

Carissa C. Jones, Ph.D.

Vanderbilt Genetics Institute
Department of Thoracic Surgery
Vanderbilt University Medical Center
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EDUCATION

- 2012 B.S. in Medicinal and Biological Chemistry, concentration in Biology
Summa Cum Laude
Palm Beach Atlantic University, West Palm Beach, FL
- 2012-2017 Ph.D., Graduate Program in Human Genetics
Vanderbilt University School of Medicine, Nashville, TN
Examining the role of genetics in lung cancer survival and risk in African Americans
Dissertation Advisor: Melinda C. Aldrich, Ph.D., M.P.H.

RESEARCH EXPERIENCE

- 2011 **Summer Undergraduate Research Fellow**, The Scripps Research Institute, La Jolla, CA
Lazzerini Denchi Lab
Internship project: *Identification of accessory factor proteins involved in telomere protection*
- 2013-2017 **Graduate student, Human Genetics**
Aldrich Lab
Vanderbilt University Medical Center, Nashville, TN
Research projects:
- *Identified genome-wide pharmacogenetic associations between metformin use and cancer survival using data extracted from the electronic medical record*
 - *Analyzed rare and common variants associated with lung cancer survival through aggregation-based and single SNP-based statistical analyses*
 - *Examined the association between global African ancestry and lung cancer survival*
 - *Identified cross-cancer pleiotropic associations for lung cancer risk in African Americans*
- 2017-current **Postdoctoral research fellow**
Aldrich Lab
Vanderbilt University Medical Center
Current research:
- *Examine patterns of African American population substructure across the U.S.*

AWARDS, HONORS, SCHOLARSHIPS, AND FELLOWSHIPS

- 2008-2012 Palm Beach Atlantic University (PBAU) Frederick M. Supper Honors Program
- *Four-year program aimed at training students to reconsider their position in the world using a survey of philosophical and sociological primary literature*

- 2008-2012 Provost's List Palm PBAU for a GPA between 3.75 and 3.99 in a semester
- 2008-2012 President's List PBAU for a GPA of 4.00 in a semester
- 2011 Arthur R. Marshall Foundation Scholar
- *One year scholarship and internship at the Arthur R. Marshall Foundation for conservation and restoration of the Florida Everglades*
- 2012 Outstanding Graduate for Medicinal and Biological Chemistry, PBAU
- *Awarded to one graduating senior each year for outstanding service and academic achievement*
- 2013-2017 NIH Human Genetics Training Grant (5T32GM080178)
- *Training Program on Genetic Variation and Human Phenotypes*
- 2013 Travel Grant (\$500), Vanderbilt University Graduate School, for attendance to the annual meeting of the American Society of Human Genetics in Boston, MA
- 2014 Vanderbilt Ingram Cancer Center Annual Scientific Retreat Poster Presentation, Awarded Honorable Mention
- *Global African ancestry is not associated with lung cancer survival*
- 2014 Travel Grant (\$500), Vanderbilt University Graduate School for attendance to the annual meeting of the American Society of Human Genetics in San Diego, CA
- 2016 Vanderbilt Ingram Cancer Center Annual Scientific Retreat Poster Presentation, Awarded Honorable Mention
- *Germline genetic variants and lung cancer survival in African Americans*
- 2016-2017 Fellow, Scientist in the Classroom Program
- 2016 Travel Grant (\$500), Vanderbilt University Graduate School for attendance to the annual meeting of the American Society of Human Genetics, Vancouver, BC, Canada
- 2017-Current Fellow, Scientist in the Classroom Program
- 2017-Current Fellow, Molecular and Genetic Epidemiology of Cancer Training Program

TEACHING EXPERIENCE

- 2015 Guest Lecture, Human Genetics I: Cancer Genetics
- 2016 Summer Academy at Vanderbilt for the Young (SAVY) Instructor, Genetics
- 2016-2017 Vanderbilt Center for Science Outreach (CSO), Scientist in the Classroom Program
- 2017 Guest Lecture, Human Genetics II: Human Genome Resources
- 2017 SAVY Instructor, Genetic Epidemiology
- 2017-Current Vanderbilt CSO, Scientist in the Classroom Program

