

NIKEA PITTMAN

EDUCATION

Postdoc	Seeding Postdoctoral Innovators in Research & Education (SPIRE) IRACDA Program	University of North Carolina at Chapel Hill (UNC-CH)	2022
Ph.D.	Biomedical Science (Biochemistry)	University of Florida (UF)	2019
M.S.	Translational Biotechnology (Virology)	University of Florida (UF)	2013
B.S.	Animal Science (Biology)	University of Florida (UF)	2010

ACADEMIC APPOINTMENTS

- Teaching Assistant Professor UNC-CH Biochemistry & Biophysics** 2022 – present
- *Course coordinator*, online undergraduate biochemistry courses with dry lab (Biochemistry I/II)
 - Biochemistry coil director, foundation courses for 1st and 2nd year medical students
 - Provided mentored training in teaching for graduate and postdoctoral teaching assistants
 - Impacted 395 students to date, and guided 4-5 teaching assistants per semester
- Adjunct Instructor North Carolina A&T State University (NCAT)** 2021
- *Instructor of record*, taught 2 independent courses using online and in-person teaching formats
 - Designed/delivered course material and adapted to rapidly shifting pandemic conditions
 - 76 students impacted and 3 graduate teaching assistants supervised
- SPIRE Postdoctoral Fellow UNC-CH Biochemistry & Biophysics** 2019 – 2022
- Initiated novel research direction in the lab studying RclA, RclB, and RclC enzymes in *E. coli*
 - Designed experiments, collected, and analyzed data for protein structure/function studies
 - Advised 2 undergraduate researchers – trained in lab techniques, planned activities to encourage career development, guided their skills development to present at national/regional meetings
- Education & Training Specialist UF Center for Precollegiate Education & Training (Summer)** 2019
- Taught ~80 undergraduate students in Summer Health Professions Education Program (SHPEP)
 - Supervised 4 student assistants to deliver biology lab workshops (50+ participants reached)
- Pre-doctoral Fellow UF Biochemistry & Molecular Biology** 2013 – 2019
- Mastered new skillset (cryoEM) to successfully determine the structure of 4 parvoviruses
 - Served as voluntary teaching assistant for 2 courses, impacting 200+ students online/in-person
 - Planned and conducted experiments for 2 independent projects to publish 3 manuscripts, travel to present at 8 venues, and receive admission to a competitive international workshop
 - Mentored 8 junior scientists who co-published manuscripts or presented their work publicly

RESEARCH ACTIVITIES

Pittman Teaching Lab at UNC-CH Biochemistry & Biophysics

- Using protein modeling to engage college students in questions about structure and function 2021 – present
- *Investigator*, collaborated on 3-person faculty team to build an interactive take-home exam
 - Co-developed the project for integration into curricula for all NCAT 1st year biology majors
 - Contributed knowledge of protein structure to develop learning materials & assessments
 - Performed qualitative data analysis and co-wrote manuscript planned for submission
 - Co-delivered oral presentation selected for short talk at a national conference
- Developing a new anti-racism initiative in graduate biology and biomedical training 2020 – present
- *Principal Investigator*, SPACE (**S**cientists **P**romoting **A**nti-racist **C**onversations & **E**quity)
 - Created first UNC-CH short course examining intersections of racial identity & STEM careers
 - Recruited and coordinated 15-person taskforce of UNC-CH trainees/staff/faculty
 - Designed goals/ learning objectives and delegated tasks to produce learning materials
 - Co-planned integration into graduate program to carry-out a pilot study for 200+ PhD students
 - Developed and implemented mixed methods assessments for course evaluation

