CURRICULUM VITAE

KEBRETEN F. MANAYE, M.D.
Professor and Chair
Department of Physiology and Biophysics
College of Medicine, Howard University
Washington DC

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EDUCATION AND TRAINING

1986-1991	Research Fellow, Department of Psychiatry, University of Texas Southwestern Medical Center at Dallas, Texas.
1982-1983	Fellowship, Internal Medicine, Surgery, Pediatrics and Psychiatry, Aristotle University of Thessalonica, Greece.
1980-1982	Internship, OBS/GYN and General Surgery, Burton on Trent Graduating Hospital, Burton on Trent, England.
1974-1980	M.D., Aristotle University of Thessalonica, College of Medicine, Greece.
1972-1974	Undergraduate degree, Haile Sellassie University of Addis Ababa Arts and Science Faculty, Ethiopia.

POSITIONS AND EMPLOYMENT

1984-1986	Director of Education, Texas College of Medical and Dental Careers; Dallas, TX
1991-1994	Instructor, Dept. of Psychiatry, University of Texas Southwestern Medical Center; Dallas, TX
1994-1999	Assistant Professor, Dept. of Psychiatry, Univ.of Texas Southwestern Medical Center; Dallas TX
1999-2005	Assistant Professor, Dept. of Physiology and Biophysics, Howard University; Washington DC
2005-2009	Associate Professor, Dept. of Physiology and Biophysics, Howard University; Washington DC
2009-2011	Director of Graduate Studies, Dept. of Phys. and Biophysics, Howard University; Washington C
2009-Present	Professor, Department of Physiology and Biophysics, Howard University; Washington DC
2013-Present	Chair, Department of Physiology and Biophysics, Howard University; Washington DC

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

1988-	Society for Neuroscience; Regular Member
2001-	American Physiological Society
2009-	International Union of Physiological Science, ICC Kyoto, Japan
2010-	Mentor for underrepresented persons, NIH Step-Up program
2010-	Editorial Board, Journal of Alzheimer's disease and Parkinsonism
2010-12	Adjunct Professor, Dept. of Neurology, Howard University; Washington DC
2010-12	Visiting Professor, Dept. of Pathology, Johns Hopkins School of Medicine; Baltimore MD
2010-12	Associate Editor, Journal of Alzheimer's Disease
2011-14	ISTAART Alzheimer's Association
2015-17	Council Member of Association of Chairs of Physiology Department (ACPD)
	Selected Honors
2001	Excellence in Teaching and Dedicated Service in the Integrated Neurosciences
2003	American College of Neuropsychopharmacology; Aventis Pharmaceutical Travel Award
2010	Outstanding Faculty Researcher Award, Howard University COM; Washington DC
2011	Distinguished Faculty Author, Howard University COM; Washington DC
2014	HU ADVANCE-IT Achievement Award, Howard University COM; Washington DC
2015	Health Science VP Achievement award
2015	Inducted to Member of Alpha Omega Alpha Honor Medical Society
2016	HU Advance-IT Women in STEM Researcher Award of the Year
2017	Induction to Sigma Xi, the Scientific Research Society membership 2003 American College of Neuropsychopharmacology Aventis Pharmaceutical Travel Award.
2002	Howard University College of Medicine Curriculum Committee, "Year One of the New Medical Curriculum" Teaching award.
2001	Excellence in Teaching and Dedicated Service in the Integrated Neurosciences.
1985	President, Woman in Science Mutual Assistant Organization
1985	Outstanding Education Excellence, Texas College of Medicine
1979	Who's Who in the Aristotle University.

INSTITUTIONAL SERVICE

Southwestern Medical School, Department of Psychiatry

1. Member of Postdoctoral and graduate students Grievance Committee
2. Organizer of Bi-Weekly Seminar and Weekly Journal Club
3. Member of Southwestern Medical School Outreach Committee
4. Co-Course Coordinator (Allied Health)

Howard University Department of Physiology and Biophysics

2005-2013 Member, Promotion and Tenure Committee
2001-2007 Seminars and Special Events Committee (Chair)
2002-2010 Executive Committee
2003-2013 Graduate Training Committee
2003-2007 Committee New faculty recruitment

