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EDUCATION:

Wake Forest University School of Medicine

Winston-Salem, NC

Major: Molecular Medicine

Co-Advisors: Michele Sale, Ph.D. and Donald Bowden, Ph.D.

Ph.D. 2007

North Carolina A&T State University

Greensboro, NC

Major: Biology

B.S. 2003

PROFESSIONAL EXPERIENCE:

- 2022-** **Professor (with tenure; joint-appointment)**, Department of Biology; Department of Public Health, East Carolina University, Greenville, NC.
- 2018-present** **Director** (interim 2018-2020), **Center for Health Disparities, East Carolina University**, Brody School of Medicine, Greenville, NC. Responsible for all planning, policy, operations, and oversight of research, education/training, and community outreach and engagement programs of the Center. Financial authority over the state appropriated budget (~\$550k annually) assigned to the Center, extramural research funding received, philanthropic funding, and other financial matters for the Center. Evaluates faculty and staff annually regarding their contributions toward the mission of the Center. Leads efforts to recruit and retain highly qualified faculty and staff. Assigns responsibilities and resources within the Center. Mentor faculty and staff directly.
- 2018-2022 **Associate Professor (with tenure; joint-appointment)**, Department of Biology; Center for Health Disparities, East Carolina University, Thomas Harriot College of Arts & Sciences, Greenville, NC.
- 2017-2019 **Co-Director Precision Health pan-university Research Cluster**, Division of Research, Economic Development and Engagement, East Carolina University, Greenville, NC.
- 2012-2018 **Assistant Professor (Tenure-track; joint-appointment)**, Department of Biology; Center for Health Disparities, East Carolina University, Thomas Harriot College of Arts & Sciences, Greenville, NC.
- 2010-2012 **Assistant Professor (Research-track)**, Department of Public Health Sciences; Center for Public Health Genomics, University of Virginia School of Medicine, Charlottesville, VA.

2007-2010

Postdoctoral Research Fellow, Department of Biochemistry & Molecular Genetics; Center for Public Health Genomics, University of Virginia School of Medicine, Charlottesville, VA. Mentor: Patrick Concannon, Ph.D.

UNIVERSITY LEADERSHIP and SERVICE:

- ECU Department of Biology Diversity Committee (Spring 2017 – present)
- Black Faculty Organization (previously Organization of African American Faculty) at ECU, Member (2012- present); BFO President (2021-present); BFO Co-Chair (2020-2021); Co-Chair By-laws Committee (2012- 2013)
- ECU Research Computing Needs Assessment Workgroup (Fall 2021-Spring 2022)
- ECU Provost and Chief Academic Officer Search Committee (Summer 2021- Fall 2021)
- ECU Fiscal Sustainability Coordinating Committee (Fall 2020- Summer 2021)
- ECU Office for Equity and Diversity Research & Teaching Working Group (Spring 2020-Spring 2021)
- ECU Research and Infrastructure Work Group (Summer 2020-Fall 2020)

HONORS AND AWARDS:

- American Heart Association 2020 Stroke Progress and Innovation Award (3rd Prize) for article entitled, “Genome-Wide Association Study Meta-Analysis of Stroke in 22,000 Individuals of African Descent Identifies Novel Associations With Stroke” (January 2021)
- Listed as one of “1000 Inspiring Black Scientists in America” <http://crosstalk.cell.com/blog/1000-inspiring-black-scientists-in-america>
- Elected to the International Stroke Genetics Consortium Steering Committee (November 2020-present)
- East Carolina University Campus Living and the Residence Hall Association (RHA) Honored Instructor (Spring 2019).
- East Carolina University Treasured Pirate Award- Effective Leadership Recipient (Spring 2018)
- Excellence in Diversity Fellow, University of Virginia (2011-2012)
- Postdoctoral Professional Development and Enrichment Award Recipient (FASEB MARC, 2009)
- Wake Forest University Alumni Travel Award (to attend the International Diabetes Federation 19th World Diabetes Congress, Cape Town, South Africa, 2006)
- Participated in the 1st Annual NIH National Graduate Student Research Festival (2006)
- Federation of American Societies for Experimental Biology (FASEB MARC) Travel Award (2005)
- Outstanding Senior of the Year (Biology Department, NC A&T, 2003)
- Merit Award (College of Arts and Sciences, NC A&T, 2003)
- London Scholarship Recipient (1999-2003)
- NSF Undergraduate Fellow- Used AFLP markers to generate a genetic map of *Medicago truncatula* to identify susceptibility loci for nematode infection. (North Carolina State University, Summer 2001)
- Howard Hughes Undergraduate Fellow- Used genetic, fine mapping techniques to localize the *sds1* mutation in *Arabidopsis thaliana*. (University of Iowa, Summer 2000)

FUNDING & GRANT SUPPORT:

Ongoing:

North Carolina GlaxoSmith Kline Foundation Keene, Graham (Multiple PI) 08/01/2022-07/31/2027

North Carolina GlaxoSmith Kline Foundation \$USD 1,315,000

Title: Growing a Diverse Public Health Workforce for Rural North Carolina through Graduate School Pathways

The goal of this proposal is to build pathways to recruit a diverse graduate student population through the development of a summer research immersion pathway program and providing graduate student scholarship support.

Role: PI (Lead)

National Science Foundation

Award # 2125684 \$USD 1,999,736 Moysey (PI) 08/01/21-07/31/26

Title: NRT-HDR: Finding Signal in the Noise to Enable Science-Based Community Response to Change in Coastal Region

Role: Senior Personnel

The goal of the Coastal Community Environmental Data Scholars (CCEDS) NRT program is to train the next generation of scientists to take a convergent approach to data science, sensing, and modeling to understand how coastal change is driven by interrelationships between ecosystems and communities.

National Institutes of Health

1 R01 HD101518-01 Hauck, Mychalekyj, Keene (Multiple PI) 09/01/20-08/31/24

NIH/NICHHD \$USD 2,379,869

Title: Using Integrative Omics as Biomarkers and Diagnostic Tools for SIDS

Role: PI (Multiple)

The goal of this proposal is to comprehensively evaluate genetic and epigenetic determinates of SIDS and together with metabolomic profiles, identify novel clinical diagnostic tools to enable molecular autopsies, and ultimately, biomarkers to proactively identify and intervene in infants at greater risk of death from SIDS.

National Institutes of Health

1R01HL150003-01 Annex and McClung (Multiple PI) 12/01/2019 – 11/30/2024

NIH/NHLBI \$USD \$3,762,028

Title: Clinical Phenotyping and Disease Specific Sampling to Identify Non-coding RNAs for Human Therapeutics in PAD

Role: Co-Investigator

The goal of this proposal is to identify micro-RNA and lncRNAs that are altered in ischemic muscle and peripheral blood of patients with peripheral arterial disease (PAD) to determine how they contribute to the disease phenotype and whether they can be developed into biomarkers for diagnosis of PAD.

