

John Alexander Dawson

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Education

Postdoctoral scholar in the Office of Energetics / SSG University of Alabama-Birmingham, Birmingham, AL Advised by Drs. David B. Allison and Nianjun Liu	July 2012 – Present
Ph.D. in Statistics (with Biostatistics option) University of Wisconsin-Madison, Madison, WI Thesis: <i>Statistical methods for differential co-expression and the genomic analysis of time-to-event outcomes</i> Distributed Minor in Genetics & Computer Science Advised by Dr. Christina Kendzioriski	May 2012
B.S. (summa cum laude) in Mathematics University of Iowa, Iowa City, IA Minor in Computer Science	May 2005

Awards

2 nd place, Poster Competition, Postdoctoral Fellow Group UAB SOPH Research Day	April 2013
Federal Traineeship through NHLBI {T32HL072757}	2012 – 2013
Federal Traineeship through NIGMS {T32GM74904}	2005 – 2010
Student Travel Award 6 th Pathways, Networks, Systems Conference Platanias, Chania, Crete, Greece	Summer 2008
Invitation to Phi Beta Kappa Honors Society	Accepted, 2005
Catherine M Wegner Scholarship Department of Mathematics, University of Iowa	2001

Presentations

- Poster session June 2008
“Preliminary analysis of islet eQTL data from using a Mixture Over Markers (MOM) model with R/eqtl.”
6th Pathways, Networks, Systems Conference
Platanias, Chania, Crete, Greece
- Program seminar December 2010
“Simple is best so best be simple: A case study in problem solving and some thoughts on presentations.”
For the University of Wisconsin-Madison NIGMS Training Grant Program
- Poster session February 2011
“Statistical frameworks for identifying differentially regulated gene networks.”
University of Wisconsin Carbone Cancer Center Research Retreat
- Contributed talk August 2011
“An empirical Bayesian model for identifying differentially co-expressed genes.”
Joint Statistical Meetings, Miami
- Contributed poster August 2012
“Survival-supervised latent Dirichlet allocation models for genomic cancer research.”
Joint Statistical Meetings, San Diego
- Poster session February 2013
“Propagation of Obesity Across Generations.”
Postdoctoral Research Day, UAB
- Poster session April 2013
“Propagation of Obesity Across Generations.”
SOPH Research Day
- Virtual seminar May 2013
“Propagation of Obesity Across Generations.”
Minority-Health GRID, Morehouse School of Medicine, Atlanta
- Symposium To be held April 2014
“Propagation of Obesity Across Generations: The Roles of Differential Realized Fertility and Assortative Mating by Body Mass Index”
Part of “Novel Mathematical Models for Investigating Topics in Obesity”
American Society for Nutrition’s (ASN) Scientific Sessions and Annual Meeting at Experimental Biology, San Diego

Publications

1. Dennison S, Haulena M, Williams DC, **Dawson JA**, Yandell BS, Gulland FMD. Determination of a sedative protocol for use in California sea lions (*Zalophus californianus*) with neurologic abnormalities undergoing electroencephalographic examination. *Journal of Zoo and Wildlife Medicine*, vol. 39, no. 4, pp. 542-547, 2008.
2. Lavine JA, Raess PW, Stapleton DS, Rabaglia ME, Suhonen JI, Schueler KL, Koltes JE, **Dawson JA**, Yandell BS, Samuelson LC, Beinfeld MC, Davis DB, Hellerstein MK, Keller MP, Attie AD. Cholecystokinin is up-regulated in obese mouse islets and expands β -cell mass by increasing β -cell survival. *Endocrinology*, vol. 151, no. 8, pp. 3577-88, 2010.
3. **Dawson JA**. Bioconductor Case Studies. *The American Statistician*, vol. 64, no. 2, pp. 185-186, 2010 [Book review].
4. Wang P, **Dawson JA**, Keller MP, Yandell BS, Thornberry NA, Zhang BB, Wang I-M, Schadt EE, Attie AD. A model selection approach for expression quantitative trait loci (eQTL) mapping. *Genetics*, vol. 87, no. 2, pp. 611-21, 2011.
5. Flowers MT, Paton CM, O'Byrne SM, Schiesser K, **Dawson JA**, Blaner WS, Kendzierski C, Ntambi JM. Metabolic changes in skin caused by *Scd1* deficiency: a focus on retinol metabolism. *PLoS One*, vol. 6, no. 5, e19734, 2011.
6. Raines SM, Richards OC, Schneider LR, Schueler KL, Rabaglia ME, Oler AT, Stapleton DS, Genove G, **Dawson JA**, Betsholtz C and Attie AD. Loss of PDGF-B activity increases hepatic vascular permeability and enhances insulin sensitivity. *American Journal of Physiology: Endocrine and Metabolism*. E-publication before print: doi: 10.1152/ajpendo.00241.2011, 2011.
7. **Dawson JA** and Kendzierski C. Survival-supervised latent Dirichlet allocation models for genomic analysis of time-to-event models. University of Wisconsin-Madison Biostatistics Technical Report 225, 2011.
8. **Dawson JA** and Kendzierski C. An empirical Bayesian approach for identifying differential co-expression in high-throughput experiments. *Biometrics*, vol. 68, no. 2, pp. 45-65, 2012.
9. **Dawson JA**, Ye S and Kendzierski C. R/EBcoexpress: An empirical Bayesian framework for discovering differential co-expression. *Bioinformatics*, vol. 28, no. 14, pp. 1939-40, 2012.
10. Leng N, **Dawson JA**, Stewart RM, Ruotti V, Rissman A, Smits B, Haag J, Gould MN, Thomson JA and Kendzierski C. EBseq: An empirical Bayes hierarchical model for inference in RNA-seq experiments. *Bioinformatics*, vol. 29, no. 8, pp. 1035-43, 2013.

