CURRICULUM VITAE

NAME: Nancy D. Connell, Ph.D.
HOME ADDRESS: 51 Greenbrook Road **PHONE:** (908) 322-2788
Berkeley Heights, NJ 07922
OFFICE ADDRESS: UMDNJ-New Jersey Medical School **PHONE:** (973) 972-3759
Department of Medicine A906 **FAX:** (973) 972-0713
185 South Orange Avenue
Newark, NJ 07103

EDUCATION

Ph.D., Bacterial Genetics
9/82 - 2/89
Harvard Medical School
Department of Cell and Development Biology
Boston, M.A. 02115
Mentor: Roberto Kolter

B.A. Middlebury College 5/75
Middlebury, VT 05753

POSTDOCTORAL TRAINING

2/89 - 10/92
Albert Einstein College of Medicine
Department of Microbiology and Immunology
Bronx, NY 10461
Mentor: Barry R. Bloom

UNIVERSITY APPOINTMENTS

UMDNJ-New Jersey Medical School, Department of Medicine

11/05 – present: Professor
11/12 – present: Director for Research
11/02 – 2/07: Vice-Chair for Research
11/02 – 11/05: Associate Professor
7/00 – 10/02: Secondary Appointment, Associate Professor
6/97 – 6/00: Secondary Appointment, Assistant Professor

UMDNJ-New Jersey Medical School, Department of Microbiology and Molecular Genetics

11/05 – present: Professor, Secondary Appointment
10/02 – 11/05 Associate Professor, Secondary Appointment
7/00 – 10/02: Associate Professor

Tenure, 7/1/00
10/92 – 6/00: Assistant Professor
Rutgers-New Jersey Medical School, Department of Medicine
7/13- present: Professor
12/13-present: Director of Research

AWARDS AND HONORS

The George H. Catlin Award for Excellence in the Classics (1975)
Ryan Fellowship for Excellence in Biomedical Research (1984-1989)
Golden Apple Nominee 1999, 2001
Golden Apple Awardee 2000, 2002
NJMS Faculty of the Year Award, 2001
UMDNJ Master Educator Guild Member, 2002-present
Fellow, 2004-5 Program in Executive Leadership in Academic Medicine (Drexel University)
Member, National Research Council Board on Life Sciences (2015-2020).
Arnold G. Wedum Distinguished Achievement Award (American Biosafety Assocaiiton) 2015.

MAJOR COMMITTEE ASSIGNMENTS

a. National:

Member, Working Group, Dangerous Pathogens Project, Center for International and Strategic Studies at Maryland (2002-2005)

Member, National Academy of Sciences /Institute of Medicine/National Academy of Sciences *Committee on Advances in Technology and the Prevention of their Application to Next Generation Biowarfare Threats*, The National Academies, (2004-2006).

Member, National Academy of Sciences /Institute of Medicine/National Academy of Sciences *Committee on Stand-off Detection Technologies for Biological Weapons*, The National Academies, (2007)

Member, NRC *Committee to Review the Health and Safety Risks of High Biocontainment Laboratories at Fort Detrick*, The National Academies, (2009-present)

Member, *Committee to Review the Scientific Approaches used in the FBI's Investigation of the 2001 Bacillus anthracis Mailings*, The National Academies, (2009- 2011).

Member, Committee: *Governance of Emerging Dual-Use Technologies in the Biological and Chemical Fields*, Dual Use Technologies Working Group, funded by James Martin Center for Nonproliferation Studies (CNS), the British Foreign and Commonwealth Office and the U.S. Defense Threat Reduction Agency, 2009-2010.

Member, Committee: "*Trends in science and technology relevant to the Biological Weapons Convention*", Beijing, China, Nov 1-3, 2010; New York Oct 17, 2011.

Member, Committee: "*Committee to Review Risk Assessment Approaches for the*

Medical Countermeasures Test and Evaluation (MCMT&E) facility at Fort Detrick, The National Academies, 2011.

Member, Committee: New York Academy of Sciences - Microbiology & Infectious Diseases Steering Committee, 2011- present

Member, Committee, "*Developing a Framework for an International Faculty Development Project on Education about Research in the Life Sciences with Dual Use Potential*, The National Academies, 2011-2013.

Member, Committee, *The Internationalization of Microbial Forensics to Advance Global Biosecurity*, 2011- present.

Member, NRC, *Committee for the Analysis of the Requirements and Alternatives for Foreign Animal and Zoonotic Disease Research and Diagnostic Laboratory Capabilities*, 2012.

Chair, *Committee, "Developing a Framework for an International Faculty Development Project on Education about Research in the Life Sciences with Dual Use Potential: MENA II*, The National Academies, 2014-present.

Participant, Howard Hughes Medical Institute/NAS Summer Institute in Science Education, July 21-27, 2103, Honolulu, Hawaii.

Facilitator, Howard Hughes Medical Institute/NAS Summer Institute in Science Education, July 22-29, 2014, Riverside, CA

Chair, Committee, Understanding Pathogenicity: A Workshop for the BWC Meeting of Experts, Geneva Switzerland, August 1-7, 2014

Chair, *Standing Committee for Faculty Development for Education about Research with Dual Use Issues in the Context of Responsible Science and Research Integrity*, NRC Board On Life Sciences, 2014 - present

b. State:

Member, Newark Metropolitan Medical Response System (1998-2001)
Member, NJ Executive MedPrep (Governor's Bioterrorism Advisory Committee)
Member, New Jersey Domestic Security Preparedness Planning Group
Member, NJ State Pathogen Security Committee
Member, NJDoHSS Laboratory Response Network
Executive Committee, NIH-Northeast Biodefense Center (2003-2010)
Scientific Director, Regional Biocontainment Laboratory (2003-2009)
Liberty Science Center Infectious Disease Advisory Board (2003-2008)
Member, New Jersey Regional Homeland Security Technology Committee (2002-present)
Faculty member, Homeland Security Preparedness College, NJ Office of Homeland Security and Preparedness (2006-present)

c. Medical School:

LCME Subcommittee: Resources for Educational Programs (1995)
Biomedical Research Summary Group (1993-1998)
Faculty Council (1997-1999)

Biohazard Committee (1999-2003)
Chair, Institutional Biosafety Committee (2001-present)
Member, UMDNJ-NJMS Bio-Safety Committee (2003-present)
Steering committee: Master's Program NJMS/GSBS (1999-present)
UMDNJ-Bioterrorism Initiative (1999-2001)
Director, UMDNJ Center for BioDefense at NJMS (2001-present)
AAUP Faculty Representative (2001-2002)
Biomedical Sciences (PhD Program) Advisory Committee (2006-present)
Member, Dean's Search Committee (2005-2009)
NJMS Interviewer (2010-present)
Co-Director, Program on Terror Medicine and Security (2009-present)
Permanent member, IRB Red Team (2010- present)
FCAP, 2011-2013
LCME, Co-chair of Committee on Educational Facilities (2012)

MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES

NIH (NIAID)