PROFESSIONAL MEMBERSHIPS

- 2013-current American Society of Human Genetics (ASHG)
- 2014 American Association of Cancer Research (AACR)

PROFESSIONAL SERVICE

- 2013-2017 Human Genetics Student Association, Vanderbilt University
- 2015-current Mentoring of undergraduate and graduate students
- 2016-2017 Graduate Student Representative, Vanderbilt Human Genetics Seminar Series

PROFESSIONAL TRAINING

- August 2014 Software Carpentry Boot Camp, Vanderbilt University
August 2015 Vanderbilt Center for Quantitative Sciences (CQS) Summer Institute: Big data in biomedical Research
August 2015 Vanderbilt CQS Summer Institute: Biostatistics I
August 2015 Vanderbilt CQS Summer Institute: Biostatistics II

RELEVANT WORK EXPERIENCE

- 2011-2012 Student Success Center Peer Tutor - Biology, Human Anatomy and Physiology, Palm Beach Atlantic University
2009-2012 Biology Lab Teaching Assistant, Palm Beach Atlantic University

INTERNAL PRESENTATIONS

1. **C.C. Iverson.** Incorporating genetic variation into lung cancer survival models (2014). Presented at *Genetics Interest Group*, Vanderbilt University, Nashville, TN.
2. **C.C. Iverson.** Investigating the Genetic Contribution of Lung Cancer Survival in African Americans (2015). Presented at *Genetics Interest Group*, Vanderbilt University, Nashville, TN.
3. **C.C. Iverson.** Uncovering fine-scale population structure in African Americans (2015). Presented at *Genetics Interest Group*, Vanderbilt University, Nashville, TN.
4. **C.C. Jones.** Cross-cancer pleiotropic analysis of lung cancer in African Americans (2016). Presented at *Genetics Interest Group*, Vanderbilt University, Nashville, TN.

PUBLICATIONS

1. J. Sun, M. Zhao, P. Jia, L. Wang, Y. Wu, **C. C. Iverson**, M. Aldrich, H. Xu, J. Denny, Z. Zhao. Deciphering Signaling Pathway Networks to Understand Molecular Mechanism of Metformin Action. *PLoS Computational Biology*. June 2015; 11(6):e1004202. PMID:26083494. PMCID: PMC4470683.
2. **C. C. Jones**, W. S. Bush, D. C. Crawford, A. Wenzlaff, A. Schwartz, J.K. Wiencke, M.R. Wrensch, W. J. Blot, S. J. Chanock, E. L. Grogan, M. C. Aldrich. Germline genetic variants and lung cancer survival in African Americans. *Cancer, Epidemiology, Biomarkers, and Prevention*. June 2017. PMID: 28619829.
3. L. N. Sausville, **C. C. Jones**, M.C. Aldrich, W.J. Blot, A. Pozzi, S.M. Williams. Genetic variation in the eicosanoid pathway is associated with non-small-cell lung cancer (NSCLC) survival. *PLoS One*. July 2017. PMID: 28704416.
4. **C. C. Jones**, S. Fletcher, J. Blume, A. Wenzlaff, H. Chen, S. A. Deppen, W. S. Bush, D. C. Crawford, A. Schwartz, W. J. Blot, E. L. Grogan, M. C. Aldrich. No evidence for an association between African genetic ancestry and lung cancer survival. *Submitted*.

5. **C. C. Jones**, A. G. Schwartz, J. K. Wiencke, M. R. Wrensch, W. J. Bloth, S. J. Chanock, M. C. Aldrich. Cross-cancer pleiotropic associations with lung cancer risk in African Americans. *In preparation*.

