2018
Network of Minority Health Research Investigators Directory

2018
Network of Minority Health Research Investigators Directory

Contents

Network of Minority Health Research Investigators History and Mission

In 1999, the National Institutes of Health (NIH) recognized the need to increase the number of minority health researchers who succeed in accessing grants and contracts for NIH research. The Office of Minority Health Research Coordination at the National Institute of Diabetes and Digestive and Kidney Disorders (NIDDK) established a communication network of current and potential biomedical research investigators and technical personnel interested in minority health research, including individuals from traditionally underserved communities—African American, Hispanic American, American Indian, Alaskan Native, and Native Hawaiian and other Pacific Islanders—to address that need.

The primary mission of the Network of Minority Health Research Investigators (NMRI, or the Network) is to encourage minority health investigators to be researchers in fields of interest to the NIDDK, including diabetes, endocrinology, metabolism, digestive diseases, nutrition, kidney, urologic, and hematologic diseases. An important component of this network is the promotion of two-way communication between NMRI members and the NIDDK. Through the Network, the NIDDK elicits recommendations for strategies to enhance opportunities for, and support of, underrepresented population groups and others in biomedical research. The NMRI strives to advance scientific knowledge and contribute to the reduction and eventual elimination of racial and ethnic health disparities.

More than 300 researchers have participated in NMRI workshops in the past decade, and approximately 100 are active members. The success of the NMRI, a network that is "owned" by its members and supported by the NIDDK, begins with the dedication of senior investigators who mentor and serve as role models for junior investigators. The participation of active members and the recruitment of new members is a primary reason for the Network's success in the past and the reason for confidence that it will continue to grow in the future.

NIDDK Executives

Griffin P. Rodgers, M.D., MACP

Director
National Institute of Diabetes and Digestive and Kidney Diseases
National Institutes of Health
Building 31, Room 9A52
31 Center Drive, MSC 2560
Bethesda, MD 20892–2560
Telephone: 301–496–5741
Fax: 301–402–2125
Email: griffinrodgers@mail.nih.gov

Dr. Griffin P. Rodgers was named Director of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)—one of the National Institutes of Health (NIH)—on April 1, 2007. He had served as NIDDK's Acting Director since March 2006 and had been the Institute's Deputy Director since January 2001. As the Director of NIDDK, Dr. Rodgers provides scientific leadership and manages a staff of more than 600 employees and a budget of $2.0 billion.

Dr. Rodgers received his undergraduate, graduate, and medical degrees from Brown University in Providence, Rhode Island. He performed his residency and chief residency in internal medicine at Barnes Hospital and the Washington University School of Medicine in St. Louis. His fellowship training in hematology was in a joint program of the NIH with The George Washington University and the Washington Veterans Administration Medical Center. In addition to his medical and research training, he earned an M.B.A., with a focus on the business of medicine/science, from Johns Hopkins University in 2005.

As a research investigator, Dr. Rodgers is widely recognized for his contributions to the development of the first effective—and now U.S. Food and Drug Administration–approved—therapy for sickle cell anemia. He was a principal investigator in clinical trials to develop therapy for patients with sickle cell disease and also performed basic research that focused on understanding the molecular basis of how certain drugs induce gamma-globin gene expression. He and his collaborators recently reported on a modified blood stem-cell transplant regimen that is highly effective in reversing sickle cell disease in adults and is associated with relatively low toxicity. He has been honored for his research with numerous awards, including the 1998 Richard and Hinda Rosenthal Foundation Award, the 2000 Arthur S. Flemming Award, the Legacy of Leadership Award in 2002, and a Mastership from the American College of Physicians in 2005.

Dr. Rodgers has been an invited professor at medical schools and hospitals both nationally and internationally. He has been honored with many named lectureships at American medical centers and has published more than 200 original research articles, reviews, and book chapters; has edited four books and monographs; and holds three patents.

Dr. Rodgers is a member of the American Society of Hematology, the American Society of Clinical Investigation, the Association of American Physicians, the American Academy of Arts and Sciences, and the National Academy of Medicine, among others. He served as Governor to the American College of Physicians and as Chair of the Hematology Subspecialty Board and as a member of the American Board of Internal Medicine's Board of Directors.

Lawrence Y.C. Agodoa, M.D., FACP

Director
Office of Minority Health Research Coordination
National Institute of Diabetes and Digestive and Kidney Diseases
National Institutes of Health
Two Democracy Plaza, Room 9221A
6707 Democracy Boulevard, MSC 5454
Bethesda, MD 20892–5454
Telephone: 301–594–1932
Fax: 301–594–9358
Email: agodoal@mail.nih.gov

Dr. Lawrence Y.C. Agodoa graduated from the Cornell University Medical College, New York, in 1971. He completed internship and residency training in internal medicine at the University of Washington Hospitals in Seattle and 3 years of training in clinical and basic research in nephrology and renal pathology.

Dr. Agodoa served as Chief of the Nephrology Service at the Madigan Army Medical Center, Tacoma, Washington, from 1976 to 1981. He subsequently completed 2 years of clinical and research training in rheumatology and immunology from 1981 to 1983. In 1983, he was assigned to the Walter Reed Army Medical Center as Assistant Chief of the Nephrology Service and the Nephrology Training Program and also was appointed to the faculty of Medicine at the Uniformed Services University of the Health Sciences (USUHS), Bethesda, Maryland. In 1985, he was appointed Director of the Military Medical Research Fellowship at the Walter Reed Army Institute of Research.

In 1987, Dr. Agodoa was appointed Director of the Clinical Affairs Program in the Division of Kidney, Urologic, and Hematologic Diseases at the NIDDK in Bethesda, Maryland. He also was an intramural research scientist in the NIDDK's Laboratory of Cell and Molecular Biology from 1987 to 1992. Currently, he is Professor of Medicine at the USUHS F. Edward Hebert School of Medicine and a Program Director at the NIH. His current duties include serving as Director, Office of Minority Health Research Coordination, NIDDK; and, Director of the Minority Chronic Kidney Disease and End-Stage Renal Disease Programs at NIDDK.

Program Planning Committee Members 2017–2018

Chair

José R. Romero, Ph.D.
Associate Physiologist
Department of Medicine
Brigham and Women's Hospital
Harvard Medical School
221 Longwood Avenue
Boston, MA 02115
Telephone: 617–732–4948
Fax: 617–732–5764
Email: jromero@partners.org

Past Chair

Lincoln Edwards, D.D.S., Ph.D.
Associate Professor
Department of Diagnostic and Biomedical Sciences
The University of Texas School of Dentistry
Houston, TX 77054
Telephone: 713–486–4109
Fax: 713–486–4416
Email: lincoln.edwards@uth.tmc.edu

Chair-Elect

Francisco Villarreal, M.D., Ph.D.
Professor
Department of Medicine
University of California, San Diego
Biomedical Sciences Building, Room 4028
9500 Gilman Drive, 0613J
La Jolla, CA 92093
Telephone: 858–534–3630
Fax: 858–534–0522
Email: fvillarr@ucsd.edu

Members

Glenn M. Chertow, M.D.
Stanford University School of Medicine
1070 Arastradero Road, Suite 313
Palo Alto, CA 94304
Telephone: 650–725–4738
Fax: 650–731–1443
Pager: 415–607–0222
Email: gchertow@stanford.edu

Leonor Corsino, M.D.
Associate Professor of Medicine
Department of Medicine
Duke University School of Medicine
DUMC Box 3451
Durham, NC 27710
Telephone: 919–684–4005
Email: corsi002@mc.duke.edu

A. Celeste Farr, Ph.D.
Assistant Professor of Biomedical Sciences
Oakland University William Beaumont School of Medicine
450 O'Dowd Hall
2200 N. Squirrel Road
Rochester, MI 48309–4401
Telephone: 248–370–3665
Fax: 248–370–4060
Email: farr@oakland.edu

Absalon Gutierrez, M.D.
Assistant Professor of Medicine
Department of Internal Medicine
The University of Texas Health Science Center at Houston
6431 Fannin, MSB 5.108
Houston, TX 77030
Telephone: 713–500–6641
Email: absalon.d.gutierrez@uth.tmc.edu

B. Michelle Harris, Ph.D.
Associate Professor
Nutrition and Food Science College of Agriculture, Urban Sustainability, and Environmental Sciences
University of the District of Columbia
Building 44
4200 Connecticut Avenue, N.W.
Washington, DC 20008
Telephone: 202–274–5739
Fax: 202–274–5577
Email: bharris@udc.edu

Patricia Heyn, Ph.D.
Associate Professor
Department of Physical Medicine and Rehabilitation
School of Medicine
University of Colorado Anschutz Medical Campus
16031 W. 79th Place
Arvada, CO 80007
Telephone: 303–513–7740
Fax: 303–837–1208
Email: patricia.heyn@ucdenver.edu

Leon McDougle, M.D.
Professor, Family Medicine
Chief Diversity Officer
The Ohio State University Wexner Medical Center
Associate Dean for Diversity and Inclusion
The Ohio State University College of Medicine
Meiling Hall, Room 242
370 W. Ninth Avenue
Columbus, OH 43210
Telephone: 614–293–8007
Email: leon.mcdougle@osumc.edu

NIDDK Representatives

Lawrence Agodoa, M.D., FACP
Director
Office of Minority Health Research Coordination
National Institute of Diabetes and Digestive and Kidney Diseases
National Institutes of Health
Two Democracy Plaza, Room 9221A
6707 Democracy Boulevard, MSC 5454
Bethesda, MD 20892–5454
Telephone: 301–594–1932
Fax: 301–594–9358
Email: agodoal@mail.nih.gov

Winnie Martinez
Program Officer
Network of Minority Health Research Investigators
National Institute of Diabetes and Digestive and Kidney Diseases
National Institutes of Health
6707 Democracy Boulevard, Room 9215
Bethesda, MD 20892–5454
Telephone: 301–435–2988
Email: winnie.martinez@nih.gov

Oversight Committee Members 2017–2018

Chair

Rocio Pereira, M.D.
Associate Professor of Medicine
Division of Endocrinology, Metabolism, and Diabetes
University of Colorado School of Medicine
Staff Endocrinologist, Medicine Service
Denver Health Medical Center
660 Bannock Street, MC 4000
Denver, CO 80204
Telephone: 303–602–0813
Fax: 303–602–5055
Email: rocio.pereira@dhha.org

Chair-Elect

Juan Sanabria, M.D., M.Sc., FRCSC, FACS, FAASLD
Professor of Surgery
Marshall University Joan Edwards School of Medicine
Vice-Chair and Scientific Director
Professor of Nutrition and Preventive Medicine
Case Western Reserve University (Adjunct)
LCDR U.S. Navy (Reserve)
Navy Federal Health Care Center Naval Station Great Lakes
North Chicago, IL 60064
Telephone: 216–647–8399
Email: jrs83@case.edu or sanabriaj@marshall.edu

Past Chair

Sylvia Rosas, M.D., M.S.
Associate Professor of Medicine
Joslin Diabetes Center/Beth Israel Deaconess Medical Center
Harvard Medical School
One Joslin Place
Boston, MA 02215
Telephone: 617–309–2477
Email: sylvia.rosas@joslin.harvard.edu

Members

Brandi Franklin, Ph.D., M.B.A.
Assistant Professor, Health Outcomes and Policy Research
The University of Tennessee College of Pharmacy
881 Madison Avenue, Room 213
Memphis, TN 38163
Telephone: 901–448–7234
Fax: 901–448–7053
Email: beveret4@uthsc.edu

Trudy Gaillard, Ph.D.
Interim Associate Dean for Academic Affairs
Nicole Wertheim College of Nursing and Health Sciences
Florida International University
11200 S.W. Eighth Street, AHC3 534A
Miami, FL 33199
Telephone: 305–348–1653
Fax: 305–348–1519
Email: tgaillar@fiu.edu

Marja Hurley, M.D.
Professor of Medicine and Orthopedics
University of Connecticut School of Medicine
263 Farmington Avenue
Farmington, CT 06030–3920
Telephone: 860–679–3484
Fax: 860–679–1850
Email: hurley@uchc.edu

Cheedy Jaja, Ph.D., M.P.H., M.S.N.
Associate Professor
Academic Health Center
University of Cincinnati College of Nursing
Cincinnati, OH 45219
Telephone: 513–558–5296
Fax: 513–558–5054
Email: cheedy.jaja@uc.edu

Myra Kleinpeter, M.D., M.P.H.
Associate Professor of Clinical Medicine
Tulane University School of Medicine
1430 Tulane Avenue, SL45
New Orleans, LA 70112
Telephone: 504–988–5346
Fax: 504–988–1909
Email: mkleinp@tulane.edu

F. Bridgett Rahim-Williams, Ph.D.
Professor and Associate Dean for Research
Petrock College of Health Sciences/
Department of Public Health
L. Gale Lemerand School of Nursing
Building, Room 121
Bethune-Cookman University
739 W. International Speedway Boulevard
Daytona Beach, FL 32114
Telephone: 386–481–2596
Email: rahimwilliamsfb@cookman.edu

Lovoria Williams, Ph.D., M.S.N., APRN-BC
Associate Professor
College of Nursing
University of Kentucky
531 College of Nursing Building
Lexington, KY 40536–0232
Telephone: 859–323–5579
Fax: 859–323–1057
Email: lovoria.williams@uky.edu

Ad Hoc Members

Shirley Blanchard, Ph.D.
Associate Professor
Department of Occupational Therapy
Creighton University
Boyne 142
2500 California Plaza
Omaha, NE 68178
Telephone: 402–280–5921
Fax: 402–280–5692
Email: sblancha@creighton.edu