Ad hoc NIH Study Section Member (BM-1, BM-2), 1997-2002
Permanent NIH Study Section Member (BM-1), 2002-2006
Chair, NIH Study Section: Bacteriology and Mycology, 2003-2005
Chair, NIH Study Section: Biodefense, (2003-2004)
Chair, Regional Centers of Excellence in Biodefense & Emerging Diseases Research NIH Review (2003, 2005)
Chair, NIH Study Section: Host Interaction with Bacterial Pathogens (HIBP) 2003-2005.
Ad-hoc Member, NIH Study Section: Bacterial pathogenesis (BACP) 2006-2009
Ad-hoc Member, NIH Study Section: F13/32 (post/pre-doctoral awards) 2007 - 2009
Chair, NIH Study Section, NIAID F13/32 (post/pre-doctoral awards) 2009 – 2011
Ad-hoc member, NIH Study Section: Innate Immunity and Inflammation, 2011-2012
Ad-hoc member, NIH Study Section: Non-HIV Anti-infectives SBIR, 2012-present
Ad-hoc member, Special Emphasis Panel AIDS Discovery and Development of Therapeutics (ADDT), 2014
Ad-hoc member, NIH Study Section: Topics in Bacterial Pathogenesis IDM-B (80) (2015 -)

Editorial positions

Ad hoc Reviewer: ASM journals (J Bacteriology, Infection and Immunity, Antimicrobial Agents and Chemotherapy; Applied Microbiology; Applied and Environmental Microbiology); Genes and Immunity; J Cell Physiology; Molec Cell Biology; Biomed Central; Biosecurity and Bioterrorism, Tuberculosis.
Editorial Board, Journal of Bacteriology, 1997-2000
Editorial Board, Clinical and Translational Science, 2007-present

Professional Societies
American Society for Microbiology, 1978-present
Council for Responsible Genetics, 1982-2000
Chair, Committee on the Military Use of Biological Research (1985-6)
New York Academy of Sciences, 1996-present
Member, Executive Committee on Emerging Pathogens
Molecular Medicine Society, 1996-present
Federation of American Scientists, Arms Control Committee, 1998-present
Member, Biological Weapons Working Group, Stimson Institute, 1999-2000
Metropolitan Medical Response System (Newark)-UMDNJ representative
New York Academy of Science, Infectious Disease Advisory Board, 2002-present
AAAS, Member, Advisory Board, Whistleblowing Committee, 2008-2010

RESEARCH PROGRAMS

Biodefense/ drug discovery research programs.

The major focus of the laboratory is antibacterial drug discovery and novel antibacterial approaches. The infectious organisms used in this program include: *Bacillus anthracis* (anthrax), *Yersinia pestis* (plague), *Burkholderia mallei* (glanders), *Burkholderia pseudomallei* (melioidosis), *Francisella tularensis* (tularemia), *Rickettsia prowazekii* (typhus), *Brucella melitensis* (brucellosis), *Coxiella burnetii* (Q fever), and multidrug resistant *Mycobacterium tuberculosis* (tuberculosis). Note that among the organisms to be studied are those that are not necessarily potential biological weapons agents, but pose a general health threat; this is consistent with the Center for BioDefense's position that biological weapons are a subset of emerging infectious diseases. For example, we offer testing/screening of antibiotics against bacteria that cause serious nosocomial infections, such as Klebsiella, Pseudomonas, Actinetobacter, Escherichia, Enterococcus, MRSA, etc. Our extensive collection of and expertise with select agents and other bacteria is central to our work both within Rutgers (Freundlich, Ebright, Perlin, Kadouri) and without (Caren, Johns Hopkins; Dunman, University of Rochester; Jacobus Pharmaceuticals). This work is supported by the NIH and Jacobus Pharmaceuticals. A recent interest in exploiting "predatory bacteria" as a novel form of antibacterial control is supported by DARPA.

UMDNJ Center for BioDefense

UMDNJ established the Center for BioDefense in 1999 in anticipation of bioterrorism attacks taking place in the United States. Since its founding, the Center has grown into a leading entity in the area of counter-terrorism, biodefense and emergency management. In light of the terrorist attacks in 2001, and of the President's commitment to protect America against future attacks, we are proud that New Jersey is able to join national efforts through the Center for BioDefense at UMDNJ. The breadth of the projects that the Center is supporting demonstrates the Center's close relationship with State efforts to increase New Jersey's state of preparedness. The Center has gained a state and national reputation for its leadership and rapid

response to the new age of bioterrorism. Since October 2001, members of the Center have embarked on an ambitious schedule of seminars, conferences, and other training sessions to educate scientists, clinicians, first responders, public health professionals, and the general public on terrorism, biodefense and biosecurity. Its members testify in Congress, deliver briefings serve on committees of the National Academies of Science and the American Association for the Advancement of Science. Special expertise is provided in the areas of biosecurity, biosafety and dual use research ethics. In 2008, the Center established the **Program in Terror Medicine and Security**. Directed by Leonard Cole, PhD, this program is focused on the new and difficult challenges that the medical community must face in an era of global terrorism. The nature of terror attacks in some regions of the world have prompted novel approaches to rescue operations, diagnosis, treatment and coordination of services. Two highly successful symposia and two publications have launched this new program by focusing on the common elements faced by response communities from several countries. The program has developed an elective for 3rd and 4th year medical students "Introduction to Terror Medicine" which combines the expertise of members of the Program on Terror Medicine with the Department of Emergency Medicine to introduce students to clinical and logistical aspects of terror medicine.

Science, technology, and responsible conduct of research policy

I have been working in the area of science policy as reflected by the social responsibility of scientists to be aware of the impact of their work since the 1970s, mostly in the arena of biological weapons. Current events have shaped the focus of this work; from helping to fashion verification protocols to the Biological Weapons Convention in the 1970-80s to application of novel technologies in the 1990-2000, to post-Amerithrax analysis and microbial forensics, and now "Gain-of-Function" and Responsible Conduct of Research. I have dedicated a portion of my professional life to considering and promoting a culture of awareness of the dual application of biological research. Much of my scholarship in this area has been in NAS/NRC/IOM reports, chapters and seminars. I am currently chairing a standing committee at the NRC *Standing Committee for Faculty Development for Education about Research with Dual Use Issues in the Context of Responsible Science and Research Integrity.*

GRANT HISTORY:

