

# MARIE OZANNE

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## EDUCATION

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<b>University of Iowa</b>	Iowa City, IA
Ph.D., Biostatistics	2019
Dissertation Title: Bayesian Compartmental Models for Zoonotic Visceral Leishmaniasis in the Americas	
Advisors: Dr. Jacob Oleson and Dr. Grant Brown	
<b>The Ohio State University</b>	Columbus, OH
M.S., Statistics	2014
<b>Mount Holyoke College</b>	South Hadley, MA
B.A., Chemistry, Statistics, <i>Cum Laude</i> , High Honors in Chemistry	2012

## RESEARCH INTERESTS

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- Infectious disease modeling
- Bayesian statistics
- Spatio-temporal modeling
- Epidemiology

## ACADEMIC EXPERIENCE

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<b>Mount Holyoke College</b>	South Hadley, MA
<i>Clare Boothe Luce Assistant Professor</i> , Dept. of Mathematics & Statistics	July 2019 - <i>present</i>
<b>University of Iowa</b>	Iowa City, IA
<i>Graduate Research Associate</i> , Dept. of Biostatistics	June 2016 - <i>May 2019</i>
<i>Graduate Research Associate</i> , Dept. of Epidemiology	January - <i>May 2018</i>
<i>Graduate Teaching Associate</i> , Dept. of Biostatistics	January 2016 - <i>May 2016</i>
<b>The Ohio State University</b>	Columbus, OH
<i>Junior Statistician</i> , Statistical Consulting Service	June 2015 - <i>December 2015</i>
<i>Graduate Teaching Associate</i> , Dept. of Statistics	August 2013 - <i>May 2015</i>
<i>Graduate Fellow</i> , Dept. of Statistics	August 2012 - <i>July 2013</i>
<b>Mount Holyoke College</b>	South Hadley, MA
<i>Undergraduate Research Assistant</i> , Dept. of Astronomy	June 2011 - <i>July 2012</i>
<i>Undergraduate Research Assistant</i> , Dept. of Chemistry	August 2010 - <i>May 2011</i>
<i>Undergraduate Teaching Assistant</i> , Dept. of Chemistry	September 2009 - <i>May 2012</i>

## PUBLICATIONS ([Research Gate](#))

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### *Peer Reviewed Journal Publications*

- **M.V. Ozanne**, G.D. Brown, J.J. Oleson, et al. (2019). Bayesian Compartmental Model for an Infectious Disease with Dynamic States of Infection. *Journal of Applied Statistics*, 46(6), 1043-1065.
- A. Toepp, G.R. Monteiro, J.F. Coutinho, A.L. Lima, M. Larson, G. Wilson, T. Grinnage-Pulley, C. Bennett, K. Mahachi, B. Anderson, **M. Ozanne**, M. Anderson, H. Fowler, M. Parrish, J. Saucier, P. Tyrrell, Z. Palmer, J. Buch, R. Chandrashekar, G. Brown, J. Oleson, S.M.B. Jeronimo, and C. Petersen. (2019). Comorbid Infections Induce Progression of Visceral Leishmaniasis. *Parasites & Vectors*, 12(1):54.
- R.A. Scheperle, V. Tejani, J.K. Omtvedt, C.J. Brown, P.J. Abbas, M.R. Hansen, B.J. Gantz, J.J. Oleson, **M.V. Ozanne**. (2017). Delayed Changes in Auditory Status in Cochlear Implant Users with Preserved Acoustic Hearing. *Hearing Research*, 350, 45-57.

- T.F. Boucher, **M.V. Ozanne**, M.L. Carmosino, et al. (2015). A Study of Machine Learning Regression Methods for Major Elemental Analysis of Rocks Using Laser-Induced Breakdown Spectroscopy. *Spectrochimica Acta Part B Atomic Spectroscopy*, 107, 1-10.
- M.D. Dyar, E.A. Breves, E. Emerson, S.W. Bell, M. Nelms, **M.V. Ozanne**, S.E. Peel, M.L. Carmosino, J.M. Tucker, M.E. Gunter, J.S. Delaney, A. Lanzirotti, and A.B. Woodland (2012). Accurate determination of ferric iron in garnets by bulk Mössbauer spectroscopy and synchrotron micro-XANES. *American Mineralogist*, 97(10), 1726-1740.
- M.D. Dyar, M.L. Carmosino, E.A. Breves, **M.V. Ozanne**, S.M. Clegg, and R.C. Wiens (2012). Comparison of partial least squares and lasso regression techniques as applied to laser-induced breakdown spectroscopy of geological samples. *Spectrochimica Acta Part B*, 70, 51-67.

#### *Journal Papers in Revision*

- **M.V. Ozanne**, G.D. Brown, A.J. Toepp, et al. Bayesian Compartmental Models for an Infection with Multiple Modes of Transmission, Submitted to: *Biometrics*.

#### *Journal Papers Submitted*

- K. Mahachi, E. Kontowicz, B. Anderson, A.J. Toepp, A.L. Lima, M. Larson, G. Wilson, T. Grinnage-Pulley, C. Bennett, **M. Ozanne**, M. Anderson, H. Fowler, M. Parrish, J. Saucier, P. Tyrell, Z. Palmer, J. Buch, R. Chandrashekar, B. Scorza, G. Brown, J.J. Oleson, and C.A. Petersen. Predominant risk factors for tick-borne coinfections in US hunting dogs, Submitted to: *Parasites & Vectors*.