Pending:

National Institutes of Health

1 U54CA280845-01 Keene, Verbanac, Forbes (Multiple PI) 04/01/2023-03/31/2028

NIH/Common Fund \$USD 15,442,737

Title: East Carolina University FIRST Cohort for Health Disparities

Role: PI (Administrative)

National Institutes of Health

1 R01 NS131866-01 Worrall, Keene, Hsu (Multiple PI) 04/01/23-03/31/28

NIH/NINDS \$USD 3,703,064

Title: Assessing the interplay and shared epigenetic and environmental risk factors for stroke and hypertension

Role: PI (Multiple)

National Institutes of Health

1 R01 HL167870-01 Keene, Cummings (Multiple PI) 04/01/23-03/31/28

NIH/NHLBI \$USD 3,111,427

Title: Addressing the influence of psychosocial stress, depressive symptoms, and epigenetics on CHD and stroke outcomes

Role: PI (Administrative)

National Institutes of Health

1 T34 GM145524-01A1 Ables, Tran, Keene, Aileru (Multiple PI) 06/01/2023-05/31/2028

NIH/NIGMS \$USD 1,981,664

Title: MARC at East Carolina University

Role: PI (Multiple)

Completed Research Support:

East Carolina University Diversity and Inclusion Research and Scholarship 07/01/2021 – 06/30/2022

2021-2022 May (PI) \$USD 10,000

Title: Developing Participatory-Designed Tools to Improve Health Behaviors among Black Pregnant and Postpartum Women in Rural Communities

Investigators: Linda May, Adrienne Muldrow, Toyin Babatunde, Nancy Winterbauer, Jim DeVente, Jameta Edwards, Keith Keene

The goals of this study are: 1) utilize community-based participatory focus groups to gain insight from Non-Hispanic Black women of reproductive age in rural communities regarding which specific tools they deem to be most appropriate to improve their participation in health behaviors (e.g. physical activity, nutrition) during and after pregnancy, and 2) create a toolset that will serve the specific needs of said population.

Bristol Myers Squibb Keene (PI) 12/15/21-06/30/22

\$USD 22,309

Title: East Carolina University Health Disparities Virtual Roundtable

The goal of this proposal is to organize and design a Health Disparities Virtual Roundtable event, hosted by the ECU Center for Health Disparities. This event would bring together health disparities/equity experts from across the country to discuss ways to alleviate disparities, form partnerships with academic, healthcare and state agencies, and help influence policies that address health disparities/equity.

Bristol Myers Squibb C. Ellis, M. Jacobs, K. Keene (Multiple PI) 12/15/20-06/30/21

\$USD 10,000

Title: Racial Disparities in Stroke Outcomes

The goal of this proposal is to examine the presence/strength/satisfaction of social networks on stroke outcomes in African American and White stroke survivors residing in the eastern NC stroke belt.

CARES ACT Funding MPI: Clay, Kearney 08/01/2020 – 12/31/2020

\$USD \$1,239,600 M Total Costs

Title: “Ethics Protocol for Vaccine Distribution” and “Eastern North Carolina COVID Mapping”

Role: Co-Investigator (Multiple)

The goals of this project were: 1) Create an ethical framework and protocol distribution plan COVID-19 vaccine(s); 2) Define and assess high risk, vulnerable populations for equitable vaccine distribution; 3) Detect emerging COVID-19 hotspot areas and prevention of spread in eastern NC; 4) Develop a COVID web portal; 5) Identify individuals, agencies, and institutions for a vaccine distribution network development; 6) Create a vaccine distribution network partnership that prioritizes the highest risk populations; 7) Generate a literature review for the protocol that provides evidence-basis for values and processes developed.

National Institutes of Health

1 R15 NS095115-01A1 Keene and Brewer (Multiple PI) 09/30/16-08/31/19

NIH/NINDS \$USD 442,372

Title: Genetic evaluation of two novel loci associated with recurrent stroke

Role: PI (Administrative)

The goal of this proposal is to use cutting edge next generation DNA sequencing to identify genetic variants contributing to recurrent stroke risk at two novel loci.

National Institutes of Health
3 R15 NS095115-01A1W1 Keene/Brewer/Spragley 01/01/2018-12/31/18
Research Supplements to Promote Diversity in Health-Related Research (Admin Supp)
NIH/NINDS \$USD 33,936

Title: Genetic evaluation of two novel loci associated with recurrent stroke

Role: PI (Administrative)

The goal of this proposal is to use cutting edge metabolomics to identify biomarkers contributing to recurrent stroke risk in African Americans.

ECU Interdisciplinary Research Collaboration Award program
2017-2018 McCubrey (PI) \$USD 25,000
Title: Mechanisms of TP53 tumor suppressor protein control of gene expression in pancreas cancer tumorigenicity
Investigators: James McCubrey, Li Yang, Edmund Stellwag, Keith Keene, Nasreen Vohra

ECU Division of Research 08/01/17-12/31/17
Harriot College of Arts and Sciences Faculty Reassignment Award \$USD 6,000
Title: Social and epigenetic influences on racial disparities of stress and disease
Role: PI

Triangle Center for Evolutionary Medicine (TriCEM)
2016-2017 \$USD 13,623
Title: Diabetes and Evolutionary Lag in the Sea Islanders
Investigators: Kyle Summers, Oyinlola Babatunde, and Keith Keene

ECU Interdisciplinary Research Collaboration Award program
2016-2017 May (PI) \$USD 17,600
Title: Prenatal Exercise and Postnatal Exercise Effects on Offspring Health (PEPE)
Investigators: Linda May, Michael Brewer, and Keith Keene

American Heart Association National Center NCRP Scientist Development Grant
AHA Grant: 12SDG9180012 Keene (PI) 01/01/2012 – 12/31/2016
AHA \$USD 308,000
Title: Genetic evaluation of genes in the FOCM pathway that influence recurrent stroke risk and measures of homocysteine
Role: PI

East Carolina University Interdisciplinary Research Collaboration Award
2015-2016 McCubrey (PI) \$USD 5,000
Title: Identification and Targeting Pancreatic Cancer Stem Cells in Resected Pancreatic Cancers
Investigators: Timothy Fitzgerald, Jim McCubrey, Kvin Lertpiriyapong, Edmund Stellwag, and Keith Keene

East Carolina University East-West Collaboration Program Fall 2012
Multiple PIs: Robert James, MD and Keith Keene PhD \$USD 25,000
Title: Prophylactic Low-Dose Intravenous Heparin Infusion for Aneurysmal Subarachnoid Hemorrhage Trial (PHAST-1): Analysis of Myeloperoxidase and Myeloid-Related Protein 8/14 Levels and Genotypes
Role: PI (Multiple)

National Institutes of Health
Research Supplement to Promote Diversity Keene (PI) 08/01/2011 – 07/31/2012
NIH/NHGRI \$USD 146,300
Title: Pharmacogenomic studies in VISP: results and implications for clinical trial design
Role: PI

National Institutes of Health
R01 DK084350-02 Sale (PI) 08/01/2009 - 07/31/2011
NIH/NIDDK \$USD 2,433,455
Title: Genetic contributors to diabetes and dyslipidemia in African Americans
Role: Co-Investigator