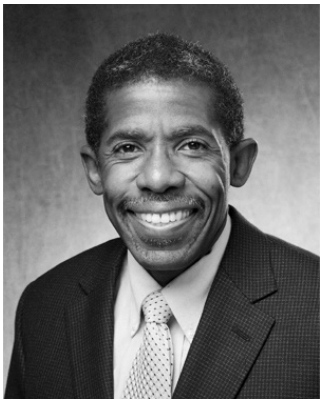
Virginia Sarapura, M.D.
Associate Professor
Division of Endocrinology
Department of Medicine
University of Colorado Anschutz
Medical Campus
12801 E. 17th Avenue, MS8106
Aurora, CO 80045
Telephone: 303–724–3931
Fax: 303–724–3920
Email: virginia.sarapura@ucdenver.edu

NIDDK Representatives

Lawrence Agodoa, M.D., FACP
Director
Office of Minority Health Research
Coordination
National Institute of Diabetes and Digestive
and Kidney Diseases
National Institutes of Health
Two Democracy Plaza, Room 9221A
6707 Democracy Boulevard, MSC 5454
Bethesda, MD 20892–5454
Telephone: 301–594–1932
Fax: 301–594–9358
Email: agodoal@mail.nih.gov

Winnie Martinez
Program Officer
Network of Minority Health Research
Investigators
National Institute of Diabetes and Digestive
and Kidney Diseases
National Institutes of Health
6707 Democracy Boulevard, Room 9215
Bethesda, MD 20892–5454
Telephone: 301–435–2988
Email: winnie.martinez@nih.gov

NMRI Attendees



E. Dale Abel, M.D., Ph.D.

François M. Abboud Chair in Internal Medicine
John B. Stokes III Chair in Diabetes Research
Chair and Department Executive Officer, Department of Internal Medicine
Director, Fraternal Order of Eagles Diabetes Research Center
Director, Division of Endocrinology and Metabolism
Professor of Medicine, Biochemistry, and Biomedical Engineering
The University of Iowa, Carver College of Medicine
4312 PBDB
169 Newton Road
Iowa City, IA 52242
Telephone: 319–356–2745 (Office); 319–356–4379 (Assistant)
Fax: 319–356–8608
Email: drcadmin@uiowa.edu

Research Interests

My research is focused on understanding the molecular mechanisms that are responsible for cardiovascular complications in diabetes. We have specifically focused on the role of altered insulin signaling, autophagy, and mitochondrial oxidative stress.

Adebowale Adebiyi, Ph.D.

Associate Professor
Department of Physiology
College of Medicine
The University of Tennessee Health Science Center
Coleman College of Medicine Building, Room C211
956 Court Avenue
Memphis, TN 38163
Telephone: 901–448–1868
Email: aadebiyi@uthsc.edu

Research Interests

My current research focuses primarily on elucidating signal transduction pathways in the kidney that are involved in the physiology and pathophysiology of renal hemodynamics. We utilize an integrative approach—including techniques drawn from cell and molecular biology, physiology, and pharmacology—to investigate regulatory proteins, ion channels, and G protein-coupled receptors that regulate renal vascular and glomerular functions.

Oreoluwa Adedoyin, Ph.D.

Postdoctoral Fellow
Department of Nephrology
The University of Alabama at Birmingham
703 19th Street South
Birmingham, AL 35223
Telephone: 859–552–2420
Email: adedoyin@uab.edu

Research Interests

My current research is focused on understanding the role of heme oxygenase-1 (HO-1) in modulation of immune responses during development (health) and in response to renal injury due to ferroptotic cell death. HO-1 is a cytoprotective, potent antioxidant enzyme, which is induced as an adaptive and beneficial response to injury. It has been shown to be protective in animal models and several clinically important conditions, such as acute renal failure, transplant rejection, angiogenesis, and atherosclerosis. Ferroptosis is an iron-dependent form of regulated, non-apoptotic cell death that is triggered under conditions of glutathione depletion and/or inactivation of glutathione peroxidase 4 (GPX4). Recent research shows that ferroptosis may mediate cell death and tubular damage in models of acute kidney injury. Even though HO-1 is protective against kidney injury, it is a source of intracellular iron (required for ferroptosis), due to its ability to catabolize the breakdown of toxic heme into iron, biliverdin, and carbon monoxide. Therefore, the goal of my research is to elucidate the role of HO-1 in the regulation of ferroptosis and to understand the mechanisms by which ferroptotic cell death activates the immune system and propagates renal damage.

Rodrigo Aguilar, M.D.

Resident Physician
Department of Internal Medicine
Marshall University Medical Center
1600 Medical Center Drive
Huntington, WV 25701
Telephone: 304–691–1213
Email: aguilarcampo@marshall.edu

Research Interests

After completing the national boards, I became a research fellow at Georgetown University Hospital, Department of Nephrology and Hypertension, where I had the opportunity to work on several projects, especially focusing in Acute Kidney Injury and Renal Replacement Therapy. Happily, my team was able to be published early this year. At this time, I am working at Marshall University Medical Center, where our main projects have been in clinical research, and have both poster and oral presentations coming along in an epidemiologic study of opioids use.

Emilyn Alejandro, Ph.D.

Assistant Professor, Visscher Biomedical Scholar
Department of Integrative Biology and Physiology
University of Minnesota Medical School
Cancer and Cardiovascular Research Building
2231 Sixth Street, S.E., Room 3–142
Minneapolis, MN 55455
Telephone: 612–301–7685
Email: emilyn@gmail.com

Research Interests

My research interests include the developmental origins of type 2 diabetes, specifically fetal programming of the pancreatic beta cells.

Larry D. Alexander, Ph.D.

Associate Professor and Chair
Professional and Medical Education
Meharry Medical College School of Medicine
1005 Dr. D. B. Todd, Jr. Boulevard
Nashville, TN 37208
Telephone: 615–327–6987
Fax: 615–327–6095
Email: ldalexander@mmc.edu

Research Interests

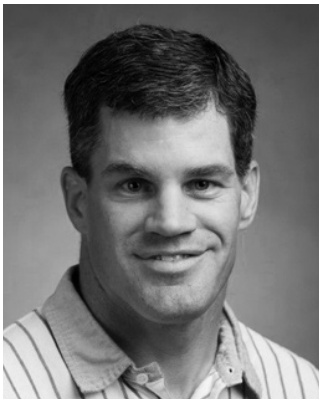
Obstructive nephropathy is one of the most common chronic kidney diseases in the United States, affecting more than 10 million adults and children. It results in a progressive and permanent loss in renal function that is characterized by interstitial inflammation and tubulointerstitial fibrosis that leads to end-stage renal disease. Human renal tubular cells secrete a number of pro-inflammatory and pro-fibrotic mediators that may contribute to the pathophysiology of obstructive nephropathy-related disorders. Understanding the regulatory pathways that control their production is paramount to developing effective therapeutics to treat these diseases. It is clear that cPLA2α and 20-HETE inhibitors have anti-inflammatory and anti-fibrotic properties. Therefore, novel cPLA2α and/or 20-HETE inhibitors may offer an alternative approach to traditional anti-inflammatory/anti-fibrotic therapies for treatment of obstructive renal injury. My research has focused on identifying the intracellular signaling mechanisms underlying the renal tubular cell response to obstructive nephropathy. One project focuses on inhibition or gene disruption of cytosolic phospholipase A2α (cPLA2α) as a mechanism that confers protection against chronic kidney injury, such as obstructive nephropathy. A second project focuses on the role of ω-hydroxylase metabolite of arachidonic acid, 20-hydroxyeicosatetraeonic acid (20-HETE) in obstructive-induced kidney injury. Thus, my laboratory proposes that inhibition of cPLA2α and/or 20-HETE counteracts the development of renal dysfunction and progression of obstructive mediated renal injury. Moreover, the role of 20-HETE synthesis inhibitors, antagonists, and analogs in the treatment of obstructive-induced renal injury offers a unique opportunity to investigate new, novel, stable ω-hydroxylase analogs, antagonists, and inhibitors and their roles in renal inflammation, apoptosis, and fibrosis.

David B. Allison, Ph.D.

Dean
Indiana University School of Public Health
1025 E. Seventh Street, Suite 111
Bloomington, IN 47405
Telephone: 812–855–1250
Email: allison@iu.edu

Research Interests

My research interests include obesity, quantitative genetics, clinical trials, and statistical and research methodology. In recent years, my work has been heavily involved in studying the relations among body weight, body composition, caloric intake, and changes thereof with longevity in animal models and humans. I also study (1) the genetic and environmental influences on obesity and related traits; (2) statistical methods for genetic and epidemiologic studies; (3) design, implementation, and analysis of randomized controlled trials for weight loss; and (4) research integrity. In addition, I have served as principal investigator or co-principal investigator for more than a half dozen successful NIH R13-funded conferences, edited five books, initiated four successful NIH-funded T32 training programs as a principal investigator, and served as the director of several NIH- and NSF-funded national short courses on statistical methods and on obesity.



Matthew Allison, M.D., M.P.H., FAHA

Professor and Division Chief
Department of Family Medicine and Public Health
University of California, San Diego
9500 Gilman Drive, MC 0965
La Jolla, CA 92093–0965
Telephone: 858–642–3289
Fax: 858–822–7662
Email: mallison@ucsd.edu

Research Interests

My research focuses broadly on the epidemiology and prevention of cardiovascular diseases. In this regard, we are examining the associations between atherosclerotic calcification of the renal arteries and both kidney function and blood pressure regulation in the Multi-Ethnic Study of Atherosclerosis. This includes studies on the spectrum of chronic kidney disease. We also are examining differences by race and gender.

Ricardo Azziz, M.D., M.P.H., M.B.A.

Chief Officer of Academic Health and Hospital Affairs
The State University of New York System Administration
State University Plaza
353 Broadway
Albany, NY 12446
Telephone: 518–445–4090
Email: ricardo.azziz@suny.edu

Research Interests

My biomedical research focuses on the study of reproductive endocrinology and androgen excess disorders, including the epidemiology, genetics, and pathophysiology of polycystic ovary syndrome; the non-classic adrenal hyperplasias; the role of the adrenal in hyperandrogenic disorders, the genetics of hyperandrogenic disorders, the physiology treatment of hirsutism; and the regulation and physiology of adrenal androgens. I have published more than 500 original peer-reviewed articles, book chapters, and reviews, and I am consistently ranked one of America's Top Doctors. For my research achievements I have received, among other recognition, the 2000 President's Achievement Award of the Society for Gynecologic Investigation and was elected member of the Association of American Physicians in 2014. I am a recognized thought leader in the arenas of higher education and academic health care, and my scholarship in these areas focuses on the study of leadership and faculty development, diversity and inclusion, change management, and mergers and consolidations.

Joyce E. Balls-Berry, Ph.D., M.P.E.

Assistant Professor of Epidemiology
Program Manager and Founding Director
Office for Community Engagement in Research
Center for Clinical and Translational Science
Mayo Clinic
200 First Street, S.W.
Rochester, MN 55905
Telephone: 507–538–3755
Email: ballsberry.joyce@mayo.edu

Research Interests

I am a psychiatric epidemiologist and health educator with research and teaching experience. My research applies community engagement across the translational research spectrum. This includes understanding diverse communities' willingness to participate in research, and determining the best approaches to provide underrepresented populations a voice in the research process, including using community-based participatory research and community-partnered participatory research. I am the founder of the Minority Women Research Network. The Network's mission is to promote community and patient engagement in research conducted by minority women scientists interested in research collaborations, academic scholarship, innovation, and dissemination. In addition to these endeavors, I serve as the principal investigator or co-investigator on several international, national, and local community-engaged research studies focused on diverse communities with the goal of increasing health equity.

Tiffany Beckman, M.D., M.P.H.

Assistant Professor of Medicine and Consulting Endocrinologist
Division of Endocrinology, Diabetes, and Metabolism
University of Minnesota Department of Medicine
420 Delaware Street, S.E., MMC 101
Minneapolis, MN 55455
Telephone: 612–626–9329
Fax: 612–626–3133
Email: beckm004@umn.edu

Research Interests

My research interests include (1) using brain functional magnetic resonance imaging to define the neural correlates of obesity; (2) using a rodent model to study the neurobiology of eating behavior; (3) investigating satiety and changes in gut hormones with protein diet supplementation before and after gastric bypass surgery; (4) using community-based research methods to examine the effects of improved food availability on incident rates of diabetes and obesity in American Indians; and (5) using holistic methods—such as traditional Indian medicine, cross-cultural healing methods, and story-telling—to improve health disparities in American Indians.

Shawn M. Bediako, Ph.D., M.S.

Associate Professor
Department of Psychology
University of Maryland, Baltimore County
1000 Hilltop Circle
Baltimore, MD 21250
Telephone: 410–455–2349
Fax: 410–455–1055
Email: bediako@umbc.edu

Research Interests

My research is broadly concerned with investigating psychosocial aspects of the sickle cell disease experience. As a social/health psychologist, I am particularly interested in the ways that psychological and social factors influence a range of physiological outcomes. My current program of research—supported by the National Heart, Lung, and Blood Institute—examines clinical implications of sickle cell disease stigma. I have published seminal findings that underscore the multidimensional nature of stigma among adults with sickle cell. I also am developing a series of studies that explore potential mechanisms through which stigma is related to dietary behavior and nutrient intake among sickle cell patients. Although biomedical advances have significantly improved treatment options and resulted in an increased life expectancy of adults with sickle cell, data also suggest a concomitant increase in obesity and overweight in this population. Very little research addresses this problem, and I am well positioned to make a significant scholarly contribution to this area. Thus, I am interested in becoming a member of the NMRI in order to (1) learn more about state-of-the-art research in the stated areas of interest; (2) build upon my expertise in hematologic diseases; and (3) develop high-impact collaborations with researchers whose interests and expertise complement mine.

Ruby Ann Benjamin-Garner, Ph.D., M.P.H.