Title of Research	**Agency**	**Amount***	**Dates**
As Principal Investigator			
Nutrient Transport in Mycobacteria	NIH-NIAID	**$350,000**	7/93-6/98
Oligopeptide Transport in Mycobacteria	UMDNJ Foundation	**$25,000**	7/94-6/95
The Molecular Basis of Resistance	National Foundation for	**$4,000**	7/95-6/96

in Mycobacteria to Cycloserine	Infectious Diseases		
Identification of genes from *Mycobacterium smegmatis* controlling utilization of paraffin	INFECTECH	**$20,000**	4/97-4/98
Dean's Bridging Award	NJ Medical School	**$25,000**	7/98-6/99
Nutrient Transport in Mycobacteria	NIH-NIAID	**$147,875**	6/99-5/00
Nutrient Transport in Mycobacteria	NIH-NIAID	**$1,610,280**	6/00-5/05
DVD Technology: applications to laboratory teaching	AcITAC	**$10,700**	8/01-6/02
Education and Training of Public Health Professionals and Healthcare Providers and Community Outreach Regarding Domestic Preparedness and Bioterrorism (section G)	NJDoHSS	**$210,000.**	9/02-8/03
UMDNJ Center for BioDefense US Soldier and Biological Chemical Command		**$4,400,000**.	12/02-11/04
Education and Training of Public Health Professionals and Healthcare Providers and Community Outreach Regarding Domestic Preparedness and Bioterrorism (section G)	NJDoHSS	**$750,000**.	9/03-8/04.
Host Response and aerosolization US Soldier and Biological Chemical Command		**$1,000,000**.	12/03-11/04
MOA BSL3 Training For Emergency Response to Outbreak	NJDoHSS	**$25,000**	1/04-12/04
Development of microarrays for diagnosis of infection	Army Medical Dept (JVAP)	**$1,000,000**	3/04-2/05
Host response and aerosolization:	Army Medical Dept (JVAP)	**$1,000,000**	3/05-2/06
Host response and aerosolization:	Army Medical Dept (JVAP)	**$1,000,000**	3/06-2/07
Low oxygen recovery assay	Foundation UMDNJ	**$25,000**	9/09-8/10

(LORA) and TB drug screening.

Basic and Applied studies in *Mycobacterium tuberculosis* (Connell, P.I., 25%)	Jacobus Pharmacueticals	**$736,417**	11/11-10/13
Basic and Applied studies in *Mycobacterium tuberculosis* (Connell, P.I., 25%)	Jacobus Pharmacueticals	**$345,487**	11/13-10/14
Basic and Applied studies in *Mycobacterium tuberculosis* (Connell, P.I., 25%)	Jacobus Pharmaceuticals	**$389,813**	11/14-10/15
Basic and Applied studies in *Mycobacterium tuberculosis* (Connell, P.I., 25%)	Jacobus Pharmaceuticals	**$389,813**	11/15-10/16

As Co-Investigator

Model Tuberculosis Prevention and Control Cooperative Agreement (P.I. Reichman; NC 5%)	CDC/NJDHSS	**$12,500/yr**	1/98-12/08
Use of DNA Microarrays to Identify Diagnostic Signature Transcriptional Profiles for Host Responses to Infectious Agents (P.I. Ellner; NC 15%)	Dept of Defense US Army Research Institute Of Infectious Diseases	**$1,545,485**	9/01-8/02
Use of DNA Microarrays to Identify Diagnostic Signature Transcriptional Profiles for Host Responses to Infectious Agents Part II (P.I. Ellner; NC 15%)	Dept of Defense US Army Research Institute Of Infectious Diseases	**$1,700,000**	9/02-8/03

Multiplex Detection of
Select Agents in Single-Well Assays.

(P.I. Alland; NC 5%)	NIH/NIAID	**$4,058,720**	6/02-5/08
NIH/NIAID: Regional Center of Excellence for Biodefense and Emerging Pathogens: Northeast Biodefense Center (P.I. Lipkin; NC 5%)	NIH/NIAID	**$65,000,000**	11/03-10-08
NIH/NIAID: Regional Biocontainment Facility Newark, NJ, Science Park (P.I. R. Johnson; NC 0%; Scientific Director)	NIH/NIAID	**$26,000,000**	11/03-02/07
Inhibitors of bacterial RNA polymerase: "switch region". (Ebright, P.I.; Connell, subcontractor 15%)	NIH/NIAID	**$35,000**	2007-2011
Sustaining a global network for biosecurity: the life sciences and dual use research. (Rappert, P.I., Connell co-P.I.)	Sloan Foundation	**$246,328**	10/08-09/09
Small-Molecule Inhibitors of *Mycobacterium tuberculosis* RNA Polymerase" (Ebright, P.I. ; Connell, subcontractor 15%))	NIH-NIAID	**$42,500**	12/08-11/10
E-Prospector: Integrated Platform to Accelerate the Rational Design of Therapeutics for Biowarfare Threats (PI: Welsh; Subcontract PI: Connell 35%)	DTRA/TMTI	**$ 8,000,000**	10/10-09/11
Therapeutics for Drug-Resistant Bacteria: Myxopyronins (Ebright, P.I.; Connell, subcontractor 15%)	NIH-NIAID	**$997,823**	07/10-06/15
On demand blood tests for select agent diagnosis (Alland, P.I.; Connell 10%)	NIH-NIAIAD	**$5,759, 427**	05/12-04/17
Therapeutics for Drug-Resistant Bacteria: Pseudouridimycins (Ebright, P.I.; Connell 10%)	NIH-NIAID	**$5,135,843**	01/13-12/18

Development of AK-Based Assays for Antimicrobial Screening (Dunman, PI; Connell 10%)	NIH-NIAID	**$750,000**	10/13 – 09/16
The use of predatory bacteria to control select pathogens and treat respiratory infections (Kadouri, P.I., Connell co-P.I., 20%)	DARPA	**$380,419**	12/13-09/14
Center to Develop Therapeutic Countermeasures to High-Threat Bacterial Agents Perlin, PI; Connell: Core Director, 25%)	NIH-NIAID	**$25,000,000**	03/14-12/19
Predatory Bacteria: from basic science to application Kadouri & Connell coPI s ($1,076,742, Connell component)	DARPA	$ **$6,956,772**,	4/1/15-3/31/18

*Total costs

MAJOR TEACHING EXPERIENCE

NJDS: Dental Microbiology Lectures (1993-2000)
NJMS: Medical Microbiology Lectures & Lab Recitation, Medical Immunology (1993-2003)
Course Co-director: 3rd-4th year Elective NJMS: Terror Medicine (2014 -)
NJMS Advanced Communictions (2nd year) (2014 -)
NJMS Mini-Med School (2000, 2004, 2007, 2009, 2013, 2014, 2015)
GSBS: Advanced Microbial Genetics I Lecturer (1992-2003)
Ethics (Bioterrorism/Dual use issues) (1995-2007)
Biological Terrorism (Established new course, 2001-present)
Microbial Pathogenesis (Established new course, 2000-present)
Molecular Techniques (Established new course 2001-present)
Seminar Course: Topics in Molecular Genetics of Pathogenesis, Spring 1995, 1998
Seminar Course: Topics in Biological Weapons Agents, Fall, 2001-2013
Biochemistry Lecturer, Ad Hoc (1992-1999)
Molecular Biology of Select Agents (Established new course, 2007-2014)
Responsible Conduct of Research (contributing lecture), RWJMS, 2007-present
Responsible Conduct of Research (contributing lecture), SOM, 2007-present
Course Director: Responsible Conduct of Research (2007- present)
Advanced Communication Skills (2nd yr medical school) (2014-present)
Elective in Disaster Medicine (Founder) (2013-present)
Established Certificate Program in Biodefense (2007-2015)

External teaching

Ramapo College NJ Governor's School 1998-2000 (Infectious Disease)

