

# *CURRICULUM VITAE*

**Anthony T. Maurelli, Ph.D.**

---

(Updated November 4, 2019)

## **BIOGRAPHICAL INFORMATION**

**TITLE:** Professor of Environmental and Global Health

**ACADEMIC ADDRESS:** Department of Environmental and Global Health  
University of Florida  
College of Public Health and Health Professions  
1225 Center Drive  
PO Box 100188  
Gainesville, FL 32610  
Telephone: (352) 294-5029 FAX: (352) 273-6070  
Email: [amaurelli@phhp.ufl.edu](mailto:amaurelli@phhp.ufl.edu)

**LABORATORY ADDRESS:** Emerging Pathogens Institute  
University of Florida  
2055 Mowry Road  
PO Box 100009  
Gainesville, FL 32610-0009

**WEB SITE:** <https://egh.phhp.ufl.edu/profile/maurelli-anthony/>

**DATE AND PLACE OF BIRTH:** September 15, 1952, Philadelphia, Pennsylvania

**CITIZENSHIP:** United States of America

## **EDUCATION AND TRAINING**

B.S. in Biology, May, 1974  
Villanova University, Villanova, Pennsylvania

Ph.D. in Molecular Cell Biology, June 1983  
University of Alabama in Birmingham, Birmingham, Alabama  
Ph.D. Advisor: Dr. Roy Curtiss III, Department of Microbiology

Postdoctoral Fellow, September 1983 – August 1985  
Service des Entérobactéries, Institut Pasteur, Paris, France  
Advisor : Pr. Philippe J. Sansonetti

## **PROFESSIONAL POSITIONS HELD**

- August 1985 – June 1986      Chargé de Recherche  
Service des Entérobactéries  
Institut Pasteur  
Paris, France
- June 1986 – May 1992      Assistant Professor  
Department of Microbiology  
F. Edward Hébert School of Medicine  
Uniformed Services University of the Health Sciences  
Bethesda, Maryland
- May 1992 – August 1999      Associate Professor  
Department of Microbiology and Immunology  
F. Edward Hébert School of Medicine  
Uniformed Services University of the Health Sciences  
Bethesda, Maryland
- July 1994 – June 2003      Associate Professor of Molecular and Cell Biology (secondary  
appointment)  
F. Edward Hébert School of Medicine  
Uniformed Services University of the Health Sciences  
Bethesda, Maryland
- August 1999 – December 2015      Professor  
Department of Microbiology and Immunology  
F. Edward Hébert School of Medicine  
Uniformed Services University of the Health Sciences  
Bethesda, Maryland
- May 2001 – December 2015      Professor of Emerging Infectious Diseases (secondary  
appointment)  
F. Edward Hébert School of Medicine  
Uniformed Services University of the Health Sciences  
Bethesda, Maryland
- June 2003 – December 2015      Professor of Molecular and Cell Biology (secondary  
appointment)  
F. Edward Hébert School of Medicine  
Uniformed Services University of the Health Sciences  
Bethesda, Maryland

January 2016 – present    Professor  
Department of Environmental and Global Health  
College of Public Health and Health Professions  
University of Florida  
Gainesville, Florida

April 2016 – present    Joint Professor  
Department of Molecular Genetics and Microbiology  
College of Public Health and Health Professions  
University of Florida  
Gainesville, Florida

July 2017 – present    Associate Chair  
Department of Environmental and Global Health  
College of Public Health and Health Professions  
University of Florida  
Gainesville, Florida

## **HONORS AND AWARDS**

Postdoctoral Fellowship: La Fondation pour la Recherche Médicale, Paris, FRANCE  
October 1983 – March, 1984.

Postdoctoral Fellowship: L'Association pour le développement de l'Institut Pasteur, Paris,  
FRANCE, April 1984 – October 1984.

Postdoctoral Fellowship: European Molecular Biology Organization (EMBO),  
November 1984 – October 1985.

Fellowship: L'Association pour le développement de l'Institut Pasteur, Paris, FRANCE,  
November 1985 – June 1986.

The Society for General Microbiology Lecture of the Year, Trinity College, University of  
Dublin, Dublin, IRELAND, April 28, 1994

Elected Fellow of the Infectious Diseases Society of America, 2000

Henry Wu Award for Excellence in Basic Science Research, Faculty Senate Research Day,  
Uniformed Services University, Bethesda, MD, May 13, 2004

The Arkansas Medical Society Distinguished Speaker Lecture Series, The University of  
Arkansas for Medical Sciences, Little Rock, AR, February 21, 2008

Elected Fellow of the American Academy of Microbiology, January 2008

Elected Secretary-Treasurer, Chlamydia Basic Research Society, 2015-2019

Inducted into Beta Upsilon Chapter of Delta Omega Honorary Society in Public Health,  
University of Florida, April 2017

## **MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

1978-present	Member, American Society for Microbiology
1986-present	Société Française de Microbiologie
2000-present	Fellow, Infectious Diseases Society of America
2002-present	Member, Chlamydia Basic Research Society
2008-present	Fellow, American Academy of Microbiology
2016-present	Member, American Society of Tropical Medicine and Hygiene

## **RESEARCH INTERESTS**

- Graduate Research:** Dissertation title: Studies on the Genetics of Pathogenicity of *Shigella flexneri* 2a
- Postgraduate Research:** Cloning and characterization of the genes required for invasion of HeLa cells by *Shigella flexneri*
- Temperature regulation of virulence gene expression by *Shigella flexneri*
- Present Areas of Research:** Pathogenic mechanisms of *Shigella flexneri*
- Evolution and emergence of Shiga toxin-producing *Shigella flexneri*
  - Role of type III secretion system components in post invasion phenotypes of *Shigella* virulence
  - Drug and vaccine discovery applying “black hole” and anti-virulence gene technology to *Shigella*
- Pathogenic mechanisms of *Chlamydia*
- Development of genetic tools for studying *Chlamydia* spp. and their application to analysis of pathogenic mechanisms of *Chlamydia* spp.
  - Cell wall metabolism and cell division processes of *Chlamydia* spp.
  - Mechanisms of antibiotic resistance in *Chlamydia* spp.
  - Characterization of transporters of essential metabolites for chlamydial growth
  - Pathway “hole filling” – identification and characterization of genes involved in critical metabolic processes of *Chlamydia* intracellular growth
- Surveillance of non-HIV sexually transmitted infections in Haiti
- Surveillance of Chlamydia, syphilis, gonorrhea, and trichomoniasis in urban and rural settings; survey of sexual behaviors and other risk factors
  - Laboratory capacity building
- Water quality and public health in Haiti
- Impact on women’s health in urban and rural communities

## TEACHING

### GRADUATE STUDENTS TRAINED – USU

Alexander E. Hromockyj, Ph.D. granted 1991	Andrea J. McCoy, Ph.D. granted 2005
Maj. Gerard P. Andrews, Ph.D. granted 1992	Christina Faherty, Ph.D. granted 2009
Francine C. Rogers, M.S. granted 1999	Kimberly Bliven, Ph.D. granted 2015

### POST DOCTORAL FELLOWS TRAINED – USU

Daniel L. Rowley, Ph.D., 1990 – 1991	Aishwarya Vivek Ramaswamy, Ph.D., 2006–10
Catherine O'Connell, Ph.D., 1993 – 1996	Derek J. Fisher, Ph.D., 2006 – 2011*
Robin C. Sandlin, Ph.D., 1993 – 1999	Ana Kolin, Ph.D., 2007 – 2008
Michael A. Davis, Ph.D., 1995 – 1998	James Henkel, Ph.D., 2009 – 2012
Raymond Schuch, Ph.D., 1995 – 2001	Sabrina S. Joseph, Ph.D., 2009 – 2013
William A. Day, Ph.D., 1998 – 2001	Styliani Antonara, Ph.D., 2009 – 2011
Colleen D. Kane, Ph.D., 1998 – 2004*	Jennifer Joseph, Ph.D., 2010 – 2012
Anita Verma, Ph.D., 2000 – 2003	Aja Gore, Ph.D., 2010 – 2011
Yasuko Homma, M.D., Ph.D., 2002 – 2004	Patricia Pelczar-Rossi, Ph.D., 2011 – 2014
John Rose, Ph.D., 2002 – 2004	Manon Rosselin, Ph.D., 2011 – 2014
Chieko Mitsuata, D.D.S., Ph.D., 2004 – 2006	Mathanraj Packiam, Ph.D., 2012 – 2015
Andrea J. McCoy, Ph.D., 2005 – 2006	Amy Kullas, Ph.D., 2013 – 2014
Daniel V. Zurawski, Ph.D., 2004 – 2008	Erica Raterman, Ph.D., 2012 – 2015
Anne-Laure Prunier, Ph.D., 2005 – 2008	Miranda Gray, Ph.D., 2011 – 2016
Rachel Binet, Ph.D., 2000 – 2009	George Liechti, Ph.D., 2012 – 2016*
Yuda Anriany, Ph.D., 2006 – 2010	

\*Ruth L. Kirschstein National Research Service Award Postdoctoral Fellow

### GRADUATE STUDENT THESIS ADVISORY COMMITTEES – USU

Judy Chow, 1986 – 1990	Amy Sims, 2000 – 2005 (Chair)
Lawrence M. Sung, 1986 – 1990	Joseph Larson, 2002 – 2004
Wei-Yang Zhang, 1987 – 1992	Jessica Giddings, 2006 – 2009
Christopher Coker, 1990 – 1996 (Chair)	Kathleen Jones, 2006 – 2011
Amy Bordner, 2000 - present	Rachel Vonck, 2007 – 2011
Ann Jerse – University of Maryland at Baltimore, 1990 (external member)	Christopher Doyle, Stony Brook Medical Center, 2011 – 2014 (external member)
Maria Scott, 1995 – 1999	Anita Marinelli, 2011 – 2014 (Chair)
Louise Teel, 1998 – 2002 (Chair)	Ryan Johnson, 2013 – 2015 (Chair)
Angel A. Soler-Garcia, 1998 – 2002	

Faculty advisor, American Society for Microbiology USU Student Branch, 2008 – 2014

## TEACHING EXPERIENCE – USU

Lecturer in medical student courses:

- Medical Microbiology and Infectious Diseases (MMID)  
Bacterial Genetics/Physiology and Pathogenic Bacteriology sections, 1986 – 2013  
Laboratory Instructor/Discussion Facilitator in MMID, 1986 – 2013
- Selected topics in Fundamentals, Cardiopulmonary/Respiratory, and Musculoskeletal blocks, 2013 – present  
Gene Transfer; Mutations and Mutagenesis  
Atypical Pneumonia; Tuberculosis  
Antibiotics that Affect Cell Wall Synthesis

Lecturer in graduate student courses:

- Pathogenic Mechanisms, 1987 – present  
Topics taught (2015): Locally Invasive Pathogens: *Shigella* spp.
- Genetics, 1996 – 2012, Course Director and Instructor
- Bacterial Genetics and Physiology, Course Director and instructor 2012 – present  
Topics taught (2014): Mutations, Mutant Isolation and Genetic Analysis  
Culture and Growth of Bacteria in the Research Laboratory (lecture and lab)  
Genetic Analysis, Gene Transfer and Mapping  
Bacteriophage Genetics  
Mobile Genetics Elements, Plasmids and Transposons  
Transposable Elements and Gene Fusions as Genetic Tools  
Evolution of Microbes
- Advanced Prokaryotic and Eukaryotic Cell Biology and Genetics, 1988 – present; Course Director 2000 – present  
Topics taught (2012): Negative regulation: the *lac* operon  
Conjugation  
Plasmid addiction  
Hypothesis building  
Techniques  
Inside the room: What happens at Study Section
- Models of Emerging Infectious Diseases, 2014 – Cholera in Haiti: a Personal Perspective
- Grant Writing – Experimental Design, 2002

