A. Marisa Chun (SBN 160351)
mchun@crowell.com
Kristin J. Madigan (SBN 233436)
kmadigan@crowell.com
Suzanne E. Rode (SBN 253830)
srode@crowell.com
CROWELL & MORING LLP
3 Embarcadero Center, 26th Floor
San Francisco, California 94111
Telephone: 415.986.2800
Facsimile: 415.986.2827

Norman J. Hamill (SBN 154272)
norman.hamill@ucop.edu
Katharine Essick (SBN 219426)
katharine.essick@ucop.edu
UNIVERSITY OF CALIFORNIA
Office of General Counsel
1111 Franklin Street, 8th Floor
Oakland, CA 94607-5200
Telephone: 510.987.9800
Facsimile: 510.987.9757

Attorneys for Defendants
The Regents of the University of California and
Michael V. Drake

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF ALAMEDA

CINDY KIEL, J.D., an Executive Associate Vice Chancellor at UC Davis, MCKENNA HENDRICKS, a UC Santa Barbara student, EDGAR DE GRACIA, a UCLA student, and LELAND VANDERPOEL, an employee at the Fresno satellite extension of the UCSF Medical Education Program, and FRANCES OLSEN, Professor of Law at UCLA,

Plaintiff,

v.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, a Corporation, and MICHAEL V. DRAKE, in his official capacity as President of the UNIVERSITY OF CALIFORNIA,

Defendants.

Case No. HG20072843

Unlimited Civil Jurisdiction

ASSIGNED FOR ALL PURPOSES TO:
Hon. Richard L. Seabolt
Department 521

DECLARATION OF DR. LEE W. RILEY IN SUPPORT OF DEFENDANTS' OPPOSITION TO PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

Date: October 14, 2020
Time: 01:30 p.m.
Dept.: 521
Reservation No.: 2206283

Complaint filed: August 27, 2020
Trial: None set

I, Dr. Lee W. Riley, declare:

1. I provide this declaration in support of Defendants The Regents of the University of California and Michael V. Drake's ("Defendants") Opposition to Plaintiffs' Motion for Preliminary Injunction. I base this declaration on my expertise as outlined below and facts within my personal knowledge, to which I could and would testify competently if called upon to do so.

Professional Background and Experience

2. I am Professor and Chair of the Division of Infectious Disease and Vaccinology in the School of Public Health at the University of California, Berkeley. I am a physician and I conduct molecular epidemiology and bacterial pathogenesis research focused on infectious diseases of global importance and diseases of urban slum settlements in developing countries. I teach an annual course called Principles of Infectious Diseases, and have in the past taught a course on Vaccinology.

3. I obtained my B.A. from Stanford University in Philosophy in 1972 and M.D. from the University of California, San Francisco in 1978. I completed my residency in internal medicine at Columbia Presbyterian Hospital and served in the Epidemic Intelligence Service at the Centers for Disease Control and Prevention (CDC). I next served as Program Manager at the World Health Organization (WHO), assigned to India. I have published more than 300 peer-reviewed papers to date and two books, including *Molecular Epidemiology of Infectious Diseases: Principles and Practices.* I am currently the Director of the Global Health Equity Scholars Program, funded by Fogarty International Center of the National Institutes of Health (NIH) and a fellow in the American Academy of Microbiology and of the Infectious Disease Society of America. In 2014, I was appointed by the U.S. Secretary of Health and Human Services to serve as a member of the Board of Scientific Counselors for the National Center for Infectious Disease of the CDC.

4. Attached hereto as **Exhibit A** and incorporated by reference to this declaration is a copy of my curriculum vitae.

5. Outside counsel for Defendants have asked me to provide my expert opinion on influenza vaccinations and whether I support Defendants' mandate that University of California

("University" or "UC") students, faculty, and staff living, learning, or working on premises at UC locations should receive an influenza vaccine this influenza season, subject to medical exemptions and certain accommodations, particularly in light of the COVID-19 pandemic that will overlap with the influenza season this year.

6. My opinions are based on my professional training, experience, and expertise, and my review of the Executive Order, Plaintiffs' Motion for Preliminary Injunction, and the supporting declarations of Peter Gøtzsche, MD, Professor Laszlo Boros, MD, Associate Professor Andrew Noymer, Associate Professor Peter Doshi, and Senior Clinical Tutor Tom Jefferson, MD. I do not offer any legal opinion, nor do I intend to interpret the legal terms of the Executive Order.

7. I find the arguments in these declarations proffered by Plaintiffs unconvincing and unjustified. Many of their arguments are irrelevant to the issue of protecting UC students, faculty, and staff from the severe consequences of the flu or COVID-19. Plaintiffs' declarants make arguments by selectively citing studies, and citing some studies that actually contradict what they claim.

8. Plaintiffs' declarants particularly focus on the effectiveness or efficacy of the influenza vaccine on reducing hospitalization rates or mortality. However, there are also other outcome measures for which effectiveness of the vaccine is assessed. Influenza vaccines, depending on the virus strain circulating during an influenza season, and the type of vaccine used during that season, have been well documented to reduce symptomatic cases, severity of symptoms, and secondary transmissions. For example, one systematic review examined 31 eligible studies from 1967 to 2011 and assessed outcomes based on test results for the influenza virus. (Osterhom MT, Kelley NS, Sommer A, Belongia EA, *Efficacy and effectiveness of influenza vaccines: a systematic review and meta-analysis,* The Lancet, 2012; 12(1):36-44).[1] The authors compared positive tests for the virus in vaccinated and unvaccinated people, which include people with a wide spectrum of respiratory symptoms who may or may have been hospitalized. The conclusion of the study was that "Influenza vaccines can provide moderate

[1] *See* https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(11)70295-X/fulltext.

protection against virologically confirmed influenza, but such protection is greatly reduced or absent in some seasons. Evidence for protection in adults aged 65 years or older is lacking. Live attenuated influenza vaccine (LAIVs) consistently show highest efficacy in young children (aged 6 months to 7 years)." Apart from hospitalization rates and mortality, none of the Plaintiffs' declarants discussed "effectiveness" in terms of these other outcome measures, which are relevant to UC's Executive Order.

9. Vaccinating for influenza reduces the number of people with respiratory symptoms from influenza. A reduction in the number of people with respiratory symptoms from influenza would prevent overwhelming testing services for COVID-19 and influenza. Without widespread influenza vaccinations, the number of people with respiratory symptoms will definitely increase, well above those due to COVID-19. People with respiratory symptoms will need to be tested for COVID-19. The testing services at UC campuses and elsewhere are already running at maximum capacity. An inability to test people with respiratory systems for COVID-19 will jeopardize timely initiation of contact investigation and quarantine, which could cause a resurgence of the epidemic on all campuses.

10. While classes are now generally taught remotely, many UC students have elected to stay on campus dormitories as well as in fraternity and sorority houses. Despite remote classes, outbreaks of COVID-19 have already occurred among these students. There is also a large number of laboratory research faculty, as well as students and staff, at all UC campuses who need to be at work in person. The increased number of respiratory infections due to influenza would mask those cases due to COVID-19, endangering those with underlying medical conditions among students, staff, and faculty. Influenza vaccines are not devoid of potential adverse effects, but none of those effects compare with the severity of COVID-19 in high-risk groups.

11. Another important reason for mandating influenza vaccination is that by reducing the number of symptomatic cases of influenza (which the vaccine is well documented to do), and reducing the severity of the symptoms for those who develop any symptoms (which the vaccine can also do), the vaccine may avert severity of COVID-19 symptoms. It is well documented that those with underlying, chronic respiratory illnesses (e.g., asthma, chronic obstructive pulmonary

disease) are at greater risk for severe COVID-19 clinical outcomes. Influenza illness can damage the respiratory tract, including the lungs. If individuals who contract influenza subsequently get infected with the COVID-19 virus, such persons could develop severe illness.

12. Perhaps the most important reason for mandating influenza vaccination at this time of COVID-19 is the ability of widespread influenza vaccination to rapidly establish herd immunity in a target community. (Kim TH, *Seasonal influenza and vaccine herd effect* Clin. Exp. Vaccine Res., 2014;3(2):128-132.)[2] Effective influenza vaccines can interrupt transmission of influenza and if a large proportion of a community is immunized rapidly, the number of secondary transmissions can be greatly reduced. This could help to speed the identification of individuals who have contracted COVID-19 (rather than influenza), clinical management, and spread. This depends on how efficacious this influenza season's vaccine is in reducing transmission, but even a modest reduction in the transmission of influenza would serve to help protect the community.

Rebuttal to Declaration of Dr. Laszlo Boros

13. In his Declaration, Dr. Laszlo Boros refers to a study by Dr. Greg Wolff which reported that an influenza vaccine increased the risk of coronavirus infection. (*See* Boros Declaration, ¶ 5) (Wolff G, *Influenza vaccination and respiratory virus interference among Dept of Defense personnel during the 2017-2018 influenza season,* Elsevier Public Health Emergency Collection, 2020; 38(2):350-354.)[3] The coronavirus reported in the study is the common cold coronavirus, unrelated to the COVID-19 coronavirus. The study actually showed good efficacy of the influenza vaccine against influenza viruses as well as other respiratory viruses, including RSV and parainfluenza. Interestingly, and not mentioned by Dr. Laszlo, the influenza vaccination was also associated with increased risk for "No Pathogen Detected." Such a result calls into question the observation made with the common-cold coronavirus. The observation is likely to be a statistical artifact, which resulted from not correcting for the large number of variables compared

[2] *See* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4083064/.
[3] *See* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7126676/.

(*e.g.*, by Bonferroni's correction)[4].

14. In his Declaration, Dr. Boros states that "A study conducted by the Centers for Disease Control had suggested the possibility that women who received A/H1N1pdm2009 (pH1N1) antigen-containing influenza vaccine two years in a row had an increased risk of miscarriage." (*See* Boros Declaration, ¶ 11; Donahue JG, et al., *Association of spontaneous abortion with receipt of inactivated influenza containing H1N1pdm09 in 2010-11 and 2011-12,* Vaccine 2017; 35(40):5314-5322[5].) The study he refers to was not a CDC study. Only one of the authors was a CDC employee. Significantly, the same group of researchers reported two years later – using a larger data set – that there was no association of two different types of influenza vaccines given over three influenza seasons with spontaneous abortion (*See* Donahue JG, et al., *Inactivated influenza vaccine and spontaneous abortion in the Vaccine Safety Datalink in 2012-13, 2013-14, and 2014-15,* Vaccine 2019; 37(44):6673-6681.)[6] A meta-analysis of 5 to 13 papers also found that pregnant women who received H1N1 influenza vaccine were less likely to give birth preterm, and gave birth to heavier infants. (*See* Richards JL, et al., *Neonatal outcomes after antenatal influenza immunization during the 2009 H1N1 influenza pandemic: impact on preterm birth, birth weight, and small for gestational age birth,* Clin. Infect. Dis. 2013; 56(9):1216-22.)[7] A Cochrane review, co-authored by Dr. Thomas Jefferson and cited by Dr. Peter Gøtzsche in his Declaration, also concludes that "The administration of both seasonal and 2009 pandemic vaccines during pregnancy had no significant effect on abortion or neonatal death." (Demicheli V, Jefferson T, et al., *Vaccines for preventing influenza in health adults,* Cochrane Database Syst. Rev. 2018; 2(2):CD001269.)[8] The declaration by Dr. Boros is misleading and contradicts the studies provided by Plaintiffs' own expert witness.

15. Dr. Boros's explanation of the potential impact of the influenza vaccine on human immune response is not in line with any established knowledge regarding human immune

---

[4] The Bonferroni correction is a multiple-comparison correction used when several dependent or independent statistical tests are being performed simultaneously and is one of several methods used to counteract the problem of multiple comparisons.
[5] *See* https://pubmed.ncbi.nlm.nih.gov/28917295/#affiliation-12.
[6] *See* https://pubmed.ncbi.nlm.nih.gov/31540812/.
[7] *See* https://pubmed.ncbi.nlm.nih.gov/23378281/.
[8] *See* https://pubmed.ncbi.nlm.nih.gov/29388196/.

response to vaccines. (*See* Boros Decl., ¶¶ 13-29.) He, nor anyone else, has published studies supporting the claims he makes in his declaration. He states that he is "a medical scientist working on immune system function" but I could not identify any paper for which he is an author, or a grant for which he is a principal investigator, which indicates that he has conducted research on "immune system function" related to infectious disease or vaccine-induced immune response.

Rebuttal to Declaration of Prof. Peter Doshi

16. In his Declaration, Prof. Doshi is correct that "Assessing the efficacy of influenza vaccines is not as straightforward as it might be for drugs." (*See* Doshi Decl., ¶ 11.) However, this is not only because vaccines are "biologics," as he states. The effectiveness of influenza vaccines is difficult to assess because during every influenza season, the epidemic is caused by a different strain of the virus, sometimes differing by a few mutations (called antigenic drift) and less frequently by abrupt large genetic changes (called antigenic shift). The CDC, WHO, and other health agencies predict which viral strain will cause the annual epidemic and rapidly produce the best vaccine that matches the epidemic strain. Thus, the effectiveness of the vaccine fluctuates year to year.

17. That is not to say that the influenza vaccine is not effective. Effectiveness is assessed not only on the vaccine's effect on reducing death or hospitalization rates, but also for its effect on reducing other outcomes, such as severity of symptoms, number of outpatient visits, and secondary transmissions. In the Unites States, influenza vaccines have been administered to the civilian population since 1946 (not 1960 as stated by Prof. Doshi), and clinical trials of the vaccines began even earlier in the 1930s. Thus, we have much accumulated evidence supporting efficacy and effectiveness of various influenza vaccines from well-controlled randomized trials for these outcomes.

18. Prof. Doshi gives two examples of adverse events associated with the influenza vaccines, including febrile convulsions in children less than five years of age in Australia, and cases of narcolepsy in teenagers in Finland and Sweden in 2009. (*See* Doshi Decl., ¶ 15.) Whether these adverse events were truly caused by influenza vaccines can be debated, but adverse events of one type or another have been reported for just about all vaccines that are licensed. It is curious

that Prof. Doshi did not refer to the Cochrane review, highlighted by Dr. Gøtzsche, that covered many studies conducted from 1969 to 2009 that concluded that there was no evidence of serious adverse events associated with the influenza vaccines used in the studies. (Demicheli V, Jefferson T, et al., *Vaccines for preventing influenza in health adults,* Cochrane Database Syst. Rev. 2018; 2(2):CD001269.)

19. Prof. Doshi states that "There should be at least two randomized trials that both demonstrated influenza vaccines reduce hospitalizations, ICU admissions, or mortality." (*See* Doshi Decl., ¶ 17.) I agree, but this point is not relevant to the question of whether the University should require influenza vaccination for its students, faculty, and staff. The influenza vaccine can reduce the number of respiratory illnesses to help prevent overwhelming COVID-19 testing services. An inability to diagnose COVID-19 in a timely manner will disrupt contact investigation and quarantine, which could cause resurgence of the epidemic (as has already begun to happen on college campuses throughout the United States).