Assistant Professor
Department of Internal Medicine
Center for Clinical and Translational Sciences
The University of Texas Health Science Center at Houston
Prairie View A&M University College of Nursing
6410 Fannin Street, UTPB 11th Floor, 1100.36
Houston, TX 77030
Telephone: 713–500–7918

Research Interests

My broad research interest is racial, ethnic, and socioeconomic disparities in health and disease outcomes. Specifically, I am interested in developing and testing interventions to decrease disparities in health outcomes. As a means of decreasing disparities in outcomes, I would like to investigate strategies to improve the quality of health care received by underserved groups, specifically African Americans, Hispanics, other minorities, and low-income individuals who are disproportionately affected by chronic diseases, i.e., diabetes, hypertension, and chronic kidney disease. I also am interested in investigating underlying causes of disparate outcomes—be they patient, provider, or system factors—to inform interventions. In my current position with the Center for Clinical and Translational Sciences, I am working to establish a Clinical Research Unit in an indigent health care facility, assisting the clinicians at the forefront of care for these patients in the development and implementation of research, including translation of clinical trial findings to the patient care setting. In this position, I plan to encourage and collaborate with clinicians on projects aimed at improving the quality of care for patients with highly prevalent chronic diseases like diabetes, hypertension, and renal disease. I realize the potential of my current position to impact disparities and, as such, I plan to maximize this opportunity to explore strategies to improve chronic disease outcomes in this underserved population. I have recently received the Eugene Washington Engagement Award from Patient-Centered Outcomes Research Institute, and my goals are to use this funding to educate patients and other non-scientist stakeholders on the research process, enabling them to collaborate as partners with research investigators, and to establish the infrastructure for patient-engaged research in a safety-net health care system.

Rhonda Bentley-Lewis, M.D., M.M.Sc., M.B.A.

Assistant Professor of Medicine
Department of Medicine, Diabetes Unit
Harvard Medical School
Massachusetts General Hospital
55 Fruit Street, Bulfinch 415
Boston, MA 02114
Telephone: 617–726–2874
Fax: 617–726–6781
Email: rbentleylewis@mgh.harvard.edu

Research Interests

My research focuses on clinical and translational investigations of the mechanisms by which diabetes in pregnancy may promote subsequent maternal cardiovascular disease risk. My research efforts have been funded by the National Institutes of Health/National Institute of Diabetes and Digestive and Kidney Diseases, the Robert Wood Johnson Foundation Harold Amos Medical Faculty Development Program Award, and the Massachusetts General Hospital Multicultural Affairs Office and Executive Committee on Research Physician Scientist Development Award.

Ernesto Bernal-Mizrachi, M.D.

Professor of Medicine
Chief of Endocrinology
Department of Medicine, Division of Endocrinology
University of Miami
1580 N.W. 10th Avenue, Suite 605
Miami, FL 33136
Telephone: 305–243–5631
Fax: 305–243–4039
Email: ebernalm@med.miami.edu

Research Interests

The long-term goal of the research program in my laboratory is delineating the signaling pathways that regulate the development, growth, and death of islet β-cells. This work established Akt signaling as a major regulator of β-cell mass, growth, and function. Further experiments have delineated critical Akt downstream targets by identifying Tsc2/mTOR signaling as an important component in modulation of cyclin D2, proliferation, β-cells mass and carbohydrate metabolism *in vivo*. Current projects on this area are focused on understanding how mTOR signaling modulates short- and long-term responses in β-cells. In addition, my laboratory explores the significance of mTOR signaling in β-cell development with particular interest in determining how fetal nutrient supply regulates the susceptibility to develop diabetes later in life. Finally, the initial studies related to the role of Akt in β-cells have evolved to explore the role of this signaling pathway on regulation of plasticity with especial focus on how this pathway could be used to convert acinar or ductal cells to functional β-cells. These studies positively affect treatment of human diabetes because they uncover potential targets to develop new pharmacologic agents designed to augment survival and proliferation of β-cells *in vivo* and *in vitro*.

Shirley A. Blanchard, Ph.D.

Associate Professor
Department of Occupational Therapy
Creighton University
2500 California Plaza, Boyne 142
Omaha, NE 68178
Telephone: 402–280–5921
Fax: 402–280–5692
Email: sblancha@creighton.edu

Research Interests
My research interests include obesity and depression in African American women. I am investigating the use of faith-based institutions to prevent and reduce the health risks associated with obesity. By providing culturally relevant health education programs in the community of the church, African Americans are empowered to change health behaviors and, ultimately, to reduce health disparities.

Nawal Boukli, Ph.D.

Associate Professor
Department of Microbiology and Immunology
Universidad Central Del Caribe
Avenue Laurel, Santa Juanita, Room 155
Bayamon, PR 00956
Telephone: 787–798–3001, ext. 2080
Fax: 787–740–4300
Email: nboukli@hotmail.com

Research Interests
I am interested in researching the effects of vitamin D deficiency on multiple sclerosis (MS) patients. MS is a severe demyelinating disease of the central nervous system, affecting young adults by producing a progressive neurological dysfunction. A high number of MS patients have vitamin D deficiency/insufficiency.

Lynda M. Brown, Ph.D.

Associate Professor
Food and Nutritional Sciences Program
North Carolina A&T State University
1601 E. Market Street, Benbow Hall 102
Greensboro, NC 27411
Telephone: 336–285–3644
Fax: 336–334–7265
Email: lmbrown2@ncat.edu

Research Interests

My research program focuses on sex differences in diet-induced obesity, especially the role of ovarian hormones and aging in central and peripheral inflammation. My long-term research goal is to understand mechanisms involved in the anti-inflammatory effects of ovarian hormones and their neuroprotective actions. By elucidating these mechanisms, a greater understanding of the consequences of the increased inflammation that occurs in postmenopausal women, particularly in relation to their risk for metabolic syndrome, will be achieved. The central hypothesis is that ovarian hormones decrease inflammation by blocking signaling through the IKKβ/NFκB pathway, which prevents increased expression of pro-inflammatory cytokines. This hypothesis is based on studies that (1) demonstrate that estradiol and progesterone decrease inflammation, (2) that female rats and mice in some paradigms have been shown to be resistant to diet-induced obesity, and (3) that a link between inflammation in the hypothalamus and obesity has been demonstrated. With a dramatic increase in the prevalence of obesity worldwide, the medical conditions associated with obesity now constitute a significant burden on public health. At the same time, the mechanisms responsible for activating inflammatory pathways in obesity are poorly understood. Although it is increasingly recognized that inflammation is an important factor in the incidence of type 2 diabetes and obesity, it is not clear how dysfunctional signaling in the hypothalamus can lead to obesity and its associated problems. Symptoms of metabolic syndrome, including insulin resistance and increased visceral obesity, begin appearing in many postmenopausal women as ovarian hormones decrease. Even in women who do not gain weight after menopause, fat shifts from a subcutaneous location into the abdomen. One goal of the laboratory is to establish animal models of these processes, using aging female rats to dissect specific mechanisms involved in postmenopausal weight gain, fat depot shifts, and inflammation.

Marino A. Bruce, Ph.D., M.Div., MRSC

Research Associate Professor of Medicine, Health, and Society
Associate Director, Center for Research on Men's Health (CRMH)
Director, CRMH Program on Faith and Health
Vanderbilt University
2301 Vanderbilt Place, PMB 401814
Nashville, TN 37240–1814
Telephone: 615–343–1952
Fax: 615–343–5222
Email: marino.bruce@vanderbilt.edu

Research Interests

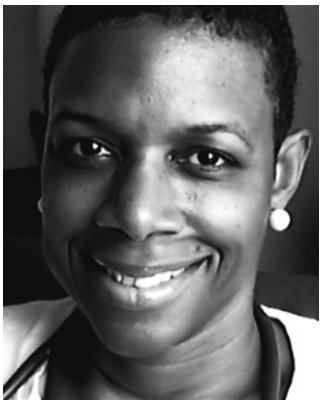
I am a social and behavioral scientist with interests in the integration of the full range of health determinants, specifically for African American males and their risk factors for chronic kidney disease and cardiovascular disease. My current research explores the intersection of race, gender, spirituality, religiosity, and behavior and their implications for social and health outcomes among African American male boys, adolescents, and emerging adults. I serve as a bridge between scientific and faith communities in order to leverage their respective strengths to improve the health of disadvantaged and disenfranchised males, their families, and their communities.

Natasha L. Burke, Ph.D.

Postdoctoral Fellow
Department of Medical and Clinical Psychology
Uniformed Services University of the Health Sciences
4301 Jones Bridge Road, B1004
Bethesda, MD 20814
Telephone: 301–295–1498
Email: natasha.burke.ctr@usuhs.edu

Research Interests

Broadly, my research interests include the prevention of disordered eating and obesity in children and adolescents. Specifically, I am interested in the complex interplay among weight status, demographic characteristics, psychological comorbidities, and associated risk factors, with a special interest in underserved groups.

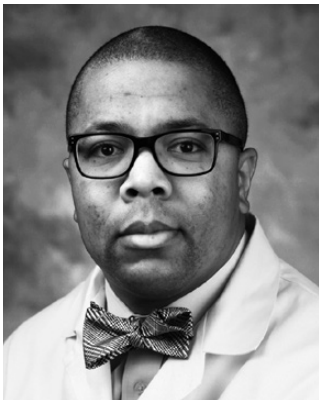


Sherri-Ann M. Burnett-Bowie, M.D., M.P.H.

Assistant Professor of Medicine
Harvard Medical School
Director of Multicultural Affairs
Endocrine Unit
Department of Medicine
Massachusetts General Hospital
50 Blossom Street, THR-1051
Boston, MA 02114
Telephone: 617–724–5594
Fax: 617–726–1703
Email: sburnett-bowie@partners.org

Research Interests

My research is focused on defining the physiology of the mineral metabolism hormone, FGF23; defining the relationship between vitamin D deficiency and insulin resistance; and studying novel therapies for osteoporosis.

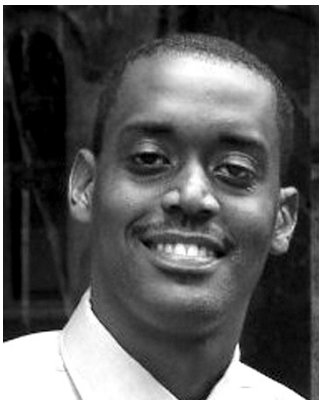


Jarrett D. Cain, D.P.M., M.Sc., M.S., FACFA

Associate Professor
Department of Orthopaedics and Rehabilitation
Orthopaedic Research Society
American College of Foot and Ankle Surgeons
P.O. Box 723
Hershey, PA 17036
Telephone: 267–971–7199
Fax: 717–531–0498
Email: cain1074@gmail.com

Research Interests

I am an active basic science and clinical researcher. Along with publishing scientific papers and presenting at numerous academic meetings, I serve as a peer reviewer for various foot and ankle journals, an abstract reviewer at scientific/research meetings, and on various organization committees. My research focuses on foot and ankle disorders, diabetic bone healing/limb salvage, biomechanics, and clinical epidemiology.



Kirk Campbell, M.D.

Associate Professor of Medicine
Icahn School of Medicine at Mount Sinai
One Gustave L. Levy Place, Box 1243
New York, NY 10029
Telephone: 212–920–9987
Fax: 212–987–0389
Email: kirk.campbell@mssm.edu

Research Interests
Despite the identification of several disease-causing gene mutations and an associated expansion in structural and functional correlates, the underlying mechanisms of podocyte loss remain poorly understood. Putative validated targets for drug development are scarce and, disappointingly, podocyte-specific therapeutic agents are not currently available. The development of such agents is crucial given the causal relationship between podocyte loss and the progression of various glomerular diseases. Our current projects focus on understanding the mechanisms of podocyte injury and identifying potential targets for therapeutic intervention.

Rotonya Carr, M.D.

Assistant Professor of Medicine
Division of Gastroenterology
University of Pennsylvania
421 Curie Boulevard, Biomedical Research Building 907
Philadelphia, PA 19104
Telephone: 617–388–3889
Email: rotonya.carr@uphs.upenn.edu

Research Interests
Alcoholic and non-alcoholic liver diseases are major causes of liver failure worldwide and affect minority populations disproportionately. Insulin resistance has been linked to disease progression in both diseases. Therefore, understanding the pathogenesis of insulin resistance in these diseases is critical to addressing these public health problems. The goal of my research is to investigate the mechanisms of insulin resistance underlying alcoholic and non-alcoholic steatosis. Specifically, I plan to examine the functional relationship between lipid droplet proteins, toxic lipid metabolite accumulation, and insulin resistance in these disorders, using complementary *in vivo* and cellular approaches. Current projects in the laboratory include investigating the relevant ceramide synthetic pathways in the pathogenesis of insulin resistance in an *in vivo* experimental model of alcoholic liver disease; investigating the upstream regulation of the lipid droplet protein Perilipin 2 in a cellular model of alcoholic steatosis; and elucidating the mechanistic link between Perilipin 2 and hepatocellular ceramide content in an *in vivo* model of alcoholic liver disease.

April P. Carson, Ph.D., M.S.P.H.

Associate Professor
Department of Epidemiology
The University of Alabama at Birmingham
1720 Second Avenue South, RPHB 220
Birmingham, AL 35294
Telephone: 205–934–6107
Fax: 205–934–8665
Email: apcarson@uab.edu

Research Interests

The overarching theme of my research focuses on health disparities in the development of diabetes and its vascular complications. With expertise in study design and research methods, I have extensive experience with large observational cohort studies and I have published on a range of social, clinical, and lifestyle factors related to the occurrence of diabetes and vascular complications. Currently, I am leading research projects directed toward understanding (1) the role of glycemic markers in the development of diabetes complications, (2) racial/ethnic differences in diabetes complications, and (3) social determinants of diabetes risk. A list of my published work is available at www.ncbi.nlm.nih.gov/sites/myncbi/april.carson.1/bibliography/44238538/public.

