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Stanford University, School of Medicine
Division of Infectious Diseases and Geographic Medicine
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CURRENT PROFESSIONAL EXPERIENCE.

Stanford University School of Medicine 2017 – present
Postdoctoral Epidemiology Research Fellow
Division of Infectious Diseases and Geographic Medicine
Stanford, California

Research Laboratory Head: Jason R. Andrews, MD, MS

Description: Contribute to several large-scale, collaborative research projects including:

- 1) Applying field epidemiology and statistical modeling to evaluate tuberculosis transmission dynamics and community-level interventions in high burden, South African townships.
- 2) Leading and organizing a collaborative individual-participant meta-analysis of 30 cohort studies with progressive tuberculosis disease data including over 400,000 individuals and 1.5 million person-years of follow-up.
- 3) Assessing the impact of tuberculosis transmission in prisons on the general population and evaluate mass screening approaches in several prisons in southern Brazil.

PRIOR PROFESSIONAL EXPERIENCE.

University of Cape Town 2016 – 2017
Research Investigator
Department of Paediatrics and Child Health
Drakenstein Child Health study
Cape Town, South Africa

Research Senior Investigator: Heather J. Zar, MD, PhD

Funding: Bill and Melinda Gates Foundation; Grant No. OPP-1017641

Description: Provided complementary support in cleaning, analysis, and writing.

The Drakenstein Child Health study is a unique, multidisciplinary, longitudinal birth cohort investigating determinants of child health, including childhood respiratory function, tuberculin skin sensitivity, tuberculosis disease, infant neurodevelopmental outcomes, and respiratory illness.

University of Georgia, Makerere University 2013 – 2017
Graduate Research Investigator
Department of Epidemiology and Biostatistics
Community Health and Social Networks of Tuberculosis (COHSONET)
Athens, Georgia; Kampala, Uganda

Research Senior Investigator: Christopher C. Whalen, MD, MS

Funding: National Institutes of Health Grant No. R01-AI-AI093856

National Institutes of Health Minority Supplement Grant No. 1021RR773015

Description: Provided support in cleaning, analysis, and writing.

The COHSONET study recruited 120 tuberculosis cases and controls and their social network contacts in Kampala, Uganda. Latent tuberculosis infection and tuberculosis disease was measured and related to individual-level characteristics and social network dynamics.

Common Ground Health Clinic
Graduate Researcher
New Orleans, Louisiana

2010 – 2012

Research Senior Investigator: Marielena Lara, MD

Funding: National Institute for Occupational Safety and Health (NIOSH) Grant No. R21 OH 009605

Description: Administered surveys and conducted six focus groups to undocumented migrant workers that work in the construction industry. Worker safety and potential interventions were assessed.

Tulane University of Public Health and Tropical Medicine
Asociacion Benefica PRISMA
Graduate Research Investigator
Lima, Peru

2010 – 2012

Research Senior Investigators: Richard A. Oberhelman, MD, Robert H. Gilman, MD

Funding: National Institute of Health – National Institute on Minority Health and Health Disparities, Grant No. T375T37MD001424-12

Description: Concurrently conducted and managed two field-based epidemiological research studies

- 1) Measured the prevalence of tuberculin sensitivity in Lima's shantytowns in 2012 and compared rates to previous estimates from 1990 and 2000.
- 2) Developed and implemented a Knowledge, Attitudes, and Practice survey to investigate attitudes to *Campylobacter jejuni* and having poultry in periurban communities.

Tulane University School of Public Health and Tropical Medicine
Graduate Research Interviewer
Department of Epidemiology
New Orleans, Louisiana

2011 – 2012

Research Senior Investigator: Patricia Kissinger, PhD, MPH

Funding: National Institute of Health – National Institute of Drug Abuse, Grant No. 1R21DA026806

Description: Interviewed undocumented Latino migrant workers on their sexual activity, HIV risk, depression, alcohol, and substance abuse practices.

University of Arizona Respiratory Center
Respiratory Research Technician
Tucson, Arizona

2008 – 2010

Research Supervisor: Monica Vasquez, PhD, MPH

Funding: National Institute of Health – National Institute of Allergy and Infectious Diseases, Clinical Trial No. NCT00395304 (BADGER)

National Institute of Health – National Heart, Lung, and Blood Institute, Clinical Trial No. NCT00394329 (TREXA)
Description: Administered questionnaires and lung function tests to Latino children with asthma for several National Institute of Health funded clinical trials

EDUCATION.

University of Georgia 2013 – 2017
College of Public Health
Department of Epidemiology and Biostatistics
Athens, Georgia

Degree: Doctorate of Philosophy

Subject: Epidemiology

Advisor: Christopher C. Whalen, MD, MS

Dissertation Title: Predicting coprevalent and incident tuberculosis disease in household contacts of tuberculosis cases

Tulane University 2010 – 2012
Tulane School of Public Health and Tropical Medicine
Department of Global Community Health and Behavioral Sciences
New Orleans, Louisiana

Degree: Master of Public Health

Advisor: Richard A. Oberhelman, MD

Thesis Title: Tuberculin skin test sensitivity over 20 years in shantytowns in Lima, Peru

University of Arizona 2005 – 2009
Tucson, Arizona

Degree: Bachelor of Arts

Subject: Political Science, Spanish

Study Abroad: Viña Del Mar, Chile

SCHOLARLY PUBLICATIONS.

Original articles: 31 (28 peer-reviewed research articles)

Total original articles as first or co-first author: 19 (16 peer-reviewed research articles)

1. **Martinez L**, Verma R, Croda J, Horsburgh CR, Walter KS, Degner N, Middelkoop K, Koch A, Hermans S, Warner D, Wood R, Cobelens F, Andrews JR. Detection, Survival, and Infectious Potential of *Mycobacterium tuberculosis* in the Environment: A Review of the Evidence and Epidemiological Implications. *European Respiratory Journal* [Online Only]. May 2019.
2. **Martinez L***, Lo N*, Cords O, Hill PC, Khan P, Hatherill M, Mandalakas A, Kay A, Croda J, Horsburgh CR, Zar HJ, Andrews JR. Pediatric Tuberculosis Transmission Outside the Household: Challenging Historical Paradigms to Inform Future Public Health Strategies. *The Lancet Respiratory Medicine*. [Online Only]. May 2019. (*Contributed equally).
3. Peters J, Andrews JR, Hatherill M, Hermans S, **Martinez L**, Schurr E, van der Heijden Y,

Wood R, Kana B (2019). Advances in the understanding of *Mycobacterium tuberculosis* transmission in HIV-endemic settings. *The Lancet Infectious Diseases*, 19 (3): 65-76.

