 3, 1995.

9. **Miller M**, Reichler M, Keegan R, Strebel P. Risk of poliomyelitis in United States Travelers to polio endemic areas. Abstract accepted for International Conference on Travel Medicine, Acapulco, April 23-27, 1995.

10. **Miller M**, Tachdjian R, Heath K, Strikas R, Williams W. Pneumococcal vaccination among persons > 65. American Journal of Respiratory and Critical Care Medicine. 151(4):A612, 1995.

11. **Miller M**, Eiseman M, Nelson M, Feldman G, Watson J. An outbreak of mealses in adults: Are we maximizing prevention? Abstracts of the Thirty Fifth Annual meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, San Francisco, CA, September 17-20, 1995.

12. **Miller M**, Tachdjian R, Strikas R, Williams W. Vaccination against pneumococcal infections and influenza: How are we doing? Abstracts of the 123rd Annual Meeting of the American Public Health Association, San Diego, October 29-November 2, 1995.

13. **Miller MA**, Legros JR, Strikas R, Williams W. Effect of medical conditions on influenza vaccination in the United States, 1993. Abstract of the 30th National Immunization Conference, Washington DC, April 1996.

14. Doshi SJ, **Miller M**, Schultz LJ, Strikas R, Williams W. Patterns of influenza and pneumococcal vaccination amongst women in the US. Abstract of the 30th National Immunization Conference, Washington DC, April 1996.

15. **Miller M**, Strikas R, Williams W. Vaccination against influenza amongst high risk persons in the US population. Abstracts of the Third Meeting of the Options to Control Influenza, Cairns, Australia, May 4-7, 1996.

16. Doshi SJ, Schultz LJ, **Miller MA**. Racial differences in influenza vaccination coverage among US women >65 years, 1993. Abstracts of the Third Meeting of the Options to Control Influenza, Cairns, Australia, May 4-7, 1996.

17. **Miller M**, Williams W, Redd S. Measles in the adult US population. Abstracts of the Thirty Sixth Annual meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, New Orleans, September 17-20, 1996.

18. Whitney CG, Levine O, Robertson R, **Miller M**, Schwartz B. Cost-effectiveness of haemophilus influenzae type b conjugate immunization in developing countries. Abstracts of the Thirty Sixth Annual meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, New Orleans, September 17-20, 1996.

19. Doshi SJ, **Miller MA**, Schultz LJ, Lobel HO. Vaccination rates among US travelers to developing countries, 1986-1991. Abstracts of the 124th Annual Meeting of the American Public Health Association, New York City, November, 1996.

20. Legros J, **Miller MA**, Strikas R, Williams WW. Influenza and pneumococcal vaccination levels and receipt of other preventive health services. Abstracts of the 124th Annual Meeting of the American Public Health Association, New York City, November, 1996.

21. Sutter R, Strebel P, **Miller M**, Hadler S. Epidemiology of vaccine-associated paralytic poliomyelitis in the United States (letter). Journal of the American Medical Association (in press).

22. Silber JL, Strikas RA, Young G, **Miller M**, Paul S, Cetron MS, Breiman RF. Measuring the impact of a multifaceted pneumococcal vaccination program through an annual telephone survey. Abstract presented at the 35th Annual Meeting of the Infectious Diseases Society of America, SanFrancisco, September 13th -16th.

23. **Miller MA**, Wenger J, Rosenstien N, Perkins B. Evaluation of Meningococcal Meningitis Control Strategies for the Meningitis Belt in Africa. Abstracts of the Thirty Seventh Annual meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, Toronto September 28th -October 2nd, 1997.

24. **Miller MA**, Schwartz B. Assessment of Pneumococcal Conjugate Vaccine Incorporation into the Global Expanded Programme on Immunizations. Abstracts of the Thirty Seventh Annual meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, Toronto September 28th -October 2nd, 1997.

25. **Miller MA**, Redd SC, Hadler S, Hinman AR. Economic Benefits of Global Measles Eradication for the United States. Abstracts of the Thirty Seventh Annual meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, Toronto September 28th -October 2nd, 1997.

26. Singleton JA, **Miller M**, Strikas RA, Williams WW. Influenza vaccination of person with chronic cardiovascular disease, United States, 1989 through 1994. Abstracts of the 12th National Conference on Chronic Disease Prevention, Washington DC, December 3-5th 1997.

27. **Miller MA**. Hidden costs of unsafe injections. In World Health Organization/Global Programme for Vaccines and Immunization. Technical network for logistics in health Copenhagen consultation '98. Geneva, 1998.

28. **Miller M**, Widdus R, McCann L. New vaccine adoption into national immunizations programs. Nordic Vaccine Meeting, Helsinki, October 7-8, 1998.

29. **Miller M**, Strebel P, Olivé JM. More on measles (letter). Public Health Reports. 1999;114:4-5.

30. **Miller M**. Progress of vaccine adoption into national immunizations programs. Clinical Microbiology and Infection. 1999;5:44.

31. Lieu T, Ray GT, Black S, Shinefield H, Butler J**, Miller M**. Cost-effectiveness of Pneumococcal Vaccine. *JAMA* 2000 Jul 26;284(4):440-441.

32. **Miller M**. Adoption of Global Public Health Goods: The Case of Vaccines. Published in the proceedings of the World Medical Association Conference, Edinboro, October, 2000.

33. Walker D, Fox-Rushby F, Sanderson C, Cutts F, **Miller M**. How useful are existing models for predicting the cost-effectiveness of introducing new vaccines? International Health Economics Association Conference, York, July 2001.

34. Parashar U, Hummelman E, Bresee J, **Miller MA**, Glass R. An Estimate of the Global Mortality from Rotavirus Disease in Children. Vaccines for Enteric Diseases VED 2001, Tampere, Finland, September 12-14, Finland.

35. Simonsen L, Reichert T, **Miller MA.** Effect of influenza vaccination in the United States: Prevention of mortality among the elderly.1st European Influenza Conference, Malta October, 2000.

36. Reichert T, Simonsen L, **Miller MA**. The virtues of antigenic sin. 1st European Influenza Conference, Malta October, 2002).

37. Reichert T, Simonsen L, Sturke R, Depinay JM, **Miller MA**. Estimating the global burden of mortality due to influenza: building the tools. 1st European Influenza Conference, Malta October, 2002.

38. Simonsen L, Blackwelder, WC, Reichert TA, **Miller MA. Estimating deaths due to influenza and respiratory syncytial virus (letter).** *JAMA*. 289 (19): 2499-2500.

39. Simonsen L, Reichert T, Blackwelder B, Miller M. A Marginal Impact of Influenza Vaccination Efforts on Influenza-related Mortality in US Elderly. Options for the control of influenza V, Okinawa, Japan, 2003, Oct 7-11.