## **UNIVERSITY COMMITTEE SERVICE – USU**

Member, Committee on Acquisition, 1987 – 1992  
Chair, University Safety Committee, 2003 – 2008  
Member, Institutional Biosafety Committee, 2003 – present  
Member, BIC Genomics Faculty Advisory Committee, 2009 – 2015  
Search Committee for Commandant, 2013

## **SCHOOL OF MEDICINE COMMITTEE SERVICE – USU**

Comparability Committee of the Faculty Senate, 1987 – 1988  
Student Awards Committee, 1989 – 1992  
Basic Sciences Curriculum Subcommittee, 1989 – 1993  
Curriculum Committee, 1990 – 1993  
Merit Review Committee, 1994 – 1998; 2008 – 2009  
Biomedical Instrumentation and Imaging Committee, 1995 – 1997 (Chairman, 1996 – 1997)  
Chairman, Curriculum Review Genetics Subtopic Committee, 1997  
Graduate Education Committee, 1999 – 2013 (Chairman, 2008 – 2013)  
Search Committee for Chair, Department of Medical and Clinical Psychology, 1999  
Search Committee for Chair, Department of Anesthesiology, 2000  
Committee on Appointments, Promotion and Tenure, 2001 – 2004  
Graduate Education Subcommittee to develop M.D. / Ph.D. Training Program, 2001 – 2002  
M.D. / Ph.D. Advisory Committee, 2004 – 2006  
Search Committee for Director, Graduate Program in Emerging Infectious Diseases, 2005  
Search Committee for Chair, Department of Biochemistry, 2006  
Search Committee for Chair, Department of Pharmacology, 2006  
Ad hoc Committee on the Establishment of a Teaching Academy, 2005 – 2006  
Outstanding Biomedical Educator Award Committee, 2009 – 2013  
School of Medicine Space Committee, 2010 – present

## **DEPARTMENTAL COMMITTEE SERVICE – USU**

Microbiology and Immunology Graduate Admissions Committee, 1987 – 1999 (Chairman, 1991 – 1999)  
Microbiology and Immunology First Year Graduate Student Advisory Committee, 1987 – 1999  
Director, Graduate Program, Microbiology and Immunology, 1999 – 2005  
Search Committees, Assistant Professor, Department of Microbiology and Immunology, 2001, 2002, 2003 (Chair for 2003 search), 2004, 2005  
Space Committee, 2009 – present



## TEACHING – UF

### GRADUATE STUDENTS TRAINED

Louise Ball, Interdisciplinary Program, Ph.D. candidate, 2017-present	Andrew Rainey, EGH, Ph.D. candidate, 2019-present
---	---

### GRADUATE STUDENT THESIS ADVISORY COMMITTEES

Tyler Kury, MPH, 2016	Alexandra Burne, Ph.D. candidate (Vet. Med.), 2016-present
John Vann, MPH, 2016-2018	Jessica Jacob, Ph.D. candidate (Vet. Med.), 2018-present
Molly Falcone, MPH, 2017-2019	Debra Brunson, Ph.D. candidate (Dentistry), 2019-present
Abriana Johnson, MPH candidate, 2017-present	Joseph Shaffer, MPH candidate, 2017-present
Ashton Creasy, Ph.D. candidate, 2018-present	Daniel Mendez, MHS candidate, 2018-present
Morgan Ingram, MPH candidate, 2018-present	Brent L. Moore, DVM, MPH candidate, 2019-present
Morgan Palmer, MPH candidate, 2019-present	

### POST DOCTORAL FELLOWS TRAINED

Dev K. Ranjit, Ph.D., 2016-2019	Jessica Slade, Ph.D., 2016-present
Raghuveer Singh, Ph.D., 2016-2019	Natasha Weatherspoon-Griffin, Ph.D., 2016-2018

#### Undergraduate teaching:

- HSC4930: The Ménage à Trois of Emerging Infectious Diseases (3 credit hours); Spring 2018; 3 credit hours; Course Director
- PHC3440: Global Public Health, guest lecture; “*Sexually Transmitted Infections in Haiti*”
- SPA4956 Overseas Studies, Study Abroad Program: UF in Haiti – Environmental and Global Health; survey of water quality in Haiti, Summer 2018; Faculty Co-Director and in-field Instructor

#### Graduate teaching:

- PHC6937: The Ménage à trois of Emerging Infectious Diseases; Spring 2019; 3 credit hours
- PHC6937: Environmental and Global Health Journal Club, Summer C, 2019; 1 credit

## **COLLEGE OF PUBLIC HEALTH and HEALTH PROFESSIONS SERVICE**

Department representative, College Tenure and Promotion Committee, June 2016 – present

### **DEPARTMENTAL COMMITTEE SERVICE**

Search Committees (\* indicates Chair of committee)

Research Assistant/Associate Professor, Environmental and Global Health and Center for African Studies (#497868), July 2016\*

Research Associate/ Full Professor, Environmental and Global Health (#501228), February 2017\*

Assistant Professor, Environmental and Global Health (#501225), February 2017

Associate/Full Professor, Occupational Health (#44883), April 2019\*

Assistant Professor, Environmental and Global Health (#50659), August 2019\*

Study Abroad Planning Committee, 2016

One Health Certificate working group, 2016

Development Task Force, 2016 – present

## **EDITORIAL EXPERIENCE**

Mini-reviews Editor, *Infection and Immunity*, 2009 – 2019

Member, Editorial Board, *Microbial Pathogenesis*, 1990 – 2013

Member, Editorial Board, *Infection and Immunity*, 1991 – 2005

Ad hoc reviewer for other journals – *Journal of Bacteriology*, *Molecular Microbiology*, *Proc. Natl. Acad. Sci. USA*, *Cellular Microbiology*, *Microbiology*, *Infection and Immunity*; *Nature Reviews Microbiology*, *mBio*, *Journal of Infectious Diseases*, *PLoS Pathogens*

## **PEER REVIEW ACTIVITIES** (last 15 years)

- Member, Henry M. Jackson Foundation Research Support Awards Committee, 2002 – 2016
- Ad hoc reviewer, Host Interactions with Bacterial Pathogens (HIBP) Study Section, NIH, June 20 – 21, 2005
- Ad hoc reviewer, Cooperative Research Partnerships for Biodefense, NIH, NIAID, January 24, February 8, 2006
- Ad hoc reviewer, Host Interactions with Bacterial Pathogens (HIBP) Study Section, NIH, February 27 – 28, 2006
- Ad hoc reviewer, Host Interactions with Bacterial Pathogens (HIBP) Study Section, NIH, June 29 – 30, 2006
- Member, Special Emphasis Panel, Minority and Disability Predoctoral Fellowship Applications, NIH, March 7 – 8, 2007
- Ad hoc reviewer, Clinical Research and Field Studies of Infectious Diseases Study Section, NIH, June 7, 2007
- Subject Matter Expert, NIH Recombinant DNA Advisory Committee, June 19-21, 2007
- Ad hoc reviewer, Host Interactions with Bacterial Pathogens (HIBP) Study Section, NIH, October 2, 2008
- Ad hoc reviewer, Special Emphasis Panel (SEP) ZRG1 IDM-T (02) - Member Conflicts in Microbiology, NIH. January 8-9, 2009
- Ad hoc reviewer, Bacterial Pathogenesis (BACP) Study Section, NIH, February 19-20, 2009.
- Ad hoc reviewer, Bacterial Pathogenesis (BACP) Study Section, NIH, June 18-19, 2009.
- Member, Bacterial Pathogenesis (BACP) Study Section, NIH, September 2009 – June 2013 (Chair, 2011 – 2013)
- Member, Topics in Bacterial Pathogenesis IDM-B (80) Study Section, NIH, October 29-30, 2015
- Member and Chair, Topics in Bacterial Pathogenesis IDM-B (81) Study Section, NIH, July 13, 2016
- Member, Member Conflict: Topics in Mechanisms of Bacterial Virulence and Pathogenesis, ZRG1 IDM-V (02) M, Study Section, NIH, December 2, 2016
- Member and Chair, Member Conflict: Topics in Bacterial Pathogenesis and Host Interactions, ZRG1 IDM-V (02) Study Section, NIH, November 3, 2017

- Member and Chair, Bacterial Member Conflict Special Emphasis Panel (SEP), ZRG1 IDM-V 02 Study Section, NIH, March 16, 2018
- Member and Chair, Topics in Bacterial Pathogenesis IDM-B (80) Study Section, NIH, July 16, 2019

### **HUMAN SUBJECTS RESEARCH AND SAFETY MONITORING**

- Member, Institutional Review Board, Naval Medical Research Center, Silver Spring, MD, 2000 – 2010
- Member, Data and Safety Monitoring Committee for Protocol 09-0009, “Safety and Immunogenicity of Two Live, Attenuated Oral *Shigella sonnei* Vaccines.” National Institutes of Health, National Institute of Allergy and Infectious Diseases, Division of Microbiology and Infectious Diseases, April 2012 – February 2015
- Member, Data and Safety Monitoring Board for Protocol 17-0112: “A Double-Blind Placebo Controlled Phase 2 Trial to Evaluate the Safety, Reactogenicity and Immunogenicity of a Live-Attenuated *Shigella sonnei* Vaccine, WRSs2 and Determine its Efficacy in a Challenge Model of *S. sonnei* 53G in Healthy Adults.” National Institutes of Health, National Institute of Allergy and Infectious Diseases, Division of Microbiology and Infectious Diseases, January 2019 – present

### **COMMUNITY SERVICE**

American Physical Society-Montgomery County Public Schools Teacher-Scientist Alliance – designed exercises to supplement elementary school science curriculum, 1997 – 1998

Scientific advisor, Microscope Training for elementary school teachers, Montgomery County Public Schools, 1998

Scientist Volunteer – organized in-classroom microbiology experiments, Sligo Creek Elementary School, Silver Spring, MD, 1999 – 2006

Career Day Presenter, Silver Spring International Middle School, Silver Spring, MD, 2006

Assistant Coach, Nelson Youth Ice Hockey Association, Laurel, MD, 2002 – 2009

Volunteer, Medical and Educational Missions to Baradères, Haiti – January 2008, January 2009, January 2012, February 2013, March 2014

### **OUTSIDE ACTIVITIES**

Member, Scientific Advisory Board – Innatrix

Member, Board of Directors – Gift of Water

## **CURRENT EXTRAMURAL RESEARCH SUPPORT**

1. National Institute of Allergy and Infectious Diseases grant R01 AI123300-01, Principal Investigator. Title: Peptidoglycan Assembly, Degradation, and Function in Pathogenic *Chlamydia*. December 5, 2016 – November 30, 2021. Direct costs 12/05/2018 – 11/30/2019 \$250,000