Carmen Castaneda-Sceppa, M.D., Ph.D.

Professor
Senior Associate Dean of Academic Affairs
Bouvé College of Health Sciences
Northeastern University
360 Huntington Avenue
Boston, MA 02115
Telephone: 617–373–5543
Fax: 617–373–2968
Email: c.sceppa@neu.edu

Research Interests

My program of research addresses three main areas of health promotion including to (1) assess the efficacy of nutrition and physical activity/exercise interventions on chronic disease risk factors and health outcomes, (2) translate evidence-based lifestyle interventions into real-world settings, and (3) develop sustainable strategies to promote health and reduce the burden of chronic diseases across the lifespan. This research targets vulnerable populations with particular emphasis on those ethnically diverse, suffering from debilitating chronic conditions, and socioeconomically disadvantaged. My current funded research focuses on health and wellness in settings that promote sedentary behavior, self-management interventions for older adults, factors influencing physical activity behavior in frail older adults, and community-based intergenerational nutrition and physical activity interventions among underrepresented families. Funding for this study has been received from the Brookdale Foundation, International Life Sciences Institute, National Institutes of Health (National Institute on Aging, National Institute of Nursing Research, National Institute of Diabetes and Digestive and Kidney Diseases), National Space and Biomedical Research Institute, corporations, and foundations. My research findings have been widely published and referenced. They represent a collaborative effort of a transdisciplinary team of investigators, students, and fellows. My research has contributed to advancing the field of healthy aging by providing evidence on the benefits of resistance exercise for multiple health outcomes and disease conditions. More importantly, the knowledge acquired from my evidence base research has informed the development of real world community-based interventions and guidelines that bridge the gap between research and practice.

Marianne Chanti-Ketterl, M.D., Ph.D., M.S.P.H.

Postdoctoral Associate
Department of Psychiatry
Duke University
413 Lakeshore Lane
Chapel Hill, NC 27514
Telephone: 813–389–1295
Email: marianne.chanti-ketterl@duke.edu

Research Interests

I just completed a 2-year T32 in the Center for Aging and Human Development at Duke University and now am a postdoctoral associate in psychiatry at Duke while I secure or transition to a faculty appointment. Currently, I am funded under three grants. One grant looks at the association between pesticides and dementia among farmers. Another explores the association between late-life depression and dementia, and the third grant, which is about to start, identifies factors that contribute to cognitive resilience among those with brain injury and examines race/ethnicity differences, education, socioeconomic status, psychiatric, and medical conditions. Currently I have been working on a proof-of-concept pilot study. My goal with this study is to use the results as pilot data to apply for my own funding in the near future. Historically, I have been interested in the epidemiology of cognitive function among older adults and its association with cardio-metabolic factors in older populations. I initially focused on biomarkers and the metabolic syndrome and later moved toward outcomes research in cognitive and physical function and their link with cardio-metabolic risk factors. Moving forward, I am focusing in minority population research, particularly farmers. I am working with an interdisciplinary team (a chemist, a neuroscientist, and an environmental epidemiologist) to design my research and achieve independent funding. The pilot data I am working on is looking at the feasibility of using silicone wristbands (known as Passive Sampling Devices [PSD]) in older rural farmers with the goal of objectively measuring the environmental chemicals they are exposed to and how these correlate with chemicals in urine. The goal is to prove that PSD can be used. I plan to eventually be able to distribute these PSD across large cohorts as a means of capturing exposures in a more economical and less invasive means to explore chemical levels and associate them with health measures. I look forward to becoming part of the Network of Minority Health Research Investigators because I believe the way to move research forward is combining efforts from interdisciplinary teams. I am particularly interested in finding a mentor who would be a good fit for me and who can guide me in the world of disparity research. My goal is to become an established researcher and be able to eventually mentor younger scientists who may also feel a bit lost in the system.

Blanche M. Chavers, M.D.

Professor, Division of Pediatric Nephrology
University of Minnesota
East Building, Sixth Floor, MB678
2450 Riverside Avenue
Minneapolis, MN 55454
Telephone: 612–626–2922
Fax: 612–626–2791
Email: chave001@umn.edu

Research Interests

I am Professor of Pediatrics in the Department of Pediatrics at the University of Minnesota, Division of Pediatric Nephrology, and Clinical Research Medical Director for the Department of Pediatrics. My clinical research interests are cardiovascular disease in children with kidney disease, kidney transplants, pediatric dialysis, and pediatric kidney transplantation.

Glenn M. Chertow, M.D.

Stanford University School of Medicine
1070 Arastradero Road, Suite 313
Palo Alto, CA 94304
Telephone: 650–725–4738
Fax: 650–731–1443
Pager: 415–607–0222
Email: gchertow@stanford.edu

Research Interests

My research interests broadly address fundamental issues in acute and chronic kidney disease, using techniques of clinical epidemiology, health services research, decision sciences, and clinical trials. Active NIH-sponsored research projects on which I serve either as principal investigator or a member of the executive or steering committee include the Frequent Hemodialysis Network study, the U.S. Renal Data System Special Studies Center in Nutrition, the Chronic Renal Insufficiency Cohort study, and the Systolic Pressure Intervention Trial (SPRINT) and SPRINT MIND.

DeLawnia Comer-HaGans, Ph.D., M.S., M.B.A.

Associate Professor
Department of Health Administration
College of Health and Human Services
Governors State University
One University Parkway, G–176
University Park, IL 60484–0975
Telephone: 708–534–4047
Email: dcomer-hagans@govst.edu

Research Interests

I am interested in health disparities research related to diabetes complications among adults and children. I also am interested in mental health disparities within this population. I envision the culmination of my research as being able to create sustainable and manageable community-based interventions, strategies, and services that positively impact health outcomes for these populations while simultaneously working toward health policies that support opportunities and accessible means to health and health care for low-income and vulnerable populations. I also am interested in community-based interventions and strategies and their impact on health outcomes within a community setting and environment.

Leonor Corsino, M.D., M.H.S., FACE

Associate Professor of Medicine
Department of Medicine
Duke University School of Medicine
DUMC Box 3451
Durham, NC 27710
Telephone: 919–684–4005
Email: corsi002@mc.duke.edu

Research Interests

I am an Associate Professor in the Department of Medicine at the Duke University School of Medicine. My research focus on the prevention and treatment of diabetes, obesity, and related complications with a special interest in minority populations. I strive to continue working in this area in order to ameliorate health disparities. In addition to my role as a clinician scientist, I work in several initiatives aiming to increase diversity in our school, department, and institution. One of my personal goals is to foster the development of the next generation of academic physicians.

Deidra C. Crews, M.D., Sc.M., FASN

Associate Professor of Medicine, Division of Nephrology
Johns Hopkins University School of Medicine
301 Mason F. Lord Drive, Suite 2500
Baltimore, MD 21224
Telephone: 410–550–2820
Fax: 410–550–7950
Email: dcrews1@jhmi.edu

Research Interests
My research interests include chronic kidney disease epidemiology, comparative effectiveness of treatment strategies for chronic kidney disease and end-stage renal disease, and racial and socioeconomic disparities in chronic kidney disease. I have a particular interest in the mechanisms through which socioeconomic, lifestyle, and behavioral factors might exert an effect on racial disparities in chronic kidney disease.

Luis Angel Cubano, Ph.D.

Associate Dean for Research and Graduate Studies
Professor of Cell Biology
Universidad Central del Caribe
P.O. Box 60327
Bayamon, PR 00960
Telephone: 787–798–3001, ext. 2151
Fax: 787–740–4390
Email: lacoadrgs@gmail.com

Research Interests
My research focuses on development of natural compounds and training of underrepresented populations in science, technology, engineering, and mathematics.

Ilse Daehn, Ph.D.

Assistant Professor of Medicine
Icahn School of Medicine at Mount Sinai
One Gustave L. Levy Place, Box 1003
New York, NY 10029
Telephone: 212–241–4310, ext. 44310
Email: ilse.daehn@mssm.edu

Research Interests

Throughout my research career, I have made numerous outstanding contributions in the fields of molecular and cell biology and biochemistry. These include the identification of active factors in milk whey that prevent cell death in skin eczema; a previously unrecognized feature of a commonly used immunosuppressant that affects cellular organelles (mitochondria), which may help explain side effects of this long-term treatment; and a fundamental paradigm shift in our current understanding of chronic kidney disease (CKD) development, opening opportunities for new therapeutic approaches to prevent the progression of CKD. My current and future studies aim to further explore the development and progression of CKD with the objective to identify key mediators, events, and biomarkers that can potentially serve as powerful diagnostic markers or develop new treatment therapies for this debilitating disease that affects millions of people worldwide, and to head toward individualized patient therapy.

Sam Dagogo-Jack, M.D., Ph.D.

A.C. Mullins Endowed Chair in Translational Research
Professor of Medicine and Director
Division of Endocrinology, Diabetes, and Metabolism
Director, Clinical Research Center
The University of Tennessee Health Science Center
920 Madison Avenue, Suite 300A
Memphis, TN 38163
Telephone: 901–448–1246
Email: sdj@uthsc.edu

Research Interests

My interests include the interaction of genetic and environmental factors in the prediction and prevention of prediabetes and diabetes and the regulation of leptin in humans. I am principal investigator of the Pathobiology and Reversibility of Prediabetes in a Biracial Cohort Study; Diabetes Control and Complications Trial/Epidemiology of Diabetes Interventions and Complications; and Diabetes Prevention Program (DPP)/DPP Outcomes Study.

Daisy D. De León, Ph.D.

Professor
Assistant to the Dean for Diversity
Center for Health Disparities and Molecular Medicine
Director, Research Core
Loma Linda University School of Medicine
Coleman Pavilion A11113
Loma Linda, CA 92354
Telephone: 909–558–9618
Fax: 909–558–5848
Email: ddeleon@llu.edu

Research Interests

My main research interest is studying the role of insulin-like growth factor 2 (IGF-2) in breast cancer and diabetes on health disparities among African American (AA) women. My laboratory has published on IGF-2 actions in the development, progression, and metastasis of breast cancer among AA women. A current emphasis in my laboratory is to determine the mechanisms that link IGF-2, diabetes, and the breast cancer survival disparity observed among AA women. A recently published observation linked IGF-2, diabetes, and breast cancer in a series of studies that integrated *in vivo* cell analyses with breast cancer tissues from AA women. In addition, my laboratory is focusing on the mechanisms of IGF-2 regulation of the mitochondria at the intersection of breast cancer and diabetes. Furthermore, my team is investigating how dietary supplements and anti-inflammatory drugs regulate IGF-2 to prevent cancer. In so doing, my research team integrates the cellular and molecular *in vivo* studies performed in established breast cancer cell lines with animal model studies and tumor tissue analyses to advance the translational significance of the research.

Clarissa Jonas Diamantidis, M.D., M.H.S.

Assistant Professor of Medicine
Duke University School of Medicine
411 W. Chapel Hill Street, Suite 500
Durham, NC 27701
Telephone: 919–668–1261
Fax: 919–613–9897
Email: clarissa.j.diamantidis@duke.edu

Research Interests

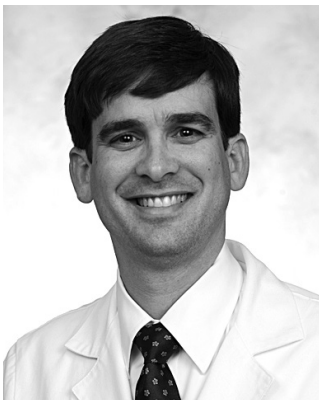
My research interests include the use of tailored health information technology (IT) platforms—such as mobile phones, websites, and telemedicine—in kidney disease care as a means to engage patients and improve patient safety in kidney disease. Use of novel health IT tools may be a means to eliminate information barriers and mitigate the disparate outcomes noted in minorities with kidney diseases. My colleagues and I have developed and tested a medication inquiry system on several IT platforms that provides guidance on the safety of medication usage in patients with chronic kidney disease (CKD), as a means to improve patient education regarding potential medication errors in CKD. We also have studied the use by patients of an educational website that provides information on CKD-relevant safety concerns. My current research explores the relation between eHealth literacy and patient safety in CKD and is funded by a Mentored Patient-Oriented Research Career Development Award (K23 099385) from the National Institute Diabetes and Digestive and Kidney Disease. I also am the co-principal investigator of an R01 clinical trial examining the effectiveness of a telehealth intervention to improve kidney function in high-risk primary care patients with diabetic kidney disease. I also am performing a pilot studying of a tablet-based educational intervention for hospitalized acute kidney injury survivors and a qualitative study examining factors associated with optimal patient-centered acute kidney injury care.

Alicia Diaz-Thomas, M.D., M.P.H.

Associate Professor
Division of Pediatrics
The University of Tennessee Health Science Center
1200 Yorkshire Drive
Memphis, TN 38119-5026
Telephone: 504–723–2365
Email: adiaztho@uthsc.edu

Research Interests

My research interests are diverse and include understanding links between bone/mineral metabolism and cardiovascular risk in patients with diabetes, as well as improving care in pediatric diabetes by personalizing treatments and endpoints. I also have interests in translational research developing tools that will help us understand how to improve care, outcomes, and health-related quality of life in children with differences in sexual development.



Alejandro Diez, M.D., FASN

Assistant Professor
Division of Nephrology
The Ohio State University
395 W. 12th Avenue, Ground Floor
Columbus, OH 43210
Email: alejandro_diez@yahoo.com

Research Interests

My main area of interest is kidney transplantation. My current research focuses on recipient clinical outcomes following living kidney donation and transplantation of difficult-to-match recipients requiring kidney transplantation.