40. Reichert T, Simonsen L, **Miller M**. The impact of influenza epidemics on seasonal mortality. Options for the control of influenza V, Okinawa, Japan, 2003, Oct 7-11.

41. Simonsen L, Reichert T, **Miller MA**. The Virtues of Antigenic Sin: Consequences of Pandemic Recycling on Influenza-associated Mortality. Options for the control of influenza V, Okinawa, Japan, 2003, Oct 7-11.

42. Viboud C, **Miller M**. *Space and time correlation of influenza epidemics in the United States:1968-1998.* Options for the control of influenza V, Okinawa, Japan, 2003, Oct 7-11.

43. Viboud C, A Flahault A, **Miller M**. Patterns of synchrony and coherence in influenza epidemics. Center for Discrete Mathematics and Theoretical Computer Science, Working Group on Spatio-Temporal and Network Modeling of Diseases, Rutgers University, USA, 2003, Apr 22-26.

44. Simonsen L, Viboud, Blackwelder W, Taylor R and **Miller M**. Researchers say yes, question the benefits of flu vaccine for the elderly, but definitely vaccinate them. Infectious Disease News. August, 2005. http://www.infectiousdiseasenews.com/200508/frameset.asp?article=guested2.asp

45. Rizzo C, Viboud C, Simonsen L, Montomoli E, Manini I, **Miller M**. Impact of influenza vaccination on mortality rates among Italian elderly. The Second European Influenza Conference, Malta, September 11-14, 2005.

Formal presentations/activities (in addition to above listed abstract presentations)

1. Institute of Medicine meeting on poliomyelitis vaccination policy, (June 1995, Washington, DC)
2. WHO Standing Committee Meetings on Measles, Acute Respiratory Infection vaccines, Diarrheal Disease, Field Epidemiology, Viral-Vector Borne Diseases, New Vaccines (6 separate meetings January-April, 97, Geneva)
3. WHO meeting on meningococcal polysaccharide vaccination options (3 separate meetings December 96 - February 97, Geneva and Annecy)
4. Children's Vaccine Initiative Consultative Group Meetings (conducted 2 different workshops on vaccine evaluations, Sao Paulo, October, 1995; Dakar, December, 1996)
5. Preventive Medicine Association/ Children's Vaccine Initiative, *Haemophilus influenzae* in Asia (Denpassar, December, 1996)
6. Children's Vaccine Initiative's and WHO Global Program for Vaccine's Scientific Advisory Group of Experts "Introducing a methodology to conduct Vaccine policy analysis" (Geneva, June 1997)
7. Centers for Disease Control and Prevention's and WHO Meeting on measles control and elimination (August 1997, Atlanta)

8. WHO regional technical advisory meetings (May-June 1997, SEARO, EMRO)
9. International Clinical Epidemiology Network Global Meeting, Vaccine policy evaluations (Queretaro, Mexico February, 1998)
10. World Bank Task Managers Meeting, Economic considerations of vaccines (Washington DC, February, 1998)
11. WHO Technical Network for Logistics in Health – Economics of unsafe injection, (Copenhagen Denmark, February, 1998)
12. Adult immunization in Asia, Considerations of adding new vaccines to national immunization programs (Hanoi, Vietnam, April, 1998)
13. 1st Asia-Pacific regional consultation on economic and policy considerations in new vaccine introduction - (Chiang Mai, Thailand, April, 1998)
14. European epidemiology training program (EPI-ET), Vaccine policy assessment (Helsinki, Finland May, 1998)
15. Children's Vaccine Initiative's and WHO Global Program for Vaccine's Scientific Advisory Group of Experts, "Establishing the value of vaccines" (Geneva, June 1998)
16. Steering committee on infectious diseases in Asia, "Evaluation of vaccine interventions against infectious diseases" (Singapore, September 4, 1998)
17. WHO/CVI meeting on new initiatives for the control of Japanese encephalitis by vaccination, "Cost effectiveness of Japanese encephalitis control" (Bangkok, October 13-15, 1998).
18. Children's Vaccine Initiative consultative group meeting, Quantitative policy analysis as a tool to help prioritize vaccination options (Geneva, November 9-10, 1998).
19. Children's Vaccine Initiative's Meeting on sustainable financing and vaccination, "Quantitative analysis as a tool for vaccine financing" (New York Feb 4-5, 1999).
20. WHO/CVI Priorities for pneumococcal and Hib vaccine development and introduction, Pneumococcal and Hib Agenda, "Estimating demand for vaccines against acute bacterial respiratory infections" (Geneva, February 9-12, 1999)
21. WHO Technical meeting for review of the current status of development of prophylactic vaccines against human papillomavirus infection and associated diseases, "Methods for evaluation of vaccination policy" (Geneva, February 16-18, 1999).
22. First workshop on rotavirus surveillance in Asia, "Cost-effectiveness of rotavirus vaccines" (Bangkok, February 25-27, 1999).
23. International Clinical Epidemiology Network XVI Global Meeting "Cost-effectiveness of vaccine adoption into national vaccination schedules" (Bangkok, March 1-4, 1999).
24. WHO meeting on the potential use of oral cholera vaccines in emergency situations **"**Policy analysis of vaccines against bacterial enteric diseases," (Geneva, May 13-14, 1999).
25. Global Forum for Health Research, "A standardized methodology to evaluate vaccine policy," (Geneva, June 8-10)
26. Combined vaccines for the world's children, "Health economics of the use of vaccines against hepatitis B and *Haemophilus influenzae* type b in national immunisation schedules," (Barcelona, June 27-29).
27. Vaccines & Immunisation into the Next Millennium, "Vaccine Cost Effectiveness" (Manchester, September 6-9, 1999).