Rebuttal to Declaration of Dr. Peter Gøtzsche

20. In his Declaration, Dr. Peter Gøtzsche cites a Cochrane review of 52 randomized clinical trials of influenza vaccines and states that vaccination "could be considered a worthwhile effect at the population level but hardly at the individual level, as '71 healthy adults need to be vaccinated to prevent one of them experiencing [laboratory-confirmed] influenza.'" (*See* Gøtzsche Decl., ¶ 9.) (Demicheli V, Jefferson T, et al., *Vaccines for preventing influenza in health adults,* Cochrane Database Syst. Rev. 2018; 2(2):CD001269.) The same review showed that 29 healthy adults need to be vaccinated to prevent one influenza-like illness (ILI). Based on this review, at the UC Berkeley campus alone where I understand about 1,500 students are presently on campus, this would prevent 21 laboratory-confirmed cases of influenza and 71 ILIs. Across all 10 campuses, assuming a similar number of students are presently on campus, influenza vaccination could prevent more than 200 cases and 710 ILIs, just among students and not including faculty and staff.

21. More importantly, the purpose of a vaccine is not only to protect an individual receiving the vaccine, but to protect members of the public at large who are at risk for

transmission of an infectious disease. Preventing just 200 cases of influenza could have a large impact on secondary spread of the disease on campuses. Mandated influenza vaccination assures rapid establishment of herd immunity, which can greatly blunt transmissions of influenza in a college campus community. (Kim TH, *Seasonal influenza and vaccine herd effect,* Clin. Exp. Vaccine Res., 2014; 3(2):128-132.)

22. Regarding adverse effects of influenza vaccines, Dr. Gøtzsche cites a 2014 Cochrane review report which concluded, "Inactivated vaccines caused local harms and an estimated 1.6 additional cases of Guillain-Barré Syndrome per million vaccinations. (*See* Gøtzsche Decl., ¶ 7.) The harms evidence base is limited." However, he does not mention that the most updated Cochrane review concludes that "Inactivated vaccines cause an increase in fever from 1.5% to 2.3%," but does not even mention Guillain-Barré syndrome. (Demicheli V, Jefferson T, et al., *Vaccines for preventing influenza in health adults,* Cochrane Database Syst. Rev. 2018;2(2):CD001269). Furthermore, the review concludes that "The administration of both seasonal and 2009 pandemic vaccines during pregnancy had no significant effect on abortion or neonatal death." Therefore, the very review to which Dr. Gøtzsche refers shows that there is no scientific basis for his statement that "administering the flu vaccine to the 510,000 members of the University of California community might cause serious harm and will likely cause more harm than good." (Gøtzsche Decl., ¶16).

23. Dr. Gøtzsche states that "The Executive Order from Janet A. Napolitano is a three-page document where she quotes the literature selectively to such an extent that I consider it scientific misconduct. According to the US Office of Research Integrity, research misconduct includes 'changing or omitting data or results such that the research is not accurately represented in the research record.'" (*See* Gøtzsche Decl., ¶ 11.) This is disingenuous on the part of Dr. Gøtzsche. The same can be said of his selectively citing parts of Cochrane reviews to support his argument. The Cochrane reviews he cites include only studies reported from 1966 to 2016, even though influenza vaccine trials go back to the 1930s. The Cochrane reviews he selected include studies covering influenza seasons from 1969 to 2009 in multiple geographic regions involving different influenza virus types, which is like comparing "apples to oranges." He does not describe

the inherent limitations of reviews that report summary effectiveness data based on highly disparate studies. Dr. Gøtzsche is a co-founder of the Cochrane Collaboration, so it is in his interest to give greater scientific credence to Cochrane reviews. He did not fully disclose all the conclusions of those reviews by overstating the danger of the vaccines. But I would not say that Dr. Gøtzsche committed "scientific misconduct" by selectively citing results that support his arguments.

Rebuttal to Declaration of Dr. Thomas Jefferson

24. In his Declaration, Dr. Jefferson states that "I would like to make the further broader points based on 25 years' of trial research synthesis: the current influenza vaccines have such low effectiveness that the US CDC has assigned a negative value to their effectiveness, coercion to use them is ideological." (*See* Jefferson Decl., ¶ 7.) This statement appears to be an opinion based on his vague use of the term "effectiveness." What does he mean by "effectiveness"? Effectiveness for reducing hospitalization? Effectiveness against reducing severe symptoms? Effectiveness against interrupting transmission? His sweeping statement about the "negative value of their effectiveness" and describing CDC's recommendation for the vaccine as "coercion" appears to be an "ideological" statement itself.

25. The arguments made by Prof. Doshi, Dr. Gøtzsche, and Dr. Jefferson are based mostly on Cochrane reviews, which is one of many ways to assess vaccine efficacy and effectiveness. This way of assessing vaccines may work for some types of vaccines, but not for influenza vaccines. There are now three vaccine formulations licensed in the United States, and the influenza virus strain types change every influenza season. Vaccine efficacy/effectiveness studies included in the Cochrane reviews are reported from a wide spectrum of geographic regions with very different histories of previous epidemics. It is not surprising that the summary data do not show convincing results when outcomes such as hospitalization rates and deaths are assessed. Hospitalization rates and deaths are dependent on many other factors that vary across regions, and not all of these factors are measured in the studies included in the reviews.

Rebuttal to Declaration of Professor Andrew Noymer

26. Prof. Noymer's statement in his Declaration that influenza vaccines are not tested

before they are administered is correct. (*See* Noymer Decl., ¶¶ 3-5.) Unfortunately, there is no choice, given the nature of the seasonal influenza viruses as described previously. When there is a mismatch between a new season's vaccine and the epidemic virus strain, effectiveness can be negative, as pointed out by Prof. Noymer. But when there is a match, a vaccine can be quite effective in reducing severe disease and interrupting transmission. Prof. Noymer's argument does not address why requiring influenza vaccination is necessary in the time of the COVID-19 pandemic.

27. Prof. Noymer states that "the most effective strategy for an individual may be to experience some influenza infection as a healthy adult, thus generating a better immunity portfolio against influenza for old age." (*See* Noymer Decl., ¶ 8.) This type of argument has been made for COVID-19, mostly by politicians, and it has been roundly debunked by scientists. As mentioned above, the influenza vaccine is not designed solely to protect an individual. It is designed to interrupt transmissions. The idea that one can avoid getting severely sick in old age by intentionally exposing oneself to influenza at a young age shows a lack of understanding of public health.

Summary

28. The arguments of Plaintiffs' declarants are unconvincing because they do not focus on the assessment of the impact of influenza vaccine effectiveness on reducing the number of laboratory-confirmed asymptomatic infections, symptomatic infections, influenza-like illness (ILI), outpatient clinic visits, severity of disease, and herd immunity (effectiveness in non-vaccinated contacts of vaccinated people). These are the relevant issues that need to be assessed to argue for or against mandated influenza vaccination in the UC community. There are many studies (not necessarily Cochrane reviews) that show effectiveness of influenza vaccines on these other types of outcomes, supporting why requiring influenza vaccination throughout the UC community is especially important during this COVID-19 pandemic period.

///

///

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed in Berkeley, California, on this 29 day of September 2020.

Dr. Lee W. Riley

EXHIBIT A

Curriculum Vitae
Lee W. Riley, MD
Professor and Chair, Division of Infectious Diseases and Vaccinology

CURRENT ADDRESS

School of Public Health, UC Berkeley
Division of Infectious Diseases
530E Li Ka Shing Bldg, Berkeley, CA 94720
tel: [redacted] email: [redacted]

EDUCATION

High School--International School of Bangkok, 1968
B.A. with Distinction, Stanford University, 1972
M.D., University of California, San Francisco 1978

LICENSURE

New York, 1979-present (inactive)
California, 1984-present

MEMBERSHIP, ADVISORY GROUPS

American Society for Microbiology
Fellow, American Association for the Advancement of Sciences, 1998
Fellow, Infectious Disease Society of America, 2002
International Society for Infectious Diseases
Medical Advisory Board: Public Health Research Institute, NJ
Member, Bacteriology-Mycology Study Section I, NIAID, NIH, 1994-1998
Panel member, NIH Persian Gulf Experience and Health, 4/26-29, 1994
National Advisory Committee: RWJ Harold Amos Medical Faculty Development Program 2000-present
Diplomate, American Board of Internal Med, 1981
Advisory Committee, Fogarty International Center, NIH: 2003-2007
National Tuberculosis Curriculum Consortium: 2003-2009
National judge: Young Epidemiology Scholars (YES) competition: 2004-2011
Member, Clinical Res/Field Studies Infectious Diseases NIH Study Section, 2008-2012
Board of Scientific Counselors, CDC, appointed by Secretary of HHS (K. Sebelius): 2014-now

EDITORIAL BOARD

Associate Editor, *International J of Infectious Diseases,* 1996-2001
Section Editor, *Tubercle and Lung Disease*, 1997-2002
Editorial staff: *Wellness Letter*, 1997-2000
Editorial board: *Pathogens and Disease*, 2012-now

HONORS, GRANTS

Cornell Scholar in Biomedical Science, 1991-94
Pew Scholar in Biomedical Sciences, 1992-96
Jack Friedman Young Investigator Prize (First prize)
Michael Wolk Foundation Clinical Scholar Award, 1993
Heiser Program for Research in Leprosy and Tuberculosis, 1992-93
AmFAR research grant, 1992-1993
German-American Academic Council Distinguished Lectureship Award, 1998;
Fellow, American Association for the Advancement of Sciences (AAAS), 1998;
Fellow, Infectious Disease Society of America, elected in 2002
Fellow, American Academy of Microbiology, elected in 2004
Ellison Foundation Senior Investigator Award in Global Infectious Diseases, 2002-06
ASM International Professorship, Salvador, Brazil, 2001
Selection for re-publication (Riley et al, *New Engl J Med*, 1983) in *Microbiology: A*

Centenary Perspective, 1899-1999 (ASM Press)
UBS Optimus Foundation award: 2011-2014
Honorary Member, Hungarian Society for Microbiology, 2012
Honoris Causa, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, May, 2015
Special Visiting Researcher Award, Science-without-Borders Program, Brazil: 11/2014-2017

NIH Grants:

9/1993-8/2003:	RO1AI35266: Molecular biology of infection with *Mycobacterium tuberculosis*
12/1993-11/2003:	RO1HL51967: Antioxidant genes of *Mycobacterium tuberculosis*
9/1997-7/2003:	TWD43 TW00905: Lab-based field epid training in emerging infectious diseases
9/1998-8/2000:	RO3 AI43032: Peptide-based Salmonella vaccine delivery system
9//1998-9//2000	R21 AI44287: Peptide-based delivery of HIV immunogens
9/2002-9/2004:	RO3 AI053754: Epidemiology of an uropathogenic *E. coli* clonal group
9/2003-3/2013:	TW006563: Emering infectious diseases
12/2004-11/2008:	RO1AI059523: Origin of multudrug-resistant uropathogenic *E. coli*
7/2005-6/2007:	R21AI63350: Therapeutic vaccine against tuberculosis
7/2009-6/2012:	R01AI073204: *In vivo* regulation of *M. tuberculosis* cell wall lipids
9/2010-12/2012:	R24TW008822: Framework to address drug-resistant infections and global health
4/2012-7/2017:	R25TW009338: Global health fellows and scholars training program
4/2015-3/2020:	R01AI117064: Consortium for drug-resistant Gram-negative pathogen detection
7/2015-6/2020:	R21/33AI119115: Maltose-targeted antibiotics
7/1/2017-6/30/2022	D43TW010540: Global Health Equity Scholars Program
6/1/2018-2/28/2023	D43 TW010332: Research Training at the Confluence of Infectious and Non-Communicable Diseases in India

USAID Grant:

12/2001-12/2004:	USAID CALR-2001-02972: Resistance of *Salmonella enteritidis* to egg albumen

CDC Grant:

8/1/2017-7/31/2019:	CDC BAA 2016-N-17812: Risk factors, resistance and genetics of community acquired foodborne urinary tract infections

PROFESSIONAL POSITIONS

1978-1979	Intern, Internal Medicine, Columbia-Presbyterian Hospital, New York
1979-1981	Resident, Internal Medicine, Columbia-Presbyterian Hospital, New York
1981-1984	Epidemic Intelligence Service, Enteric Diseases Branch, Division of Bacterial Diseases, Centers for Disease Control, Atlanta, GA
1984-1988	Infectious Disease Fellowship/Medical Microbiology Post-Doctorate, Stanford University
1988-1990	Centers for Disease Control, assigned to WHO in New Delhi (SEARO), Laboratory Project Manager, India Biomedical Support Project
1990-1994	Assistant Professor of Medicine, Division of International Medicine, Department of Medicine, Cornell University Medical College (CUMC)
1994-1996	Associate Professor of Medicine, CUMC
1996-present	Professor of Infectious Diseases and Epidemiology, University of California, Berkeley
2008-present	Chair, Division of Infectious Diseases and Vaccinology, School of Public Health University of California, Berkeley

INTERNATIONAL WORK EXPERIENCES:

1964-1968	High School, International School of Bangkok, Thailand (because of father's work)
1970, 71, 72	Bangkok, Thailand each summer to work as an English instructor
1972-1973	Tokyo, Japan, as an exchange student and English instructor
1977	Chiengmai, Thailand for 3 months for medical clerkship during medical school
1981	Santo Domingo and Haiti for investigation of gastroenteritis outbreak on a cruise ship as CDC EIS Officer
1982 (Nov-Dec)	Sao Paulo, Brazil for epidemiologic investigation of multiresistant Salmonella as EIS Officer (by invitation of Escola Paulista de Medicina)
1983 (Sep-Nov)	Dhaka, Bangladesh, to assess surveillance of cholera as EIS Officer (by invitation of International Center for Diarrheal Disease Research, Bangladesh)
1986, 1987	Chiapas, Mexico, to help establish a field site for the study of diarrheal diseases for the division of Geographic Medicine at Stanford University
1988 (Aug)	Manila, Philippines, to assess public health laboratories and their relationship to their Field Epidemiology Training Program (FETP): CDC Consultant
1988-1990	New Delhi, India, as a Laboratory Project Manager, WHO/Southeast Asia Regional Office, on assignment from CDC, Atlanta
1989 (May)	Beijing, China, to discuss the role of the laboratory in epidemiology
1989 (Aug)	Myanmar (Burma) and Thailand to conduct a WHO workshop on Transfer of Appropriate Technology in Diagnosis and Surveillance of Shigellosis in Southeast Asia
1990-1996	Established a project on invasive diarrhea, Cornell Research Unit, Salvador, Brazil
1992-now	Tuberculosis research projects in Brazil (Sao Paulo, Rio de Janeiro-Salvador)
1994 (Dec)	Temporary Advisor, WHO, Geneva, Evaluate use of RFLP and other molecular subtyping techniques for epidemiological studies
1992, 94, 97, 07, 11	Infectious Disease Update courses, given in Taipei, Taiwan and Shanghai, China
2014, 2016	Sino-American Infectious Disease Update course, Shanghai, China
1998-2001	Course: Molecular Epidemiology; University of Zurich, Switzerland (given for 1-2 days every Dec or July as part of an MPH program of the University of Zurich)
1996-2011	Cornell Salzburg Seminar in Infectious Diseases and Epidemiology; (course given over a 1-week period every year to East European physicians and public health professionals)
1997-2002	Director, UC Berkeley Fogarty International Training and Research in Emerging Infectious Diseases
1998-2003	Director, Fogarty International Training and Research in Tuberculosis
1998-2000	Consultant, International Clinical Epidemiology Network (INCLEN) for India
Summer, 2002	ASM International Professorship to give a course on Molecular Epidemiology if Infectious Diseases, Salvador Brazil
Summers, 2001-now	Ibero-American Course on Molecular Epidemiology of Infectious Diseases I-IV, Salvador, Brazil
2003-2013	Director, UC Berkeley Fogarty International Center program in Global Infectious Diseases
January, 2006	American Society of Microbiology (ASM) Indo-US Visiting Professorship, Mahatma Gandhi Institute of Medical Sciences, Sevagram, India
Since 2009	Short-term consultant to teach Molecular Epidemiology of Infectious Disease, FETP-Japan, National Institute of Infectious Diseases, Tokyo (every 2 years).
2012-now	Director, Global Health Scholars and Fellows Training and Research Program (Global Health Equity Scholars Program)
2014-now	Special visiting researcher, Science-without-Borders, Ministry of Health, Brazil
2016 (Jan):	Course: Molecular epidemiology of infectious diseases, Institute of Hygiene and Tropical Medicine, Universidade Nova de Lisboa, Lisbon, Portugal
2015, 16, 19	Course: Molecular epidemiology of infectious diseases, Zhejiang Provincial CDC, Hanzhou,