4. Castellanos ME, Kirimunda S, **Martinez L**, Quach T, Woldu H, Kakaire R, Handel A, Zalwango S, Kiwanuka N, Whalen CC (2018). Performance of the QuantiFERON Gold In-Tube Assay in Tuberculin Skin Test Converters: A Prospective Cohort Study. *International Journal of Tuberculosis and Lung Disease*. 22 (9), 1000–1006.
5. Liu Q*, Lu P*, **Martinez L***, Yang H, Lu W, Ding X, Zhu L (2018). Factors Affecting Time to Sputum Culture Conversion and Treatment Outcome of Patients with Multidrug-resistant Tuberculosis in China. *BMC Infectious Diseases*. 18 (1). (*All contributed equally).
6. **Martinez L**, Shen Y, Handel A, Chakraborty S, Stein C, Malone L, Boom WB, Quinn FD, Joloba ML, Whalen CC, Zalwango S (2018). Effectiveness of WHO’s Pragmatic Screening Algorithm for Child Contacts of Tuberculosis Cases in Resource-Constrained Settings: A Prospective Cohort Study in Uganda. *The Lancet Respiratory Medicine*. 6 (4), 276–286.
7. **Martinez L**, Handel A, Shen Y, Chakraborty S, Quinn F, Stein CM, Malone LL, Zalwango S, Whalen CC (2018). A Prospective Validation of a Clinical Algorithm to Detect Tuberculosis in Child Contacts. *American Journal of Respiratory and Critical Care Medicine*. 197 (9): 1214–1216.
8. Ezeamama AE, Bustinduy A, Nkwata AK, **Martinez L**, Pabalan N, Boivin MJ, King CH (2018). Cognitive Deficits and Educational Loss in Children with Schistosome Infection – A Systematic Review and Meta-analysis. *PLoS Neglected Tropical Diseases* 12 (1): e0005524.
9. Sekandi JN, Zalwango S, Nkwata A, **Martinez L**, Kakaire R, Mutanga J, Whalen CC, Kiwanuka N (2018). Low Prevalence of Tuberculin Skin Test Boosting among Community Residents in Uganda. *American Journal of Tropical Medicine and Hygiene*. 98 (2), 379-381.
10. Lu P, Ding X, Liu Q, Lu W, **Martinez L**, Sun J, Lu F, Zhong C, Jiang H, Miao C, Zhu L, Yang H (2018). Mediating Effect of Repeated Tuberculosis Exposure on the Risk of Transmission to Household Contacts of Multidrug-Resistant Tuberculosis Cases. *American Journal of Tropical Medicine and Hygiene*. 98 (2), 364-371.
11. **Martinez L**, le Roux DM, Barnett W, Stadler A, Nicol MP, Zar HJ (2018). Tuberculin Skin Test Conversion and Primary Progressive Tuberculosis Disease in the First Five Years of Life: A Birth Cohort Study from Cape Town, South Africa. *The Lancet Child & Adolescent Health*. 2 (1), 46–55.
12. **Martinez L**, Zhu L, Castellanos ME, Chen C, Liu Q, Hallowell BD, Whalen CC (2017). Glycemic Control and the Prevalence of Tuberculosis Infection: A Population-based Observational Study. *Clinical Infectious Diseases*. 65 (12), 2060-2068.
 - Media mention: Central Chronicle (India), *BMJ*, Citizen News Service, bdnews24 (Bangladesh), Health24, Asian Tribune
 - 2017 Union Conference for Lung Health press release
 - 2017 Union Conference for Lung Health opening press conference

- Citizen News press conference
13. Liu Q, Li Q, Chen C, Wang J, **Martinez L**, Lu W, Zhu L (2017). Diagnostic Performance of the GenoType MTBDRplus and MTBDRsl Assays to Identify Tuberculosis Drug Resistance in Eastern China. *Chinese Medical Journal*. 130 (13), 1521–1528.
 14. **Martinez L**, Shen Y, Mupere E, Kizza A, Hill PC, Whalen CC (2017). Transmission of *Mycobacterium tuberculosis* in Households and the Community: A Systematic Review and Meta-Analysis. *American Journal of Epidemiology*. 185 (12), 1327–1339.
 15. Mesías S, **Martinez L**, Yohannessen K, Alvarado S, Klarián J, Martín M, Costilla R, Fuentes M, Cáceres DD (2017). Trace Element Contents in Fine Particulate Matter (PM_{2.5}) in Urban School Microenvironments Near a Contaminated Beach with Mine Tailings, Chañaral, Chile. *Environmental Geochemistry and Health*. [Online only]. May 2017.
 16. **Martinez L**, Castellanos ME, Hallowell B, Whalen CC (2017). Innovative Methods to Manage, Detect, and Prevent Tuberculosis. *American Journal of Respiratory and Critical Care Medicine*. 195 (4), 530–532.
 17. Lu P*, Liu Q*, **Martinez L***, Yang H, Lu W, Ding X, Zhu L (2017). Time to Sputum Culture Conversion and Treatment Outcome of Patients with Multidrug-resistant Tuberculosis: A Prospective Cohort Study from Urban China. *European Respiratory Journal*. 49 (3). (*All contributed equally).
 18. **Martinez L**, Xu L, Chen C, Sekandi JN, Zhu Y, Zhang C, Whalen CC, Zhu L (2017). Delays and Features of Tuberculosis Diagnosis in Patients from a Referral Hospital in Urban China. *American Journal of Tropical Medicine and Hygiene*. 96 (5), 1060–1065.
 19. **Martinez L**, Sekandi JN, Castellanos ME, Zalwango S, Whalen CC (2016). Infectiousness of HIV-seropositive Patients with Tuberculosis in a High-burden African Setting. *The American Journal of Respiratory and Critical Care Medicine*. 194 (9), 1152–1163.
 - University of Georgia press release
 20. Diaz Fuentes CM, **Martinez Pantoja L**, Tarver M, Gerschwind SA, Lara M (2016). Latino Immigrant Day Laborer Perceptions of Occupational Safety and Health Information Preferences. *American Journal of Industrial Medicine*. 59 (6), 476-485.
 21. **Martinez L**, Mesías S, Yohannessen K, Alvarado S, Klarián J, Martín M, Costilla R, Cáceres DD (2016). Indoor-outdoor Concentrations of Fine Particulate Matter in School Microenvironments Near a Mine Tailing Deposit. *AIMS Environmental Science*. 3 (4), 752–764.
 22. Sekandi JN, Zalwango S, **Martinez L**, Handel A, Kakaire R, Nkwata AK, Ezeamama AE, Kiwanuka N, Whalen CC (2015). Four Degrees of Separation: Social Contacts and Health Providers Influence the Steps to Final Diagnosis of Active Tuberculosis Patients in Urban Uganda. *BMC Infectious Diseases*, 15:361. (Selected for inclusion in the 9th issue of “HIV this month” in October of 2015.)