## **PAST RESEARCH SUPPORT**

1. USUHS Research Protocol R07385-11. Title: Isolation of *Shigella* Virulence Gene Products by *lacZ* Protein Fusions. October 1, 1986 – September 30, 1997. Annual direct costs \$16,200. Competitively renewed in 1989 and 1992.
2. USUHS Research Protocol R07385-17. Title: Intracellular Expression of *Shigella* Virulence Genes. October 1, 1997 – September 30, 2003. Annual direct costs \$16,200.
3. USUHS Research Protocol H073KB-01. Title: Genetics of *Shigella* Virulence: Analysis of Post-invasion Virulence Phenotypes. October 1, 2003 – September 30, 2006. Annual direct costs \$16,000.
4. National Institute of Allergy and Infectious Diseases grant R21 AI061058-01, Principal Investigator. Title: Metabolic Modeling of Invasive Bacteria and HeLa Cytosol. July 14, 2004 – June 30, 2007. Annual direct costs \$150,000.
5. USUHS Research Protocol R073QB-01, Principal Investigator. Title: Molecular Mechanisms of *Shigella* Escape from Infected Cells. January 1, 2009 – September 30, 2011. Annual direct costs \$20,000.
6. National Institute of Allergy and Infectious Diseases grant R01 AI044033-11, Principal Investigator. Title: Molecular Genetic Analysis of *Chlamydia* Pathogenicity. December 1, 1998 – September 17, 2012.
7. National Institute of Allergy and Infectious Diseases grant R56 AI044033-11, Principal Investigator. Title: Molecular Genetic Analysis of *Chlamydia* Pathogenicity. September 18, 2012 – July 31, 2013 (bridge award). Annual direct costs \$250,000.
8. National Institute of Allergy and Infectious Diseases grant U19 AI08044-04, Principal Investigators Patrik Bavoil and Jacques Ravel. Title: Eco-pathogenomics of Chlamydial reproductive tract infection. September 21, 2009 – August 31, 2014. Annual direct costs \$192,089.

9. National Institute of Allergy and Infectious Diseases grant R01 AI024656-23, Principal Investigator. Title: Molecular Genetic Analysis of *Shigella* Pathogenicity. July 1, 2009 – June 30, 2014. Originally funded January 1, 1988 and competitively renewed in 1992, 1998, 2003 and 2009.
10. USUHS Research Protocol R073300915. Title: *Chlamydia trachomatis* Susceptibility and Response to Host-Derived Oxidative Stress. October 1, 2014 – September 30, 2015. Annual direct costs \$20,000.
11. Armed Forces Health Surveillance Branch-Global Emerging Infections Surveillance and Response System grant PO216\_14\_HS, Co-Principal Investigator. Title: Sexually Transmitted Infections Surveillance in Urban and Rural Communities in Haiti. October 1, 2015 – September 30, 2016. Direct costs 10/01/2015 – 08/31/2017 \$205,500. Funded since October 2013.
12. National Institute of Allergy and Infectious Diseases grant R01 AI044033-12, Principal Investigator. Title: Molecular Genetic Analysis of *Chlamydia* Pathogenicity. August 1, 2013 – July 31, 2018. Originally funded December 1, 1998 and competitively renewed in 2006 and 2013. Direct costs 08/01/2016 – 07/31/2018

## **PATENTS AWARDED**

“Method of Detecting *Shigella* or *Shigella mxiM* DNA”. **Anthony T. Maurelli**, Raymond Schuch, and Robin C. Sandlin. U.S. Patent number 6,342,352 B1, issued January 29, 2002.

“Methods of Identifying Bacterial Genes that are Incompatible with Bacterial Pathogenicity, and the Use of Such Genes, Such as *cadA*, to Reduce Pathogenicity in a Bacteria or to Combat Pathogenic Bacterial Infections”. **Anthony T. Maurelli**, Reinaldo E. Fernández, Craig A. Bloch, and Alessio Fasano. U.S. Patent number 6,344,201 B1, issued February 5, 2002.

U.S. Patent number 6,780,414 B2, issued August 24, 2004.

Australian Patent number 763993, issued November 20, 2003.

“A Plasmid Expressing the Minimal Invasion Genes of *Shigella* and its Use in a Vaccine Strain”. **Anthony T. Maurelli**. U.S. Patent number 9,434,772 B2, issued September 6, 2016.

## **INVITED PRESENTATIONS** (last 10 years)

“*Shigella* and *Chlamydia*: Vive la difference”

International Conference “A tribute to Professeur Philippe Sansonetti and his School of Cellular and Tissular Microbiology”

Sainte Gemme Moronval, FRANCE, April 9-10, 2009

“*Shigella* and *Chlamydia* Pathogenesis”

Symposium in Honor of Roy Curtiss III

Phoenix, AZ, May 30, 2009

“Black Holes, Windows to *Shigella* Virulence”

FASEB Summer Research Conference, Microbial Pathogenesis: Mechanisms of Infectious Diseases  
Snowmass Village, CO, July 19-24, 2009

“Anti-apoptosis in *Shigella* and Survival in a Host Cell”

Bortree Lecture Series, Department of Veterinary and Biomedical Sciences

Pennsylvania State University

University Park, PA, November 20, 2009

“Metabolic Virulence Genes: A New Paradigm to Study Intracellular Bacterial Pathogens”

Department of Medicine, Division of Infectious Diseases and International Health

University of Virginia School of Medicine

Charlottesville, VA, March 8, 2011

“Metabolic Virulence Genes: A New Paradigm to Study Intracellular Bacterial Pathogens”  
Department of Molecular Genetics and Microbiology  
The University of New York Stony Brook Health Sciences Center  
Stony Brook, NY, May 17, 2011

“Metabolic Virulence Genes: A New Paradigm to Study Intracellular Bacterial Pathogens”  
Mucosal Biology Research Center  
University of Maryland School of Medicine  
Baltimore, MD, June 1, 2011

“Metabolic Virulence Genes: A New Paradigm to Study Intracellular Bacterial Pathogens”  
Department of Cell Microbiology and Molecular Genetics  
University of Maryland  
College Park, MD, November 4, 2011

“How to Grow within a Mammalian Cell: Lessons learned from *Chlamydia*”  
Department of Microbiology and Molecular Genetics  
University of California, Irvine  
Irvine, CA, November 30, 2011

“Metabolic Virulence Genes: A New Paradigm to Study Intracellular Bacterial Pathogens”  
Department of Microbiology  
University of Colorado School of Medicine  
Aurora, CO, March 2, 2012

“Metabolic Virulence Genes: A Powerful Tool for the Study of Intracellular Bacterial Pathogens”  
Department of Microbiology and Immunology  
Virginia Commonwealth University School of Medicine  
Richmond, VA, April 19, 2012

“Using Metabolic Virulence Genes to Study Intracellular Bacterial Pathogens”  
Department of Veterinary Medicine  
Virginia-Maryland Regional College of Veterinary Medicine, University of Maryland  
College Park, MD, May 10, 2012

“Evolution of *Shigella*: Gene Gain and Gene Loss (and Gene Gain?)”  
Emerging Pathogens Institute  
University of Florida  
Gainesville, FL, November 15, 2012

“Evolution of *Shigella*: Gene Gain and Gene Loss (and Gene Gain?)”  
Department of Microbiology  
University of Pennsylvania  
Philadelphia, PA, January 11, 2013



“Gene Loss, Gene Reduction and Bacterial Pathogenesis”  
European Course on Microbial Evolution and Molecular Epidemiology  
Ecole Normale Supérieure de Lyon and the Université Claude Bernard  
Lyon, FRANCE, January 21, 2013

“Another Brick in the Wall: Peptidoglycan Synthesis in *Chlamydia*”  
Department of Microbiology  
University of Georgia  
Athens, GA, September 5, 2013

"Infectious Disease Surveillance in Haiti: Projects for Sabbatical Leave and Beyond"  
Department of Microbiology and Immunology  
Uniformed Services University of the Health Sciences  
Bethesda, MD, September 16, 2013

"Emergence of a Strain of *Shigella flexneri* that Produces Shiga Toxin 1"  
Weekly Webinar, National Biosurveillance Integration Center  
Department of Homeland Security, Office of Health Affairs  
Washington, DC, September 18, 2013

“All the Bricks in the Wall: How *Chlamydia* Synthesizes and Degrades its Peptidoglycan”  
Gordon Research Conference on Bacterial Cell Surfaces  
Mount Snow Resort, West Dover, VT, June 22-27, 2014

“My Sabbatical in Haiti: Lessons Learned doing Science in Hard Places”  
Department of Microbiology and Immunology  
Uniformed Services University of the Health Sciences  
Bethesda, MD, October 6, 2014

“Prevalence of Stx1a-producing *Shigella* Species Isolated from French Travelers Returning from the Caribbean: An Emerging Pathogen with International Implications”  
49<sup>th</sup> U.S.-Japan Conference on Cholera and Other Enteric Bacterial Infections  
Gainesville, FL, January 14-16, 2015

“Sexually Transmitted Infections Surveillance in Haiti: Doing Science in Hard Places”  
Henry F. Jackson Foundation Council of Directors Regular Meeting  
Bethesda, MD, January 21, 2015

“Finding the Peptidoglycan in *Chlamydia trachomatis* and Resolving the Chlamydial Anomaly”  
Département de Biologie Cellulaire et Infection  
Institut Pasteur  
Paris, FRANCE, February 10, 2015

“Finding the Peptidoglycan in *Chlamydia trachomatis* and Resolving the Chlamydial Anomaly”  
Keynote Address  
German Chlamydia Workshop  
Vienna, AUSTRIA, February 11, 2015

“*Chlamydia* Cell Wall Biogenesis: An Historical Perspective”  
Seventh Biennial Meeting of the *Chlamydia* Basic Research Society  
New Orleans, LA, March 29 – April 1, 2015

“From Paris to Bethesda, from *Shigella* to *Chlamydia*: Mentoring Junior Faculty”  
Molecular Pathogenesis of Infectious Diseases Mini-Symposium Celebrating the Career of  
Randall K. Holmes, M.D., Ph.D.  
University of Colorado School of Medicine  
Aurora, CO, September 25, 2015

“Finding the Bricks in the Wall: Peptidoglycan Synthesis in *Chlamydia*”  
Lambda Lunch, National Institute of Child Development and Health  
Bethesda, MD, November 19, 2015

“All the Bricks in the Wall: Peptidoglycan Synthesis and Structure in *Chlamydia*”  
Department of Microbiology and Cell Science  
University of Florida Institute of Food and Agricultural Sciences  
Gainesville, FL, March 14, 2016

“Peptidoglycan synthesis in *Chlamydia*: Balancing immune evasion with requirements for cell  
division”  
Society for General Microbiology Annual Conference 2016  
Liverpool, ENGLAND, March 21-24, 2016

“All the Bricks in the Wall: Peptidoglycan Synthesis and Cell Division in *Chlamydia*”  
Department of Molecular Genetics and Microbiology  
University of Florida College of Medicine  
Gainesville, FL, April 5, 2016

“All the Bricks in the Wall: Peptidoglycan Synthesis and Cell Division in *Chlamydia*”  
Department of Chemistry  
Lehigh University  
Bethlehem, PA, May 4, 2016

“A Bacterium Builds a Wall: Peptidoglycan Synthesis and Cell Division in *Chlamydia*”  
Department of Infectious Diseases and Pathology  
University of Florida College of Veterinary Medicine  
Gainesville, FL, February 14, 2017