China

PATENTS BASED ON RESEARCH WORK:

US Patent #	Date of Issue	Inventor	Description of patent
6,008,201	12/28/1999	Riley	DNA molecule encoding cellular uptake of Mtb
6,072,048	6/6/2000	Riley	DNA molecule encoding cellular uptake of Mtb
6,214,543	4/10/2001	Riley	DNA molecule encoding cellular uptake of Mtb
6,177,086	1/23/2001	Riley, Nathan, Ehrt	DNA molecule conferring upon Mtb resistance against RNI
6,224,881	5/1/2001	Riley	DNA molecule encoding cellular uptake of Mtb
6,399,764	6/4/2002	Riley	DNA molecule encoding cellular uptake of Mtb
6,509,151	1/21/2003	Riley	DNA molecule encoding cellular uptake of Mtb
6,995,255	2/07/2006	Riley, Lu	Cellular delivery agent
8,445,658	05/21/2013	Ko, Mitermayer, Croda, Riley	Proteins with repetitive bacterial IgG-like proteins
9,835,624	12/07/2017	Riley, Mathies, Goodridge	Composition and methods for detecting Mycobacteria

BIBLIOGRAPHY

Journal Articles

1. Riley LW, Remis RS, Helgerson SD, McGee HB, Wells JG, Davis BR, Herbert RJ, Olcott H, Johnson L, Hargrett N, Blake PA, Cohen ML. Outbreaks of hemorrhagic colitis associated with a rare *E. coli* serotype. **New Eng J Med.** 1983; 308:681-685.
2. Riley LW, DeFerdinando GT, DeMelfi TM, Cohen ML. Evaluation of isolated cases of salmonellosis by plasmid profile analysis: introduction and transmission of a bacterial clone by a contaminated commercial product. **J Infect Dis** 1983; 148:12-17.
3. Riley LW, Cohen ML, Seals JE, Blaser MJ, Birkness KA, Hargrett NT, Martin SM, Feldman RA. Importance of host factors in human salmonellosis caused by multiresistant strains. **J Infect Dis.** 1984; 149:878-883.
4. Riley LW, Ceballos BSO, Trabulsi LR, Toledo MRF, Blake PA. Significance of hospitals as reservoirs for endemic multiresistant *S. typhimurium* causing infections in urban Brazilian children. **J Infect Dis.** 1984; 150:236-241.
5. Riley LW, Finch MJ. Results of the first year of national Campylobacter surveillance in the United States. **J Infect Dis.** 1985; 151:956-959.
6. Finch MJ, Riley LW. Campylobacter infections in the United States: results of 11-state surveillance. **Arch Intern Med.** 1984; 144:1610-1612.
7. Wells JG, Davis BR, Wachsmuth IK, Riley LW, Remis RS, Sokolov R. Laboratory investigation of outbreaks of hemorrhagic colitis associated with a rare *Escherichia coli* serotype. **J Clin Microbiol** 1983; 18:512-520.
8. Remis RS, McDonald KL, Riley LW, Puhr ND, Wells JG, Davis BR, Birkness KA, Blake PA, Cohen ML. Sporadic cases of hemorrhagic colitis in the United States. **Annals Intern Med.** 1984: 101:624-6.
9. Riley LW. Hemorrhagic colitis--a "new" disease. **Clin Micro Newslet.** 1985; 7:47-49.
10. Paulozzi LT, Johnson KE, Kamahele LM, Clausen CR, Riley LW, Helgerson SD. Diarrhea associated with adherent enteropathogenic *E. coli* in an infant toddler center, Seattle, Washington. **Pediatrics.** 1986: 77:296-300.
11. Riley LW, Waterman SH, Faruque ASG, Huq MI. Breastfeeding children in the household as a risk factor for cholera in rural Bangladesh: an hypothesis. **J Trop Geogr Med.** 1987; 39:9-14.
12. Riley LW. The epidemiologic, clinical, and microbiologic features of hemorrhagic colitis. **Annual Rev of Microbiol.** 1987: 41:383-407.
13. Riley LW, Junio L, Libaek LB, Schoolnik GK. Plasmid-encoded expression of lipopolysaccharide O-antigenic polysaccharide in enteropathogenic *Escherichia coli.* **Infect Immun** 1987; 55:2052-56.

14. Riley LW, Arathoon E, Loverde V. Epidemiologic patterns of drug- resistant *Mycobacterium tuberculosis* infections: a community-based study. **Am Rev Respir Dis**. 1989; 139:1282-85.
15. Toth I, Cohen ML, Rumschlag HS, Riley LW, White EH, Carr JH, Bond WW, Wachsmuth IK. Influence of the 60-Mdal plasmid on adherence of *E. coli* O157:H7 and genetic derivatives. **Infect Immun** 1990; 58:1223-1231.
16. Riley LW, Munoz EC, Zarate R, Sibley B, Keller J, Zarate L, Valasquez FM, Schoolnik GK. Factores de riesgo de diarrea infantil aguda en una comunidad rural de Chiapas, Mexico. Una estrategia de intervencion. **Bol Of Sanit Panam**. 1990; 108:93-99.
17. Frankel G, Riley LW, Giron JA, Valmossoi J, Friedmann A, Strockbine N, Falkow S, Schoolnik GK. Detection of Shigella in feces using DNA amplification. **J Infect Dis**. 1990;161:1252-1256.
18. Riley LW, Munoz EC, Zarate R, Sibley B, Keller J, Zarate L, Valasquez FM, Schoolnik GK. Examination of risk factors for acute childhood diarrhea in the highlands of Chiapas, Mexico. **Bull PAHO**. 1990; 24:210-216.
19. Panda CS, Riley LW, Kumari SN, Prakash K. Comparison of alkaline-phosphatase-conjugated oligonucleotide DNA probe with the Sereny test for identification of Shigella strains. **J Clin Microbiol**. 1990; 28:212-2124.
20. Khanna KK, Dhanvijay A, Riley LW, Sehgal S, Kumari S. Cholera outbreak in Delhi--1988. **J Communic Dis** 1990;22:35-8.
21. Riley LW, Junio L, Schoolnik GK. Hela cell invasion by enteropathogenic *Escherichia coli* lacking O-antigenic polysaccharide. **Molec Microbiol**. 1990; 4:1661-1666.
22. Giron J, Jones T, Millan-Velasco F, Castro-Munoz E, Zarate L, Fry J, Mosely SL, Baudry B, Kaper JB, Schoolnik GK, and Riley LW. Diffuse-adhering *Escherichia coli* as a putative cause of diarrhea in Mayan children in Mexico. **J Infect Dis**. 1991; 163:507-513.
23. Chattopadhya D, Riley LW, Kumari S. Behavioral risk factors for acquisition of HIV infection and knowledge about AIDS among male professional blood donors in Delhi. **Bull WHO**. 1991; 69:319-323.
24. Laraque F, Riley LW. Tuberculosis in HIV-infected patients. **AIDS Reader**. 1992; 2:171-180.
25. Barreto, JA, Palaci M, Ferrazoli L, Riley LW, Johnson WD, and Galvao PA. Isolation of *Mycobacterium avium* complex from bone marrow aspirates of AIDS patients in Brazil. **J Infect Dis**. 1993;168:777-9.
26. Arruda S, Bomfim G, Knights R, Huima-Byron T, Riley LW. Cloning of a *Mycobacterium tuberculosis* DNA fragment associated with HeLa cell entry and survival inside human macrophage. **Science** 1993;261:1454-7.
27. Riley LW. Drug-resistant tuberculosis. **Clin Infect Dis**. 1993;17:S442-6.
28. Stoeckle M, Guan L, Riegler N, Weitzman I, and Riley LW. Catalase-peroxidase gene sequences in isoniazid-sensitive and resistant strains of *M. tuberculosis* from New York City. **J Infect Dis**. 1993;168:1063-5.
29. Kikuchi K, Bernard EM, Kiehn TE, Armstrong D, Riley LW. Restriction fragment length polymorphism analysis of clinical isolates of *Mycobacterium haemophilum*. **J Clin Microbiol** 1994;32:1763-67.
30. NIH Technology Assessment Workshop Panel. The Persian Gulf experience and health. **JAMA**. 1994;272:391-395.
31. Ferrazoli L, Palaci M, Telles MAS, Ueki SY, Kritski A, Marques LRM, Ferreira O, Riley LW. Catalase expression, *kat*G, and isoniazid minimal inhibitory concentration of *Mycobacterium tuberculosis* isolates from Sao Paulo, Brazil. **J Infect Dis** 1995;171:237-40.
32. Riley LW. Mechanisms of phagocytosis of *M. tuberculosis*. **Trends in Microbiol.** 1995;3:27-31.
33. Sepkowitz KA, Raffalli JR, Riley LW, Kiehn TE, Armstrong D. Tuberculosis in the AIDS era. **Clin Microbiol Rev**. 1995;8:180-199.
34. Gunzburg ST, Tornieporth NG, Riley LW. Identification of enteropathogenic Escherichia coli by a PCR-based detection of the bundle-forming pilus gene. **J Clin Microbiol**. 1995;33:1375-77.
35. Tornieporth, NG, John J, Salgado K, Jesus P, Latham E, Melo C, Gunzburg S, Riley LW. Differentiation of pathogenic *E. coli* in Brazilian children by polymerase chain reaction. **J Clin Microbiol**. 1995;33:1371-74.

36. Friedman CR, Stoeckle MY, Johnson W, Riley LW. Double repetitive element (DRE)-PCR method for subtyping *Mycobacterium tuberculosis* clinical isolates. **J Clin Microbiol**. 1995;33:1383-84.
37. Friedman CR, Stoeckle MY, Kreiswirth BN, Johnson WD, Manoach SM, Sathianathan K, Hafner A, Riley LW. Transmission of multidrug-resistant tuberculosis in a large urban setting. **Am J Respir Crit Care Med**. 1995;152:355-59.
38. Delihas N, Riley LW, Loo W, Berkowitz J, Poltoratskaia N. High sensitivity of Mycobacterium species to the bactericidal activity by polylysine. **FEMS Microbiology Let**. 1995;132:233-37.
39. Kritski AL, Marquez MJO, Rabahi MF, Vieira MAM, Werneck-Barroso E, Carvalho CES, Andrade GN, Bravo-de Souza R, Andrade LM, Gontijo PP, Riley LW. Transmission of tuberculosis to close contacts of patients with multidrug-resistant tuberculosis. **Am J Respir Crit Care Med**. 1996;153:331-35.
40. Casper C, Singh SP, Rane S, Daley CR, Schecter GS, Riley LW, Small PM. Transcontinental transmission of tuberculosis? A molecular epidemiological assessment. **Am J Public Health**. 1996; 86:551-53.
41. Sepkowitz KA, Riley LW, Friedman CR, Stoeckle MY. Tuberculosis among urban health care workers: a study utilizing restriction fragment length polymorphism typing. **Clin Infect Dis**. 1995;21:1098-102.
42. Ferreira MMC, Ferrazoli L, Moises P, Salles PS, Medeiros LA, Novoa P, Kiefer CR, Schechtmann M, Kritski AL, Johnson WD, Riley LW, Ferreira OC. Tuberculosis and HIV infection among women inmates in Sao Paulo, Brazil: a prospective cohort study. **J AIDS**. 1996;13:177-183.
43. Lin RL, Bernard EM, Armstrong D, Chen CH, Riley LW. Transmission patterns of tuberculosis in Taiwan: analysis by restriction fragment length polymorphism. **Int J Infect Dis** 1996;1:18-21.
44. Seigel RR, Sant'anna CS, Salgado K, deJesus P, Riley LW. Acute diarrhea among children from high and low socioeconomic communities in Salvador, Brazil. **Int J Infect Dis** 1996;1:28-34.
45. Mannheimer SB, Riley LW, Roberts RB. The association of penicillin-resistant pneumococcus with residence in a pediatric chronic care facility. **J Infect Dis.** 1996; 174:513-9.
46. Tornieporth NG, Roberts RB, John J, Hafner A, Riley LW. Risk factors associated with vancomycin resistant *Enterococcus faecium* (VREF) infection/colonization in 145 matched case and control patients. **Clin Infect Dis** 1966;23:767-72.
47. Kritski A, Jesus LSR, Andrade MK, Werneck-Barroso E, Monteiro MA, Haffner A, Riley LW. Retreatment tuberculosis cases: factors associated with drug resistance and adverse outcomes. **Chest**. 1997;111:1162-67.
48. Friedman CR, Quinn GC, Kreiswirth BN, Perlman DC, Salomon N, Schluger N, Lutfey M, Berger J, Poltratskaia N, Riley LW. Widespread dissemination of a single drug-susceptible strain of *M. tuberculosis*. **J Infect Dis.** 1997;176:478-84.
49. Mannheimer SB, Sepkowitz KA, Stoeckle M, Friedman CR, Hafner A, Riley LW. Risk factors and outcomes of human immunodeficiency virus-infected patients with sporadic multidrug-resistant tuberculosis in New York City. **Int J Tuberc Lung Dis**. 1997;1:319-25.
50. Ehrt S, Shiloh MU, Ruan J, Choi M, Gunzburg S, Nathan C, Xie QW, Riley LW. A novel antioxidant gene from *M. tuberculosis*. **J Exp Med.** 1997;186:1885-96.
51. Tornieporth NG, Ptachewich Y, Poltoratskaia N, Ravi BS, Katapadi M, Berger JJ, Dahdouh M, Segal-Maurer S, Glatt A, Adamis R, Lerner C, Armstrong D, Weiner M, D'Amato R, Kiehn T, Lavie S, Stoeckle MY, Riley LW. Tuberculosis among foreign-born persons in New York City, 1992-1994: implications for tuberculosis control. **Int J Tuberc Lung Dis** 1997;1:528-35.
52. Kubin M, Riley LW, Havelkova M, Poltoratskaia N, Kocova A. Molecular epidemiology of tuberculosis in Prague: analysis by restriction fragment length polymorphism. **Int J Infect Dis**. 1998;2:155-8.
53. Schriefer, A, Maltez JR, Silva N, Stoeckle MY, Barral-Netto M, Riley LW. Expression of a pilin subunit BfpA of the bundle-forming pilus of enteropathogenic *E. coli* in an aroA live Salmonella vaccine strain. **Vaccine** 1999;17:770-78.