28. Vaccines & Immunisation into the Next Millennium, "Global Measles Control Epidemiologic and Economic Assessment of Control Strategies," (Manchester, UK September 6-9, 1999).
29. Asia Pacific Regional Seminar on Expanding and Sustaining Immunisation, "A Model for Policy Analysis for Vaccine Introduction," (Brisbane, November 21-24, 1999).
30. The Albert B Sabin Institute, 5th Annual Vaccine Colloquium, Vaccines for Developing Economies, Who Will Pay? "Economic and epidemiologic factors associated with adoption of vaccines into national vaccine programs" (Cold Spring Harbor, December 5-7, 1999).
31. NIH/NVPO-Sponsored Workshop on Intussusception, Infection and Immunization, Risk Benefit of Rotavirus Vaccine: US and International Perspectives", (Bethesda, January 21, 2000).
32. International Vaccine Institute, The Diseases of the Most Impoverished (DOMI) Program Planning Meeting, "Cross-cutting research and technical assistance needs for DOMI vaccine introduction, Economic analysis" (Geneva, February 7-8, 2000).
33. World Health Organization, Future Direction for Rotavirus Vaccine Research in Developing Countries, "Mortality of Rotavirus Disease in Developing Countries, Policy Evaluation of Rotavirus Vaccine" (Geneva, February 9-11, 2000).
34. RIVM, (Netherlands National Institute of Public Health) "Country Specific Quantitative Policy Analysis of the Use of New Vaccines in National Immunization Schedules" (Bilthoven, Netherlands April 4, 2000).
35. Pan American Health Organization, Andean Sub-Regional Meeting on Dengue Research, "Opportunities to conduct socio-behavioral and economic research for the control of Dengue" (Lima, Peru).
36. International Vaccine Institute, "Economic Analysis of Vaccines against Shigella, Cholera and Typhoid" (Seoul, Korea, May 8-12, 2000).
37. USAID, "Assessing and Creating Demand for Vaccines Accelerating the Adoption of New and Underutilized Vaccines" (May 25-26, Washington, DC).
38. Fondation Merieux, Advanced Vaccinology Course, "Use and Limitations of Economic Analysis" (Veyrier du Lac, May 29, 2000).
39. World Health Organization, "CVI Quantitative Policy Analysis for Hepatitis B, Methods for Estimating Hepatitis B Disease Burden" (Geneva, May 30-31, 2000).
40. US Department of State Global Health Issues Workshop, "The Global Burden of Disease" (Arlington, VA, June 28, 2000).
41. Global Alliance for Vaccines and Immunization (GAVI) Financing Task Force meeting at The World Bank (Washington, D.C., September 20-21, 2000).
42. Options on the Control of Influenza, (Herssonius, Greece, September 23-28, 2000).
43. International Conference on Health Research for Development, "Globalization of Infectious Diseases" and Chairman of session – Cost Effectiveness of Health Interventions (Bangkok, October 10-13, 2000).
44. National Vaccine Advisory Committee on global vaccine issues, (Washington, D.C., October, 23-24, 2000).
45. Conducted a workshop for the International Vaccine Institute Diseases of the Most Impoverished Program on the Economic Aspects of Shigellosis, (Bangkok, November 6 - 9, 2000).

46. Delivered a talk on Perspectives on Vaccine Development and Deployment, University of Massachusetts (Amherst, MA, November 16, 2000).
47. Global Alliance for Vaccines and Immunization meeting (Noordweijk, Netherlands, November 20-21, 2000).
48. Chaired a meeting for review of CVI treatment protocol cost studies (Geneva, December 11-12, 2000).
49. WHO Commission on Macroeconomics and Health, (Washington DC, December 13-14, 2000).
50. Colloquium on geographic information systems and Vector-Borne Diseases, (San Diego, January 3-5, 2001).
51. Developing an agenda to control human papilloma virus through vaccination, sponsored by the Gates Foundation, (Seattle, January 18-19, 2001).
52. Presented a talk on "Global Immunization Initiatives" to the US National Vaccine Advisory Committee, (Washington, D.C., February 14, 2001).
53. Presented a talk on "Vaccine Research, Availability...and Reality: Perspectives of international health & humanitarian assistance communities" at the US Medicine Institute for Health Studies sponsored by the Department of Defense, (Washington, D.C., March 15, 2001).
54. WHO consultation on new measles vaccine candidates at Johns Hopkins School of Public Health, (Baltimore, MD, March 21, 2001).
55. WHO Commission on Macroeconomics and Health Steering Committee/Working Group 5 Meeting, (Lausanne, Switzerland, March 27, 2001).
56. National Institute of Public Health (Mexico) presented a talk on Expanding Global Vaccine Coverage Financing, Health System Infrastructure and Economic Evaluation, (Cuernavaca, Mexico, April 11, 2001).
57. 2nd Colloquium on Geographic Information Science/Vector (Warrenton, VA, May 22-24, 2001).
58. Scientific Committee and instructor in 2nd Advanced Vaccinology Course (Veyrier du Lac, France, May 25 – June 2, 2001)
59. Rapporteur in WHO/GAVI Global Vaccine Research Meeting (Montreux, Switzerland, June 9-14, 2001)
60. World Health Organization Strategic Advisory Group of Expert Meeting on vaccines (Geneva, Switzerland, June 14–15, 2001)
61. Rapporteur in UNAIDS meeting Access to Future HIV Vaccines (Geneva, Switzerland, June 26–July 2, 2001)
62. International Health Economics Association Biennium meeting (York, United Kingdom, July 22–25, 2001)
63. US National Vaccine Advisory Committee Workshop on Intussusception from Rotavirus vaccine (Arlington, VA, September 5-7, 2001)
64. Paper by Parvathi Myer and Mark Miller presented in Helsinki, Finland Global meeting for future vaccines for enteric diseases, "Risk of inaction: Rotavirus vaccine in developing countries." (September 12-14, 2001)
65. Sabin Foundation sponsored meeting at Cold Spring Harbor on Access to future vaccines, the role of intellectual property rights and biotechnology for public health goods (Cold Spring Harbor, NY, October 9-11, 2001).