“The How and Why of Cell Wall Synthesis in *Chlamydia*”  
Department of Cell Biology, Microbiology and Molecular Biology  
University of South Florida  
Tampa, FL, February 24, 2017

“Shiga toxin-producing *Shigella* Species Isolated from Travelers Returning from the Caribbean:  
An Emerging Pathogen with International Implications”  
Department of Global Health  
University of South Florida College of Public Health  
Tampa, FL, October 10, 2017

“One Health Lessons in Sexually Transmitted Infections – Even when it’s not about sex, it’s  
about sex”  
One Health Center of Excellence  
University of Florida Emerging Pathogens Institute  
Gainesville, FL, January 11, 2018

“How *Chlamydia* uses a Primordial Enzyme to Build its Cell Wall: A New 2-for-1 Drug  
Target?”  
Infectious Diseases & Global Medicine Group  
University of Florida College of Medicine  
Gainesville, FL, April 25, 2018

“A Brief History of *Shigella*”  
Keynote Address, 62<sup>nd</sup> Annual Wind River Conference on Prokaryotic Biology  
Estes Park, CO, June 14, 2018

“Shiga toxin-producing *Shigella* Species in Travelers Returning from the Caribbean: A One  
Health Approach to Studying Emerging Pathogens”  
Walter Reed Army Institute of Research  
Silver Spring, MD, July 19, 2018

“Roadmap for Research, or How to Find Your Niche in Science”  
Department of Environmental and Global Health  
University of Florida College of Public Health and Health Professions  
Gainesville, FL, September 18, 2018

“Pathway Hole Filling and Moonlighting Enzymes to Build a *Chlamydia* Cell Wall”  
Keynote Address, Department of Oral Biology Departmental Retreat  
University of Florida College of Dentistry  
Gainesville, FL, November 9, 2018

“How *Chlamydia* uses a Primordial Enzyme to Build its Cell Wall: A New 2-for-1 Drug Target?”

Department of Molecular Genetics and Microbiology

University of Florida College of Medicine

Gainesville, FL, November 13, 2018

“In the Beginning, there was a Plasmid, A Very Big Plasmid (and a very small lab)”

International Symposium: A tribute to Philippe Sansonetti and the Microbial Molecular Pathogenesis Team

Institut Pasteur

Paris, FRANCE, April 25, 2019

“A Brief History of *Shigella*”

CATALySES: Emerging Pathogens Summer Institute

University of Florida Center for Precollegiate Education and Training

Gainesville, FL, June 17, 2019

## ABSTRACTS

1. **Maurelli, A. T.**, B. Blackmon, and R. Curtiss III. 1983. Effect of growth temperature on virulence of *Shigella flexneri* 2a. 83<sup>rd</sup> General Meeting of the American Society for Microbiology, New Orleans, LA.
2. **Maurelli, A. T.**, B. Baudry, and P. J. Sansonetti. 1985. Cloning of plasmid sequences involved in invasion of HeLa cells by *Shigella flexneri*. 85<sup>th</sup> General Meeting of the American Society for Microbiology, Las Vegas, NV
3. **Maurelli, A. T.**, B. Baudry, and P. J. Sansonetti. 1985. Clonage de la sequence necessaire á la penetration de *Shigella flexneri* dans les cellules HeLa. INSERM Colloque d'animation de la recherche 1984-1985, Mont Sainte Odile, Ottrott, FRANCE.
4. **Maurelli, A. T.**, and P. J. Sansonetti. 1986. Identification d'un gene chromosomique controlant la regulation thermique de la virulence de *Shigella flexneri*. Premier Congres de la Société Francaise de Microbiologie, Toulouse, FRANCE.
5. Hromockyj, A. E., and **A. T. Maurelli**. 1988. Identification of an *Escherichia coli* gene homologous to *virR*, a regulator of *Shigella* virulence. 88<sup>th</sup> General Meeting of the American Society for Microbiology, Miami Beach, FL.
6. Hromockyj, A. E., and **A. T. Maurelli**. 1989. Identification of *Shigella* invasion genes by isolation of temperature regulated *inv::lacZ* operon fusions. 89<sup>th</sup> General Meeting of the American Society for Microbiology, New Orleans, LA.
7. Andrews, G. P., C. Coker, and **A. T. Maurelli**. 1989. Characterization of protein fusions in the invasion plasmid of *Shigella flexneri* 2a. 89<sup>th</sup> General Meeting of the American Society for Microbiology, New Orleans, LA.
8. Andrews, G. P., A. E. Hromockyj, and **A. T. Maurelli**. 1990. Characterization of a secretion mutant of *Shigella flexneri* which is defective for export of invasion plasmid antigens B and C. 30<sup>th</sup> Annual Meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy, Atlanta, GA.
9. Rowley, D. L., S. C. Tucker, and **A. T. Maurelli**. 1991. Time course of virulence gene induction in *Shigella flexneri* 2a after temperature shift. 27<sup>th</sup> U.S.-Japan Joint Conference on Cholera and Related Diarrheal Diseases, Charlottesville, VA.
10. Lampel, K. A., R. C. Sandlin, S. P. Keasler, and **A. T. Maurelli**. 1994. Effect of a *galU* mutation on invasiveness and spread of *Shigella flexneri* 2a in HeLa cells. 94<sup>th</sup> General Meeting of the American Society for Microbiology, Las Vegas, NV.

11. O'Connell, C. M. C., D. Cheek, and **A. T. Maurelli**. 1994. Identification of a temperature-regulated phosphatase activity associated with the virulence plasmid of *Shigella flexneri*. 94<sup>th</sup> General Meeting of the American Society for Microbiology, Las Vegas, NV.
12. Andrews, G. P., G. Howe, D. Heath, C. See, **A. T. Maurelli**, and A. Friedlander. 1994. Temperature-dependent expression of *Yersinia pestis* fraction 1 capsular antigen (F1) is controlled by a homolog of the thermoregulatory loci, *hns* of *Escherichia coli* and *virR* of *Shigella flexneri*. 94<sup>th</sup> General Meeting of the American Society for Microbiology, Las Vegas, NV.
13. Sandlin, R. C. and **A. T. Maurelli**. 1995. Importance of O side chain length and sugar composition on invasion capacity and cell-to-cell spread of *Shigella flexneri* 2a. 95<sup>th</sup> General Meeting of the American Society for Microbiology, Washington, DC.
14. Schuch, R., R. C. Sandlin, and **A. T. Maurelli**. 1998. A method for evaluating distinct type III secretion requirements in the intracellular spread of *Shigella flexneri*: role of MxiM. 98<sup>th</sup> General Meeting of the American Society for Microbiology, Atlanta, GA.
15. O'Connell, C. M. C., and **A.T. Maurelli**. 1998. Introduction of foreign DNA into *Chlamydia* and stable expression of chloramphenicol resistance. Ninth International Symposium on Human Chlamydial Infection, Napa, CA.
16. **Maurelli, A. T.**, R. E. Fernández, B. McCormick, and A. Fasano. 1998. Understanding pathogenesis by looking for missing genes: the case of "black holes" in the genome of *Shigella flexneri*. 34<sup>th</sup> U.S.-Japan Panel Conference on Cholera and Related Bacterial Enteric Infections, Shonan Village, Kanagawa, JAPAN.
17. McCormick, B. A., M. I. Fernandez, A. M. Siber, and **A. T. Maurelli**. 1999. Inhibition of *Shigella flexneri*-induced transepithelial migration of polymorphonuclear leukocytes by cadaverine. 99<sup>th</sup> General Meeting of the American Society for Microbiology, Chicago, IL.
18. Fernández, R. E., R. C. Sandlin, and **A. T. Maurelli**. 1999. Isolation of rifampicin resistant mutants of *Chlamydia* using the plaque assay. 99<sup>th</sup> General Meeting of the American Society for Microbiology, Chicago, IL.
19. Schuch, R., R. C. Sandlin, and **A. T. Maurelli**. 1999. Requirements for type III protein secretion in the intracellular dissemination of *Shigella flexneri*. 99<sup>th</sup> General Meeting of the American Society for Microbiology, Chicago, IL.
20. Schuch, R., and **A. T. Maurelli**. 2000. Functional analysis of outer membrane-associated Mxi-Spa type III secretory elements in *Shigella flexneri*. 100<sup>th</sup> General Meeting of the American Society for Microbiology, Los Angeles, CA.

21. Kohler, H., S. Rodrigues, **A. T. Maurelli**, E. Cario, D. K. Podolsky, and B. A. McCormick. 2001. Invasion of *Shigella flexneri* into model human intestinal epithelia is dependent on a lipopolysaccharide interaction with the host cell. *Gastroenterology* 2001; (Suppl); 120:A371. Abstracts of the Annual Meeting, American Gastroenterological Association.
22. McCoy, A. J., R. C. Sandlin, and **A. T. Maurelli**. 2003. In vitro and in vivo functional activity of *Chlamydia* MurA, a UDP-*N*-acetylglucosamine enolpyruvyl transferase involved in peptidoglycan synthesis and fosfomycin resistance. First Biennial Meeting of the *Chlamydia* Basic Research Society, Memphis, TN.
23. Verma, A., and **A. T. Maurelli**. 2003. Characterization of putative open reading frames of *Chlamydia trachomatis* serovar L2 with conserved serine/threonine kinase motifs. First Biennial Meeting of the *Chlamydia* Basic Research Society, Memphis, TN.
24. Honma, Y., and **A. T. Maurelli**. 2003. Reduction of multi-drug efflux pump function induced by the type III secretion system in invasive *Shigella flexneri*. 38<sup>th</sup> U.S. Japan Cholera and Other Bacterial Enteric Diseases Joint Panel Meeting, Bethesda, MD.
25. McCoy, A. J., and **A. T. Maurelli**. 2004. Characterization of *Chlamydia* MurC-Ddl, a fusion protein exhibiting D-alanyl-D-alanine ligase activity involved in peptidoglycan synthesis. 104<sup>th</sup> General Meeting of the American Society for Microbiology, New Orleans, LA.
26. Binet, R., and **A. T. Maurelli**. 2004. Mutations in 16S rRNA associated with spectinomycin resistance in *Chlamydia psittaci* 6BC. 104<sup>th</sup> General Meeting of the American Society for Microbiology, New Orleans, LA.
27. McCoy, A. J., and **A. T. Maurelli**. 2005. Characterization of *Chlamydia* MurC-Ddl, a fusion protein exhibiting D-Alanyl-D-Alanine ligase activity involved in peptidoglycan synthesis. Second Biennial Meeting of the *Chlamydia* Basic Research Society, Indianapolis, IN.
28. Binet, R., and **A. T. Maurelli**. 2005. Spontaneous mutations that confer antibiotic resistance in *Chlamydia* spp.: Fitness cost due to mutations in the 16S rRNA associated with spectinomycin resistance in *C. psittaci* 6BC Second Biennial Meeting of the *Chlamydia* Basic Research Society, Indianapolis, IN.
29. Binet, R., and **A. T. Maurelli**. 2005. Antibiotic resistance in *Chlamydia* spp.: Fitness cost associated with spectinomycin resistance due to spontaneous mutations in the 16S rRNA in *C. psittaci* 6BC. 2005 Annual Conference on Antimicrobial Resistance, National Foundation for Infectious Diseases, Bethesda, MD.