TEACHING ACTIVITIES
Instructor of Record

<u>UNC-CH School of Medicine: Medical Science Courses</u>	2023 – present
<ul style="list-style-type: none"> <i>Biochemistry coil director</i>, developed for 1st and 2nd year medical students during the foundations phase of medical training. Coils represent basic sciences, such as biochemistry, that are integrated throughout the curriculum (~200 students, in-person) 	
<u>UNC-CH Department of Biochemistry & Biophysics: Introduction to Biochemistry II with dry lab</u>	2023 – present
<ul style="list-style-type: none"> <i>Course coordinator</i>, designed for undergraduates desiring a background in biochemistry as it relates to the human body (pre-nursing, pre-dental hygiene, allied health). Part II of an introductory survey of biochemistry, 4.0 credits (175 students, asynchronous online) 	
<u>UNC-CH Department of Biochemistry & Biophysics: Introduction to Biochemistry I with dry lab</u>	2022 – present
<ul style="list-style-type: none"> <i>Course coordinator</i>, designed for undergraduates in pre-nursing and allied health career tracks. Brief overview of general chemistry, organic chemistry, and an introduction to biochemistry, 4.0 credits (~220 students, asynchronous online) 	
<u>NCAT Department of Biology: Concepts of Biology I with lab (Fall)</u>	2021
<ul style="list-style-type: none"> <i>Instructor</i>, an introduction to the scientific method, basic biochemistry, cell structure and function, energy and metabolism, reproduction, genetics, 4.0 credits (48 students in-person) 	
<u>NCAT Department of Biology: Cell Biology with dry lab (Spring)</u>	2021
<ul style="list-style-type: none"> <i>Instructor</i>, upper-level undergraduate course designed to teach students about the role of organelles and their specific proteins in the cell, 4.0 credits (28 students, synchronous online) 	
<u>UF Summer Health Professions Education Program (SHPEP) (Summer)</u>	2019
<ul style="list-style-type: none"> <i>Course coordinator</i>, 15 weekly hours for team-taught survey course (80 students, in-person) 	
Co-instruction and Teaching Assistant	
UF Program in Biomedical Sciences: First Year Mentoring Group (10 students, in-person)	2018
UF Department of Microbiology & Cell Science: Virology (200 students, hybrid online/in-person)	2017
UF Dean of Students Office: First Year Florida (20 students, in-person)	2009

PROFESSIONAL TRAINING
Research

Faculty Success Program (National Center for Faculty Development & Diversity)	2023 – present
Qualitative Research Summer Intensive (Research Talk Inc. and Odum Institute)	2023
Qualitative Research Series (North Carolina Translational and Clinical Sciences Institute)	2023 – present

Pedagogy

Summer Institute on College Teaching, 5-day workshop (UNC-CH)	2022
Fundamentals of Process Oriented Guided Inquiry Learning (POGIL), 2-day workshop	2022
Flipped Classroom, 2-part workshop series (Barbi Honeycutt, Ph.D.)	2020
Seminar on College Teaching, semester course (Ed Neal, Ph.D.)	2020
Effective College Teaching, 1 day workshop (Richard Felder, Ph.D. and Rebecca Brent, Ph.D.)	2020
Center for the Integration of Research, Teaching, and Learning (UNC-CH)	2019 – 2022
Fundamentals of Biomedical Science Education, semester course (UF)	2018
Teaching Biomedical Science, semester course (UF)	2017

Student Support

Facilitator training, Inclusive STEM Teaching Project	2023
Relational Leadership training (Relational Leadership at Carolina)	2023
Culturally Aware Mentor training (Suzanne Barbour, Ph.D., and Rick McGhee, Ph.D.)	2022
Inclusive STEM Teaching Project, 6-week course (edX)	2022
Supporting Students with Mental Health Issues/Crises (Sandra Evans and Steve Knotek)	2021
Managing Bias (EverFi)	2021
Phase I The Groundwater Approach, 2-day workshop (Racial Equity Institute in Greensboro, NC)	2021

Effective Mentoring, 4-part workshop series (UNC-CH)	2020
Diversity, Equity, and Inclusion Conference (North Carolina Central University)	2020
Standard Safe Zone Training (UNC-CH)	2018