11. **Dawson JA**, Dhurandhar EJ, Vasquez AI, Peng B and Allison DB. Propagation of Obesity Across Generations: The Roles of Differential Realized Fertility and Assortative Mating by Body Mass Index. Accepted, Human Heredity. 2013
12. **Dawson JA**, Kaiser KA, Affuso O, Cutter G and Allison DB. A Bayesian meta-analytic study of whether rigorous control conditions diminish treatment effects in weight loss randomized clinical trials. Submitted.
13. Santos DA, **Dawson JA**, Matias CN, Rocha PM, Minderico CS, Allison DB, Sardinha LB and Silva AM. Dual energy X-ray absorptiometry and anthropometry reference values for athletes. In preparation.
14. Christopherson MR, **Dawson JA**, Stevenson D, Cunningham A, Bramhacharya S, Weimer PJ, Kendziorski C and Suen G. The complete genome of *Ruminococcus albus 7* suggests a novel cellulolytic strategy. In preparation.

Postdoctoral Research Experience

Postdoctoral trainee under Dr. David B. Allison and Dr. Nianjun Liu 2012 – Present
UAB Office of Energetics and Section on Statistical Genetics, Biostatistics

Postdoctoral Teaching and Professional Experience

Lecture on Meta-analysis of Weight Loss RCTs Part of “Overview of Randomized Clinical Trials in Obesity” Special lecture for UAB BST 725	October 2012
Lecture on Multiple Imputation in SAS and R Part of a team-taught lecture for visitors from Georgia Health Sciences University	December 2012
“Past As Prologue: Awards from 2008-2013 Using RePORT” Seminar for UAB Grant Writing Journal Club	March 2013
“EBSeq: Setting, Theory, Implementation and an Application” Seminar for UAB SSG Journal Club	May 2013

Graduate Research Experience

Research Assistant for Dr. Christina Kendziorski 2007 – 2012
UW-M Biostatistics and Medical Informatics

Rotations as part of NIGMS Training Grant Fall 2005 – Spring 2007

- Dr. Mari Palta, UW-M Population Health. *Longitudinal analysis of Wisconsin NICU data.*
- Dr. Cameron Currie, UW-M Bacteriology. *Inhibition reactions of fungus-growing ant mutualists.*
- Dr. Sunduz Keles, UW-M Statistics. *A web server for processing microarray data.*
- Dr. Christina Kendziorski, UW-M Biostatistics and Medical Informatics. *Comparing multiple-QTL mapping approaches.*

Project Assistant for Dr. Marian Fisher
UW-M Biostatistics and Medical Informatics, Clinical Trials Center

Summers 2005 & 2006

Graduate Teaching and Professional Experience

Lecture and Practicum on using R/EBarrays July 2009 & 2011
Part of “Computational Approaches to Analyzing Microarray Data”
Hosted by the BioPharmaceutical Technology Center Institute (BTCI)

Short Course in R, Computational Biology and Biostatistics (CBB) 2006 – 2010
Summer Research Program

Independent Consulting for Stratatech Corporation May 2011

Graduate Coursework

Statistical Methodology: Theory & Application of Regression & Analysis of Variance I & II, Introduction to Bayesian Decision & Control, Decision Trees for Multivariate Analysis, Experimental Design I, Estimation of Functions from Data, Survival Analysis Theory and Methods, Statistical Consulting

Biostatistics: Statistical Methods for Clinical Trials, Survival Analysis Theory & Methods, New Statistical Methods in Molecular Biology, Ethical & Regulatory Issues in Clinical Investigation, Introduction to Bioinformatics

Theory: Introduction to Measure & Integration, Mathematical Statistics I & II, Theory of Probability.

Biology and Genetics: General Genetics, Human Genetics, Introduction to Human Biochemistry, Topics in Analytical Chemistry – Genomic Science

Computer Skills

Proficient in R, LaTeX, PowerPoint, Word and Excel
Experience with SAS, Access, Java, C, C++, BASH and Maple

Service

Department Chair Search Committee Fall 2008 – Spring 2010
Graduate student contingent
UW-M Biostatistics and Medical Informatics

Social Committee, UW-M Statistics Fall 2008 – Spring 2010

Computing Committee, UW-M Statistics Fall 2007 – Spring 2012