30. Clark, C. S. and **A. T. Maurelli**. 2005. *Shigella flexneri* inhibits apoptosis in epithelial cells. 40<sup>th</sup> Joint Meeting of the U.S.-Japan Cholera and Other Bacterial Enteric Infections Panel, Boston, MA.
31. Zurawski, D. V., C. Mitsuhashi, and **A. T. Maurelli**. 2005. Characterization of OspF, a type III secreted effector protein of *Shigella flexneri*. 40<sup>th</sup> Joint Meeting of the U.S.-Japan Cholera and Other Bacterial Enteric Infections Panel, Boston, MA.
32. Mitsuhashi, C., D. V. Zurawski, and **A. T. Maurelli**. 2005. Characterization of OspC, a type III secreted effector protein of *Shigella flexneri*. 40<sup>th</sup> Joint Meeting of the U.S.-Japan Cholera and Other Bacterial Enteric Infections Panel, Boston, MA.
33. Binet, R., and **A. T. Maurelli**. 2006. CT354, a functional homolog of *Escherichia coli* ribosomal RNA dimethyltransferase KsgA, confers kasugamycin resistance to *Chlamydia trachomatis*. 11<sup>th</sup> International Symposium of Human Chlamydial Infections, Niagara-on-the-Lake, Ontario, CANADA.
34. Adams, N. E., A. J. McCoy, A. O. Hudson, T. Leustek, and **A. T. Maurelli**. 2006. Novel pathway for the synthesis of *meso*-diaminopimelate in *Chlamydia trachomatis* serovar L2. 11<sup>th</sup> International Symposium of Human Chlamydial Infections, Niagara-on-the-Lake, Ontario, CANADA.
35. Binet, R., and **A. T. Maurelli**. 2007. Frequency of development and associated physiological cost of macrolide resistance in *Chlamydia*. Third Biennial Meeting of the *Chlamydia* Basic Research Society, Louisville, KY.
36. Binet, R., R. E. Fernández, and **A. T. Maurelli**. 2007. Characterization of the S-adenosylmethionine transporter of *Chlamydia trachomatis* L2. Third Biennial Meeting of the *Chlamydia* Basic Research Society, Louisville, KY.
37. Prunier, A-L., R. Schuch, R. E. Fernández, K. L. Mumy, H. Kohler, B. A. McCormick, **A. T. Maurelli**. 2007. *nadA* and *nadB* of *S. flexneri* 5a are antivirulence loci responsible for the synthesis of quinolinate, a small molecule inhibitor of *Shigella* pathogenicity. 107<sup>th</sup> General Meeting of the American Society for Microbiology, Toronto, CANADA.
38. Badea, L., D. V. Zurawski, K. L. Mumy, J. A. Prentice, B. A. McCormick, **A. T. Maurelli**, and E. Hartland. 2007. NleE/OspZ is required for PMN transepithelial migration induced by enteropathogenic *Escherichia coli* and *Shigella flexneri*. EMBO-FEMS-Leopoldina Symposium, *E. coli* – Facets of a versatile pathogen, Kloster Banz, Bad Staffelstein, GERMANY.



39. Faherty, C. S., D. S. Merrell, and **A. T. Maurelli**. 2008. Apoptosis gene expression profiles during *Shigella flexneri* infection in epithelial cells. 108<sup>th</sup> General Meeting of the American Society for Microbiology, Boston, MA.
40. Binet, R., and **A. T. Maurelli**. 2008. Site-directed allelic exchange of *Chlamydia psittaci* using recombinant DNA introduced by electroporation. 108<sup>th</sup> General Meeting of the American Society for Microbiology, Boston, MA.
41. Zurawski, D. V., K. L. Mumy, C. S. Faherty, B. A. McCormick, and **A. T. Maurelli**. 2008. *Shigella flexneri* T3SS effectors OspB and OspF target the nucleus to down-regulate the host inflammatory response via interactions with Retinoblastoma protein. 108<sup>th</sup> General Meeting of the American Society for Microbiology, Boston, MA.
42. Faherty, C. S. and **A. T. Maurelli**. 2009. Identification of the anti-apoptosis factor in *Shigella flexneri*. Mid-Atlantic Microbial Pathogenesis Meeting, Wintergreen, VA.
43. Binet, R., and **A. T. Maurelli**. 2009. Transformation and isolation of allelic exchange mutants of *Chlamydia psittaci* using recombinant DNA introduced by electroporation. Fourth Biennial Meeting of the *Chlamydia* Basic Research Society, Little Rock, AR.
44. Fisher, D. J. and **A. T. Maurelli**. 2009. Assessing the role of the shikimate pathway in the metabolism of *Chlamydia trachomatis*. Fourth Biennial Meeting of the *Chlamydia* Basic Research Society, Little Rock, AR.
45. Ramaswamy, A. V. and **A. T. Maurelli**. 2009. Characterization of chlamydial lipoic acid ligases. Fourth Biennial Meeting of the *Chlamydia* Basic Research Society, Little Rock, AR.
46. Binet, R., **A. T. Maurelli**, A. K. Bowlin, and R. G. Rank. 2009. Impact of mutations conferring resistance to azithromycin on the virulence and fitness of *C. caviae* during ocular infection in guinea pigs. Fourth Biennial Meeting of the *Chlamydia* Basic Research Society, Little Rock, AR.
47. Binet, R., R. E. Fernández, and **A. T. Maurelli**. 2009. Identification and characterization of the *Chlamydia trachomatis* L2 *S*-adenosylmethionine transporter. Fourth Biennial Meeting of the *Chlamydia* Basic Research Society, Little Rock, AR.
48. Binet, R., A. K. Bowlin, **A. T. Maurelli**, and R. G. Rank. 2009. Impact of azithromycin resistant mutations on the virulence and fitness of *Chlamydia caviae* in guinea pigs. 49<sup>th</sup> Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA.
49. Fisher, D. J., N. E. Adams, and **A. T. Maurelli**. 2011. Phosphoproteomic analysis of *Chlamydia caviae* GPIC reveals developmental stage specific protein phosphorylation

- patterns. Fifth Biennial Meeting of the *Chlamydia* Basic Research Society, Redondo Beach, CA.
50. Adams, N .E., V. de Crécy-Lagard, D. Iwata-Reuyl, and **A. T. Maurelli**. 2013. CT327 is a bi-functional enzyme that acts as a GTP cyclohydrolase (FolE) and a phosphoribosyl anthranilate isomerase (TrpF) in *Chlamydia*. Sixth Biennial Meeting of the *Chlamydia* Basic Research Society, San Antonio, TX.
  51. Bavoil, P., R. Brotman, L. Forney, P. Gajer, A. Mahurkar, **A. Maurelli**, G. Myers, R. Rank, M. Terplan, O. White, D. Wilson, L. Yeruva, and J. Ravel. 2013. Eco-Pathogenomics of Chlamydial Reproductive Tract Infection (EPCRTI). FEMS2013 – 5<sup>th</sup> Congress of European Microbiologists, Leipzig, Germany.
  52. Khan, M. R., J. P. Celestin, J. D. Scheidell, M. B. De Rochars, M. N. Seraphin, M. M. Hobbs, **A. T. Maurelli**, J. Glenn Morris, L. B Cottler. 2014. Prevalence of STIs and evaluation of syndromic treatment approaches among pregnant women in semi-urban Haiti. 142<sup>nd</sup> Annual Meeting, American Public Health Association, New Orleans, LA.
  53. Gray, M. D., D. W. Lacher, S. Leonard, J. Abbott, S. Zhao, K. A. Lampel, E. Prothery, M. Gouali, F.-X. Weill, and **A. T. Maurelli**. 2015. Prevalence of Stx1a-producing *Shigella* Species Isolated from French Travelers Returning from the Caribbean: An Emerging Pathogen with International Implications. 49<sup>th</sup> U.S.-Japan Conference on Cholera and Other Enteric Bacterial Infections. Gainesville, FL.
  54. Liechti, G. W., E. Kuru, M. Packiam, Y-P. Hsu, Y. V. Brun, M. VanNieuwenhze, and **A. T. Maurelli**. 2015. Peptidoglycan biosynthesis and degradation is linked to cell division in pathogenic *Chlamydia*. Seventh Biennial Meeting of the *Chlamydia* Basic Research Society, New Orleans, LA.
  55. Yeruva, L., A. K. Bowlin, N. Spencer, **A. T. Maurelli**, and R. G. Rank. 2015. Ascending genital infection is dependent upon the ability of a chlamydial variant to elicit an inflammatory response. Seventh Biennial Meeting of the *Chlamydia* Basic Research Society, New Orleans, LA.
  56. Scheidell, J. D., M. R. Khan, and **A. T. Maurelli**. 2016. Sexually Transmitted Infection Prevalence and Associated Sexual Risk Behaviors Among Adult Haitian Men and Women. 2016 National STD Prevention Conference. Atlanta, GA.
  57. Eledge, M., **A. T. Maurelli**, K. Ramsey, R. R. Rank, and L. Yeruva. 2017. Chlamydial Variant Representation in an Infectious Population Dictates Disease Outcome. Eighth Biennial Meeting of the *Chlamydia* Basic Research Society, Charlotte, NC.
  58. Liechti, G., P. L. Rossi, M. Gray, N. E. Adams, and **A. T. Maurelli**. 2017. *Chlamydia trachomatis* *dapF* encodes a bifunctional enzyme possessing both D-glutamate racemase

and diaminopimelate epimerase activity. Eighth Biennial Meeting of the Chlamydia Basic Research Society, Charlotte, NC.

59. Weatherspoon-Griffin, N., M. Gray, and **A. T. Maurelli**. 2017. Localization and novel secretion of a Shiga toxin produced in recently emerged *Shigella flexneri* isolates. 61<sup>st</sup> Annual Wind River Conference on Prokaryotic Biology. Estes Park, CO.
60. Singh, R., G W. Liechti, P. L.Rossi, M. D. Gray, N. E. Adams, and **A. T. Maurelli**. 2018. Identification and Biochemical Characterization of a Dual Functionality Enzyme Involved in Penta-peptide Synthesis of Peptidoglycan in *Chlamydia trachomatis*. ASM Microbe 2018. Atlanta, GA.
61. Weatherspoon-Griffin, N., M. Gray, and **A. T. Maurelli**. 2018. Investigating the production and release of Shiga toxin from recently emerged *Shigella flexneri* isolates. 62<sup>st</sup> Annual Wind River Conference on Prokaryotic Biology. Estes Park, CO
62. Singh, R., and **A. T. Maurelli**. 2019. The Putative Oligopeptide Transporter of *Chlamydia trachomatis* Siphons Oligopeptides from the Host While Recycling Peptidoglycan Fragments to Assist Peptidoglycan Synthesis. Ninth Biennial Meeting of the *Chlamydia* Basic Research Society, Seattle, WA
63. Ranjit, D.K. and **A. T. Maurelli**. 2019. Chlamydial MreB directs cell division and peptidoglycan synthesis in *Escherichia coli* in the absence of MreB and FtsZ. Ninth Biennial Meeting of the Chlamydia Basic Research Society, Seattle, WA
64. Slade, J.A., G.W. Liechti, R. Singh, and **A. T. Maurelli**. 2019. Iron deprivation inhibits replication of *Chlamydia trachomatis* by preventing isoprenoid synthesis. Ninth Biennial Meeting of the Chlamydia Basic Research Society, Seattle, WA