66. International Vaccine Institute Social Science Task Force retreat for the Diseases of the Most Impoverished (Morgantown, West Virginia, October 3-4, 2001).
67. WHO clinical workshop meeting on human papilloma virus vaccines (Geneva, Switzerland, November 1-2, 2001).
68. UNAIDS/WHO workshop to discuss future access to HIV vaccines (Geneva, Switzerland, November 19-20, 2001).
69. Malaria Vaccine Initiative meeting on research to determine the potential market for malaria vaccines (Rockville, MD, December 10-11, 2001).
70. Planned and hosted a consultation on the role of mathematical modeling of biological weapons to help formulate strategy and policy (Bethesda, MD, December 13-14, 2001).
71. Global Alliance for Vaccines and Immunization financing task force meeting (Washington DC, January 23-24, 2002).
72. WHO consultation on cost-effectiveness analysis (Geneva 1/28-29, 2002.
73. National Institute of Public Health, presentation on Economic considerations in making decisions about vaccination programs: Hidden costs of unsafe injections, (Cuernavaca, Mexico, February 21-23rd, 2002).
74. Institute of Medicine, presentation on The Impact of Globalization on Infectious Disease Emergence and Control
    Addressing the Challenge (Washington DC, April 17th, 2002).
75. International Aids Vaccine Initiative consultation on Policy and Public Sector Support Program (New York, April 22, 2002).
76. Hosted a meeting on Modeling Smallpox Transmission Dynamics and Response (Washington DC, April 30-May 1st, 2002).
77. Disease Control Priorities Project, presentation on Vaccine Economics, the Role in Childhood Mortality Reductions, (Annapolis, MD, May 2-3rd, 2002).
78. French National Institute of Medical Research (INSERM), presentation on Burden of influenza: towards a global agenda (Paris, France, May 31st, 2002).
79. Global Pertussis Initiative, (Paris, France, June 1-2, 2002).
80. Scientific Council and Instructor for Advanced Vaccinology Course, (Veryier du Lac, France, June 3-14th, 2002).
81. WHO Scientific Advisory Group of Experts, (Geneva, Switzerland, June 13-14th).
82. Co-hosted meeting on The role of Antibodies in Viral Infections: Special Reference to Dengue Infections (Bethesda, MD, June 3-4th, 2002).
83. WHO/UNAIDS presentation on Socioeconomic factors for Introduction of HIV/AIDS Vaccines (Geneva, Switzerland, August 9th, 2002).
84. Informal meeting of the WHO product development group for aerosol measles vaccine (Geneva, August 19-20).
85. Measles Control with Aerosol Vaccines, presentation to the Sabin Vaccine Institute, (New Canaan, CT, October 4, 2002).
86. European Scientific Working Group on Influenza, presentation on Burden of influenza: The Multinational Influenza Seasonal Mortality Study, (Malta, October 23, 2002).
87. Disease Control Priorities Project, Economic methodologies in the evaluation of public health programs, (Bethesda, MD, November 5-7th, 2002).
88. Chairperson at Roundtable on supporting cooperation in health research for development: A review of the International Health Research Awards (Arusha, Tanzania, November 10th, 2002).

89. Participant in Future Challenges Facing the World Health Organization, (Arusha, Tanzania, November 10-12th, 2002).
90. Global Forum for Health Research, (Arusha, Tanzania, November 12-15th, 2002).
91. Chairperson and Program Committee at Pan American Health Organization Conference on Vaccines Prevention and Public Health: A Vision for the Future (Washington DC, November 25-27, 2002).
92. Scientific Council and Instructor for Advanced Vaccinology Course, (Veryier du Lac, France, May 26-June 6th, 2003).
93. World Health Organization Scientific Advisory Group of Experts for Vaccines and Biologicals (Geneva, June 18-19th, 2003).
94. Bill & Melinda Gates Foundation consultation on the potential benefits of *Haemophilus influenzae* type b vaccine in developing countries (September, 2003)
95. Global Forum for Health Research, (Geneva, December 2-5, 2003).
96. Disease Control Priorities Project: Trends in childhood mortality (Venice, January 26-29th, 2004).
97. WHO Product Development Group for Measles Aerosol Vaccine (Geneva, February 5-7th, 2004).
98. National Institute of Allergy and Infectious Diseases meeting on Enteric Vaccines for Pediatric Use (Warrenton, VA, April 25-26th).
99. Scientific Council and Instructor for Advanced Vaccinology Course, (Veryier du Lac, France, May 10-21st, 2004).
100. Global Alliance for Vaccines and Immunization Vaccine Research Meeting, (Montreux, June 7-11th).
101. Pandemic Influenza: Assessing Capabilities for Prevention and Response. Institute of Medicine's Forum on Microbial Threats (Washington, D.C.,June 16-17th 2004).
102. Bill & Melinda Gates Foundation's Global Health Diagnostics Forum (Seattle, September 27-28th, 2004).
103. World Health Organization Scientific Advisory Group of Experts for Vaccines and Biologicals (Geneva, October 27-29, 2004)
104. US delegate to Ministerial Summit and Global Forum for Health Research, (Mexico City, Mexico, November 16-20, 2004).
105. World Health Organization Advisory Committee for Health Research, (Mexico City, Mexico, November 20, 2004).
106. Bill and Melinda Gates Foundation Forum for Diagnostics Development (Santa Monica, December 7-8, 2004).
107. "A tribute to John La Montagne, PhD; Influenza in the 21st Century." National Institute of Public Health of Mexico, (Cuernavaca, Mexico, March 2-4, 2005).

J. Thomas Ratchford

Dr. J. Thomas Ratchford is Distinguished Visiting Professor at the National Center for Technology & Law of the George Mason University (GMU) Law School, where he directs the Science and Trade Policy Program. Founder of the GMU Center for Science, Trade, and Technology Policy in 1994, he was its director until 1999. His professional activities involve a variety of global science and technology issues, with special attention to innovation and the interface between trade, technology, and the law. He also serves as Principal of STTA, LC, a consulting firm that provides analytic and advisory services to corporate, educational, and not-for-profit clients in the U.S. and overseas.

Previously Dr. Ratchford was Associate Director for Policy and International Affairs at the White House Office of Science and Technology Policy (OSTP) in the first Bush Administration. Prior to his confirmation by the Senate to his OSTP position in 1989, he was the Associate Executive Officer of the American Association for the Advancement of Science (AAAS). At AAAS he was deputy to the chief executive officer and in addition headed the Association's three program directorates: Education and Human Resources, International Programs, and Science and Policy Programs.

A condensed matter physicist, Dr. Ratchford previously served on university faculties and on staffs of private and governmental laboratories and research management organizations. As a member of the professional staff of the Science Committee of the U.S. House of Representatives in the 1970s, and one of the first scientists to serve the Congress full-time, he dealt with policy and funding for science and technology.

A former Congressional Fellow of the American Political Science Association, Dr. Ratchford was also a Research Scholar at the International Institute for Applied Systems Analysis in Austria. Over the years he has chaired outside advisory panels for organizations such as the Gas Research Institute, the Congressional Office of Technology Assessment, and the National Science Foundation (NSF), and has served as a consultant and advisor to various governmental, university, and industrial organizations. He presently spends much of his time on China-U.S. science and technology issues and co-chairs a China-U.S. initiative in science policy sponsored by the NSF and the Chinese National Natural Science Foundation (NSFC).

Dr. Ratchford received his B.S. in mathematics and physics from Davidson College. The University of Virginia awarded him an M.A. and a Ph.D., both in physics. He is a fellow of the AAAS and of the American Physical Society (APS), where he has served as chair of the APS Forum on International Physics. His memberships include the Council on Foreign Relations, Phi Beta Kappa, and Sigma Xi. Dr. Ratchford is married to Joanne Walton Causey; they have four children and five grandchildren.