New York Academy of Medicine: Infectious Disease Board Review (2007)
Montclair State University (Infectious Disease, 2008)
NIH Hong Kong Mycobacterial GCP and Biosafety Workshop (2009)
Penang, Malaysia: 14th International Conference on Emerging Infectious Diseases in the Pacific Rim: Next Generation Diagnostics for Infectious Diseases (2010)
Educational Institute for Responsible Research on Infectious Diseases: Ensuring Safe Science in the 21st Century (Aqaba, Jordan, Sept 4-11, 2012)
Institute on Responsible Conduct of Research, Bibliotecha Alexandrina, Alexandria Egypt, Nov 17-21. 2013.
2nd MENA Educational Institute on Responsible Science, Trieste, Italy, May 7-13, 2014
MENA Educational Institute on Responsible Science, Mangalore, New Dehli, India, April 29-May 5, 2105
3rd MENA Educational Institute on Responsible Science, Istanbul, Turkey, May 6-15, 2015
2nd Egypt Educational Institute on Responsible Science, El Sokhna, Egypt, July 19-27, 2015
National Academies Summer Institute on Undergraduate Education, Riverside, CA, June 22-27, 2014.
NYU "Hot Topics in Molecular Biology" yearly, 2012-present

Masters Students:

(2002-present) Brian Ghanny, Rafael Linares, Kathryn Hoes, Priyanka Narayanan, Chimaobi Odumuko, Erica Smalls, Joseph Dolina, Edward Vallejo., Donald No, Coatney Alexander, Kenneth Smiley, Monica Midha, Richard Ngo, Alina Choudhury, Gretter Mugica, Jeffrey Shrensel, Joshua Urban, Jennifer Miller, Hamaseh Nasseh, Priyanka Narayanan, Azita Ebrahim, Shradhdha Sahani, Tasso Drenis, Yasmin Abdelhady, Vincent Ventere, Carmine Cataldo, Grace Na, Marilyn Ekonomidis, LaToya King, Rosiane Lesperance, Hemeseh Nasseh, Laila Rehan, Alexandros Stamatiades, Joshua Urban, Gregory Sun, Rafeala Dejanonovich, Rakiya Muhammadu. Olivera Krsyanoska, Richard Chae, Anuj Goyal, Matthew Dudek, Gregory Ramirez, Chi Tang, Caitlyn Menucci, MinanMansour, Sean Shukla, Alyssa Pallatta, Onoyom Onyilr

PhD Students:

Achal Bhatt	PhD, 1999:U.S. Presidential Intern; CDC Vaccine division
Jay Berger	PhD, 1999; MD 2003: Practicing physician
Marcy Peteroy	PhD, 1999: Professor and Chair, Pace
Meliza Talue	PhD, 2005: Post Doctoral Fellow, Center for Biodefense
Yaswant Dayaram	PhD, 2006: Johnson and Johnson
Kenneth Schatzkes	PhD anticipated 2017
Alexander Lemenze	PhD anticipated 2017

Postdoctoral Fellows

Anjali Seth	1996-1999

Amol Amin	1999-2002
Vishwanath Venketaraman	2000-2004
Carolina Sofer-Podesta	2004-2006
Nicholas Megjujorac	2005-2006
Meliza Talaue	2005-present
Taylor Choi	2009-2010
Riccardo Russo	2013-present

PhD Committees:

D. Legarda, V. Kamalakannan, M. Klein-Patel, Xinyan Liu.

MAJOR ADMINISTRATIVE RESPONSIBILITIES

Director of Biosafety Level Three Facility, Center for Emerging Pathogens, 1999-present
Scientific Director of Construction Project, Regional Biocontainment Lab, 2003-2008
Administrative responsibilities as Vice-chair of Medicine, 2003-2007

- Department of Medicine Research Advisory Committee
- Established searchable database of all proposals submitted, awarded
- Bimonthly research mentoring group meetings with all junior faculty (2003-2007)
- Established yearly Department of Medicine Resident Research Day (2002-2007)
- Developed Department Research Office to assist in grant preparation (2002-2007)
- Department funding increased from $11.4M (FY02) to $18.1M (FY07)
- Established research workshop for entering house staff (2008-2010)

Administrative responsibilities as Vice-chair of Medicine, 2013-present

ARTICLES

1. Romano, A.H. and **N.D. Connell** (1982) 6-Deoxy-D-glucose and D-xylose: analogs for the study of D-glucose transport in mouse 3T3 cells. J. Cell Physiol. **111:**77-82.
2. Romano, A.H. and **N.D. Connell** (1982) Transport of 6-deoxy-D-glucose and D-xylose by untransformed and SV40-transformed 3T3 cells. J. Cell Physiol. **111:**83-88.
3. Romano, A.H. and **N.D. Connell** (1982) Effect of glucose uptake on growth rate of mouse 3T3 cells. J. Cell Physiol. **111:**195-200.
4. **Connell, N.D**. and A.H. Romano (1983) D-glucose transport by membrane vesicles from quiescent, serum-stimulated and SV40-transformed mouse 3T3 cells. Biochem. Biophys. Acta **729:**267-274.
5. **Connell, N.D**. and J.H. Rheinwald (1983) Regulation of the cytoskeleton in mesothelial cells: reversible loss of keratin and vimentin during rapid growth in culture. Cell **34:**245-253.
6. Rheinwald, J.G., T.M. O'Connell, **N.D. Connell**, S.M. Rybak, B.L. Allen-Hoffman, P.J. LaRocca, Y.-J. Wu. and S.M. Rhewoldt (1984) Expression of specific keratin subsets and vimentin in normal human epithelial cells-a function of cell type and conditions of growth

during serial culture. Cancer Cells 1/The Transformed Phenotype, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, p. 217-227.