Howard University College of Medicine

2003-2012 Member, Collage of Medicine, Executive
2007-2013 Curriculum Committee member
2004-2014 Member of MD/Ph.D. admission committee
2004-2004 Chair, Member of Committee on Committees
2002-2009 Member of Committee on Committees
2009-2013 Member of Student Grievance Committee
2010 Committee member of the Dean's Interdisciplinary
2011-2013 Research Conference Series
2012 Subcommittee member for Year I and II of medical students' course

2015 Member, Provost Research Advisory Committee
2012-2013 Howard University, Standing Committees
2002-2005 Library Systems, Research/resources

SPECIAL ASSIGNMENTS

2016 Member of Search Committee for Chairman, Department of Obstetrics and Gynecology, Howard University
2015 Search Advisory Committee for the Dean of the Collage of Medicine and Vice President for Health Affairs, Howard University
2010 Search Advisory Committee for the Dean of the Graduate School and Associate Provost for
2010 Graduate Studies at Howard University
2002-2004 Member of Search Committee for Chairman, Department of Physiology and Biophysics
2001 Member of the LCMI, Reviewer Faculty Committee (Self-Study Task force, 2001)
2006 Committee on Partner in Education for Dana Foundation

BOARD MEMBERSHIP/ CONSULTANTSHIP

1995-1997 Board of Director for Phoenix House for Mentally ILL, DALLAS, TX
1998-Presnt Scientific Advisory Board member, Behavioral Sciences International Research Press Inc.
2009-2015 Board of Directors, Sinq Neuroimaging Systems Inc. Columbia, MD.

2004-2006 Consultant: Stereological Applications, University of Kansas, Department of Physiology, Lawrence, KS.

PROFESSIONAL SERVICE

Associate Editor of Journal of Alzheimer's disease.

Ad Hoc JOURNAL REFEREE: *Brain Research, Journal of Neurodegeneration; NeuroReport, Neuroscience Letters, Journal of Alzheimer's disease and Journal of Neuroscience Methods.*

Ad Hoc Grant reviewer: *VA Merit Award; GCRC Grant, Health Science Faculty Seed Grant Proposal Reviews, Howard University, February/April 2009.*

External Reviewer *Dr. Kebret Kebede, MD (Tenure and Associate Professor) for Nevada State College 2010.*

PROFESSIONAL DEVELOPMENT PROGRAMS ATTENDED

2014	Leadership Training, ACPD
2013	Association of Chairs for Physiology Departments
2011	Grant writing, NINDS
2010	Gene Cloning and advanced molecular Course
2010	Diversity Grant Writing Skills (NINDS) Grant Writing Skills
2009	International Physiological Conference, Kyoto, Japan
1999, 2005, 2007	Grant Writing workshop
2008	Grantmanship Training Seminar and Workshop, FASEB Career Resources, Tucson. AR
2002	Intensive Course on Molecular Biology and PCR Course
2002	New England Bio. Workshop, Smith College, Northampton, MA
2000	New Faculty workshop, Office for Research Administration Howard University, Washington, DC
1998, 1999, 2000	Unbiased Stereology, Johns Hopkins University, Baltimore, MD
2000, 2005, 2008	Safety Training (Day) Howard University, Washington, DC

TEACHING SERVICE

COURSES TAUGHT AT HOWARD UNIVERSITY

- Structure and Function for Freshman Medical Students
- Medical Physiology for Dental Students
- Neurophysiology for Graduate Students
- Biomedical Sciences I for Pharmacy Students
- General Physiology for Allied Health Students
- SDSP course lecture review
- Small group facilitator
- Unit Leader (2002-2009)
- Major advisor for Ph.D. and MD/Ph.D. students

- Committee to develop Neuroscience Courses for Graduate students
- Currently 2 graduate Students

TRAINED GRADUATE STUDENTS

Graduate students trained by Manaye, with their thesis title and current affiliation:

Rakib Rayhan, **MD/PhD Candidate** (2021). Mr. Rayhan is the first MD/PhD Candidate in the history of Howard University to win an NIH/NINDS F30 NRSA grant. His thesis work focuses on functional MRI and its biomarker potential.
Current Affiliation: Resident at Georgetown, Department of Neurology, Washington, DC.

