

CURRICULUM VITAE

Jenifer Coburn PhD, MA

**Professor
Department of Medicine
Division of Medicine Infectious Diseases**

OFFICE ADDRESS:

8701 Watertown Plank Road

Milwaukee, WI 53226

EDUCATION:

09/1976 - 01/1980 BA - Biology, Boston University, Boston, MA

09/1981 - 05/1983 MA - Biology, Boston University, Boston, MA

09/1986 - 05/1991 PhD - Molecular Biology and Microbiology, Tufts University Sackler School of Graduate Biomedical Sciences, Boston, MA

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

05/1991 - 06/1995 Laboratory of John Leong, MD/PhD, Division of Rheumatology and Immunology, Tufts-New England Medical Center, MA

1992 - 1995 Fellowship, Life Sciences Research Foundation, MA

FACULTY APPOINTMENTS:

07/1995 - 06/1996 Instructor of Medicine, Rheumatology and Immunology, Tufts-New England Medical Center, Boston, MA

07/1996 - 06/2002 Assistant Professor of Medicine, Rheumatology and Immunology, Tufts-New England Medical Center, Boston, MA

01/1997 - Present Assistant Professor (Secondary Appointment), Molecular Biology and Microbiology, Tufts University School of Medicine, Boston, MA

07/2002 - 04/2004 Assistant Professor of Medicine, Geographic Medicine and Infectious Diseases, Tufts-New England Medical Center, Boston, MA

05/2004 - 04/2008 Associate Professor of Medicine (Research Track), Geographic Medicine and Infectious Diseases, Tufts-New England Medical Center, Boston, MA

05/2008 - Present Professor of Medicine, Infectious Diseases, Center for Infectious Disease Research, Medical College of Wisconsin, Milwaukee, WI

07/2008 - Present Professor of Microbiology and Molecular Genetics (secondary appointment), Medical College of Wisconsin, Milwaukee, WI

07/2008 - Present Graduate Faculty Appointment, Medical College of Wisconsin, Milwaukee, WI

ADMINISTRATIVE APPOINTMENTS:

2001 - 2008 Quantitative PCR Facility Director, Center for Gastroenterology Research on Absorptive and Secretory Processes

2014 - Present Director, Center for Infectious Disease Research,, Medical College of Wisconsin, Milwaukee, WI

EDUCATIONAL ADMINISTRATIVE APPOINTMENTS:

1998 - Present Graduate Faculty Appointment, Program in Molecular Microbiology, Tufts University School of Medicine, Sackler School of Graduate Biomedical Sciences

2001 - 2008 Graduate Faculty Appointment, Program in Immunology, Tufts University School of Medicine, Sackler School of Graduate Biomedical Sciences

07/2008 - Present Graduate Faculty Appointment, Medical College of Wisconsin, Milwaukee, WI

RESEARCH ADMINISTRATIVE APPOINTMENTS:

- 01/1980 - 09/1981 Research Assistant, Neurotransmitter Metabolism, Tufts University Sackler School of Graduate Biomedical Sciences, Boston, MA
- 08/1993 - 08/1996 Research Assistant, Mechanism of Cholera Toxin Activation, Tufts University Sackler School of Graduate Biomedical Sciences, Boston, MA
- 05/1998 - 04/2008 Special and Scientific Staff, Tufts-New England Medical Center, Boston, MA

AWARDS AND HONORS:

- 1992 - 1995 Genentech Fellow , Life Sciences Research Foundation
- 1996 - 1998 Research Grant , The Cystic Fibrosis Foundation
- 1997 - 2002 FIRST (R29) Award, NIH/NIAID
- 1997 - 2003 Biomedical Science Grants (2 consecutive) , The Arthritis Foundation
- 2001 - Present Shared Instrumentation Grant for a real-time thermocycler , NCRR, for GRASP members and other users at Tufts and Tufts-NEMC
- 10/2002 - 12/2002 Institutional Bridge Funding (competitive)
- 2003 - 2010 R01, NIH/NIAID
- 2004 - 2006 R21, NIH/NIAID
- 2005 - 2011 R01, NIH/NIAID
- 08/2007 - 08/2008 Pilot Project, GRASP Center at Tufts-New England Medical Center (competitive)
- 2010 - 2012 R21, NIH/NIAID
- 2011 Top 10 Teaching Faculty in the Department of Medicine for the 2009-2010 academic year
- 2011 - 2015 R01, NIH/NIAID
- 2012 R21 From NIH/NIAID
- 2012 Michael J. Dunn Award for Research Excellence, Medical College of Wisconsin Department of Medicine
- 2014 - 2018 R01 From NIH/NIAID
- 2014 - 2016 R21 From NIH/NIAID
- 2015 - 2020 R01 from NIH/NIAID (MPI subcontractor)
- 2016 - 2020 R01 from NIH/NIAID (MPI)

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

- 1990 - Present American Association for the Advancement of Science
- 1994 - Present American Society for Microbiology
- 2006 - Present International Leptospirosis Society
- 2011 - Present American Society for Tropical Medicine and Hygiene

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Editorial Board

- 2003 - Present Editorial Board, Infection and Immunity
- 2008 - Present Associate Editor, PLoS Pathogens
- 2010 - Present Review Editorial Board, Frontiers in Cellular Microbiology

Journal Review

- 1992 - Present Journal of Clinical Microbiology
- 1992 - Present Microbiology
- 1992 - Present Journal of Bacteriology
- 1992 - Present BMC Microbiology
- 1992 - Present PLoS Pathogens
- 1992 - Present Cell Host & Microbe
- 1992 - Present PLoS One
- 1992 - Present Applied and Environmental Microbiology
- 1992 - Present Infection and Immunity
- 1992 - Present Clinical and Vaccine Immunology
- 1992 - Present Biochemistry
- 1992 - Present Molecular Microbiology
- 1992 - Present Cellular Microbiology

1992 - Present Journal of Infectious Diseases
1992 - Present PLoS Neglected Tropical Diseases
PNAS (Proceedings of the National Academy of Sciences USA)