PUBLICATIONS

1. Mays A, Byars-Winston A, Hinton A Jr, Marshall AG, Kirabo A, August A, Marlin BJ, Riggs B, Tolbert B, Wanjalla C, Womack C, Evans CS, Barnes C, Starbird C, Williams C, Reynolds C, Taabazuig C, Cameron CE, Murray DD, Applewhite D, Morton DJ, Lee D, Williams DW, Lynch D, Brady D, Lynch E, Rutaganira FUN, Silva GM, Shuler H, Saboor IA, Davis J, Dzirasa K, Hammonds-Odie L, Reyes L, Sweetwyne MT, McReynolds MR, Johnson MDL, Smith NA, **Pittman N**, Ajjola OA, Smith Q, Robinson RAS, Lewis SC, Murray SA, Black S, Neal SE, Andrisse S, Townsend S, Damo SM, Griffith TN, Lambert WM, Clemons WM Jr. *Juneteenth in STEMM and the barriers to equitable science*. Cell. 2023. Review.
2. Spriggs C, **Pittman N**, Scott N, Taylor K, Kozik AJ. *A Talent Network of Black Microbiologists*. Nature Microbiology. 2022. Correspondence.
3. Scott-Elliston A, Arnold K, and **Pittman, N**. *Addressing Disparities in K-12 Education for Black Youth*. American Society for Microbiology. 2022. Blog article.
4. Taylor K, Kozik AJ, Spriggs C, **Pittman N**, Scott N. *Introducing the Black Microbiologists Association*. Lancet Microbe. 2021. Commentary.
5. Ran G, Chen X, Xie Y, Zheng Q, Xie J, Yu C, **Pittman N**, Qi S, Yu F, Agbandje-McKenna M, Srivastava A, and Ling C. *Site-directed Mutagenesis Improves the Transduction Efficiency of Capsid Library-Derived Recombinant Adeno-Associated Virus Vectors*. Molecular Therapy-Methods & Clinical Development. 2020.
6. Marr M, D'Abramo A, **Pittman N**, Agbandje-McKenna M, Cotmore SF, Tattersall P. *Optimizing the Targeting of Mouse Parvovirus 1 to Murine Melanoma Selects for Recombinant Genomes and Novel Mutations in the Viral Capsid Gene*. Viruses. 2018.
7. **Pittman N**, Misseldine A, Geilen L, Halder S, Smith JK, Kurian J, Chipman P, Janssen M, Mckenna R, Baker TS, D'Abramo A Jr, Cotmore S, Tattersall P, Agbandje-McKenna M. *Atomic Resolution Structure of the Oncolytic Parvovirus LuIII by Electron Microscopy and 3D Image Reconstruction*. Viruses. 2017.

Other Communications

1. Invited interview, *The Hashtags that Brought Black Scientists Together*. Nature. 2021.
2. Invited interview, *What Black Scientists Want from Their Colleagues and Institutions*. Nature. 2020.
3. Adams JD, Berry CA, Cohen R, Delgado A, Faherty JK, Gonzales E, Holford M, Kozik AJ, Jennings L, Mays A, Muglia LJ, **Pittman N**, and Silveyra P. *How Social Media is Accelerating STEM Inclusion*. [arXiv:2212.03245](https://arxiv.org/abs/2212.03245) [astro-ph.IM]

INVITED PRESENTATIONS

1. *We're Just Getting Started: Building Inclusive Learning Communities for Rising Scientists*. American Society for Virology 43rd Annual Meeting, Athens, GA, 2023.
2. Panelist, *Scientists of Many Trades*, Women in Science Annual Symposium, UNC-CH, Chapel Hill, NC, 2023
3. Panelist, *Voices of Diversity: The Perspectives of Underrepresented Professors at UNC*, First Year Council, UNC-CH, Chapel Hill, NC, 2023
4. *Empowering Early Career Scientists Through Inclusive Teaching & Discussions about Diversity*. Department of Microbiology & Immunology, UNC-CH, Chapel Hill, NC, 2022.
5. *How Social Media is Accelerating Inclusion in STEM Training and Careers*. 2030STEM Accelerator Salon, National Virtual Meeting, 2022.
6. *Investigating a New Mechanism for Bacterial Defense: Characterizing Proteins Involved in Reactive Chlorine Stress for Escherichia coli*. Department of Biology, Bowdoin College in Brunswick, ME, Virtual Presentation, 2022.