7. **Connell, N.D**., Z. Han, F. Moreno, and R. Kolter (1987) An *E. coli* promoter induced by the cessation of growth. Molec. Micro. **1:**195-201.
8. Barletta, R.G., Snapper, J.D. Cirillo, **N.D. Connell**, D.D. Kim, W.R. Jacobs, and B.R., Bloom (1990) Recombinant BCG as a candidate oral vaccine vector. Institut Pasteur/Elsevier Res. Microbiol. **141:**931-939.
9. Bohannon, D.E., **N. Connell**, J. Keener, A. Tormo, M. Espinosa-Urgel, M. Zambrano, and R. Kolter (1991) Stationary phase-inducible "gearbox" promoters: Differential effects of katF mutations and role of σ^{70}. J. Bacteriol. **173:**4482-4492.
10. **Connell, N.D.,** E. Medina-Acosta, W.R. McMaster, B.R. Bloom, and D.G. Russell (1993) Effective immunization against cutaneous Leishmaniasis with recombinant BCG expressing the Leishmania surface protease (gp63). Proc. Nat. Acad. Sc. **90:**11473-11477
11. Tuckman, D., R.J. Donnelly, F-X. Zhao, W.R. Jacobs, Jr., and **N.D. Connell** (1997) Interruption of the phosphoglucose isomerase gene results in glucose auxotrophy in *Mycobacterium smegmatis*. J. Bacteriol **179:**2724-2730.
12. Sreevatsan, S., X. Pan, K. Stockbauer, **N.D. Connell**, B.W. Kreiswirth, T.S. Whittam and J.M. Musser (1997) Restricted structural gene polymorphism in the *Mycobacterium tuberculosis* complex indicates evolutionarily recent global dissemination. Proc. Natl. Acad. Sci. **94:**9869-9874.
13. Kurepina, N.E., Sreevatsan, S., Plikaytis, B.B., Bifani, P.J., **Connell, N.D**., Donnelly, R.J., van Sooligen, D., Musser, J.R. and Kreiswirth, B.N. (1998) Characterization of the phylogenetic distribution and chromosomal insertion sites of five *IS*6110 elements in *Mycobacterium tuberculosis*: Nonrandom integration in the *dnaA-dnaN* region. Tubercle and Lung Disease **79:**31-42.
14. Bhatt, A., Green, R., Condon, M., and **Connell, N.D**. (1998) A mutant of *Mycobacterium smegmatis* defective in dipeptide transport. J. Bacteriol. **180:**6773-6775.
15. Green, R.M., Seth, A., and **Connell, N.D**. (2000) A peptide permease mutant of *Mycobacterium bovis* BCG resistant to the toxic peptides glutathione and S-nitrosoglutathione. Infect. Immun. **68:**429-436.
16. Seth, A. and **N. D. Connell** (2000) Amino acid transport and metabolism in mycobacteria: cloning, interruption and characterization of an L-arginine/γ-aminobutyric acid permease gene in *Mycobacterium bovis* BCG. J. Bacteriol. **182:**919-927.
17. Peteroy, M., Severin, A., Rosner, D., Scherman, H., Belanger, A., Harvey, B., Zhao, F., Hatfull, G.F., Brennan, P.J. and **N.D. Connell** (2000) Characterization of a mutant of *Mycobacterium smegmatis* that is simultaneously resistant to D-cycloserine and vancomycin. Antimicrob. Agents Chemother **44:**1701-1704.
18. Cole, A.M., R.O. Darouiche, D. Legarda, **N.D. Connell** and G. Diamond (2000) Characterization of a fish antimicrobial peptide: gene expression, subcellular localization, and spectrum of activity. Antimirob. Agents and Chemother **44:**2039-2045.
19. Peteroy, M., V. Venketeraman, and **N. D. Connell** (2001) Effects of *Mycobacterium*

bovis-BCG infection on the regulation of L-arginine uptakeand the synthesis of reactive nitrogen intermediates in J774.1 murine macrophages. Infect. Immun 69:5823-5831.

20. Ebright, R.E. and **N.D. Connell**. 2001. Bioweapon agents: more access means more risk. Nature. 2002 Jan 24;415 (6870):364 (letter)
21. Venketaraman, V., Y. K. Dayaram, A.G.Amin, R. Ngo, R. M.Green, M. T. Talaue, J. Mann, and **N. D. Connell**. 2003. Role of glutathione in macrophage control of mycobacteria. Inf Immun 71:1864-1871.
22. Peteroy-Kelly, M.A. and **N.D. Connell**. 2003. Expression and activity of L-arginine permeases are upregulated in *Mycobacterium bovis*-BCG during intracellular growth. Inf Immun, 71:1011-1015.
23. Venketaraman, V., M. Talaue, Y.K. Dayaram, M.A. Peteroy-Kelly, W. Bu and **N.D. Connell.** 2003. Nitric oxide regulation of L-arginine uptake in murine and human macrophages. Tuberculosis 85:311-318.
24. Varma-Basil, M., El-Haijj,H. Marras, S.A.E., Hazbon, M.H., Mann, J.M., **Connell, N.D.**, Kramer, F.R., Alland, D. 2004 Multiplex Detection of Four Bacterial Bioterrorism Agents with Molecular Beacons. Clinical Chemistry 50: 1060-2.
25. Fennelly, K.P, A.L. Davidow, S.L. Miller, **N.D. Connell.** J.J. Ellner. Airborne infection with Bacillus anthracis—from mills to mail. Emerg Infect Dis. 2004. 10:996-1002.
26. Mann, J.M and **N.D. Connell.** 2004. Risk assessment of potential bio-terrorism agents for laboratory workers. Human and Ecol Risk Assess 10: 159-165.
27. Venketaraman, V., M. Talaue, Y.K. Dayaram, and **N.D. Connell**. 2005. Glutathione and nitrosoglutathione in macrophage defense against *M. tuberculosis*. Inf Immun 73:1886-1889.
28. Boniotto, M., W.J. Jordan, J. Eskdale, A. Tossi, N. Antcheva, S. Crovella, **N.D. Connell** and G. Gallagher. 2006. Human beta-defensin 2 induces a vigorous cytokine response in peripheral blood mononuclear cells. Antimicrob Agents Chemother, 50:1433-1441.
29. Freeman, S. F.A. Post, L.G. Bekker, R. Harbacheuski, L.M. Steyn, B. Ryffel, N.D. Connell, B.N. Kreiswith, G. Kaplan. 2006. *Mycobacterium tuberculosis* H37Ra and H37Rv differential growth and cytokine/chemokine induction in murine macrophages *in vitro*. 2006. J Interferon cytokine Res 26:27-33.
30. Dayaram, Y.K., M. Talaue, **N. D. Connell**, and V. Venketaraman. 2006. Characterization of a glutathione metabolic mutant of *Mycobacterium tuberculosis* and its resistance to glutathione and nitrosoglutathione. J Bacteriol 188:1364-1372.
31. Talaue, M., V. Venketaraman, M. Hazbon, M. A. Peteroy-Kelly, A. Seth, D. Alland, and **N. D. Connell**. Arginine homeostasis in J774.1 macrophages in the context of *M. bovis* BCG infection. J Bacteriol, 88: 4830-40.
32. Venketaraman, V., T. Rodgers, R. Linares, N. Reilly, S. Swaminathan, D. Hom, A. Millman, R. Wallis, and **N. D. Connell**. 2006. Tuberculosis immunity in healthy and HIV infected subjects. AIDS Res Ther. Feb 20;3:5.
33. Zhu, L., Y. Zhang, J.-S. Teh, J. Zhang, **N.D. Connell**, H. Rubin, M. Inouye. Multiple

mRNA interferases in *Mycobacterium tuberculosis*. 2006. J Biol Chem 281(27):18638-43.

