


# Curriculum Vitae





## EDUCATION

-  Ph.D., Statistics 2019  
University of Wisconsin-Madison
-  M.D., Madison, Wisconsin, USA  
Medicine 2007  
University of Wisconsin–Madison
-  M.S., Madison, Wisconsin, USA  
Population health sciences 2007  
University of Wisconsin-Madison
-  B.S., Madison, Wisconsin, USA  
Chemistry, mathematics, biochemistry  
University of Wisconsin-Madison 2001  
Madison, Wisconsin, USA



## PROFESSIONAL EXPERIENCE

-  Assistant researcher 2011-2011  
University of Wisconsin-Madison  
Madison, Wisconsin, USA






## SELECTED SOFTWARE PACKAGES


-  **gemma2**: Multivariate random effects for systems genetics studies. (2019) 
-  **qtl2pleio**: Performs a test of pleiotropy vs. separate QTL after Jiang & Zeng (1995). (2019) 

## COURSES AND WORKSHOPS


-  **Teaching statistics**, (*online*), Apr 30, 2018
-  **Introductory statistics for biologists (Statistics 371)**, *University of Wisconsin-Madison*, Dec 20, 2016

## PUBLICATIONS


-  Julia H. Kemis, Vanessa Linke, Kelsey L. Barrett, Frederick J. Boehm, Lindsay L. Traeger, Mark P. Keller, Mary E. Rabaglia, Kathryn L. Schueler, Donald S. Stapleton, Daniel M. Gatti, Gary A. Churchill, Daniel Amador-Noguez, Jason D. Russell, Brian S. Yandell, Karl W. Broman, Joshua J. Coon, Alan D. Attie and Federico E. Rey (2019) **Genetic determinants of gut microbiota composition and bile acid profiles in mice.**  
doi:10.1371/journal.pgen.1008073
-  Frederick Boehm, Brian Yandell and Karl Broman (2019) **qtl2pleio: Testing pleiotropy vs. separate QTL in multiparental populations.**  
doi:10.21105/joss.01435
-  Frederick J. Boehm, Elissa J. Chesler, Brian S. Yandell and Karl W. Broman (2019) **Testing Pleiotropy vs. Separate QTL in Multiparental Populations.**  
doi:10.1534/g3.119.400098
-  Eric C. Tauchman, Frederick J. Boehm and Jennifer G. DeLuca (2015) **Stable kinetochore–microtubule attachment is sufficient to silence the spindle assembly checkpoint in human cells.**  
doi:10.1038/ncomms10036
-  James C Costello, Laura M Heiser, Elisabeth Georgii, Mehmet Gönen, Michael P Menden, Nicholas J Wang, Mukesh Bansal, Muhammad Ammad-ud-

 **Introductory statistics for engineers**  
(**Statistics 324**), *University of Wisconsin-Madison*, May 15, 2016


## HONORS AND AWARDS


 **Conference travel scholarship to attend the annual International Mammalian Genome Conference**, International Mammalian Genome Society (2018)


 **Best poster award at the annual International Mammalian Genome Conference**, International Mammalian Genome Society (2018)


 **Research ethics fellowship to participate in the Integrating research ethics and scholarship program**, University of Wisconsin-Madison (2013)

 **New Arts Venture Challenge Award for collaborative research to complete the Victorian Eyes art exhibit**, University of Wisconsin-Madison (2013)


 **Medical Student Research Training Fellowship**, Howard Hughes Medical Institute (2006)


 **Shapiro research award**, University of Wisconsin-Madison Department of Family Medicine (2004)

 **LOCUS research stipend**, University of Wisconsin-Madison Department of Family Medicine (2004)

 **University Bookstore award for outstanding undergraduate thesis**, University of Wisconsin-Madison (2001)

din, Petteri Hintsanen, Suleiman A Khan, John-Patrick Mpindi, Olli Kallioniemi, Antti Honkela, Tero Aittokallio, Krister Wennerberg, James J Collins, Dan Gallahan, Dinah Singer, Julio Saez-Rodriguez, Samuel Kaski, Joe W Gray and Gustavo Stolovitzky (2014) **A community effort to assess and improve drug sensitivity prediction algorithms**. doi:10.1038/nbt.2877

 Catherine DeRose, Carrie Roy and Fred Boehm (2014) **Victorian eyes: Literary, statistical, and artistic perspectives on Victorian novels - and Dickens's unfinished murder mystery**. doi:10.1111/j.1740-9713.2014.00740.x

 William F. Dove, Alexandra Shedlovsky, Linda Clipson, James M. Amos-Landgraf, Richard B. Halberg, Kathleen J. Krentz, Frederick J. Boehm, Michael A. Newton, David J. Adams and Thomas M. Keane (2014) **A Strategy to Identify Dominant Point Mutant Modifiers of a Quantitative Trait**. doi:10.1534/g3.114.010595