Ashleigh Bouchelion, **MD/PhD (2016)**, "Nonsense Mutation in Mouse CLN1 Gene Recapitulates the INCL Phenotype and Responds to Treatment."
Current Affiliation – Resident at Case Western Medical School, Cleveland, OH

Dezmond Taylor-Douglas **PhD (2016)**, "The Role of MC3R in the Regulation of Lipogenic and Lipolytic Processes in Mice."
Current Affiliation- Post-Doc at Gladstone Institutes in the Institute of Virology and Immunology, San Francisco, CA

Emad Hamid**, MD/PhD (2007**) "Neurotensin Receptor Binding Abnormalities in the Entorhinal Cortex in Schizophrenia and Affective Disorders."
Current Affiliation – Assistant Professor at the University of Washington, Kansas City, KS
Sara Kalifa, **DVM/PhD (2008)** Neuroinflammation and distribution patterns of cannabinoid CB1 receptors in the hippocampus of APPswe/PS1ΔE9 double transgenic mice.
Current Affiliation – Professor in the Biology department at Montgomery College: Rockville Campus, Rockville, MD

Jahn O'Neil, **PhD, 2006,** "Alzheimer's Disease and Depression: A Stereological, Behavioral, and Neurochemical Assessment of a Double Transgenic Mouse Model of Alzheimer's Disease."
Current Affiliation – Instructor, Howard University, College of Medicine, Department of Physiology and Biophysics, Washington, DC

Joanne Allard, **PhD, 2004**, "Stereological Analysis of Noradrenergic and Hypocretinergic Cell Groups after Deprivation of Rapid Eye Movement Sleep."
Current Affiliation – Associate Professor, Howard University, College of Medicine, Department of Physiology and Biophysics, Washington, DC

POST–DOCTORAL FELLOWS) TRAINED/ SUPERVISED

1. Yukti Sharma, Ph.D. 2006-2012
2. Guang Xu, M.D. 2008-2011
3. De-Liang Lei, M.D. 2009-2010
4. Edossa Amanuel, Ph.D. 2008-2009
5. Heidi Griffith, M.D. 2007-2008
6. Tao Xu, M.D. 2006-2008

DOCTORAL RESEARCH (DEFENSE OF DISSERTATION COMMITTEE)

Physiology	**Degree**	**Completed/to be Completed**
Dr. Luc M. Oke	M.D., Ph.D.	2001
Prabha KC	Ph.D.	2001
Sandra Watson	Ph.D.	2002
Cheryl Rust	Ph.D.	2005
Joanne Allard	Ph.D.	2006
Vermon Ruffin	Ph.D.	2006
Jahn O'Neil	Ph.D.	2007
Emad Hamid	M.D., Ph.D.	2008
Sara Kalifa	DVM., Ph.D.	2008
Bradley Thomas	Ph.D.	2008
Pharmacology		
ReneeLouise Hayslett	Ph.D.	2006
Harriet W. Kamendi	Ph.D.	2007
Bruk Getachew	Ph.D.	2008
Luli Rebecca Akinfiresoye	Ph.D.	2012
Dwayne Brown	Ph.D.	2013
Biology		
Paul Peters	Ph.D.	2008
Ankur D. Upadhyay	M.S.	2012
Biochemistry		
Andrea R. Allen	Ph.D.	2012
Anatomy		
Kasey Davis	Ph.D.	2013

Post-doctoral Fellows	*Training Duration*	*Current Position*
– Tao Xu, MD	2006-2008	Asso. Professor, University of Shanghai, China
– Heidi Griffith, MD	2007-2008	Internal Medicine Physician, Atlantic City, NJ
– Edossa Amanuel, PhD	2008-2009	Asst. Professor, University of Addis Abeba, Ethiopia
– Guang Xu, MD	2008-2011	Research Scientist, NIH, Bethesda, MD

– Yukti Sharma, PhD	2006-2012	Asst Profesros, UDC, Washington, DC

Undergraduate Research

Mentees (last five years)	*Training Duration*	*Current Educational Institution*
– Marry Webster	Summer 2014	University of Texas A&M
– Erika Epps	Summer 2014	N/A
– David Parker	Summer 2014	University of Maryland, MD
– Serawit Mekonnen	Summer 2014	Howard University, School of Pharmacy
– Bezawit Taddese	Summer 2016	N/A
– Jonas Tizabi	Summer 2015	University of Maryland, College Park, MD
– Ruth Tamrat	Summer 2015	North Carolina State College
– Malcom Marfan	Summer 2017	Howard University, Graduate school
– Uchenna Okoro	Summer 2017	Johns Hopkins, School of Medicine, MD
– Crystal Roach	Summer 2015	Howard University, School of Medicine