#### *Journal Papers in Preparation*

- **M.V. Ozanne**, G.D. Brown, J.J. Oleson, et al. Bayesian Hierarchical Model Incorporating Sensitivity and Specificity to Identify Infection States for *Leishmania infantum* Infection.

#### *Editorials*

- G.D. Brown and **M.V. Ozanne** (2019). Statistical models for infectious diseases: a useful tool for practical decision-making. *American Journal of Tropical Medicine & Hygiene*. 101, 1-2.

#### PRESENTATIONS

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- Bayesian Compartmental Model for an Infectious Disease with Multiple Infectious States. *Women in Statistics and Data Science, Bellevue, WA*. 2019
- Bayesian Compartmental Model for an Infectious Disease with Multiple Infectious States. *Joint Statistical Meetings, Denver, CO*. 2019
- Whose Fault Is It Anyway? Calculating Reproductive Numbers for Multiple Infectious Sources. *Great Plains Emerging Infectious Diseases Conference, Iowa City, IA*. 2019
- Modeling Vertical Transmission of Canine Visceral Leishmaniasis in Foxhounds in the United States. *Joint Statistical Meetings, Vancouver, BC*. 2018
- Visceral Leishmaniasis in Brazil: A Quest for a Reproductive Number. *Great Plains Emerging Infectious Diseases Conference, Iowa City, IA*. 2018
- A Comparison of Transition Probability Structures for a Stochastic Compartmental Model: Analyzing Visceral Leishmaniasis in Brazil. *Joint Statistical Meetings, Baltimore, MD*. 2017
- Bayesian Epidemic Compartmental Model for an Infectious Disease with Multiple Transition Paths: Analyzing Visceral Leishmaniasis in Brazil. *Great Plains Emerging Infectious Diseases Conference, Iowa City, IA*. 2017
- Comparison of Lasso and Elastic Net Regression for Major Element Analysis of Rocks Using Laser-Induced Breakdown Spectroscopy (LIBS). *Forty-third Lunar and Planetary Science Conference, The Woodlands, TX*. 2012

## SERVICE

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### *Five College Statistics*

- Webmaster, 2019-present

### *R Ladies Iowa City*

- Co-organizer and founder, 2018-2019

### *Department of Biostatistics, University of Iowa*

- Student Representative, Computation & Informatics Committee, 2017-2018

### *Department of Statistics, The Ohio State University*

- Graduate Student Co-President, 2014-2015

### *Professional*

- Journal Reviewer: *Acta Tropica* (1), *Journal of Applied Statistics* (1), *Journal of the Academy of Nutrition and Dietetics* (1), *Journal of Infection* (1), *Journal of Racial and Ethnic Health Disparities* (1)
- Volunteer, Statistics in Education/History Booth, Joint Statistical Meetings 2019

## HONORS AND AWARDS

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| • William R. Clarke Research Graduate Assistant Award, University of Iowa              | 2019      |
| • Delta Omega Honorary Society in Public Health, Alpha Phi Chapter                     | 2019      |
| • University of Iowa Dare to Discover Banner Campaign, Featured Researcher             | 2019      |
| • Great Plains Emerging Infectious Diseases Conference Poster Competition, First Place | 2017      |
| • Graduate Student University Fellowship, The Ohio State University                    | 2012-2013 |
| • Corporate Fellowship, The Ohio State University                                      | 2012      |
| • NASA Space Grant Fellowship, Mount Holyoke College                                   | 2012      |
| • Phi Beta Kappa, Mount Holyoke College  | 2012      |
| • Mu Sigma Rho, Mount Holyoke College  | 2012      |
| • Sigma Xi, Mount Holyoke College  | 2012      |
| • Connecticut Valley Section Award, Chemistry  | 2012      |
| • American Chemical Society Award in Analytical Chemistry                              | 2011      |
| • Louisa Stone Stevenson Prize for excellence in Chemistry                             | 2011      |
| • Leadership Scholarship, Mount Holyoke College  | 2008-2012 |

## PROFESSIONAL ACTIVITY

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| • Member, American Statistical Association (ASA) | 2012 - <i>present</i> |
| • Member, American Chemical Society (ACS)        | 2012 - <i>present</i> |

## COMPUTER SKILLS

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- Statistical Software: R, SAS, Python
- Application Software: L<sup>A</sup>T<sub>E</sub>X, Microsoft Word, Excel, Powerpoint

## LANGUAGES

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- English (fluent)
- Mandarin Chinese (working)
- Spanish (working)
- Portuguese (elementary)

## REFERENCES

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### **Dr. Grant Brown**

Assistant Professor  
Department of Biostatistics  
University of Iowa  
Iowa City, IA, 52242  
Phone: (319) 384-1599  
Email: grant-brown@uiowa.edu

### **Dr. Jacob Oleson**

Professor  
Department of Biostatistics  
University of Iowa  
Iowa City, IA, 52242  
Phone: (319) 384-1595  
Email: jacob-oleson@uiowa.edu

### **Dr. Christine Petersen**

Associate Professor  
Department of Epidemiology  
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