LOCAL/REGIONAL APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2002 - 2008 Member, Scientific Affairs, Tufts University School of Medicine
2002 - 2004 Member, Basic Science Review, Intramural Research Council
2003 - 2008 Member, Executive, Gastroenterology Research on Absorptive and Secretory Processes
2003 - 2004 Co-Chair, Scientific Affairs, Tufts University School of Medicine
2004 - 2006 Member, Student Awards, Tufts University Sackler School of Graduate Biomedical Sciences
2009 - 2015 Member, Institutional Biosafety, Medical College of Wisconsin
2009 - Present Member, Global Health Pathway Advisory, Medical College of Wisconsin
2009 - 2012 Member, Curriculum and Evaluation, Medical College of Wisconsin
2010 Graduate Student Awards Committee, Medical College of Wisconsin
2012 - Present Faculty Development Committee, MCW Department of Medicine
2013 Co-Chair 2015-2017, Research Committee, MCW Department of Medicine
2014 Director, center for Infectious Disease Research, Medical College of Wisconsin

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

1998 - 2001 Member, Clinical Immunology Study Section, Arthritis Foundation
2001 Member, Initial Steering, American Academy of Microbiology colloquium on Microbial Origins of Chronic Human Disease
2003 Member, Ad hoc NIH study section, Pathobiochemistry
2003 Member, Ad hoc NIH study section, NIAID SEP (ZAI1 GSM-M S3)
2004 - 2007 Member, NIH recurring special emphasis panel (SEP) study section, Topics in Bacterial Pathogenesis (IDM-A 90S)
2006 Member, Ad hoc NIH study section, Bacterial Pathogenesis (BACP)
2007 Member, NIH study section, International Research in Infectious Diseases (IRID)
2008 Member, NIH study section, Special Topics in Biological Sciences (BCMB-B 90S)
2009 Member, Ad hoc NIH study section, Bacterial Pathogenesis (BACP)
2009 - 2013 Member, NIH study section, Bacterial Pathogenesis (BACP)
2010 CDC Special Emphasis Panel CK10-004
2011 Ad hoc reviewer, Bacterial Waterborne and Emerging Infectious Diseases in North Africa and the Middle East (MENA) on behalf of NIH/NIAID, U.S. Civilian Research & Development Foundation (CRDF) Global
2011 - Present Ad hoc reviewer, NIH study section ZRG1 IDM-A (02) M, Bacterial Pathogenesis Review (member conflict)
2011 Bacterial Waterborne and Emerging Infectious Diseases in North Africa and the Middle East (MENA) on behalf of NIH/NIAID, U.S. Civilian Research & Development Foundation (CRDF) Global
2011 Zoonotic Risks Panel (NP103 panel K), Agricultural Research Service Office of Scientific Quality Review
2013 - Present Ad hoc reviewer, NIH study section ZRG1 F13 C (20) Fellowships: Infectious Diseases and Microbiology both in-person and teleconference reviews in November and December
2014 - Present Elected vice chair for 2016 Gordon Research Conference on the Biology of Spirochetes, will be chair for 2018 meeting
2014 - Present Ad hoc reviewer, NIH study section ZRG1 IDM-R (50) Clinical Research and Field Studies (CRFS)
2016 - Present Member, Ad hoc, Agricultural Research Service Office of Scientific Quality Review (NP 103 Panel 4). Zoonotic Bacterial Diseases
2016 - Present Member, Ad hoc, NIH study section ZAI1 AMC-M (J1) 1 SEP
2016 - Present Ad hoc reviewer, NIH Center for Scientific Review pilot study to evaluate the relative quality of grant applications across Infectious Diseases and Microbiology integrated review groups (IDM IRG)
2016 - Present Ad hoc reviewer, NIH study section ZRG1 IDM-B (81) Topics in Bacterial Pathogenesis

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active**Peer Review**

Title: Adhesion of *Leptospira interrogans* to Human Cell Surface Receptors
Source: NIH/NIAID R21 AI-077560 (in no cost extension)
Role & Effort: PI
PI: Self
Dates: 07/01/2008 - 06/30/2010
Direct Funds: \$125,000

Title: The heart of *OspC* as a *Borrelia burgdorferi* adhesin
Source: NIH/NIAID R21 AI-082147
Role & Effort: PI
PI: Self
Dates: 04/01/2010 - 03/31/2012
Direct Funds: \$125,000

Title: Comprehensive Analysis of *Borrelia burgdorferi* Adhesins
Source: NIH/NIAID R01 (multiple PI)
Role & Effort: PI
PI: Dr. George Chaconas and Dr. John Leong
Dates: 12/01/2010 - 11/30/2015
Direct Funds: \$432,089

Title: Analysis of the *Borrelia burgdorferi* Integrin Ligand P66
Source: NIH/NIAID R01
Role & Effort: PI
PI: Self
Dates: 12/01/2011 - 11/30/2016
Direct Funds: \$250,000

Title: *Leptospira interrogans* Interactions with Human Cells
Source: NIH/NIAID R01
Role & Effort: PI
PI: Self
Dates: 08/27/2014 - 07/31/2018
Direct Funds: \$250,000

Title: Multiple *B. burgdorferi* Factors Collaborate to Evade Complement-Mediated Defenses
Source: NIH/NIAID R01 AI121401
Role & Effort: MPI, contact PI is Dr. John Leong
Dates: 12/01/2015 - 11/30/2020
Direct Funds: \$134,366 (subcontract to MCW)

Title: Functional Analysis of *Borrelia burgdorferi* Adhesins
Source: NIH/NIAID R01 AI118799-01A1
Role & Effort: PI (contact) with Dr. George Chaconas and Dr. John Leong as the other PIs

Dates: 01/15/2016 - 12/31/2020
 Direct Funds: \$572,187 (including subcontracts to Tufts and to University of Calgary)

Title: Identification of protective Lyme disease antigens using live attenuated vaccines
 Source: NIH/NIAID R01 AI 121217-01A1 (2nd percentile)
 Role & Effort: Contact PI-Coburn, MPI with Dr. Dean Nardelli and Dr. Joseph Campo
 Dates: 07/01/2016 - 06/30/2021
 Direct Funds: \$250,000 (including subcontracts to University of Wisconsin-Milwaukee and Antigen Discovery, Inc.)