54. Harris E, Sandoval E, Xet-Mull AM, Johnson M, Riley LW. Rapid subtyping of dengue viruses by restriction site specific (RSS)-PCR. **Virology** 1999;253:86-95.
55. Ruan J, St. Louis G, Ehrt S, Riley LW, Nathan C. NOXR3, a novel gene from *M. tuberculosis* protects *Salmonella typhimurium* from nitrosative and oxidative stress. **Infect Immun** 1999;67:3276-83.
56. Burroughs, M, Beitel, A, Kawamura, A, Revai, K, Ricafort, R, Chiu, K, Jacobs, R, Riley, LW. Pediatric Tuberculosis Consortium. Clinical presentation of tuberculosis in culture-positive children. **Pediatric Infectious Disease Journal**. 1999;8:440-446.
57. Ko AI, Reis MG, Dourado CMR, Johnson WD, Riley LW and the Salvador Leptospirosis Study Group. Urban epidemic of severe leptospirosis in Brazil. **Lancet**. 1999;354:820-25.
58. Niederweis M, Ehrt S, Heinz C, Klocker U, Karosi S, Swiderek K, Riley LW, Benz R. Cloning of the *msp*A gene encoding a porin from *Mycobacterium smegmatis*. **Molecular Microbiol**. 1999;33:933-45.
59. Lu S, Manges AR, Xu Y, Fang FC, Riley LW. Analysis of virulence of clinical isolates of *Salmonella enteritidis* in vivo and in vitro. **Infect Immun** 1999;67:5651-57.
60. Ferrazoli L, Palaci M, Marques LRM, Jamal LF, Aifune JB, Chimara E, Martins MC, Telles MAS, Oliveira CAF, Palhares MC, Spada DTA, Riley LW. Transmission of tuberculosis in an endemic urban setting in Brazil. **Int J Tuberc Lung Dis**. 2000;4:18-25.
61. Ko AI, Reis JN, Coppola SJ, Gouveia EL, Cordeiro MS, Lobo TS, Pinheiro RM, Salgado K, Ribeiro DCM, Tavares-Neto J, Rocha H, Reis MG, Johnson WD, Riley LW. Clonally-related penicillin-resistant serotype 14 *Streptococcus pneumoniae* from cases of meningitis in Salvador, Brazil. **Clin Infect Dis**. 2000;30:78-86.
62. Miagostovitch MP, Santos FB, Guiterrez CM, Riley LW, Harris E. Rapid subtyping of dengue virus serotypes 1 and 4 by restriction site-specific PCR. **J Clin Microbiol**. 2000;38:1286-89.
63. Kimura R, Mandrell RE, Galland JC, Hyatt D, Riley LW. Restriction-site-specific (RSS)-PCR as a rapid test to detect enterohemorrhagic *E. coli* O157:H7 strains in environmental samples. **Appl Environ Microbiol**. 2000;66:2513-19.
64. Buchmeier N, Blanc-Potard A, Ehrt S, Piddington D, Riley LW, Groisman EA. A parallel intraphagosomal survival strategy shared by *Mycobacterium tuberculosis* and *Salmonella enterica*. **Molecular Microbiol**. 2000;35:1375-82.
65. Fandinho FCO, Kritski AL, Hofer C, Conde Jr H, Ferreira RMC, Saad MHF, Silva MG, Riley LW, Fonseca LS. RFLP patterns and risk factors for resistant tuberculosis transmission among hospitalized tuberculosis patients in Rio de Janeiro, Brazil. **Trans Royal Soc Trop Med Hyg.** 2000;94:271-275.
66. Stewart GR, Ehrt S, Riley LW, Dale JW, and McFadden J.Deletion of the putative antioxidant NoxR1 does not alter the virulence of *Mycobacterium tuberculosis* H37Rv. **Tubercle and Lung Dis.** 2000;80:237-242.
67. Magnani J, Mathema B, Berger J, Brown S, David M, Glatt A, Pujol F, Segal-Maurer S, Riley LW, Kreiswirth BN, Sepkowitz KA. Molecular epidemiology of tuberculosis among eight hospitals in New York City, 1996-1997. **Int J Infect Dis**. 2001;5:126-32.
68. Barocchi MA, Ko AI, Ferrer SR, Faria MT, dos Reis MG, Riley LW. Identification of a new repetitive element in *Leptospira interrogans* serovar copenhageni and its application to PCR-based differentiation of *Leptospira* serogroups. **J Clin Microbiol**.2001;39:191-195.
69. Chitale S, Ehrt S, Kawamura I, Fujimura T, Shimono N, Anand N, Lu S, Cohen-Gould L, and Riley LW. Recombinant *Mycobacterium tuberculosis* protein associated with mammalian cell entry. **Cellular Microbiol**. 2001;3:247-254.
70. Krekulova L, Rehak V, Wakil AE, Harris E, Riley LW. Nested restriction-site-specific PCR to type hepatitis C virus: a rapid method to distinguish HCV subtype 1b from other genotypes. **J Clin Microbiol**. 2001;39:1774-80.
71. Foxman B and Riley LW. Molecular epidemiology: focus on infection. **Am J Epidemiol**. 2001;153:1135-1141.
72. Webb M, Riley LW, Roberts RB. Cost of hospitalization and risk factors attributable to vancomycin-resistant

Enterococcus faecium infection. **Clin Infect Dis** 2001;33:445-452.
73. Krekulova L, Rehak V, Madrigal N, Johnson M, Riley LW. Genotypic and epidemiologic characteristics of hepatitis C virus (HCV) infections among injection drug user and non-user populations. **Clin Infect Dis.** 2001;33:1435-8.
74. Flannery B, Costa D, Carvalho FP, Guerreiro H, Matsunaga, J, Silva ED, Ferreira AGP, Riley LW, Reis MG, Haake DA, Ko AI. Evaluation of recombinant Leptospira antigen-based enzymelinked immunosorobent assays for the serodiagnosis of Leptospirosis. **J Clin.Microbiol,** 2001;39:3303-10.
75. Manges AR, Johnson JR, Foxman B, O'Bryan TT, Fullerton KE, and Riley LW. Widespread distribution of urinary tract infections caused by a multidrug-resistant *Escherichia coli* clonal group. **New Engl J Med.** 2001;345:1007-13.
76. Flannery B, Pereira MM, Velloso LF, Carvalho CC, Codes LG, Orrico GS, Dourado CMR, Riley LW, Reis MG, Ko AI. Referral Pattern of Leptospirosis Cases During a Large Urban Epidemic of Dengue. **Am. J. Trop. Med. Hyg.** 2001;65: 657-663.
77. Krekulova L, Rehak V, Killoran P, Madrigal N, Riley LW. Genotypic distribution of TT virus (TTV) in a Czech population: evidence for sexual transmission of the virus. **J Clin Virol.** 2001;23:31-41.
78. Kaps I, Ehrt S, Seeber S, Schnappinger D, Martin C, Riley LW, Niederweis M. Energy transfer between fluorescent proteins using a co-expression system in *Mycobacterium smegmatis*. **Gene** 2001;278:115-124.
79. Lu S, Killoran PB, Fang F, Riley, LW. The global regulator ArcA controls resistance to reactive nitrogen and oxygen intermediates in *Salmonella enteritidis*. **Infect Immun** 2002;70:451-461.
80. Firmani M, Riley LW. *Mycobacterium tuberculosis* CDC 1551 is resistant to Reactive Nitrogen and Oxygen Intermediates *in vitro*. **Infect Immun.**2002;70:3965-68.
81. Pellegrino FLPC, Teixeira LM, Carvalho MGS, Nouér SA, Oliveira MP, Sampaio JLM, Freitas AA, Ferreira, ALP, Amorim ELT, Riley LW, and Moreira BM. Occurrence of a Multidrug-Resistant *Pseudomonas aeruginosa* Clone in Different Hospitals Located in Rio de Janeiro, Brazil. **J Clin Microbiol.** 2002;40:2420-24.
82. Johnson JR, Manges AR, O'Bryan TT, and Riley LW. A Broadly Disseminated Multi-Drug Resistant Clonal Group of Extraintestinal Pathogenic *Escherichia coli* as a significant cause of acute pyelonephritis in the U.S. **Lancet.** 2002;359:2249-51.
83. Firmani M, Riley LW. Reactive nitrogen intermediates are bacteriostatic to *Mycobacterium tuberculosis* in vitro. **J Clin Microbiol.** 2002;40:3162-66.
84. Williams S, Senaratne R, Mougous J, Riley LW, Bertozzi CR. 5'adenosinephosphosulfate lies at a metabolic branch point in Mycobacteria. **J Biol Chem.** 2002;277:32606-615.
85. Sarkar U, Nascimento SF, Barbosa B, Martins R, Nuevo H, Kalafanos I, Grunstein I, Flannery B, Dias J, Riley LW, Reis MG, Ko AI. A Population-Based Case-Control Investigation of Risk Factors for Leptospirosis During an Urban Epidemic. **Am J Trop Med Hyg.** 2002;66:605-10.
86. Barocchi MA, Ko AI, Reis MG, McDonald KL, Riley LW. Rapid translocation of polarized MDCK cell monolayers by *Leptospira interrogans*: an invasive but non-intracellular pathogen. **Infect Immun.** 2002;70:6926-32.
87. Casali N, Konieczny M, Schmidt MA, Riley LW. The invasion activity of a *Mycobacterium tuberculosis* peptide presented by the *Escherichia coli* AIDA autotransporter. **Infect Immun.** 2002;70:6846-52.
88. Mougous JD, Leavell MD, Senaratne R, Leigh CD, Williams SJ, Riley LW, Leary JA, Bertozzi CR. Discovery of Sulfated Metabolites in Mycobacteria using a Genetic and Mass Spectrometric Approach. **Proc Natl Acad Sci, USA.** 2002;99:17037-42.
89. dos Santos FB, Miagostovich MP, Nogueira RM, Edgil D, Schatzmayr HG, Riley LW, Harris E Complete nucleotide sequence analysis of a Brazilian dengue virus type 2 strain. **Mem Inst Oswaldo Cruz.** 2002;97:991-5.
90. Pessoa-Silva CL, Moreira BM, Almeida VC, Flannery B, Lins MCA, Sampaio JLM, Teixeira LM, Miranda LEV, Riley LW, and Gerberding JL. Extended-spectrum ß-lactamase-producing *Klebsiella pneumoniae* in a neonatal

intensive care unit: risk factors for infection and colonization. **J. Hosp. Infect.** 2003;53:198-206.
91. Matsunaga J, Barocchi MA, Croda J, Young TA, Sanchez Y, Siqueira I, Bolin CA, Reis MG, Riley LW, Haake DA, Ko AI. Pathogenic Leptospira species express surface-exposed proteins belonging to the bacterial immunoglobulin superfamily. **Mol Microbiol.** 2003;49:929-45.
92. Krekulova L, Rehak V, Silva Filho HP, Zavoral M, and Riley LW. Genotypic distribution of hepatitis B virus in the Czech Republic: a possible association with modes of transmission and clinical outcome. **Eur J Gastroenterol Hepatol.** 2003;15:1-6.
93. Miagostovich MP, Sequeira PC, Dos Santos FB, Maia A, Nogueira RM, Schatzmayr HG, Harris E, Riley LW. Molecular typing of dengue virus type 2 in Brazil. Rev Inst Med Trop Sao Paulo. 2003;45:17-21.
94. Lu, S., Killoran, P. B., and Riley LW. Association of *Salmonella enterica* serovar Enteritidis YafD with chicken egg albumen resistance. **Infect Immun.** 2003; 71:6734-41.
95. Pai M, Flores LL, Pai N, Hubbard A, Riley LW, Colford JM Jr. Diagnostic accuracy of nucleic acid amplification tests for tuberculous meningitis: a systematic review and meta-analysis. **Lancet Infect Dis.** 2003;3:633-43.
96. Schmidt MA, Riley LW, Benz I. Sweet new world: glycoproteins in bacterial pathogens. **Trends Microbiol.** 2003;11:554-61.
97. Shimono N, Morici L, Casali N, Cantrell S, Sidders B, Ehrt S and Riley LW. Hypervirulent mutant of *Mycobacterium tuberculosis* resulting from disruption of the *mce1* operon. **Proc Natl Acad Sci, USA.** 2003;100:15918-23.
98. Schriefer A, Schriefer AL, Goes-Neto A, Guimaraes LH, Carvalho LP, Almeida RP, Machado PR, Lessa HA, de Jesus AR, Riley LW, Carvalho EM. Multiclonal *Leishmania braziliensis* population structure and its clinical implication in a region of endemicity for American tegumentary leishmaniasis. **Infect Immun.** 2004;72:508-14.
99. Manges A, Dietrich PS, Riley LW. 2004. Multidrug-Resistant *Escherichia coli* Clonal Groups Causing Community-acquired Pyelonephritis. **Clin Infect Dis.** 2004;38:329-34.
100. Pai Madhukar, Flores L, Hubbard A, Riley LW, Colford J. Nucleic acid amplification tests in the diagnosis of tuberculous pleuritis: a systematic review and meta-analysis. **BMC Infect Dis. 2004.** 4:6.
101. Guertin-McHugh C and Riley LW. Risk factors and costs associated with methicillin-resistant *Staphylococcus aureus* bloodstream infections. **Infect Cont Hosp Epidemiol.** 2004;25:425-30.
102. Woodruff PJ, Carlson BL, Siridechadilok B, Pratt MR, Senaratne RH, Mougous JD, Riley LW, Williams SJ, Bertozzi CR. Trehalose is required for growth of *Mycobacterium smegmatis*. **J Biol Chem.** 2004;279:28835-43.
103. Mougous JD, Petzold CJ, Senaratne RH, Lee DH, Akey DL, Lin FL, Munchel SE, Pratt MR, Riley LW, Leary JA, Berger JM, Bertozzi CR. Identification, function and structure of the mycobacterial sulfotransferase that initiates sulfolipid-1 biosynthesis. **Nat Struct Mol Biol.** 2004;11:721-9.
104. Johnson JR, Owens K, Manges AR, Riley LW. Rapid and specific detection of *Escherichia coli* clonal group A by gene-specific PCR. **J Clin Microbiol.** 2004;42:2618-22.
105. Lagally ET, Scherer JR, Blazej RG, Toriello NM, Diep BA, Ramchandani M, Sensabaugh GF, Riley LW, Mathies RA. Integrated portable genetic analysis microsystem for pathogen/infectious disease detection. **Anal Chem.** 2004;76:3162-70.
106. dos Santos FB, Miagostovich MP, Nogueira RM, Schatzmayr HG, Riley LW, Harris E. Analysis of recombinant dengue virus polypeptides for dengue diagnosis and evaluation of the humoral immune response. **Am J Trop Med Hyg.** 2004 71:144-52.
107. Manges AR, Johnson JR, Riley LW. Intestinal population dynamics of UTI-causing *Escherichia coli* within heterosexual couples. **Curr Issues Intestin Microbiol.** 2004;5:49-58.
108. Ramchandani M, Manges A, Debroy C, Smith S, Johnson JR, Riley LW. Possible animal origin of human multidrug-resistant uropathogenic *Escherichia coli*. **Clin Infect Dis** 2005;40:251-7.
109. Diehl GE, Yue HH, Hsieh K, Kuang AA, Ho M, Morici LA, Lenz LL, Cado D, Riley LW, Winoto A. TRAIL-R