OTHER INSTITUTIONAL SERVICE: PH.D. DOCTORAL THESES COMMITTEE

Georgetown University External Ph.D. Defense Examiner Department of Neuroscience

UNDERGRADUATE STUDENTS SUMMER TRAINING (2001-2014)

Marry Webster	University of Texas A&M
Erika Epps	Bowie University
Serawit Mekonnen	Howard University
Bezawit Taddese	Montgomery College
Jonas Tizabi	College Park, MD
Ruth Tamrat	North Carolina state College
Malcom Marfan	Howard University
Uchenna Okoro	Johns Hopkins, MD
Crystal Roach	Johns Hopkins, MD
David Parker	University of Maryland

MEDICAL STUDENTS SUMMER RESEARCH TRAINING (ONLY SUCCESSFUL STUDENTS) (2015-2015)

Alexandra Weis	MS I
Steven Wood	MS II
Reza Mazani	MS II
Aileen Cariano-Heat	MS II
Angela Hardwick	MS II
Michele Maita	MS II

OTHER TEACHING EXPERIENCE

2003-2012 Instructor at International Application of Unbiased Stereology to Neuronal Systems (Short course Before Society for Neuroscience meeting)

SUPPORT FOR EDUCATIONAL AND COMMUNITY ACTIVITIES

2009 African American Alzheimer's Association, Washington DC. "Obesity and AD"

2000-2017 **Brain Awareness Week,** Program Coordinator for Howard University National Museum of Medicine, Walter Reed Hospital, Washington, DC.

2008 **NPR: Radio Interview"** Tell me more" (U.S. Doctors to Fill Vast Medical Gap in Africa March 27, 2008. The shortage of trained health personnel in Africa is an ongoing problem, but one of the oldest organizations of African-American physicians wants to help.) Dr. Kebreten Manaye, of Howard University College of Medicine, and Dr. Mohammad Akhter, of the National Medical Association, discuss a new initiative.

2000-Present	**Partners in Educations** Dona Foundation (Brain Awareness Week) liaison for Howard College of Medicine, Howard University, DC.
1997-1999	Cedar Hill School District Gifted and Talented Task Force.
1990-1991	Board of Director for Phoenix House for mentally challenged.

I am dedicated to the academic mission of supporting the next generation of neuroscientists.
I have over two decades of training/mentoring of promising students through the Step-Up NIH program.

GRANT SUPPORT
ACTIVE :Ongoing Research Support:

U54 (NIH) : 1 U54 EB033664-01
Cost: $117,000,000
Length: 07/01/2022 to 06/30/2027
Title: NeuroTech Harbor: Our nation's first equitech ecosystem for neuromedical technologies
Role : MPI
The overall goals of the proposed NeuroTech Harbor (NTH) are to accelerate early development of the most promising neuromedical solutions, and to increase the number of women and underrepresented minority (URM) innovators through outreach and education, and to improve the equity and accessibility of neuromedical solutions.

CZI Chan Zuckerberg Imitative-Science
Cost: $1924,760
Length: 08/01/2022-07-31-24
Role: MPI
Title: CZI NDCN Bioinformatics Post-Baccalaureate Program
To train URGs Post-Baccalaureate to Neurodegenerative computational Neuroscience 2 years programs in several

R01 AG063881-01 Nwulia, Misiak, Obisesan (MPI)
Length: 08/15/2019 to 05/31/2024
Cost*: $2,500,000*
Role: Co-Investigator
Title: Mechanisms of APOE-induced Preclinical Alzheimer's Pathophysiology in Human Olfactory System
Goals: This project investigates long noncoding RNA, mRNA and proteomic changes following cellular perturbation of ApoE olfactory neuronal isoforms.

R25 AGO47843-01 Duttaroy (PI)
Cost: $1,800,000

Length: 09/01/2021 to 04/30/2026
Role: Co-PI
Title: Advancing aging research through development of minority gerontologists.