Philip F. ("Fred") Sparling

Position Title

Professor of Medicine & Microbiology and Immunology

Education

Institution and Location	Degree	Year(s)	Field of Study
Princeton University, Princeton, NJ	A.B.	1958	Biology
Harvard Medical School, Boston, MA	M.D.	1962	Medicine
Massachusetts General Hospital, Boston, MA	--	1962-1964	Inten/Resident
Harvard Medical School, Dept of Bacteriology	--	1966-1968	Postdoc Fellow
Massachusetts General Hospital, Boston, MA	--	1968-1969	Postdoc Fellow

Professional Experience:

1976-2/28/81 **Professor** of Medicine and Bacteriology and Chief of Division of Infectious Diseases, University of NC School Medicine
3/1/81-1989 **Professor and Chair** of Microbiology and Professor of Medicine, UNC
1989-1999 **Professor and Chair** of Medicine and Professor of Microbiology, UNC
1986-2001 **J. Herbert Bate Professor of Medicine and Microbiology and Immunology,** UNC
1991-present **Director**, North Carolina Sexually Transmitted Infections Research Center, UNC
2001-present **J Herbert Bate Professor of Medicine and Microbiology and Immunology, Emeritus,** UNC
2002-present **Coordinator** UNC programs in Biodefense Research

Honors and Awards:

AOA Harvard 1962; American Society for Clinical Investigation 1975; Association of American Physicians 1980; Bacteriology and Mycology StudySection, NIAID, NIH (Member, 1980-84; Chair, 1982-84); Council, Infectious Diseases Society of America (IDSA), 19851988, and 1995-1998; Chair, Gordon Research Conference on Microbial Toxins, 1988; Member, National Academy/Institute of Medicine (IOM) Committee on AIDS, 1986; Member, Infectious Diseases and MicrobiologyResearch Committee, NIAID, NIH, 1988-1991; NIH Merit Award, 1988-1998; Joseph Smadel Award, Infectious Diseases Society of America, 1989; Member, IOM Committee on Emerging Microbial Threats to Health, 1991-1992, and 2000-2003; Distinguished Faculty Award, University of North Carolina School of Medicine, 1993; Member, Merck Scientific Advisory Board, 1994-present; President, Infectious Diseases Society of America, 1996-1997; Member, IOM Forum on Emerging Infectious Diseases, 1996-present [cochair as of 2004]; Member, NIH [CSR] Committee on Scientific Boundaries for Review, 1999-2003; Maxwell Finland Award, Infectious Diseases Society of America, 2000; Chair, Burroughs Wellcome Fund Committee for Investigators in Infectious Diseases Pathogenesis, 2002-present.

Research Projects Ongoing:

Role of Lactoferrin Receptor in Gonococcal Pathogenesis
Principal Investigator: Philip F. Sparling, M.D.
Agency: National Institutes of Health/National Institute of Allergy and Infectious Diseases
Type: R01 (AI26837-16) Period: 04/15/99-03/31/04; no cost extension 4/1/04-
This proposal studies the structure, function and genetics of the gonococcal lactoferrin (LF) receptor.
15% effort; this grant will be replaced by the current application

North Carolina STD Topical Microbicide Cooperative Research Center
Project Director: Philip F. Sparling, M.D.
Agency: National Institutes of Health/National Institute of Allergy and Infectious Diseases
Type: U01 (AI31496) Period: 09/01/04-08/31/09
A multi-disciplinary Center for Sexually Transmitted Diseases involving investigators from Medicine and Public Health to carry out an interactive set of projects that will help design better strategies to prevent sexually transmitted infections. There are 5 projects and 2 cores.
50% effort (plus 10% effort on Project 3, Gonococcal PilC as a vaccine target, P.I Christopher E Thomas)

The Southeast Regional Center of Excellence in Biodefense
Principal Investigator: Bart Haynes M.D., Duke University
Coinvestigator: Philip F Sparling M.D.
Agency: National Institutes of Health/NIAID
Period: 09/01/03-03/01/08
SERCEB is the region 4 center for studies related to discovery and development of new therapeutics, diagnostics and preventives for select agent pathogens; PFS is a member of the steering committee and leader on the UNC campus
19% effort

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3. Thompson, SA & PF Sparling: The RTX cytotoxin-related FrpA protein of *Neisseria meningitidis* is secreted extracellularly by meningococci and by HlyBD + *Escherichia coli*. *Infect Immun* **61**:2906-2911, 1993.
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Protein 2 Facilitates but is not Essential for Transferrin Utilization. *J Bacteriol*, **176**:3162-3170, 1994.

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13. Thomas, CE, PF Sparling. Isolation and Analysis of a *fur* Mutant of Neisseria gonorrhoeae. J Bacteriol, 178(14):4224-4232., 1996.
14. Cornelissen, C.N., Anderson, J.E., Sparling, P.F. Characterization of the Diversity and the Transferrin-Binding Domain of Gonococcal Transferrin-Binding Protein 2, Inf Immun 65(2):822-828, 1997.
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Trilateral Seminar on R&D Policies Related to Emerging and Re-emerging Infectious Diseases

C – Agenda

Wednesday December 14:

Morning/afternoon	Field trip to sites of interest in Boston area, or Boston University-Merck Seminar at Trustees Ballroom, Boston University
6:00 pm	**Reception at the Castle, Boston University**
7:00 pm – 9:00 pm	**Working dinner at the Castle**

Thursday December 15:

8:00 am	Continental Breakfast available at the Executive Leadership Center, 4th floor, Boston University School of Management
9:00 am – 9:45 am	**Opening session** ***Chair: Joung Soon Kim, Seoul National University*** Introductory Remarks: J. Thomas Ratchford, George Mason University Keynote Address: P. Frederick (Fred) Sparling, University of North Carolina "*Control of Emerging and Re-emerging Infectious Diseases: Lessons from the Institute of Medicine Forum on Microbial Threats*"
10:00 am- 1:00 pm	**Plenary Session I: *Surveillance*** ***Chair: DA Henderson, University of Pittsburgh*** Invited speakers: Wang Ning, National Center for AIDS/STD Prevention and Control, Beijing "*HIV/AIDS Surveillance System in China*"

Thursday December 15 (continued):

Ok Park, WHO & Korean Center for Disease Control
"*Surveillance System for Emerging Infectious Disease in Korea*"

Ruth Berkelman, Emory University
"*Public Health Surveillance for Respiratory Disease, USA*"

Panel:
Hyun-Sul Lim, Dongguk University
Marcelle Layton, New York City Health Department
Xu Jianguo, Chinese Center for Diseases Control and Prevention

Open discussion

1:00 pm – 2:30 pm **Working Lunch**
Chair: Wu Guanling, Nanjing Medical University
Remarks by Laurie Garrett, Council on Foreign Relations
"*Its All About Infrastructure*"

3:00 pm – 6:00 pm **Plenary Session II: *Modeling and Simulation***
Chair: Mark Miller, National Institutes of Health