Pending

Peer Review

Title: Short Term Research Training in Infectious Diseases
 Source: NIH/NIAID T35
 Role & Effort: PI
 PI: Self
 Dates: 06/01/2011 - 05/31/2016
 Direct Funds: \$25,380

Prior

Peer Review

Title: Pseudomonas aeruginosa interactions with phagocytes
 Source: Cystic Fibrosis Foundation Research Grant
 Role & Effort: PI
 PI: Self
 Dates: 07/01/1996 - 06/30/1998
 Direct Funds: \$30,000

Title: Characterization of a novel integrin ligand encoded by Lyme disease spirochetes
 Source: Arthritis Foundation Biomedical Science Grant
 Role & Effort: PI
 PI: Self
 Dates: 07/01/1997 - 12/31/2000
 Direct Funds: \$69,000

Title: Analysis of a B. burgdorferi ligand for ?3 integrins
 Source: NIH / NIAID R29 AI-40938
 Role & Effort: PI
 PI: Self
 Dates: 09/01/1997 - 08/31/2002
 Direct Funds: \$70,000

Title: Lyme disease spirochete interactions

Source:	with α 3-chain integrins and with the vasculature in murine tissues Arthritis Foundation Biomedical Science Grant
Role & Effort:	PI
PI:	Self
Dates:	01/01/2001 - 12/31/2003
Direct Funds:	\$78,200
Title:	Real-Time Quantitative PCR Thermocycler
Source:	NIH/NCRR S10 RR15970
Role & Effort:	PI
PI:	Self
Dates:	04/15/2001 - 04/14/2002
Direct Funds:	\$95,964
Title:	Borrelia-Integrin Interactions
Source:	NIH/NIAID RO1 AI-051407
Role & Effort:	PI
PI:	Self
Dates:	01/01/2003 - 01/31/2010
Direct Funds:	\$200,000
Title:	Vascular Tropism of Borrelia burgdorferi
Source:	NIH/NIAID R21 AI-059192
Role & Effort:	PI
PI:	Self
Dates:	04/01/2004 - 03/31/2006
Direct Funds:	\$175,000
Title:	Molecular Analysis of Borrelia P66-Integrin Interactions
Source:	NIH/NIAID R01 AI-059505
Role & Effort:	PI
PI:	Self
Dates:	06/01/2005 - 02/28/2010
Direct Funds:	\$225,000
Title:	Analysis of spirochetes present in cholera stool samples
Source:	Tufts-New England Medical Center for Gastroenterology Research on Absorptive and Secretory Processes (GRASP), Pilot Project Award
Role & Effort:	Co-PI
PI:	Dr. Andrew Camilli of Tufts University School of Medicine
Dates:	08/2007 - 07/2008
Direct Funds:	\$18,000
Title:	Adhesion of Leptospira interrogans to Human Cell Surface Receptors
Source:	NIH/NIAID R21 AI-077560
Role & Effort:	PI
Dates:	07/01/2008 - 06/30/2010

Direct Funds: \$125,000
Title: The heart of OspC as a Borrelia burgdorferi adhesin
Source: NIH/NIAID R21 AI-082147
Role & Effort: PI
Dates: 04/01/2010 - 03/31/2012
Direct Funds: \$125,000

Title: Francisella Infection in Ticks
Source: NIH/NIAID R21 (multiple PI)
Role & Effort: PI
PI: Dr. Dara Frank
Dates: 12/01/2010 - 11/30/2012
Direct Funds: \$125,000

Title: Cell-Binding Adhesins of Leptospira interrogans
Source: NIH/NIAID R21
Role & Effort: PI
PI: Self
Direct Funds: \$125,000

Non-Peer Review

Title: Pathogenesis of Lyme disease
Source: Mathers Foundation
Role & Effort: Co-PI
PI: Allen C. Steere, MD
Dates: 07/01/1998 - 06/30/2004
Direct Funds: \$45,000

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

International

Genetics and Molecular Determinants of Virulence, NATO ARW (Advanced Research Workshop) on the Molecular Biology of Spirochetes, Prague, Czech Republic, 12/2005
Regulation of expression of P66 by B. burgdorferi, NATO ARW (Advanced Research Workshop) on the Molecular Biology of Spirochetes, Prague, Czech Republic, 12/2005
Determinants of Borrelia burgdorferi Tissue Tropism, Gordon Research Conference on the Biology of Spirochetes, Barga, Italy, 04/2006

National

Attachment of Borrelia to Host Tissue, Gordon Research Conference on the Biology of Spirochetes, Ventura, CA, 01/2002
Borrelia-Integrin Interactions, Rheumatology Grand Rounds, Tufts-New England Medical Center, Boston, MA, 2003
Subversion of Host Defenses by Bacterial Type III Secretion Systems, Rheumatology Grand Rounds, Tufts-New England Medical Center, Boston, MA, 2003
Borrelia-Integrin Interactions, Rheumatology Grand Rounds, Massachusetts General Hospital, Boston, MA, 2003
Identification of Vascular Tropism Determinants of Borrelia burgdorferi using In Vivo Phage Display, Gordon Research Conference on the Biology of Spirochetes, Ventura, CA, 01/2004
Phage Displayed Views of Borrelia burgdorferi Adhesion, Phage Rocky Mountain Laboratories, Hamilton, MT, 2004
Phage Displayed Views of Borrelia burgdorferi Adhesion, West Virginia University School of Medicine, Dept. of Microbiology, Morgantown, WV, 2004
Identification of Vascular Tropism Determinants of Borrelia burgdorferi Using In Vivo Phage Display, Tufts

Infectious Diseases Initiative, Boston, MA, 2005
Phage Displayed Views of *Borrelia burgdorferi* Adhesion, Department of Microbial and Molecular Pathogenesis, Texas A&M College of Medicine, College Station, TX, 2006
Gordon Research Conference on the Biology of Spirochetes, Ventura, CA, 01/2008
Phage Displayed Views of *Borrelia burgdorferi* Adhesion, Department of Microbiology & Immunology, New York Medical College, Valhalla, NY, 2008
Biology Related to Risk of Infection, Gordon Research Conference on the Biology of Spirochetes, Ventura, CA, 01/2010
Interactions of pathogenic leptospire with host cells, Gordon Research Conference on Microbial Toxins and Pathogenicity, Waterville Valley, NH, 07/2010
Borrelia burgdorferi at the tick-mammal interface, Life Sciences Research Foundation Alumni Symposium, San Francisco, CA, 10/2010
Borrelia burgdorferi at the tick-mammal interface, Departments of Oral Biology and Microbiology/Immunology, SUNY Buffalo, Buffalo, NY, 2011
The Role of the *Borrelia burgdorferi* Integrin Ligand P66 in the Tick-Mouse Infection Cycle, Department of Microbiology-Immunology, Northwestern University Feinberg School of Medicine, 2012
Gordon Research Conference on the Biology of Spirochetes, Ventura, CA, 01/2014
Interactions of *Leptospira* species with the endothelium, Department of Pathobiology, University of Illinois Urbana-Champaign, 2015
Spirochetes: sneaky bacteria that don't always follow the rules, Department of Chemistry and Biochemistry, University of Wisconsin - La Crosse, 2016
multifunctional Adhesins of *Borrelia burgdorferi*, Department of Biomedical Sciences, University of Minnesota Medical School, Duluth, MN, 2016

