

CURRICULUM VITAE AND TABLE OF CONTENTS

JOSEPH LACHANCE, PH.D.
ASSISTANT PROFESSOR
SCHOOL OF BIOLOGICAL SCIENCES

I. EARNED DEGREES	2
II. EMPLOYMENT HISTORY	2
III. HONORS AND AWARDS	2
IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES	2
A. PUBLISHED BOOKS, BOOK CHAPTERS, AND EDITED VOLUMES	2
A1. BOOKS.....	2
A2. REFEREED BOOK CHAPTERS	3
A3. EDITED VOLUMES.....	3
B. REFEREED PUBLICATIONS AND SUBMITTED ARTICLES	3
B1. PUBLISHED AND ACCEPTED JOURNAL ARTICLES	3
B2. CONFERENCE PRESENTATIONS WITH PROCEEDINGS (REFEREED).....	5
B3. OTHER REFEREED MATERIAL	5
B4. SUBMITTED JOURNAL ARTICLES	5
B5. ARTICLES IN PREPARATION	6
C. OTHER PUBLICATIONS AND CREATIVE PRODUCTS	6
D. PRESENTATIONS	7
D1. INVITED SEMINARS.....	7
D2. CONFERENCE TALKS.....	9
D3. CONFERENCE POSTERS.....	10
E. GRANTS AND CONTRACTS	13
E1. AS PRINCIPAL INVESTIGATOR	13
E2. AS CO-PRINCIPAL INVESTIGATOR	13
E3. AS SENIOR PERSONNEL OR CONTRIBUTOR	13
E4. PENDING PROPOSALS	13
E5. PROPOSALS SUBMITTED BUT NOT FUNDED (LAST TWO YEARS).....	13
F. OTHER SCHOLARLY AND CREATIVE ACCOMPLISHMENTS	13
G. SOCIETAL AND POLICY IMPACTS	14
H. OTHER PROFESSIONAL ACTIVITIES	14
V. EDUCATION	14
A. COURSES TAUGHT	14
B. INDIVIDUAL STUDENT GUIDANCE	15
B1. PH.D. STUDENTS	15
B2. M.S. STUDENTS.....	15
B3. UNDERGRADUATE STUDENTS	16
B4. SERVICE ON THESIS OR DISSERTATION COMMITTEES.....	16
B5. MENTORSHIP OF POSTDOCTORAL FELLOWS OR VISITING SCHOLARS.....	17
C. EDUCATIONAL INNOVATIONS AND OTHER CONTRIBUTIONS	17
VI. SERVICE	18
A. PROFESSIONAL CONTRIBUTIONS	18
A1. REVIEWED PUBLICATIONS	18
A2. GUEST EDITOR	18
A3. GRANT REVIEWING.....	18
A4. SOCIETY MEMBERSHIPS	18
B. PUBLIC AND COMMUNITY SERVICE	18
C. INSTITUTIONAL CONTRIBUTIONS	18
D. OTHER SERVICE	19

JOSEPH LACHANCE PH.D.
ASSISTANT PROFESSOR
SCHOOL OF BIOLOGICAL SCIENCES

I. EARNED DEGREES

- 1992-1996 B.A. in biology, University of Chicago
Thesis title: "Epistatic interactions underlie incipient speciation in Zimbabwe *Drosophila melanogaster*"
- 2005-2010 Ph.D. in genetics, Stony Brook University
Dissertation title: "Life after beanbag genetics: theoretical and empirical studies on epistasis and penetrance"
Ph.D. advisor: John True

II. EMPLOYMENT HISTORY

- 2015- Assistant Professor, School of Biological Sciences, Georgia Institute of Technology
- 2010-2014 NIH NRSA Postdoctoral Fellow, University of Pennsylvania
Postdoctoral advisor: Sarah Tishkoff

III. HONORS AND AWARDS

- 1992-1996 National Merit Scholar (University of Chicago)
- 1995 Howard Hughes summer undergraduate fellowship (University of Chicago)
- 1996-1997 NIH Predoctoral training grant fellowship, Duke University
- 2005-2007 NIH Predoctoral training grant fellowship, Stony Brook University
- 2007 King-Miller Travel Award
- 2008 Research Access Project funding (Stony Brook University GSO)
- 2009 Cedar Brook Award for best student talk (Stony Brook University)
- 2009 Summer Institute in Statistical Genetics fellowship recipient
- 2011-2014 NIH Kirschstein NRSA postdoctoral fellowship
- 2016- Member of the Faculty of 1000 (Evolutionary/Comparative Genomics)
- 2017-2018 Class of 1969 Teaching Fellow
- 2019 CTL/BP Junior Faculty Teaching Excellence Award
- 2019 Elected to the Executive Council of the of the AAAG
- 2019 NIH MIRA Award

IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES

***Bold** text indicates to members of the Lachance Lab*

Underlined text indicates corresponding author

** indicates work done at Georgia Tech*

A. PUBLISHED BOOKS, BOOK CHAPTERS, AND EDITED VOLUMES

A1. BOOKS

No data

A2. REFEREED BOOK CHAPTERS

- * 1. **Lachance J** (2016). Hardy-Weinberg proportions and the mathematical population genetics of randomly mating populations. *Encyclopedia of Evolutionary Biology*, edited by Kliman RM. Academic Press. Vol. 2, pp. 208-211.
[This publication is solely a product of the Lachance Lab at Georgia Tech]

