

Curriculum Vitae Gaius J. Augustus

gaiusjaugustus@gmail.com



Personal Information

Tucson, AZ

Language English

Citizenship USA

Education

- 2014 – 2019 Cancer Biology Graduate Interdisciplinary Program, University of Arizona. GPA: 3.81
- 2010 – 2014 B.S. in Integrative Studies with a focus in Chemistry and Biology. Kennesaw State University. GPA: 3.84
- 2003 – 2006 Studied Film & Television. Savannah College of Art and Design.

Honors & Awards

- 2017-2019 Cancer Biology GIDP Training Grant (T32 CA009213)
- 2018 ScienceWriters Graduate Travel Grant, NASW
- 2017 Scholar-in-Training Award, AACR
- 2017 Travel Award, The Geographic Management of Cancer Health Disparities Program (GMaP)
- 2016 Full Registration & Travel Scholarship, Summer Institutes for Statistical Genetics, University of Washington
- 2015 Scholar-in-Training Award, AACR
- 2014 Department of Biology & Physics Student of the Year Award
- 2012 – 2014 Safe Space Endowed Scholarship
- 2012 – 2013 Student Life Organization of the Year (for N/A*)
- 2012 – 2013 Charles S. Wollmer Memorial Scholarship, August C. Krueger Memorial Endowed Scholarship
- 2011 – 2012 New Organization of the Year (for N/A*)
- 2011 – 2012 Gertrude Ely Richardson Stillwell Scholarship
- 2010 – 2012 National Science & Mathematics Access to Retain Talent (SMART) Grant
- 2003 – 2006, Spring 2010-Fall 2011 Helping Outstanding Pupils Educationally (HOPE) Scholarship

Publications

Augustus, G.J., Xicola, R.M., Llor, X., Ellis, N.A. Decreased copy-neutral loss of heterozygosity in African American colorectal cancers. *Genes, Chromosomes, & Cancer*. [submitted]

Xicola, R. M., Manojlovic, Z., Augustus, G. J., Kupfer, S.S., Emmadi, R., Alagiozian-Angelova, V., Triche Jr., T., Salhia, B., Carpten, J., Llor, X., Ellis, N.A. Lack of APC somatic mutation is associated with early-onset colorectal cancer in African Americans. *PLOS Genet.* doi:10.1093/carcin/bgy122 (2018).

Augustus G.J., Roe D.J., Jacobs E.T., Lance P., Ellis N.A. Is increased colorectal screening effective in preventing distant disease? *PLOS ONE*. 2018:13(7):e0200462. doi: 10.1371/journal.pone.0200462.

Publications (cont'd)

- Augustus G.J., Ellis N.A. Colorectal Cancer Disparity in African Americans: Risk Factors and Carcinogenic Mechanisms. *Am J Pathol.* 2018;188(2):291-303. doi: 10.1016/J.AJP.2017.07.023.
- Yazici, C., Wolf, P.G., Kim, H., Cross, T.W.L., Vermillion, K., Carroll, T., Augustus, G.J., Mutlu, E., Tussing-Humphreys, L., Braunschweig, C., Xicola, R.M., Jung, B., Llor, X., Ellis, N.A., Gaskins, H.R. Race-dependent association of sulfidogenic bacteria with colorectal cancer. *Gut.* 2017;66(11). doi:10.1136/gutjnl-2016-313321.
- Tulenko F. J., Augustus G. J., Massey J. L., Sims S. E., Mazan S., Davis M. C. HoxD expression in the fin-fold compartment of basal gnathostomes and implications for paired appendage evolution. *Sci. Rep.* 2016;6, 22720. doi: 10.1038/srep22720.

Published Abstracts, Presentations, & Posters

- 2017 Augustus, G.J., Roe D.J., Jacobs E.T., Lance P., Ellis N.A. Paradoxically Increasing Proportion of Distant Colorectal Cancer, University of Arizona Cancer Center Phoenix Retreat (Invited Poster).
- 2017 Augustus, G.J., Ellis, N.A. Copy neutral loss of heterozygosity is decreased in African American colorectal cancers, AACR Cancer Health Disparities Conference (Poster).
- 2015 Augustus, G.J., Xicola, R.M., Manojlovic, Z., Carpten, J., Llor, X., Ellis, N.A. Homologous Recombination Drives African American Colorectal Carcinogenesis, AACR Cancer Health Disparities Conference (Poster & Presentation)
- 2015 Cooper, K., Augustus, G.J., McNeal, J.R. Primer design for population genetics of Beaked dodder (*Cuscuta rostrata*), Regional meeting of Association for Southeastern Biologists
- 2015 Massey J.L., Augustus, G.J., Tulenko, F.J., Mazan, S., Davis, M.C. Expression of 5' HoxD Cluster Genes in the American Paddlefish *Polyodon spathula*, National meeting of Society for Integrative & Comparative Biology