Regional

Phage Displayed Views of *Borrelia burgdorferi* Adhesion, Department of Immunology-Microbiology, Rush Medical College, Chicago, IL, 2009
Borrelia burgdorferi at the tick-mammal intersection, Midwest Microbial Pathogenesis Conference, St. Louis, MO, 09/2010

Local

Sticky Problems: Interactions of Spirochetes with Host Cells, Division of Infectious Diseases, Medical College of Wisconsin, Milwaukee, WI, 2008
TWISTED Update on Spirochetes, Department of Microbiology & Molecular Genetics, Medical College of Wisconsin, Milwaukee, WI, 2010
TWISTED Spirochetes in the Coburn Lab, Biomedical Resource Center, Medical College of Wisconsin, Milwaukee, WI, 2010

PEER REVIEWED WORKSHOPS/PRESENTATIONS:

International

Poster Presentation, Bacterial Protein Toxins Fifth European Workshop, 1991

National

Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 1990
Poster Session, Gordon Research Conference on Microbial Toxins and Pathogenicity, 1992
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 1994
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 1996
Poster Presentation, Cold Spring Harbor Symposium on Microbial Pathogenesis and Host Response, 1997
Poster Presentation, Gordon Research Conference on Biology of Spirochetes, 1998
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 1998
Poster Presentation, American Society for Microbiology General Meeting, 1999
Poster Presentation, Gordon Research Conference on Biology of Spirochetes, 2000
Poster Presentation, Gordon Research Conference on Molecular Mechanisms of Microbial Adhesion, 2001
Poster Presentation, American Society for Microbiology General Meeting, 2001
Borrelia-Integrin Interactions, Arthritis Research Conference, San Diego, CA, 2001
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 2002

Poster Presentation, Gordon Research Conference on Biology of Spirochetes, 2004
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 2004
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 2006
Poster Presentation, Gordon Research Conference on Biology of Spirochetes, 2006
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 2008
Poster Presentation, Gordon Research Conference on Biology of Spirochetes, 2008
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 2012
Poster Presentation, Gordon Research Conference on Biology of Spirochetes, 2012
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 2014
Poster Presentation, Gordon Research Conference on Biology of Spirochetes, 2014
Poster Presentation, Gordon Research Conference on Microbial Toxins and Pathogenicity, 2016
Poster Presentation, Gordon Research Conference on Biology of Spirochetes, 2016

COMMITTEE SERVICE:

Medical College of Wisconsin

2002 - 2008 Member, Scientific Affairs, Tufts University School of Medicine
2003 - 2004 Co-Chair, Scientific Affairs Committee, Tufts University School of Medicine
2004 - 2006 Member, Student Awards Committee, Tufts University Sackler School of Graduate Biomedical Sciences
2006 - 2007 Member, Sackler Dean's Award
2009 - 2015 Member, Institutional Biosafety Committee, Medical College of Wisconsin
2009 Member, Curriculum and Evaluation, Medical College of Wisconsin
2009 Member, Biochemistry Chair Search Committee, Medical College of Wisconsin
2010 - Present Member, Graduate Student Awards, Medical College of Wisconsin
2010 Member, Department of Medicine Website Committee, Medical College of Wisconsin
2013 - Present Research Affairs Committee, Medical College of Wisconsin
2014 - Present MCW Department of Medicine Research Committee, Medical College of Wisconsin
2015 - Present Microbiology and Molecular Genetics Chair Search Committee, Medical College of Wisconsin
2016 - Present Section Chief Search Committee, Pediatric Infectious Diseases, Medical College of Wisconsin

Hospital

2002 - 2004 Member, Intramural Research Council, Basic Science Review, Tufts-New England Medical Center
2003 - 2008 Member, Executive, Gastroenterology Research on Absorptive and Secretory Processes Center, Tufts-New England Medical Center

MCW TEACHING ACTIVITIES:

Postdoctoral Fellow Education

2008 - Present Organizer, Infectious Diseases Research Conference Series
2009 - Present Faculty, Mucosal Toxins course
2009 - Present Faculty, Microbiology Course
2009 - Present Faculty, Cellular Microbiology course
2011 Faculty, Infections Diseases Update, CME Event
2011 Department of Medicine Grand Rounds

EXTRAMURAL TEACHING:

Graduate Student Education

2000 - 2008 Tufts University School of Medicine, Lecturer, Medical Microbiology Course
2001 - 2008 Tufts University School of Dental Medicine, Lecturer, Microbiology Course
2002 - 2005 Tufts University Sackler School, Co-coordinator, Host-Pathogen Interactions course, Graduate Program in Immunology
2006 - 2008 Tufts University Sackler School, Co-coordinator, Applied Ethics for Scientists course,

Graduate Program in Molecular Microbiology

Postdoctoral Fellow Education

- 1981 - 1983 Boston University Medical School, Graduate Teaching Assistant, Biochemistry and Histology laboratories
- 1995 - 1996 Brown University Medical School, Lecturer, Medical Microbiology Course
- 1998 - 2000 Brown University Medical School, Lecturer, Medical Microbiology Course

Continuing Medical Education

- 2008 - 2012 Grand Rounds speaker with Dr. John Bellizzi on Lyme Disease and other tick-borne infections, Waukesha and Columbia St. Mary's hospitals

Community/Lay Public

- 1977 - 1979 Boston University, Undergraduate Teaching Assistant, General Biology and Histology laboratories

MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:

Medical Students

- 2009 James McCarthy, Medical College of Wisconsin
- 2010 - 2011 Adam Olson, Medical College of Wisconsin
- 2010 - 2011 Kim Truong, Medical College of Wisconsin
- 2011 Gregory Robbins, medical student at Medical College of Wisconsin (Physician-Scientist Pathway project advisor), Medical College of Wisconsin
- 2012 Patrick Aranda, Physician-Scientist Pathway project advisor, Medical College of Wisconsin, Medical Student at Medical College of Wisconsin

Postdoctoral Researchers

- 2009 - Present Karen Evangelista, PhD, Medical College of Wisconsin
- 2009 - Present Laura Ristow, PhD, Medical College of Wisconsin
- 2012 - Present Jennifer Ritchie, PhD student, Medical College of Wisconsin, Jennifer Ritchie, PhD student at Medical College of Wisconsin
- 2013 - Present Michael Curtis, PhD student, Medical College of Wisconsin
- 2013, Medical College of Wisconsin, Reader for MPH Capstone Project written by Sanja Vodanovic Jankovic

Clinical/Research Fellows

- 2009 - Present, Member of thesis advisory committee for 6 PhD students, Medical College of Wisconsin
- 2013 - Present Bin Ren, Faculty mentoring committee for Bin Ren, Department of Medicine, Medical College of Wisconsin
- 2014 - Present Yi (Sherry) Zhang, Faculty mentoring committee for Yi (Sherry) Zhang, Department of Medicine, Medical College of Wisconsin
- 2014 - 2015 Zouyan Lu, Medical College of Wisconsin
- 2014 - Present Anna Huppler, Faculty mentoring committee for Ann Huppler, Department of Pediatrics, Medical College of Wisconsin

EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS MENTORED:

Medical Students

- 1999 Nicholle Espadron, Xavier University
- 2003 Lorena Contreras Hernandez, University of Puerto Rico, Cayey
- 2004 Deborah McGhee, Florida State University
- 2005 - 2008 Denise Martinez Lopez, Tufts University, PREP Interns
- 2005 Ivia Rivera Agosto, University of Puerto Rico, Humacao
- 2006 - 2007 Ryan Salvador, Tufts University, PREP Interns
- 2006 Azuka Onye, Syracuse University

2007 Alexis Liakos, Vassar College
2012 Vidhya Chandrasekaran, Medicine Resident doing research elective project on Brachyspira prevalence for August 2012

Graduate Students

PhD Students Advised

2006 - 2007 Jessica Pierce, PhD, Tufts University

Postdoctoral Researchers

2001 - 2008 Melisa Medrano, PhD, Molecular Microbiology, Tufts University

2004 - 2009 Styliani (Stella) Antonara, PhD, Molecular Microbiology, Tufts University

2007 - 2009 Deborah McGhee Breiner, MS, Molecular Microbiology, Tufts University

Mary Farrow, PhD, Harvard School of Public Health

Clinical/Research Fellows

1995 - 1997 Jesus Hernandez, MD

1998 - 2009, Member of thesis advisory committee for >25 PhD students in the Tufts Molecular Microbiology and Immunology Program, Tufts University

1998 - 2000 Holly Rothermel, MD

1998 - 2000 Hyacinthe Ntchobo, PhD

2001 - 2003 Rebecca Chafel, DVM

2004 - 2006 Dorothee Grimm, PhD

2005 - 2006 Hongtao Wang, PhD

PROGRAMMATIC DEVELOPMENTS:

Research Programs

The identification of, and the biochemical and genetic characterization of, the *Borrelia burgdorferi* proteins that mediate attachment to human integrins.

Identification of *Brachyspira* species in human stool samples from patients with diarrheal disease in Bangladesh.

The identification of the mammalian cell surface molecules that serve as receptors for *Leptospira interrogans* and related pathogenic leptospires.

COMMUNITY SERVICE ACTIVITIES:

1985 - 1995 HAM Radio Operator (advanced class license NIHOE), provided public safety communication with other local HAM operators for numerous events including parades and the Boston Marathon, late 1980's through mid 1990's

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Rando, R.R., COBURN, J. and Parkinson, D. (1982) The differential effects of GABA transaminase inactivation in chick retina and brain. *J. Neurochem.* 39:1147-1151.
2. Gill, D.M. and COBURN, J. (1987) ADP-ribosylation by cholera toxin: Functional analysis of a cellular system that stimulates the enzymic activity of cholera toxin fragment A1. *Biochemistry* 26:6364-6371.
3. Gill, D.M. and COBURN, J. (1988) ADP-ribosylation of membrane proteins by bacterial toxins in the presence of NAD glycohydrolase. *Biochim. Biophys. Acta* 954:65-72.
4. COBURN, J., Wyatt, R.T., Iglewski, B.H. and Gill, D.M. (1989) Several GTP-binding proteins, including p21cHras, are preferred substrates of *Pseudomonas aeruginosa* exoenzyme S. *J. Biol. Chem.* 264:9004-9008.
5. COBURN, J., Dillon, S.T., Iglewski, B.H. and Gill, D.M. (1989) Exoenzyme S of *Pseudomonas aeruginosa*