Juvenile Diabetes Research Foundation International Postdoctoral Fellowship
JDRF Grant: 3-2009-649 Keene (PI) 09/01/2009 – 08/31/2010
JDRF \$USD 92,564
Title: Genetic evaluation of a novel type 1 diabetes locus at 12q13
Role: PI

National Research Service Award (NRSA)
F32 DK084954-01 Keene (PI) 07/01/2009- 06/30/2011
NIH/NIDDK \$USD 96,472
Title: Evaluation of chromosome 12q13 as a novel type 1 diabetes locus, (Declined)

Diabetes and Hormone Action Training Grant (T32)
T32 DK007320 (NIH/NIDDK)
University of Virginia 03/01/2008- 08/31/2009
Role: Postdoctoral Research Fellow

National Research Service Award (NRSA)
F31 DK072550-03 Keene (PI) 07/15/2005- 11/19/2007
NIH/NIDDK \$USD 124,206
Title: Chromosome 6q and Diabetes in African Americans
Role: PI

PUBLICATIONS: 2,637 Total Citations overall; h-index = 21; i10-index = 28 (Citation numbers from Google Scholar as of August 2022)

Manuscripts: (# of Citations as of August 2022 = C#) student authors underlined

Aniket Mishra, Rainer Malik,, **Keith Keene**, Stephanie Debette. Stroke genetics informs drug discovery and risk prediction across ancestries. *Nature Genetics* (conditional acceptance June 2022)

Davis Armstrong NM, Chen WM, Hsu FC, Brewer MS, Cullell N, Fernandez-Cadenas I, Williams SR, Sale MM, Worrall BB, **Keene KL**. DNA methylation analyses identify an intronic ZDHHC6 locus associated with time to recurrent stroke in the Vitamin Intervention for Stroke Prevention (VISP) clinical trial. *PLoS One*. 2021 Jul 12;16(7):e0254562. doi: 10.1371/journal.pone.0254562. eCollection 2021. PMID: 34252155 PMCID: PMC8274879.

Fatumo S, Karhunen V, Chikowore T, Sounkou T, Udosen B, Ezenwa C, Nakabuye M, Soremekun O, Daglas I, Ryan DK, Taylor A, Mason AM, Damrauer SM, Vujkovic M, **Keene KL**, Fornage M, Jarvelin MR, Burgess S, Gill D. Metabolic traits and stroke risk in individuals of African ancestry: Mendelian

randomization analysis. *Stroke*. 2021 Aug;52(8):2680-2684. doi: 10.1161/STROKEAHA.121.034747. Epub 2021 Jun 3. PMID: 34078102. PMCID: PMC8312569 (C#4)

Zimmerman KD, Schurr TG, Chen WM, Nayak U, Mychaleckyj JC, Quet Q, Moultrie LH, Divers J, **Keene KL**, Kamen DL, Gilkeson GS, Hunt KJ, Spruill IJ, Fernandes JK, Aldrich MC, Reich D, Garvey WT, Langefeld CD, Sale MM, Ramos PS. Genetic Landscape of Gullah African Americans. *Am J Phys Anthropol*. 2021 Aug;175(4):905-919. doi: 10.1002/ajpa.24333. Epub 2021 May 19. PMID: 34008864. (C#3)

Tumin D, Brewer KL, Cummings DM, **Keene KL**, Campbell KM. Estimating clinical research project duration from idea to publication. *J Investig Med*. 2021 May 14:jim-2021-001915. doi: 10.1136/jim-2021-001915. Online ahead of print. PMID: 33990370. PMCID: PMC8127282.

Davis Armstrong NM, Spragley KJ, Chen WM, Hsu FC, Brewer MS, Horn PJ, Williams SR, Sale MM, Worrall BB, **Keene KL**. Multi-omic analysis of stroke recurrence in African Americans from the Vitamin Intervention for Stroke Prevention (VISP) clinical trial. *PLoS One*. 2021 Mar 4;16(3):e0247257. doi: 10.1371/journal.pone.0247257. eCollection 2021. PMID: 33661917. PMCID: PMC7932724. (C#1)

Ellis C, Jacobs M, **Keene KL**, Grubaugh AL. The impact of COVID-19 on racial-ethnic health disparities in the US: Now is the time to address the problem. *J Natl Med Assoc*. 2020. Sep 8:S0027-9684(20)30173-5. doi: 10.1016/j.jnma.2020.08.008. PMID:32917409. (C#1)

Keene KL*, Hyacinth HI, Bis JC, Kittner SJ, Mitchell BD, Cheng YC, Pare G, Chong M, O'Donnell M, Meschia JF, Chen WM, Sale MM, Rich SS, Nalls MA, Zonderman AB, Evans MK, Wilson JG, Correa A, Markus HS, Traylor M, Lewis CM, Carty CL, Reiner A, Haessler J, Langefeld CD, Gottesman R, Mosley TH, Woo D, Yaffe K, Liu YM, Longstreth WT, Psaty BM, Kooperberg C, Lange LA, Sacco R, Rundek T, Lee JM, Cruchaga C, Furie KL, Arnett DK, Benavente OR, Grewal RP, Peddareddygari LR, Dichgans M, Malik R, Worrall BB, Fornage M, on behalf of the COMPASS, SiGN and METASTROKE Consortia. A GWAS Meta-Analysis of Stroke in 22,000 individuals of African descent identifies novel associations with stroke. *Stroke*. 2020 Aug;51(8):2454-2463. doi: 10.1161/STROKEAHA.120.029123. PMID:32693751. PMCID: PMC7387190. *Corresponding author. (C#12)

Ellis C, Jacobs M, **Keene K**, Bell R, Dickerson D. COVID-19 and the Potential Devastation of Rural Communities: Concern from the Southeastern Belts. *Annals of Family Medicine*. 2020. Available at: <https://deepblue.lib.umich.edu/handle/2027.42/154715>. (C#1)

Green IE, Williams SR, Sale MM, **Keene KL**, Worrall BB, Southerland AM. Differential expression of PHACTR1 in atheromatous versus normal carotid artery tissue. *J Clin Neurosci*. 2020;74:265-267. doi: 10.1016/j.jocn.2020.01.018. PMID: 31980275. (C#2)

Arthur A, Terman A, Kurzontkowski C, **Keene K**, Babatunde T, Summers K. Molecular Evolution of Genes Associated with Preeclampsia: Genetic Conflict, Antagonistic Coevolution and Signals of Selection. *Journal of Evolutionary Medicine*. 2018; 6(1):1-9. doi:10.4303/jem/236038. (C#5)

Green IE, Rahman SA, Owens DL, Sale MM, Currie LJ, **Keene KL**, Worrall BB, Southerland AM. Cervical Artery Dissection in Patients of African Ancestry. *Cerebrovasc Dis*. 2018;46(5-6):218-222. doi: 10.1159/000494704. PMID: 30517918. (C#2)

Davis Armstrong NM, Chen WM, Brewer MS, Williams SR, Sale MM, Worrall BB, **Keene KL**. Epigenome-Wide Analyses Identify Two Novel Associations With Recurrent Stroke in the Vitamin Intervention for

Stroke Prevention Clinical Trial. *Front Genet.* 2018 Sep 6;9:358. doi: 10.3389/fgene.2018.00358. eCollection 2018. PMID: 30237808; PMCID: PMC6135883. (C#11)

Callis-Duehl K, **Keene KL**, Christensen T, Stiller J. From DNA to Proteins: Learning tertiary folding through problem solving. *The Science Teacher (TST)*. 2018 August;86(1):35-39.