A3. EDITED VOLUMES

No data

B. REFEREED PUBLICATIONS AND SUBMITTED ARTICLES

B1. PUBLISHED AND ACCEPTED JOURNAL ARTICLES

1. **Lachance J** (2008) A fundamental relationship between genotype frequencies and fitnesses. *Genetics* 180:1087-93.
2. **Yukilevich R**, **Lachance J**, Aoki F, and True JR (2008) Long-term adaptation of epistatic genetic networks. *Evolution* 62:2215-2235.
3. **Lachance J** (2009) Detecting selection-induced departures from Hardy-Weinberg proportions. *Genetics Selection Evolution* 41:15.
4. **Lachance J** (2009) Inbreeding, pedigree size, and the most recent common ancestor of humanity. *Journal of Theoretical Biology* 261:238-247.
5. **Lachance J** (2010) Disease-associated alleles in genome-wide association studies are enriched for derived low frequency alleles relative to HapMap and neutral expectations. *BMC Medical Genomics* 3:57.
6. **Lachance J** and **True JR** (2010). X-autosome incompatibilities in *Drosophila melanogaster*: Tests of Haldane's rule and geographic patterns within species. *Evolution* 64:3035-3046.
7. **Lachance J**, Johnson NA, and True JR (2011). The population genetics of X-autosome synthetic lethals and steriles. *Genetics* 189:1011-1027.
8. **Lachance J**, Vernet B, Elbers CC, Ferwerda B, Froment A, Bodo JM, Lema G, Fu W, Nyambo TB, Rebbeck TR, Zhang K, Akey JM, and **Tishkoff SA** (2012) Evolutionary history and adaptation from high coverage whole-genome sequences of diverse African hunter-gatherers. *Cell* 150:457-469.
9. **Pickrell J**, **Patterson N**, **Carbieri C**, **Berthold F**, **Gerlach L**, **Güldemann T**, **Kure B**, **Mpoloka SW**, **Nakagawa H**, **Nauman C**, **Lipson M**, **Loh PR**, **Lachance J**, **Mountain J**, **Bustamante C**, **Berger B**, **Tishkoff SA**, **Henn B**, **Stoneking M**, **Reich D**, and **Pakendorf B** (2012) The genetic prehistory of southern Africa. *Nature Communications* doi:10.1038/ncomms2140.
10. **Johnson NA** and **Lachance J** (2012) The genetics of sex chromosomes: evolution and implications for hybrid incompatibility. *Annals of the New York Academy of Natural Sciences: The Year in Evolutionary Biology* 1256:E1-E22.
11. **Lachance J** and **Tishkoff SA** (2013) SNP ascertainment bias in population genetic analyses: Why it is important, and how to correct it. *BioEssays* 35:780-786.
12. **Lachance J**, **Jung L**, and **True JR** (2013) Genetic background and GxE interactions modulate the penetrance of a naturally occurring wing defect in *Drosophila melanogaster*. *G3: Genes|Genomes|Genetics* 3:1893-1901.

13. Wang S, **Lachance J**, Tishkoff SA, Hey J, and Xing J (2013) Apparent variation in Neanderthal admixture among African populations is consistent with gene flow from non-African populations. *Genome Biology and Evolution* 5:2075-2081.
14. **Lachance J** and Tishkoff SA (2103) Population genomics of human adaptation. *Annual Review of Ecology, Evolution, and Systematics* 44:123-143.
15. **Lachance J** and Tishkoff SA (2014) Biased gene conversion skews allele frequencies in human populations, increasing the disease burden of recessive alleles. *American Journal of Human Genetics* 95:408-420.
- * 16. Karmin M, Saag L, Vicente M, Wilson-Sayres MA, ... **Lachance J** (author 33 of 100) ... Kivisild T (2015) A recent bottleneck of Y chromosome diversity coincides with a global change in culture. *Genome Research* 25:459-466.
[Lachance Lab contributions: supplied genomic data and assisted in writing paper]
- * 17. Hsieh PH, Veeramah KR, **Lachance J**, Tishkoff SA, Wall JD, Hammer MF, and Gutenkunst RN (2016) Whole genome sequence analyses of Western Central African Pygmy hunter-gatherers reveal a complex demographic history and identify candidate genes under positive natural selection. *Genome Research* 26:279-290.
[Lachance Lab contributions: supplied genomic data, interpreted demographic simulations, and assisted in writing paper]
- * 18. Hsieh PH, Woerner AE, Wall JD, **Lachance J**, Tishkoff SA, Gutenkunst RN, and Hammer MF (2016) Model-based analyses of whole genome data reveal a complex evolutionary history involving archaic introgression in Central African Pygmies. *Genome Research* 26:291-300.
[Lachance Lab contributions: supplied genomic data and helped supervise archaic introgression analyses]
- * 19. Pagani L, Lawson D, Jagoda E, Mörseburg A, Eriksson A, ... **Lachance J** (author 41 of 98) ... Metspalu M (2016) Genomic analyses inform on migration events during the peopling of Eurasia. *Nature* 538:238-242.
[Lachance Lab contributions: supplied genomic data and assisted in writing the paper]
- * 20. **Berens AJ**, **Cooper TL**, and **Lachance J** (2017) The genomic health of ancient hominins. *Human Biology* 89:7-19.
[This publication is solely a product of the Lachance Lab at Georgia Tech]
- * 21. **Lachance J**, **Berens AJ**, Hansen MEB, **Teng AK**, Tishkoff SA, and Rebeck TR (2018) Genetic hitchhiking and population bottlenecks contribute to prostate cancer disparities in men of African descent. *Cancer Research* 78(9):2432-2443.
[Lachance Lab contributions: conceived and supervised project, analyzed data, ran demographic simulations, and wrote the paper - collaborators supplied datasets]
- * 22. Rishishwar L, Wang L, Wang J, Yi S, **Lachance J**, Jordan K (2018) Evidence for positive selection on recent human transposable element insertions. *Gene* 675:69-79.
[Lachance Lab contributions: supervised selection analyses, conceived and supervised demographic simulations, and assisted in writing and revising the paper]
- * 23. Andrews C, ... **Lachance J** (author 31 of 79) ... Rebeck TR, (2018) Development, evaluation, and implementation of a pan-African cancer research network: Men of African Descent and Carcinoma of the Prostate (MADCaP). *Journal of Global Oncology* Sept(4):1-14.
[Lachance Lab contributions: led array working group, supervised population genetics analyses, and assisted in writing paper]

- * 24. Hey J, Chung Y, Sethuraman A, **Lachance J** Tishkoff SA, Sousa VC, and Wang Y (2018) Phylogeny estimation by integration over isolation with migration models. *Molecular Biology and Evolution* 35(11):2805-2818.
[Lachance Lab contributions: supplied genomic data and assisted in writing the paper]
- * 25. **Kim MS**, **Patel KP**, **Teng AK**, **Berens AJ**, and Lachance J (2018) Genetic disease risks can be misestimated across global populations. *Genome Biology* 19:179.
[This publication is solely a product of the Lachance Lab at Georgia Tech]
- * 26. Waldetoft KW, Gurney J, **Lachance J**, Hoskisson PA, and Brown S (2019) Evolving antibiotics against resistance: a potential platform for natural product development. *mBio* 10:e02946-19.
[Lachance Lab contributions: provided expert advice re: the genetics of adaptation and assisted in writing the manuscript]
- * 27. **Harlemon M**, Ajayi O, Kachambwa P, **Kim MS**, **Simonti CN**, **Quiver MH**, Peterson D, Mittal A, ..., and Lachance J, (2020) A custom genotyping array reveals population-level heterogeneity for the genetic risks of prostate cancer and other cancers in Africa. *Cancer Research* doi:10.1158/0008-5472.CAN-19-2165.
[Lachance Lab contributions: conceived the study, designed the MADCaP genotyping array, conducted genetic analyses, and wrote the paper]

B2. CONFERENCE PRESENTATIONS WITH PROCEEDINGS (REFEREED)

- * 1. Lachance J (2016) Ancient introgression in Africa and the evolutionary genetics of hybrid fitness effects. *American Journal of Physical Anthropology* 159:199.
[This publication is solely a product of the Lachance Lab at Georgia Tech]
- * 2. Lachance J (2020) Ancient DNA reveals that few disease-associated loci have been strongly selected during recent human history. *American Journal of Physical Anthropology* 171:153.
[This publication is solely a product of the Lachance Lab at Georgia Tech]