as a negative regulator of innate immune cell responses. **Immunity**. 2004; 21:877-89.
110. Pai M, Riley LW, Colford JM Jr. Interferon-gamma assays in the immunodiagnosis of tuberculosis: a systematic review. **Lancet Infect Dis**. 2004;4:761-76.
111. Krekulova L, Rehak V, Riley LW. Hepatitis C virus (HCV) 5'NC sequence variants and their association with hepatitis C risk groups. **J Clin Virol**. 2005; 32:300-4.
112. de Filippis I, do Nascimento CR, Clementino MB, Sereno AB, Rebelo C, Souza NN, Riley LW. Rapid detection of *Neisseria meningitidis* in cerebrospinal fluid by one-step polymerase chain reaction of the nspA gene. **Diagn Microbiol Infect Dis**. 2005;51:85-90.
113. Ehrt S, Guo XV, Hickey CM, Ryou M, Monteleone M, Riley LW, Schnappinger D. Controlling gene expression in mycobacteria with anhydrotetracycline and Tet repressor. **Nucleic Acids Res.** 2005;33:e21.
114. Pai M, Gokhale K, Joshi R, Dogra S, Kalantri S, Mendiratta DK, Narang P, Daley CL, Granich RM, Mazurek GH, Reingold AL, Riley LW, Colford JM Jr. *Mycobacterium tuberculosis* infection in health care workers in rural India: comparison of a whole-blood interferon gamma assay with tuberculin skin testing. **JAMA**. 2005;293:2746-55.
115. Pai M, Kalantri S, Pascopella L, Riley LW, Reingold AL. Bacteriophage-based assays for the rapid detection of rifampicin resistance in *Mycobacterium tuberculosis*: a meta-analysis. **J Infect**. 2005.
116. Vivoni AM, Santos KR, de-Oliveira MP, Giambiagi-deMarval M, Ferreira AL, Riley LW, Moreira BM. Mupirocin for controlling methicillin-resistant *Staphylococcus aureus*: lessons from a decade of use at a university hospital. **Infect Control Hosp Epidemiol**. 2005;:662-7.
117. Riley LW, Manges AR. Epidemiologic versus genetic relatedness to define an outbreak-associated uropathogenic *Escherichia coli* group. **Clin Infect Dis.** 2005;41:567-8.
118. Telles MA, Ferrazoli L, Waldman EA, Giampaglia CM, Martins MC, Ueki SY, Chimara E, Silva CA, Cruz V, Waldman CC, Heyn I, Hirono IU, Riley LW. A population-based study of drug resistance and transmission of tuberculosis in an urban community. **Int J Tuberc Lung Dis**. 2005;9:970-6.
119. Telles MA, Chimara E, Ferrazoli L, Riley LW. *Mycobacterium kansasii*: antibiotic susceptibility and PCR-restriction analysis of clinical isolates. **J Med Microbiol**. 2005;54:975-9.
120. Chiang CY, Riley LW. Exogenous reinfection in tuberculosis. **Lancet Infect Dis**. 2005;5:629-36.
121. Flores LL, Pai M, Colford JM Jr, Riley LW. In-house nucleic acid amplification tests for the detection of *Mycobacterium tuberculosis* in sputum specimens: meta-analysis and meta-regression. **BMC Microbiol.** 2005;5:55.
122. Tartof SY, Solberg OD, Manges AR, Riley LW. Analysis of a uropathogenic *Escherichia coli* clonal group by multilocus sequence typing. J Clin Microbiol. 2005;43:5860-4.
123. Casali N, White AM, Riley LW. Regulation of the *Mycobacterium tuberculosis mce1* operon. **J Bacteriol.** 2006;188:441-9.
124. Clavijo RI, Loui C, Andersen GL, Riley LW, Lu Sangwei. Identification of genes associated with survival of *Salmonella enterica* Serovar enteritidis in chicken egg albumen. **Appl Environ Microbiol**. 2006;72:1055-64.
125. Manges AR, Perdreau-Remington F, Solberg O, Riley LW. Multidrug-resistant *Escherichia coli* clonal groups causing community-acquired bloodstream infections. **J Infect**. 2005 (online publication)
126. Manges AR, Natarajan P, Solberg OD, Dietrich PS, Riley LW. The changing prevalence of drug-resistant *Escherichia coli* in a community: evidence for community outbreaks of urinary tract infections. **Epidemiol Infect.** 2006;134:425-31.
127. Senaratne, R.H., De Silva, A.D., Williams, S.J., Mougous, J.D., Reader, J.R., Zhang, T., Chan, S., Sidders, B., Lee, D.H., Chan, J. Bertozzi, C.R., and Riley, L.W. 5'-Adenosinephosphosulfate reductase (CysH) protects *Mycobacterium tuberculosis* against reactive nitrogen and oxygen species and adaptive immunity. **Molecular Microbiol.** 2006;59:1744-53.

128. Cafrune PI, Riley LW, Possuelo LG, Valim AR, Borges M, Ribeiro MO, Rossetti ML, Zaha A. Recent transmission of tuberculosis involving retired patients. **J Infect**. 2006;53(6):370-6.
129. Myers WP, Westenhouse JL, Flood J, Riley LW. An ecological study of tuberculosis transmission in California. **Am J Public Health**. 2006;96:685-90.
130. Mougous JD, Senaratne RH, Petzold CJ, Jain M, Lee DH, Schelle MW, Leavell MD, Cox JS, Leary JA, Riley LW, Bertozzi CR. A sulfated metabolite produced by stf3 negatively regulates the virulence of *Mycobacterium tuberculosis*. **Proc Natl Acad Sci, USA**. 2006;103:4258-63.
131. Martins IS, Pessoa-Silva CL, Nouer SA, De Araujo EG, Ferreira AL, Riley LW, Moreira BM. Endemic Extended-Spectrum beta-Lactamase-producing *Klebsiella pneumoniae* at an Intensive Care Unit: Risk Factors for Colonization and Infection. **Microb Drug Resist**. 2006;12:50-8.
132. Solberg O, Ajiboye RI, Riley LW. Origin of class 1 and 2 integrons and gene cassettes in a population-based sample of uropathogenic *Escherichia coli*. **J Clin Microbiol**. 2006;44:1347-51.
133. Lu S, Tager LA, Chitale S, Riley LW.A cell-penetrating peptide derived from mammalian cell uptake protein of *Mycobacterium tuberculosis*. **Anal Biochem**. 2006;353:7-14
134. Kang H, Loui C, Clavijo RI, Riley LW, Lu S. Survival characteristics of *Salmonella enterica* serovar Enteritidis in chicken egg albumen. **Epidemiol Infect**. 2006;134(5):967-76.
135. Vivoni AM, Diep BA, de Gouveia Magalhaes AC, Santos KR, Riley LW, Sensabaugh GF, Moreira BM. Clonal Composition of *Staphylococcus aureus* Isolates at a Brazilian University Hospital: Identification of International Circulating Lineages. **J Clin Microbiol**. 2006;44:1686-91.
136. Pai M, Joshi R, Dogra S, Mendiratta DK, Narang P, Kalantri S, Reingold AL, Colford Jr JM, Riley LW, Menzies D. Serial Testing of Health Care Workers for Tuberculosis using Interferon-{gamma} Assay. **Am J Respir Crit Care Med**. 2006;174:349-55.
137. Pellegrino FL, Casali N, Dos Santos KR, Nouer SA, Scheidegger EM, Riley LW, Moreira BM. *Pseudomonas aeruginosa* epidemic strain carrying bla(SPM) metallo-beta-lactamase detected in Rio de Janeiro, Brazil. **J Chemother**. 2006;18:151-6.
138. Riley, LW. Of mice, men, and elephants: *Mycobacterium tuberculosis* cell envelope lipids and pathogenesis. **J Clin Invest**. 2006;116:1475-8.
139. Aguiar-Alves F, Medeiros F, Fernandes O, Pereira RMG, Perdreau-Remington F, Riley LW. A new genotyping method for *Staphylococcus aureus* based on exotoxin (*set*) genes. **J Clin Microbiol**. 2006; 44:2728-32.
140. Alves MS, Dias RC, de Castro AC, Riley LW, Moreira BM. Identification of clinical isolates of indole-positive and indole-negative Klebsiella spp. **J Clin Microbiol**. 2006;44(10):3640-6.
141. Martins IS, Moreira BM, Riley LW, Santoro-Lopes G. Outbreak of extended-spectrum beta-lactamase-producing *Klebsiella pneumoniae* infection among renal transplant recipients. **J Hosp Infect**. 2006;64(3):305-8.
142. Krekulova L, Rehak V, Riley LW. Structure and functions of hepatitis C virus proteins: 15 years after. **Folia Microbiol (Praha)**. 2006;51:665-80.
143. Eisenberg JN, Cevallos W, Ponce K, Levy K, Bates SJ, Scott JC, Hubbard A, Vieira N, Endara P, Espinel M, Trueba G, Riley LW, Trostle J. Environmental change and infectious disease: how new roads affect the transmission of diarrheal pathogens in rural Ecuador. **Proc Natl Acad Sci U S A**. 2006;103(51):19460-5.
144. Dogra S, Narang P, Mendiratta DK, Chaturvedi P, Reingold AL, Colford JM Jr, Riley LW, Pai M. Comparison of a whole blood interferon-gamma assay with tuberculin skin testing for the detection of tuberculosis infection in hospitalized children in rural India. **J Infect**. 2007;54(3):267-76.
145. Uchida Y, Casali N, White A, Morici L, Kendall LV, Riley LW. Accelerated immunopathological response of mice infected with *Mycobacterium tuberculosis* disrupted in the mce1 operon negative transcriptional regulator. **Cell Microbiol**. 2007; 9(5):1275-83.
146. Pellegrino FL, Netto-Dos Santos KR, Riley LW, Moreira BM. *blaGES* carrying *Pseudomonas aeruginosa*

isolates from a public hospital in Rio de Janeiro, **Brazil. Braz J Infect Dis**. 2006;10(4):251-3.
147. Giudice A, Camada I, Leopoldo PT, Pereira JM, Riley LW, Wilson ME, Ho JL, de Jesus AR, Carvalho EM, Almeida RP. Resistance of Leishmania (Leishmania) amazonensis and Leishmania (Viannia) braziliensis to nitric oxide correlates with disease severity in Tegumentary Leishmaniasis.
BMC Infect Dis. 2007;7(1):7 [Epub ahead of print].
148. Sato N, Fujimura T, Masuzawa M, Yogi Y, Matsuoka M, Kanoh M, Riley LW, Katsuoka K. Recombinant Mycobacterium leprae protein associated with entry into mammalian cells of respiratory and skin components. **J Dermatol** Sci. 2007; [Epub ahead of print].
149. Senaratne RH, Mougous JD, Reader JR, Williams SJ, Zhang T, Bertozzi CR, Riley LW. Vaccine efficacy of attenuated but persistent *Mycobacterium tuberculosis cysH* mutant. J Med Microbiol. 2007;56:454-8.
150. Casali N, Riley LW. A phylogenomic analysis of the Actinomycetales mce operons. **BMC Genomics**. 2007;8:60.
151. Kalantri SP, Joshi R, Riley LW. Chikungunya epidemic: an Indian perspective. **Natl Med J India**. 2006;19(6):315-22.
152. Riley LW, Ko AI, Unger A, Reis MG. Slum health: Diseases of neglected populations. **BMC Int Health Hum Rights**. 2007;7:2.
153. Croda J, Ramos JG, Matsunaga J, Queiroz A, Homma A, Riley LW, Haake DA, Reis MG, Ko AI. Leptospira Immunoglobulin-Like (Lig) proteins is a Serodiagnostic Marker for Acute Leptospirosis. **J Clin Microbiol.** 2007;45(5):1528-34.
154. de Bruin MA, Riley LW. Does vancomycin prescribing intervention affect vancomycin-resistant enterococcus infection and colonization in hospitals? A systematic review. **BMC Infect Dis**. 2007;7(1):24 [Epub ahead of print].
155. Alves MS, Riley LW, Moreira BM. A case of severe pancreatitis complicated by Raoultella planticola infection. **J Med Microbiol**. 2007;56:696-8.
156. Lima P, Sidders B, Morici L, Reader R, Senaratne R, Casali N, Riley LW. Enhanced mortality despite control of lung infection in mice aerogenically infected with a *Mycobacterium tuberculosis mce1* operon mutant. **Microbe Infect**. 2007;9:1285-90.
157. Tartof S, Solberg OD, Riley LW. Genotypic analyses of uropathogenic *Escherichia coli* based on *fimH* single nucleotide polymorphism (SNP). **J Med Microbiol**. 2007;56:1363-9.
158. da Silva Dias RC, Borges-Neto AA, D'Almeida Ferraiuoli GI, de-Oliveira MP, Riley LW, Moreira BM. Prevalence of AmpC and other beta-lactamases in enterobacteria at a large urban university hospital in **Brazil. Diagn Microbiol Infect Dis**. 2007;60(1):79-87.
159. Unger A, Riley LW. Slum health: from understanding to action. PLoS Med. 2007;4:1561-6.
160. Rabello RF, Moreira BM, Lopes RM, Teixeira LM, Riley LW, Castro AC. Multilocus sequence typing of Staphylococcus aureus isolates recovered from cows with mastitis in Brazilian dairy herds. **J Med Microbiol.** 2007;56:1505-11.
161. Manges AR, Smith SP, Lau BJ, Nuval CJ, Eisenberg JN, Dietrich PS, Riley LW.
Retail Meat Consumption and the Acquisition of Antimicrobial Resistant Escherichia coli Causing Urinary Tract Infections: A Case-Control Study. **Foodborne Pathog Dis**. 2007;4:419-31.
162. Cantrell SA, Pascopella L, Flood J, Crane CM, Kendall LV, Riley LW. Community-wide transmission of a strain of *Mycobacterium tuberculosis* that causes reduced lung pathology in mice. **J Med Microbiol**. 2008;57:21-7. 18065663
163. Senaratne, RH, Sidders B, Sequeira P, Saunders G, Dunphy K, Marjanovic O, Reader RJ, Lima P, Chan S, Kendall S, McFadden JJ, Riley LW. *Mycobacterium tuberculosis* strains disrupted in *mce3* and *mce4* operons are attenuated in mice. **J Med Microbiol** 2008; 57:164-70. 18201981
164. Smith SP, Manges AR, Riley LW. Temporal changes in the prevalence of community-acquired antimicrobial-resistant urinary tract infection affected by *Escherichia coli* clonal group composition.
Clin Infect Dis. 2008;46:689-95. 18230040

