

John G. Gibbons, Ph.D.

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PROFESSIONAL APPOINTMENTS

- 2014-Present **Assistant Professor**
Department of Biology
Clark University, Worcester, MA
Research Interests: Functional and Evolutionary Genomics, Bioinformatics
- 2012-2014 **Postdoctoral Research Fellow**
Harvard School of Public Health, Boston, MA
Advisor: Bernardo Lemos

EDUCATION

- 2007-2012 **Ph.D., Biological Sciences**
Vanderbilt University, Nashville, TN
Advisor: Antonis Rokas
Dissertation Title: The Function and Evolution of the *Aspergillus* Genome
- 2001-2005 **B.S., Biology**
Keene State College, Keene, NH

TEACHING EXPERIENCE

- 2014 **Assistant Professor.** *The Human Genome* (BIOL230); Clark University, Worcester, MA
Topics covered: Genome structure, organization, and function, comparative genomics, population genomics, genetic disease, epigenetics
- 2013 **Guest Lecturer.** *From Genes to Phenotype*; Clayton State University, Morrow, GA
- 2009-2010 **Teaching assistant.** *Research Based Biological Laboratory* (111C); Vanderbilt University, Nashville, TN
- 2008-2010 **Teaching assistant.** *General Biological Sciences Laboratory* (111B); Vanderbilt University, Nashville, TN

EDUCATIONAL DEVELOPMENT & OUTREACH

- 2013-2014 **Research Host.** Crimson Summer Academy high school students; Harvard School of Public Health, Boston, MA
- 2012-2013 **Effective Teaching Workshop.** Harvard School of Public Health, Boston, MA
- 2010 **Discussion Leader.** *What to Expect in Graduate School.* Undergraduate seminar, Belmont University, Nashville, TN
- 2010 **Research Guest Lecturer.** Science Major Seminar Series. Shorter College, Rome, GA

MENTORSHIP

- Undergraduate Students*
- 2011-2012 Martha H. Elmore Functional study of naturally polymorphic repetitive DNA

2010–2011	Zhengda Zhao	Characterization of repetitive DNA variation
2008–2010	Douglas A. Denniston	Development of DNA sequence parsing software

Graduate Students

2009	Sarah P. Lawson	Identification of selective sweeps using microsatellite markers
2008	Parimal Samir	Development of <i>Aspergillus</i> microsatellite markers

HONORS & AWARDS

2011	Graduate Student Research Excellence Award in Biological Sciences. Awarded annually to a graduate student of at least third-year status who has performed outstanding and scholarly research over a sustained period of his/her tenure in the Department of Biological Sciences, Vanderbilt University
2011	FEMS Young Scientist Meeting Grant. Awarded to support attendance to the FEMS Biofilms in Nosocomial Fungal Infections Conference in Paris, France
2010	Vanderbilt University Graduate School Travel Award. Awarded to assist in travel to collaborating lab in Paris, France
2010	Gisela Mosig Best Presenter Award. Awarded annually for the best presentation at the Department of Biological Sciences Annual Retreat; Department of Biological Sciences, Vanderbilt University
2010-2012	Ruth Kirschstein National Research Service Award for Individual Predoctoral Fellow. National Institute of Health and National Institute of Allergy and Infectious Disease (NIH, NIAID: F31AI091343-01)
2009	Ann Bernard Martin Award. Awarded annually to a graduate student who demonstrates exceptional promise in research and scholarly activity in the early stages of his/her graduate career; Department of Biological Sciences, Vanderbilt University
2008	Biological Sciences Annual Retreat Best Poster Award. Awarded annually for the best poster presentation at the Department of Biological Sciences Annual Retreat; Department of Biological Sciences, Vanderbilt University
2005	Keene State College Undergraduate Research Grant. Awarded in support of independent research focused on the population biology of <i>Polygala paucifolia</i> ; Keene State College

OTHER RESEARCH EXPERIENCE

2006-2007	Research Technician I. The Broad Institute, Cambridge, MA
2006	Research Associate I. Millennium Pharmaceuticals, Cambridge, MA
2003-2005	Research Assistant. Department of Sociology, Keene State College, Keene, NH

PUBLICATIONS

- Gibbons, J.G.**, A. Branco, S. Yu, and B. Lemos. Ribosomal DNA copy number is coupled with gene expression variation and mitochondrial abundance in humans. *Nature Communications*: In press.
- Muszkiet, L., A. Beauvais, V. Pätz, **J. G. Gibbons**, V. A. Leberre, R. Beau, K. Shibuya, A. Rokas, J. M. Francois, O. Kniemeyer, A. A. Brakhage, and J.-P. Latge (2013). Investigation of *Aspergillus fumigatus* biofilm formation by various “omics” approaches. *Frontiers in Microbiology*: 4.
- Ubaida Mohien, C., D. R. Colquhoun, D. K. Mathias, **J. G. Gibbons**, J. S. Armistead, M. del Carmen-Rodriguez, M. H. Rodriguez, N. J. Edwards, J. Hartler, G. G. Thallinger, D. R. Graham, J. Martinez-Barnetche, A. Rokas, and R. R. Dinglasan (2012). A bioinformatics approach for integrated transcriptomic and proteomic comparative analyses of model and non-sequenced anopheline vectors of human malaria parasites. *Molecular & Cellular Proteomics*: 12: 120-131.
- Gibbons, J. G.**, and A. Rokas (2012). The function and evolution of the *Aspergillus* genome. *Trends in Microbiology*: 21: 14-22.