B3. OTHER REFEREED MATERIAL

- * 1. Lachance J (2019) Book Review: Molecular Population Genetics by Hahn. *Evolution* 73:860-861.
[This publication is solely a product of the Lachance Lab at Georgia Tech]

B4. SUBMITTED JOURNAL ARTICLES

- * 1. Lachance J, **Quiver MH**, Mullen K, Hansen MEB, **Berens AJ**, Chen MA, Hsieh PH, Veeramah KR, and Tishkoff SA (2020) Genomic evidence of a male-biased migration out of Africa from X chromosome-autosome comparisons. *Under revisions for Evolution*.
[Lachance Lab contributions: conceived and supervised project, analyzed data, developed mathematical models, and wrote the paper - collaborators supplied datasets]
- * 2. **Quiver MH** and Lachance J (2020) Adaptive eQTLs reveal the evolutionary impacts of pleiotropy and tissue-specificity, while contributing to health and disease in human populations.
[This publication is solely a product of the Lachance Lab at Georgia Tech]

- * 3. **Lachance J, Gowrishankar P, Kim MS, Simonti CN**, Agalliu I, and Rebbeck TJ (2020) Challenges to generalizing genetic predictions of cancer risks to diverse populations. *Under review at Nature Cancer*.
[Lachance Lab contributions: conceived the study, conducted genetic analyses, and wrote the paper]
- * 4. **Simonti CN** and **Lachance J** (2020) Ancient DNA reveals that few GWAS loci have been strongly selected during recent human history. *Submitted to Molecular Biology and Evolution*.
[This publication is solely a product of the Lachance Lab at Georgia Tech]

B5. ARTICLES IN PREPARATION

- * 1. **Kim MS**, Kachambwa P, **Simonti CN**, **Gerald N**, **Harlemon M**, Agalliu I, Baichoo S, ... Peterson L, Haiman C, Rebbeck TR, and **Lachance J** (2020) Poor genetic prediction of prostate cancer risks in African men underscores the need for ancestry-matched polygenic risk scores. *In preparation*.
[Lachance Lab contributions: conceived the study, conducted genetic analyses, and wrote the paper]
- * 2. Hansen MEB, **Kim MS**, Soi S, Scheinfeldt L, Thompson S, Ranciaro A, Hirbo J, **Lachance J**, and **Tishkoff SA** (2020) Complex-traits in a multiethnic African cohort: ancestry, transferability of associations, and polygenic scores. *In preparation*.
[Lachance Lab contributions: conceived the project, performed all analyses regarding replication of GWAS across continents, and assisted in writing paper]
- * 3. **Lachance J** (2020) Inhibition of adaptive introgression by Dobzhansky-Muller incompatibilities. *In preparation*.
[This publication is solely a product of the Lachance Lab at Georgia Tech]
- * 4. **Simonti CN**, Baños H, Wang L, Heitsch C, **Lachance J**, and **Paaby A** (2020) Mutational load, compensatory evolution, and tRNA structure in *C. elegans*. *In preparation*.
[Lachance Lab contributions: performed bioinformatics and evolutionary genomics analyses, as well as assisting in writing the paper]

C. OTHER PUBLICATIONS AND CREATIVE PRODUCTS

1. **Lachance J** (2007) Book Review: Compositional Evolution by Watson. *Quarterly Review of Biology* 82:148-149.
2. **Lachance J** (2008) Book Review: Modelling for Field Biologists and other Interesting People by Kokko. *Quarterly Review of Biology* 83:296.
3. **Lachance J** (2008) Subject to Change. *Nature* 454:916.
4. **Lachance J** (2009) Book Review: Evolving Pathways: Key Themes in Evolutionary Developmental Biology by Minelli and Fusco. *Quarterly Review of Biology* 84:102-103.
5. **Lachance J** and **Bourdeau P** (2010) Evolution by Futuyma: online supplements, 2nd ed. Sinauer Associates, Sunderland MA.
6. **Lachance J** (2011) Book Review: How Many Friends Does One Person Need? By Dunbar. *Quarterly Review of Biology* 86:104.
7. **Lachance J** (2012) The genomics of African hunter-gatherers: what cutting-edge technology can tell us about human history. *Huffington Post* (invited guest blog).

8. **Lachance J** (2013) Book Review: An Introduction to Population Genetics: Theory and Applications by Nielsen and Slatkin. *Quarterly Review of Biology* 88:353.
9. **Lachance J** (2014) Book Review: Human Evolutionary Genetics, 2nd ed. by Jobling, Hollox, Hurles, Kivisild, and Tyler-Smith. *Quarterly Review of Biology* 89:176-177.
- * 10. **Lachance J** (2016) Book Review: Population in the Human Sciences: Concepts, Models, Evidence by Kreager, Winney, Ulijaszek, and Capelli. *Quarterly Review of Biology* 91:234-235.
- * 11. **Lachance J** (2018) Book Review: Crumbling Genome: The Impact of Deleterious Mutations on Humans by Kondrashov. *Quarterly Review of Biology* 93:274.
- * 12. **Kim MS** and **Lachance J** (2018) Challenges to globalizing genetic predictions of health and disease. *On Biology* (invited guest blog).
- * 13. **Lachance J** (2020) Book Review: Cellular and Animal Models in Human Genomics Research by Walz and Young. *Quarterly Review of Biology*.
- * 14. **Lachance J** (2020) Book Review: The Genetics of African Populations in Health and Disease by Ibrahim and Rotimi. *Quarterly Review of Biology*.

D. PRESENTATIONS

D1. INVITED SEMINARS

1. Inbreeding, Fibonacci constants, and the most recent common ancestor of humanity. *Provost's Graduate Student Lecture Series* (Stony Brook University - 2010)
2. Synthetic incompatibilities and incomplete penetrance in *Drosophila melanogaster* / Inbreeding, the MRCA of humanity, and alleles that are associated with genetic disease. *Invited seminar* (University of Pennsylvania - 2010).
3. Evolutionary history and adaptation inferred from whole genome sequences of diverse African hunter-gatherers. *Annual Meeting of the American Society of Human Genetics - session chair* (San Francisco, CA - 2012).
4. Evolutionary history and adaptation inferred from whole genome sequences of diverse African hunter-gatherers. *Department of Biology invited seminar* (Union College - 2012).
5. Evolutionary medicine and the population genetics of diverse African hunter-gatherers. *Department of Pathology invited seminar* (Philadelphia VA Medical Center - 2012).
6. Evolutionary genomics of diverse African hunter-gatherers. *College of Biological Sciences invited seminar* (University of Minnesota - 2013).
7. Evolutionary genomics of diverse African hunter-gatherers. *Department of Biology invited seminar* (Temple University - 2013).
8. Evolutionary genomics of diverse African hunter-gatherers. *School of Biology invited seminar* (Georgia Institute of Technology - 2013).
9. "Spatializing" research on genetic diversity. *Relocating Human Conference invited panel discussant* (University of Cambridge - 2013).
10. Evolutionary genomics of diverse African hunter-gatherers. *Department of Biology invited seminar* (University of Illinois at Urbana-Champaign - 2014).
- * 11. Population and evolutionary genomics of prostate cancer-associated variants: Implications for health disparities in men of African descent. *Satellite meeting of the African Organization for Research and Training in Cancer* (Marrakech, Morocco - 2015).