Invited speakers:
Cao Wuchun, Academy of Military Medical Sciences Beijing
"*Modeling SARS Transmission Dynamics and Control Efforts*"

Byung-Chul Chun, Korea University
"*Epidemic Modeling and its Applications in Emerging Infectious Diseases and Bioterrorism in Korea*"

Panel:
Wu Haiwei, Nanjing Medical University
Moran Ki, Eulji University, Korea
Marc Lipsitch, Harvard School of Public Health

Open discussion

6:00 pm **Reception at the Executive Leadership Center**

Thursday December 15 (continued):

6:45 pm – 8:45 pm **Working Dinner**
Chair: DA Henderson, University of Pittsburgh
Remarks by Joung Soon Kim, Seoul National University
"*Epidemiological Transition of Communicable Diseases, and Contributions of Academia to the National Communicable Disease Program in Korea*"

Friday December 16:

8:00 am Continental Breakfast available at the Executive Leadership Center, 4th floor, School of Management, Boston University

9:00 am – 12:00 pm **Plenary Session III: *Products and Technologies***
Chair: Jin-Han Kang, Catholic University, Seoul

Invited speakers:

Wen Yu Mei, Shanghai Medical College, Fudan Univ.
"*Strategies on Developing Novel Types of Vaccines to Combat Emerging Infectious Diseases*"

Gerald Keusch, Boston University
"*Security and Intellectual Property Constraints on Emerging Infectious Diseases Research*"

Panel:

Xu Jianguo, Chinese Center for Disease Prevention & Control
Baik-Lin Seong, Yonsei University, Korea
Mark Klempner, Boston University

Open discussion

12:30 pm – 2:00 pm **Working Lunch**
Chair: Hae-Kwan Cheong, Sungkyunkwan University
Remarks by Zeng Yi, Institute for Prevention and Control of Viral Diseases, Center for Disease Prevention and Control, Beijing

Friday December 16 (continued):

2:00 pm – 5:00 pm	**Plenary Session IV:** ***Implementation of Effective Policies*** ***Chair: Wu Guanling, Nanjing Medical University***
	Invited speakers: Duk Hyoung Lee, Korea Center for Disease Control and Prevention "*Implementation of Effective Policies"* Margaret Hamburg, NTI Global Health and Security Initiative *"We Must Act: Addressing the Challenge of Microbial Threats to Health"*
	Panel: Chen Xianyi, Ministry of Health, Beijing Bo Youl Choi, Hanyang University, Korea David R. Challoner, Institute of Medicine, USA
	Open discussion
5:00 pm – 5:30 pm	**Closing Plenary Session** ***Chair: J. Thomas Ratchford, George Mason University***
5:30 pm	Adjournment

Trilateral Seminar on R&D Policies Related to Emerging and Re-emerging Infectious Diseases

D – George Mason University Program of U.S.-China Cooperation in Science Policy, Research and Education

Supported by Grants from the
U.S. National Science Foundation (NSF) to the
Science and Trade Policy Program
National Center for Technology & Law
George Mason University School of Law

**Carried out in Cooperation with the
U.S. National Science Foundation (NSF) and the
National Natural Science Foundation of China (NSFC)**

The U.S.-China Cooperation Program in Science Policy, Research and Education began in 1999. It is built on experience gained from more than two decades of prior cooperation between the United States and the People's Republic of China in science and engineering. The productive, long-standing relationship between the National Science Foundation of the United States of America (NSF) and the National Natural Science Foundation of China (NSFC) is a cornerstone of this cooperation. The program aims to utilize the various events of the initiative as a basis for expanded bilateral cooperation in science policy, and to provide a foundation for strengthened partnerships in specific areas of science and engineering.

Information on the NSFC can be found at: http://www.nsfc.gov.cn

Information on the NSF can be found at: http://www.nsf.gov

The program is composed of a variety of activities. It includes a series of science and technology policy seminars, workshops, forums and related events scheduled over the first decade of the twenty-first century. These activities have explored or will explore issues with significant implications for the vitality of science and engineering in the emerging global, borderless, knowledge-based economy. These and other activities are documented through print and electronic publication. Desired outcomes include better information on science and technology policy issues for policy makers in both countries as well as increased bilateral cooperation between Chinese and U.S. institutions, including those involved in the initiative's activities.

Further information on the initiative can be found at:

http://law.gmu.edu/nctl/stpp/us_china.php

OCTOBER 1999 BEIJING R&D POLICY SEMINAR

The first bilateral event in this program was held in Beijing, October 24-26, 1999. Co-chaired by Wu Weixuan (Chinese Academy of Sciences) and J. Thomas Ratchford (George Mason University Law School), the "Seminar on **R&D and the Knowledge-Based Society:** *Linking the Production, Dissemination, and Application of Research***,**" was designed to develop guiding principles for the entire initiative. Specific topics addressed at the Beijing seminar include:

- Information and Data Requirements for Policy Making
- Human Resources for Science and Engineering
- Changing Character of R&D
- Challenges for the Future

A short report and Executive Summary of the Seminar can be found at:

http://www.nsftokyo.org/rm00-01.html

A proceedings volume with the full text of papers in both English and Chinese has been published by the NSFC. The complete proceedings are available at:

http://law.gmu.edu/nctl/stpp/first_scipolicy.php

DECEMBER 2000 BETHESDA BIOTECH SEMINAR

The second major event was the "U.S.-China Policy Forum on **Biotechnology and Biomedicine**," held at the Lawton Chiles International House of the National Institutes of Health, December 4-5, 2000. The co-chairs were Gerald Keusch (National Institutes of Health) and Ji-Sheng Han (Peking University). Topics addressed include:

- Areas that Offer Mutual Advantages from Cooperation, including case studies from the past and current projects that demonstrate factors that make for successful collaborations.
- New Technologies that Facilitate Cooperation, including information technologies, technologies for understanding biocomplexity in the environment, and genomic sciences.
- Biodiversity and Ecology of Infectious Diseases, including wildlife conservation and biodiversity in China and the U.S. and ecology of infectious diseases in the two countries.
- Clinical Research Systems Compared, including cancer research, organization and management of clinical research, and clinical trial oversight.
- Differences in the Chinese and U.S. IPR and Bioethics Systems, including intellectual property rights, as relevant to research, protection of IPR in biotechnology in China, research on the management of IPR for biology and drug manufacture, technology transfer, ethics in cancer prevention and control in China, and protection of human subjects and harmonization of ethical standards for international research.