23. Ezeamama AE, Mupere M, Oloya J, **Martinez L**, Kakaire R, Yin X, Sekandi JN, Whalen CC (2015). Age, Sex & Nutritional Status Modify CD4+ T-Cell Recovery Rate in HIV/Tuberculosis Co-Infected Patients on cART. *International Journal of Infectious Diseases*, 35: 73-79.
24. Zhu L*, Liu Q*, **Martinez L***, Shi J, Chen C, Shao Y, Zhong C, Song H, Li G, Ding X, Zhou Y, Zhu L, Whalen CC, Lu W (2015). Diagnostic Value of Genechip for Detection of Resistant *Mycobacterium tuberculosis* in Patients with Differing Treatment Histories. *Journal of Clinical Microbiology*. 53.1: 131-135. (*All contributed equally).
25. Shao Y, Chen C, Song H, Li G, Liu Q, Li Y, Zhu L, **Martinez L**, Lu W (2015). The Epidemiology and Geographic Distribution of Nontuberculous Mycobacteria Clinical Isolates from Sputum Samples in the Eastern Region of China. *PLoS Neglected Tropical Diseases*. 9 (3): e0003623.
26. **Martinez L**, Arman A, Haveman N, Lundgren A, Cabrera L, Evans CA, Pelly TF, Saito M, Callacondo D, Oberhelman R, Collazo G, Carnero A, Gilman RH (2013). Changes in Tuberculin Skin Test Positivity over 20 Years in Periurban Shantytowns in Lima, Peru. *American Journal of Tropical Medicine and Hygiene*. 89: 507-515.
27. Calvopiña M, **Martinez L**, Hashiguchi Y (2013). Cutaneous Leishmaniasis “Chiclero's Ulcer” in Subtropical Ecuador. *American Journal of Tropical Medicine and Hygiene*, 89, 195.
28. **Martinez L**, Collazo G, Cabrera L, Bernabe-Ortiz A, Ramos-Peña Y, Oberhelman R (2013). Free-ranging Chickens in Households in a Periurban Shantytown in Peru – Attitudes and Practices 10 Years After a Community-based Intervention Project. *American Journal of Tropical Medicine and Hygiene*, 89: 229-231.

Invited Perspectives.

29. **Martinez L** (2019). Towards a More Holistic Understanding of Paediatric Tuberculosis. *The Lancet Child & Adolescent Health*, 3 (4): 220-221.

Invited Guest Editorials.

30. **Martinez L**, Andrews JR (2019). Improving Tuberculosis Case Finding in Persons Living with Advanced HIV through New Diagnostic Algorithms. *American Journal of Respiratory and Critical Care Medicine*, 199 (5): 559-560.
31. **Martinez L**, Zar HJ (2018). Tuberculin Conversion and Tuberculosis Disease in Infants and Young Children from The Drakenstein Child Health Study: A Call to Action. *South African Medical Journal*. 108 (4): 247-248.

Manuscripts Currently Under Peer Review.

1. **Martinez L***, Cheng W*, Wang X*, Ling F, Mu L, Li C, Huo X, Huang H, Zhu L, Li C, Handel A, Chen E, Shen Y. Predicting Mortality Among Laboratory-Confirmed Avian Influenza A H7N9 Patients: Derivation and Validation of a Risk Classification Model. *Journal of*

Infectious Diseases (Accepted Pending Revisions). Accepted in April 2019. (*All contributed equally).

2. Handel A, **Martinez L**, Sekandi JN, Bellan S, Zhu L, Chen C, Liu Q, Donkor S, Sutherland J, Hill PC, Gilman RH, Grandjean L, Whalen CC. Evidence for Tuberculosis Superspreaders: An Analysis of Cough Duration in Six Studies from China, Peru, The Gambia, and Uganda. *International Journal of Tuberculosis and Lung Disease* (Accepted Pending Revisions). Accepted in April 2019.
3. **Martinez L**, Woldu H, Chen C, Hallowell BD, Castellanos ME, Lu P, Liu Q, Whalen CC, Zhu L. Transmission Dynamics in Tuberculosis Patients with Human Immunodeficiency Virus: A Systematic Review and Meta-Analysis of 32 Observational Studies. *British Medical Journal* (Under Review). Initial submission in May 2019.
4. Liu Q*, Lu P*, **Martinez L***, Kong W, Ding X, Peng H, Zhu T, Wang J, Zhu L, Lu W. Undiagnosed Diabetes Mellitus and Tuberculosis Infection: A Population-based Observational Study from Eastern China. *BMC Medicine* (Under Review). Initial submission in November 2018. (*All contributed equally).
5. Khan PY, Glynn JR, Fielding KL, Mzembe T, **Martinez L**, Mulawa D, Chiumya R, Kranzer K, Fine PE, Crampin AC. Incident *Mycobacterium tuberculosis* infections in children identify risk factors for community M.tb transmission in Malawi. *American Journal of Respiratory & Critical Care Medicine* (Under Review). Initial submission in February 2019.
6. Woldu H, Zalwango S, **Martinez L**, Castellanos ME, Kakaire R, Sekandi JN, Kiwanuka N, Whalen CC. Defining an Indeterminate Tuberculin Skin Test: A Mixture Model Analysis of Two High-Risk Populations from Kampala, Uganda. *American Journal of Respiratory & Critical Care Medicine* (Under Review). Initial submission in April 2019.
7. Liu Q, Li Z, Ji Y, **Martinez L**, Zhu L, Wang J. Seasonality and Trend Forecasting of Pulmonary Tuberculosis in Jiangsu Province, China, Using the Advanced Statistical Time-Series Analyses. *Infection and Drug Resistance* (Under Review). Initial Submission in March 2019.
8. Oliveira R, Carbone A, Reis C, Leite A, Sacchi F, Araujo R, Santos P, Rolla V, **Martinez L**, Andrews JR, Croda J. Primary Prophylaxis for the Prevention of Tuberculosis Infection and Disease in Prisons: A Randomized Controlled Trial from Brazil. *American Journal of Respiratory & Critical Care Medicine* (Under Review). Initial submission in March 2019.
9. Liu Q, Wang D, **Martinez L**, Lu P, Zhu L, Lu W, Wang J. *Mycobacterium tuberculosis* Beijing Genotype Strains and Unfavorable Treatment Outcomes: A Systematic Review and Meta-analysis of 12 Cohort Studies. *Journal of Clinical Medicine* (Under Review). Initial Submission in March 2019).

CONFERENCES AND SCHOLARLY ACTIVITIES.

Extramural Invited Scholarly Presentations.