- * 12. Evolutionary history, cancer, and the population genetics of health disparities. *Integrated BioSystems Institute Chalk Talk* (Georgia Institute of Technology - 2015).
- * 13. Ancient introgression in Africa and the evolutionary genetics of hybrid fitness effects. *American Association of Anthropological Genetics* (Atlanta, GA - 2016).
- * 14. Population and evolutionary genomics of prostate cancer-associated variants: Implications for health disparities in men of African descent. *Annual meeting of the International Society for Evolution, Medicine, and Public Health* (Durham, NC - 2016).
- * 15. Evolutionary genomics of prostate cancer in African men. *Integrated Cancer Research seminar series* (Georgia Institute of Technology - 2016).
- * 16. Evolutionary genomics of prostate cancer in African men. *4th Biennial Science of Global Prostate Cancer Disparities Conference* (Orlando, FL - 2016).
- * 17. Genetic ancestry and computational genomics of African populations. *MADCaP Investigator's Meeting* (Cape Town, South Africa - 2017).
- * 18. Evolutionary history and the genomic health of ancient and modern humans. (Cedar Crest College - 2017).
- * 19. Evolutionary history and the genomic health of ancient and modern humans. (Vanderbilt University - 2017).
- * 20. Evolutionary history and hereditary disease risks in ancient and modern humans. (Emory University - 2017).
- * 21. Evolutionary history and hereditary disease risks in ancient and modern humans. (Pennsylvania State University - 2017).
- * 22. Evolutionary history and hereditary disease risks in ancient and modern humans. (Auburn University - 2018).
- * 23. Evolutionary history and hereditary disease risks in ancient and modern humans. *Gene Forum 2018* (Tartu, Estonia - 2018).
- * 24. Evolutionary genetics of prostate cancer in men of African descent. *Prostate Cancer Seminar Series* (Winship Cancer Institute of Emory University - 2018).
- * 25. Evolutionary history and hereditary disease risks in ancient and modern humans. *2018 International Symposium of Evolutionary Genomics and Bioinformatics* (National Taiwan University - 2018).
- * 26. Evolutionary history and hereditary disease risks in ancient and modern humans. (National Central University, Taiwan - 2018).
- * 27. Genetics of prostate cancer in men of African descent. *Grand Rounds* (Winship Cancer Institute of Emory University - 2018).
- * 28. Development of the MADCaP array: a custom genotyping platform optimized for the detection of genetic associations with prostate cancer in men of African descent. *Prostate cancer in Africa: Connecting Clinical to Basic Science Research* (Abuja, Nigeria - 2019).
- * 29. Population genomics of prostate cancer and the pitfalls of generalizing genetic predictions of cancer risk to African populations. *MADCaP Prostate Cancer Symposium* (Abuja, Nigeria - 2019).
- * 30. Evolution and genetic prediction of prostate cancer risks in African men. *ICRC Cancer Symposium - Cancer from an Evolutionary Perspective* (Georgia Institute of Technology - 2019).
- * 31. Evolution and genetic prediction of hereditary disease risks in ancient and modern humans. *Genetics Seminar Series* (University of Georgia - 2019).

- * 32. Challenges to globalizing genetic predictions of cancer risks. *Indo-US Workshop on Human Diversity and Health Disparities* (CCMB in Hyderabad, India - 2020).
- * 33. Evolution and genetic prediction of prostate cancer risks in African populations. *5th Annual Cancer Health Disparities Symposium* (SUNY Downstate Medical Center - 2020).
- * 34. Challenges to globalizing genetic predictions of prostate cancer risks. *University of Southern California's Center for Genetic Epidemiology*, (virtual seminar - 2020).
- * 35. Ancient DNA, Neanderthals, and the evolution of human health. *Department of Biology Seminar Series* (Williams College - 2020).
[talk rescheduled due to coronavirus pandemic]
- * 36. Evolution and genetic prediction of hereditary disease risks in ancient and modern humans. *Department of Bioinformatics and Genomics Seminar Series* (UNC Charlotte - 2020).
[talk rescheduled due to coronavirus pandemic]

D2. Conference Talks

1. Inbreeding, the pruning of family trees, and the most recent common ancestor of humanity. *Annual Meeting of the Society for the Study of Evolution* (Christchurch, New Zealand - 2007).
2. A fundamental relationship between genotype frequencies and fitnesses. *Annual Meeting of the Society for the Study of Evolution* (University of Minnesota - 2008).
3. X-autosome interactions in *Drosophila melanogaster*: phenotypes, incompatibilities, and geography. *Department of Ecology and Evolution Retreat* (Stony Brook University - 2009).
4. X-autosome interactions in *Drosophila melanogaster*: phenotypes, incompatibilities, and geography. *Annual Meeting of the Society for the Study of Evolution – session chair* (University of Idaho - 2009).
5. Genotype-phenotype maps and the population genetics of incomplete penetrance. *Annual Meeting of the Society for the Study of Evolution* (Portland State University - 2010).
6. The population genetics of X-autosome incompatibilities and the origins of Haldane's rule. *Annual Meeting of the Society for the Study of Evolution* (University of Oklahoma - 2011).
7. Evolutionary history and adaptation inferred from whole genome sequences of African hunter-gatherers. *Annual Meeting of the Society for the Study of Evolution* (Ottawa, Canada - 2012).
8. Scans of selection using whole genome sequences of diverse African hunter-gatherers reveal associations between pituitary loci and Pygmy stature. *Annual Meeting of the Society for the Study of Evolution - session chair* (Snowbird, UT - 2013).
9. Scans of selection using whole genome sequences of diverse African hunter-gatherers reveal associations between pituitary loci and Pygmy stature. *Annual Meeting of the Society for Molecular Biology and Evolution* (Chicago, IL - 2013).
10. GC-biased gene conversion and the curse of the converted. *Annual Meeting of the Society for the Study of Evolution - session chair* (Raleigh, NC - 2014).
11. GC-biased gene conversion and the curse of the converted. *School of Biology retreat* (Georgia Institute of Technology - 2014).
- * 12. Population and evolutionary genomics of prostate cancer-associated variants: Implications for health disparities in men of African descent. *The Science of Cancer at Georgia Tech* (Georgia Institute of Technology - 2015).