7. *Studying Uncharacterized Proteins in Escherichia Coli to Inform Approaches in Human Medicine*. Department of Biological and Biomedical Sciences, North Carolina Central University in Durham, NC, 2020.
8. *Investigating the Structure and Function of RclA, RclB, and RclC Enzymes*. Department of Natural Sciences and Math, Johnson C. Smith University, 2020.
9. *Structure-Guided Investigation of Anti-tumor Parvoviruses: Virus-Cell Interactions*. Synthetic Virology Laboratory/Department of Biosciences, Rice University, 2018.

GRANTS / FUNDING

<i>Adhoc Grant</i> , Burroughs Wellcome Fund (#1022440 “A new anti-racism course at UNC” \$8,646)	2022 – Present
<i>Writing Fellowship</i> , Course Source Writing Studio 3-day workshop, Minneapolis, MN (\$2,000)	2022
<i>Award Recipient</i> , Burroughs Wellcome Fund Postdoctoral Diversity Enrichment Program (\$60,000)	2021 – Present
<i>SPIRE Postdoctoral Scholar</i> , NIH K12 IRACDA Program (\$168,000)	2019 – 2022
<i>Pre-Doctoral Fellow</i> , NIH T32 Fellowship (5T32AI007110-34, \$60,000)	2016 – 2018
<i>Pre-Doctoral Fellow</i> , NIH Diversity Supplement (GM082946-07S1, \$50,000)	2014 – 2016
<i>Masters student</i> , NSF Fellowship in Translational Biotechnology (1011553, \$30,000)	2011 – 2013
<i>Undergraduate research fellow</i> , University Scholars, UF Center for Undergraduate Research (\$2000)	2010
<i>Undergraduate research fellow</i> , HHMI Science for Life Scholar at UF (\$2000)	2009

DIVERSITY / INCLUSION

Black Microbiologists Association (BMA)

- *Director of Communications*, coordinated public relations, social media, and web design 2022 – present
- *Founding Board Member* (Secretary), established 501(c)(3) STEM nonprofit organization 2021 – present
- *Organizer*, Black In Microbiology Week, coordinated 8-person team and collaborated with other team leads to plan 2 virtual conferences attracting >2500 participants from >30 countries 2020 – 2021

Office of Academic Support (OAS) Transition and Mentorship Programs at UF

- *Undergraduate Coordinator*, allocated \$15,000 budget to plan orientation program welcoming ~300 historically underrepresented students to UF each year during summer and fall semesters
- Managed 90 peer mentors to deliver year-round workshops & community-building events
- Co-developed and launched new programs for selection & training of peer mentors

Strengthening Opportunities And Reaching Out (SOAR) at UF

2008

Minority Ambassadors and Outreach Ambassadors Programs at UF

2006 – 2007

Consulting

- *Reviewed Cohort 2 Project* “Writing about race in biological science” in JEDI (Justice Equity & Inclusion) Leadership Fellows Program at UNC-CH 2023

Mentoring persons historically excluded in STEM / Higher Education

- *Informal career advising* (UNC-CH), 4 postdocs, 1 PhD student, 1 staff 2022 – Present
- *Training in lab skills* (UF, UNC-CH), 2 PhD rotation students and 5 undergraduates 2013 – 2022
- *Florida Opportunity Scholars* (UF), 20 first-generation-in-college students 2009 – 2010
- *OAS Mentorship Program* (UF), 2-5 undergraduates each year 2007 – 2010
- *Boys and Girls Club of Alachua County*, 3 Black youth 2006 – 2007

NATIONAL / INTERNATIONAL MEETINGS (Pittman, N. previously known as Aytes, N.)
Oral Presentations