1. "Modeling Pediatric Tuberculosis: How Can We Improve?" Tuberculosis MAC/WHO Meeting. Session: Advancing the Modeling of Diagnostic Testing in Key Populations: Children and People Living with HIV. Washington DC, United States, September 2018
2. "Does Tuberculosis Exposure Intensity Influence Quantitative IGRA Level?" South African Tuberculosis Vaccine Initiative (SATVI). Cape Town, South Africa. July 2018.
3. "Differential Risk of Progressive Tuberculosis Disease in Males and Females." Epidemiology In-Action Research Seminar. University of Georgia, School of Public Health, Institute for Global Health. May 2018.
4. "Pediatric Tuberculosis in sub-Saharan Africa: A Call to Action." Stephen Lawn Memorial Award Seminar. London School of Hygiene & Tropical Medicine. 2018 World TB Day Symposium. March 2018.
5. "The International Exchange Program for Minority Students: An Experience from Northern Chile." Mount Sinai School of Medicine, Department of Preventative Medicine. New York, New York. June 2016.
6. "Fine Particulate Matter Levels in School Microenvironments Near a Beach Polluted with Mine Tailings in Northern Chile." Mount Sinai School of Medicine, Department of Preventative Medicine. New York, New York. June 2015.
7. "Increased Tuberculosis Infection in Men in Peruvian Shantytowns Despite a Decade of Decreasing Tuberculosis Disease." Quinta Conferencia Anual American Society of Tropical Medicine and Hygiene Peru. Lima, Peru. February 2015.

Intramural Invited Scholarly Presentations.

Stanford University, School of Medicine.

1. **Martinez L.** "Men and Tuberculosis: Weeding through the Hypotheses." Jason R. Andrews' Research Seminar. Stanford University, School of Medicine. Division of Infectious Diseases and Geographic Medicine. Stanford, California. October 2018.
2. **Martinez L.** "Differential Risk in Males and Females of Progressive Tuberculosis Disease Given Infection – Preliminary Findings from 8 Cohort Studies of 17681 Individuals with Tuberculosis Infection." Infectious Disease Epidemiology Research-In-Progress Seminar. Stanford University, School of Medicine. Division of Infectious Diseases and Geographic Medicine. Stanford, California. April 2018.
3. **Martinez L.** "The Epidemiology of Pediatric Tuberculosis in sub-Saharan Africa." Angelle Desiree LaBeaud's Research Seminar. Stanford University, School of Medicine. Department of Pediatrics. Stanford, California. October 2017.
4. **Martinez L.** "Environmental Sampling of *Mycobacterium tuberculosis*." Jason R. Andrews' Research Seminar. Stanford University, School of Medicine. Division of Infectious Diseases and Geographic Medicine. Stanford, California. September 2017.

University of Georgia, College of Public Health.

5. **Martinez L.** “The Infectiousness of HIV seropositive tuberculosis patients.” Center for Global Health Seminar Series, University of Georgia. Athens, Georgia. September 2016.
6. **Martinez L.** “Household and Community Tuberculosis Transmission: A Systematic Review and Meta-analysis.” Christopher C. Whalen’s Research Seminar. University of Georgia, School of Public Health, Department of Epidemiology and Biostatistics. Athens, Georgia. October 2015.
7. **Martinez L.** “Systematic screening of household contacts of tuberculosis cases: Is programmatic implementation possible in low-income countries?” Presented at the Epidemiology Seminar Series, University of Georgia. Athens, Georgia. September 2016.
8. **Martinez L.** “Global Health: The Epidemiology of Infectious Diseases.” Guest Lecture in Introduction to Epidemiology Undergraduate Course. University of Georgia. Athens, Georgia. April 2016.

Tulane University School of Tropical Medicine & Hygiene.

9. **Martinez L.** “Corralling of Free-Ranging Chickens in Households from a Periurban Shantytown in Peru: Attitudes and Practices 10 Years after a Community-Based Intervention.” Tulane University School of Tropical Medicine and Hygiene, Orientation Conference. New Orleans, Louisiana. August 2012.

Oral Conference Presentations.

1. Walter KS, Gonçalves CC, Ko AI, Oliveira RD, da Silva Santos A, **Martinez L**, Arakaki-Sanchez D, Croda J, Andrews JR. Increases in tuberculosis cases in prisons offset control gains in the general population in Brazil. 50th Union World Conference on Lung Health. Hyderabad, India. October 2019.
2. **Martinez L**, Cords O, Walter KS, O’Marr J, Zheng J, Patkar N, Croda J, Warren J, Cohen T, Andrews JRA. Global Burden of Tuberculosis Attributable to Incarcerated Populations. 50th Union World Conference on Lung Health. Hyderabad, India. October 2019.
3. **Tuberculosis Observational Studies Consortium.** Prophylaxis in Diabetic Patients to Prevent Tuberculosis Progression: A Multi-Cohort Study. 50th Union World Conference on Lung Health. Hyderabad, India. October 2019. (First and Primary Author of Consortium).
4. **Tuberculosis Observational Studies Consortium.** Tuberculosis Disease Progression in Children After Close Exposure and Effectiveness of Preventive Therapy. 50th Union World Conference on Lung Health. Hyderabad, India. October 2019. (First and Primary Author of Consortium).
5. Liu Q, You N, **Martinez L**, Lu P, Cao H, Guo X, Yin W, Mao X, Zhu L, Wang J, Lu W. Treatment outcomes among tuberculosis patients with diabetes mellitus patients in Jiangsu, China. 50th Union World Conference on Lung Health. Hyderabad, India. October 2019.
6. Verma R, Middelkoop J, Degner N, Moreira F, da Silva Santos A, **Martinez L**, Patil S, Wood

- R, Croda J, Andrews JRA. Detection of *Mycobacterium tuberculosis* in the Environment as a Novel Tool for Identifying High-risk Locations for Tuberculosis Transmission. 50th Union World Conference on Lung Health. Hyderabad, India. October 2019.
7. Zhu L, Lu P, Liu Q, **Martinez L**, Lu W. Comparison of Tuberculin Skin Tests and QuantiFERON Gold In-Tube Tests in a High TB-Burden Setting: A Population-based, Prospective Cohort Study. 50th Union World Conference on Lung Health. Hyderabad, India. October 2019.
 8. Liu Q, You N, **Martinez L**, Lu P, Cao H, Guo X, Yin W, Mao W, Zhu L, Wang J, Lu W. A Prospective Mass Tuberculosis Screening Evaluation of 89,704 Diabetic Patients in Jiangsu Province, China. 50th Union World Conference on Lung Health. Hyderabad, India. October 2019.
 9. Liu Q, Li G, **Martinez L**, Lu P, Lu W, Zhu L. The Beijing Genotype and Unfavorable Tuberculosis Treatment Outcomes: A Prospective Cohort Study from Mainland China of *Mycobacterium tuberculosis* in China. 7th Conference of the Union Asia Pacific Region. Manila, Philippines. April, 2019.
 10. Lu P, Liu Q, **Martinez L**, Zhu L, Lu W. "Diabetes Mellitus and Latent Tuberculosis Infection in the Eastern China: A Population-based, Retrospective Cohort Study." 7th Conference of the Union Asia Pacific Region. Manila, Philippines. April, 2019.
 11. Castellanos ME, **Martinez L**, Sekandi JN, Ebell MH, Dobbin KK, Quinn FD, Kiwanuka N, Whalen CC. "Defining adequate contact for transmission of *Mycobacterium tuberculosis* in an urban African environment." 49th Union World Conference on Lung Health. Session: TB infection: from latent to eliminated. The Hague, The Netherlands. October 2018.
 12. **Martinez L**, Zhu L, Whalen, CC, Liu Q, Hill PC, Croda J, Andrews JR. "Differential Risk of Progression to Tuberculosis Disease in Men and Women: Findings from 9 Cohort Studies Involving 21033 Individuals with Tuberculosis Infection. 49th Union World Conference on Lung Health. Session: From Local to Global in TB Care and Prevention. The Hague, The Netherlands. October 2018.
 13. **Martinez L***, le Roux DM*, Stadler A, Barnett W, Nicol MP, Zar HJ. "Tuberculin skin test conversion and primary progressive disease in South African infants and young children: A longitudinal birth cohort study." 48th Union World Conference on Lung Health. Session: The Union/CDC Late-breaker session on tuberculosis. Guadalajara, Mexico. October 2017. (*Contributed equally).
 14. **Martinez L**, Handel A, Shen Y, Quinn F, Whalen CC. "Systematic screening of household contacts of tuberculosis cases in sub-Saharan Africa: derivation of a predictive risk score." 48th Union World Conference on Lung Health. Session: Leave no one behind – the hard work of finding cases. Guadalajara, Mexico. October 2017.
 15. **Martinez L**, Handel A, Shen Y, Chakraborty S, Quinn F, Whalen CC. "The World Health Organization's symptom-based screening algorithm for child tuberculosis contacts: A prospective validation from sub-Saharan Africa." 48th Union World Conference on Lung