- * 13. Population and evolutionary genomics of prostate cancer-associated variants: Implications for health disparities in men of African descent. *Annual Meeting of the American Society of Human Genetics* (Baltimore, MD - 2015).
- * 14. Simulating human history many genomes at a time. *High Performance Computing Science Day* (Georgia Institute of Technology - 2015).
- * 15. Adaptive introgression and the evolutionary genetics of hybrid fitness effects. *SMBE/AAAG Satellite Meeting on the Genetics of Admixed Populations* (San Antonio, TX - 2016).
- * 16. Adaptive introgression and the evolutionary genetics of hybrid fitness effects. *Annual Meeting of the Society for the Study of Evolution* (Austin, TX - 2016).
- * 17. Ascertainment bias in predicting disease risks. *Annual Meeting of the American Society of Human Genetics* (Vancouver, BC - 2016). Chaired a platform session on ancestry, admixture, and migration.
- * 18. Health disparities and biased predictions of genetic disease risks. *4th Biennial Science of Global Prostate Cancer Disparities in Black Men Conference* (Orlando, FL - 2016).
- * 19. The genomic health of ancient hominins. *Annual Meeting of the Society for Molecular Evolution* (Austin, TX - 2017).
- * 20. Ascertainment bias can create the illusion of genetic health disparities. *Annual Meeting of the Society for Molecular Biology and Evolution* (Austin, TX - 2017).
[presented by Lachance Lab Ph.D. student: **Michelle Kim**]
- * 21. Adaptive eQTLs in human populations. *Annual Meeting of the American Society of Human Genetics* (Orlando, FL - 2017).
[lightning talk presented by Lachance Lab Ph.D. student: **Melanie Quiver**]
- * 22. Ancient DNA reveals that few disease-associated loci have been strongly selected during recent human history. *Annual Meeting of the Society for the Study of Evolution* (Providence, RI - 2019).
- * 23. Ancient DNA reveals that few disease-associated loci have been strongly selected during recent human history. *Annual Meeting of the Society for Molecular Biology and Evolution* (Manchester, United Kingdom - 2019).
[presented by Lachance Lab postdoc: **Corinne Simonti**]
- * 24. Evolution and genetic prediction of prostate cancer risks in African men. *Annual Meeting of the Society for Molecular Biology and Evolution* (Manchester, United Kingdom - 2019).
- * 25. A custom genotyping array for detecting disease associations in men of African descent reveals population-level heterogeneity in the genetic risks of prostate and other cancers. *AORTIC's 12th Annual International Conference on Cancer in Africa* (Maputo, Mozambique - 2019).
- * 26. Ancient DNA reveals that few disease-associated loci have been strongly selected during recent human history. *Annual Meeting of the American Association of Physical Anthropology* (Los Angeles, CA - 2020).
[conference canceled due to coronavirus pandemic]

D3. Conference Posters

1. Inference of post-selection genotype frequencies. *Stony Brook University Genetics Program Retreat* (Brookhaven National Laboratory - 2006).
2. Inbreeding, the pruning of family trees, and the most recent common ancestor of humanity. *Stony Brook University Genetics Program Retreat* (Cold Spring Harbor Laboratory - 2007)

3. Long-term adaptation of epistatic genetic networks. *Laufer Center for Computational Biology and Genome Sciences* (Stony Brook University - 2009).
4. Long-term adaptation of epistatic genetic networks. *Stony Brook University Genetics Program Retreat* (Brookhaven National Laboratory - 2010).
5. Evolutionary history and adaptation inferred from whole genome sequences of diverse African hunter-gatherers. *Annual Meeting of the Society for Molecular Biology and Evolution* Dublin, Ireland - 2012).
6. GC-biased gene conversion and the curse of the converted. *Annual Meeting of the American Society of Human Genetics* (Boston, MA - 2013).
7. GC-biased gene conversion and the curse of the converted. *Annual Meeting of the Society for Molecular Biology and Evolution* (San Juan, Puerto Rico - 2014).
- * 8. Selective constraint and sex-biased demography of human populations from X chromosome-autosome comparisons. *Annual Meeting of the Society for Molecular Biology and Evolution* (Vienna, Austria - 2015).
- * 9. Selective constraint and sex-biased demography of human populations from X chromosome-autosome comparisons. *Annual Meeting of the American Society of Human Genetics* (Baltimore, MD - 2015).
[presented by Lachance Lab PhD. student: **Melanie Quiver**]
- * 10. Selective constraint and sex-biased demography of human populations from X chromosome-autosome comparisons. *Annual Meeting of American Indian Society Science Engineering Society* (Phoenix, AZ - 2015).
[presented by Lachance Lab Ph.D. student: **Melanie Quiver**]
- * 11. Population and evolutionary genomics of prostate cancer-associated variants: Implications for health disparities in men of African descent. *South Big Data Hub Workshop: High Impact Applications of Data Science in Precision Medicine, Health Analytics, and Health Disparities* (Atlanta, GA - 2016).
- * 12. Painting by evolutionary history: inference of local ancestry in admixed genomes. *SMBE/AAAG Satellite Meeting on the Genetics of Admixed Populations* (San Antonio, TX - 2016).
[presented by Lachance Lab postdoc: **Ali Berens**]
- * 13. Evidence of sex-biased migration and selection against recessive alleles from X chromosome-autosome comparisons. *SMBE/AAAG Satellite Meeting on the Genetics of Admixed Populations* (San Antonio, TX - 2016).
[presented by Lachance Lab Ph.D. student: **Melanie Quiver**]
- * 14. Painting by evolutionary history: inference of local ancestry in admixed genomes. *Annual Meeting of the American Society of Human Genetics* (Vancouver, BC - 2016).
[presented by Lachance Lab postdoc: **Ali Berens**]
- * 15. Population and evolutionary genomics of prostate cancer-associated variants: Implications for health disparities in men of African descent. *AACR International Conference on New Frontiers in Cancer Research* (Cape Town, South Africa - 2017).
- * 16. The genomic health of ancient hominins. *Annual Meeting of the Society for the Study of Evolution* (Portland, OR - 2017).
[presented by Lachance Lab undergraduate: **Taylor Cooper**]
- * 17. Adaptive eQTLs in human populations. *Annual Meeting of the American Society of Human Genetics* (Orlando, FL - 2017). Received a Reviewer's Choice Award
[presented by Lachance Lab Ph.D. student: **Melanie Quiver**]