Lectures & Educator Experience (also see Employment)

- Nov 30, 2018 From Science to Infographic (Instructor), *University of Arizona*
- Aug 26, 2017 Software/Data Carpentry Workshop on R (Co-Instructor), *University of Arizona/Cyverse*
- Mar 31, 2017 Software/Data Carpentry Workshop on git/GitHub (Helper), *University of Arizona*
- Feb 25-26, 2017 Python Software Carpentry Workshop (Helper), *University of Arizona*
- Apr 18, 2014 (A)spirituality, *Kennesaw State University*
- Nov 5, 2013 Acceptance & Identity, *Kennesaw State University*
- Oct 18, 2013 Beyond the Binary: Sex, Love, and Romance, *Kennesaw State University*
- 2013 Student Safe Space, *Kennesaw State University*

Research Experiences

- Mar 2015 – Apr 2019 **Ongoing Graduate Work**
University of Arizona, Cancer Biology GIDP
Faculty Mentor: Nathan Ellis, PhD, naellis@email.arizona.edu
Project: Genetics of colorectal cancer in African Americans
- Jan 2015 – Mar 2015 **Graduate Rotation**
University of Arizona, Arizona Biological & Biomedical Sciences; Faculty Mentor: Justina McEvoy, PhD
Project: Validation of antibodies for epigenetic profiling of Rhabdomyosarcomas
- Oct 2014 – Jan 2015 **Graduate Rotation**
University of Arizona, Arizona Biological & Biomedical Sciences
Faculty Mentor: Nathan Ellis, PhD
Project: Testing reproducibility and accuracy of FFPE-Blood DNA genotypes
- Aug 2014 – Oct 2014 **Graduate Rotation**
University of Arizona, Arizona Biological & Biomedical Sciences
Faculty Mentor: Tim Bolger, PhD, tbolger@email.arizona.edu
*Project: Characterization of mutant Ded1 translation in *Saccharomyces cerevisiae**
- Spring 2013 – 2014 **Undergraduate Researcher**
Kennesaw State University Dept. of Biology and Physics
Faculty Mentor: Marcus Davis, PhD, mdavi144@kennesaw.edu
*Project: Analysis of Hox gene expression in paired fins of paddlefish (*Polyodon spathula*)*
- Spring 2012 – 2014 **Undergraduate Researcher**
Kennesaw State University Dept. of Biology and Physics
Faculty Mentor: Joel McNeal, PhD, jmcneal7@kennesaw.edu
*Project: Primer design for population genetics of Beaked Dodder (*Cuscuta rostrata*)*
- Summer 2013 **NSF Funded Research Assistant**
Kennesaw State University, Dept. Of Biology and Physics
Faculty Mentor: Marcus Davis, PhD, mdavi144@kennesaw.edu

Research Skills

Genomic Techniques

Processing of microarray data, primer design, gene sequence preparation for submission to GenBank, visualization of sequencing data, copy number analysis, differential methylation analysis, differential expression analysis

Statistical Techniques

Parametric and non-parametric comparisons of 2 categorical or continuous variables, logistic & linear regression, machine learning (clustering and classification techniques), adjusting for multiple testing

Wet Techniques

DNA isolations, RNA isolations, agarose gel electrophoresis, PCR, microsatellite identification, preparation of GeneScan reactions, field work (collecting tissue samples), planting and caring for specimens, histological techniques for skeletal staining, cDNA synthesis, gel purification, ligation into vector, bacterial transformation, plating and cultures techniques, restriction endonuclease digestion, transcription reaction, *in situ* hybridization

Computer Skills

Languages: Advanced – R, Command line; Intermediate – Python
Web application development: Proficient in HTML5 standards, CSS3, PHP
Database implementation: MySQL

Employment

Oct 2017 – Aug 2018 **Multimedia Coordinator**
University of Arizona, Cancer Center
Supervisor: Anna Christensen, achristensen@email.arizona.edu

Jan 2014 – May 2014 **Physics Learning Assistantship**
Kennesaw State University, Dept of Biology & Physics
Supervisor: Taha Mzoughi, PhD

Jan 2012 – Oct 2013 **Tutor of Chemistry, Biology, Physics, and Mathematics**
Kennesaw State University, Student-Athlete Success Services
Supervisor: Tyler Pede, tpede@kennesaw.edu

2011 – 2013 **Freelance Web Design**

2007 – 2009 **Freelance Portrait Photography**

Dec 2005 – Dec 2010 **Head Photo Specialist & Certified Pharmacy Technician**
Walgreens