The goal of establishing the Advancing Diversity in Aging Research (ADAR) program at Howard. University (HUADAR) is to identify a group of bright minority students from MSTEM disciplines early during their undergraduate years and then through extensive mentoring and training prepare them to successfully compete for graduate studies and other professional careers.

Pending Grant

NSF 2213743
Cost: *$4,000,000.00*
Length: *06-01-23 to 05-31-2028*
Title*:* Institute for Natural and Artificial Intelligence
Role: Co-PI

renowned institutions of the nations.
Role: MPI
Completed Research

Completed Research

R03 AG049288-01 Manaye (PI)

Title: APOE genotype and sex dependent effects of 17αE2 estradiol on AD pathology.
Costs: $150,000
Length: 2015-2017
Role: PI

The goal of this study to investigate the role of 17alpha estradiol in several animal models in AD pathology transgenic mice. These findings support the view that 17αE2, which may act through non-genomic mechanisms independent of traditional estrogen receptors, could prevent or delay the progression of AD in older men and women.

R25 AGO47843-01 Duttaroy (PI)
Title: Advancing Aging research through development of minority gerontologist

The goal of establishing the Advancing Diversity in Aging Research (ADAR) program at Howard University (HUADAR) is to identify a group of bright minority students from MSTEM disciplines early during their undergraduate years and then through extensive mentoring and training prepare them to successfully compete for graduate studies and other professional careers.

Costs: $1, 872, 495, 00
Length: 09/01/2014 -04/30/2019

Role: Co-PI

NSF-IGERT (0006461) Wood (PI)
Length: 2008-2017
Role: Co-I and mentor
Title: Dynamics of Behavioral Shifts in Human Evolution.

This grant investigated the comparative and developmental of brains from several speciates to train graduate students in research related to evolution of the brain, bodies and ecology.

U54 NS039407-06A1 Graf (PI)
Length: 09/01/05 to 8/31/10
Title: Central autonomic control, aging, and oxidative stress.
This sub-project entitled "The impact of Aging and Gender on the Noradrenergic System in a Transgenic Model for Alzheimers-Type B-Amyloid Deposition" dealt with neuropathological changes and neurodegeneration as well as how it influences cognition as a function of age in aging and AD animal model.
Role: Investigator (Project 3)

James Smith McDonnell's Foundation Allman (PI)
Length: 2009-2013
Title: The Von Economo Neurons: a comparative and developmental study.
Role: HU Site-PI

The goal of funding was to study the Von Economo neuron to allow Allman and his colleagues to perform a wide variety of research on the specialized neurons. The work could lead to new insights into the nature and treatment of various psychiatric disorders**.**

NSF-PIRE (0730255) Rauschecker (PI)
Length: 2007-2013
Role: Co-I and mentor
Title: International Research Program in Cognitive and Computational Neuroscience:
The goal of this study was to collaborate with several Universities from European countries and exchange graduate students and post-doctoral fellows in neuroscience training.

Title: **Neurobiology of Von Economo Neurons and related circuits and cognition**
Source: McDonnell Foundation
California Institute of Technology
Costs: $320,000
Length: 2009-2014
Effort: **PI** (HU)

FUNDING AGENCY	**AMOUNT**	**RESEARCH PERIOD**	**ROLE**
NIH/NINDS	$900,000	2005-2011	**PI (P#3)**

Title: ***Impact of Aging and Gender on the Noradrenergic System in a Transgenic Model for Alzheimer's-type ß-Amyloid Deposition.***

McDonnell Foundation $320,000 2009-2013 **PI (HU)**

California Institute of Technology
Title: **Neurobiology of Von Economo Neurons and related circuits and cognition**

NIH/NIGMS $568,600 2006 – 2010 **Co-PI**
Title: **Nicotine, Neurotrophic Factors and Depression.**

Faculty Seed Grant: Howard University College of Med. $25,000ine 2010-11 **Co-I**

Title: **Serotonergic and noradrenergic projections to the amygdala in the VPA Rodent model of autism.**

Georgetown University $50,000 2010-2011 **PI**
Pilot Project
Title: **Effects of Estrogen against Amyloid-related Neuron Loss**

Training Grants

Minority International Research Training (MIRT: NSF) 2006-2011 **Co-PI**

NSF-PIRE (W. Graf PI: NSF) 2007-2013 **Co-I**
(International Research Program in Cognitive and Computational Neuroscience)