- Options for Policy and Procedural Changes to Facilitate Research Cooperation

An English language report on the seminar is available at the NSF Tokyo web site:

http://www.nsftokyo.org/asia/eaprm01-09.htm

The full proceedings in Chinese and English are available at:

http://law.gmu.edu/nctl/stpp/biotech.php

MARCH 2002 WASHINGTON INNOVATION SEMINAR

The national headquarters of the Industrial Research Institute (IRI) in Washington was the site of the third bilateral seminar. The "U.S.-China Seminar on **Technical Innovation**" was held March 18-20, 2002, co-chaired by Lewis Branscomb (Harvard University) and Zhu Zuoyan (National Natural Science Foundation of China). The seminar addressed policies and practice affecting the transition from invention to innovation. Major topics included:

- Creation of Innovations: Research Centers, Institutes and Universities
- Innovations in Large Enterprises and Their Supply Chains
- Globalization: Transnational Dependences in Innovation
- Innovation in Small and New High Tech Enterprises
- Financing Innovations
- Innovation Networks and Social Capital

The full proceedings (in both English and Chinese) are available at:

http://law.gmu.edu/nctl/stpp/tech_innovation.php

JUNE 2002 BEIJING S&T POLICY WORKSHOP

A "China-U.S. Workshop on **S&T Policy Challenges for the Decade**" was held in Beijing, June 24-25, 2002. The agenda can be found at:

http://law.gmu.edu/nctl/stpp/us_china_pubs/nsfc-nsf_workshop_agenda.pdf

The workshop reviewed progress under the initiative and considered revisions to its themes and content. It also considered dissemination strategies that would make results of the initiative and its various activities more helpful to policy makers. Topics for future seminars were discussed and those in preparation for 2002-2003 were confirmed. A major bilateral seminar to review and compare U.S. and Chinese science and technology policy was recommended for 2004. A workshop report will treat these and other issues in more detail.

OCTOBER 2002 SHANGHAI & BEIJING ENGINEERING EDUCATION SEMINAR

The fifth event was a "China-U.S. Seminar on **Engineering Education for a Global Economy**" held October 20-24, 2002 in Shanghai and Beijing. Its theme addresses changing demands for engineering education in the global knowledge-based economy. Underlying the selection of this theme is the assumption that a deeper understanding of and appreciation for differing perspectives and approaches to associated issues will improve planning and implementation - nationally, bilaterally, and regionally - for the effective and balanced development of a global workforce.

There were three topical themes:

1. Lifelong Learning & Distance Education. The rapid pace of technological change necessitates means for engineers to learn continuously throughout their careers. How can they best achieve life-long learning and how can universities and companies best provide opportunities for such learning? What role should universities play in retraining engineers for career changes later in life?

2. Globalization of Engineering Education. The development of the global economy has made more companies multi-national based. International cooperation and collaboration for engineering is becoming a common phenomenon. Issues considered include: what influence should globalization have in shaping policies? How should engineering education curricula and programs be adapted to match this changing environment? How should accreditation in different countries be handled?

3. Innovation and Creation in Engineering Education. The soul of engineering is innovation and creation. Explicit knowledge is generally taught well and transferred easily. Implicit or tacit knowledge, frequently referred as "know-how," is not taught well. The seminar considered how can the principles of knowledge management be applied to strengthen engineering education in the global economy? How can students' identity be strengthened and how can students be encouraged to think critically? What role can partnerships and research parks play in preparing students to be future innovators?

The full proceedings in Chinese and English are available at:

http://law.gmu.edu/nctl/stpp/eng_education.php

DECEMBER 2003 HAWAII INTERNET SEMINAR

A Trilateral Seminar on **Science, Society and the Internet** was held December 14-16, 2003 at the East-West Center in Honolulu. For the first time in this program there was Japanese participation, along with delegations from the U.S. and China. The Japan Society for the Promotion of Science (JSPS) joined the National Natural Science Foundation of China (NSFC) and the U.S. National Science Foundation (NSF) in supporting the seminar.

This seminar brought together scientists from the United States, Japan and China, as well as other policy makers and experts from the three countries. These experts were concerned with and knowledgeable about the impacts of the Internet on science and society. Many of the issues discussed at the seminar involved balances and tradeoffs: for example, between the desirability of open communication among scientists, and the imperatives to maintain national and international security and protect personal and institutional privacy. The overall objective of the seminar was to identify and illuminate the most critical issues associated with the impacts of the Internet on science and society, rather than to seek to identify definitive solutions to the significant national and international issues that arise.

The full English language proceedings are available at:

http://law.gmu.edu/nctl/stpp/Internet.php and http://law.gmu.edu/nctl/stpp/us_japan.php

FEBRUARY 2004 BEIJING FORUM ON BASIC SCIENCES

Long range planning for basic research was the topic of the Sino-U.S. Forum on **Basic Sciences for the Next Fifteen Years** held February 16-17, 2004 in Beijing. The Forum took place in conjunction with efforts by the National Natural Science Foundation of China (NSFC) to coordinate the development of a national basic research plan covering the next fifteen years in that country. This in turn is part of a larger effort, known as "China's Science & Technology Advance Towards 2020," coordinated by the Ministry of Science and Technology in China (MOST), and covering all aspects of science and technology and their roles in education and the economy. Experts from both countries evaluated and compared the content, funding and management of basic research at the national level in the U.S. and China.

The forum provided explicit information about approaches the Chinese scientific community is taking to the complex set of technical and economic issues associated with the support and conduct of basic research during the medium and long-term future. The forum also provided information of a more implicit nature about the attitudes of the Government of the People's Republic of China, and of the Chinese scientific community, towards the support of basic research, and research and development (R&D) more broadly. One set of issues concerned the increasingly significant role of enterprises in China both in the performance and support of R&D. However, in view of its focus on basic sciences, the "world view" of the forum was primarily that of government.

Information from the Forum will be useful to US and Chinese policy makers in government, universities and industry. Discussions are underway as how best to use the February 2004 Forum as a point of departure for a Forum on Science and Technology Policy in the United States and China. The latter event would examine and compare science and technology policies more broadly than the Forum on Basic Science for the Next Fifteen Years. Co-chairs of the Forum on Basic Science for the Next Fifteen Years were Chen Jia'er, Honorary President of NSFC, and Joseph Bordogna, Deputy Director of NSF.

A detailed English language report on the Forum is available at:

http://law.gmu.edu/nctl/stpp/basic_science.php

DECEMBER 2005 TRILATERAL SEMINAR ON R&D POLICIES RELATED TO EMERGING AND RE-EMERGING INFECTIOUS DISEASES

A Trilateral Seminar on **R&D Policies Related to Emerging and Re-emerging Infectious Diseases** was held December 14-16, 2005 at Boston University in Boston, MA. This is the second trilateral event in the series, with the Korea Science and Engineering Foundation (KOSEF) joining the NSFC and NSF in support.