165. Loui C, Grigoryan G, Huang H, Riley LW, Lu S. Bacterial communities associated with retail alfalfa sprouts. **J Food Prot**. 2008;71:200-4.
166. Ling DI, Flores LL, Riley LW, Pai M. Commercial nucleic-acid amplification tests for diagnosis of pulmonary tuberculosis in respiratory specimens: meta-analysis and meta-regression. **PLoS ONE**. 2008;3:e1536.
167. Baethgen LF, Weidlich L, Moraes C, Klein C, Nunes LS, Cafrune PI, Lemos AP, Rios SS, Abreu MF, Kmetzsch C, Sperb AF, Riley LW, Rossetti ML, Zaha A. Epidemiology of meningococcal disease in southern Brazil from 1995 to 2003, and molecular characterization of *Neisseria meni*ngitidis using multilocus sequence typing. **Trop Med Int Health**. 2008;13:31-40.
168. Pellegrino FL, Casali N, Nouér SA, Riley LW, Moreira BM. A carbapenem-susceptible *Pseudomonas aeruginosa* strain carrying the bla(SPM) gene. **Diagn Microbiol Infect Dis**. 2008;61:214-6.
169. Reis JN, Palma T, Ribeiro GS, Pinheiro RM, Ribeiro CT, Cordeiro SM, da Silva Filho HP, Moschioni M, Thompson TA, Spratt B, Riley LW, Barocchi MA, Reis MG, Ko AI. Transmission of *Streptococcus pneumoniae* in an urban slum community. **J Infect**. 2008;57:204-13.
170. Machado A Jr, Emodi K, Takenami I, Finkmoore BC, Barbosa T, Carvalho J, Cavalcanti L, Santos G, Tavares M, Mota M, Barreto F, Reis MG, Arruda S, Riley LW. Analysis of discordance between the tuberculin skin test and the interferon-gamma release assay. **Int J Tuberc Lung Dis**. 2009;13:446-53. 19335949
171. Inumaru VT, Nogueira PA, Butuem IV, Riley LW, Ferrazoli L. Reactive nitrogen intermediate susceptibility of *Mycobacterium tuberculosis* genotypes in an urban setting. **Int J Tuberc Lung Dis.** 2009;13:665-8. 19383204
172. Machado A Jr, Finkmoore B, Emodi K, Takenami I, Barbosa T, Tavares M, Reis MG, Arruda S, Riley LW. Risk factors for failure to complete a course of latent tuberculosis infection treatment in Salvador, Brazil. **Int J Tuberc Lung Dis**. 2009;13:719-25. 19460247
173. Schriefer A, Guimarães LH, Machado PR, Lessa M, Lessa HA, Lago E, Ritt G, Góes-Neto A, Schriefer AL, Riley LW, Carvalho EM. Geographic clustering of leishmaniasis in northeastern Brazil. **Emerg Infect Dis.** 2009;15:871-6.
174. Ajiboye RM, Solberg OD, Lee BM, Raphael E, Debroy C, Riley LW. Global spread of mobile antimicrobial drug resistance determinants in human and animal Escherichia coli and Salmonella strains causing community-acquired infections. **Clin Infect Dis**. 2009;49:365-71. 19538087
175. Dias RC, Marangoni DV, Riley LW, Moreira BM. Identification of uropathogenic Escherichia coli clonal group A (CgA) in hospitalised patients. **Mem Inst Oswaldo Cruz.** 2009;104:787-9. 19820843
176. Dias RC, Marangoni DV, Smith SP, Alves EM, Pellegrino FL, Riley LW, Moreira BM. Clonal composition of *Escherichia coli* causing community-acquired urinary tract infections in the State of Rio de Janeiro, Brazil. **Microb Drug Resist**. 2009;15:303-8. 19857137
177. Delcroix M and Riley LW. Cell-Penetrating Peptides for Antiviral Drug Development. **Pharmaceuticals** 2010; 3:448-470; doi:10.3390/ph3030448.
178. de Lourdes Bastos M, Osterbauer B, Mesquita DL, Carrera CA, Albuquerque MJ, Silva L, Pereira DN, Riley L, Carvalho EM. Prevalence of human T-cell lymphotropic virus type 1 infection in hospitalized patients with tuberculosis. **Int J Tuberc Lung Dis**. 2009;13:1519-23. 19919770
179. Marjanovic O, Miyata T, Goodridge A, Kendall LV, Riley LW. Mce2 operon mutant strain of *Mycobacterium tuberculosis* is attenuated in C57BL/6 mice. **Tuberculosis** (Edinb). 2010;90:50-6. 19963438
180. Dias RC, Moreira BM, Riley LW. Use of fimH single-nucleotide polymorphisms for strain typing of clinical isolates of *Escherichia coli* for epidemiologic investigation. **J Clin Microbiol**. 2010;48(2):483-8. (PMC2815601)
181. Dunphy KY, Senaratne RH, Masuzawa M, Kendall LV, Riley LW. Attenuation of *Mycobacterium tuberculosis* functionally disrupted in a fatty acyl-coenzyme A synthetase gene fadD5. **J Infect Dis**. 2010;201(8):1232-9. 20214478
182. Martins IS, da Conceição Faria FC, Miguel MA, de Sá Colaço Dias MP, Cardoso FL, de Gouveia Magalhães AC, Mascarenhas LA, Nouér SA, Barbosa AV, Vallim DC, Hofer E, Rebello RF, Riley LW, Moreira BM. A cluster of

Listeria monocytogenes infections in hospitalized adults. **Am J Infect Control.** 2010 Epub ahead of print. (PMC2952061)

183. Cheigh CI, Senaratne R, Uchida Y, Casali Y, Kendall LV, Riley LV. Post-treatment reactivation tuberculosis in mice caused by *Mycobacterium tuberculosis* disrupted in *mce1R*. **J Infect Dis** 2010; 202(5):752-9. (PMC2916974)
184. Tartof SY, Farrimond F, de Matos JA, Reis JN, Ramos RT, Andrade AN, Dos Reis MG, Riley LW. Inverse association between Lancefield group G Streptococcus colonization and sore throat in slum and non-slum settings in Brazil. **J Clin Microbiol.** 2010 49(1):409-12. (PMC3020425)
185. Tartof SY, Reis JN, Andrade AN, Ramos RT, Reis MG, Riley LW. Factors associated with Group A Streptococcus emm type diversification in a large urban setting in Brazil: a cross-sectional study. **BMC Infect Dis.** 2010 Nov 11;10:327 (PMC2994873)
186. Raphael E, Wong LK, Riley LW. Extended-spectrum Beta-lactamase gene sequences in gram-negative saprophytes on retail organic and nonorganic spinach. **Appl Environ Microbiol.** 2011;77:1601-7.
187. Marjanovic O, Iavarone AT, Riley LW. Sulfolipid accumulation in Mycobacterium tuberculosis disrupted in the mce2 operon. **J Microbiol.** 2011;49(3):441-7.
188. Pellegrino FL, Vieira VV, Baio PV, dos Santos RM, dos Santos AL, Santos NG, Meohas MM, Santos RT, de Souza TC, da Silva Dias RC, Santoro-Lopes G, Riley LW, Moreira BM. Acinetobacter soli as a cause of bloodstream infection in a neonatal intensive care unit. **J Clin Microbiol.** 2011;49(6):2283-5.
189. Stavrum R, Stavrum AK, Valvatne H, Riley LW, Ulvestad E, Jonassen I, Aßmus J, Doherty TM, Grewal HM. Modulation of Transcriptional and Inflammatory Responses in Murine Macrophages by the *Mycobacterium tuberculosis* Mammalian Cell Entry (Mce) 1 Complex. **PLoS ONE.** 2011;6(11): 10.1371
190. Miyata, T, Cheigh CI, Casali N, Goodridge A, Marjanovic O, Kendall LV, Riley LW. An adjunctive therapeutic vaccine against reactivation and post-treatment relapse tuberculosis. **Vaccine**; 2012;30:459-465.
191. Martins N, Martins IS, de Freitas WV, de Matos JA, Magalhães AC, Girão VB, Dias RC, de Souza TC, Pellegrino FL, Costa LD, Boasquevisque CH, Nouér SA, Riley LW, Santoro-Lopes G, Moreira BM. Severe infection in a lung transplant recipient caused by donor-transmitted carbapenem-resistant *Acinetobacter baumannii*. **Transpl Infect Dis.** 2011. [Epub ahead of print].
192. Goodridge A, Cueva C, Lahiff M, Muzanye G, Johnson JL, Nahid P, Riley LW. Anti-phospholipid antibody levels as biomarker for monitoring tuberculosis treatment response. **Tuberculosis (Edinb).** 2012;92(3):243-7.
193. Adams-Sapper S, Sergeevna-Selezneva J, Tartof S, Raphael E, Diep BA, Perdreau-Remington F, Riley LW. Globally dispersed mobile drug-resistance genes in Gram-negative bacterial isolates from patients with bloodstream infections in a US urban general hospital. **J Med Microbiol.** 2012;61(Pt 7):968-74.
194. Ribeiro GS, Tartof SY, Oliveira DW, Guedes AC, Reis MG, Riley LW, Ko AI. Surgery for valvular heart disease: a population-based study in a Brazilian urban center. **PLoS One.** 2012;7(5):e37855.
195. Smith CD, Berk SG, Brandl MT, Riley LW. Survival characteristics of diarrheagenic Escherichia coli pathotypes and *Helicobacter pylori* during passage through the free-living ciliate, Tetrahymena sp. **FEMS Microbiol Ecol.** 2012 Jun 11. [Epub ahead of print].
196. Stavrum R, Valvatne H, Stavrum AK, Riley LW, Ulvestad E, Jonassen I, Doherty TM, Grewal HM. *Mycobacterium tuberculosis* Mce1 protein complex initiates rapid induction of transcription of genes involved in substrate trafficking. **Genes Immun.** 2012 Jun 14. [Epub ahead of print].
197. Queiroz A, Sousa R, Heine C, Cardoso M, Guimarães LH, Machado PR, Carvalho EM, Riley LW, Wilson ME, Schriefer A. Association between an emerging disseminated form of leishmaniasis and Leishmania (Viannia) braziliensis strain polymorphisms. **J Clin Microbiol.** 2012;50(12):4028-34.
198. Adams-Sapper S, Diep BA, Perdreau-Remington F, Riley LW. Clonal Composition and Community Clustering of Drug-Susceptible and -Resistant *Escherichia coli* Isolates from Bloodstream Infections. **Antimicrob Agents Chemother.** 2013;57(1):490-7.

199. Vinhas SA, Palaci M, Marques HS, Lobo de Aguiar PP, Ribeiro FK, Peres RL, Dietze R, Gomes HM, Suffys PN, Golub JE, Riley LW, Noia Maciel EL. Mycobacterium tuberculosis DNA fingerprint clusters and its relationship with RD(Rio) genotype in Brazil. **Tuberculosis (Edinb).** 2012; S1472-9792(12)00182-5.
200. Takenami I, Finkmoore B, Machado A Jr, Emodi K, Riley LW, Arruda S. Levels of interferon-gamma increase after treatment for latent tuberculosis infection in a high-transmission setting. **Pulm Med.** 2012;757152.
201. Martins N, Martins IS, de Freitas WV, de Matos JA, Girão VB, Coelho-Souza T, Maralhães AC, Cacci LC, de Figueiredo MP, Dias RC, Costa-Lourenço AP, Ferreira AL, Dalla-Costa L, Nouér SA, Santoro-Lopes G, Riley LW, Moreira BM. Imported and Intensive Care Unit-Born *Acinetobacter baumannii* Clonal Complexes: One-Year Prospective Cohort Study in Intensive Care Patients. **Microb Drug Resist.** 2013. [Epub ahead of print].
202. Coelho-Souza T, Reis JN, Martins N, Martins IS, Menezes AO, Reis MG, Silva NO, Dias RC, Riley LW, Moreira BM. Longitudinal surveillance for meningitis by Acinetobacter in a large urban setting in **Brazil. Clin Microbiol Infect.** 2013;19(5):E241-4.
203. de Sousa VS, Rabello RF, Dias RC, Martins IS, dos Santos LB, Alves EM, Riley LW, Moreira BM. Time-based distribution of *Staphylococcus saprophyticus* pulsed field gel-electrophoresis clusters in community-acquired urinary tract infections. **Mem Inst Oswaldo Cruz.** 2013 Feb;108(1):73-6.
204. Reis-Santos B, Locatelli R, Horta BL, Faerstein E, Sanchez MN, Riley LW, Maciel EL. Socio-Demographic and Clinical Differences in Subjects with Tuberculosis with and without Diabetes Mellitus in Brazil - A Multivariate Analysis. **PLoS One.** 2013 Apr 24;8(4):e62604.
205. Girão VB, Martins N, Cacci LC, Coelho-Souza T, Nouér SA, Riley LW, Moreira BM. Dissemination of *Acinetobacter nosocomialis* clone among critically ill patients and the environment. **J Clin Microbiol.** 2013 May 22. [Epub ahead of print]. PMID:23698521.
206. Goodridge A, Zhang T, Miyata T, Lu S, Riley LW. Anti-phospholipid IgM antibody response in acute and chronic Mycobacterium tuberculosis mouse infection model. **Clin Respir J.** 2013;12049. [Epub ahead of print] PMID:23910993.
207. Reis-Santos B, Gomes T, Macedo LR, Horta BL, Riley LW, Maciel EL. Prevalence and patterns of multimorbidity among tuberculosis patients in Brazil: a cross-sectional study. **Int J Equity Health.** 2013;12(1):61. [Epub ahead of print]. PMID:23962018.
208. Cantrell SA, Leavell MD, Marjanovic O, Iavarone AT, Leary JA, Riley LW. Free mycolic acid accumulation in the cell wall of the mce1 operon mutant strain of Mycobacterium tuberculosis. **J Microbiol.** 2013; 51(5):619-26. PMID:24037657.
209. Takenami I, Loureiro C, Machado A Jr, Emodi K, Riley LW, Arruda S. Blood Cells and Interferon-Gamma Levels Correlation in Latent Tuberculosis **Infection. ISRN Pulmonol.** 2013. doi:pii: 256148.
210. Gomes T, Vinhas SA, Reis-Santos B, Palaci M, Peres RL, Aguiar PP, Ribeiro FK, Marques HS, Dettoni Vdo V, Johnson JL, Riley LW, Maciel EL. Extrapulmonary Tuberculosis: *Mycobacterium tuberculosis* Strains and Host Risk Factors in a Large Urban Setting in Brazil. **PLoS One.** 2013 Oct 2;8(10):e74517.
211. Martins N, Dalla-Costa L, Uehara AA, Riley LW, Moreira BM. Emergence of Acinetobacter baumannii international clone II in Brazil: Reflection of a global expansion. **Infect Genet Evol.** 2013 Oct 10;20C:378-380. PMID: 24121023.
212. Ribeiro Macedo L, Reis-Santos B, Riley LW, Maciel EL. Treatment outcomes of tuberculosis patients in Brazilian prisons: a polytomous regression analysis. **Int J Tuberc Lung Dis.** 2013;17(11):1427-34. PMID: 24125446.
213. Coelho-Souza T, Martins N, Maia F, Frases S, Bonelli RR, Riley LW, Moreira BM. Pyomelanin production: a rare phenotype in *Acinetobacter baumannii*. **J Med Microbiol.** 2013. PMID:24149622.
214. Berman HF, Riley LW. Identification of novel antimicrobial resistance genes from microbiota on retail spinach. **BMC Microbiol.** 2013; 13:272.
215. Snyder RE, Jaimes G, Riley LW, Faerstein E, Corburn J. A Comparison of Social and Spatial Determinants of