- * 18. The genomic health of ancient hominins. *Annual Meeting of the American Society of Human Genetics* (Orlando, OR - 2017).
- * 19. Adaptive eQTLs in human populations. *SMBE Satellite Meeting on Modern Methods for the Study of Ancient DNA* (Providence, RI - 2018).
[presented by Lachance Lab Ph.D. student: **Melanie Quiver**]
- * 20. Adaptive eQTLs in human populations reveal the evolutionary impacts of pleiotropy and tissue-specificity. *Annual Meeting of the Society for Molecular Biology and Evolution* (Yokohama, Japan - 2018).
- * 21. How genetic disease risks can be misestimated. *Annual Meeting of the American Society of Human Genetics* (San Diego, CA - 2018).
[presented by Lachance Lab Ph.D. student: **Michelle Kim**]
- * 22. Ancient DNA reveals signatures of selection on disease-associated loci from GWAS. *Annual Meeting of the American Society of Human Genetics* (San Diego, CA - 2018).
[presented by Lachance Lab postdoc: **Corinne Simonti**]
- * 23. Investigating the contribution of runs of homozygosity and genetic ancestry to elevated risks of prostate cancer in men of African descent. *5th Biennial Science of Global Prostate Cancer Disparities in Black Men Conference* (Ilorin, Nigeria - 2018).
[presented by Lachance Lab Ph.D. student: **Maxine Harlemon**]
- * 24. Development of a custom genotyping platform and genetic prediction of prostate cancer risks in sub-Saharan Africa. *Annual Meeting of the American Association for Cancer Research* (Atlanta, GA - 2019).
- * 25. Scans of selection in urban African populations reveal recurrent targets of adaptation. *Annual Meeting of the American Society of Human Genetics* (Houston, TX - 2019).
[presented by Lachance Lab Ph.D. student: **Melanie Quiver**]
- * 26. Polygenic risk scores generated from European populations poorly predict prostate cancer risks in African populations. *Annual Meeting of the American Society of Human Genetics* (Houston, TX - 2019).
[presented by Lachance Lab Ph.D. student: **Michelle Kim**]
- * 27. A custom genotyping array for detecting disease associations in men of African descent reveals population-level heterogeneity in the genetic risks of prostate and other cancers. *Annual Meeting of the American Society of Human Genetics* (Houston, TX - 2019).
[presented by Lachance Lab Ph.D. student: **Maxine Harlemon**]
- * 28. Limited transferability of polygenic trait scores and asymmetric replication of GWAS results between Europe and sub-Saharan Africa. *Annual Meeting of the Society for Molecular Biology and Evolution* (Quebec City, Canada - 2020).
[meeting canceled due to coronavirus pandemic, poster by Ph.D. student: **Michelle Kim**]
- * 29. Scans of positive selection in African populations reveal a large X effect and a key role for blood-related traits. *Annual Meeting of the Society for Molecular Biology and Evolution* (Quebec City, Canada - 2020).
[meeting canceled due to coronavirus pandemic, poster by Ph.D. student: **Melanie Quiver**]

E. GRANTS AND CONTRACTS

E1. AS PRINCIPAL INVESTIGATOR

2019-2024 Evolution of Genetic Disease Risks over Time and Space
NIH R35GM133727
Role: PI
Direct funding: \$1,882,000 total to Georgia Tech

Previously Funded

2011-2014 Population genomics of geographically and ethnically diverse Africans
NIH F32HG006648
Role: PI
Direct and indirect funding: \$154,000 total

2019 Globalizing genetic predictions of prostate cancer
Integrated Cancer Research Center Seed Grant
Role: PI
Direct funding: \$30,000 total

E2. AS CO-PRINCIPAL INVESTIGATOR

No data

E3. AS SENIOR PERSONNEL OR COLLABORATOR

2015-2020 Genetic epidemiology of prostate cancer in Africa
NIH U01CA184374
Role: Subcontractor (one of nine)
Collaborator: Timothy Rebbeck (PI)
Direct and indirect funding: \$8,890,000 total (\$194,000 to Georgia Tech)

E4. PENDING PROPOSALS

2021-2026 Genetics and tumor biology of prostate cancer in men of African descent
NIH NCI U01
Role: Subcontractor (one of nine)
Collaborator: Timothy Rebbeck (PI)
Direct and indirect funding: \$8,000,000 total (\$606,000 to Georgia Tech)

2021-2023 Accurate genetic prediction of cancer risks in diverse human populations
Mark Foundation for Cancer Research: Emerging Leader Award
Role: PI
Direct and indirect funding: \$750,000 total

E5. PROPOSALS SUBMITTED BUT NOT FUNDED (LAST TWO YEARS)

NIH NHGRI R01
Evolutionary trajectories of cryptic genomic structural variants in primates

F. OTHER SCHOLARLY AND CREATIVE ACCOMPLISHMENTS

No data

G. SOCIETAL AND POLICY IMPACTS

Media coverage of African hunter-gatherer genomes and ancient introgression: *New York Times (front page), Washington Post (front page), Philadelphia Inquirer, Veja, Medium, Science, Nature, Nature Genetics, Scientific American, Chronicle of Higher Education, ScienceNews, io9, GenomeWeb, PBS,* and the cover of *Cell*

One of 139 professors to sign a letter criticizing Nicholas Wade's book: *A Troublesome Inheritance*. Media coverage of this letter: *New York Times, Wall Street Journal, Huffington Post, Daily Mail, Scientific American, Science,* and *Nature*

Media coverage of Y chromosomes, mtDNA, and the invention of agriculture: *Ars Technica, phys.Org, Pacific Standard, Science Daily,* and *The Hindu*

Media coverage of how evolution has shaped the genomes of African Pygmies: *New York Times, Smithsonian, Science News,* and *Nature*

Lachance Lab Ph.D. student Melanie Quiver featured in Georgia Tech's *Research Horizons* magazine

Media coverage of the migration out-of-Africa and ancient introgression: *New York Times (front page), Seattle Times, The Conversation, Daily Mail, Washington Post, Christian Science Monitor, Economic Times, Ars Technica, New Scientist, TIME, Discover Magazine, GenomeWeb, Sinc, Science Daily, The Verge, ABC, BBC, Science,* and the cover of *Nature*

Media coverage of the genomic health of ancient hominins: *American Association of Anthropological Genetics, American Society of Human Genetics, Front Line Genomics, Men's Health UK, National Geographic Explorer, phys.org, PLoS Blogs, Research Horizons, Science Daily, Technique,* and the cover of *Human Biology*

Media coverage of the genetic risks of prostate cancer in Africans: *Gene Expression*

Media coverage of the challenges to globalizing genetic prediction of disease risks: *BMC Blog Network, GenomeWeb, Genome Medicine*

Media coverage of a custom genotyping array that is optimized for detecting associations with prostate cancer in African populations: *ThermoFisher's Life in the Lab.*

H. OTHER PROFESSIONAL ACTIVITIES

Guest speaker for "Your Health Connection" on Clark Atlanta University's radio station: WCLK, FM 91.9. This show was hosted by Pattie Walden and the Center for Cancer Research and Therapeutic Development.

Led discussions and interviewed director Christian Frei at a screening of "Genesis 2.0" at the Jimmy Carter Presidential Library and Museum. This documentary film follows the lives of tusk hunters in Siberia, as well as geneticists attempted to clone woolly mammoths. This event was hosted by the Swiss Consulate of Atlanta and was part of the Atlanta Science Tavern series.

Two student groups from my BIOL 3600 class had films that were finalists in the Evolution-Themed Film Festival held at the SSE's 2019 conference. Only 15 films were selected as finalists in this international contest.