## BOOK CHAPTERS

1. Sansonetti, P. J., T. L. Hale, **A. T. Maurelli**, H. d'Hauteville, and S. B. Formal. 1984. Genetic analysis of virulence on *Shigellae* and enteroinvasive *Escherichia coli*, p. 53-61. In A. Sanna and G. Morace (ed.), *New Horizons in Microbiology*. Elsevier Science Publishers, Amsterdam.
2. Sansonetti, P. J., B. Baudry, P. Clerc, **A. T. Maurelli**, X. Nassif, and A. Ryter. 1987. Molecular mechanisms of pathogenicity in *Shigella flexneri*, p. 109-113. In R. Rott and W. Goebel (ed.), *Molecular Basis of Viral and Microbial Pathogenesis*. Springer-Verlag, Berlin.
3. Curtiss, R. III, **A. T. Maurelli**, and P. A. Gulig. 1988. Genetic analysis of pathogenesis of enteric bacteria, p. 69-84. In P. Owen and T. J. Foster (ed.), *Immunochemical and Molecular Genetic Analysis of Bacterial Pathogens*. Elsevier Science Publishers, Amsterdam.
4. Sansonetti, P. J., B. Baudry, P. Clerc, **A. T. Maurelli**, X. Nassif, and A. Ryter. 1988. Comparative strategies of infection by enteroinvasive bacteria, p. 133-147. In W. Donachie, E. Griffiths, and J. Stephen (ed.), *Bacterial Infections of Respiratory and Gastrointestinal Mucosae*. IRL Press, Washington, DC.
5. **Maurelli, A. T.** and K. A. Lampel. 1994. *Shigella*, p. 319-343. In Y. H. Hui, J. R. Gorman, K. D. Murrell, and D. O. Cliver (ed.), *Foodborne Disease Handbook: Vol. I*. Marcel Dekker Publishers, Inc., New York, NY.
6. O'Connell, C. M. C., R. C. Sandlin, and **A. T. Maurelli**. 1995. Signal Transduction and Virulence Gene Regulation in *Shigella* spp.: Temperature and (maybe) a whole lot more, p. 111-127. In R. Rappuoli (ed.), *Signal Transduction and Bacterial Virulence*. R. G. Landes Company, Austin, TX.
7. **Maurelli, A. T.**, and K. A. Lampel. 1997. *Shigella* species, p. 216-227. In M. P. Doyle, L. R. Beuchat, and T. J. Montville (ed.), *Food Microbiology: Fundamentals and Frontiers*. American Society for Microbiology Press, Washington, DC.
8. Schuch, R., and **A. T. Maurelli**. 2000. The type III secretion pathway: dictating the outcome of bacterial-host interactions, p. 203-223. In K. A. Brogden, J. A. Roth, T. B. Stanton, C. A. Bolin, F. C. Minion, and M. J. Wannemuehler (ed.), *Virulence Mechanisms of Bacterial Pathogens* (3<sup>rd</sup> edition). American Society for Microbiology Press, Washington, DC.

9. **Maurelli, A. T.**, and K. A. Lampel. 2001. *Shigella*, p. 323-343. In Y. H. Hui, M. D. Pierson, and J. R. Gorman, (ed.), Foodborne Disease Handbook: Vol. I. Second edition. Marcel Dekker, Inc., New York, NY.
10. Lampel, K. A., and **A. T. Maurelli**. 2001. *Shigella* species, p. 247-261. In M. P. Doyle, L. R. Beuchat, and T. J. Montville (ed.), Food Microbiology: Fundamentals and Frontiers (2<sup>nd</sup> edition). American Society for Microbiology Press, Washington, DC.
11. Lampel, K. A., and **A. T. Maurelli**. 2002. *Shigella*, p. 69-77. In D. O. Cliver, and H. P. Riemann (ed.), Foodborne Diseases (2<sup>nd</sup> edition). Academic Press, London, England.
12. Day, W. A., and **A. T. Maurelli**. 2002. *Shigella* and enteroinvasive *Escherichia coli*: Paradigms for pathogen evolution and host-parasite interactions, p. 209-237. In M. Donnenberg (ed.), *Escherichia coli*: Virulence Mechanisms of a Versatile Pathogen. Academic Press, London, England.
13. Lampel, K. A., and **A. T. Maurelli**. 2003. *Shigella* species, p. 167-180. In M. D. Miliotis and J. W. Bier (ed.), International Handbook of Foodborne Pathogens. Marcel Dekker, Inc., New York, NY.
14. Strockbine, N. A., and **A. T. Maurelli**. 2005. *Shigella*, p. 811-823. In G. M. Garrity (ed.), Bergey's Manual of Systematic Bacteriology, 2<sup>nd</sup> edition, Volume 2: The Proteobacteria Part B: The Gammaproteobacteria. Springer, NY.
15. Day, W. A., and **A. T. Maurelli**. 2006. Black Holes and Anti-virulence Genes: Selection for Gene Loss as Part of the Evolution of Bacterial Pathogens, p. 109-122. In H. S. Seifert and V. DiRita (ed.), Evolution of Microbial Pathogens. American Society for Microbiology Press, Washington, DC.
16. **Maurelli, A. T.** 2006. Evolution of Bacterial Pathogens, p. 31-56. In B.A. McCormick (ed.), Bacterial-Epithelial Cell Cross-Talk: Molecular Mechanisms in Pathogenesis. Cambridge University Press, Cambridge, UK.
17. Lampel, K. A., and **A. T. Maurelli**. 2007. *Shigella* species, p. 323-341. In M. P. Doyle and L. R. Beuchat (ed.), Food Microbiology: Fundamentals and Frontiers (3<sup>rd</sup> edition). American Society for Microbiology Press, Washington, DC.
18. Jeffrey, B. M., **A. T. Maurelli**, and D. D. Rockey. 2012. Chlamydial Genetics: Decades of Efforts, Very Recent Successes, p. 334-351. In M. Tan and P. M. Bavoil (ed.), Intracellular Pathogens I: Chlamydiales. American Society for Microbiology Press, Washington, DC.
19. **Maurelli, A. T.** 2013. *Shigella* and enteroinvasive *Escherichia coli*: Paradigms for pathogen evolution and host-parasite interactions, p. 215-245. In M. Donnenberg (ed.),

*Escherichia coli*: Virulence Mechanisms of a Versatile Pathogen (2<sup>nd</sup> edition). Academic Press, London, England.

20. Bliven, K. A. and **Maurelli, A. T.** 2015. *Shigella* and Antivirulence: The Dark Side of Bacterial Evolution, p. 49-63. In W. D. Picking and W. L. Picking (ed.), *Shigella: Molecular and Cellular Biology*. Caister Academic Press.
21. Lampel, K. A., S. B. Formal, and **A. T. Maurelli.** 2018. A Brief History of *Shigella*. In J. B. Kaper (ed.), *EcoSal Plus*, American Society for Microbiology Press, Washington, DC, doi:10.1128/ecosalplus.ESP-0006-2017.
22. Liechti, G. W., P. H. Viollier, G. Greub, and **A. T. Maurelli.** 2019. *Chlamydia* Cell Division and Differentiation. In C. Suetterlin, H. Hegemann, and M. Tan (eds.), *Chlamydia*. (in press)

## INVITED REVIEWS

1. **Maurelli, A. T.**, and P. J. Sansonetti. 1988. Genetic determinants of *Shigella* pathogenicity. *Annu. Rev. Microbiol.* **42**:127-150. PMID: 3059992
2. **Maurelli, A. T.** 1989. Temperature regulation of virulence genes in pathogenic bacteria: a general strategy for human pathogens? *Microbial Pathogen.* **7**:1-10. PMID: 2682128
3. **Maurelli, A. T.** 1989. Regulation of virulence genes in *Shigella*. *Mol. Biol. Med.* **6**:425-432. PMID: 2696859
4. **Maurelli, A. T.**, A. E. Hromockyj, and M. L. Bernardini. 1992. Environmental regulation of *Shigella* virulence. *Curr. Top. Microbiol. Immunol.* **180**:95-116. PMID: 1324135
5. **Maurelli, A. T.** 1992. *Shigella* inside and out: Lifestyles of the invasive and dysenteric. *ASM News* **11**:603-608.
6. **Maurelli, A. T.** 1994. Virulence protein export systems in *Salmonella* and *Shigella*: A new family or lost relatives? *Trends Cell Biol.* **4**:240-242. PMID: 14731663
7. McCoy, A. J., and **A. T. Maurelli.** 2006. Building the invisible wall: Updating the Chlamydial peptidoglycan anomaly. *Trends Microbiol.* **14**:70-77. PMID: 16413190
8. **Maurelli, A. T.** 2007. Black holes, anti-virulence genes and gene inactivation in the evolution of bacterial pathogens. *FEMS Microbiol. Lett.* **267**:1-8. PMID: 17233672
9. **Maurelli, A. T.**, and A.-L. Prunier. 2007. Mutations, black holes and anti-virulence genes: A new paradigm for bacterial pathogen evolution. *Microbe* **2**:388-394.
10. Faherty, C. S. and **A. T. Maurelli.** 2008. Staying alive: Bacterial inhibition of apoptosis during infection. *Trends Microbiol.* **16**:173-180. PMCID: PMC2746948
11. Bliven, K. A., and **A. T. Maurelli.** 2012. Antivirulence Genes: Insights into pathogen evolution through gene loss. *Infect. Immun.* **80**:4061-4070. PMCID:PMC3497401
12. Bliven, K. A. and **Maurelli, A. T.** 2016. Evolution of Bacterial Pathogens within the Human Host. *Microbiol. Spectrum* **4**:VMBF-0017-2015 .