- ADP-ribosylates the intermediate filament protein vimentin. *Infect. Immun.* 57:996-998.
6. COBURN, J. and Gill, D.M. (1991) ADP-ribosylation of p21ras and related proteins by *Pseudomonas aeruginosa* exoenzyme S. *Infect. Immun.* 59:4259-4262.
 7. COBURN, J., Kane, A.V., Feig, L. and Gill, D.M. (1991) *Pseudomonas aeruginosa* exoenzyme S requires a eukaryotic protein for ADP-ribosyl transferase activity. *J. Biol. Chem.* 266:6438-6446.
 8. COBURN, J., Leong, J.M. and Erban, J.K. (1993) Integrin alpha-IIb-beta-3 mediates binding of *Borrelia burgdorferi* to human platelets. *Proc. Natl. Acad. Sci.* 90:7059-7063.
 9. Fu, H., COBURN, J., and Collier, R.J. (1993) The eukaryotic host factor that activates exoenzyme S of *Pseudomonas aeruginosa*, is a member of the 14-3-3 family. *Proc. Natl. Acad. Sci.* 90:2320-2324.
 10. COBURN, J., Barthold, S.W. and Leong, J.M. (1994) Diverse Lyme disease spirochetes bind integrin alpha-IIb-beta-3 on human platelets. *Infect. Immun.* 62:5559-5567.
 11. Leong, J.M., Morrissey, P.M., Ortega-Barria, E., Pereira, M.E.A., and COBURN, J. (1995) Hemagglutination and proteoglycan binding by the Lyme disease spirochete. *Infect. Immun.* 63:874-883.
 12. COBURN, J., Magoun, L., Bodary, S.C., and Leong, J.M. (1998) Integrins alpha-v-beta-3 and alpha-5-beta-1 mediate attachment of Lyme disease spirochetes to human cells. *Infect. Immun.* 66:1946-1952.
 13. Leong, J.M., Wang, H., Magoun, L., Field, J., Morrissey, P.E., Robbins, D., Tatro, J.B., COBURN, J., and Parveen, N. (1998) Different classes of proteoglycans contribute to the attachment of *Borrelia burgdorferi* to cultured endothelial and brain cells. *Infect. Immun.* 66:994-999.
 14. COBURN, J., Chege, W., Magoun, L., Bodary, S.C., and Leong, J.M. (1999) Characterization of a candidate *Borrelia burgdorferi* beta3-chain integrin ligand identified using a phage display library. *Molecular Microbiol.* 34:926-940.
 15. Carlson, D., Hernandez, J., Bloom, B.J., COBURN, J., Aversa, J.M., and Steere, A.C. (1999) Lack of *Borrelia burgdorferi* DNA in synovial samples from patients with treatment-resistant Lyme arthritis. *Arthr. Rheumat.* 42:2705-2709.
 16. COBURN, J. and Frank, D.W. (1999) Macrophages and epithelial cells respond differently to the *Pseudomonas aeruginosa* type III secretion system. *Infect. Immun.* 67:3151-3154.
 17. Stockbauer, K.E., Magoun, L., Liu, M., Burns, E.H. Jr., Gubba, S., Renish, S., Pan, X., Bodary, S.C., Baker, E., COBURN, J., Leong, J.M., Musser, J.M. (1999) Natural variation in the critical extracellular cysteine protease virulence factor of group A *Streptococcus*: a single amino acid substitution confers preferential binding of an arginine-glycine-aspartic acid (RGD) containing subtype made by highly invasive serotype M1 isolates to human integrins alpha-v-beta3 and alpha-IIb-beta3. *Proc. Natl. Acad. Sci.* 96:242-247.
 18. Harjacek, M., Diaz-Cano, S., Alman, B.A., COBURN, J., Ruthazer, R., Wolfe, H., and Steere, A.C. (2000) Prominent expression of mRNA for proinflammatory cytokines in synovium in patients with juvenile rheumatoid arthritis or chronic Lyme arthritis. *J. Rheumatol.* 27:497-503.
 19. Alugupalli, K.R., Michelson, A.D., Barnard, M.R., Robbins, D., COBURN, J., Baker, E.K., Ginsberg, M.H., Schwan, T.G., and Leong, J.M. (2001) Platelet activation by a relapsing fever spirochete results in enhanced bacterium-platelet interaction via integrin alpha-IIb-beta-3 activation. *Molecular Microbiol.* 39:330-340.
 20. Defoe, G. and COBURN, J. (2001) Delineation of *Borrelia burgdorferi* P66 sequences required for integrin alpha-IIb-beta3 recognition. *Infect. Immun.* 69:3455-3459.
 21. Ntchobo, H., Rothermel, H., Chege, W., Steere, A.C., and COBURN, J. (2001) Antibody responses to multiple epitopes of *Borrelia burgdorferi* P66, a candidate adhesin, in patients with various manifestations of Lyme disease. *Infect. Immun.* 69:1953-1956.
 22. Cugini C., Medrano, M., Schwan, T.G., and Coburn, J. (2003) Regulation of expression of the *Borrelia burgdorferi* beta3-chain integrin ligand, P66, in the tick and in culture. *Infect. Immun.* 71:1001-1007.
 23. COBURN, J. and Cugini, C. (2003) Targeted mutation of P66 of *Borrelia burgdorferi* disrupts attachment to integrin alpha-v-beta3. *Proc. Natl. Acad. Sci.* 100:7301-7306.
 24. Rocha, C.L., COBURN, J., Rucks, E., and Olson, J.C. (2003) Characterization of *Pseudomonas aeruginosa* exoenzyme S as a bifunctional enzyme in J774A.1 macrophages. *Infect. Immun.* 71:5296-5305.
 25. Craig-Mylius, K., Weber, G., COBURN, J., and Glickstein, L. (2005) *Borrelia burgdorferi*, an extracellular pathogen, circumvents osteopontin in inducing an inflammatory cytokine response. *J. Leukocyte Biol.* 77:710-718.
 26. Behera, A.K., Hildebrand, E., Uematsu, S., Akira, S., COBURN, J., and Hu, L.T. (2006) Identification of a TLR-Independent Pathway for *Borrelia burgdorferi*-Induced Expression of Matrix Metalloproteinases and Inflammatory Mediators through Binding to Integrin alpha3beta1. *J. Immunol.* 177:657-664.