Malik R, Chauhan G, Traylor M, Sargurupremraj M, Okada Y, Mishra A, Rutten-Jacobs L, Giese AK, van der Laan SW, Gretarsdottir S, Anderson CD, Chong M, Adams HHH, Ago T, Almgren P, Amouyel P, Ay H, Bartz TM, Benavente OR, Bevan S, Boncoraglio GB, Brown RD Jr, Butterworth AS, Carrera C, Carty CL, Chasman DI, Chen WM, Cole JW, Correa A, Cotlarciuc I, Cruchaga C, Danesh J, de Bakker PIW, DeStefano AL, Hoed MD, Duan Q, Engelter ST, Falcone GJ, Gottesman RF, Grewal RP, Gudnason V, Gustafsson S, Haessler J, Harris TB, Hassan A, Havulinna AS, Heckbert SR, Holliday EG, Howard G, Hsu FC, Hyacinth HI, Ikram MA, Ingelsson E, Irvin MR, Jian X, Jiménez-Conde J, Johnson JA, Jukema JW, Kanai M, **Keene KL**, Kissela BM, Kleindorfer DO, Kooperberg C, Kubo M, Lange LA, Langefeld CD, Langenberg C, Launer LJ, Lee JM, Lemmens R, Leys D, Lewis CM, Lin WY, Lindgren AG, Lorentzen E, Magnusson PK, Maguire J, Manichaikul A, McArdle PF, Meschia JF, Mitchell BD, Mosley TH, Nalls MA, Ninomiya T, O'Donnell MJ, Psaty BM, Pulit SL, Rannikmäe K, Reiner AP, Rexrode KM, Rice K, Rich SS, Ridker PM, Rost NS, Rothwell PM, Rotter JI, Rundek T, Sacco RL, Sakaue S, Sale MM, Salomaa V, Sapkota BR, Schmidt R, Schmidt CO, Schminke U, Sharma P, Slowik A, Sudlow CLM, Tanislav C, Tatlisumak T, Taylor KD, Thijs VNS, Thorleifsson G, Thorsteinsdottir U, Tiedt S, Trompet S, Tzourio C, van Duijn CM, Walters M, Wareham NJ, Wassertheil-Smoller S, Wilson JG, Wiggins KL, Yang Q, Yusuf S, Amin N, Aparicio HS, Arnett DK, Attia J, Beiser AS, Berr C, Buring JE, Bustamante M, Caso V, Cheng YC, Choi SH, Chowhan A, Cullell N, Dartigues JF, Delavaran H, Delgado P, Dörr M, Engström G, Ford I, Gurpreet WS, Hamsten A, Heitsch L, Hozawa A, Ibanez L, Ilinca A, Ingelsson M, Iwasaki M, Jackson RD, Jood K, Jousilahti P, Kaffashian S, Kalra L, Kamouchi M, Kitazono T, Kjartansson O, Kloss M, Koudstaal PJ, Krupinski J, Labovitz DL, Laurie CC, Levi CR, Li L, Lind L, Lindgren CM, Lioutas V, Liu YM, Lopez OL, Makoto H, Martinez-Majander N, Matsuda K, Minegishi N, Montaner J, Morris AP, Muiño E, Müller-Nurasyid M, Norrving B, Ogishima S, Parati EA, Peddaredygar LR, Pedersen NL, Pera J, Perola M, Pezzini A, Pileggi S, Rabionet R, Riba-Llena I, Ribasés M, Romero JR, Roquer J, Rudd AG, Sarin AP, Sarju R, Sarnowski C, Sasaki M, Satizabal CL, Satoh M, Sattar N, Sawada N, Sibolt G, Sigurdsson Á, Smith A, Sobue K, Soriano-Tárraga C, Stanne T, Stine OC, Stott DJ, Strauch K, Takai T, Tanaka H, Tanno K, Teumer A, Tomppo L, Torres-Aguila NP, Touze E, Tsugane S, Uitterlinden AG, Valdimarsson EM, van der Lee SJ, Völzke H, Wakai K, Weir D, Williams SR, Wolfe CDA, Wong Q, Xu H, Yamaji T, Sanghera DK, Melander O, Jern C, Strbian D, Fernandez-Cadenas I, Longstreth WT Jr, Rolfs A, Hata J, Woo D, Rosand J, Pare G, Hopewell JC, Saleheen D, Stefansson K, Worrall BB, Kittner SJ, Seshadri S, Fornage M, Markus HS, Howson JMM, Kamatani Y, DeBette S, Dichgans M; AFGen Consortium; Cohorts for Heart and Aging Research in Genomic Epidemiology (CHARGE) Consortium; International Genomics of Blood Pressure (iGEN-BP) Consortium; INVENT Consortium; STARNET; BioBank Japan Cooperative Hospital Group; COMPASS Consortium; EPIC-CVD Consortium; EPIC-InterAct Consortium; International Stroke Genetics Consortium (ISGC); METASTROKE Consortium; Neurology Working Group of the CHARGE Consortium; NINDS Stroke Genetics Network (SiGN); UK Young Lacunar DNA Study; MEGASTROKE Consortium; MEGASTROKE Consortium. Multi-ancestry genome-wide association study of 520,000 subjects identifies 32 loci associated with stroke and stroke subtypes. *Nature Genet.* 2018 Apr;50(4):524-537. doi: 10.1038/s41588-018-0058-3. PMID: 29531354; PMCID: PMC5968830. (C#728)

Williams SR, Hsu FC, **Keene KL**, Chen WM, Dzhivhuho G, Rowles JL, Southerland AM, Furie KL, Rich SS, Worrall BB, Sale MM. Genetic drivers of von Willebrand Factor levels in an ischemic stroke population and association with risk of recurrent stroke. *Stroke.* 2017 Jun;48(6):1444-1450. doi: 10.1161/STROKEAHA.116.015677. PMID 28495826; PMCID: PMC5536245. (C#20)

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Conference Abstracts

Bynum M, Kearney, GD, Bailey EJ, Keene, KL. A Meta-Synthesis of Environmental Justice Topics in North Carolina: 1965-2021. NC BREATHE. Virtual Meeting, Presentation. April 2021.

Greer A, Kitta A, Tutor R, **Keene K**, Clay M. Unlikely Partners: Redefining the Interprofessional Health Care Team. Jefferson Center for Interprofessional Practice and Education (JCIPE) conference. Virtual Meeting. April 13-17, 2021.

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Davis Armstrong NM, Spragley KJ, Chen WM, Hsu FC, Brewer MS, Williams SR, Sale MM, Worrall BB, **Keene KL**. Multi-omic analyses implicate sphingolipids as biomarkers of recurrent stroke in African Americans. American Society for Human Genetics 2019 Annual Meeting. Houston TX, October 15-19, 2019, Poster Presentation (2755T).