ABSTRACTS

1. **C. C. Iverson**, H. Xu, Q. Chen, A. Shah, Q. Dai, J. Warner, N. B. Peterson, L. Olson, D. C. Crawford, D. M. Roden, J. C. Denny, M. C. Aldrich. Personalized genomics of metformin therapy for improved cancer survival; (2013). Presented at the 63rd Annual Meeting of *The American Society of Human Genetics*, Boston, MA.
2. J. Sun, M. Zhao, P. Jia, L. Wang, Y. Wu, **C. Iverson**, M. Aldrich, H. Xu, J. Denny, Z. Zhao. A Novel Computational Framework to Explore Signaling Pathway Networks for Understanding Drug Action; (2013). Presented at the 6th Annual *RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges*, Toronto, Ontario.
3. **C. C. Iverson**, S. Fletcher, J. Blume, H. Dilks, H. Chen, S. A. Deppen, W. S. Bush, D. C. Crawford, W. J. Blot, E. L. Grogan, M. C. Aldrich. Global African ancestry is not associated with lung cancer survival; (2014). Presented at the 105th Annual Meeting of the *American Association for Cancer Research*, San Diego, CA.
4. **C. C. Iverson**, S. Fletcher, J. Blume, H. Dilks, H. Chen, S. A. Deppen, W. S. Bush, D. C. Crawford, W. J. Blot, E. L. Grogan, M. C. Aldrich. Global African ancestry is not associated with lung cancer survival; (2014). Presented at the Vanderbilt Ingram Cancer Center (VICC) Annual Scientific Retreat, Nashville, TN. *Awarded Honorable Mention*.
5. **C. C. Iverson**, W. S. Bush, D. C. Crawford, A. Wenzlaff, H. Dilks, A. Schwartz, W. J. Blot, E. L. Grogan, M. C. Aldrich. Rare and common variants contribute to lung cancer survival in African Americans; (2014). Presented at the 64th Annual Meeting of *The American Society of Human Genetics*, San Diego, CA.
6. J. Sun, M. Zhao, P. Jia, L. Wang, Y. Wu, **C.C. Iverson**, Y. Zhou, E. Bowton, D. Roden, J. Denny, M. Aldrich, H. Xu, Z. Zhao. DSPathNet: a novel computational framework to decipher drug signaling pathway networks for understanding drug action; (2014). Presented at the 7th Annual *RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges*, San Diego, CA.
7. **C. C. Jones**, W. S. Bush, D. C. Crawford, A. Wenzlaff, A. Schwartz, J.K. Wiencke, M.R. Wrensch, W. J. Blot, S. J. Chanock, E. L. Grogan, M. C. Aldrich. Germline genetic variants and lung cancer survival in African Americans; (2016). Presented at the Vanderbilt Ingram Cancer Center (VICC) Annual Scientific Retreat, Nashville, TN. *Awarded Honorable Mention*.
8. **C. C. Jones**, Y. Bradford, C. I. Amos, W. J. Blot, S. J. Chanock, C. C. Harris, A. G. Schwartz, J. K. Wiencke, X. Wu, M. C. Aldrich. Cross-cancer pleiotropic analysis of lung cancer in African Americans; (2016). Presented at the North Coast Conference on Precision Medicine, Cleveland, OH.
9. **C. C. Jones**, Y. Bradford, C. I. Amos, W. J. Blot, S. J. Chanock, C. C. Harris, A. G. Schwartz, J. K. Wiencke, X. Wu, M. C. Aldrich. Cross-cancer pleiotropic analysis of lung cancer in African Americans; (2016). Presented at the 66th Annual Meeting of *The American Society of Human Genetics*, Vancouver, BC, Canada.

10. L. N. Sausville, **C. C. Jones**, M. C. Aldrich, W. J. Blot, A. Pozzi, S. M. Williams. Genetic variation in the eicosanoid pathway is associated with non-small cell lung cancer (NSCLC) survival; (2016). Presented at the 66th Annual Meeting of *The American Society of Human Genetics*, Vancouver, BC, Canada.

VOLUNTEER WORK

- 2011-2012 Arthur R. Marshall Foundation
2013-2014 Cross Point Guest Experiences
2013-current Active recruitment of potential Vanderbilt graduate students
2015-2016 Hills Kids, Team Leader

RESEARCH SKILLS

Programming

Proficient in Linux/Unix computing
Proficient in R software
Plink, ADMIXTURE, LAMP