CURRICULUM VITAE

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

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# BIOGRAPHICAL INFORMATION

**TITLE:** Professor and Associate Chair 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

**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/

**ORCID iD:** 0000-0002-4788-6166

**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

 Emerging Pathogens Institute

 University of Florida

 Gainesville, Florida

April 2016 – present Affiliate Professor

 Department of Molecular Genetics and Microbiology

 College of Medicine

 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

October 2021 – present Affiliate and Graduate Faculty status

 Center for Latin American Studies

 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 Follow 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

Dean’s Citation Paper Award for "Fosmidomycin, an inhibitor of isoprenoid synthesis, induces persistence in *Chlamydia* by inhibiting peptidoglycan assembly" PLoS Pathog. 2019. **15:**e1008078

University of Florida Faculty Enhancement Opportunity award, April 2023

**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

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.
* Characterization of transporters of essestial metabolites for chlamydial growth
* Pathway “hole filling” – identification and characterization of genes involved in critical metabolic processes of *Chlamydia* intracellular growth

Emergency COVID-19 response

* Establishment, staffing, and supervision of a research testing lab for SARS-CoV-2
* Surveillance for SARS-CoV-2 in school children and coping and resiliency to pandemic
* Surveillance for SARS-CoV-2 in wastewater

Wastewater projects

* Surveillance for viral and bacterial pathogens in wastewater
* Surveillance for drug metabolites in wastewater
* Development and validation of tools for application of wastewater surveillance data for public health interventions

# TEACHING – Uniformed Services University (USU)

# 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 Mitsuhata, 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 – 2016

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 – 2016

**DEPARMENTAL 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 – UNIVERSITY OF FLORIDA**

**GRADUATE STUDENTS TRAINED**

|  |  |
| --- | --- |
| Louise Ball, Interdisciplinary Program, Ph.D. candidate, 2017-2023 | Andrew Rainey, EGH, Ph.D. candidate, 2019-present |

**GRADUATE STUDENT THESIS ADVISORY COMMITTEES – Masters**

|  |  |
| --- | --- |
| Tyler Kury, MPH, 2016 | Brent L. Moore, MPH, 2019 |
| John Vann, MPH, 2016-2018 | Morgan Palmer, MPH, 2019- 2021 |
| Molly Falcone, MPH, 2017-2019 | Katherine Buschang, MHS, 2020- 2022 |
| Joseph Shaffer, MPH, 2017-2019 | Andre Genus, MPH, 2020-2022 |
| Abriana Johnson, MHS, 2017-2020 | Jonathon Antle, MPH candidate, 2022-present |
| Morgan Ingram, MPH, 2018-2020  | Paige Spiess, MPH candidate, 2022-present |
| Daniel Mendez, MHS, 2018-2020 | Alexandra Mitchel, MHS candidate, 2021-present |

**GRADUATE STUDENT THESIS ADVISORY COMMITTEES – Ph.D.**

|  |  |
| --- | --- |
| Alexandra Burne, Ph.D. candidate (Vet. Med.), 2016-present | Mariah Watson, Ph.D. candidate (combined EGH-DVM), 2019-present |
| Jessica Jacob, Ph.D. (Vet. Med.), 2018-2019 | Debra Brunson, Ph.D. candidate (Dentistry), 2019-present |
| Ashton Creasy, Ph.D. (EGH), 2018-2022 | Md Abu Sayeed, Ph.D. candidate (EGH), 2020-present |
| Lisa Emerson, Ph.D. student (IFAS), 2020-present | Michael Asare-Baah, Ph.D. student (Epidemiology). 2022-present |

**POST DOCTORAL FELLOWS TRAINED**

|  |  |
| --- | --- |
| Dev K. Ranjit, Ph.D., 2016-2019 | Jessica Slade, Ph.D., 2016-2020 |
| Raghuveer Singh, Ph.D., 2016-2019 | Melissa Rae Lamanna, Ph.D. 2020-2022 |
| 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:

* PHC6671: The Ménage à trois of Emerging Infectious Diseases; Spring 2019-present; 3 credit hours
* PHC6900: Environmental and Global Health Journal Club, Summer C, 2019-present; 1 credit hours
* PHC6937: Mechanisms of Environmental Diseases, Spring, 2021- present; 3 credit hours

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

Department representative, College Tenure and Promotion Committee, June 2016 – June 2022

**DEPARMENTAL COMMITTEE SERVICE**

Faculty 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\*

Assistant/Associate Professor in Environmental and Global Health (#65529), October 2020

Assistant/Associate/ Full Professor Environmental and Global Health (#521820), May, 2022\*

Assistant/Associate/ Full Professor Environmental and Global Health (#526191), March, 2023\*

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*, *PL*o*S Pathogens, Emerging Infectious Diseases, mSphere*