Paquette DW, Swift C, Gillone A, Martinez Luna A, Gay I, Camargo GA, Wu Q, Bell R, **Keene KL**, Moss M. Periodontal Health Disparities Among Adults in Rural North Carolina. International Association for Dental Research Annual Meeting. Vancouver, BC, Canada. June 2019. Poster Presentation [P-2152].

Mitchell N, Brewer MS, **Keene KL**. A Candidate Gene Study: Finding Associations Between Recurrent Stroke and Genetic Variants of the Five Folate-Mediated One Carbon Metabolism Pathway Genes. Research and Creative Achievement Week. East Carolina University, Greenville, NC. April 1-8, 2019.

Safa DM, Brewer MS, **Keene KL**. Fine-mapping a novel locus on chromosome 1 for association with recurrent stroke. Research and Creative Achievement Week. East Carolina University, Greenville, NC. April 1-8, 2019.

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Spragley KJ, Brewer MS, **Keene KL**. A metabolomics approach to understanding stroke recurrence in VISP. Research and Creative Achievement Week. East Carolina University, Greenville, NC. April 1-8, 2019.

Davis Armstrong NM, Chen WM, Hsu FC, Brewer MS, Williams SR, Sale MM, Worrall BB, **Keene KL**. Epigenome-wide methylation survival analyses identify seven loci associated with time to recurrent stroke and composite vascular endpoints in participants from the Vitamin Intervention for Stroke Prevention (VISP) clinical trial. American Society for Human Genetics 2018 Annual Meeting. San Diego. CA, October 16-20, 2018, Poster Presentation

Summers K, **Keene KL**, Babatunde OT, Kurzontkowski C, Arthur, AD, Terman A. Genetic conflict, preeclampsia, and signals of selection in humans. Joint Congress on Evolutionary Biology Meeting. Montpellier France. August 19-22, 2018. Poster Presentation [P-1204].

Davis Armstrong NM, Chen WM, Brewer MS, Williams SR, Sale MM, Worrall BB, **Keene KL**. Epigenome-wide association study of the previous number of strokes in participants from the Vitamin Intervention for Stroke Prevention clinical trial identifies two novel associations. Research and Creative Achievement Week. East Carolina University, Greenville, NC. March 26- April 2, 2018. Oral Presentation.

Summers K, **Keene KL**, Babatunde T, Terman A, Arthur A, Kurzontkowski C. Molecular Evolution of a Gene Associated with Preeclampsia: Genetic Conflict, Antagonistic Coevolution and Signals of Selection. Research and Creative Achievement Week. East Carolina University, Greenville, NC. March 26- April 2, 2018. Oral Presentation.

Southerland AM, McMurry TL, Williams SR, **Keene KL**, Owens DL, Odell VA, Hsu GC, Bekiranov S, Sale MM, Worrall BB. Gene Expression Profile of Cervical Artery Dissection By Time of Event. International Stroke Conference Annual Meeting. Los Angeles, CA, January 24-26, 2018. Moderated Poster Presentation.

Southerland AM, McMurry TL, Williams SR, **Keene KL**, Owens DL, Odell VA, Hsu GC, Bekiranov S, Sale MM, Worrall BB. Gene Expression Profile of Cervical Artery Dissection By Time of Event. 22nd International Stroke Genetics Consortium (ISGC) Workshop. Utrecht, the Netherlands, November 2-3, 2017. Oral Presentation.

Summers K, Keene KL, Babatunde OT, Kurzontkowski C, Amin B, Terman A. Evolutionary lag and diabetes: preliminary results. Triangle Center for Evolutionary Medicine (TriCEM) Research Symposium. Raleigh NC, October 2017. Poster Presentation.

Davis Armstrong NM, Chen WM, Brewer MS, Williams SR, Sale MM, Worrall BB, **Keene KL**. Epigenome-wide association study of the previous number of strokes in participants from the Vitamin Intervention for Stroke Prevention clinical trial. American Society for Human Genetics 2017 Annual Meeting. Orlando FL, October 17-21, 2017, Poster Presentation.

Davis NM, Chen WM, Brewer MS, Williams SR, Sale MM, Worrall BB, and **Keene KL**. Differential DNA methylation loci implicated in measures of homocysteine from the Vitamin Intervention for Stroke Prevention (VISP) trial. 28th Symposium on Cerebral Blood Flow, Metabolism and Function/13th Conference on Quantification of Brain Function with PET; Berlin, Germany, April 1-4, 2017. Poster Presentation.

Keene KL, Chen WM, Hsu FC, Williams SR, Sale MM, Worrall BB, on behalf of the GARNET Collaborative Research Group. Genome-wide association studies from the Vitamin Intervention for Stroke Prevention (VISP)

trial detect novel loci for recurrent stroke. 28th Symposium on Cerebral Blood Flow, Metabolism and Function/13th Conference on Quantification of Brain Function with PET; Berlin, Germany, April 1–4, 2017. Poster Presentation.

Sale MM, Allen EK, Manichaikul A, Williams SR, **Keene KL**, Mychaleckyj JC, Quinlan A, Chen W, Adli M, Rich SS, Daly KA. Defining genetic risk of chronic otitis media with effusion and/or recurrent otitis media: a genome-wide association follow-up study. International Society for Otitis Media 18th International Symposium, National Harbor, MD, June 7-11, 2015 Oral Presentation (OM2015078).

Keene KL, Hopkins KM, Davis ND, Sale MM, Worrall BB. The Pursuit of Personalized Medicine Using Genomics in the Big Data Era: Lessons Learned from the Vitamin Intervention for Stroke Prevention Clinical Trial. Health Informatics (Big Data) Symposium, East Carolina University Heart Institute, Greenville, NC, October 24, 2014.

Keene KL, Chen WM, Turner SD, Koeppl AF, Williams SR, Sale MM, Worrall BB. Genome-wide DNA methylation analyses identify loci influencing recurrent stroke risk in samples from the Vitamin Intervention for Stroke Prevention clinical trial. American Society of Human Genetics 64th Annual Meeting, San Diego, CA, October 2014.

Huang Y, Chen WM, **Keene KL**, Chen F, Nayak U, Hou X, Spruill IJ, Hunt KJ, Fernandes JK, Lok K, Divers J, Mychaleckyj JC, Kamen DL, Post W, Rich SS, Rotter JI, Gilkeson GS, Garvey WT, Cushman M, Sale MM. Genome-wide association studies of lipoprotein subclasses in African American populations elucidates subfractions affected by SNP variation (poster). American Society of Human Genetics 60th Annual Meeting, San Francisco, CA, November 2012.

Huang Y, Chen WM, **Keene KL**, Chen F, Nayak U, Hou X, Spruill IJ, Hunt KJ, Fernandes JK, Lok K, Divers J, Mychaleckyj JC, Kamen DL, Post W, Rich SS, Rotter JI, Gilkeson GS, Garvey WT, Cushman M, Sale MM. Genome-wide association study (GWAS) of lipoprotein subclasses in African Americans identifies two novel loci. Kern Lipid Conference, Vail, Colorado, July 2012.