The co-chairs were Dr. Wu Guanling, Nanjing Medical University, Chinese co-chair; Dr. Hae-Kwan Cheong, M.D., Sungkyunkwan University School of Medicine, Korean co-chair; and Dr. Gerald Keusch, M.D., School of Public Health, Boston University, US co-chair. The four major themes were:

Surveillance. This was a review of existing and potential local and national mechanisms for the early detection and diagnosis of new or emergent infectious diseases. It also covered approaches for international collaboration in surveillance. There was a special emphasis on respiratory infections, notably SARS and influenza. Factors contributing to past successes and failures were considered along with feasible means for improving the relevant mechanisms. Although presentations dealt primarily with national programs there was discussion on how these translate into operations at city and/or local or regional levels.

Modeling and Simulation. Emerging and re-emerging infectious diseases occur in the context of uncertainty with regard to their control. However, data from past or similar experiences can be integrated to formulate decision support models. Quantitative variables that describe biological properties (microbial niche, transmission dynamics, natural history with hosts, population immunity profiles), intervention effectiveness (social spacing, vaccines, therapeutics) and operational/logistical response to implement population-based controls, can help describe the impact of an emerging disease and possible response scenarios. This portion of the seminar addressed how some of these modeling tools have been used to inform decision making in both real time and in future planning. Issues covered included the use and limits of models, collaborations to facilitate data collection/collation and how to address uncertainty.

Products and Technologies. This session considered two aspects of product development for emerging infectious diseases: drugs and vaccine on the one hand, and tools for surveillance, rapid diagnosis and determination of virulence and drug resistance profiles on the other. It covered the technical, development, testing and safety challenges associated with designing and manufacturing drugs and vaccines for these agents, which may be locally important and limited in capacity to spread widely or rapidly pandemic in nature. A second emphasis was on the need for and existing barriers to development and dissemination of new and rapid technologies for epidemiological and clinical use to identify and characterize emerging infectious agents, whether in the environment, in

reservoir hosts, or in individual patients. Issues such as sensitivity, specificity, cost and availability were considered. The potential for and barriers to international collaboration in the development of products and diagnostic technologies were highlighted.

Implementation of Effective Policies. This session, based in part on lessons learned from past experience, considered how to put in place feasible national policies and institutional mechanisms for dealing effectively and rapidly with specific threats associated with the spread of infectious diseases. Short-range measures intended to deal with infectious diseases that may emerge within the next five years, as well as longer-term measures were addressed. The long-term measures include areas where additional research should be emphasized, as well as education and career paths for the next generation of scientists and policy specialists.

The agenda and power point presentations will be posted on the GMU China Program website in January 2006. Publication and web posting of the full English language proceedings are expected in late spring 2006.

ADVISORY COUNCIL

An Advisory Council has provided advice and guidance to the program since 2003. Dr. Fred Bernthal, President of Universities Research Association chairs the panel. Other members are drawn from government, universities, industries, and scientific and engineering societies and academies. The core group of council members comprised the U.S. delegation to the June 2002 Beijing Workshop. The Advisory Council held its first meeting in November 2002 and met again on August 2, 2004. Some of the council meetings may be held in conjunction with broader consultations with the U.S. science, engineering and policy communities concerning the initiative's course and agenda.

Council members are: Frederick M. Bernthal, Council Chair, Universities Research Association; Mary Brown Bullock, Agnes Scott College; Alex DeAngelis, U.S. National Science Foundation (ret.); James Decker, US Department of Energy; Rebecca Spyke Gardner, White House Office of Science and Technology Policy; Paul Gilman, Oak Ridge Center for Advanced Studies; Gretchen Kalonji, University of Washington; Ruth Kirschstein, National Institutes of Health; Kathie L. Olsen, U.S. National Science Foundation; J. Thomas Ratchford, George Mason University School of Law; Maxine Savitz, Honeywell (ret.); Allen L. Sessoms, Delaware State University; Denis Simon, Levin Graduate Institute for International Relations & Commerce; and Lilian Wu, IBM Corporation.

LATE 2006 U.S.-CHINA FORUM ON SCIENCE & TECHNOLOGY POLICY

One future event is in the planning stage. This Forum, still in the early planning stages, is expected to be held in Beijing in conjunction with the 2006 Meeting of the United States (U.S.)-People's Republic of China (PRC) Joint Commission on Scientific and Technological Cooperation (JCM). The 2004 JCM in Washington DC supported the concept of such a forum.

The principal objective of the Forum would be to competently explore issues (both scientific and policy issues) facing the U.S. and China that have significant implications for science and engineering in the 21st century or are greatly impacted by advances in science and engineering. The results of these explorations, reached in part through the joint participation of both policy makers and scholars, will in turn made available to other policy makers in each country.

One or more principal themes will be incorporated into the agenda, with the final determination to be made by a bilateral Steering Group for the Forum. Candidate themes include a review of the historical evolution of U.S.-China S&T policy; science, technology and economic development; international benchmarking of R&D and R&D data; and energy research and technologies.

FURTHER INFORMATION

In addition to the material on the web sites referred to above, you may obtain further information on the initiative by contacting the project director and principal investigator:

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Trilateral Seminar on R&D Policies Related to Emerging and Re-emerging Infectious Diseases

E-Acknowledgements

Success, it is said, has many parents. This is certainly the case for the Trilateral Seminar on R&D Policies Related to Emerging and Re-emerging Infectious Diseases. First, the three sponsoring organizations, Korea Science and Engineering Foundation (KOSEF), National Natural Science Foundation of China (NSFC), and the U.S. National Science Foundation (NSF) are to be recognized for their generous financial support and for lending their intellectual and research cachet to the seminar. Dr. Wu Guanling, Dr. Hae-Kwan Cheong, and Dr. Gerald Keusch served as the respective Chinese, Korean and U.S. co-chairs. They and their colleagues on the organizing committee (see page 5) did a superb job in conceiving and implementing the intellectual content, and its U.S. co-chair, Dr. Keusch and his colleagues at Boston University, served as gracious hosts for the event. Dr. William Blanpied, consultant to the GMU Science and Trade Policy Program not only edited this volume but also contributed to the seminar content and organization in many ways. Last but not least were those "on the ground" who made the seminar function smoothly, making possible the intellectual excitement felt by all participants. These include Soo Jung Shin and James Panagis of the GMU Science and Trade Policy Program; Mary Sforza and John Douglas of Boston University; Chen Huai of the National Natural Science Foundation of China; and Kilsu Park of the Korea Science and Engineering Foundation. Without their superb contributions the seminar would have not been what it was.

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