Led discussions of the film "Human Nature" at the Jimmy Carter Presidential Library and Museum. This documentary film examines the implications of CRISPR technology. This event was part of the Atlanta Science Tavern series.

V. EDUCATION

A. COURSES TAUGHT

Spring, 2015	BIOL 2400	Mathematical Models in Biology	24 students
		CIOS overall effectiveness: 4.6	
Spring, 2016	BIOL 4803/8803	Human Evolutionary Genomics	16 students
		CIOS overall effectiveness: 5/5 (undergrad), 4.9/5 (grad)	
Fall, 2016	BIOL 8803	Frontiers in Molecular Cell Biology	9 students
		CIOS overall effectiveness: 4.9/5	
Spring, 2017	BIOL 2400	Mathematical Models in Biology	21 students
		CIOS overall effectiveness: 4.9/5	
Fall, 2017	BIOL 4803/8803	Human Evolutionary Genomics	26 students
		CIOS overall effectiveness: 5/5 (undergrad), 5/5 (grad)	
Spring, 2018	BIOL 3600	Introduction to Evolutionary Biology	49 students
		CIOS overall effectiveness: 4.7/5	
Fall, 2018	BIOL 8803	Frontiers in Molecular Cell Biology	6 students
		CIOS overall effectiveness: 4.9/5	
Spring, 2019	BIOL 4803/8803	Human Evolutionary Genomics	17 students
		CIOS overall effectiveness: 5/5 (undergrad), 5/5 (grad)	
Spring, 2019	BIOL 2344	Genetics	57 students
		CIOS overall effectiveness: 4.8/5	
Spring, 2020	BIOS 3600/6600	Introduction to Evolutionary Biology	75 students

B. INDIVIDUAL STUDENT GUIDANCE

B1. PH.D. STUDENTS

2015-	Melanie Quiver (biology)
	Joined Lachance Lab in January 2015
	NIH T32 training grant fellowship
	2nd place poster award at the 2015 AISES Conference
	Jackson Lab short course on the genetics of addiction - travel award
	Summer internship for indigenous peoples in genomics fellowship
	American Indian Education Fund fellowship
	Poster award at the 2017 ASHG meeting
2015-2020	Maxine Harlemon (biology, Clark Atlanta University)
	Joined Lachance Lab in January 2015
	Co-advisor: Nathan Bowen
	PhD defended May 2020
2016-	Michelle Kim (bioinformatics)
	Joined Lachance Lab in August 2016

B2. M.S. STUDENTS

2015-2016	Binbin Huang (bioinformatics)
	Joined Lachance Lab in January 2015, graduated May 2016
	Placed into a Ph.D. program at Michigan State University

- 2015-2016 Andrew Teng (bioinformatics)
 Joined Lachance Lab in August 2015, graduated December 2016
 NIH/NCI summer internship
 Placed into a Ph.D. program at the University of Washington
- 2016-2017 Venna Wang (bioinformatics)
 Joined Lachance Lab in August 2016, graduated December 2017
 Placed into a developer/data scientist job at Kx Systems/First Derivatives
- 2017-2018 Mohit Thakur (bioinformatics)
 Joined Lachance Lab in August 2017, graduated December 2018
 Placed into a metagenomics fellow position at the CDC
- 2018-2019 Preethi Gowrishankar (bioinformatics)
 Joined Lachance Lab in August 2018
 Placed into a data analyst job at Slalom Consulting
- 2018-2019 Nishant Gerald (bioinformatics)
 Joined Lachance Lab in August 2018
 Genomics data scientist intern at AncestryDNA
 Placed into a bioinformatics engineer position at General Dynamics
- 2018-2019 Jialin Ma (bioinformatics)
 Joined Lachance Lab in August 2018
 Placed into an associate software engineer position at the Broad Institute
- 2018-2020 Siddhartha Sharma (bioinformatics)
 Joined Lachance Lab in August 2018
 Intern at the Jackson Laboratory for Genomic Medicine
- 2019 Will Hutwagner (bioinformatics)
 Joined Lachance Lab in June 2019, graduated August 2019
 Placed into an EMT job
- 2019 Winnie Zheng (bioinformatics)
 Joined Lachance Lab in August 2019

B3. UNDERGRADUATE STUDENTS

- 2015 Anna Paulino (biochemistry)
- 2015 Imon Ghosh (biochemistry)
- 2015 Claire Hanson (biology)
 Obtained PURA salary award
- 2015-2016 Kane Patel (biology)
 Obtained PURA travel award
 Georgia Tech research symposium: 2nd place poster award
 Placed into a job at the CDC
- 2015-2017 Taylor Cooper (biology)
 School of Biological Sciences Fast-Track to Research Scholar
 SSE/BEACON Undergraduate Diversity in Evolution travel award
 Cherry L. Emerson Research Award
- 2016-2017 Collin Spencer (biology)
 School of Biological Sciences Fast-Track to Research Scholar
- 2017-2018 Greg Johnston (computer science)
 Obtained PURA salary award
 Placed into a Silicon Valley cloud computing start-up job
- 2017 Nigel Blackwood (computational biology, University of Pennsylvania)
- 2017 Courtney Wong (biomedical engineering)
- 2017-2018 Keerthi Ramachandran (biology)
 School of Biological Sciences Fast-Track to Research Scholar

- 2018 Ashley Salen (biology)
College of Sciences Dean's Intern
- 2019- Subbarao Garlapati (mathematics)
Obtained PURA salary award
- 2019- Ryan Sequeira (biology)
Stamp's Presidential Scholar
- 2019- Gabriel Cruz (biomedical engineering)

B4. SERVICE ON THESIS OR DISSERTATION COMMITTEES

- 2015 Jing Zhao (biology)
- 2015-2018 Diana Williams (biology)
- 2015-2018 Biao Zeng (bioinformatics)
- 2015-2019 Dan Sun (biology)
- 2016-2019 Yuehui Zhao (biology)
- 2016-2019 Emily Norris (bioinformatics)
- 2018- Aroon Chande (bioinformatics)
- 2019- Angela Mo (bioinformatics)
- 2019- Sashwat Nagar (bioinformatics)
- 2019- Ross Lindsey (biology)

B5. MENTORSHIP OF POSTDOCTORAL FELLOWS OR VISITING SCHOLARS

- 2016 Annachiara Korchmaros (bioinformatics M.S. rotation student)
- 2015-2017 Ali Berens (postdoctoral researcher)
Joined Lachance Lab in August 2015, obtained position in April 2017
Placed into a private-sector data scientist job at Monsanto
- 2017- Corinne Simonti (postdoctoral researcher)
Joined Lachance Lab in December 2017