Worrall BB, Chen F, Chen WM, Hsu FC, Southerland AM, Meschia JF, Sharma P, Nalls M, Brown Jr RD, Brott TG, Hardy J, Singleton A, Doheny KF, Laurie CC, Gogarten S, Bookman EB, Mirel DB, Reiner AP, Kooperburg C, Carty C, **Keene KL**, Sale MM. Analysis of Hypertension Associated Genetic Variants in Stroke Cases and Controls. International Stroke Conference. New Orleans, LA, February 2012, Oral Presentation; Presentation # 189 (p.92).

Sale MM, Chen WM, Chen F, Hsu FC, **Keene KL**, Mychaleckyj JC, Doheny KF, Boehm CD, Laurie CC, Gogarten SM, Bookman EB, Coull BM, Furie KL, and Worrall BB on behalf of the GARNET Collaborative Research Group. Genome-wide Association Analyses From The Vitamin Intervention For Stroke Prevention (VISP) Trial Identify Genetic Loci That Influence Post-stroke Measures of Inflammation and Thrombosis. International Stroke Conference. New Orleans, LA, February 2012, Poster Presentation (P133); Presentation # 2414 (p.193).

Williams SR, Chen F, **Keene KL**, Chen WM, Hsu FC, Wang L, Doheny KF, Zilka M, Worrall BB, Sale MM. Significant genome wide association identified between the glycine N-methyltransferase gene (*GNMT*) and post-methionine load test homocysteine levels in the vitamin intervention for stroke prevention (VISP) cohort. International Stroke Conference. New Orleans, LA, February 2012, Poster Presentation (P174); Presentation # 3012 (p.136).

Keene KL, Chen F, Chen WM, Hsu FC, Mychaleckyj JC, Doheny KF, Adams M, Laurie CC, Gogarten SM, Heagerty PJ, Bookman EB, Worrall BB and Sale MM on behalf of the GARNET Collaborative Research Group. A GWAS from the Vitamin Intervention for Stroke Prevention (VISP) clinical trial identifies variants

that contribute to recurrent stroke and combined vascular endpoints. International Stroke Conference. New Orleans, LA, February 2012, Moderated Poster Presentation (MP86); Presentation # 2607 (p.112).

Chen WM, Huang Y, Chen F, **Keene KL**, Divers J, Mychaleckyj JC, Nayak U, Hou X, Kamen DL, Hunt KJ, Spruill IJ, Fernandes JK, Cushman M, Garvey WT, Sale MM. A genome-wide association scan of lipids and lipoprotein subclasses in African Americans including the Sea Island Gullah. 12th International Congress of Human Genetics. Montreal, Canada, October 2011, Abstract # 351F (p.263).

Keene K, Chen F, Chen WM, Hsu FC, Mychaleckyj J, Doheny K, Pugh E, Ling H, Laurie C, Gogarten S, Bookman E, Worrall B, Sale M, on behalf of GARNET. A GWAS from the Vitamin Intervention for Stroke Prevention clinical trial identifies variants that influence measures of one carbon metabolism. 12th International Congress of Human Genetics. Montreal, Canada, October 2011, Abstract # 356F (p.263).

Huang Y, Chen WM, Hou X, Nayak U, Mychaleckyj JC, Chen F, **Keene KL**, Lok K, Kamen DL, Hunt KJ, Spruill IJ, Fernandes JK, Garvey WT, Sale MM. Population substructure in the Sea Island Gullah African Americans. 12th International Congress of Human Genetics. Montreal, Canada, October 2011, Abstract # 474F (p.268).

Keene KL, Onengut-Gumuscu S, Concannon P. ERBB3 variants at 12q13 confer genetic risk for type 1 diabetes. American Society of Human Genetics 59th Annual Meeting. Honolulu, HI, October 2009, Abstract # 2846.

Keene KL, Onengut-Gumuscu S, Concannon P. A comprehensive evaluation of the Interferon Induced with Helicase C Domain 1 gene (IFIH1) reveals further evidence for association in families with type 1 diabetes. American Society of Human Genetics 58th Annual Meeting. Philadelphia, PA, November 2008, Abstract # 874 (p.193)

Leak TS, Perlegas PS, Smith SG, Hicks PG, Li L, Langefeld CD, **Keene KL**, Freedman BI, Sale MM, Bowden DW. Variants in the ELMO1 gene are associated with diabetes and nephropathy in African Americans. American Society of Nephrology 55th Annual Meeting, San Francisco, CA, October 2007 Oral Presentation FC064.

Keene KL, Mychaleckyj JC, Smith SG, Leak TS, Langefeld CD, Freedman BI, Rich SS, Bowden DB, Sale MM. Association of the distal region of the Ectonucleotide Pyrophosphatase/Phosphodiesterase 1 (ENPP1) gene with Type 2 Diabetes enriched for nephropathy in an African American Population. American Society of Human Genetics 57th Annual Meeting, San Diego, CA, October 2007 Abstract #2354 (p.236).

Leak TS, Perlegas PS, Smith SG, Hicks PG, Li L, Langefeld CD, **Keene KL**, Freedman BI, Sale MM, Bowden DW. Variants in the ELMO1 gene are associated with diabetes and nephropathy in African Americans. American Society of Human Genetics 57th Annual Meeting, San Diego, CA, October 2007, Abstract #2355 (p.236).

Leak TS, **Keene KL**, Langefeld CD, Smith SG, Hicks PJ, Freedman BI, Bowden, DW, Sale MM. Variants in the ELMO1 gene are associated with severe type 2 diabetic nephropathy in African Americans. American Diabetes Association 67th Annual Meeting, Chicago, IL, June 2007.

Sale MM, Leak TS, Mychaleckyj JC, **Keene KL**, Smith SG, Hicks PJ, Freedman BI, Rich SS, Bowden DW. A dense SNP map of human chromosome 6q24-27 to localize a type 2 diabetes gene in an African American population. American Diabetes Association 67th Annual Meeting, Chicago, IL, June 2007.

Keene KL, Mychaleckyj JC, Smith SG, Langefeld CD, Herrington DM, Freedman BI, Rich SS, Bowden DW, Sale MM. A Comprehensive Genetic Evaluation of the Estrogen Receptor Alpha Gene Reveals Evidence for

Association with Type 2 Diabetes-End Stage Renal Disease in an African American Population. 67th Annual American Diabetes Association Meeting, Chicago, IL, 2007 [1135-P].

Sale MM, Leak TS, **Keene KL**, Langefeld CD, Lu L, Mychaleckyj JC, Freedman BI, Bowden DW. Investigation of an Early-Onset of Type 2 Diabetes Locus in an African American Population. International Diabetes Federation 19th World Diabetes Congress, Cape Town, South Africa, 2006, [P174].

Keene KL, Mychaleckyj JC, Gordon CJ, Freedman BI, Bowden DW, Sale MM. The Impact of Admixture on Genetic Association Studies of Type 2 Diabetes in an African American Population. International Diabetes Federation 19th World Diabetes Congress, Cape Town, South Africa, 2006, [P165].