Karen Margaret Tabb Dina, Ph.D., M.S.W.

Assistant Professor
School of Social Work
University of Illinois at Urbana-Champaign
1010 W. Nevada Street, MC/082
Urbana, IL 61801
Telephone: 217–300–0200
Email: ktabb@illinois.edu

Research Interests

My current research investigates the relationship between diabetes and depressive symptoms during pregnancy and post-delivery outcomes for mothers and infants. While significant gains have been made in documenting the national prevalence of maternal health disparities (e.g., depression), more work is needed to understand the interaction of diabetes and depression during the perinatal period. In addition, I am conducting mentored research as an Early Career investigator on the Hispanic Community Health Study/Study of Latinos, a multisite epidemiological study on depressive symptoms and chronic health problems (e.g., MetS and diabetes) among women. Accordingly, the National Institute of Diabetes and Digestive and Kidney Diseases is the most appropriate Institute given my current and future research interests.

Ayotunde Dokun, M.D., Ph.D.

Associate Professor of Medicine
The University of Tennessee Health Science Center
920 Madison Avenue, Suite 300A
Memphis, TN 38163
Telephone: 919–255–2670
Email: dokun001@gmail.com

Research Interests

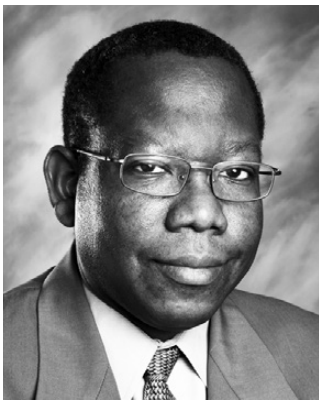
My research involves the peripheral arterial disease (PAD) of the lower extremities, which is the result of atherosclerotic blockage of blood vessels; its severity varies even among people with similar occlusions, suggesting a possible role for genetics in its severity. Individuals with diabetes are more likely to develop PAD, and when people have PAD and diabetes, the disease is more severe, resulting in higher risk of amputation and death. Studies in our laboratory currently seek to understand how the metabolic environment in diabetes interacts with genetics and contributes to the poor PAD outcomes seen in individuals with diabetes.

Michael B. Duncan, Ph.D.

Assistant Professor of Medicine and of Biochemistry and Molecular Biology
Augusta University Cancer Center Member
Section of Gastroenterology/Hepatology
Medical College of Georgia at Georgia Regents University
1120 15th Street, CB2608
Augusta, GA 30912
Telephone: 706–721–5484
Email: mduncan@augusta.edu

Research Interests

The goal of my research program is to determine the functional role of the extracellular matrix (ECM) in liver disease and cancer. My long-term interests are aimed at developing novel diagnostic and therapeutic options for treating advanced liver disease and cancer based on targeting remodeling events involving the ECM. We are particularly focused on determining the interaction between an important liver ECM molecule, type XVIII collagens, and hepatocyte integrins. We have found that this interaction is critical for cell survival. We are hopeful that our studies will yield important information regarding how the ECM modulates cellular phenotype during the injury response and the complex milieu of the tumor microenvironment. Additionally, we have initiated a project that seeks to establish the role of tumor-associated macrophages in angiogenesis and vessel remodeling during hepatocellular carcinoma (HCC). The aims for this project are to identify robust markers and the genetic signature of pro-angiogenic macrophages in the HCC tumor microenvironment and, ultimately, to validate this cell population as a target for therapeutic interventions. In order to conduct our studies, my group relies on genetic and chemically induced mouse models of liver injury and HCC, as well as modern techniques in tissue imaging, cell biology, biochemistry, and molecular biology.



Lincoln Edwards, D.D.S., Ph.D.

Associate Professor
Department of Diagnostic and Biomedical Sciences, Room 5367
The University of Texas School of Dentistry
Houston, TX 77054
Telephone: 713–486–4109
Fax: 713–486–4416
Email: lincoln.edwards@uth.tmc.edu

Research Interests

As the human body continues to expand and fuel the epidemic of type 2 diabetes, novel approaches to the treatment of metabolic diseases will be needed. My research interest involves the development of imidazoline compounds as therapeutic agents to treat metabolic diseases, such as type 2 diabetes. Some of these compounds currently are in clinical use as antihypertensive agents, and I am exploring the possibility of developing imidazoline compounds as single-agent therapy for diabetics with hypertension. I also am studying the cross-talk between insulin and imidazoline receptor signaling pathways.

Mayra L. Estrella, Ph.D., M.P.H.

Postdoctoral Fellow
Institute for Minority Health Research
College of Medicine
University of Illinois at Chicago
1819 W. Polk Street, 246F CMW
Chicago, IL 60612
Telephone: 312–355–0598
Email: mestre3@uic.edu

Research Interests

I earned a Master of Public Health in Biostatistics from the University of Puerto Rico and a doctoral degree in Community Health Sciences from the University of Illinois at Chicago School of Public Health. My experience includes collaborating with Hispanic/Latino communities in Chicago addressing a range of public health issues (e.g., diabetes and access to health care among adolescents and adults). Currently, I am a postdoctoral fellow in the T-32 Training Program in Cardiovascular Disease (CVD) Epidemiology and Related Chronic Diseases in Minority Populations at the University of Illinois at Chicago Institute for Minority Health Research. In general, I am interested in exploring the persistent burden of CVD and related chronic conditions among Hispanics/Latinos using data from the landmark Hispanic Community Health Study/ Study of Latinos.

More specifically, I am interested in the investigation of factors associated with favorable cardiovascular health among Hispanic/Latino adults and adolescents. I am examining the prevalence of volunteering (a social capital indicator) and its association with low cardiovascular risk among Hispanics/Latinos. Finally, I am also interested in exploring the interrelationships of multiple factors (e.g., neighborhoods, psychosocial, and behavioral) that contribute to disparities in the high burden of CVD risk factors between Puerto Ricans and other Hispanic/Latino groups. In the long term, I would like to focus on better understanding the neighborhood-level factors that influence disparities in CVD risk factors among Hispanics/Latinos to inform the development of multilevel interventions.

Tolulope Falaiye, M.D., M.S.C.I.

Assistant Professor of Pediatric Gastroenterology
The Pennsylvania State University Hershey Medical Center
500 University Drive, H085
Hershey, PA 17033
Telephone: 717–531–5901
Fax: 717–531–0653
Email: tfalaiye@hmc.psu.edu

Research Interests

I have a strong clinical interest in taking care of pediatric patients with inflammatory bowel disease (IBD). I am interested in pediatric IBD, specifically issues of transition of care to adult gastroenterology and outcomes research. I established the pediatric IBD clinic and the pediatric IBD transition clinic at The Pennsylvania State University Hershey Medical Center. Establishing the clinic involved recruiting personnel—including a nutritionist, social worker, and clinical psychologist—to participate routinely in the clinic. These clinics serve as a resource for patients and the pediatric gastroenterology providers, as well as a source for IBD research patients, including an enrollment area for the Improve Care Now network (an international pediatric IBD consortium). I have been trained in methods of clinical investigation and apply that knowledge to designing and implementing studies in this population. Currently, I am studying factors that affect pediatric IBD transition to adult IBD care. In addition, I am part of the Rising Educators Academics and Clinicians Helping IBD committee for the Crohn's and Colitis Foundation of America.

A. Celeste Farr, Ph.D., M.P.H.

Assistant Professor of Biomedical Sciences
Oakland University William Beaumont School of Medicine
450 O'Dowd Hall
2200 N. Squirrel Road
Rochester, MI 48309–4401
Telephone: 248–370–3665
Fax: 248–370–4060
Email: farr@oakland.edu

Research Interests

My goal and passion remains to encourage health care equity and eliminate health disparities among African Americans. My research goal is to reduce obesity and diabetes in the African American community, first through prevention of diabetes in women, and later through teaching the women how to affect the health of their families through lifestyle changes, such as diet changes, increased exercise, and improved nutrition. Because both obesity and diabetes transcend socioeconomic status, I plan to begin my work with women who are a bit more resource-rich by working with suburban, predominantly African American churches, and with graduate chapter sorority members. Eventually, I would like to work with more resource-challenged women and help them navigate their situations to successfully reduce obesity and diabetes. Obesity and diabetes are increasing rapidly within the African American community, but clearly both can be prevented. I want to be among those who show people how to protect and improve their health.

Gregory L. Florant, Ph.D.

Professor
Department of Biology
Colorado State University
200 W. Lake Street
Fort Collins, CO 80523
Telephone: 970–491–7627
Fax: 970–491–0649
Email: florant@colostate.edu

Research Interests

My research interest is in the area of energy metabolism. In particular, I am interested in studying animal models that can help us understand obesity, diabetes, and food intake. I study mammals that hibernate because they undergo dramatic body mass cycles that are primarily based on fat storage and utilization. In addition, I work on hormone cell signaling in fat and muscle cells because this is an important part of how nutrients are used.

Brandi E. Franklin, Ph.D., M.B.A.

Assistant Professor, Health Outcomes and Policy Research
The University of Tennessee College of Pharmacy
881 Madison Avenue, Room 213
Memphis, TN 38163
Telephone: 901–448–7234
Fax: 901–448–7053
Email: beveret4@uthsc.edu

Research Interests

The incidence of type 2 diabetes mellitus (T2DM) has increased rapidly in youth subsequent to the rise of childhood obesity. Progress in this field has been hampered in three ways: (1) a small, unevenly dispersed pediatric endocrine workforce relative to its growing patient base; (2) the lack of U.S. Food and Drug Administration-approved pharmacotherapies for treatment; and (3) scant empirical evidence for pediatric lifestyle and disease management. Specifically, I am interested in understanding how current care delivery systems can be enhanced to support youth in managing their diabetes without the need for continuous intervention by pediatric endocrinologists; in finding new therapeutic options for youth with chronic conditions, such as T2DM; and in reducing barriers that hinder engagement in healthy lifestyle practices and diabetes self-management, especially for racial/ethnic minority youth. These three areas form the core of my current research program and my future research plans.

Through doctoral and postgraduate training, I have mastered a cadre of advanced statistical and pharmaco-economic methods that I incorporate into my research, including cost-effectiveness analysis and decision modeling, comparative effectiveness, and categorical and longitudinal data analysis. For the next 3 to 5 years, I have planned research projects that will evaluate medication use and outcomes, factors influencing disease severity and decline, and novel systems that support disease self-management in youth with T2DM. Longer term, my primary research goal is to develop and disseminate targeted, theory-driven interventions to enhance lifestyle behaviors in youth with chronic conditions like T2DM.

Amanda Mae Fretts, Ph.D., M.P.H.

Assistant Professor
Department of Epidemiology
University of Washington
1730 Minor Avenue, Suite 1360
Seattle, WA 98052
Telephone: 206–287–2777
Fax: 206–287–2662
Email: amfretts@u.washington.edu

Research Interests

My long-term career goal is to mitigate diabetes-related health disparities and improve health behaviors and metabolic health outcomes among American Indians (AIs). I hope to take advantage of findings from observational studies to develop targeted interventions that improve metabolic health in this underserved population. My career goals require a translational approach, bridging epidemiology, the social determinants of health, health behaviors, and health disparities research with community-based interventions and health promotion. The burden of diabetes and its risk factors in AI communities is striking. AIs are 60% more likely to be obese and 200% more likely to have diabetes than non-Hispanic whites of similar age. Identifying effective interventions for lowering diabetes risk among AIs is critical. Despite a large body of evidence that demonstrates the ill effects of a poor diet, physical inactivity, and obesity on risk of diabetes, diet and physical activity education and health promotion programs have not led to improvements in metabolic outcomes for AIs. This may, in part, be due to an inadequate understanding of the social factors that contribute to these health behaviors and diabetes risk factors. Having identified activity and diet as the primary behavioral factors associated with diabetes and its risk factors, it is essential to better understand the social-contextual determinants of these behaviors and risk factors to inform the development of effective interventions. As part of my KL2 award agenda, I will spend the next 4 years working on a project to better understand the social determinants of diabetes and its risk factors among AIs. I will (1) develop expertise in understanding social-contextual determinants of physical activity, diet, and obesity-related metabolic risk factors among AIs; (2) gain proficiency in all components of health promotion interventions/randomized trials, including design, implementation, and evaluation; and (3) integrate data on social determinants of health, physical activity, and nutritional and diabetes epidemiology to inform the development of a targeted diabetes-related health intervention for AIs using a translational approach. The project takes advantage of data already collected from 3,665 individuals who participated in the Strong Heart Study (SHS). Additionally, we will utilize the existing SHS infrastructure (SHS field center, SHS participants) in South Dakota to perform feasibility/pilot work needed to better understand ways to develop and implement a sustainable intervention focused on health behaviors and the prevention of diabetes and its risk factors.

Crystal A. Gadegbeku, M.D., FAHA, FACP, FASN

Section Chief, Nephrology
Assistant Director, Temple Clinical Research Institute
Associate Professor of Medicine
Temple University School of Medicine
Kresge West, Suite 100
3440 N. Broad Street
Philadelphia, PA 19140
Telephone: 215–707–0744
Fax: 215–707–9697
Email: crystal.gadegbeku@tuhs.temple.edu

Research Interests
My research interests include hypertension and vascular biology in kidney disease, chronic kidney disease, and health disparities in kidney disease.

Trudy Gaillard, Ph.D., RN, FAHA, CDE

Interim Associate Dean for Academic Affairs
Nicole Wertheim College of Nursing and Health Sciences
Florida International University
11200 S.W. Eighth Street, AHC3 534A
Miami, FL 33199
Telephone: 305–348–1653
Fax: 305–348–1519
Email: tgaillar@fiu.edu

Research Interests
My research has focused on (1) exploring the traditional and nontraditional risk factors associated with the development of prediabetes, type 2 diabetes, cardiovascular disease, and cognitive impairment; and (2) community diabetes self-management education programs. My studies have focused on differences in metabolic syndrome, insulin resistance, and its correlations in African Americans and white Americans. I am interested in developing culturally specific, community-based diabetes self-management and support programs aimed at prevention and management of prediabetes, type 2 diabetes, cardiovascular disease, and cognitive impairment.