**PEER REVIEW ACTIVITIES** (last 20 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
* Member, Investigator Initiated Program Project Application (P01), ZAI1-AWA-M-M3 review panel, NIH/NIAID, February 11, 2020
* Member, Special Emphasis Panel ZRG1 IDM-R (90), NIH, March 19, 2020
* Member and Chair, Special Emphasis Panel IDIA-B (02), NIH, June 9, 2021
* Ad hoc reviewer, Bacterial Pathogenesis (BACP) Study Section, NIH, June 6-7, 2022

**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, 2022.
2. National Institute for Occupational Safety and Health, Southeastern Coastal Center for Agricultural Health and Safety grant U54 OH011230, Co-Investigator. Title: Estimating agricultural pesticide exposure using wastewater-based epidemiology. September 30, 2021 – September 29, 2022

# 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
13. University of Florida Clinical and Translational Science Institute COVID-19 Rapid-Response Research Project. Co-Investigator. Title: “Characterization of COVID-19 Infection and Family Resilience in Symptomatic and Asymptomatic School-Age Children”, Direct costs April 13, 2020 – October 13, 2020 $76,396.97
14. National Institute on Drug Abuse grant 3U01DA051126-02S2, Co-Investigator. Title: NDEWS Supplement Integrating Wastewater-Based Epidemiology into the National Drug Early Warning System Coordinating Center to Track Community Health Trends. May 1, 2021 – April 30, 2022

**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)

“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”

49th 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

Univeristy 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, 62nd 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

“Old and New Enzymes in *Chlamydia* Cell Wall Synthesis: Novel Antibiotic Targets?”

Burnett School of Biomedical Sciences

University of Central Florida College of Medicine

Orlando, FL, November 15, 2019

“Peptidoglycan Synthesis and Cell Division in *Chlamydia*”

Department of Microbiology

University of Alabama at Birmingham School of Medicine

Birmingham, AL, January 28, 2020

“Epidemiology of COVID-19 in First Responders”

Clinical and Translational Science Institute

University of Florida

Gainesville, FL, July 13, 2020

“K-12 Students and Families in the Time of COVID-19: Surveillance for SARS-CoV-2 and Psychosocial Impacts of Lockdown”

Clinical and Translational Science Institute

University of Florida

Gainesville, FL, August 10, 2020

“Sampling Sewage to Combat SARS: Using Wastewater-based Epidemiology to Bridge the Gap between Environmental Monitoring and Public Health” (with Tara Sabo-Attwood, Joe Bisesi, and others)

EGH Spring Webinar Series on Practical Applications for One Health

February 23, 2021

“Cell Division in *Chlamydia*: Anomaly and Paradox”

Department of Microbiology, Immunology, and Parasitology

LSU Health Sciences Center

New Orleans, LA, March 8, 2021 (Zoom presentation)

“The Ménage à Trois of Emerging Sexually Transmitted Infections”

CATALySES Emerging Pathogens and Infectious Diseases Seminar series

University of Florida Center for Precollegiate Education and Training

Gainesville, FL, April 29, 2021 (Zoom presentation)

“Peptidoglycan and Cell Division in *Chlamydia*: Anomaly and Paradox”

Department of Microbiology, Immunology, and Parasitology

University of California, Irvine

Irvine, CA, December 8, 2021 (Zoom presentation)

**ABSTRACTS**

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 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. 30th 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. 27th 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. 94th General Meeting of the American Society for Microbiology, Las Vegas, NV.

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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. 98th General Meeting of the American Society for Microbiology, Atlanta, GA.

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20. Schuch, R., and **A. T. Maurelli**. 2000. Functional analysis of outer membrane-associated Mxi-Spa type III secretory elements in *Shigella flexneri*. 100th General Meeting of the American Society for Microbiology, Los Angeles, CA.

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1. 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.
2. 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*. 38th U.S. Japan Cholera and Other Bacterial Enteric Diseases Joint Panel Meeting, Bethesda, MD.
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4. Binet, R., and **A. T. Maurelli.** 2004. Mutations in 16S rRNA associated with spectinomycin resistance in *Chlamydia psittaci* 6BC. 104th General Meeting of the American Society for Microbiology, New Orleans, LA.
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44. Ball, L. M., and **A. T. Maurelli**. 2022. *Neisseria gonorrhoeae* drives *Chlamydia trachomatis* into an aberrant state during in vitro co-infection. UF Emerging Pathogens Research Day, Gainesville, FL
45. Acosta, D., Y. Fujii, D. Joyce-Beaulieu, **A. T. Maurelli**, E. J. Nelson, and S. L. McKune. 2022. COVID-19: The infected and the affected; mental health implications of children in a K-12 school, a prospective cross-sectional time series study. UF College of Public Health and Health Professions Research Day, Gainesville, FL
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**BOOK CHAPTERS**

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