Sale MM, Hsu FC, Palmer ND, Gordon CJ, **Keene KL**, Borgerink HM, Sharma AJ, Bergman RN, Taylor KD, Saad MF, Norris JM. The Uncoupling Protein 1 Gene Is Expressed in Human Islets and Associated with Acute Insulin Response in African American Families from the IRAS Family Study. American Diabetes Association 66th Scientific Sessions, Washington DC, 2006, [1122-P]

Leak TS, Mychaleckyj JC, **Keene KL**, Gordon, CJ, Hicks PA, Freedman BI, Bowden DW, Sale MM. A Dense SNP Map of Human Chromosome 6q24-27 To Localize a Type 2 Diabetes Gene in an African American Population. American Diabetes Association 66th Scientific Sessions, Washington DC, 2006, [1109-P].

Keene KL, Gallagher CJ, Mychaleckyj JC, Langefeld CD, Hirschhorn JN, Henderson BE, Gordon CJ, Freedman BI, Rich SS, Bowden DW, Sale MM. Association of the Estrogen Receptor Alpha Gene with Type 2 Diabetes in African American and European American Populations. American Diabetes Association 66th Scientific Sessions, Washington DC, 2006, [1103-P].

Keene KL, Gallagher CJ, Mychaleckyj JC, Gordon CJ, Langefeld CD, Freedman BI, Bowden DW, Sale MM. Admixture-adjusted association between the estrogen receptor alpha gene and type 2 diabetes in an African American population. American Society of Human Genetics 55th Annual Meeting, Salt Lake City, Utah, 2005, Abstract #1767 (p.327).

TEACHING EXPERIENCE:

Fall 2018	Principles of Biology I (BIOL 1100-02; active PBL style) Credit Hours: 3; Enrollment: 52 East Carolina University Greenville, NC
Fall 2017	Topics in Cell Biology (BIOL 6030-01) Credit Hours: 3; Enrollment 13 East Carolina University Greenville, NC
Fall 2016	Principles of Biology I (BIOL 1100-02; active PBL style) Credit Hours: 3; Enrollment: 52 East Carolina University Greenville, NC
Fall 2015	Principles of Biology I (BIOL 1100-07; active PBL style) Credit Hours: 3; Enrollment: 52 East Carolina University Greenville, NC

Fall 2015	Principles of Biology I (BIOL 1100-010; active PBL style) Credit Hours: 3; Enrollment: 49 East Carolina University Greenville, NC
Spring 2015	Genomics and Human Health (BIOL- 6994-060) Credit Hours: 1; Enrollment: 2 East Carolina University Greenville, NC
Fall 2014	Principles of Biology I (BIOL 1100-08; active PBL style) Credit Hours: 3; Enrollment: 49 East Carolina University Greenville, NC
Fall 2013	Principles of Biology I (BIOL 1100-05; traditional lecture) Credit Hours: 3; Enrollment: 118 East Carolina University Greenville, NC
2011	Guest Lecturer (PHARM- 902) University of Virginia Charlottesville, VA
2006-2007	Adjunct Professor Winston Salem State University Winston-Salem, NC Supervisor: Donna Durham-Pierre, Ph.D.
2004	Guest Lecturer, Physiology and Pharmacology (PHYS-782) Wake Forest University School of Medicine Winston Salem, NC
2001-2003	Laboratory Instructor Microbiology, Concepts in Biology, Zoology North Carolina A&T State University Greensboro, NC Supervisor: Joseph Whittaker, Ph.D.

LECTURES AND ORAL PRESENTATIONS:

- “Genomics, Epigenomics, and Oral Health”. East Carolina University School of Dental Medicine Celebration of Research and Scholarship (CORAS). Keynote Speaker. August 21, 2019.
- “Using integrative “omics” approaches to understand stroke recurrence”. East Carolina University Department of Physical Medicine and Rehabilitation Grand Rounds. Vidant Rehabilitation Center. May 29, 2019.
- “Using Genomic Approaches to Eliminate Health Disparities”. East Carolina University Center for Health Disparities Research Seminar Series. April 17, 2018.
- “Genome-wide association studies from the Vitamin Intervention for Stroke Prevention (VISP) trial detect novel loci for recurrent stroke”. International Stroke Genetics Consortium Workshop. University of Texas Health Science Center- Houston. Houston, TX. June 1, 2017.

- “GWAS Meta-Analysis of Stroke in individuals of African descent Identifies two novel loci associated with stroke”. International Stroke Genetics Consortium Workshop. University of Texas Health Science Center- Houston. Houston, TX. June 1, 2017.
- “Using Genomic Approaches to Eliminate Health Disparities”. Sleep Symposium: Awakening to the Significance of Sleep and Health Disparities: A Global Evolutionary Perspective. Duke University and Triangle Center for Evolutionary Medicine. December 1-2, 2016.
- “Genomics in the era of BIG DATA” East Carolina University. Brody Summer Series Technical Workshop. July 14, 2015.
- Conway Middle School S.T.E.M Career Day (Invited Speaker). April 25, 2014.
- “Genetic and Epigenetic Studies of Ischemic Stroke: Findings from the VISP Clinical Trial” East Carolina University Department of Pharmacology & Toxicology Spring Seminar Series. March 19, 2014.
- “Personalized Medicine: Is Genomics the Key?” East Carolina University Pulmonology Grand Rounds. August 20, 2013.
- “Consortium of Minority Population genome-wide Association Studies of Stroke (COMPASS) study update.” 13th International Stroke Genetics Consortium Workshop. University of Virginia, Charlottesville VA. April 25-26, 2013.
- “Diabetes and Periodontal Disease: A Two-way Street.” Diversity in Medical Dentistry Society. East Carolina University. April 23, 2013.
- Conway Middle School S.T.E.M Career Day (Invited Speaker). March 14, 2013.
- “DNA Methylation Project: Analysis by race and homocysteine status.” GARNET Steering Committee Meeting, Chicago, Illinois. September 13, 2012.
- “Epigenetic Studies of Stroke in VISP.” 11th International Stroke Genetics Consortium Workshop. Newcastle, Australia. April 12, 2012.
- The Genetics of the Peoples of Africa and the Transatlantic African Diaspora: An International Conference. (Invited Speaker) University of North Carolina- Chapel Hill. March 20, 2012.
- “Genetic and Epigenetic Studies of Recurrent Stroke.” 10th International Stroke Genetics Consortium Workshop. Jacksonville, Florida. November 17, 2011.
- “Genetic Studies of Recurrent Stroke.” 8th International Stroke Genetics Consortium Workshop. Miami, Florida. January 14, 2011.
- “ERBB3: A New Locus for Type 1 Diabetes Susceptibility?” University of Virginia. Center for Public Health Genomics Fall 2008 Retreat. October 16, 2008.
- “Chromosome 6q and Diabetes in African Americans.” Wake Forest University School of Medicine, Department of Molecular Medicine. October 27, 2006.
- “Chromosome 6q: Type 2 Diabetes and the Estrogen Receptor Alpha Gene.” Wake Forest University School of Medicine, Department of Molecular Medicine. March 4, 2005.
- “Uncoupling Protein Genes: Type 2 Diabetes Candidates in African American Populations.” Wake Forest University School of Medicine, Department of Molecular Medicine. April 2, 2004.
- “The Role of IκB in Decreased IL-1β Expression in Endotoxin-Adaptive Cells.” Wake Forest University School of Medicine, Department of Molecular Medicine. November 14, 2003.
- “SSLP Mapping: *sds1* Mutation in Arabidopsis.” North Carolina A&T State University, Department of Biology. Symposium 2002.