NSF-IGERT (W. Graf PI: NSF) 2008-2013 **Co-I**
Integrative Graduate Education and Research Traineeship Program
Title: Dynamics of Behavioral Shifts in Human Evolution: Brains, Bodies and Ecology

McDonnell's foundation $490,000 2006-2009 **PI (HU)**
Collaborative Grant:
California Institute of
Technology, Pasadena,
Title: **The Von Economo Neurons: a comparative and developmental study**

NIH/NIMH, PAR01-029 $249,198 2004 to 2007 **PI**
(sub-project #3)
Title: ***Depression, Alzheimer's disease and Synaptic Connectivity in Transgenic Mouse Model***

Stanley Foundation $100,000 2000-2003 **PI**

Title: ***Hypothalamic Abnormalities in Depression and Schizophrenic Disorders***

The Lathman Charitable Trust $24,000 2003-2005 **PI**
Title: ***Number of Neurons in the Hypothalamus in Depressive Disorders***

Howard University $40,000 2000-2002 **PI**

New Faculty Award
Title***: Lesion of Brain Stem Nuclei: Parkinson's disease"***

Gwathmey Inc. $3,000 2000-2000 **PI**
Travel Fellowship for *"Graduate students to travel to Society for Neuroscience"*

NIH/NIAAA(Tizabi, PI) $99,800 2003-2005 **Co-PI**
Title: ***Alcohol Nicotine and Alpha 2 Brain Receptors***

NIH/NIGMS $849,328 2002-2006 **Co-PI**
Title: ***Nicotine, Biogenic Amines and Depression***

Howard University $460.032 2001-2003 **Co-PI**
Mordecai Wyatt Johnson (PI McKenzie)
Tile: ***Brain Stem Cells, Astrocytic Progenitors, and the Regulations of Brain Again***

Howard University $320,000 2000-2003 **Co-PI**
Wyatt Johnson Mordecai (PI Y. Tizabi)
Title: ***Nicotinic Interactions with central alpha-2 adrenoceptors: Implications for novel interventions in smoking cessation***

Eli-Lilly $12,500 2002-2003 Co-PI
Howard University
Collaborative Research Support (Tizabi)
Title: ***Nicotinic Cholinergic System in an Animal Model of Schizophrenia***

Eli-Lilly $12,500 2002-2002 **Co-PI**
Howard University
Collaborative Research Support (Tizabi)
Title**: *Nicotinic Cholinergic System in an Animal Model of Depression***

Eli-Lilly $12,500 2002-2002 **Co-PI**
Howard University
Collaborative Research Support (Sobrian, S)

Title: ***Prenatal Cocaine and/or Nicotine Exposure and Schizophrenia in Aging Rats***

Eli-Lilly $12,500 2002-2002 **Co-PI**
Howard University Collaborative Research Support (Davila-Garcia)
Title: ***Mechanisms of Nicotine-Induced Dopaminergic Regulation***

RESEARCH INTEREST, TEACHING PHYLOSOPHY

I am dedicated to the academic mission of supporting the next generation of neuroscientists. I have over two decades of training/mentoring of promising students through the Step-Up NIH program. Currently, as a Co-PI for the Howard Advancing Aging research through the development of minority gerontologist, I have developed a comprehensive curriculum for HU undergraduate students on aging and age-related disorders. During the last four years, I have mentored over 30 students and trained them on experimental design and basic research techniques. I have had the priceless honor of being a principal advisor for two MD/PhD candidates, one DVM/PhD candidate, four PhD pre-doctoral students, two MS graduate students, and seven post-doctoral fellows. All students are currently in successful stages in their careers.

In my role as previous Graduate Director and current Chair, I foster the recruitment of minority students into our graduate program and of minority scientists into postdoc/faculty positions. I have recruited from underrepresented communities including talented female, veterans, and students with disabilities into our graduate programs who are successful in the biomedical related professions.

The aim is to support the training and mentoring of students to develop a pipeline for future Ph.D. and M.D./Ph.D. students. As such, I am PI and collaborator on several Neuroscience. These resources will provide minority researchers an opportunity to initiate their research programs and develop a neuroscience career path early in their professional development. My lab is currently NIH funded and provides research opportunities for undergraduate, post-doctoral, graduate, medical, and postdoctoral students.