Health. Session: State of the Art – updates on childhood tuberculosis and lung health. Guadalajara, Mexico. October 2017.

16. **Martinez L**, Zhu L, Castellanos ME, Chen C, Liu Q, Hallowell BD, Whalen CC. “Glycemic control and the prevalence of latent tuberculosis infection: a population-based study using HbA_{1c}, fasting plasma glucose, and 2-hour plasma glucose.” 48th Union World Conference on Lung Health. Session: Recent developments in tuberculosis co-morbidities: updates from the front line. Guadalajara, Mexico. October 2017.
17. **Martinez L**, Xu L, Cheng C, Sekandi JN, Zhu Y, Zhang C, Whalen CC, Zhu L. “Delays and features of tuberculosis diagnosis in patients from a referral hospital in urban China.” 47th Union World Conference on Lung Health. Session: We can work it out: understanding and preventing diagnostic treatment delays. Liverpool, England. October 2016.
18. **Martinez L**, Castellanos ME, Sekandi JN, Zalwango S, Whalen CC. “The Infectiousness of HIV Seropositive Tuberculosis Patients in sub-Saharan Africa.” 47th Union World Conference on Lung Health. Session: HIV and TB: lessons from Africa. Liverpool, England. October 2016.
19. **Martinez L**, Castellanos ME, Kakaire R, Sekandi JN, Zalwango S, Kiwanuka N, Whalen CC. “Optimizing the efficacy and efficiency of household contact tracing in sub-Saharan Africa.” 47th Union World Conference on Lung Health. Session: Enhanced case-finding and contact tracing. Liverpool, England. October 2016.
20. **Martinez L**, Sekandi JN, Castellanos ME, Zalwango S, Whalen CC. Modifiers to the “Infectiousness of HIV Seropositive Tuberculosis Patients: A Household Contact Study from Sub-Saharan Africa.” American Thoracic Society 2016 International Conference. Symposium: Tuberculosis Game Changers: Diagnostics, HIV, Drug Resistance, and Treatment. May 2016.
21. Sekandi JN, Zalwango S, Kakaire R, Handel A, **Martinez L**, Kizza A, Ezeamama AE, Okwera A, Kiwanuka N, Whalen CC. “Four Degrees of Separation: The Influence of Social and Provider Networks in the Steps to Diagnosis of Active Tuberculosis in Urban Uganda.” 46th Union World Conference on Lung Health. Cape Town, South Africa. December 2015.
22. Ezeamama AE, Mupere E, Oloya J, **Martinez L**, Kakaire R, Yin X, Sekandi JN, Whalen CC. “Absolute CD4+T-Cell Recovery in HIV/Tuberculosis Co-infected Patients - Variations by Age, ART and Nutritional Status.” American Society of Tropical Medicine and Hygiene 63rd Annual Meeting. Louisiana, USA. October 2014.
23. **Martinez L**, Isaacson S, Evans CA, Oberhelman RA, Cabrera L, Saito M, Gilman RH. “Increased tuberculosis infection in men in Peruvian shantytowns despite a decade of decreasing tuberculosis disease.” American Society of Tropical Medicine and Hygiene 63rd Annual Meeting. Symposium: Pneumonia, Respiratory Infections and Tuberculosis II. Louisiana, USA. October 2014.
24. **Martinez L**, Arman A, Haveman N, Lundgren A, Cabrera L, Evans CA, Pelly T, Saito M, Callacondo D, Oberhelman RA, Collazo G, Carnero A, Gilman RH. “Infeccion latente con la

TBC: cambios durante los últimos 20 años.” Estrategia Sanitaria Nacional de Prevención y Control de Tuberculosis (ESNPCT). Lima, Peru. March 2014.

25. Díaz-Fuentes C, Tarver M, Hernandez-Dias N, **Martinez L**, Lara-Greenberg M. “Occupational Health Experiences of Hispanic Day Laborers.” American Public Health Association Meeting. Symposium: Occupational Epidemiology. California, USA. October 2012.

Poster Conference Presentations.

1. Liu Q, Li Z, Ji Y, **Martinez L**, Zhu L, Lu W, Wang J. Predicting the Incidence of Pulmonary Tuberculosis (PTB) in Jiangsu Province, China using Advanced Statistical Time-Series Methods. 7th Conference of the Union Asia Pacific Region. Manila, Philippines. April, 2019.
2. Carbone A, Lemos E, Oliveira R, **Martinez L**, Gonçalves C, Ko AI, Andrews JR, Croda J. “Evaluation of Strategies for the Control of Tuberculosis in Brazilian Prisons.” 49th Union World Conference on Lung Health. The Hague, The Netherlands. October 2018
3. Lu P, Liu Q, **Martinez L**, Zhu L, Lu W. “Diabetes Mellitus and Latent Tuberculosis Infection in the Eastern China: a Population-based, Retrospective Cohort Study.” 49th Union World Conference on Lung Health. Session: From Local to Global in TB Care and Prevention. The Hague, The Netherlands. October 2018.
4. **Martinez L**, Bendavid E, Andrews JR. “India, Tuberculosis, and Poverty: Changes Over Time and Mediating Variables.” 49th Union World Conference on Lung Health. Session: Social, Mental and Behavioural Determinants and TB. The Hague, The Netherlands. October 2018.
5. Handel A, **Martinez L**, Sekandi JN, Bellan S, Zhu L, Chen C, Liu Q, Donkor S, Sutherland J, Hill PC, Gilman RH, Grandjean L, Whalen CC. “Using Machine Learning to Determine Variables that Predict Prolonged Coughing of Tuberculosis Patients.” Southern Data Science Conference. Atlanta, Georgia. April 2018.
6. Robinson M, **Martinez L**, Andrews JR. “Global Burden of Pediatric Tuberculosis Due to Implementation Gaps in Screening and Isoniazid Prophylaxis of Household Contacts of Tuberculosis Cases: A Statistical Modeling Study.” Stanford Research Convening. Stanford, California. February 2018.
7. Sekandi JN, Zalwango S, Kakaire R, Nkwata A, **Martinez L**, Whalen CC, Kiwanuka N. “Low prevalence of tuberculin skin test boosting among community residents in a high tuberculosis burden setting.” 48th Union World Conference on Lung Health. Guadalajara, Mexico. October 2017.
8. Woldu H, **Martinez L**, Castellanos ME, Whalen CC. “Estimating the optimal induration cutoff from tuberculin skin testing through mixture modeling: an analysis of two high-risk populations from sub-Saharan Africa.” 48th Union World Conference on Lung Health. Session: LTBI: testing and perceptions. Guadalajara, Mexico. October 2017.