34. Chakravorty S, Helb D, Burday M, **Connell ND,** Alland D. A detailed analysis of 16S ribosomal RNA gene segments for the diagnosis of pathogenic bacteria. J Microbiol Methods. 2007 May;69(2):330-9
35. Venketaraman V, Millman A, Salman M, Swaminathan S, Goetz M, Lardizabal A, David Hom, **Connell N.D**. 2008. Glutathione levels and immune responses in tuberculosis patients. Microb Pathog 44:255-261.
36. Millman A, Salman M, Dayaram, Y K, **Connell N.D,** Venketaraman V. 2008. Natural killer cells, glutathione, cytokines and innate immunity against *Mycobacterium tuberculosis*. J Interferon Cytokine Res. 2008 Mar;28(3):153-65.
37. Venketaraman V, Lin, AK, Le, A, Kachlany, SC, **Connell ND**, Kaplan, JB.(2008) Both leukotoxin and poly-N-acetylglucosamine surface polysaccharide protect *Aggregatibacter actinomycetemcomitans* cells from macrophage killing. 2008. Microb Pathog 45: 173-180.
38. Rameshwar, P., Wong, E. W., Schutzer, S. E., **Connell, N. D.,** Liu, K., Upadhyay. A. 2008. Effects of anthrax proteins and toxins on hematopoietic cells: Consequence to vaccine responses. J Cell Mol Med 13:1907-1919.
39. **Connell, N.D**., V. Venketarman (2009) Control of *Mycobacterium tuberculosis* infection by glutathione. Recent Pat Anti-Infect Drug Discov, 4:214-226.
40. Liu K, Wong EW. Schutzer SE, Connell ND, Upadhyyay A, Bryan M, Rameshwar P. (2009) Non-canonical effects of anthrax toxins on hematopoiesis: implications for vaccine development. J Cell Mol Med. 13: 1907–1919.
41. Srivastava A, Talaue M, Liu S, Degen D, Ebright RY, Sineva E, Chakraborty A, Druzhinin SY, Chatterjee S, Mukhopadhyay J, Ebright YW, Zozula A, Shen J, Sengupta S, Niedfeldt RR, Xin C, Kaneko T, Irschik H, Jansen R, Donadio S, Connell ND and Ebright RH. (2011) New target for inhibition of bacterial RNA polymerase:'switch region'. Curr Opin Microbiol. 14(5):532-43
42. Rameshwar, P, Wong, E., and **Connell, ND** (2011) Effects by anthrax toxins on hematopoiesis: A key role for cytokines as mediators. Cytokine. 57: 143-149.
43. Ekins, S., Reynolds, R.C., Kim H., Koo, M.-S., Ekonomidids, M., Talaue, M., Paget, S.D., Woolhiser, L.K., Lenaerts, A.J., Bunin, B.A., **Connell, N**. Freundlich, J.S. (2013) Dual-event machine learning models to accelerate drug discovery. Chem Biol 20(3):370-378.
44. Clements JD, **Connell ND**, Dirks C, El-Faham M, Hay A, Heitman E, Stith JH, Bond EC, Colwell RA, Anestidou L, Husbands JL, Labov JB. 2014. Engaging actively with issues in the responsible conduct of science: lessons from international efforts are relevant for undergraduate education in the United States. CBE Life Sci Educ. 12(4): 596-603.
45. Budowle, Bruce B, **Connell ND**, Bielecka-Oder A, Colwell RA, Corbett CR, Fletcher J, Forsman M, Kadavy DR, Markotic A, Morse SA, Murch RS, Sajantila A, Schmedes SE, Ternus KL, Turner SD and Minot S. 2014. Validation of High Throughput Sequencing and Microbial Forensics Applications. Investigative Genetics July 30:5-9.

46. Degen D, Feng Y, Zhang Y, Ebright KY, Ebright YW, Gigliotti M, Vahedian-Movahed H, Mandal S, Talaue M, **Connell N**, Arnold E, Fenical W, Ebright RH. 2014. Transcription inhibition by the depsipeptie antibiotic saliniamide A. Elife. 2014 Apr 30;3:e02451.
47. Cole LA, Wagner K, Scott S, Connell ND, Cooper A, Kennedy CA, Natal B, Lamba S. 2014.Terror medicine as part of the medical school curriculum. Frontiers in Public Health, 2:138-142.
48. Feng Y, Degen D, Wang X, Gigliotti M, Liu S, Zhang Y, Das D, Michalchuk T, Ebright YW, Talaue M, **Connell N,** Ebright RH. 2015. Structural Basis of Transcription Inhibition by CBR Hydroxamidines and CBR Pyrazoles. Structure. 2015 Aug 4;23(8):1470-81
49. Forbes L, Ebsworth-Mojica K, DiDone L, Li SG, Freundlich JS, **Connell N**, Dunman PM, Krysan DJ. A High Throughput Screening Assay for Anti-Mycobacterial Small Molecules Based on Adenylate Kinase Release as a Reporter of Cell Lysis. PLoS One. 2015 Jun 22;10(6):e0129234.
50. Shatzkes K, Chae R, Tang C, Ramirez GC, Mukherjee S, Tsenova L, **Connell ND**, Kadouri DE. (2015) Examining the safety of respiratory and intravenous inoculation of *Bdellovibrio bacteriovorus* and *Micavibrio aeruginosavorus* in a mouse model. Sci Rep Aug 7;5:12899.
51. Diller DJ, **Connell ND**, Welsh WJ. Avalanche for shape and feature-based virtual screening with 3D alignment. J Comput Aided Mol Des. 2015 Oct 12.
52. Russo R, Chae R, Mukherjee S, Singleton EJ, Occi JL, Kadouri DE, **Connell ND**. Susceptibility of select agents to predation by predatory bacteria. Microorganisms 2015 Dec2; 3:903-912.
53. Cole LA, Natal B, Fox A, Cooper A, Kennedy CA, **Connell ND**, Sugalski G, Kulkarni M, Feravolo M, Lamba S. A course on terror medicine:content and evaluations. (2016) Prehosp Disaster Med 2016 Jan 11; 1-4.

BOOKS, MONOGRAPHS AND CHAPTERS

1. **Connell, N.D**. and H. Nikaido. (1994) Membrane permeability and transport in *Mycobacterium tuberculosis. In* Tuberculosis: Pathogenesis, protection and control. (B.R. Bloom, ed.) American Society for Microbiology, Washington, DC.
2. **Connell, N.D.** (1994) Mycobacterium: Isolation, maintenance, transformation and mutant selection. *In* Methods in microbial pathogenesis. (D.G. Russell, ed). Academic Press, Orlando, FL.
3. **Connell, N.D.** (1995) Biological weapons research and public health. In War and Public Health. (V. Seidel, ed.). American Public Health Association, New York.
4. Ollar, R.-A. and **Connell, N.D**. *eds*., (1998) Molecular Mycobacteriology. Marcel Dekker, New York.
5. **Connell, N. D**. and Ollar, R.-A. (1998) The mycobacterial and nocardial genomes and their isolation and manipulation. *In* Molecular Mycobacteriology, pp. 87-108. (Ollar, R.-