## PEER-REVIEWED PUBLICATIONS

1. Johnson, B. J., U. N. Kucich, and **A. T. Maurelli**. 1976. Studies on the antigenic determinants of the Thy 1.2. alloantigen as expressed by the murine lymphoblastoid line S-49.1 TB.2.3. *J. Immunol.* **116**:1669-1672.
2. Shaw, D. R., **A. T. Maurelli**, J. D. Goguen, S. C. Straley, and R. Curtiss III. 1983. Use of UV-irradiated bacteriophage T6 to kill extracellular bacteria in tissue culture infectivity assays. *J. Immunol. Methods* **56**:75-83.
3. **Maurelli, A. T.**, B. Blackmon, and R. Curtiss III. 1984. Temperature-dependent expression of virulence genes in *Shigella* species. *Infect. Immun.* **43**:195-201. PMCID: PMC263409
4. **Maurelli, A. T.**, B. Blackmon, and R. Curtiss III. 1984. Loss of pigmentation in *Shigella flexneri* 2a is correlated with loss of virulence and virulence-associated plasmid. *Infect. Immun.* **43**:397-401. PMCID: PMC263440
5. **Maurelli, A. T.**, and R. Curtiss III. 1984. Bacteriophage Mu *d1* (Ap<sup>f</sup> *lac*) generates *vir-lac* operon fusions in *Shigella flexneri* 2a. *Infect. Immun.* **45**:642-648. PMCID: PMC263343
6. **Maurelli, A. T.**, B. Baudry, H. d'Hauteville, T. L. Hale, and P. J. Sansonetti. 1985. Cloning of virulence plasmid DNA sequences involved in invasion of HeLa cells by *Shigella flexneri*. *Infect. Immun.* **49**:164-171. PMCID: PMC262074
7. Sansonetti, P. J., A. Ryter, P. Clerc, **A. T. Maurelli**, and J. Mounier. 1985. Multiplication of *Shigella flexneri* within HeLa cells: Lysis of the phagocytic vacuole and plasmid mediated contact hemolysis. *Infect. Immun.* **51**:461-469. PMCID: PMC262354
8. Baudry, B., **A. T. Maurelli**, P. Clerc, J. C. Sadoff, and P. J. Sansonetti. 1987. Localization of plasmid loci necessary for the entry of *Shigella flexneri* into HeLa cells, and characterization of one locus encoding four immunogenic polypeptides. *J. Gen. Microbiol.* **133**:3403-3413. PMID: 2846749
9. **Maurelli, A. T.**, and P. J. Sansonetti. 1988. Identification of a chromosomal gene controlling temperature-regulated expression of *Shigella* virulence. *Proc. Natl. Acad. Sci. U.S.A.* **85**:2820-2824. PMCID: PMC280091
10. Hromockyj, A. E., and **A. T. Maurelli**. 1989. Identification of an *Escherichia coli* gene homologous to *virR*, a regulator of *Shigella* virulence. *J. Bacteriol.* **171**:2879-2881. PMCID: PMC209979



11. Hromockyj, A. E., and **A. T. Maurelli**. 1989. Identification of *Shigella* invasion genes by isolation of temperature regulated *inv::lacZ* operon fusions. *Infect. Immun.* **57**: 2963-2970. PMID: PMC260756
12. Andrews, G. P., A. E. Hromockyj, C. Coker, and **A. T. Maurelli**. 1991. Two novel virulence loci in *Shigella flexneri* 2a, *mxiA* and *mxiB*, facilitate excretion of invasion plasmid antigens. *Infect. Immun.* **59**:1997-2005. PMID: PMC257956
13. Hromockyj, A. E., S. C. Tucker, and **A. T. Maurelli**. 1992. Temperature regulation of *Shigella* virulence: Identification of the repressor gene *virR*, an analogue of *hns*, and partial complementation by tyrosyl transfer RNA (tRNA<sub>1<sup>tyr</sup></sub>). *Mol. Microbiol.* **6**:2113-2124. PMID: 1406252
14. Andrews, G. P., and **A. T. Maurelli**. 1992. *mxiA* of *Shigella flexneri* 2a, which facilitates export of invasion plasmid antigens, encodes a homolog of the low calcium response protein, LcrD, of *Yersinia pestis*. *Infect. Immun.* **60**:3287-3295. PMID: PMC257313
15. Sandlin, R. C., K. A. Lampel, S. P. Keasler, M. B. Goldberg, A. L. Stolzer, and **A. T. Maurelli**. 1995. Avirulence of rough mutants of *Shigella flexneri*: Requirement of O-antigen for correct unipolar localization of IcsA in bacterial outer membrane. *Infect. Immun.* **63**:229-237. PMID: PMC172982
16. Sandlin, R. C., M. B. Goldberg, and **A. T. Maurelli**. 1996. Effect of O side chain length and composition on the virulence of *Shigella flexneri*. *Mol. Microbiol.* **22**:63-73. PMID: 8899709
17. Schuch, R., and **A. T. Maurelli**. 1997. Virulence plasmid instability in *Shigella flexneri* 2a is induced by virulence gene expression. *Infect. Immun.* **65**:3686-3692. PMID: PMC175525
18. **Maurelli, A. T.**, R. E. Fernández, C. A. Bloch, C. K. Rode, and A. Fasano. 1998. "Black holes" and bacterial pathogenicity: A large genomic deletion that enhances the virulence of *Shigella* spp. and enteroinvasive *Escherichia coli*. *Proc. Natl. Acad. Sci. USA* **95**:3943-3948. PMID: PMC19942
19. McCormick, B. A., A. M. Siber, and **A. T. Maurelli**. 1998. Requirement of the *Shigella flexneri* virulence plasmid in the ability to induce trafficking of neutrophils across polarized monolayers of the intestinal epithelium. *Infect. Immun.* **66**:4237-4243. PMID: PMC108511
20. **Maurelli, A. T.**, P. R. Routh, R. C. Dilman, M. D. Ficken, D. M. Weinstock, G. W. Almond, and P. E. Orndorff. 1998. *Shigella* infection as observed in the experimentally

- inoculated domestic pig, *Sus scrofa domestica*. Microbial Pathogen. **25**:189-196. PMID: 9817822
21. Sandlin, R. C., and **A. T. Maurelli**. 1999. Establishment of unipolar localization of IcsA in *Shigella flexneri* 2a is not dependent on virulence plasmid determinants. Infect. Immun. **67**:350-356. PMID: PMC96317
  22. Schuch, R., and **A. T. Maurelli**. 1999. The Mxi-Spa type III secretory pathway of *Shigella flexneri* requires an outer membrane lipoprotein, MxiM, for invasion translocation. Infect. Immun. **67**:1982-1991. PMID: PMC96556
  23. McCormick, B. A., M. I. Fernandez, A. M. Siber, and **A. T. Maurelli**. 1999. Inhibition of *Shigella flexneri*-induced transepithelial migration of polymorphonuclear leukocytes by cadaverine. Cell. Microbiol. **1**:143-155. PMID: 11207548
  24. Schuch, R., R. C. Sandlin, and **A. T. Maurelli**. 1999. A system for identifying post-invasion functions of invasion genes: requirements for the Mxi-Spa type III secretion pathway of *Shigella flexneri* in intercellular dissemination. Mol. Microbiol. **34**:675-689. PMID: 10564508
  25. Day, Jr., W. A., and **A. T. Maurelli**. 2001. *Shigella flexneri* LuxS quorum-sensing system modulates *virB* expression but is not essential for virulence. Infect. Immun. **69**:15-23. PMID: PMC97850
  26. Schuch, R., and **A. T. Maurelli**. 2001. Spa33, a cell surface-associated subunit of the Mxi-Spa type III secretory pathway of *Shigella flexneri*, regulates Ipa protein traffic. Infect. Immun. **69**:2180-2189. PMID: PMC98145
  27. Fernandez, I. M., M. Silva, R. Schuch, W. A. Walker, A. M. Siber, **A. T. Maurelli**, and B. A. McCormick. 2001. Cadaverine prevents the escape of *Shigella flexneri* from the phagolysosome: A connection between bacterial dissemination and neutrophil transepithelial signaling. J. Infect. Dis. **184**:743-753. PMID: 11517436
  28. Day, Jr., W. A., R. E. Fernández, and **A. T. Maurelli**. 2001. Pathoadaptive mutations that enhance virulence: Genetic organization of the *cadA* regions of *Shigella* spp. Infect. Immun. **69**:7471-7480. PMID: PMC98836
  29. Schuch, R., and **A. T. Maurelli**. 2001. MxiM and MxiJ, base elements of the Mxi-Spa type III secretion system of *Shigella*, interact with and stabilize the MxiD secretin in the cell envelope. J. Bacteriol. **183**:6991-6198. PMID: PMC95545
  30. Kane, C. D., R. Schuch, W. A. Day, Jr., and **A. T. Maurelli**. 2002. MxiE regulates intracellular expression of factors secreted by the *Shigella flexneri* 2a type III secretion system. J. Bacteriol. **184**:4409-4419. PMID: PMC135254

31. Kohler, H., S. P. Rodrigues, **A. T. Maurelli**, and B. A. McCormick. 2002. Inhibition of *Salmonella typhimurium* enteropathogenicity by piperidine, a metabolite of the polyamine cadaverine. *J. Infect. Dis.* **186**:1122-1130. PMID: 12355363
32. McCoy, A. J., R. C. Sandlin, and **A. T. Maurelli**. 2003. In vitro and in vivo functional activity of *Chlamydia* MurA, a UDP-*N*-acetylglucosamine enolpyruvyl transferase involved in peptidoglycan synthesis and fosfomycin resistance. *J. Bacteriol.* **185**:1218-1228. PMID: PMC142877
33. Verma, A., and **A. T. Maurelli**. 2003. Identification of two eukaryote-like serine/threonine kinases encoded by *Chlamydia trachomatis* serovar L2 and characterization of interacting partners of Pkn1. *Infect. Immun.* **71**:5772-5784. PMID: PMC201055
34. Honma, Y., R. E. Fernández, and **A. T. Maurelli**. 2004. A DNA adenine methylase mutant of *Shigella flexneri* shows no significant attenuation of virulence. *Microbiology* **150**:1073-1078. PMID: 15073316
35. Lario, P. I., R. A. Pfuetzner, E. A. Frey, L. Creagh, C. Haynes, **A. T. Maurelli**, and N. C. J. Strynadka. 2005. Structure and biochemical analysis of a secretin pilot protein. *EMBO J.* **24**:1111-1121. PMID: PMC556411
36. McCoy, A. J., and **A. T. Maurelli**. 2005. Characterization of *Chlamydia* MurC-DdlA, a fusion protein exhibiting D-alanyl-D-alanine ligase activity involved in peptidoglycan synthesis and D-cycloserine sensitivity. *Mol. Microbiol.* **57**:41-52. PMID: 15948948
37. Binet, R., and **A. T. Maurelli**. 2005. Frequency of spontaneous mutations that confer antibiotic resistance in *Chlamydia* spp. *Antimicrob. Agents Chemother.* **49**:2865-2873. PMID: PMC1168699
38. Binet, R., and **A. T. Maurelli**. 2005. Fitness cost due to mutations in the 16S rRNA associated with spectinomycin resistance in *Chlamydia psittaci* 6BC. *Antimicrob. Agents Chemother.* **49**:4455-4464. PMID: PMC1280162
39. Zurawski, D. V., C. Mitsuhashi, K. L. Mummy, B. A. McCormick, and **A. T. Maurelli**. 2006. OspF and OspC1 are *Shigella flexneri* type III secretion system effectors that are required for post-invasion aspects of virulence. *Infect. Immun.* **74**:5964-5976. PMID: PMC1594884
40. McCoy, A. J., N. E. Adams, A. O. Hudson, C. Gilvarg, T. Leustek, and **A. T. Maurelli**. 2006. L,L-diaminopimelate aminotransferase, a trans-kingdom enzyme shared by *Chlamydia* and plants for synthesis of diaminopimelate/lysine. *Proc. Natl. Acad. Sci. USA* **103**:17909-17914. PMID: PMC1693846