9. Castellanos ME, Kiramunda S, Quach T, **Martinez L**, Chakraborty S, Zalwango S, Kiwanuka N, Whalen CC. "Concordance of tuberculin skin test and Quantiferon assay in recent skin test converters: Results from a longitudinal study." 48th Union World Conference on Lung Health. Guadalajara, Mexico. October 2017.
10. Cáceres DA, Toro H, Soto S, Mesias S, **Martínez L**, Yohannessen K, Klarían, J, Cáceres DD. "Evaluacion de riesgo en salud humana por exposicion a metales pesados en material particulado fino (MP_{2.5}), en microambientes escolares y residenciales. Chanaral, Region de Atacama, Chile." XXXV Reunion Cientifica de la Sociedad Espanola de Epidemiologia: XII Congresso da Associacao Portuguesa de Epidemiologia. Barcelona, Spain. September 2017.
11. Hallowell BD, Kintziger K, **Martinez L**, Robb S, Whalen CC. "The effect of a cancer diagnosis on the survival of HIV-infected individuals living in South Carolina in the post-ART era." North American Association of Central Cancer Registries. Albuquerque, New Mexico. June 2017.
12. **Martinez L**, le Roux D, Stadler A, Barnett W, Nicol MP, Zar HJ. "Tuberculin skin test conversion in infants from Cape Town, South Africa: A longitudinal birth cohort study." American Thoracic Society 2017 International Conference. Late-Breaker Session: Bronchiectasis and Lung Infection. Washington DC, United States. May 2017.
13. Handel A, **Martinez L**, Sekandi JN, Whalen CC. "Tuberculosis superspreaders: duration of cough as a proxy for transmission." 6th Southeastern Mycobacteria Meeting. Athens, Georgia, United States. February 2017.
14. Sekandi JN, Zalwango S, Kakaire R, Handel A, **Martinez L**, Whalen CC, Kiwanuka N. "Four Degrees of Separation: The Influence of Social and Provider Networks in the Steps to Diagnosis of Active Tuberculosis in Urban Uganda." 6th Southeastern Mycobacteria Meeting. Athens, Georgia. February 2017.
15. **Martinez L**, Castellanos ME, Sekandi JN, Zalwango S, Whalen CC. "The transmission potential of HIV Seropositive Tuberculosis Patients in sub-Saharan Africa." 6th Southeastern Mycobacteria Meeting. Athens, Georgia. February 2017.
16. Castellanos ME, **Martinez L**, Zalwango S, Sekandi JN, Kakaire R, Nkwata AK, Kiwanuka N, Whalen CC. "Prevalence of latent tuberculosis infection in the community by meeting venue." 6th Southeastern Mycobacteria Meeting. February 2017.
17. Nkwata A, Zalwango S, Kakaire R, **Martinez L**, Mutanga J, Castellanos ME, Handel A, Sekandi JN, Kiwanuka N, Whalen CC. "High prevalence of latent TB infection in non-household contacts in urban Uganda." 47th Union World Conference on Lung Health. Session: Latent TB infection: something for everyone. Liverpool, England. October 2016.
18. Castellanos ME, **Martinez L**, Zalwango S, Sekandi JN, Kakaire R, Nkwata AK, Kiwanuka N, Whalen CC. "Prevalence of latent tuberculosis infection in the community by meeting venue." 47th Union World Conference on Lung Health. Session: TB contact tracing and latent TB infection. Liverpool, England. October 2016.

19. **Martinez L**, Isaacson S, Gilman RH, Saito M, Cabrera L, Oberhelman RA, Evans CA. “Effectiveness of Household Contact Tracing differs based on overall transmission levels.” 46th Union World Conference on Lung Health. Session: Trends, transmission and tuberculosis case finding. Cape Town, South Africa. December 2015.
20. **Martinez L**, Shen Y, Ezeamama AE, Isaacson S, Kizza A, Mupere E, Hill PC, Whalen CC. “The Individual and Population Level Impact of Household Exposure on Tuberculosis: A Systematic Review and Meta-Analysis.” 46th Union World Conference on Lung Health. Session: Molecular epidemiology and modelling: how can we break the cycle of transmission? Cape Town, South Africa. December 2015.
21. Mesías SM, **Martinez L**, Alvarado SA, Vergara J, Yohannessen K, Martín MM, Salazar R, Cáceres DD. “Levels of fine particulate matter (PM_{2.5}) and metals/metalloids in school microenvironments contaminated with mine tailings in Chañaral, Chile.” 27th Conference of the International Society for Environmental Epidemiology (ISEE). Sao Paolo, Brazil. August 2015.
22. **Martinez L**, Isaacson S, Evans CA, Oberhelman RA, Cabrera L, Saito M, Gilman RH. “Increased tuberculosis infection in men in Peruvian shantytowns despite a decade of decreasing tuberculosis disease.” American Society of Tropical Medicine and Hygiene 63rd Annual Meeting. Young Investigator Poster Award Presentation. Louisiana, USA November 2014.
23. Ezeamama AE, Mupere E, Oloya J, **Martinez L**, Kakaire R, Yin X, Sekandi JN, Whalen CC. “Absolute CD4+T-Cell Recovery in HIV/Tuberculosis Co-infected Patients- Variations by Age, ART and Nutritional Status.” HIV and Aging Conference: From Mitochondria to the Metropolis. Georgia, USA. October 2014.
24. **Martinez L**, Calvopina M. “Implementation of DOTS Treatment with Tuberculosis Patients in Ecuador.” Hispanic-Serving Health Professions Schools Conference. Washington DC, USA. August 2012.

GRANTS AND STIPENDS.