- Elmore, M.H.*, **J.G. Gibbons***, and A. Rokas (2012). Assessing the genome-wide effect of promoter region tandem repeat natural variation on gene expression. *G3* 2:1643-1649. (*Equal contributors)
- Rokas, A., **J. G. Gibbons**, X. Zhou, A. Beauvais, and J.-P. Latge (2012). The diverse applications of RNA-seq for functional genomic studies in *Aspergillus fumigatus*. *Annals of the New York Academy of Sciences* 1273:25-34.
- Gibbons, J. G.**, L. Salichos, J. C. Slot, D. C. Rinker, K. L. McGary, J. G. King, M. A. Klich, D. L. Tabb, W. H. McDonald, and A. Rokas (2012). The evolutionary imprint of domestication on genome variation and function of the filamentous fungus *Aspergillus oryzae*. *Current Biology*: 22: 1-7.
- Martínez-Barnetche, J., R. E. Gómez-Barreto, M. Ovilla-Muñoz, J. Téllez-Sosa, D. E. García López, R. R. Dinglasan, C. Ubaida-Mohien, R. M. MacCallum, S. N. Redmond, **J. G. Gibbons**, A. Rokas, C. A. Machado, F. Cazares-Raga, L. González-Cerón, S. Hernández-Martínez, and M. H. Rodríguez López (2012). Transcriptome of the adult female malaria mosquito vector *Anopheles albimanus*. *BMC Genomics*. 13:207.
- Klaassen, C. H. W.* , **J. G. Gibbons***, N. D. Fedorova, J. F. Meis, and A. Rokas (2012). Evidence for genetic differentiation and variable recombination rates among Dutch populations of the opportunistic human pathogen *Aspergillus fumigatus*. *Molecular Ecology*. 21: 57-70. (*Equal contributors)
- Gibbons, J. G.**, A. Beauvais, R. Beau, K. L. McGary, J.-P. Latge, and A. Rokas (2012). Global transcriptome changes underlying colony growth in the opportunistic human pathogen *Aspergillus fumigatus*. *Eukaryotic Cell*. 11: 68-78.
- Kent, B. N., L. Salichos, **J. G. Gibbons**, A. Rokas, I. L. G. Newton, M. E. Clark, and S. R. Bordenstein (2011). Complete bacteriophage transfer in a bacterial endosymbiont (*Wolbachia*) determined by targeted genome capture. *Genome Biology and Evolution*. 3: 209-218.
- An J.H., 102 additional co-authors including **J.G. Gibbons** (2010) Permanent Genetic Resources added to Molecular Ecology Resources Database 1 October 2009-30 November 2009. *Molecular Ecology Resources*. 10, 404-408.
- Gibbons, J. G.**, E. Janson, C. T. Hittinger, M. Johnston, P. Abbot and A. Rokas (2009). Benchmarking next-generation transcriptome sequencing for functional and evolutionary genomics. *Molecular Biology and Evolution*. 26: 2731-2744.
- Gibbons, J. G.** and A. Rokas (2009). Comparative and functional characterization of intragenic tandem repeats in ten *Aspergillus* genomes. *Molecular Biology and Evolution*. 26: 591-602.
- Saxena, R., 65 additional co-authors including **J.G. Gibbons** (2007). Genome-wide association analysis identifies loci for type 2 diabetes and triglyceride levels. *Science* 316:1331-1336.

Manuscripts in Review

- Gibbons, J.G.**, A. Branco, S. Godinho, S. Yu, and B. Lemos. Concerted copy number variation harmonizes ribosomal DNA dosage in human and mouse genomes. *In review at PNAS*
- Stahlin, B.M., **J.G. Gibbons**, A. Rokas, T.V. O'Halloran and J.C. Slot. Ancient and modern copper pollution recorded in a bacterial pan-genome. *In review at mBio*

INVITED CONFERENCE PRESENTATIONS

- 2010 IMC9: The Biology of Fungi; Edinburgh, United Kingdom.

INVITED DEPARTMENTAL SEMINARS

- 2014 Department of Biology; Southern Connecticut State University; New Haven, CT
- 2014 Department of Biology; East Carolina University, Greenville, NC
- 2014 Department of Biology; Clark University, Worcester, MA.
- 2012 Department of Pathology, Microbiology and Immunology; Vanderbilt University.
- 2012 Center for Genomics & Systems Biology; New York University, NY.
- 2011 Mycotic Diseases Branch; Center for Disease Control and Prevention; Atlanta, GA.

CONTRIBUTED PRESENTATIONS

- 2014 Molecular & Integrative Physiological Sciences; Harvard School of Public Health, Boston, MA
2012 Department of Biological Sciences Seminar; Vanderbilt University.
2011 Biofilms in Nosocomial Fungal Infections; Paris, France.
2010 Department of Biological Sciences Annual Retreat; Vanderbilt University.
2010 Mycological Society of America Annual Meeting; Lexington, KY.
2009 Department of Biological Sciences Annual Retreat; Vanderbilt University.
2009 Association of Southeastern Biologists Annual Meeting; Birmingham AL.
2008 Mycological Society of America Annual Meeting; Pennsylvania State University, State College, PA.

SERVICE

Review of Manuscripts

- BMC Microbiology
- BMC Genomics
- BMC Bioinformatics
- Heredity
- Molecular Biology and Evolution
- PLoS Neglected Tropical Diseases
- PLoS One
- Fungal Genetics and Biology
- Toxins

Present and Former Professional Society Membership

- Association of Southeastern Biologists
- International Mycological Congress
- Society for Molecular Biology and Evolution
- French Society of Microbiology
- Mycological Society of America

Organizational (Department of Biological Sciences Graduate Student Association)

- 2009-2011 Invited Lecture Series Chair
2008-2009 Social Activity Chair
2008-2012 Board Member

Institutional

- 2012-2014 MIPS “Big Data” Group organizer (Harvard School of Public Health)
2012 Vanderbilt University Beckman Scholar Selection Committee