Health Between Formal and Informal Settlements in a Large Metropolitan Setting in Brazil. J Urban Health. 2013 Dec 3. [Epub ahead of print].
216. Riley LW, Raphael E, Faerstein E. Obesity in the United States - dysbiosis from exposure to low-dose antibiotics? **Front Public Health**. 2013;1:69.
217. Sequeira PC, Senaratne RH, Riley LW. Inhibition of toll-like receptor 2 (TLR-2)-mediated response in human alveolar epithelial cells by mycolic acids and Mycobacterium tuberculosis mce1 operon mutant. **Pathog Dis.** 2014;70(2):132-40.
218. Gomes T, Reis-Santos B, Bertolde A, Johnson JL, Riley LW, Maciel EL. Epidemiology of extrapulmonary tuberculosis in Brazil: a hierarchical model. **BMC Infect Dis**. 2014. [Epub ahead of print].
219. Madhivanan P, Raphael E, Rumphs A, Krupp K, Ravi K, Srinivas V, Arun A, Reingold AL, Klausner JD, Riley LW. Characterization of culturable vaginal Lactobacillus species among women with and without bacterial vaginosis from the United States and India: a cross-sectional study. **J Med Microbiol**. 2014 Jul;63(Pt 7):931-5. PMID: 24836413.
220. Riley LW. Pandemic lineages of extraintestinal pathogenic Escherichia coli. **Clin Microbiol Infect**. 2014;20(5):380-90.
221. Berman HF, Barberino MG, Moreira ED, Riley LW, Reis JN. Distribution of strain type and antimicrobial susceptibility of Escherichia coli isolates causing meningitis in a large urban setting in Brazil. **J Clin Microbiol** 2014;52(5):1418-22. PMID: 24523478
222. Berman HF, Tartof SY, Reis JN, Reis MG, Riley LW. Distribution of superantigens in group A streptococcal isolates from Salvador, Brazil. **BMC Infect Dis**. 2014 May 29;14:294. PMID:24885209.
223. Reis-Santos B, Gomes T, Locatelli R, de Oliveira ER, Sanchez MN, Horta BL, Riley LW, Maciel EL. Treatment outcomes in tuberculosis patients with diabetes: a polytomous analysis using Brazilian surveillance system. **PLoS One**. 2014;9(7):e100082. PMID: 25003346.
224. de Souza FM, do Prado TN, Pinheiro Jdos S, Peres RL, Lacerda TC, Loureiro RB, Carvalho JA, Fregona G, Dias ES, Cosme LB, Rodrigues RR, Riley LW, Maciel EL. Comparison of interferon-γ release assay to two cut-off points of tuberculin skin test to detect latent *Mycobacterium tuberculosis* infection in primary health care workers. **PLoS One.** 2014;9(8):e102773. PMID: 25137040.
225. Francis SS, Riley LW. Metagenomic epidemiology: a new frontier. **J Epidemiol Community Health**. 2014. PMID: 25248921.
226. Snyder RE, Marlow MA, Riley LW. Ebola in urban slums: the elephant in the room. **Lancet Glob Health**. 2014;2(12):e685. PMID:25433618.
227. Braga ED, Aguiar-Alves F, de Freitas Mde F, de e Silva MO, Correa TV, Snyder RE, de Araújo VA, Marlow MA, Riley LW, Setúbal S, Silva LE, Araújo Cardoso CA. High prevalence of *Staphylococcus aureus* and methicillin-resistant *S. aureus* colonization among healthy children attending public daycare centers in informal settlements in a large urban center in Brazil. **BMC Infect Dis**. 2014;14:538. PMID: 25287855.
228. Martins N, Picão RC, Adams-Sapper S, Riley LW, Moreira BM. Association of Class 1 and 2 Integrons with Multidrug-Resistant Acinetobacter baumannii International Clones and Acinetobacter nosocomialis Isolates. **Antimicrob Agents Chemother**. 2015;59(1):698-701. PMID: 25348522.
229. Hristea A, Olaru ID, Adams-Sapper S, Riley LW. Characterization of ESBL-producing Escherichia coli and Klebsiella pneumoniae from bloodstream infections in three hospitals in Bucharest, Romania: a preliminary study. **Infect Dis (Lond).** 2015;47(1):46-51. PMID:25365029.
230. Umene YD, Wong LK, Satoh T, Yamane K, Matsui M, Riley LW, Arakawa Y, Suzuki S. Molecular Epidemiological Characterization of Uropathogenic Escherichia coli from an Outpatient Urology Clinic in Rural Japan. **J Clin Microbiol**. 2015;53(2):681-3. PMID:25428151.
231. Snyder RE, Marlow MA, Riley LW. Ebola in urban slums: the elephant in the room. **Lancet Glob Health.** 2014;2(12):e685.

232. Marlow MA, Maciel EL, Sales CM, Gomes T, Snyder RE, Daumas RP, Riley LW. Tuberculosis DALY-Gap: spatial and quantitative comparison of disease burden across urban slum and non-slum census tracts. **J Urban Health**. 2015; 92(4):622-34.
233. Madhivanan P, Alleyn HN, Raphael E, Krupp K, Ravi K, Nebhrajani R, Arun A, Reingold AL, Riley LW, Klausner JD. Identification of culturable vaginal Lactobacillus species among reproductive age women in Mysore, India. **J Med Microbiol**. 2015 Apr 14.
234. Unger A, Felzemburgh RD, Snyder RE, Ribeiro GS, Mohr S, Costa VB, Melendez AX, Reis RB, Santana FS, Riley LW, Reis MG, Ko AI; Pau da Lima Urban Health Team. Hypertension in a Brazilian urban slum population. **J Urban Health**. 2015;92(3):446-59.
235. Laux da Costa L, Delcroix M, Dalla Costa ER, Prestes IV, Milano M, Francis SS, Unis G, Silva DR, Riley LW, Rossetti ML. A real-time PCR signature to discriminate between tuberculosis and other pulmonary diseases. **Tuberculosis**. 2015;95(4):421-5.
236. Ribeiro FK, Pan W, Bertolde A, Vinhas SA, Peres RL, Riley L, Palaci M, Maciel EL. Genotypic and Spatial Analysis of *Mycobacterium tuberculosis* Transmission in a High-Incidence Urban Setting. **Clin Infect Dis.** 2015;61(5):758-66.
237. Adams-Sapper S, Nolen S, Donzelli GF, Lal M, Chen K, Justo da Silva LH, Moreira BM, Riley LW. Rapid induction of high-level carbapenem resistance in heteroresistant KPC-producing Klebsiella pneumoniae. **Antimicrob Agents Chemother**. 2015;59(6):3281-9.
238. Stephens C, Cho PJ, Afonso de Araujo V, Gomes IM, de Azevedo Sias SM, Araújo Cardoso CA, Riley LW, Aguiar-Alves F. Draft Genome Sequence of a Community-Associated Methicillin-Resistant Panton-Valentine Leukocidin-Positive Staphylococcus aureus Sequence Type 30 Isolate from a Pediatric Patient with a Lung Infection in Brazil. **Genome Announc**. 2015;3(4).
239. Queiroz A, Medina-Cleghorn D, Marjanovic O, Nomura DK, Riley LW. Comparative metabolic profiling of mce1 operon mutant vs wild-type *Mycobacterium tuberculosis* strains. **Pathog Dis**. 2015 Nov;73(8).
240. Reis-Santos B, Pellacani-Posses I, Macedo LR, Golub JE, Riley LW, Maciel EL. Directly observed therapy of tuberculosis in Brazil: associated determinants and impact on treatment outcome. **Int J Tuberc Lung Dis**. 2015 Oct;19(10).
241. Stephens CM, Skerker JM, Sekhon MS, Arkin AP, Riley LW. Complete Genome Sequences of Four *Escherichia coli* ST95 Isolates from Bloodstream Infections. **Genome Announc**. 2015 Nov 5;3(6).
242. Martins N, Picão RC, Cerqueira-Alves M, Uehara A, Barbosa LC, Riley LW, Moreira BM. A new trilocus sequence-based multiplex-PCR to detect major *Acinetobacter baumannii* clones. **Infect Genet Evol**. 2016;42:41-5.
243. Takenami I, de Oliveira CC, Lima FR, Soares J, Machado A Jr, Riley LW, Arruda S. Immunoglobulin G response to mammalian cell entry 1A (Mce1A) protein as biomarker of active tuberculosis. **Tuberculosis** (Edinb). 2016;100:82-8.
244. Snyder RE, Marlow MA, Phuphanich ME, Riley LW, Maciel EL. Risk factors for differential outcome following directly observed treatment (DOT) of slum and non-slum tuberculosis patients: a retrospective cohort study. **BMC Infect Dis**. 2016;16:494.
245. Francis SS, Plucinski MM, Wallace AD, Riley LW. Genotyping Oral Commensal Bacteria to Predict Social Contact and Structure. **PLoS One**. 2016;11(9):e0160201.
246. Prado TN, Rajan JV, Miranda AE, Dias ED, Cosme LB, Possuelo LG, Sanchez MN, Golub JE, Riley LW, Maciel EL. Clinical and epidemiological characteristics associated with unfavorable tuberculosis treatment outcomes in TB-HIV co-infected patients in Brazil: a hierarchical polytomous analysis. **Braz J Infect Dis**. 2016 S1413-8670(16)30586-4.
247. Francis SS, Wallace AD, Wendt GA, Li L, Liu F, Riley LW, Kogan S, Walsh KM, de Smith AJ, Dahl GV, Ma X, Delwart E, Metayer C, Wiemels JL. In utero cytomegalovirus infection and development of childhood acute lymphoblastic leukemia. **Blood.** 2016; 07-723148.

248. Pandya S, Ravi K, Srinivas V, Jadhav S, Khan A, Arun A, Riley LW, Madhivanan P. Comparison of Culture-dependent and Culture-Independent Molecular Methods for Characterisation of Vaginal Microflora. **J Med Microbiol**. 2016; 10.1099/jmm.0.000407.
249. Schump MD, Fox DM, Bertozzi CR, Riley LW. Subcellular Partitioning and Intramacrophage Selectivity of Antimicrobial Compounds against *Mycobacterium tuberculosis*. **Antimicrob Agents Chemother**. 2017;61(3) e01639-16.
250. de Souza da-Silva AP, de Sousa VS, Martins N, da Silva Dias RC, Bonelli RR, Riley LW, Moreira BM. *Escherichia coli* sequence type 73 as a cause of community acquired urinary tract infection in men and women in Rio de Janeiro, Brazil. **Diagn Microbiol Infect Dis**. 2017: S0732-8893(17)30043-3.
251. Queiroz A, Riley LW. Bacterial immunostat: Mycobacterium tuberculosis lipids and their role in the host immune response. Rev Soc Bras Med Trop. 2017;50(1):9-18.
252. Snyder RE, Boone CE, Cardoso CA, Aguiar-Alves F, Neves FP, Riley LW. Zika: A scourge in urban slums. **PLoS Negl Trop Dis**. 2017;11(3):e0005287.
253. Stephens C, Adams-Sapper S, Sekhon M, Johnson J, Riley LW. Genomic Analysis of Factors Associated with Low Prevalence of Antibiotic Resistance in Extraintestinal Pathogenic *Escherichia coli* Sequence Type 95 Strains. **mSphere.** 2(2). pii: e00390-16.
254. Neves FPG, Cardoso NT, Snyder RE, Marlow MA, Cardoso CAA, Teixeira LM, Riley LW. Pneumococcal carriage among children after four years of routine 10-valent pneumococcal conjugate vaccine use in Brazil: The emergence of multidrug resistant serotype 6C. **Vaccine.** 2017;35(21):2794-2800.
255. de Sousa VS, da-Silva APS, Sorenson L, Paschoal RP, Rabello RF, Campana EH, Pinheiro MS, Dos Santos LOF, Martins N, Botelho ACN, Picão RC, Fracalanzza SEL, Riley LW, Sensabaugh G, Moreira BM. Staphylococcus saprophyticus Recovered from Humans, Food, and Recreational Waters in Rio de Janeiro, Brazil. **Int J Microbiol.** 2017;2017:4287547.
256. Rajan JV, Ferrazoli L, Waldman EA, Simonsen V, Ferreira P, Telles MA, Riley LW. Diabetes increases the risk of recent-transmission tuberculosis in household contacts in São Paulo, Brazil. **Int J Tuberc Lung Dis.** 2017;21(8):916-921.
257. Raphael E, Riley LW. Infections Caused by Antimicrobial Drug-Resistant Saprophytic Gram-Negative Bacteria in the Environment. **Front Med (Lausanne).** 2017;4:183.
258. Lima FR, Takenami I, Cavalcanti MA, Riley LW, Arruda S. ELISA-based assay of immunoglobulin G antibodies against mammalian cell entry 1A (Mce1A) protein: a novel diagnostic approach for leprosy. **Mem Inst Oswaldo Cruz.** 2017;112(12):844-849.
259. Prado TND, Riley LW, Sanchez M, Fregona G, Nóbrega RLP, Possuelo LG, Zandonade E, Locatelli RL, Souza FM, Rajan JV, Maciel ELN. Prevalence and risk factors for latent tuberculosis infection among primary health care workers in Brazil. **Cad Saude Publica**. 2017;18;33.
260. Neves FPG, Cardoso NT, Souza ARV, Snyder RE, Marlow MM, Pinto TCA, Teixeira LM, Riley LW. Population structure of Streptococcus pneumoniae colonizing children before and after universal use of pneumococcal conjugate vaccines in Brazil: emergence and expansion of the MDR serotype 6C-CC386 lineage. **J Antimicrob Chemother**. 2018; doi: 10.1093/jac/dky001
261. Peres RL, Vinhas SA, Ribeiro FKC, Palaci M, do Prado TN, Reis-Santos B, Zandonade E, Suffys PN, Golub JE, Riley LW, Maciel EL. Risk factors associated with cluster size of Mycobacterium tuberculosis (Mtb) of different RFLP lineages in Brazil. **BMC Infect Dis**. 2018;18(1):71.
262. Tarlton NJ, Satoorian TS, Panchal A, Borges CA, Geisberg M, Riley LW. Monoclonal antibody-mediated detection of CTX-M β-lactamases in gram-negative bacteria. **J Microbiol Methods.** 2018; 144:37-43.
263. Yamaji R, Rubin J, Thys E, Friedman CR, Riley LW. Persistent pandemic lineages of uropathogenic Escherichia coli in a college community-1999-2017. **J Clin Microbiol**. 2018; 56: e01834-17.
264. Kim MW, Greenfield BK, Snyder RE, Steinmaus CM, Riley LW. The association between community-associated