2018 – present	Loan Repayment Program National Institute of Allergy and Infectious Diseases National Institutes of Health, Division of Loan Repayment Focus on pediatric tuberculosis
2017 – present	Ruth L. Kirschstein National Research Service Award National Institutes of Health T32 Training Grant Grant# T32 AI 052073 Infectious Diseases Epidemiology Training grant Stanford University School of Medicine Division of Infectious Diseases and Geographic Medicine
2016 – 2017.	National Institutes of Minority Health Supplement Grant# 1021RR773015

University of Georgia
School of Public Health
Department of Epidemiology and Biostatistics

- 2014 Freeman Asia-Georgia Internship Connection (AGIC) Grant. Funding to investigate causes for delays in diagnosis of tuberculosis patients in a heavily urbanized Chinese city.
Advisors: Dr. Limei Zhu, Dr. Christopher C. Whalen
- 2013 – 2015 University of Georgia Graduate School Assistantship Award (\$41,472). Funding for two years to complete a doctoral degree and perform research within the Department of Epidemiology at the University of Georgia School of Public Health.

INTERNSHIPS/FELLOWSHIPS.

- 2013 Mount Sinai International Exchange Program for Minority Students (\$5,000). Funding and mentorship for travel to Chile to work on indoor air pollution in schools of a mining town.
Advisor: Dr. Dante Caceres
- 2012 Hispanic-Serving Health Profession Schools Fellowship (\$6,000). Funding for educational and research fellowship under infectious disease epidemiologists in Ecuador.
Advisor: Dr. Manuel Calvopiña
- 2011 Minority Health and Health Disparities International Research Training grant (\$5,500). Provided funding and mentorship to conduct research on infectious diseases in Lima, Peru.
Advisors: Dr. Richard Oberhelman, Dr. Robert Gilman

CONFERENCE AND TRAVEL FUNDING.

- 2017 The Stephen Lawn TB-HIV Research Leadership Prize. Full scholarship to the “48th World Union Conference on Lung Health: Accelerating Toward Elimination”
- 2017 Conference Travel Late-Breaker Abstract award (\$3000) from the Coordinating Committee of Scientific Activities to attend the “48th World Union Conference on Lung Health: Accelerating Toward Elimination” in October 2017 in Guadalajara, Mexico
- 2016 Conference travel award (\$1300) from the Coordinating Committee of Scientific Activities to attend the “47th World Union Conference on Lung Health. Confronting Resistance: Fundamentals to Innovations” in October 2016 in Liverpool, United Kingdom
- 2016 Conference travel stipend (\$1100) from the University of Georgia School of

Public Health, Department of Epidemiology to attend the “47th World Union Conference on Lung Health. Confronting Resistance: Fundamentals to Innovations” in October 2016 in Liverpool, United Kingdom

- 2016 Conference travel stipend (\$500) from the Assembly on Microbiology, Tuberculosis & Pulmonary Infections (MTPI) to attend the American Thoracic Society (ATS) conference in May 2016 in San Francisco, California
- 2016 Conference travel stipend (\$655) from the University of Georgia School of Public Health, Department of Epidemiology to attend the 2016 American Thoracic Society conference in San Francisco, California
- 2016 Conference travel stipend (\$475) from the University of Georgia Graduate School to attend the 2016 American Thoracic Society in San Francisco, California

AWARDS.

- 2017 The Stephen Lawn TB-HIV Research Leadership Prize; awarded by the TB Centre of the London School of Hygiene & Tropical Medicine, the Desmond Tutu HIV Centre from the University of Cape Town, South Africa, The International Union Against Tuberculosis and Lung Disease, and *The Lancet*
- Profile/news item in *The Lancet*
 - Full fellowship to attend the “48th World Union Conference on Lung Health: Accelerating Toward Elimination” in Guadalajara, Mexico in October 2017
 - \$1000 cash prize
 - Opportunity to attend the Stephen Lawn Memorial Lecture in London, United Kingdom in March 2018
- 2017 Delta Omega National Honorary Society in Public Health, Beta Chi Chapter, University of Georgia, School of Public Health
- 2017 Graduate School Student Spotlight, University of Georgia Graduate School
- 2016 Abstract in the HIV portion of the rapporteur session of the 47th Union Conference for Lung Health in Liverpool, UK selected as amongst the 25 most outstanding abstracts amongst 1780 total conference abstract submissions
- 2015 Outstanding student profile for the 2015 University of Georgia College of Public Health magazine
- 2013 Hispanic-Serving Health Profession Schools Fellowship Alumni Spotlight

REVIEWER ACTIVITIES

Editorial Service.

2018 PLoS ONE, Guest Academic Editor

Journal Peer Review Service (number of manuscripts reviewed in parentheses).

2019 *American Journal of Tropical Medicine and Hygiene* (1)
American Journal of Epidemiology (1)

2018 *Annals of Internal Medicine* (1)
Tuberculosis (1)
Clinical Infectious Diseases (1)
American Journal of Epidemiology (1)
American Journal of Respiratory and Critical Care Medicine (2)
PLoS ONE (3)

2017 *BMC Infectious Diseases* (1)
Respiratory Research (1)
PLoS ONE (1)
International Journal of Tuberculosis and Lung Disease (1)

2016 *Patient Preference and Adherence* (1)
Journal of Occupational Medicine and Toxicology (1)
PLoS ONE (2)
Journal of the Georgia Public Health Association (1)

2015 *American Journal of Tropical Medicine and Hygiene* (2)
PLoS ONE (1)
Clinical Epidemiology (1)

2014 *American Journal of Tropical Medicine and Hygiene* (1)

External Peer Review.

2016 National Cancer Institute (NCI), **A Socio-Ecological Approach to Addressing Tobacco-Related Health Disparities**, Chapter 5: *Infectious Disease-Associated Cancers and Tobacco-Related Health Disparities*

Conference Abstract Review.

2018 49th World Union Conference on Lung Health – Declaring Our Rights: Social and Political Solutions in October 2018 in The Hague, The Netherlands

2016 144rd American Public Health Association (APHA) Annual Meeting

2015 143rd American Public Health Association (APHA) Annual Meeting

Application Review.

- 2015 – 2016 Selection committee member for tenure-track Assistant Professor position in infectious disease epidemiology in the Department of Epidemiology at the University of Georgia School of Public Health
- 2014 Hispanic-Serving Health Profession Schools (HSHPS) Graduate Fellowship Program
- 2014 Hispanic-Serving Health Professions Schools (HSHPS) Student Mentorship Program

TEACHING AND MENTORSHIP.