RESEARCH MENTORING: (as tenured/tenure-track Professor)

Research Mentor

Graduate students:

Student (Institution)	Degree	Date	Project
Dunya Safa (ECU)	MS (MBBT)	Spring 2018-Summer 2019	“Fine-mapping a novel locus on Chromosome 1 for associations with recurrent stroke”

Catherine Darcey (ECU)	MS (MBBT)	Fall 2017 – Summer 2019	“Investigating novel chromosome 2 genetic variants associated with recurrent stroke”
Kelsey Spragley (ECU)	MS (Biology)	Fall 2017 – Summer 2019	“A metabolomics approach to understanding recurrent stroke risk in African Americans”
Nicole Mitchell (ECU)	MS (MBBT)	Fall 2017 – Spring 2019	“A Candidate Gene Study: Finding Associations between Recurrent Stroke Genetic Variants of Five Folate-Mediated One Carbon Metabolism Pathway Genes”
Mitchell Williams (ECU)	MS (MBBT)	Fall 2015- Summer 2017	“Investigating Genetic Variants of the Folate One Carbon Metabolism (FOCM) Pathway for Associations with Recurrent Stroke and Measures of Homocysteine.”
Nicole Davis Armstrong (ECU)	PhD (IDPBS)	Fall 2014- Spring 2019	"Integrative multi-omic analyses identify novel biomarkers for recurrent stroke in participants from the Vitamin Intervention for Stroke Prevention (VISP) clinical trial"
Jessica Kennedy (ECU)	MS (non-thesis)	Spring 2014- Fall 2015	“The path to precision medicine- promising or problematic?”
Keeden Hopkins (ECU)	MS	Spring 2014- Fall 2014	Genetic Determinants of human complex disease.

Undergraduate students:

- Hannah Turner (ECU, Spring 2018-Spring 2019)
- Josie Salisbury (ECU, Spring 2018-2019)
- Mariama Ibrahim (ECU, Spring 2018-Spring 2019)
- Bina Amin (ECU, Fall 2016-Spring 2017)
- Dalon Paredes (ECU, Fall 2015-Spring 2017)
- Sara Kim (ECU, Fall 2014)
- Latisha Garner (ECU, Summer 2013-Fall 2013)
- Jamine Ifedi (ECU, Summer 2013)
- Clementina Oguejiofor (ECU, Spring 2013)

Thesis or Dissertation Committee Member

- Zoe Terwilliger (ECU PhD Dissertation, Summer 2022 – present)
- Farnoosh Koleini (ECU MS Thesis, Summer 2022 – present)
- Samantha McDonald (ECU MS Thesis, Spring 2018-Summer 2019)
- Marcus Williams (ECU MS Thesis, Fall 2017-Summer 2019)
- Victoria Hardy (ECU MS Thesis, Fall 2014-Spring 2016)
- Attelia Oswalt (ECU MS Thesis, Fall 2014)
- John Davidson (ECU MS Thesis, Fall 2013- Summer 2015)
- E. Kaity Allen (University of Virginia School of Medicine PhD, Fall 2010-Spring 2014)

PROFESSIONAL MEMBERSHIPS and RELATED ACTIVITIES:

- NIH Standing Member of Genetics of Health and Disease (GHD) Study Section (2022-2028)
- American Heart Association Genomic and Precision Medicine (GPM) and Council on Epidemiology and Prevention Molecular Determinants of Cardiovascular Health Committee, Member (July 2022 – June 2024)
- Consortium of Minority Population genome-wide Association Studies of Stroke (COMPASS) – Co-Chair (2013-present)
- Center for Human Health and the Environment Member, NC State University (August 2017-present)
- East Carolina University Academic Success Committee (ASC)- Committee Member. The purpose of the Academic Success Committee (ASC) is to protect and enhance the academic integrity of all athletic programs and to promote the academic success of all student athletes. (2015- present)
- American Heart Association, Member (2011-present)
- American Society of Human Genetics, Member (2009-present)
- ECU Grants Research Infrastructure Committee (July 2020-October 2020)

- ECU Diversity and Reentry Workshop (January 2020)
- American Heart Association My Research Legacy Ambassador (2017-2020)
- Frontiers in Epidemiology, Editorial Board (2012- 2019)
- Director, East Carolina University Genomics Core (August 2016-2018)
- ECU Department of Biology Executive Committee (August 2016 – August 2018)
- Co-Chair (organizer) of the new **GR**ants **I**n **P**rogress (**GRIP**) Series, hosted by the Department of Biology. The GRIP series allows faculty, staff, postdoctoral fellows, and graduate students the opportunity to present grant ideas and applications in progress for potential funding, to colleagues in the department for valuable feedback and critiques. (2015- 2017)
- ECU Department of Biology Unit Code and BAFER Committee (Fall 2013 – Fall 2016)
- ECU Department of Biology Graduate Studies Committee (Fall 2013 – Fall 2015)
- East Carolina University, Department of Biology, Summer Workshop in Genomics and Bioinformatics (Summer 2015)
- Research In Progress (RIP) Panelist “Opportunities and Keys to Obtaining Grants”. East Carolina University. (October 27, 2014)
- Health Disparities P20 Grant Committee (ECU), Member (2012-2013)
- American Diabetes Association, Member (2010-2012)
- Ad hoc reviewer: Journals- *Diabetes*, *The American Journal of the Medical Sciences*, *The American Journal of Physiology-Renal Physiology*, *Neurology*, *BMC Medical Genetics*, *BMC Nephrology*; *Expert Review of Molecular Diagnostics*; Funding agencies- National Science Foundation CREST Program; National Institutes of Health Genetic Variation and Evolution study section

PROFESSIONAL DEVELOPMENT COURSES ATTENDED:

April 2016	Duke University School of Medicine Human Genetics Education Colloquium.
Spring 2016	East Carolina University Chancellor’s Leadership Academy (CLA). The CLA is an intensive professional development experience for faculty and staff, offering leadership development to high potential university members through quality curriculum, materials and experiences delivered by top-level university leaders.
January 2012	University of Virginia Teaching Workshop. “Educational Goals of Diversity” The Teaching Resource Center
August 2011	University of Virginia Teaching Workshop. “Getting Connected” The Teaching Resource Center and the Office of the Vice Provost for Faculty Development.
July 2010	NIH Grant Training Seminar. “Writing/Designing NIH Proposals Workshop. Dr. Robert J. Freishtat. George Washington University, Washington DC.
March 2008	Genes, Environment, and Health Initiative: Translating Whole Genome Association Data into Clinical Practice, National Institute of Health, Bethesda, Maryland.
July 2005	Applied Statistical Methods featuring STATA, Applied Regression and Applied Logistic Regression Analysis. Drs Stanley Lemeshow, Soledad-Fernandez, Amy Ferketich, Ohio State University, Columbus, Ohio.