C. EDUCATIONAL INNOVATIONS AND OTHER CONTRIBUTIONS

- 1996 Teaching assistant: University of Chicago
Genetics (undergraduate level - BIOS 143)
- 2006 Teaching assistant: Stony Brook University
Genetics (undergraduate level - BIO 320)
- 2006 Teaching assistant: Stony Brook University
Molecular cell biology techniques (undergraduate level - BIO 311)
- 2008 Instructor: Stony Brook University
Population genetics and evo-devo (Ph.D. level - BGE 510)
- 2006-2010 Research Mentor: Stony Brook University
Mentored three undergraduates (JoAnn Lenci, Jamal Hyder, Lawrence Jung) and five high school students (Marek Solomianko, Michael Casper, Sangmi Ahn, Michael Luke, Manny Vivekanandan)
- 2012-2014 Research Mentor: University of Pennsylvania
Mentored two undergraduates (Kristen Mullen and Michael Chen)
- 2007-2009 Guest instructor: Stony Brook University
Molecular diversity laboratory (undergraduate level - BIO 367)
- 2011 Guest instructor: Perelman School of Medicine
Population genetics (M.D. level - Core Principles Module 1)
- 2012 Guest instructor: University of Pennsylvania
Population genetics (Ph.D. level - CAMB 550)
- 2012 Instructor: University of Pennsylvania
Human evolutionary genomics (undergraduate level - BIOL 522)

- 2013 Instructor: University of Pennsylvania
Human population genetics (Ph.D. level - CAMB 550)
- 2014 Guest instructor: Georgia Institute of Technology
Human evolutionary genetics (undergraduate level - BIOL 3600)
- 2015 Guest instructor: Georgia Institute of Technology
Human evolutionary genetics (undergraduate level - BIOL 3600)
- 2015 Guest instructor: Georgia Institute of Technology
African genetic variation (undergraduate level - BIOL 4545)
- 2016 Instructor: Summer Institute in Statistical Genetics
Introduction to genetics and genomics (Ph.D. level - Module 2)
Teaching ratings: 12/19 excellent, 5/19 very good, 2/19 good
- 2017 Instructor: Summer Institute in Statistical Genetics
Introduction to genetics and genomics (Ph.D. level - Module 2)
Teaching ratings: 18/24 excellent, 5/24 very good, 1/24 good
- 2019 Instructor: MADCaP Investigator's Meeting in Maputo, Mozambique
Working with genetic data from the MADCaP Array (training workshop)
- 2020 Instructor: Summer Institute in Statistical Genetics
Introduction to genetics and genomics (Ph.D. level - Module 2)

VI. Service

A. PROFESSIONAL CONTRIBUTIONS

A1. REVIEWED PUBLICATIONS

American Journal of Physical Anthropology, BMC Genomics, Cancer Research, eLife, Evolution, Evolutionary Applications, G3: Genes|Genomes|Genetics, Genes and Genetic Systems, Genetica, Genetics, Genome Biology, Genome Biology and Evolution, Genome Research, Heredity, Human Biology, Human Genetics, Journal of Theoretical Biology, Molecular Biology and Evolution, Molecular Ecology, Oxford University Press, Physical Biology, PLoS Genetics, PLoS One, Proceedings of the National Academy of Sciences, Quarterly Review of Biology, Science Advances, Sinauer Associates, Theoretical Population Biology, Trends in Genetics, and the Yearbook of Physical Anthropology

A2. GUEST EDITOR

2015-2016 PLoS Genetics

A3. GRANT REVIEWING

2008 King Miller Fellowship
2015 Leakey Foundation
2017-2019 National Science Foundation (Biological Anthropology)
2019 Swiss National Science Foundation

A4. SOCIETY MEMBERSHIPS

2002- Society for the Study of Evolution
(attended eleven meetings)

2006- Genetics Society of America

2009- Society for Molecular Biology and Evolution
(attended seven meetings)

2010- American Society of Human Genetics
(attended six meetings)

- 2015- American Association of Anthropological Genetics
(attended three meetings)
- 2016- International Society for Evolution, Medicine, and Public Health
(attended one meeting)
- 2016- American Association for Cancer Research
(attended three meetings)

B. PUBLIC AND COMMUNITY SERVICE

- 2015 Science Olympiad judge (CEISMC)

C. PROFESSIONAL CONTRIBUTIONS

- 2015 Evolution@Tech seminar series organizer
- 2015- Active participant in the College of Sciences New Faculty Mentoring Workshop
- 2015 Commencement alignment volunteer
- 2015 Organized the School of Biology holiday party
- 2016 Participated in the Best Practices Forum on Mentoring
- 2016 Assisted in the Research Bound in STEM workshop
- 2016 Faculty-staff advisory committee for EBB
- 2016-2017 School of Biological Sciences graduate committee
- 2016 Petit Scholars review committee
- 2017 Reviewed student applications for bioinformatics T32 training grant
- 2017-2018 Reviewed student applications for the Leland Jackson award
- 2020- School of Biological Sciences ECSEL committee

D. OTHER SERVICE

- 2005-2009 Organized a philosophy of biology discussion (Stony Brook University)
- 2006 Assisted in organizing SSE's Evolution 2006 conference
- 2007-2009 Led Darwin Day discussions (Stony Brook University)
- 2007-2009 New teaching assistant workshop (Stony Brook University)
- 2009-2010 Student representative on the executive committee of the Graduate Program in
Genetics (Stony Brook University)
- 2012-2014 Organized journal club for the Department of Genetics (University of
Pennsylvania)
- 2015 Represented Georgia Institute of Technology at the National Science South
Big Data Hub and Spokes meeting (Atlanta, GA)
- 2015- Member of the Petit Institute for Bioengineering and Bioscience (Georgia
Institute of Technology)
- 2015- Member of the Integrated Cancer Research Center (Georgia Institute of
Technology)
- 2015- Member of the Center for Integrated Genomics (Georgia Institute of
Technology)
- 2015-2017 Member of the Integrative BioSystems Institute (Georgia Institute of
Technology)
- 2016 Represented Georgia Institute of Technology at the Atlanta area Quantitative
Biology Workshop (Spelman College)
- 2016 Organized a networking event for members of Georgia Tech's School of
Biology and global experts in Neanderthal and Denisovan genomics
- 2016-2018 Men of African Descent and Carcinoma of the Prostate (MADCaP) network:
co-chair of the array working group

- 2016- Organized Darwin Day events and an Evolution Themed Film Festival at
(Georgia Institute of Technology)
- 2017- Member of the Institute for Data Engineering and Science (Georgia Institute of
Technology)
- 2017-2018 Presented Lachance Lab research to Georgia Tech's chapter of TriBeta
(biology undergraduate honors society)
- 2019 Hamilton Award judge at Evolution 2019 (Society for the Study of Evolution)
- 2019 Faculty mentor at Evolution 2019 (Society for the Study of Evolution)
- 2019 Evaluated a candidate for Research Professor of Evolutionary Genomics at the
Institute of Genomics (University of Tartu)
- 2019- Men of African Descent and Carcinoma of the Prostate (MADCaP) network:
co-chair of the genomics working group
- 2019- Member of the Winship Cancer Institute of Emory University
- 2019- Executive committee of the American Association of Anthropological Genetics