- 2018 – 2019 Coordinator, Infectious Diseases Journal Club, Stanford University, School of Medicine, Division of Infectious Diseases and Geographic Medicine
- 2018 – 2019 Co-coordinator, Research-in-Progress Infectious Disease Epidemiology seminar, Stanford University, School of Medicine, Division of Infectious Diseases and Geographic Medicine
- 2018 Stanford Science Penpals, Stanford University, School of Medicine; Partner with a 10th grade student interested in science writing letters and answering questions in relation to science, career interests, and career trajectories.
- 2018 Mentor, Tulane School of Public Health & Tropical Medicine Short-term Mentoring Program; Career Mentor to Master of Public Health Epidemiology student
- 2017 Mentor to Epidemiology Doctoral Student, Stanford ADVANCE Journal Club; Mentor to Doctorate student in Epidemiology
- 2016 – 2017 Coordinator, Epidemiology in Action (EIA) research seminar on tuberculosis, University of Georgia, Department of Epidemiology
- 2016 Co-coordinator, Doctoral Epidemiology Book Club, University of Georgia, Department of Epidemiology
- 2016 Coordinator, Doctoral Epidemiology Journal Club, University of Georgia, Department of Epidemiology
- 2015 Coordinator, Doctoral Epidemiology Journal Club, University of Georgia, Department of Epidemiology
- 2015 Mentor, Hispanic-Serving Health Profession Schools (HSHPS) Student Mentorship Program for Hispanic Health Research
- 2014 Undergraduate Class Lecturer, University of Georgia, School of Public Health, Introduction to Epidemiology

- 2013 Graduate Teaching Assistant, University of Georgia, School of Public Health, Introduction to Epidemiology
- 2012 Graduate Teaching Assistant, Tulane University School of Public Health and Tropical Medicine, Health Systems in Taiwan and the United States
- 2011 Graduate Teaching Assistant, Tulane University School of Public Health and Tropical Medicine, Study Design

PROFESSIONAL MEMBERSHIPS.

- 2017 – present Member, Delta Omega National Honorary Society in Public Health, Beta Chi Chapter, University of Georgia, School of Public Health
- 2016 – present Member, International Union of Tuberculosis and Lung Disease
- 2015 – present Member, American Thoracic Society
- 2013 – 2015 Member, American Society of Tropical Medicine and Hygiene
- 2013 – 2014 Board Member, Hispanic-Serving Health Professions Schools Alumni Association, Washington, DC
- 2008 – 2010 Board Member, 9 Queens – Empowerment through Chess, Tucson, Arizona

FOREIGN LANGUAGE.

- Language: Fluent in oral and written Spanish
- Certification: Interpretation in Spanish for Social Justice Training, October 2011

Profile

Leo Martinez: striving to end childhood tuberculosis

Not only can Leo Martinez work opponents on the chess board—he began playing aged 8 and reached national level—he's also a talented scientist who was awarded the 2017 Stephen Lawn TB-HIV Research Leadership Prize for his contributions to reducing the burden of tuberculosis (TB) and HIV/AIDS in Africa. "Leo has done outstanding innovative research on reducing the childhood TB burden—a much needed and underappreciated area", says Professor Heather Zar, Chair of the Department of Paediatrics and Director of the MRC Unit on Child & Adolescent Health at the University of Cape Town in South Africa. "Leo has demonstrated how to efficiently identify TB cases among children through targeted household contact investigations in settings with limited resources", adds Jason Andrews, Assistant Professor of Medicine (Infectious Diseases) at Stanford University, Stanford, CA, USA, where Martinez is a Postdoctoral Research Fellow.

When talking with Martinez about his early life, you soon realise that his sensitivity to marginalised populations was evident in his upbringing. Born in Italy to immigrant parents from Chile, he grew up in the USA in Tucson, AZ. "My family are all in direct service professions—I was raised to think about how to contribute to a more equitable world", he says. He loved reading and spent much of his childhood at the bookstore where his older sisters worked before enrolling at the University of Arizona to study political science and Spanish. "I was interested in international law, and was thinking of working with undocumented immigrants", he says.

It was a Masters in Public Health at Tulane University in New Orleans, LA, that shifted Martinez's focus to TB. He spent 6 months in Peru measuring tuberculin sensitivity in Lima's shanty towns. "That experience really illuminated the financial hardship that TB brings to the entire family. It creates this never ending cycle of poverty." Since then, he admits to becoming "very passionate about studying TB". He sought further training in epidemiology and, in 2013, joined the University of Georgia's Department of Epidemiology and Biostatistics to do a PhD. His mentor there, Christopher Whalen, became a great influence, encouraging him to continue his research in Uganda where HIV added a level of complexity to the TB epidemic. "I focused on household contact investigations. Active case finding approaches are not commonly used in sub-Saharan Africa. Changing that paradigm has been difficult", he says. "But we're making progress", he thinks. Part of his research involved seeking out undiagnosed children living in Kampala. "By evaluating WHO's recommendation to only screen symptomatic exposed children, we identified 70–80% of all exposed children with TB while only screening 20%, thereby bolstering the evidence-base for this approach in low-income settings", he says.

By this time, Martinez had a passion for paediatric TB. In 2016, after meeting Zar at the American Thoracic Society international conference, he began working with her on the Drakenstein Child Health Study in Cape Town. They identified very high rates of TB in children younger than 5 years, despite good primary care, and a strong link between TB and lower respiratory tract infection. "I'll never forget a baby who had three or four episodes of pneumonia, which is an incredible amount for a child under 2", he recalls. Martinez hopes these findings will spur action: "If we integrate health services for these two diseases, we could detect more paediatric TB. Children that present to any clinic with pneumonia should be screened for TB."

Last year, intent on improving primary prevention, he applied to Stanford University to work with Andrews on TB transmission dynamics. Several months earlier, Andrews had reviewed one of his papers on TB transmission in household versus community settings. "It was one of the most important studies in the TB transmission literature in the past several years", says Andrews. "One of those clear and cogent papers where you think, 'I wish I'd thought of that!'" Now Martinez spends his time focusing on TB transmission dynamics in high-risk settings. One such project is: "evaluating several mass screening approaches in Brazilian prisons. There is a large prison population in Brazil where people are frequently exiting from the prisons into the community—this is a significant driver of the TB epidemic", he explains.

Martinez has been instrumental in creating a large international collaborative working group of paediatric TB researchers and compiling the world's first global database of children exposed to TB. As he explains, "many important characteristics of paediatric TB remain unknown or come from studies from the pre-chemotherapeutic era (before 1950)". The database will help advance knowledge. "We need to join forces if we are going to have a chance of eliminating TB. 40 groups from around 35 countries are now sharing data on over 40 000 children", he says.

People who have worked with Martinez are full of praise for him: "Leo has an intrinsic drive and motivation to understand TB", says Whalen, Director of the Global Health Institute at the University of Georgia, Athens, GA, USA. "He is one of the smartest students I've known, with an extraordinary ability to think outside the box while bringing strong analytical skills to bear", adds Zar. 10 years from now, Martinez hopes to be an academic professor designing and testing new ways of bringing TB under control. The Stephen Lawn TB-HIV Research Leadership Prize highlights his contributions to date. But, there's no doubt, the best is yet to come.

Rachael Davies



Published Online
March 21, 2018
[http://dx.doi.org/10.1016/S0140-6736\(18\)30680-9](http://dx.doi.org/10.1016/S0140-6736(18)30680-9)

For more on the Stephen Lawn TB-HIV Research Leadership Prize see <https://www.thelancet.org/what-we-do/awards/the-stephen-lawn-tb-hiv-research-leadership-prize>