A. and N. D. Connell, *eds)*. Marcel Dekker, New York.

6. **Connell, N. D.** , McAdam, R. A. and Winter, N. (1998) Mycobacterial shuttle vectors: homologous and heterologous gene expression. *In* Molecular Mycobacteriology, pp. 223-252. (Ollar, R.-A. and N. D. Connell, *eds)*. Marcel Dekker, New York.
7. **Connell, N.D.** and B.N. Kreiswirth. (2000) Mycobacterial strain genotyping. *In* Tuberculosis: a comprehensive international approach. (L.B. Reichman, and E.S. Hershfeld, ed.). Marcel Dekker, New York.
8. **Connell, N.D.** and A.E. Belanger (2000) Mutants and Mutagenesis. *In* Molecular genetics of mycobacteria. (G.F. Hatfull and W.R. Jacobs, Jr., ed.). ASM Press, Washington, D.C.
9. Vishwanath V. and **N. D. Connell**. Glutathione and its role in human and bacterial cells, with special reference to tuberculosis infection. 2003. Bacterial Pathogenesis. Transworld Network.
10. Fragale, J., McCormick, R., McCluskey, B., and **Connell, N.D.** 2003. Emergency Medical Services Response to the Large Scale Incident - Level I Awareness. Upper Saddle River, NJ: Harmar Associates.
11. Content, J., Braibant, M., **Connell, N.** & Ainsa, J. A. 2005 Transport processes. In *Tuberculosis and the tubercle bacillus*, pp. 379-401. Edited by S. Cole, K. D. Eisenach, D. N. McMurray & W. R. Jacobs. Washington: ASM Press.
12. **Connell, N.** and B. McCluskey. 2010. Bringing Biosecurity-related Concepts into the Curriculum: A US View. *In* Education and Ethics in the Life Sciences: Strengthening the Prohibition of Biological Weapons. (B. Rappert, ed.). The Australian National University Press. Canberra ACT 0200, Australia.
13. **Connell, N. D**., J. M. McCormick, and M. Figueroa. 2010. Joint Perspectives on Managing a High-Containment Facility: Principal Investigator and Biosafety Personnel. In *Anthology of Biosafety XII: Managing Challenges for Safe Operations of BSL-3/ABSL-3 Facilities*. ASBSA Press: Mundelein, IL.
14. **Connell, N. D.,** 2011. "The super TB experiment – evolution and resolution of an experiment with dual use concerns". In *On the Dual Uses of Science and Ethics: Principles, Practices, and Prospects.* (B. Rappert and M. Selgelid, eds.). ANU E-Press works.
15. **Connell, N.** 2102. "Immunological modulation" In *Innovation, Dual Use, and Security: Managing the Risks of Emerging Biological and Chemical Technologies*, (J Tucker, ed). MIT Press.
16. Cole, L. A. and **N. D. Connell,** *eds.* "Local Planning in Terror and Disaster: From Bioterrorism to Earthquakes. Wiley, Hoboken, 2012.

REPORTS

1. Anestidou, L., Bond, E., Clements, J., Colwell, R. Connell, N., Dirks, C., El Faham, M., Hay, A., Heitman, E.,Husbands, J. Labov, Monstafa, M., and J., Stith, J. Research in the Life Sciences with Dual Use Potential: An International Faculty Development Project on Education About the Responsible Conduct of Science 2012. National Research Council of the National

Academies in Collaboration with Bibliothecha Alexandrina and the World Academy of Sciences.

2. An Analysis of the Requirements and Alternatives for Foreign Animal and Zoonotic Disease Research and Diagnostic Laboratory Capabilities

3. Trends in Science and Technology Relevant to the Biological Weapons Convention: An International Workshop 2011.

4. Globalization, Biosecurity, and the Future of the Life Sciences 2006

5. Review of the Scientific Approaches Used During the FBI's Investigation of the 2001 Anthrax Mailings 2011.

6. Science Needs for Microbial Forensics: Developing an Initial International Roadmap

7. Meeting Critical Laboratory Needs For Animal Agriculture: Examination of Three Options

8.

INVITED REVIEWS

1. **Connell, N.D**., C.K. Stover, and W.R. Jacobs, Jr. (1992) Live recombinant vaccines: new faces on old vectors. Curr. Opin. Immunol. **4:**442-448.
2. **Connell, N.D**., Expression systems for use in actinomycetes and related organisms Curr Opin Biotechnol. 2001 Oct;12(5):446-9.
3. **Connell, N.D**., P. Datillo. Smallpox and viral hemorrhagic fever viruses: agents of bioterrorism. 2003. Curr Treatment Options in Inf Dis 5:3-9.
4. Mann, J.M. and **Connell, N.D.** Risk Assessment of Potential Bio-Terrorism Agents for Laboratory Workers. 2004. Human and Ecological Risk assessment 10:159-165.
5. **Connell, N.D**. and J.J. Ellner. Extensively drug-resistant TB. 2008. New Jersey Journal of Medicine. 1(2):11.
6. **Connell, N.D.,** B. Bielory, G. Gallagher, J. McCormick. 2008. Bioterrorism, biodefense and medicine. New Jersey Journal of Medicine. 1(2):14.
7. **Connell, N.D.** September 2010, A View from the Inside. GeneWatch, Council for Responsible Genetics. Cambridge, MA.
8. **Connell, N.D.** July 2012, Biological Agents in the Laboratory – the Regulatory Issues. Public Interest Reports, Federation of American Scientists. fas.org.

INVITED SEMINARS

International

Biological Weapons Convention, 3rd Review Conference,
Geneva September 11, 1991

GlaxoSmithKline **London** April 29, 1997

National Institute for Medical Research,

	London	April 30, 1997
Imperial College of Science, Technology and Medicine,		
	London	May 1, 1997
Invited Schweitzer Lecture: Tuberculosis in Prisons		
	Moscow	February 29, 2000
Porton Down, UK		July 19, 2004
NJ Delegation to Israel on Terror Medicine and Domestic Security		
	Jerusalem	May 23-28, 2005
Uganda: The Global Bargain for Biosecurity and Health.		
	Kampala	October 1, 2005
Pugwash BWC Conference		
	Geneva	December 11, 2005
INTERPOL: Americas Regional Workshop on Preventing Bioterrorism		
	Santiago	July9-12, 2006
University of Manila, Dept of Microbiology		
	Manila	January 25, 2007
Seventh ASEAN Peoples' Assembly		
	Manila	October 24, 2007
Japan, Waseda University	**Tokyo**	February 4, 2008
Japan, Keio University	**Tokyo**	February 5, 2008
Japan, National Institute of Infectious Disease		
	Tokyo	February 6, 2008
Japan, National Defense Medical University		
	Tokyo	February 7, 2008
Australia, University of Syndey	**Sydney**	December 7-13, 2008
Hong Kong, US-Japan Workshop		Aug 3-7, 2009
Dual Use in the Life Sciences	**Oxford**	Mar 23-24, 2010
NIH Emerging Infection Disease	**Penang**	Oct 2-6, 2010
Chinese Academy of Physics/NAS		

Beijing Nov 1-3, 2010

NAS/MENA Dual Use Education Project

Trieste May 29-April 2, 2011

United Nations First Committee Briefing:
"Life Sciences and Related Fields:
Trends Relevant to the Biological Weapons
Convention." **New York** Oct 17, 2011

NAS/MENA Dual Use Education workshop, Aqaba, Jordan

Aqaba, Jordan Sept 2012

ISTC "Responsible Science in a Global Security Environment: How to increase awareness?" **Yerevan, Armenia** Oct 2012

NAS/MENA Dual Use Education workshop, **Kuala Lumpur, Malaysia,** Nov 2013

Biblioteca Alexandrina:s Research Ethics Symposium, **Alexandria, Egypt**, Nov 2013