Courtney E. Gamston, Pharm.D., Sc.M.

Discipline Chair for Pharmacology/Assistant Professor
Edward Via College of Osteopathic Medicine–Auburn Campus
Auburn University
2316 Walker Building
Auburn, AL 36849–0001
Telephone: 334–442–4040
Email: cgamston@auburn.vcom.edu

Research Interests

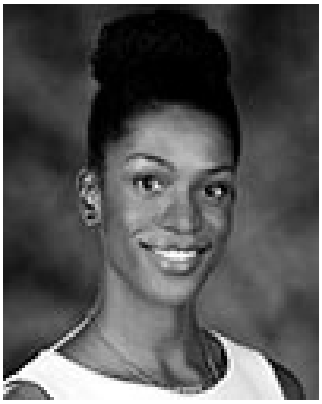
My current research focuses on establishing, improving, and maintaining sustainable ambulatory care services in a pharmacist-led primary care clinic. Areas of focus include prediabetes, diabetes, obesity, dyslipidemia, and hypertension. My research is focused not only on the provision of medication therapy management, but also on patient education services that improve self-care behaviors and overall health. Another facet of this work is improving the education of pharmacy and Doctor of Osteopathic Medicine (DO) students in the realm of patient education and disease state management in the ambulatory care setting. The goal of this research is twofold: (1) to establish models of ambulatory care practice for implementation in a variety of settings, and (2) to enhance the education and experience of pharmacy and DO students in order to prepare them to operate independently in an ambulatory care setting.

Melawhy Garcia, Ph.D., M.P.H.

Assistant Professor
Department of Health Science
California State University, Long Beach
604 S. Marjan Street
Anaheim, CA 92806-4345
Telephone: 714–308–2188
Email: melawhy@gmail.com

Research Interests

My research interest including addressing cardiometabolic risk factors and diabetes among Latinos in the United States. I conduct mixed-methods research to examine factors that put Latinos at risk for chronic conditions, as well as to inform research interventions to address obesity and diabetes. I am interested in conducting clinical research within health care settings and through the use of health information technology and mobile health.



Symielle Gaston, Ph.D., M.P.H.

IRTA Postdoctoral Fellow
Epidemiology Branch
National Institute of Environmental Health Sciences
National Institutes of Health
111 T.W. Alexander Drive, MD A3-05
Research Triangle Park, NC 27709
Telephone: 984–287–3724
Email: symielle.gaston@nih.gov

Research Interests

I investigate how differences in exposure to physical and social environmental stressors contribute to racial/ethnic and socioeconomic disparities in cardiometabolic health outcomes like type 2 diabetes. From a life course perspective, I focus on elucidating pathways from stress to deleterious health behaviors, metabolic dysfunction, and cardiovascular disease. It is especially important to investigate stress-related exposures as mediators among women because the pathways may affect pregnancy outcomes and offspring metabolic function. In particular, my research captures multilevel exposures that may contribute to the enduring cardiometabolic health disparities often observed in the literature. In prior research, I have studied both how adverse neighborhood environments may contribute to women's mental health, and whether exposure to phthalates (a class of ubiquitous endocrine disrupting chemicals) is associated with metabolic syndrome among adolescents. As a postdoctoral fellow, I am currently investigating whether aspects of the physical and social environment—such as housing environments, racial/ethnic discrimination, and chemical exposures through personal care products—are associated with suboptimal sleep, which may be a novel contributor to racial/ethnic disparities in cardiometabolic health. As the common theme across my research projects, I seek to understand how micro- and macro-exposures contribute to poor cardiometabolic health and associated health behaviors. By investigating these exposures over the life course, I will contribute to mitigating the burden of poor cardiometabolic health, including type 2 diabetes, that disproportionately affects marginalized populations.

Senta K. Georgia, Ph.D.

Assistant Professor of Pediatrics
Division of Endocrinology
Developmental Biology and Regenerative Medicine Program
Saban Research Institute
Children's Hospital Los Angeles
Keck School of Medicine
University of Southern California
4650 Sunset Boulevard, MS 35
Los Angeles, CA 90027
Telephone: 323–361–6003
Email: sgeorgia@chla.usc.edu

Research Interests

My laboratory investigates how pancreatic beta cells differentiate during organogenesis, how they increase their cell numbers during normal growth and in response to metabolic stress, and how they can be regenerated as a cellular therapy for diabetic patients. I am specifically interested in how DNA methylation mediates tissue-specific gene expression patterns that define beta cell identity.

Nasra Giama, D.N.P., RN, PHN

Research Coordinator
Division of Gastroenterology and Hepatology
Mayo Clinic
200 First Street, S.W.
Rochester, MN 55905
Telephone: 507–538–0097
Fax: 507–266–0350
Email: giama.nasra@mayo.edu
Clinical Assistant Professor
University of Minnesota School of Nursing
300 University Square
111 S. Broadway
Rochester, MN 55904
Telephone: 507–258–8041
Fax: 507–258–8043
Email: giama003@umn.edu

Research Interests

My primary research interests center around health promotion, research participation and inclusion, and determinants affecting the health of minority communities. Specifically, I am involved with research studies about hepatitis B and C and liver disease among immigrant and refugee communities and identifying opportunities to intervene at the individual, community, and system levels. I also am interested in adolescent health and examining the relationship between educational attainment and health.

Sherita Hill Golden, M.D., M.H.S.

Professor of Endocrinology and Metabolism
Johns Hopkins University School of Medicine
1830 E. Monument Street, Room 9052
Baltimore, MD 21287
Telephone: 443–287–4827
Fax: 410–614–8510
Email: sahill@jhmi.edu

Research Interests

My primary research interest centers around identifying endocrine risk factors associated with the development of diabetes and cardiovascular disease through the incorporation of measures of hormonal function into the design of clinical trials of cardiovascular risk modification, observational studies of incident cardiovascular disease and diabetes, and studies evaluating diabetic complications. My research explores the role of hypothalamic-pituitary-adrenal (HPA) axis biomarkers in type 2 diabetes pathogenesis. I have made fundamental discoveries regarding hormonal determinants of the association between depression and type 2 diabetes, specifically HPA axis activation. My investigation demonstrating a bi-directional, longitudinal association between depression and type 2 diabetes spawned international collaborations to explore biological mechanisms. I also have studied other molecular epidemiology aspects of type 2 diabetes, demonstrating that endogenous sex hormones in post-menopausal women are associated with atherosclerosis, insulin resistance, and incident type 2 diabetes. I serve as the principal investigator of the Johns Hopkins site of the Diabetes Prevention Program Outcome Study. My health services research focuses on understanding and eliminating diabetes health disparities and implementing and evaluating systems interventions to improve patient safety and quality of care in hospitalized patients with diabetes.

Gabriel Gonzalez, Ph.D.

Research Biologist
Director, Nikon Imaging Core, West Roxbury Campus
VA Boston Healthcare System, Research and Development Service
Instructor of Medicine
Division of Genetics
Brigham and Women's Hospital
Harvard Medical School
1400 VFW Parkway
West Roxbury, MA 02132
Telephone: 857–203–5181
Email: gabriel.gonzalez4@va.gov

Research Interests

I am a research scientist and Instructor of Medicine in the laboratory of Dr. Natasha Frank at Brigham and Women's Hospital, Harvard Medical School. My research is focused in the area of stem cell and cancer biology and regenerative medicine. Mouse models are used to study the role of ATP-binding cassette sub-family B member 5-positive cells during organogenesis and how they contribute to eye, gastrointestinal tract, and skin development, as well as cancer initiation. Throughout my research experience, I have been afforded the opportunity to characterize the population of adult stem cells capable of (1) maintaining tissue homeostasis; and (2) assisting tissue regeneration. My research interests also are focused on investigating the mechanisms within this model system that when altered could lead to cancer initiation.

Eddie L. Greene, M.D.

Associate Professor of Medicine
Division of Nephrology and Hypertension
Department of Internal Medicine
Faculty Director for Health Disparities and Minority Health
Mayo Clinic
200 First Street, S.W.
Rochester, MN 55905
Telephone: 507–255–6916
Fax: 507–266–7891
Email: greene.eddie@mayo.edu

Research Interests

My research interests include (1) the pathophysiology of chronic kidney disease (specifically the biology of fibrosis-inducing signaling cascades in renal tubule cells and in the renal mesangium), (2) the evaluation and management of cardiovascular comorbidities in patients with chronic kidney disease, and (3) the pathophysiology of renal malignancies.

Raquel Charles Greer, M.D., M.H.S.

Assistant Professor of Medicine
Division of General Internal Medicine
Johns Hopkins University
2024 E. Monument Street, Suite 2–626
Baltimore, MD 21287
Telephone: 410–502–8897
Fax: 410–955–0476
Email: rfcharle@jhmi.edu

Research Interests
My research focuses on identifying and addressing modifiable factors to improve the health of patients with chronic kidney disease and to narrow ethnic/racial disparities in clinical outcomes. I am specifically interested in improving the care that primary care providers deliver to patients with chronic kidney disease and improving awareness and knowledge of chronic kidney disease among ethnic/racial minorities.

Absalon D. Gutierrez, M.D.

Assistant Professor of Medicine
Endocrinology, Diabetes and Metabolism
Department of Internal Medicine
The University of Texas Health Science Center at Houston
6431 Fannin Street, MSB 5.108
Houston, TX 77030
Telephone: (713) 500-6641
Email: absalon.d.gutierrez@uth.tmc.ed

Research Interests
My clinical and translational research focuses on the effects of glucoincretin hormones and peroxisome proliferator-activated receptor gamma agonists on the development of cardiac and hepatic steatosis. I also am very interested in the effects of antioxidants on the progression of atherosclerosis in type 2 diabetic patients.

Arthur Gutierrez-Hartmann, M.D.

Director, Medical Scientist Training Program
Director, Physician Scientist Training Program
Professor, Departments of Medicine and of Biochemistry and Molecular Genetics
Division of Endocrinology
University of Colorado Anschutz Medical Campus
12801 E. 17th Avenue, Room L18–7108, MS 8106
Aurora, CO 80045
Telephone: 303–724–3921
Fax: 303–724–3920
Email: a.gutierrez-hartmann@ucdenver.edu

Research Interests

The main focus of my laboratory is to determine the role of Ras/MAPK signaling and Ets transcription factors in epithelial cell development and tumorigenesis, with a focus on pituitary and mammary model systems.

Rasheeda Hall, M.D., M.B.A., M.H.S.

Medical Instructor
Duke University School of Medicine
DUMC 2747
2424 Erwin Road, Suite 605
Durham, NC 27705
Telephone: 919–660–6861
Fax: 919–681–1143
Email: rasheeda.stephens@dm.duke.edu

Research Interests

I am a geriatric nephrologist, and my studies involve the use of administrative data and qualitative methodology to develop preliminary data to inform the design of interventions that improve quality of care and quality of life in older adults with advanced kidney disease. I am particularly interested in the mechanisms of functional decline and how it informs dialysis decision making in older adults. Additional areas of interest include health disparities, nursing home management of end-stage renal disease patients, and fracture prediction and management in older adults with kidney disease.

B. Michelle Harris, Ph.D., M.P.H., RD

Associate Professor
Nutrition and Food Science
College of Agriculture, Urban Sustainability, and Environmental Sciences
University of the District of Columbia
4200 Connecticut Avenue, N.W., Building 44
Washington, DC 20008
Telephone: 202–274–5739
Fax: 202–274–5577
Email: bharris@udc.edu

Research Interests

Through a resident-led health committee initiative, I am engaged in collaborative relationship-building with the University of the District of Columbia, the District of Columbia Housing Authority (DCHA), and various health-related agencies across the District of Columbia to encourage the active participation of DCHA residents in conducting research and surveillance that will contribute to reducing health disparities, especially in the area of obesity-related diseases. I will continue to explore the metabolic syndrome and will examine various approaches to reducing its negative impact on the health of minority populations. I am working to expand research opportunities among undergraduate students in the areas of nutrition and related sciences. My past research includes a Robert Wood Johnson Foundation Active Living Research-funded project titled "The Availability of Healthy Foods, BMI, and Dietary Patterns in Urban Adolescents." In this project, we examined the associations among adolescents' perceived and objective availability of healthy foods, the physical environment, and body mass index. I also completed a study titled "The Relationship of Low Birth Weight and Current Obesity to Diabetes in African American Women."

Patricia C. Heyn, Ph.D., FGSA, FACRM

Associate Professor
Department of Physical Medicine and Rehabilitation
School of Medicine
University of Colorado Anschutz Medical Campus
16031 W. 79th Place
Arvada, CO 80007
Telephone: 303–513–7740
Fax: 303–837–1208
Email: patricia.heyn@ucdenver.edu

Research Interests

My research is on the effects of exercise on selected metabolic, functional, and health outcomes of individuals with complex health and chronic diseases, as well as older adults. I have a particular interest in understanding the effects of physical activity (PA) on cognitive function and its association with metabolic syndrome and diabetes. My investigations include the PA associations between lifestyle behavior, sex hormones, diabetes, and obesity on cognitive function. I have extensive experience in evaluating cognitive and physical training in older adults with cognitive impairments, including individuals with Alzheimer's disease, stroke, and intellectual disabilities. My current studies include patient-reported outcomes methods and health services research evaluation.