 Cathy C. Laurie, Kimberly F. Doheny, Daniel B. Mirel, Elizabeth W. Pugh, Laura J. Bierut, Tushar Bhangale, Frederick Boehm, Neil E. Caporaso, Marilyn C. Cornelis, Howard J. Edenberg, Stacy B. Gabriel, Emily L. Harris, Frank B. Hu, Kevin B. Jacobs, Peter Kraft, Maria Teresa Landi, Thomas Lumley, Teri A. Manolio, Caitlin McHugh, Ian Painter, Justin Paschall, John P. Rice, Kenneth M. Rice, Xiuwen Zheng, Bruce S. Weir and NA NA (2010) **Quality control and quality assurance in genotypic data for genome-**

-  **Meyerhoff Excellence award**,  
University of Wisconsin-Madison (2001)
-  **Dean's list**, University of Wisconsin-Madison (2001)
-  **Graduate research fellowship**, National Science Foundation (2001)
-  **Edward Panek Memorial scholarship**,  
University of Wisconsin-Madison  
Department of Chemistry (2000)
-  **Hilldale Undergraduate Research fellowship**, University of Wisconsin-Madison (1999)
-  **Wisconsin Idea fellowship**, University of Wisconsin-Madison (1999)
-  **Summer research scholarship**,  
University of Wisconsin-Madison  
Department of Chemistry (1998)
-  **Wisconsin Academic Excellence scholarship**, University of Wisconsin-Madison (1996)
-  **Eagle Scout award**, Boy Scouts of America (1995)




## PRESENTATIONS

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-  **Testing pleiotropy in multiparental populations**, *Early career scientist seminar*, Genetics Society of America, online, Oct 17, 2019 
-  **Testing pleiotropy in multiparental populations**, *Thesis defense*, University of Wisconsin-Madison, Madison, Wisconsin, USA, Apr 21, 2019 
-  **Testing pleiotropy in multiparental populations**, *International Mammalian*






**wide association studies.**

doi:10.1002/gepi.20516



-  M.C. Smith Fawzi, W. Lambert, F. Boehm, J.L. Finkelstein, J.M. Singler, F. Léandre, P. Nevil, D. Bertrand, M.S. Claude, J. Bertrand, M. Louissaint, L. Jeannis, P.E. Farmer, A.T. Yang and J.S. Mukherjee (2010) **Economic Risk Factors for HIV Infection Among Women in Rural Haiti: Implications for HIV Prevention Policies and Programs in Resource-Poor Settings.**  
doi:10.1089/jwh.2008.1334
-  Elizabeth E Marchani, Yanming Di, Yoonha Choi, Charles Cheung, Ming Su, Frederick Boehm, Elizabeth A Thompson and Ellen M Wijsman (2009) **Contrasting identity-by-descent estimators, association studies, and linkage analyses using the Framingham Heart Study data.**  
doi:10.1186/1753-6561-3-s7-s102
-  Jason E Gestwicki, Laura E Strong, Christopher W Cairo, Frederick J Boehm and Laura L Kiessling (2002) **Cell Aggregation by Scaffolded Receptor Clusters.** doi:10.1016/s1074-5521(02)00102-3



## SERVICE

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-  **Scientist penpal**, Letters to a Pre-scientist ( October 2018 to May 2019 ) 
-  **Peer review trainee**, Genetics Society of America ( September 2018 to September 2019 ) 
-  **Co-coordinator**, Computational methods in communications


*Genomics Conference, Rio Mar, Puerto Rico, USA, Nov 6, 2018*

 **Testing pleiotropy in multiparental populations**, *Joint Statistical Meetings, Vancouver, British Columbia, Canada, Aug 1, 2018* 

 **Testing pleiotropy in multiparental populations**, *Complex Trait Community Meeting, Glasgow, Scotland, Jun 15, 2018* 


research group ( September 2016 to December 2016 )


 **Research mentor to undergraduate researcher Jinyu Xia**, University of Wisconsin-Madison ( August 2015 to August 2016 )


 **Moderator**, University of Wisconsin-Madison Undergraduate Research Symposium (April 2012 )


 **Participant**, American Statistical Association workshop on communicating with the media and the public (November 2016 )


 **Instructor**, The Carpentries ( May 2017 to September 2019 ) 

 **Moderator**, University of Wisconsin-Madison Undergraduate Research Symposium (April 2013 )

 **Coordinator**, WISCIENCE graduate student book group ( June 2015 to May 2016 )

 **Research mentor to undergraduate researcher Robert Turner**, University of Wisconsin-Madison ( May 2015 to May 2016 )

 **Coach**, Madison Science Olympiad Team ( October 2013 to March 2014 )

 **Organizer**, Data, humanities, and art symposium at University of Wisconsin-Madison ( September 2013 to November 2013 )

👍 **Reviewer**, University of Wisconsin-Madison Graduate Student Peer Mentor Award Committee ( April 2013 to April 2013 )

👍 **Reviewer**, University of Wisconsin-Madison Graduate School Vilas Travel Grant Review Committee ( October 2012 to November 2012 )

👍 **Assistant coach**, Madison Mathcounts Team ( September 2012 to May 2013 )

👍 **Member**, University of Wisconsin-Madison Statistics Department Social Committee ( January 2012 to May 2014 )

👍 **Founder and director**, Salvation Army Learning Center ( September 1998 to May 2000 )

👍 **Cub Scouts den leader**, Boy Scouts of America ( September 1998 to June 2000 )