Beyond my academic endeavors, my research program has focused on understanding the mechanisms that underlie neurological and neurodegenerative illnesses associated with brain aging. We employ a diverse range of innovative stereological, neuroimaging, biochemical, and behavioral approaches to elucidate neuronal mechanisms of Alzheimer's disease (AD), dementia, and other neurodegenerative disorders. Additionally, we aim to develop potential

pharmacological interventions utilizing animal, in vitro, and in vivo models. Most recent findings exhibit delayed pathological progression when using 17-α- estradiol treatment in transgenic mice bred for AD pathology.

In summary, my record of research productivity in several model systems and training, as well as my administrative leadership, have prepared me well to successfully conduct this project in the area of neuroscience research training and to serve as an effective PI and mentor for minority undergraduate students.

COLLABORATIONS (DEPARTMENTAL, NATIONAL, INTERNATIONAL)

Peter R. Mouton, Ph.D.	Professor of Pathology & Cell Biology USF Health Byrd Alzheimer Institute, University of South Florida College of Medicine, Tampa, FL
Yousef Tizabi, Ph.D.	Professor, Department of Pharmacology, Howard University College of Medicine
John Allman, Ph.D.	Professor, Division of Biology, Caltech, Pasadena, CA
Chet C. Sherwood, Ph.D.	Associate Professor, Department of Anthropology GW Mind-Brain Institute, George Washington University, Washington, DC
John Young, Ph.D.	Professor, Department of Anatomy, Howard University College of Medicine
J.C. McKenzie, PH.D.	Professor, Department of Anatomy, Howard University College of Medicine
Donald K. Ingram, Ph.D.	Chief Gerontology, GRC/ NIA/NIH Baltimore, MD
Mary Ann Ottinger, Ph.D.	Professor, University of Maryland, MD
Martha Miller, M.D.	Professor, Case Western Medial Center, Cleveland, OH
Peter Kelly, Ph.D.	Senior Scientist, Novartis, Parma, Department of Neuroscience Research, Basel, Switzerland

Joanne K. Marcario, Ph.D.	Assistant Professor, University of Kansas, Kansas, Missouri.
Christopher S. Sinton, Ph.D.	Associate Professor, University of Texas, Southwestern Medical School, Dallas Texas
Neil R. Smalheiser, M.D., Ph.D.	Assistant Professor, University of Chicago, Chicago, Illinois
Dave Morgan, Ph.D.	Professor, Alzheimer's Center, University of South Florida, Tampa, Florida.
Patrick R. Hof, M.D.	Professor, Mount Sinai School of Medicine, New York, NY.
Yasuji Matsuoka, Ph.D.	Assistant Professor, Georgetown University, Washington, DC.
Scott Turner, M.D.	Professor, Georgetown University, Washington, DC.
Eva Polston, Ph.D.	Assistant Professor, Howard University
Joanne S. Allard, Ph.D.	Assistant Professor, Howard University

INVITED LECTURES AND PRESENTATIONS

2015 "17-α-Estradiol and Bexarotene Effects on AD-like Pathology in Mutant Mice." Department of Pharmacology, Howard University, College of Medicine.

2015 "The use of animal models to understand the pathology of brain Disorders such as Alzheimer's Disease" Georgetown University, Washington, DC.

2014 "Sex Dependent Effects of 17-a- Estradiol and Bexarotene on Alzheimer's disease in Mutant APP/PS1 Mice." The 2nd Great Washington D.C. Area Chapter of the American Physiological Society Meeting.

2013 "The Effect of 17 alpha Estradiol on Aged Animal Model for Alzheimer's Disease Neuropathology." Department of Biochemistry, HU, Washington, DC.

2012 "Sex Dependent Effects of 17-a- Estradiol on Alzheimer's disease in Mutant APP/PS1 Mice." Rush Institute, Chicago, IL.

2011 “Hypothalamic regulation of sleep and circadian rhythms.” Investigators Annual meeting at California Institute of Technology, Pasadena, CA.2010 Comparative Study of the Hypothalamus and Brain Stem in Apes and Humans. Neuroscience Symposium, New Avenues and Directions in Neuroscience: a Revolution in understanding behavior through channels, genes and neurons. Washington, DC.