Alethea Hill, Ph.D., M.S.N., ANP-BC

Associate Professor/Adult Nurse Practitioner
College of Nursing
University of South Alabama
5271 University Drive North, HAHN 4062
Mobile, AL 36688
Telephone: 251–455–4099
Fax: 251–650–3804
Email: amhill222@gmail.com

Research Interests

My research interests are prediabetic states and type 2 diabetes as a risk equivalent for cardiovascular disease. In addition, I am interested in the gender and racial/ethnic differences that exist when predicting the risk of type 2 diabetes and prediabetic states among African American women. I began my research career working with community and faith-based organizations focusing on diabetes self-management education and risk awareness projects. I plan to expand my research interest to investigate the associations between sleep duration/hygiene, dyslipidemia, and diabetes among African American populations.

Jonathan Himmelfarb, M.D., FASN

Joseph W. Eschbach, M.D., Endowed Chair in Kidney Research
Director
Kidney Research Institute
Professor of Medicine
Division of Nephrology
University of Washington
President, American Society of Nephrology
Box 359606
325 Ninth Avenue
Seattle, WA 98104
Telephone: 206–616–4717
Fax: 206–685–9399
Email: himmej@u.washington.edu

Research Interests

My research interests involve metabolic complications of kidney disease, including chronic kidney disease, end-stage renal disease, and acute kidney injury. In particular, I have focused on understanding how the loss of kidney function contributes to increased oxidative stress, inflammation, insulin resistance and endothelial dysfunction, and ultimately cardiovascular risk in kidney disease. I also have been involved in creating statewide, community-based research into health care disparities related to chronic kidney disease and evaluating novel approaches to renal replacement therapies.

Sula Hood, Ph.D., M.P.H.

Assistant Professor
Department of Social and Behavioral Sciences
Richard M. Fairbanks School of Public Health at Indiana University–Purdue University Indianapolis
1050 Wishard Boulevard, RG6051
Indianapolis, IN 46202
Telephone: 317–278–3107
Email: sulahood@iu.edu

Research Interests

My research agenda has a strong emphasis on addressing chronic disease health disparities in ethnic minorities and disadvantaged populations and focuses on the development of community-based interventions to increase social support, peer support, and health communication as critical strategies for promoting chronic disease prevention, coping, and self-management. My disease topics of primary interest include diabetes, cancer, lupus, and sickle cell anemia. My most recent work has been done in collaboration with African American families to incorporate health promotion activities at black family reunions. In particular, my current line of research is focused on identifying patterns of communication about health in African American families and developing culturally sensitive strategies to (1) promote awareness of the importance of family health history sharing among African Americans and (2) increase family health history sharing and collection in African American families. My research utilizes mixed methods, incorporating both qualitative and quantitative methodology, including social network analysis.

Lina Huerta-Saenz, M.D.

Pediatric Endocrinologist
Division of Pediatric Endocrinology and Diabetes
Penn State Children's Hospital
The Pennsylvania State University College of Medicine
2171 Gelder Park Drive
Hummelstown, PA 17036
Telephone: 215–460–9503
Email: lhuertasaenz@pennstatehealth.psu.edu

Research Interests

I am pediatric endocrinologist and a junior physician-scientist. My current main research interests are (1) the impact of medical nutrition therapy to prevent and treat type 1 and type 2 diabetes mellitus in pediatric population, (2) pre-diabetes treatment, and (3) how to decrease the current health disparities in pediatric medical care. During my pediatric endocrinology fellowship I worked on the development of a clinical questionnaire to assess nutrition and healthy knowledge in children and youth with Type 1 diabetes (NutriCarbQuiz 2) as a measure to translate this assessment into specific therapeutic actions for these children and families. Now, I am working on designing specific nutrition interventions to increase the survival rate of the remaining beta-cells in children and youth with early onset type 1 diabetes. My goal is to enroll patients from different ethnicities for all my research studies, so I can contribute in the effort to decrease health disparities in children/youth. I also expect the results of my research studies can contribute to our current understanding about the progression of this disease and design different treatment interventions than the current ones available especially for those diabetic children/youth who still have remaining beta-cell function.

Marja M. Hurley, M.D.

Professor of Medicine and Orthopedics
University of Connecticut School of Medicine
263 Farmington Avenue
Farmington, CT 06030–3920
Telephone: 860–679–3484
Fax: 860–679–1850
Email: hurley@uchc.edu

Research Interests

I am an internationally recognized expert in the field of bone biology, particularly in the area of anabolic growth factors and their impact on bone growth and metabolism. I am a physician-scientist who is recognized nationally and internationally as the expert in the role of fibroblast growth factor-2 (FGF2) in bone. I have made seminal observations on the importance of FGF2 in maintaining bone mass in mice as demonstrated by my publication in the premier *Journal of Clinical Investigation* on the bone phenotype in FGF2 mice and subsequent publications in the *Journal of Biological Chemistry, Journal of Endocrinology,* and *Journal of Bone and Mineral Research.* I have co-authored papers in the Proceedings of the National Academy of Sciences and Nature Medicine. I also have demonstrated that FGF2 is highly regulated by bone morphogenetic protein, an agent approved by the FDA for fracture repair in humans. In addition, my laboratory was the first to demonstrate that FGF2 expression in bone cells is increased by parathyroid hormone (PTH), the only anabolic agent approved by the FDA for osteoporosis treatment in the United States, and further demonstrated that the anabolic response to PTH is impaired in FGF2 mice. Of potential translational/clinical relevance, I published a seminal paper demonstrating that the anabolic effect of PTH in humans is associated with increased serum levels of FGF2. More recently, I have demonstrated a novel role for the nuclear isoforms of FGF2 in phosphate homeostasis and was recently awarded a grant from the National Institute of Diabetes and Digestive and Kidney Diseases to study the potential role of these isoforms in human disorder X-Linked Hypophosphatemic Rickets. My outstanding research contributions, including seminal work on the role of FGF2 in bone, have resulted in funding by the National Institutes of Health for well over 20 years. This has resulted in a profusion of high-quality publications that includes papers in the Journal of Bone and Mineral Research, Journal of Endocrinology, Journal of Biological Chemistry, and Journal of Clinical Investigation, among other leading journals. I have developed a number of new genetic murine models that have greatly advanced our understanding of the complex effects that multiple FGF2 isoforms exert on osteoblast commitment, differentiation and function.

Tod Ibrahim

Executive Director
American Society of Nephrology
1510 H Street, N.W., Suite 800
Washington, DC 20005
Telephone: 202–640–4676
Fax: 202–637–9793
Email: tibrahim@asn-online.org

Research Interests

I focus on advancing the mission of the American Society of Nephrology (ASN) to lead the fight against kidney disease by educating health professionals, sharing new knowledge, advancing research, and advocating the highest quality care for patients. Through a collaboration with leading workforce investigators from The George Washington University, ASN is conducting research on the nephrology workforce and an analysis of the current job market, including a survey of fellows and their perceptions of the job market and the specialty of nephrology.

Princess Imoukhuede, Ph.D.

Assistant Professor
Department of Biomedical Engineering
Washington University in St. Louis
1 Brookings Drive
St. Louis, MO 63130
Telephone: 314–935–7038
Email: pimoukhuede@email.wustl.edu

Research Interests

I study the vascular microenvironment to identify molecular and cellular signaling networks that modulate, inhibit, and promote blood vessel formation. I combine this with systems biology approaches to identify promising therapeutic targets. My goal is to unravel the molecular complexities governing blood vessel formation, which has the potential for treatment of more than 70 diseases, including breast cancer and some cardiovascular diseases.

Claire Townsend Ing, Dr.P.H.

Assistant Professor
Department of Native Hawaiian Health
John A. Burns School of Medicine
677 Ala Moana Boulevard, Suite 1016
Honolulu, HI 96813
Telephone: 808–692–1042
Email: clairemt@hawaii.edu

Research Interests

I have a personal and career-driven passion for advancing our understanding of and ability to address health disparities. My long-term career goal is to advance to full professor, recognized as an international expert in addressing the multilevel determinants of cardiovascular health in Native Hawaiians and other indigenous peoples. I plan to have an established, independently funded (i.e., R01 level) research program through which I am able to teach, mentor, and develop the next generation of scholars and researchers in Native Hawaiian and indigenous health. I am committed to continuously developing community-academic partnerships to examine multilevel determinants of health; enabling communities, researchers, and policy-makers to effectively address these determinants; and improving the health of Native Hawaiians and other indigenous peoples. The knowledge gained from my research will lead to a better understanding the dynamic interaction of multilevel determinants of cardiovascular health in Native Hawaiian and indigenous communities and the development of sustainable programs and policies to address them. To achieve this long-term goal, I have identified several short-term research objectives, which are to improve my knowledge and skill to (1) identify and measure multilevel determinants of cardiovascular health in Native Hawaiians, (2) use system science methodologies to examine the structure and impact of multilevel determinants of cardiovascular health, and (3) identify potential targets for multilevel interventions to improve cardiovascular health in Native Hawaiians. To meet these research objectives, I have identified several funding opportunities.

Carlos Isales, M.D.

Professor of Neuroscience and Regenerative Medicine
Augusta University
1120 15th Street, CA–1004
Augusta, GA 30912
Telephone: 706–721–0692
Fax: 706–721–8727
Email: cisales@augusta.edu

Research Interests

We are interested in the impact of nutrients on stem cells and the aging process. Caloric restriction seems to retard the aging process, but how it does this is not clear. We do know that as we age, the stem cells become adipocytes rather that muscle/bone cells. We are looking for the regulators of this molecular switch with aging. In particular we are interested in the impact of dietary amino acids on bone marrow mesenchymal stem cell (BMSC) function. Our data demonstrate that amino acids (AAs) have varying anabolic or catabolic effects. There are 20 common dietary amino acids and our data demonstrate that the aromatic amino acids have the most potent anabolic effects, particularly in the aging mouse model. Aging (24-month-old) C57BL/6 mice fed a low-protein diet lose bone, but this loss is prevented by dietary supplementation of aromatic amino acids. Our central hypothesis is that AAs are not just fuel, broken down to provide ATP for cell function, but rather that AAs normally function as "nutritional hormones" binding to extracellular receptors and activating cell signaling pathways. Our data are consistent with the aging process resulting in the loss of the ability of BMSCs to "sense" these normal anabolic signals from nutrients through epigenetic mechanisms. Further aging is associated with the accumulation of toxic breakdown products of these metabolites that interfere with their normal anabolic actions.

Chandra L. Jackson, Ph.D., M.S.

Earl Stadtman Investigator
Epidemiology Branch
Social and Environmental Determinants of Health Equity
National Institute of Environmental Health Sciences
National Institutes of Health
111 T.W. Alexander Drive, Room A327
P.O. Box 12233, Mail Drop A3–05
Research Triangle Park, NC 27709
Telephone: 919–541–4962
Fax: 301–480–3290
Email: chandra.jackson@nih.gov

Research Interests

My research focuses on investigating how the attributes of neighborhood, housing, and work conditions affect sleep health (i.e., insufficient sleep duration and inadequate sleep quality) and cardiometabolic dysfunction (e.g., obesity, type 2 diabetes or cardiovascular disease) in under-resourced populations. In addition to identifying the biological mechanisms by which factors in the physical, chemical, and social environments affect health and contribute to health inequities, I am interested in the translation of epidemiologic findings into novel environmental interventions, policies, and practices that address structural-, macro-, and individual-level barriers to achieving and maintaining optimal health.

Cynthia Ann Jackson, Ph.D., M.S.

Associate Professor of Physiology
Division of Natural Sciences and Mathematics
Nashville State Community College
7113 Sunnywood Drive
Nashville, TN 37211
Telephone: 615–953–6599
Email: femscientist@gmail.com

Research Interests

My area of research interest is renal physiology, focusing on understanding how the heterogeneity segments of the kidney regulate various parameters, such as water and electrolyte balance, in order to maintain homeostasis. Presently, I have three major ongoing projects in my laboratory. My first project is identifying urinary protein markers associated with various pathophysiological diseases, specifically sodium-induced hypertension. My second project involves characterizing a cluster of genes and their temporal expression in the kidney during the developmental phase of hypertension. I have initiated a third project that will examine the interactions of the intrarenal hormones in renal carcinoma cells. The three major intrarenal hormones that we will be investigating are the renin-angiotensin-aldosterone system, prostaglandin, and Kinin-Kalikrein system.

Cheedy Jaja, Ph.D., M.P.H., M.N., RN

Associate Professor
Academic Health Center
University of Cincinnati College of Nursing
Cincinnati, OH 45219
Telephone: 513–558–5296
Fax: 513–558–5054
Email: cheedy.jaja@uc.edu

Research Interests

My long-term career goal is to make substantial contributions to sickle cell disease analgesic pharmacogenetics by developing a robust pharmacogenetic research program centered on the clinical translation of inherited genetic variants that would foster the development of algorithms for appropriate selection of analgesics for pain management in sickle cell disease patients. My current NIH/National Institute of Nursing Research–funded study investigates incidence of suboptimal prescribing of analgesics and association between suboptimal prescribing, deficient cytochrome P450 (CYP2D6, CYP2C9, and CYP2C19) metabolic enzymes, frequent acute care visits, and quality of life in adult sickle cell disease patients.

Maud Joachim-Celestin, Dr.P.H., M.P.H.

Assistant Professor
Department of Preventive Medicine
Loma Linda University
99 Fairway Drive
Valatie, NY 12184
Telephone: 518–365–0787
Email: mcelestin@llu.edu

Research Interests

My passion is health promotion and chronic disease prevention among underserved minorities of various ethnic and cultural backgrounds. I have conducted research among women veterans with cardiovascular disease and helped update cardiovascular screening guidelines, and more recently among Latino communities at risk of diabetes and other chronic diseases. I also co-created a culturally sensitive diabetes prevention program that was implemented and evaluated among Latinos. This project became my doctoral dissertation, and aspects of that work were presented at the American Public Health Association 2016 annual meeting. I am currently in the process of publishing our results and plan to pursue further research to help empower and improve the health of communities with a disproportionate prevalence of chronic diseases. Because I was raised in a military family and have lived in several countries and cultures, I believe that I have a unique perspective of issues faced by underserved, disadvantaged, immigrant, and minority communities in the United States. I believe that with more mentoring and funding I could help to better promote health in these populations. My ongoing research goal is to assess the impact of a cultural adaptation on the success of a weight management program.