41. Clark, C. S. and **A. T. Maurelli**. 2007. *Shigella flexneri* inhibits staurosporine-induced apoptosis in epithelial cells despite inducing cell death in macrophages. *Infect. Immun.* **75**:2531-2539. PMID: PMC1865761
42. Prunier, A.-L., R. Schuch, R. E. Fernández, K. L. Mumy, H. Kohler, B. A. McCormick, and **A. T. Maurelli**. 2007. *nadA* and *nadB* of *Shigella flexneri* 5a are anti-virulence loci responsible for the synthesis of quinolinate, a small molecule inhibitor of *Shigella* pathogenicity. *Microbiol.* **153**:2363-2372. PMID: 17600080
43. Prunier, A.-L., R. Schuch, R. E. Fernández, and **A. T. Maurelli**. 2007. Genetic structure of the *nadA* and *nadB* anti-virulence genes in *Shigella* spp. *J. Bacteriol.* **189**:6482-6486. PMID: PMC1951923
44. Binet, R., and **A. T. Maurelli**. 2007. Frequency of development and associated physiological cost of azithromycin resistance in *Chlamydia psittaci* 6BC and *C. trachomatis* L2. *Antimicrob. Agents Chemother.* **51**:4267-4275. PMID: PMC2167982
45. Zurawski, D. V., K. L. Mumy, L. Badea, J. A. Prentice, E. L. Hartland, B. A. McCormick, and **A. T. Maurelli**. 2008. The NleE/OspZ family of effector proteins is required for polymorphonuclear transepithelial migration, a characteristic shared by enteropathogenic *Escherichia coli* and *Shigella flexneri* infections. *Infect. Immun.* **76**:369-379. PMID: PMC2223660
46. Zurawski, D. V., K. L. Mumy, C. S. Faherty, B. A. McCormick, and **A. T. Maurelli**. 2009. *Shigella flexneri* type III secretion system effectors OspB and OspF target the nucleus to down-regulate the host inflammatory response via interactions with retinoblastoma protein. *Mol. Microbiol.* **71**:350-368. PMID: PMC2783611
47. Binet, R., and **A. T. Maurelli**. 2009. Transformation and isolation of allelic exchange mutants of *Chlamydia psittaci* using recombinant DNA introduced by electroporation. *Proc. Natl. Acad. Sci. USA* **106**:292-297. PMID: PMC2629194
48. Faherty, C. S. and **A. T. Maurelli**. 2009. Spa15 of *Shigella flexneri* is secreted through the type-III secretion system and prevents staurosporine-induced apoptosis. *Infect. Immun.* **77**:5281-5290. PMID: PMC2786474
49. Binet, R., and **A. T. Maurelli**. 2009. The chlamydial functional homolog of KsgA confers kasugamycin sensitivity to *Chlamydia trachomatis* and impacts bacterial fitness. *BMC Microbiol.* **9**:279. PMID: PMC2807437
50. Binet, R., A. K. Bowlin, **A. T. Maurelli** and R. G. Rank. 2010. Impact of azithromycin resistance mutations on the virulence and fitness of *Chlamydia caviae* in guinea pigs. *Antimicrob. Agents Chemother.* **54**:1094-1101. PMID: PMC2826001

51. Faherty, C. S., D. S. Merrell, C. Semino-Mora, A. Dubois, A. V. Ramaswamy, and **A. T. Maurelli**. 2010. Microarray analysis of *Shigella flexneri*-infected epithelial cells identifies host factors important for apoptosis inhibition. *BMC Genomics* **11**:272. PMID: PMC2996966
52. Ramaswamy, A. V. and **A. T. Maurelli**. 2010. *Chlamydia trachomatis* serovar L2 can utilize exogenous lipoic acid through the action of the lipoic acid ligase, LplA1. *J. Bacteriol.* **192**:6172-6181. PMID: PMC2981205
53. Binet, R., R. E. Fernández, D. J. Fisher, and **A. T. Maurelli**. 2011. Identification and characterization of the *Chlamydia trachomatis* L2 S-adenosyl methionine transporter. *mBio* **2**:e00051-11. PMID: PMC3104491
54. Fisher, D. J., R. E. Fernández, N. E. Adams, and **A. T. Maurelli**. 2012. Uptake of biotin by *Chlamydia* spp. through the use of a bacterial transporter (BioY) and a host-cell transporter (SMVT). *PLoS ONE* **7**:e46052. PMID: PMC3459881
55. Rank, R. G., A. K. Bowlin, K. I. Tormanen, Y. Wang, and **A. T. Maurelli**. 2012. Effect of inflammatory response on *in vivo* competition between two chlamydial variants in the guinea pig model of inclusion conjunctivitis. *Infect. Immun.* **80**:612-619. PMID: PMC3264299
56. Bliven, K. A., D. J. Fisher, and **A. T. Maurelli**. 2012. Characterization of the activity and expression of arginine decarboxylase in human and animal *Chlamydia* pathogens. *FEMS Immunol. Med. Microbiol.* **337**:140-146. PMID: PMC3510315
57. Fisher, D. J., R.E. Fernández, and **A. T. Maurelli**. 2013. *Chlamydia trachomatis* transports NAD via the Npt1Ct ATP/ADP translocase. *J. Bacteriol.* **195**:3381-3386. PMID: PMC3719547
58. Liechti, G. W., E. Kuru, E. Hall, A. Kalinda, Y. V. Brun, M. VanNieuwenhze, and **A. T. Maurelli**. 2014. A new metabolic cell wall labeling method reveals peptidoglycan in *Chlamydia trachomatis*. *Nature* **506**:507-510. PMID: PMC3997218
59. Emanuele, A. A., N. E. Adams, Y-C. Chen, **A. T. Maurelli**, and G. A. Garcia. 2014. Potential novel antibiotics from HTS targeting the virulence-regulating transcription factor, VirF, from *Shigella flexneri*. *J. Antibiot.* **67**:379-386. PMID: PMC4050983
60. Yeruva V., G. S. A. Myers, N. Spencer, H. H. Creasy, N. E. Adams, **A. T. Maurelli**, G. R. McChesney, M. A. Cleves, J. Ravel, A. Bowlin, and R. G. Rank. 2014. Early microRNA expression profile as a prognostic biomarker for the development of pelvic inflammatory disease in a mouse model of chlamydial genital infection. *mBio* **5**:e01241-14. PMID: PMC4073489

61. Adams, N. E., J. J. Thiaville, J. Proestos, A. L. Juárez-Vázquez, A. J. McCoy, F. Barona-Gómez, D. Iwata-Reuyl, V. de Crécy-Lagard, and **A. T. Maurelli**. 2014. Promiscuous and adaptable enzymes fill “holes” in the tetrahydrofolate pathway in *Chlamydia* species. *mBio* **5**:e01378-14. PMID: PMC4161248
62. Gray, M. D., K. A. Lampel, R. E. Fernández, A. Melton-Celsa, N. A. Strockbine and **A. T. Maurelli**. 2014. Clinical isolates of Shiga toxin 1a-producing *Shigella flexneri* with an epidemiological link to Hispaniola. *Emerg. Infect. Dis.* **20**:1669-1677. PMID: PMC4193171
63. Gray, M. D., D. W. Lacher, S. R. Leonard, J. Abbott, S. Zhao, K. A. Lampel, E. Prothery, M. Gouali, F.-X. Weill, and **A. T. Maurelli**. 2015. Prevalence of Stx1a-producing *Shigella* species isolated from French travelers returning from the Caribbean: An emerging pathogen with international implications. *Clin. Microbiol. Infect.* **21**:765.e9-765.e14. PMID: PMC4497849
64. Yeruva, L., A. K. Bowlin, N. Spencer, **A. T. Maurelli**, and R. G. Rank. 2015. Chlamydial variants differ in their ability to ascend the genital tract in the guinea pig model of chlamydial genital infection. *Infect. Immun.* **83**:3176-3183. PMID: PMC4496626
65. Fisher, D. J., N. E. Adams, and **A. T. Maurelli**. 2015. Phosphoproteomic analysis of the *Chlamydia caviae* elementary body and reticulate body forms. *Microbiology* **161**:1648-1658. PMID: PMC4681041
66. Packiam, M., B. Weinrick, W. R. Jacobs, Jr., and **A. T. Maurelli**. 2015. Structural characterization of mucopeptides from *Chlamydia trachomatis* peptidoglycan by mass spectrometry resolves “chlamydial anomaly”. *Proc. Natl. Acad. Sci. USA* **112**:11660-11665. PMID: PMC4577195
67. Gray, M. D., S. R. Leonard, D. W. Lacher, K. A. Lampel, M. T. Alam, J. G. Morris, Jr, A. Ali, P. T. LaBreck, and **A. T. Maurelli**. 2015. Stx-producing *Shigella* species from patients in Haiti: an emerging pathogen with the potential for global spread. *Open Forum Infect. Dis.* **2**:ofv134. PMID: PMC4606844
68. Liechti, G. W., E. Kuru, M. Packiam, Y.-P. Hsu, S. Tekkam, E. Hall, J. T. Rittichier, M. VanNieuwenhze, Y. V. Brun, and **A. T. Maurelli**. 2016. Pathogenic *Chlamydia* lack a ‘classical’ sacculus but synthesize a narrow, midcell peptidoglycan ring, regulated by MreB, for cell division. *PLoS Pathog.* **12**:e1005590. PMID: PMC4856321
69. Hazen, T. H., S. R. Leonard, K. A. Lampel, D. W. Lacher, **A. T. Maurelli**, and D. A. Rasko. 2016. Investigating the relatedness of enteroinvasive *Escherichia coli* to other *E. coli* and *Shigella* using comparative genomics. *Infect. Immun.* **84**:2362-2371. PMID: PMC4962626

70. Liechti, G. W., R. Singh, P. L. Rossi, M. D. Gray, N. E. Adams, and **A. T. Maurelli**. 2018. *Chlamydia trachomatis* *dapF* encodes a bifunctional enzyme capable of both D-glutamate racemase and diaminopimelate epimerase activities. *mBio* **9**:e00202. PMID: PMC5885031
71. Fogolari, M., C. Mavian, S. Angeletti, M. Salemi, K. A. Lampel, and **A. T. Maurelli**. 2018. Distribution and characterization of Shiga toxin converting temperate phages carried by *Shigella flexneri* in Hispaniola. *Infect. Genet. Evol.* **65**:321-328. PMID: PMC6260934
72. Slade, J. A., M. Brockett, R. Singh, G. W. Liechti, and **A. T. Maurelli**. 2019. Fosmidomycin, an inhibitor of isoprenoid synthesis, induces persistence in *Chlamydia* by inhibiting peptidoglycan assembly. *PLoS Pathog.* **15**: e1008078. PMID: PMC6818789
73. Ranjit, D.K., G. W. Liechti, and **A. T. Maurelli**. 2019. Chlamydial MreB directs cell division and peptidoglycan synthesis in *Escherichia coli* in the absence of FtsZ. *mBio* (manuscript in revision).
74. Singh, R., G. W. Liechti, J.A. Slade, and **A. T. Maurelli**. 2019. *Chlamydia trachomatis* oligopeptide transporter performs dual functions of oligopeptide transport and peptidoglycan recycling (manuscript in revision).
75. Singh, R., J. A. Slade, and **A. T. Maurelli**. 2019. Competing substrates for the dual functional diaminopimelic acid epimerase/glutamate racemase modulate peptidoglycan synthesis in *Chlamydia trachomatis* (manuscript in preparation).
76. Bliven, K. A., M. Rosselin, Y. Anriany, A.L. Prunier, D. V. Zurawski, and **A. T. Maurelli**. 2018. The Smip: a novel tool for studying the contribution of *Shigella* T3SS genes to virulence (manuscript in preparation).
77. Rosselin, M., and **A. T. Maurelli**. 2018. Pathoadaptive inactivation of the *tna* operon in *Shigella* spp. prevents attenuation of *Shigella* virulence by the small molecule inhibitor indole (manuscript in preparation).
78. Joseph, S., M. Rosselin, and **A. T. Maurelli**. 2018. OspC1 functions as an anti-apoptotic factor of *Shigella flexneri* (manuscript in preparation).