NAS/MENA Dual Use Education workshop ("MENA II"), **Trieste, Italy Nov 2014**

Biological Weapons Convention Meeting of Experts: **Geneva** Aug 2014

Harvard Medical School Kolter Retrospective: **Canfranc, Spain** June 2015

Malaysian Society for Microbiology, keynote speaker, **Penang, Malaysia**, Dec 2015

National

Public Health Research Institute	Oct. 11, 1994
University of Pennsylvania	Dec. 9, 1994
New York University	Jan. 3, 1995
Seton Hall University	Mar. 29, 1995
Merck Research Laboratories	Aug. 9, 1995
Rockefeller University	Sept. 30, 1996
City University of New York	Nov. 26, 1996
Colorado State University	August 15, 1997
UMDNJ/NJMS, Dept of Medicine	Sept. 11, 1997

UMDNJ/NJMS Department of Medicine, Pulmonary Division, Nov. 14, 1997	
New Jersey Institute of Technology	Nov. 20, 1997
University of Pittsburgh	Dec. 17, 1997
Johns Hopkins School of Medicine	Jan. 15, 1998
New Jersey Institute of Technology	March 23, 1998
Rutgers University	May 26, 1998
Colorado State University	August 14, 1998
Einstein College of Medicine	January 12, 1999
Wyeth-Ayerst/Lederle Laboratory, Pearl River, NY	January 22, 1999
Department of Anatomy, UMDNJ/NJMS	March 3, 1999
Wadsworth TB Center, SUNY Albany	March 30, 1999
Rockefeller University	June 11, 1999
Texas A&M University, College Station TX	April 10, 2000
City University of New York	April 18, 2000
University of Colorado, Denver, CO	August 4, 2000
Colorado State University, Fort Collins, CO	August 7, 2000
UMDNJ-RWJMS- Piscataway	January 16, 2001
New York College of Medicine	February 7, 2001
Pace University	April 1, 2005
TB Symposium, Boston	March 22-23, 2012
Pace University	April 23, 2104

Biodefense lectures and briefings:

ASM President's Forum	May 23, 1993
NJDS Faculty	Oct 18, 2001
NJMS Grand Rounds Dept Medicine	Oct 26, 2001
Ramapo College (biology faculty)	Oct 30, 2001

Ramapo College (community)	Oct 30, 2001
NJMS Grand Rounds Dermatology	Nov 5, 2001
NJMS/Sigma Xi	Nov 7, 2001
NJMS Clinical Dept Heads	Nov 12, 2001
Berkeley Heights School Board	Nov 14, 2001
Ramapo/UMDNJ Nursing School	Nov 14, 2001
NJMS Mini-medical School	Nov 14, 2001
Horizon BCBS executive briefing	Nov 19, 2001
Newark Museum	Nov 20, 2001
RWJ Medical School/Biochemistry	Nov 26, 2001
NJ Women in Media group	Nov 28, 2001
HPAE (Cherry Hill)	Dec 6, 2001
NE Industrial Hygienists Conference	Dec 7, 2001
AFTRA (NYC)	Dec 10, 2001
Summit Business Group (Old Guard)	Dec 11, 2001
NJ State Occupational Medicine Assoc	Dec 11, 2001
HPAE (Toms River)	Dec 13, 2001
HPAE (Paramus)	Dec 19, 2001
NJMS Faculty	Jan 10, 2002
NJ Water Commission	Jan 23, 2002
NJMS Parents of Medical Students	Jan 24, 2002
Local Law Enforcement	Jan 30, 2002
EOHSI	Feb 14, 2002
Rockefeller University	Feb 15, 2002
HPAE	Mar 6, 2002
NJMS/Mini-Medical School	Mar 6, 2002
Cook College Biotechnology Club	Mar 13, 2002
Local Law Enforcement	Mar 21, 2002
Local Law Enforcement	April 3, 2002

American Federation of Teachers	Apr 13, 2002
Tompkins Medical Society, Ithaca NY	May 31, 2002
EOHSI, Piscataway, NJ	June 6, 2002
Bergen Community College	August 19, 2002
Cook College	September 25, 2002
Johnson and Johnson (MABSA)	September 27, 2002
NJMS (Mini-Med)	October 9, 2002
Ohio Wesleyan University:	
Carl Sagan Symposium	October 30, 2002
Rutgers Bioterrorism Conference	February 14, 2003
Newark Leadership	March 11, 2003
Howard Hughes Medical Institute	
Outreach Program, Princeton	March 22, 2003
ACS-Med-Atlantic Meeting	June 10, 2003
Cornell University	July 29, 2003
Bergen Community College	September 19, 2003
New York Academy of Sciences	October 11, 2003
DIMACS, Rutgers University	October 29, 2003
NJMS-National TB Center	November 13, 2003
NJ Universities Consortium	January 22, 204
Picatinny	February 7, 2—4
Newark Leadership	March 9, 2004
NJ Universities Consortium	May 1, 2004
UMDNJ Informatics	May 12, 2004
Center for Biodefense State Symposium	June 3, 2004
Keane University	June 6, 2004
NIAID	June 25, 2004
(Lab detection)	August 12, 2004
Raritan Valley Community College	September 13, 2004

University of Arizona	September 16, 2004
GSBS Conference	October 5, 2004
American College of Chest Physicians	October 23, 2004
Picatinny Symposium	February 16-17, 2005
Pace University	April 1, 2005
University Biosecurity Summit	May 9-10, 2005
Politics and Life Sciences	September 2, 2005
Princeton University	December 2, 2005
Rutgers (NJ Homeland Security)	May 15, 2006
New Brunswick (MABSA)	September 4, 2006
Inf Disease Fellows	December 15, 2006
NYU	February 5, 2007
Dept of Oral Biology, NJDS	September 7, 2007
NJ Regional Homeland Security Technology Committee	December 12, 2007
Waseda Medical University-Tokyo	February 5, 2008
Keio G-Sec and JST RISTEX-Tokyo	February 6, 2008
Nat'l Inst. of Infectious Disease, Japan	February 7, 2008
Medical Defense College of Japan	February 8, 2008
AAAS; Capital Hill Briefing	June 25, 2008
Montclair University (Weston Scholars)	June 26, 20008
Rutgers University (Countermeasures course)	Oct 7, 2008
AAAS, Dual Use Workshop	Nov 21, 2008
Center for Biosecurity, UPMC	Jan 8, 2009
AAAS Dual Use Policy Workshop	Aug 11, 2009
Symposium on Terror Medicine and Security	Jul 15, 2009
Symposium on Terror Medicine and Security	Sept 22, 2010
Union High School	May 11, 2011
Princeton University	May 13, 2011

ASMCUE/ Baltimore, MD	June 3, 2011
Department of Medicine, NJMS	Dec 13, 2011
Department of Medicine, Barnabas Hospital	Jan 11, 2012
Louria Society, NJMS	Dec 4, 2012
Department of Microbiology, NYU	Mar 22, 2013
Department of Cell Biology, SOM-UMDNJ	April , 2013
Department of Microbiology, NYU	April 22, 2014
New Jersey Institute of Technology	Nov 4, 2014
US Department of State	Feb 11, 2015
Malaysian National	Dec 8, 2105
ASEAN Regional	Dec 11, 2105