Staphylococcus aureus colonization and disease: a meta-analysis. **BMC Infect Dis**. 2018;18(1):86.
265. Ordoñez C, Savage HP, Tarajia M, Rivera R, Weeks-Galindo C, Sambrano D, Riley L, Fernandez PL, Baumgarth N, Goodridge A. Both B-1a and B-1b cells exposed to Mycobacterium tuberculosis lipids differentiate into IgM antibody-secreting cells. **Immunology**. 2018. doi: 10.1111/imm.12909.
266. Adams-Sapper S, Gayoso A, Riley LW. Stress-adaptive responses associated with high-level carbapenem resistance in KPC-producing *Klebsiella pneumoniae*. **J Pathogens**. 2018; https://doi.org/10.1155/2018/3028290.
267. Frazee BW, Trivedi T, Montgomery M, Petrovic DF, Yamaji R, Riley LW. Emergency department urinary tract infections caused by extended-spectrum b-lactamase–producing Enterobacteriaceae: Many patients have no identifiable risk factor and discordant empiric therapy is common. **Annals of Emergency Medicine.** S0196-0644(18)30415-3.
268. Yamaji R, Friedman CR, Rubin J, Suh J, Thys E, McDermott P, Hung-Fan M, Riley LW. A Population-Based Surveillance Study of Shared Genotypes of Escherichia coli Isolates from Retail Meat and Suspected Cases of Urinary Tract Infections. **mSphere**. 2018;3(4). pii: e00179-18.
269. DeBoer T, Tarlton N, Yamaji R, Adams-Sapper S, Wu T, Maity S, Vegesna G, Sadlowski C, DePaola P, Riley LW, Murthy N. An enzyme-mediated amplification strategy enables detection of β-lactamase activity directly in unprocessed clinical samples for phenotypic detection of β-lactam resistance. **Chembiochem**. 2018;19(20):2173-2177.
270. Lovero KL, de Oliveira TRD, Cosme EM, Cabrera NB, Guimarães MF, de Avelar JG, de Oliveira GRT, Salviato CM, Douglass-Jaimes G, Cruz MLS, João EC, de Barros ACMW, Pone MVDS, Gomes IM, Riley LW, Cardoso CAA. Retrospective analysis of risk factors and gaps in prevention strategies for mother-to-child HIV transmission in Rio de Janeiro, Brazil. **BMC Public Health**. 2018 Sept;18(1):1110.
271. Takenami I, de Oliveira CC, Petrilli JD, Machado A, Riley LW, Arruda S. Serum antiphospholipid antibody levels as biomarkers for diagnosis of pulmonary tuberculosis patients. **Int J Tuberc Lung Dis**. 2018;2(9):1063-1070.
272. Batalha de Jesus AA, Freitas AAR, de Souza JC, Martins N, Botelho LAB, Girão VBC, Teixeira LM, Riley LW, Moreira BM. High-Level Multidrug-Resistant Escherichia coli Isolates from Wild Birds in a Large Urban Environment. **Microb Drug Resist**. 2018; doi: 10.1089/mdr.2018.0180.
273. Riley LW, Blanton RE. Advances in Molecular Epidemiology of Infectious Diseases: Definitions, Approaches, and Scope of the Field. **Microbiol Spectr**. 2018;6(6). doi: 10.1128/microbiolspec.
274. Riley LW. Laboratory Methods in Molecular Epidemiology: Bacterial Infections. **Microbiol Spectr**. 2018;6(6). doi: 10.1128/microbiolspec.
275. Delcroix M, Heydari K, Dodge R, Riley LW. Flow-cytometric analysis of human monocyte subsets targeted by Mycobacterium bovis BCG before granuloma formation. **Pathog Dis**. 2018;76(8).
276. Oliosi JGN, Reis-Santos B, Locatelli RL, Sales CMM, da Silva Filho WG, da Silva KC, Sanchez MN, de Andrade KVF, de Araújo GS, Shete PB, Pereira SM, Riley LW, Lienhardt C, Maciel ELN. Effect of the Bolsa Familia Programme on the outcome of tuberculosis treatment: a prospective cohort study. **Lancet Glob Health**. 2019;7(2):e219-e226.
277. Jackson N, Wu TZ, Adams-Sapper S, Satoorian T, Geisberg M, Murthy N, Lee L, Riley LW. A multiplexed, indirect enzyme-linked immunoassay for the detection and differentiation of E. coli from other Enterobacteriaceae and P. aeruginosa from other glucose non-fermenters. **J Microbiol Methods**. 2019;158:52-58.
278. Rayasam SDG, Ray I, Smith KR, Riley LW. Extraintestinal Pathogenic Escherichia coli and Antimicrobial Drug Resistance in a Maharashtrian Drinking Water System. **J Trop Med Hyg**. 2019 Mar 4. doi: 10.4269/ajtmh.18-0542.
279. Butcher CR, Rubin J, Mussio K, Riley LW. Risk factors associated with community-acquired urinary tract infections caused by extended-spectrum β-lactamase-producing Escherichia coli: a systematic review. **Current Epidemiology Reports.** https://doi.org/10.1007/s40471-019-00206-4.
280. Riley LW. Differentiating Epidemic from Endemic or Sporadic Infectious Disease Occurrence. **Microbiol Spectr.**

2019;7(4). doi: 10.1128/microbiolspec.
281. Tarlton NJ, Moritz C, Adams-Sapper S, Riley LW. Genotypic analysis of uropathogenic *Escherichia coli* to understand factors that impact the prevalence of ß-lactam-resistant urinary tract infections in a community. **J Glob Antimicrob Resist.** 2019; S2213-7165(19)30064-5.
282. Neves FPG, Cardoso NT, Cardoso CAA, Teixeira LM, Riley LW. Direct effect of the 13-valent pneumococcal conjugate vaccine use on pneumococcal colonization among children in Brazil. **Vaccine.** 2019 Aug 23;37(36):5265-5269. doi: 10.1016/j.
283. Justo-da-Silva LH, De-Azeredo AN, Bueno AC, Montezzi LF, Leobons MBGP, Alves MS, de Souza Inhaquite P, Santos RR, Girão VBC, da Cunha AJLA, Pessoa-Silva CL, Picão RC, Hofer CB, Santoro-Lopes G, Riley LW, Moreira BM. Diversity of clonal types of Klebsiella pneumoniae causing infections in intensive care neonatal patients in a large urban setting. **Braz J Microbiol.** 2019;50(4):935-942.
284. Neves FPG, Marlow MA, Rezende-Pereira G, Pinheiro MG, Dos Santos AFM, de Fátima Nogueira de Freitas M, Barros RR, Aguiar-Alves F, Cardoso CAA, Riley LW. Differences in gram-positive bacterial colonization and antimicrobial resistance among children in a high income inequality setting. **BMC Infect Dis.** 2019;19(1):478. doi: 10.1186/s12879-019-4104-2.
285. Borges CA, Tarlton NJ, Riley LW. Escherichia coli from Commercial Broiler and Backyard Chickens Share Sequence Types, Antimicrobial Resistance Profiles, and Resistance Genes with Human Extraintestinal Pathogenic *Escherichia coli*. **Foodborne Pathog Dis.** 2019. doi: 10.1089/fpd.2019.2680.
286. Vianna RAO, Lovero KL, Oliveira SA, Fernandes AR, Santos TCSD, Lima LCSS, Carvalho FR, Quintans MDS, Bueno AC, Torbey AFM, Souza ALAAG, Farias AOP, Camacho LAB, Riley LW, Cardoso CAA. Children Born to Mothers with Rash During Zika Virus Epidemic in Brazil: First 18 Months of Life. **J Trop Pediatr.** 2019;65(6):592-602.
287. Morberg DP, Alzate López YA, Moreira S, Prata N, Riley LW, Burroughs Peña MS. The rheumatic heart disease healthcare paradox: disease persistence in slums despite universal healthcare coverage-a provider perspective qualitative study. **Public Health.** 2019 Jun;171:15-23. doi: 10.1016/j.puhe.2019.03.015.
288. Cho B, Lee SH, Song J, Bhattacharjee S, Feng J, Hong S, Song M, Kim W, Lee J, Bang D, Wang B, Riley LW, Lee LP. Nanophotonic Cell Lysis and Polymerase Chain Reaction with Gravity-Driven Cell Enrichment for Rapid Detection of Pathogens. **ACS Nano.** 2019;13(12):13866-13874.
289. Martins-Sorenson N, Snesrud E, Xavier DE, Cacci LC, Iavarone AT, McGann P, Riley LW, Moreira BM. A novel plasmid-encoded mcr-4.3 gene in a colistin-resistant Acinetobacter baumannii clinical strain. **J Antimicrob Chemother.** 2020;75(1):60-64.
290. Rubin J, Mussio K, Xu Y, Suh J, Riley LW. Prevalence of Antimicrobial Resistance Genes and Integrons in Commensal Gram-Negative Bacteria in a College Community. **Microb Drug Resist.** 2020; doi: 10.1089/mdr.2019.0279.
291. Riley LW. Extraintestinal Foodborne Pathogens. **Annu Rev Food Sci Technol.** 2020; doi: 10.1146/annurev-food-032519-051618.
292. Schmidt CM, Lovero KL, Carvalho FR, Dos Santos DCM, Barros ACMW, Quintanilha AP, Barbosa AP, Pone MVS, Pone SM, Araujo JM, de Paula Martins C, Macedo SGD, Miceli AL, Vieira ML, Sias SMA, Queiroz A, Coca Velarde LG, Kritski AL, Silva AA, Sant'Anna CC, Riley LW, Araújo Cardoso CA. Serum anti-Mce1A immunoglobulin detection as a tool for differential diagnosis of tuberculosis and latent tuberculosis infection in children and adolescents. **Tuberculosis (Edinb).** 2020;120:101893. doi: 10.1016/j.tube.2019.101893.
293. Maity S, Wang X, Das S, He M, Riley LW, Murthy N. A cephalosporin-chemiluminescent conjugate increases beta-lactamase detection sensitivity by four orders of magnitude. **Chem Commun (Camb).** 2020; doi: 10.1039/c9cc09498a.
294. Vianna RAO, Rua EC, Fernandes AR, Dos Santos TCS, Dalcastel LAB, Dos Santos MLB, de Paula PDS, de Carvalho FR, Pache de Faria AO, Almeida PL, Sales LF, Riley LW, de Oliveira SA, Cardoso CAA. Experience in

diagnosing congenital Zika syndrome in Brazilian children born to asymptomatic mothers. **Acta Trop.** 2020 Mar 9:105438. doi: 10.1016/j.actatropica.2020.105438

295. Neto EDA, Guerrero J, Snyder RE, Pereira RFA, de Fátima Nogueira de Freitas M, Silva-Santana G, Riley LW, Aguiar-Alves F. Genotypic distribution of Staphylococcus aureus colonizing children and adolescents in daycare centers, an outpatient clinic, and hospitals in a major Brazilian urban setting. **Diagn Microbiol Infect Dis.** 2020 Apr 8;97(3):115058. PMID: 32380359.
296. Matsui Y, Hu Y, Rubin J, de Assis RS, Suh J, Riley LW. Multilocus sequence typing of Escherichia coli isolates from urinary tract infection patients and from fecal samples of healthy subjects in a college community. **Microbiology Open.** 2020 Mar 18:e1032. PMID: 32189451.
297. Matsui Y, Hu Y, Tarlton NJ, Riley LW. Draft Genome Sequence of an Escherichia coli Sequence Type 420 Isolate from a Patient with Urinary Tract Infection in Northern California. **Microbiology Open.** 2020;9(6):1225-1233.
298. Borges CA, Tarlton NJ, Riley LW. Escherichia coli from Commercial Broiler and Backyard Chickens Share Sequence Types, Antimicrobial Resistance Profiles, and Resistance Genes with Human Extraintestinal Pathogenic Escherichia coli. **Foodborne Pathog Dis.** 2019;16(12):813-822.
299. Hu Y, Matsui Y, Riley LW. Risk factors for fecal carriage of drug-resistant Escherichia coli: a systematic review and meta-analysis. **Antimicrobial Resistance and Infection Control.** 2020;9:31.
300. Faria AOP, Miterhof MEVDCR, Vianna RAO, Carvalho FR, Dalcastel LAB, Oliveira SA, Fonseca SC, Riley LW, Velarde LGC, Cardoso CAA Audiological Findings in Children Suspected to Have Been Exposed to the Zika Virus in the Intrauterine Period. **Otol Neurotol.** 2020; 41(7):e848-e853.
301. Moritz CF, Snyder RE, Riley LW, Immke DW, Greenfield BK. Antimicrobial Drug-Resistant Gram-Negative Saprophytic Bacteria Isolated from Ambient, Near-Shore Sediments of an Urbanized Estuary: Absence of β-Lactamase Drug-Resistance Genes. **Antibiotics** (Basel). 2020.10;9(7):E400.
302. Tarlton NJ, Petrovic DF, Frazee BW, Borges CA, Pham EM, Milton AK, Jackson N, DeBoer TR, Murthy N, Riley LW. A dual enzyme-based biochemical test rapidly detects third-generation cephalosporin-resistant CTX-M-producing uropathogens in clinical urine samples. **Microb Drug Resist.** (in press, 2020).

Books:

Riley, LW. *Molecular Epidemiology of Infectious Diseases: Principles and Practices*. 2004; ASM Press, Washington, DC, 348p.
Corburn J and Riley LW. *Slum health: from the cell to the street*. June, 2016. UC Press, 315p.
Riley LW and Blanton R. Curated series: Advances in Molecular Epidemiology of Infectious Diseases. *Microbiology Spectrum*, ASM Press

Book Chapters:

1. Feldman RA, Riley LW. Epidemiology of Salmonella and Shigella infections in the United States. In: Bacterial Diarrheal Diseases. Eds: Takeda Y, Miwatani T, KTK Scientific Publishers. Tokyo 1984.
2. Riley LW. Infectious diseases associated with *Escherichia coli*. In: The Laboratory Diagnosis of Infectious Diseases: Principles and Practice, vol 1. Eds: Balows A, Hausler WJ, Ohashi M, Turano A. Springer-Verlag. p. 237-261.
3. Riley LW, Pape JW, Johnson WD. Salmonellosis and Shigellosis. In: Internal Medicine, 4th edition. Ed. J.H. Stein. Mosby, St Louis, p.2140-47.
4. Riley LW. Acute inflammatory diarrhea (dysentery). In: Infections of the Gastrointestinal Tract. Eds. MJ Blaser, PD Smith, JI Ravdin, HB Greenberg, RL Guerrant. Raven Press, NY. 1995; p. 283-298.
5. Riley LW. Isoniazid chemistry and metabolism. In: Tuberculosis. Eds W.N. Rom, S. Garay. Little, Brown & Co. Boston. 1996.

6. Riley LW. Phagocytosis of *M. tuberculosis*. In: Tuberculosis. Eds. W.N. Rom, S. Garay. Little, Brown & Co. Boston. 1996.
7. Ho JH, Riley LW. Defenses against tuberculosis. In: The Lung: Scientific Foundation. Eds. R. Crystal, JB West et al. Lippincott-Raven Publishers, Philadelphia, 1997.
8. Riley LW. Acute inflammatory diarrhea (dysentery). In: Infections of the Gastrointestinal Tract. Eds. MJ Blaser, PD Smith, JI Ravdin, HB Greenberg, RL Guerrant. Raven Press, NY. 2nd Edition. Lippincott Williams & Wilkins., Philadelphia, 2002.
9. Fenton MJ, Riley, LW, Schlesinger LS. Receptor-mediated recognition of *Mycobacterium tuberculosis* by host cells. Tuberculosis and the Tubercle Bacillus. Cole ST, Eisenach KD, McMurray DN, and Jacobs WR (eds). ASM Press, 2004.
10. Riley, LW. Molecular Epidemiology. In: Bacterial Infections of Humans. 4th ed. Brachman PS, Abrutyn E. (eds). Springer, New York. 2009.
11. Riley, LW. Dare to imagine and imagine to dare. In: Young Scientist Journey. Soderberg P, Astin C eds. Butrous Foundation, Canterbury, UK 2010.

Up-To-Date Journal:
1. Riley LW. Immunology of tuberculosis: 2000-2017. UpToDate, Wellesley, MA.
2. Riley LW. Microbiology and pathogenesis of tuberculosis: 2000-2017. UpToDate, Wellesley, MA.