Jan 2005 – Dec 2005 **Sales Associate & Lab Technician**
Wolf Camera

Nov 2004 – Jan 2005 **Cookie Cake Decorator**
Great American Cookie Company

Leadership Experiences & Organization Memberships

2018 Public Affairs & Marketing Network

2017 – curr. National Association of Science Writers

2015 – 2017 American Association for Cancer Research

2012 – curr. Golden Key International Honour Society

2013 – 2014 Campus Climate & Culture Assessment Task Force

2013 – 2014 Society for Integrative and Comparative Biology, Student-In-Training Member

2012 – 2014 Student Government Association (Senator for Registered Student Organizations)

2012 – 2014 American Medical Student Association

2012 – 2014 Presidential Commission for Gender and Work/Life Balance

2012 – 2013 National Organization of Gay and Lesbian Scientists and Technical Professionals

2012 Presidential Commission for GLBTIQ Initiatives

2011 – 2014 Non-Normative Anti-Assimilationist Students of KSU (N/A*)

Research Advisors

Nathan Ellis, PhD
 Cellular and Molecular
 Medicine
 Director, Cancer Biology
 Program
 University of Arizona
 Tucson, AZ, USA
 520-626-7979
 naellis@email.arizona.edu

Marcus Davis, PhD
 Biology
 Associate Dean, Integration of
 Teaching & Scholarship,
 College of Math. & Science
 James Madison University
 Harrisonburg, VA, USA
 540-568-3508
 davis4mc@jmu.edu

Joel McNeal, PhD
 Dept of Ecology,
 Evolution, and Organismal
 Biology
 Asst. Professor of Biology
 Kennesaw State University
 Kennesaw, GA, USA
 470-578-3561
 jmcneal7@kennesaw.edu

Math & Science Courses

Undergraduate		
Elementary Statistics	Biological Principles	Cell & Molecular Biology
Biostatistics	Evolutionary Biology	Human Anatomy & Physiology
Calculus II	Genetics	Physiological Psychology
Principles of Physics	Medical Genetics	Molecular Biosciences Seminar
General Chemistry	Immunology	Genomics & Systems Biology (audit)
Modern Organic Chemistry	Bioinformatics	Quantitative Analytical Chemistry
Biochemistry		
Graduate		
Cancer Biology	Grant Writing	Art of Scientific Discovery
Problems in the Biology of Complex Diseases	Science, Society & Ethics	Experimental Design
Genetic & Molecular Networks	Biostatistics for Research	Molecular & Cellular Neurobiology

Art Courses

Survey of Western Arts I	Survey of Western Arts II	Roman Art & Archaeology
History of Film	Drawing I	Drawing II
Life Drawing I	2-D Design	3-D Design
Color Theory	Intro to Video Production	Intro to Film Production
Adv. Survey of Computer Applications	Preproduction	Lighting & Field Production Techniques
Intro to Sound Design	Intermediate Sound Design	Location Sound
Postproduction Techniques	Advanced Postproduction	Directing the Narrative
Writing Fundamentals for Screen & Stage	Screenwriting	

Independent Coursework

Year, Course	Medium	Institution
2016-2018, Python Programmer Track	DataCamp	
2015-2017, R Programming Track	DataCamp	
2016-2017, Data Manipulation with R Track	DataCamp	
2016, Association Mapping: GWAS and Sequencing Data	Summer Institute for Statistical Genetics	University of Washington, Department of Biostatistics
2016, Introduction to Pathway and Network Analysis	Summer Institute for Statistical Genetics	University of Washington, Department of Biostatistics
2016, Bayesian Statistics for Genetics	Summer Institute for Statistical Genetics	University of Washington, Department of Biostatistics
2016, Cleaning Data in R	DataCamp	
2016, Data Visualization with ggplot2	DataCamp	
2016, Command Line Tools for Genomic Data Science	Coursera	Johns Hopkins University
2015, Reporting with R Markdown	DataCamp	
2015, Intro to Statistics with R: Introduction	DataCamp	
2015, Introduction to Metagenomics Data Analysis	Summer Institute for Modelling of Infectious Disease	University of Washington, Department of Biostatistics
2015, Population Genetics Data Analysis	Summer Institute for Statistical Genetics	University of Washington, Department of Biostatistics
2015, Gene Expression Profiling	Summer Institute for Statistical Genetics	University of Washington, Department of Biostatistics
2015, Introduction to R Programming	Summer Institute for Statistical Genetics	University of Washington, Department of Biostatistics
2015, Statistical Inference	Coursera	Johns Hopkins University
2015, R Programming	Coursera	Johns Hopkins University
2015, The Data Scientist's Toolbox	Coursera	Johns Hopkins University
2015, HTML5	SoloLearn	
2014, Python	Codecademy	
2014, PHP	Codecademy	

2014, PHP	SoloLearn	
2014, HTML & CSS	Codecademy	
2014, Learning How to Learn: Powerful mental tools to help you master tough subjects	Coursera	University of California, San Diego
2013, Epigenetic Control of Gene Expression	Coursera	The University of Melbourne