1. Bernot K*, **Pittman N***, and Pigford K. *Co-presenters, *Legos and Cotton balls: Engaging Students with Protein Modeling*. Project Kaleidoscope Regional Network Conference. Oral Presentation. Virtual Conference, March 2022.
2. **Pittman N**, Janssen M, Geilen L, Misseldine A, Mckenna R, Baker TS, Cotmore S, Tattersall P, Agbandje-McKenna M. *Structure and Function Investigation of the Oncolytic Protovirus LuIII*. Gordon Research Seminar on Physical Virology, Lucca, Italy. 2017.
3. **Pittman N**, Janssen M, Geilen L, Misseldine A, Mckenna R, Baker TS, Cotmore S, Tattersall P, Agbandje-McKenna M. *Structure and Function Investigation of LuIII for Cancer Therapy*. American Society for Virology, Madison, WI. 2017.
4. **Pittman N**, Janssen M, Geilen L, Misseldine A, Mckenna R, Baker TS, Cotmore S, Tattersall P, Agbandje-McKenna M. *Structure and Function Characterization of LuIII for the Development of New Brain Tumor Targeted Therapies*. XVIth International Parvovirus Workshop, Corsica, France. 2016.
5. **Pittman N**, Velilla J, Mietzsch M, Tseng Y, Chipman P, Ling C, Srivastava A, Agbandje-McKenna M. *Structural Investigation of Adeno-Associated Virus Serotype 3B Cross-reactive Epitopes to Improve Hepatocellular Carcinoma Therapy*. FASEB Science Research Conference on Virus Structure and Assembly, Steamboat Springs, CO. 2016.
6. **Aytes N**, Halder S, Govindasamy L, Vogel M, Dinsart C, Stroh-Dege A, Salome N, Cotmore S, Tattersall P, McKenna R, Agbandje-McKenna M. *Structural Studies of H-1 Parvovirus Receptor Binding*. American Society for Virology 34th Annual Meeting, London, Canada. 2015.
7. **Aytes N**, Halder S, Govindasamy L, Vogel M, Dinsart C, Stroh-Dege A, Salome N, Cotmore S, Tattersall P, McKenna R, Agbandje-McKenna M. *Structural Studies of Oncolytic Parvoviruses: Toward the Development of New Brain Tumor Targeted Clinical Therapies*. International Parvovirus 15th Biennial Workshop, Bordeaux, France. 2014.

Poster Presentations

1. **Pittman N**, Bernot K, and Pigford K. *Protein Modeling as Assessment that Spurs Students' Creativity*. American Society for Biochemistry and Molecular Biology, Transforming Undergraduate Education in the Molecular Life Sciences Conference. Boston, MA. 2023.
2. **Pittman N**, Wrobel J, Ward-Conyers N, and Neher S. *Structural Characterization of Proteins Involved in Reactive Chlorine Stress in Escherichia coli*. Burroughs Wellcome Fund New Awardees Networking Meeting. Research Triangle Park, NC, 2021.
3. **Pittman N**, Janssen M, Geilen L, Misseldine A, Mckenna R, Baker TS, Cotmore S, Tattersall P, Agbandje-McKenna M. *Structure and Function Investigation of the Oncolytic Protovirus LuIII*. Gordon Research Conference on Physical Virology, Lucca, Italy. 2017.
4. **Pittman N**, Velilla J, Mietzsch M, Tseng Y, Chipman P, Ling C, Srivastava A, Agbandje-McKenna M. *Structural Investigation of Adeno-Associated Virus Serotype 3B Neutralizing Epitopes to Improve Hepatocellular Carcinoma Therapy*. XVIth International Parvovirus Workshop, Corsica, France. 2016.
5. **Aytes N**, Glotfelty C, Prakoso D, and Long M. *Detection of Eastern Equine Encephalitis Virus Using Real-Time PCR on Formalin-Fixed Tissues*. National Conference for Minorities in Agriculture, Natural Resources & Related Sciences (MANRRS), Overland Park, KS. 2011.
6. **Aytes N**, Glotfelty C, Prakoso D, and Long M. *Detection of Eastern Equine Encephalitis Virus Using Real-Time PCR on Formalin-Fixed Tissues*. Florida Statewide Research Symposium, Jacksonville, FL. 2010.