27. Glickstein, L., and COBURN, J. (2006) Macrophage Inflammatory Response and Cell Death Following *Borrelia burgdorferi* Infection in vitro Correlates with Arthritis Resistance. *Am. J. Trop. Med. Hyg.* 75: 964-967.
28. Pinne, M., Thein, M., Denker, K., Benz, R., COBURN, J., and Bergström, S. (2007) Elimination of channel-forming activity by insertional inactivation of the p66 gene in *Borrelia burgdorferi*. *FEMS Microbiol. Letts.* 266:241-249.
29. Medrano, M., Ding, Y., Wang, X-G., Lu, P., COBURN, J., and Hu, L.T. (2007) Regulators of expression of the oligopeptide permease A proteins of *Borrelia burgdorferi*. *J. Bacteriol.* 189: 2653-2659
30. Antonara, S., Chafel, R., LaFrance, M., and COBURN, J. (2007) *Borrelia burgdorferi* Adhesins Identified Using In Vivo Phage Display. *Molecular Microbiol.* 66:262-276. PMID: PMC2651023
31. Behera, A., Durand, E., Cugini, C., Antonara, S., Bourassa, L., Hildebrand, E., Hu, L.T., and COBURN, J. (2008) *Borrelia burgdorferi* BBB07 Interaction With Integrin $\alpha 3\beta 1$ Stimulates Production of Pro-Inflammatory Mediators in Primary Human Chondrocytes. *Cellular Microbiol.* 10:320-331 published on line 9/6/07. PMID: PMC2586958
32. Nelson, E.J., Tanudra, A., Chowdhuri, A., Kane, A.V., Qadri, F., Calderwood, S.B., COBURN, J., and Camilli, A. (2009) High prevalence of spirochetosis in cholera patients in Bangladesh. *Emerg. Inf. Dis.* 15:571-573. PMID: PMC2671413
33. Breiner, D.D.M., Fahey, M., Salvador, R., Novakova, J., and COBURN, J. (2009) *Leptospira interrogans* Binds to Human Cell Surface Receptors Including Proteoglycans. *Infection and Immunity* 77: 5528-5536. PMID: PMC2786458
34. Medrano, M, Policastro, PF, Schwan, TG, COBURN, J. (2010) Interaction of *Borrelia burgdorferi* Hbb with the p66 promoter. *Nucleic Acids Research* 38:414-427 published on line 11/12/09. PMID: PMC2811001
35. Antonara, S., Ristow, L., McCarthy, J. and COBURN, J. (2010) Effect of *Borrelia burgdorferi* OspC at the Site of Inoculation in Mouse Skin, *Infection and Immunity*, 78:4723-4733.
36. Evangelista, K. and COBURN, J. (2010) *Leptospira* as an emerging pathogen: a review of the biology, pathogenesis and host immune responses. *Future Microbiology* (peer-reviewed), 5:1413-1425.
37. Martinez-Lopez, D.G., Fahey, M., and COBURN, J. (2010) Responses of Human Endothelial Cells to Pathogenic and Non-Pathogenic *Leptospira* Species, *PLoS Neglected Tropical Diseases*, 4(12): e918. doi:10.1371/journal.pntd.0000918.
38. LaFrance, M.E., Pierce, J.V., Antonara, S., and COBURN, J. (2011) The *Borrelia burgdorferi* Integrin Ligand, P66, Affects Gene Expression by Human Cells in Culture, in revision, *Infection and Immunity*.
39. Evangelista, K., Franco, R., Schwab, A., and COBURN, J. (2014) *Leptospira interrogans* binds to Cadherins. *PLoS Neglected Tropical Diseases* 8(1): e2672. doi:10.1371/journal.pntd.0002672
40. Evangelista, K., Hahn, B., Wunder Jr., E.A., Ko, A.I., Haake, D.A., and COBURN, J. (2014) Identification of Cell-Binding Adhesins of *Leptospira interrogans*. *PLoS Negl Trop Dis* 8(10): e3215. doi:10.1371/journal.pntd.0003215.
41. COBURN, J., Maier, T., Casey, M., Padmore, L., Sato, H., and Frank, D. A Reproducible and Quantitative Model of Dermacentor Variabilis Infection with the Live Vaccine Strain of Francisella tularensis. *Appl. Env. Microbiol.* 2015; 81(1) 386-395, published online 31 October 2014 doi:10.1128/AEM.02917-14
42. Robbins, G.T., Hahn, B.L., Evangelista, K., Padmore, L.J., Aranda, P.S., and COBURN, J. Evaluation of Cell Binding Activities of *Leptospira* ECM Adhesins. *PLoS Negl Trop Dis* April 14, 2015 DOI: 10.1371/journal.pntd.0003712.
43. Lin, Y.-P., Chen, Q., Ritchie, J.A., Dufour, N.P., Fischer, J.R., COBURN, J., and Leong, J.M. Glycosaminoglycan binding by *Borrelia burgdorferi* adhesin BBK32 specifically and uniquely promotes joint colonization. *Cell Microbiol.* 2015 Jun;17(6):860-75. PubMed PMID: 25486989; PubMed Central PMCID: PMC4437914.
44. Ristow, L.C., Bonde, M., Lin, Y.-P., Sato, H., Curtis, M., Wesley, E., Hahn, B.L., Fang, J., Wilcox, D. A., Leong, J.M., Bergström, S., and COBURN, J. Integrin binding by *Borrelia burgdorferi* P66 facilitates dissemination but is not required for infectivity. *Cell Microbiol.* 2015 Jul;17(7):1021-36. PubMed PMID: 25604835; PubMed Central PMCID: PMC4478124.
45. Ristow, L.C., Bonde, M., Lin, Y.-P., Sato, H., Curtis, M., Wesley, E., Hahn, B.L., Fang, J., Wilcox, D. A., Leong, J.M., Bergström, S., and COBURN, J. Integrin binding by *Borrelia burgdorferi* P66 facilitates dissemination but is not required for infectivity. *Cell Microbiol.* 2015 Jul;17(7):1021-36. PubMed PMID: 25604835; PubMed Central PMCID: PMC4478124

46. Lin, Y.-P., Bhowmick, R., COBURN, J., and Leong, J.M. Host cell heparan sulfate glycosaminoglycans are ligands for OspF-related proteins of the Lyme disease spirochete. *Cell Microbiol.* 2015 Oct;17(10):1464-76. PubMed PMID: 25864455; PubMed Central PMCID: PMC4583806.
47. Caine JA, COBURN, J. A short-term *Borrelia burgdorferi* infection model identifies tissue tropisms and bloodstream survival conferred by adhesion proteins. *Infect Immun.* 2015 Aug;83(8):3184-94. PubMed PMID: 26015482; PubMed Central PMCID: PMC4496602.
48. Kumar D, Ristow LC, Shi M, Mukherjee P, Caine JA, Lee W-Y, Kubes, P, COBURN, J, and Chaconas, G.(2015) Intravital Imaging of Vascular Transmigration by the Lyme Spirochete: Requirement for the Integrin Binding Residues of the *B. burgdorferi* P66 Protein. *PLoS Pathog.* 2015 Dec;11(12):e1005333. PubMed PMID: 26684456; PubMed Central PMCID: PMC4686178.