2010 “In vivo and in vitro models of Alzheimer’s disease Neuropathology and neuroprotection, Neuroscience Symposium, New Avenues and Directions in Neuroscience: a Revolution in understanding behavior through channels, genes and neurons” Washington, DC.

2010 “17a-estradoil attenuates neuron loss in overectomized Dtg APPSWE/PS1DE9 mice.” 8th Conference of Specialized Neuroscience Research Programs, San Juan, Puerto Rico.

2009 Effects of Immunotherapy and Estrogen against Amyloid-Related Neuron Loss. Munich, Germany.

2009 “Amyloid Pathology Is Associated With Progressive Neurodegeneration In A Transgenic Mouse Model of Alzheimer’s Disease.” Department of Pharmacology, University of Maryland, Baltimore, MD.

2008 McDonnell Foundation Collaborative Annual Symposium. (Co-organizer) The George Washington University, Washington, DC.

2008 “Eye on Mice and Men: Double Transgenic Mice and Neurodegeneration.” Universidad Pablo De Olavide, Seville, Spain.

2008 “Animal Model to Study Alzheimer’s disease Neuropathology: ‘Brain, Signaling from Neurons to Circuits.’” International Research Training Group and Georgetown University, Washington, DC.

2007 “A Comparative Study of the Hypothalamus in Apes and Humans.” Department of Biology, California Institute of Technology, Pasadena, CA

2007 “Orexin Neurons of the Lateral Hypothalamus in Apes and Humans.” The George Washington University, Washington DC.

2007 “An Animal Model to Study Alzheimer’s Disease Neuropathology.” International Behavioral Research Press, San Francisco, CA.

2006 “Is the Dtg APP/PS1 Mouse an Animal Model of Alzheimer’s Disease?” (Guest speaker) International Stereology Workshop, Atlanta, GA.

2006 “Comparative Study of the Hypothalamus and the Brainstem in Apes and Humans: What Makes Us Human?” Behavioral Sciences International Press, Scientific Advisory Board Annual Meeting, Palm Beach, FL.

2005 “Grand Round.” Howard University Hospital Department of Psychiatry, Washington, DC.

2005 Mississippi University, Department of Psychiatry, Jackson, MS.

2004 Novartis, Parma, Department of Neuroscience Research, Basel, Switzerland.

2003 Addis Ababa University, Tikur Ambessa Hospital, Department of Psychiatry.

2002 International Behavioral Research, Vancouver, BC, Canada.

2002 International Behavioral Research, Miami, FL.

2001 Howard University, Department of Anatomy, Washington, DC.

1998 Howard University, Department of Physiology and Biophysics, Washington, DC.

1998 International Behavioral Research, Honolulu, HI.

1998 TEMPA Research group, Department of Neuroscience and Psychiatry, TX.

1998 University of Arlington, Department of Psychology, Arlington, TX.

PUBLICATIONS

Peer Reviewed Journal Articles:

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3. Narayan Rai, Maria Mananita Hipolito, John W VanMeter, Riya Seth, Ayokunnumi Adenuga, Myeshia Shelby, Magdalena Misiak-Christian, Charles Nwaokobia**, Kebreten F Manaye**, Thomas O Obisesan, Evaristus Nwulia (2021). Comparative Effects of Repetitive Odor Identification and Odor Memory Tasks on Olfactory Engagement in Older Populations A Pilot fMRI Study. Neuropsychiatr Dis Treat. 17: 1279–1288. Published online 2021 Apr 30. doi: 10.2147/NDT.S298303PubMed Central PMCID:
4. Tizabi Y, Getachew B, Csoka AB, **Manaye KF,** Copeland RL.(2019) Novel targets for parkinsonism-depression comorbidity. Prog Mol Biol Transl Sci.167:1-24. doi: 10.1016/bs.pmbts.2019.06.004. Epub 2019 Jul 8.PMID: 31601399 Review:

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79. POSTERS/PRESENTATION AT INTERNATIONAL FORUM

80. Afsan R. Bhadelia, B.S. **Kebreten Manaye, M.D.** Kendall D. Jefferson, Mengistu Legesse, Berhano Erko and Yalemtsehay Mekonnen, Ph.D. Schitosomiasis and

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