HONORS

National POGIL Learning Community	2022 – 2023
Diversity Award recipient, UNC-CH Office of the Provost	2021
Gordon Research Conference travel award	2017

Carl Storm Underrepresented Minority fellowship	2017
1 st place Oral Presentation (Biology), UF Diversity Research Symposium	2017
Federation of American Societies for Experimental Biology (FASEB) travel award	2016
UF Office of Research travel award	2016
Grinter fellowship, UF Graduate School	2013 – 2016
American Society for Virology travel award	2015
UF Office of Graduate Minority Programs travel award	2014, 2017
UF McKnight Brain Institute travel award	2014, 2016
UF College of Medicine travel award	2013 – 2017
UF Department of Biochemistry & Molecular Biology travel award	2013 – 2017
Poster award, National meeting for Minorities in Agriculture, Natural Resources, and Related Sciences	2011
National S.M.A.R.T. Grant Recipient	2008
Florida Academic Scholar, Florida Bright Futures Scholarship Program	2006 – 2010
Machen Florida Opportunity Scholarship	2006 – 2010
UF Office of Admissions Presidential Scholar	2006 – 2010

SERVICE

<i>Committee member</i> , Biochemistry & Biophysics Graduate Education Committee, UNC-CH	2022 – Present
<i>Judge</i> , North Carolina Louis Stokes Alliance for Minority Participation Virtual Conference	2023
<i>Postdoc committee</i> , Biochemistry & Biophysics Department, UNC-CH	2022
<i>Selection committee</i> , SPIRE Undergraduate Summer Research Program	2020, 2022
<i>Interviewer</i> , Chancellor's Science Scholars Program, UNC-CH	2020 – 2023
<i>Subcommittee chair</i> , Diversity & Inclusion Council of the School of Medicine, UNC-CH	2020 – 2021
<i>Diversity committee</i> , Biochemistry and Biophysics Department, UNC-CH	2020 – 2021
<i>Planning committee</i> , Dismantling Racism in Academia Journal Club, UNC-CH	2020
<i>Job search selection committee</i> , UNC-CH cryoEM core facility	2020
<i>Session co-chair</i> , 1 st Triangle Area cryoEM Symposium	2019
<i>Coordinator</i> , UF Biochemistry selection committee for invited speakers	2017 – 2018
<i>Editorial board</i> , UF Journal of Undergraduate Research	2015 – 2016
<i>Coordinator</i> , UF Biochemistry graduate student practice sessions	2014 – 2019
<i>Volunteer</i> , Cade Science Museum (Gainesville, FL)	2013 – 2014
<i>Science fair judge</i> , Alachua County Public School System	2009 – 2016

WORKSHOPS DELIVERED / DESIGNED

1. *It's About That Time: A Needed Talk About Black Scientists in Microbiology*. Fireside Chat hosted by Black Microbiologists Association. American Society for Microbiology Microbe Conference, Houston, TX, June 2023.
2. *Proteins are Everywhere! The Structure of SARS-CoV-2 and Your Immunity*. High school science outreach, First Baptist Church of Chapel Hill in Chapel Hill, NC, 2022.
3. *Preparing Your First Presentation at a Scientific Conference*. Maximizing Access to Research Careers (MARC) Undergraduate Research Program. NCAT State University in Greensboro, NC, 2021.
4. *Molecular Biology Bootcamp*. Summer Health Professions Education Program (SHPEP) in Gainesville, FL, 2019.
5. *Harry Potter and the Case of the Half-Eaten Licorice Wand* (Forensic science workshop). Florida Department of Education College Reach Out Program in Gainesville, FL, 2019.
6. *Applying Structural Biology in Classroom Teaching*. Collaborating to Advance Teaching & Learning of K12 Science Educators, University of Florida in Gainesville, FL, 2019.

7. *Exploring DNA, Central Dogma, and Molecular Biology*. Cade Science Museum in Gainesville, FL, 2013.
8. *Academic and Career Success Series: Time Management, Effective Studying, and Resume Prep*. UF Office for Academic Support in Gainesville, FL, 2009 – 2010.

PROFESSIONAL MEMBERSHIPS

American Society for Biochemistry and Molecular Biology
American Society for Microbiology
Association of Biochemistry Educators
Black Microbiologists Association
Society for Advancement of Biology Education Research
The Protein Society