Books, Chapters, and Reviews

1. Gill, D.M. and COBURN, J. (1985) Why does cholera toxin need GTP to act? pp. 562-568 in ADP-Ribosylation of Proteins, Althaus, Hilz, and Shall (eds.), Springer-Verlag, Berlin and Heidelberg.
2. Gill, D.M., COBURN, J. and Tamir, A. (1987) The enzymic activity of cholera toxin requires a GTP-binding protein of the membrane. pp. 65-72 in Membrane Mediated Cytotoxicity, Bonavida and Collier (eds.), Alan R. Liss, New York.
3. Woolkalis, M., Gill, D.M. and COBURN, J. (1988) Assay and purification of a cytosolic factor required for the activity of cholera toxin. *Methods Enzymol.* 165:246-249.
4. COBURN, J. (1992) *Pseudomonas aeruginosa* Exoenzyme S. pp. 133-143 in Current Topics in Microbiology and Immunology volume 175: ADP-Ribosylating Toxins. K. Aktories (ed.) Springer-Verlag, Heidelberg.
5. COBURN, J. (1993) ADP-Ribosylation of Low Molecular Weight GTPases by *Clostridium botulinum* Exoenzyme C3 and *Pseudomonas aeruginosa* Exoenzyme S. Chapter 43 in: Handbook of Experimental Pharmacology: GTPases in Biology I and II. vol. 108, pp. 679-688. B. Dickey and L. Birnbaumer, eds. Springer-Verlag, Heidelberg.
6. COBURN, J. and Kalish, R.A. (2000) Lyme Disease. in the Encyclopedia of Microbiology, second edition. J. Lederberg (ed.) Academic Press
7. COBURN, J. Adhesion mechanisms of the Lyme disease spirochete, *Borrelia burgdorferi*. (2001) *Current Drug Targets-Infectious Disorders.* 1:171-179.
8. COBURN, J., Medrano, M., and Cugini C. (2002) *Borrelia burgdorferi* and its Tropisms for Adhesion Molecules in the Joint. *Curr. Opinion in Rheumatol.* 14:394-398.
9. Schmidt, M., Leong, J.M., and COBURN, J. (2003) Review of "Bacterial Pathogenesis: A Molecular Approach" 2nd. ed. by A. Salyers and D. Whitt, ASM News, 69(2):98-99.
10. Steere, A.C., COBURN, J., and Glickstein, L. (2004) The Emergence of Lyme Disease. *J. Clin. Invest.* 113:1093-1101.
11. Steere AC, COBURN J, Glickstein L. (2005) Lyme Borreliosis. pp. 176-206 in Tick-Borne Infections of Humans. Goodman, Dennis, and Sonenshine, (eds.) American Society of Microbiology Press.
12. COBURN, J., Fischer, J., and Leong, J.M. (2005) Solving a sticky problem: new genetic approaches to host cell adhesion by the Lyme disease spirochete. *Molecular Microbiol.* 57:1182-1195
13. Medrano, M.S., Policastro, P., Schwan, T.G., and COBURN, J. (2006) Regulation of Expression of the Integrin Ligand P66 in *B. burgdorferi*. Pages 281-291 in *Molecular Biology of Spirochetes*, Cabello, Hulinska, and Godfrey (eds.) IOS Press, Amsterdam.
14. COBURN, J. and Leong, J.M. Lyme Disease. (2007) Chapter 25 in *Mechanisms of Microbial Disease*, 4th ed. Schaechter, Engelberg, Eisenstein, and Medoff, G. (eds.) Lippincott, Williams, and Wilkins
15. Rosenthal, M., and COBURN, J. Lyme Disease. (2008) *Encyclopedia of Public Health*, pp. 168-174 in Heggenhougen and Quah: *International Encyclopedia of Public Health v.4*, Academic Press, San Diego
16. Norris, S.J., COBURN, J., Leong, J.M., Hu, L.T., and Höök, M. (2010) Pathobiology of Lyme Disease *Borrelia*, a chapter in *Borrelia: Molecular and Cellular Biology* D.S. Samuels and J.D. Radolf, eds.
17. Jewett, M., COBURN, J. and Leong, J.M. (2012) Lyme Disease. Chapter in *Schaechter's Mechanisms of Microbial Disease*, 5th ed. Engelberg, Dermody, and DiRita. (eds.) Lippincott, Williams, and Wilkins.
18. Truong, K.N. and COBURN, J. (2012) The emergence of severe pulmonary hemorrhagic leptospirosis: questions to consider. *Perspective in Frontiers in Cellular and Infection Microbiology*, 1:24. doi: 10.3389/fcimb.2011.00024.
19. COBURN, J., Leong, J. and Chaconas, G. (2013) Illuminating the roles of the *Borrelia burgdorferi* adhesins. *Trends in Microbiology* 21:372-379.

20. Lin, Y.-P., Osborne, M.O., Pereira, M., COBURN, J., and Leong, J.M. (2016) Glycosaminoglycan Binding by the Lyme Disease Spirochete is a Determinant of Tissue Tropism and Disease. Chapter in Glycobiology and Human Diseases, Gherman Wiederschain, ed. CRC Press.
21. Antonara, S., Ristow, L. and COBURN, J. Adhesion Mechanisms of *Borrelia burgdorferi*, a chapter in Bacterial Adhesion: Biology, Chemistry, and Physics D. Linke and A. Goldman, eds. In press.
22. Jewett, M., COBURN, J. and Leong, J.M. Lyme Disease. Chapter 25 in Mechanisms of Microbial Disease, 5th ed. Schaechter, Engelberg, Eisenstein, and Medoff, G. (eds.) Lippincott, Williams, and Wilkiins. In press.

Editorials, Letters To Editor, Other

1. COBURN, J. (1983) M.A. Thesis: Investigation of the Type of Inhibition of Low KM cAMP Phosphodiesterase of Rat Prostate by an Endogenous Factor.
2. COBURN, J. (1991) Ph.D. thesis: Characterization of the ADP-Ribosylation Reaction Catalyzed by *Pseudomonas aeruginosa* Exoenzyme S.
3. COBURN, J. and Leong, J.M. (2000) Arresting Features of Bacterial Toxins. (perspective) Science 290:287-288.

Non-Peer Reviewed Educational Products

1. Syllabus materials for lectures on “Bacterial Toxins”, “Damage to Host”, and “Spirochetes” given to medical and dental students at Brown and Tufts Universities, and medical students at Medical College of Wisconsin