Stacey Jolly, M.D., M.A.S.

Associate Professor
General Internal Medicine
Cleveland Clinic Lerner College of Medicine
9500 Euclid Avenue, G10
Cleveland, OH 44122
Telephone: 216–444–8188
Fax: 216–445–1007
Email: jollys@ccf.org

Research Interests

I have focused my research career on common conditions seen in primary care, such as hypertension, obesity, cardiovascular disease, and kidney disease. As an Alaska Native academic general internist, I have sought to better understand the epidemiology of these conditions among American Indians and Alaska Natives. Additionally, I am interested in patient education and educational interventions. I was funded by an NIDDK K23 career development grant, to assess chronic kidney disease (CKD) knowledge and awareness among American Indians and also was co-principle investigator (PI) on an NIDDK R34 grant at the Cleveland Clinic to assess the effectiveness of a CKD patient navigator, an enhanced personal health record, both, or usual care on CKD patient outcomes. I work with studies that focus on native health, such as the Western Alaska Tribal Collaborative for Health study. I am the current PI for the Dakota Center funded by the NHLBI of the Strong Heart Study/Strong Heart Family Study.

Holly J. Jones, Ph.D., RN, CFNP

Assistant Professor
University of Cincinnati College of Nursing
P.O. Box 210038
Cincinnati, OH 45221–0038
Telephone: 513–558–5285
Fax: 513–558–2142
Email: joneshj@ucmail.uc.edu

Research Interests

My research interests include perceived stress, women's health, midlife women's issues, stress reduction, aging, symptom experience, and long-term health outcomes. My research uses mixed methods to understand the unique stressors affecting midlife women and the effects of chronic stress on long-term health outcomes, symptom expression, and aging. I am interested in the clinical expression of stress as demonstrated by physiological and genomic biomarkers and symptom experience. Recent publications include "Bladder Symptoms in the Early Menopause Transition," published in the *Journal of Women's Health* (2016) and "A Qualitative Understanding of Midlife Sources of Stress and Support in African American Women," published in *The Journal of the National Black Nurses Association* (2016). I have recently concluded another descriptive study of the stress and stressors affecting midlife African American women in Cincinnati with plans for publication and continued research based upon the findings. My clinical experience, expertise, and interests include primary care, health promotion, community health, and vulnerable populations.

Letitia Jones, Ph.D.

Postdoctoral Scholar
Duke Human Vaccine Institute
Duke University Medical Center
2 Genome Court, Room 3009, MSB 2
Durham, NC 27710
Telephone: 919–681–6498
Email: letitia.jones@duke.edu

Research Interests

I currently hold a postdoctoral scholar position at Duke Human Vaccine Institute where I am characterizing a special subset of T-cells call T-follicular helper cells in an effort to identify targets for HIV vaccine development. For my Ph.D. thesis at the University of Rochester Medical Center (URMC), I worked on developing a model to study a serious condition in HIV-positive individuals called HAND (HIV-associated neurocognitive disorder). HAND occurs as a result of the blood-brain barrier's (BBB) integrity changing, thereby increasing BBB permeability. The BBB is a tightly regulated unit permeable only to necessary molecules, such as calcium and immune surveillance lymphocytes. This research is an extension to the predoctoral thesis work I did under the guidance of Dr. Sanjay Maggirwar. Individuals with HIV have a 52% chance of developing HAND and currently, no therapies are available. To develop treatments, the underlying mechanisms of HAND must be identified, but since HIV naturally infects humans, an animal model is critical. Thus, my graduate work centered around overcoming that restriction challenge. In summary, I developed and characterized a mouse model in which mice infected with mouse-specific HIV recapitulated neuropathologies reported in humans living with HIV. I went on to identify that activated platelets play a major role in HAND—mice treated with anti-platelet treatments did not develop HAND or exhibited BBB dysfunction. In addition to this project, I collaborated with a pediatric oncologist at URMC to study the role platelet activation plays in sickle cell anemia. I initiated this collaboration, devised the approved protocol to work with human subjects, and performed all the experiments. Prior to my doctoral program, I had done research on identifying genes differentially expressed in shrimp infected with infectious haematopoietic necrosis virus. In the future as faculty, I want to continue my studies on HIV and platelet activation, as well as autoimmune diseases.

Patricia D. Jones, M.D., M.S.C.R.

Assistant Professor
Hepatology Division
Department of Medicine
University of Miami Miller School of Medicine
1120 N.W. 14th Street, Room 822
Miami, FL 33136
Telephone: 305–243–5787
Email: pdjones@med.miami.edu

Research Interests
My research interests center around the identification and elimination of factors contributing to disparities in liver disease, liver transplantation, and hepatocellular carcinoma. My population of interest is composed mainly of blacks and Hispanics because the incidence of hepatocellular carcinoma is increasing in these populations for different reasons. My current work uses qualitative methods to assess perceptions of liver disease, hepatitis B, and hepatocellular carcinoma, as well as barriers to care among blacks with and without chronic hepatitis B.

Joshua J. Joseph, M.D.

Assistant Professor of Medicine
Division of Endocrinology, Diabetes and Metabolism
The Ohio State University Wexner Medical Center
566 McCampbell Hall
1581 Dodd Drive
Columbus, OH 43210
Telephone: 614–346–8878
Fax: 614–366–0345
Email: joseph.117@osu.edu

Research Interests
My research is focused on understanding risk factors in the development of obesity and type 2 diabetes in diverse populations. My group examines classical risk factors for diabetes and obesity, including physical activity, dietary intake, smoking, cholesterol, blood pressure, and adiposity and potential racial/ethnic differences. We also examine the role of novel risk factors, including adrenal hormones and the hypothalamic-pituitary-adrenal axis—specifically aldosterone and cortisol—in the development of diabetes and obesity using data from longitudinal observational cohorts, including the Multi-Ethnic Study of Atherosclerosis, Jackson Heart Study, Coronary Artery Risk Development in Young Adults Study, and Reasons for Geographic and Racial Differences in Stroke. The hypotheses generated using epidemiological approaches is used to design and execute detailed metabolic clinical studies to uncover explanatory mechanisms as potential targets for prevention of diabetes and obesity.

Arion Kennedy, Ph.D.

Research Instructor
Department of Molecular Physiology and Biophysics
Vanderbilt University Medical Center
Nashville, TN 37232
Telephone: 615–322–5972
Fax: 615–322–8973
Email: arion.kennedy@vanderbilt.edu

Research Interests

My research focuses on the impact of nutrients on immune cell function and ultimate impact on obesity and associated metabolic disorders. Nonalcoholic steatohepatitis (NASH) has become a common disorder associated with obesity and diabetes. Currently, my research focuses on understanding the role of hepatic T lymphocytes in the development of NASH under obese and hyperlipidemic conditions.

Tasneem Khambaty, Ph.D.

Assistant Professor
Department of Psychology
University of Maryland, Baltimore County
Math/Psychology 326
1000 Hilltop Circle
Baltimore, MD 21250
Telephone: 410–455–2304
Email: khambaty@umbc.edu

Research Interests

My research centers on the primary prevention and management of diabetes and related cardiometabolic conditions (e.g., metabolic syndrome, cardiovascular disease), particularly among at-risk populations. My primary interests lie in the examination of psychological (e.g., depression, anxiety) and cognitive risk factors for the development of diabetes, with the intention of translating epidemiological findings into practical, culturally sensitive, psychosocial interventions that can be easily implemented in clinical settings (e.g., primary care). I particularly focus on identifying psychosocial determinants of race/ethnicity disparities in cardiometabolic disease and have worked closely with data from the Hispanic Community Health Study/Study of Latinos. I am committed to producing innovative and clinically relevant research and ultimately reducing the burden of chronic diseases associated with psychological factors and improving long-term public health and patient care.

Nicole Kim, M.D., M.P.H.

Gastroenterology Fellow
Department of Gastroenterology
University of Washington
1959 N.E. Pacific Street
Box 356424
Seattle, WA 98195
Telephone: 206–405–7428
Email: nicole.kim8@gmail.com

Research Interests

My research interests include minimizing health disparities in viral hepatitis, chronic liver disease, and transplant hepatology, particularly for immigrant and underserved populations. I am interested in community-based research and utilizing mixed methods to explore barriers to care and to promote equity in medical care. My prior projects have included studying the impact of workplace sexual harassment among migrant farmworkers in Washington State and hepatitis C linkage to care and treatment outcomes in an urban underserved population in San Francisco. I also am interested in improving transitions of care between liver specialists and primary care providers as task-shifting models continue to expand liver disease management.

Myra A. Kleinpeter, M.D., M.P.H.

Associate Professor of Clinical Medicine
Tulane University School of Medicine
1430 Tulane Avenue, SL45
New Orleans, LA 70112
Telephone: 504–988–5346
Fax: 504–988–1909
Email: mkleinp@tulane.edu

Research Interests

My principal interests are in chronic disease management, continuing medical education, quality improvement, and providing health care to underserved populations. My research activities include cardiovascular disease risk factors in chronic kidney disease (CKD) patients, health literacy assessment, the impact of modifying patient education programs on health outcomes, and the effect of modified clinical visits on health outcomes and access to health care. As health care payment models change, implementation of chronic care management teams will play an integral role. I am interested in studying the impact of patient-centered medical homes on care delivery and reduction of health disparities in CKD patients.

Maudry-Beverley Lashley, Ph.D.

Chairperson and Researcher
Department of Psychology
Medgar Evers College
City University of New York
1650 Bedford Avenue
Brooklyn, NY 11225
Telephone: 718–270–4995
Fax: 718–270–4828
Email: mlashley@mec.cuny.edu

Research Interests
I am a clinical/developmental tenured Associate Professor. My research and scholarship interests are concentrated in the areas of evidence-based practice with a focus on black women and gender issues, alcohol, depression and other psychiatric illnesses, domestic violence, health disparities, and community participatory research. My current research is focusing on cardiovascular illnesses.

Mark Andrew Lawson, Ph.D.

Professor
Department of Reproductive Medicine
University of California, San Diego
9500 Gilman Drive
La Jolla, CA 92093–0674
Telephone: 858–822–4128
Email: mlawson@ucsd.edu

Research Interests
We are investigating the molecular mechanisms of hormone action in the pituitary, with a special emphasis on factors controlling reproductive function. Current studies are focused on understanding the role of hormone action in regulating translation initiation and mRNA utilization. We also are interested in the mechanism of endocrine diseases affecting reproduction, such as polycystic ovary syndrome and type 2 diabetes. Our long-term interest is in understanding the integration of multiple hormone signaling pathways in the regulation of endocrine cell function.

Zeenat A. Lila, Ph.D.

Senior Research Director
1890 Research and Extension Program
South Carolina State University
300 College Street, N.E.
Orangeburg, SC 29117
Telephone: 803–533–3925
Fax: 803–533–3792
Email: zlila@scsu.edu

Research Interests

My research interest is to investigate the involvement of DNA in glycoxidation reactions having implications in diseases such as diabetes, mutation of DNA, synthesis of proteins such as insulin, and cancer. It is widely believed that DNA is involved in complications arising out of obesity, diabetes, and other age-related diseases. Initial experiments were designed to identify uniquely modified DNA nucleosides (CMdA and CMdC) from *in vitro* reactions followed by experiments to detect the presence of the same in calf thymus and human serum DNA. Our work describing detection of carboxymethyl-2'-deoxyadenosine (CMdA) and carboxymethyl -2'-deoxycytidine (CMdC) was already reported. Our current research is to develop a method for quantification of modified DNA nucleosides using spectrophotometer, HPLC and LC-MS/MS spectroscopy. These results will indicate the severity and age/obesity dependency of DNA modification in relation to diabetes and other age-related diseases. We hope that continued research in this area will lead to the discovery of a biomarker for diseases that result from complications in diabetes, such as blindness, renal failure, coronary heart, and Alzheimer's diseases.

Jesús M. López-Guisa, Ph.D.

Associate Professor of Pediatrics
Divisions of Immunology/Rheumatology
Clinical Scientist, Immunology Diagnostic Laboratory
University of Washington and Seattle Children's Hospital
Center for Immunity and Immunotherapies
Jack MacDonald Building (IBO-JMB)
Seattle Children's Research Institute
1900 Ninth Avenue, C9S–7
Seattle, WA 98101–1304
Telephone: 206–884–1227
Fax: 206–987–7310
Email: jesus.lopez-guisa@seattlechildrens.org

Research Interests

Our group focuses on primary immune deficiency disorders (PIDDs). There are more than 140 of these complex conditions. People with PIDDs are born with immune systems that are not working properly or that are missing needed parts. This makes them more open to serious infection and illness. Our laboratory offers the newest and most thorough testing to identify these disorders and their causes. This allows us to use what we learn to provide the most advanced care for people with PIDDs, developing a one-stop screening panel for all known immunodeficiency genes, including the 20 or so genetic defects that cause severe combined immunodeficiency and a few hundred more that result in other immunological problems.

Wairimu Magua, Ph.D., M.S.

Postdoctoral Fellow
Department of Surgery
Division of Transplantation
Emory University
101 Woodruff Circle, 5105 WMB
Atlanta, GA 30322
Telephone: 470–819–3358
Email: wairimu.magua@emory.edu

Research Interests
My current research leverages structured and unstructured data, such as clinical notes, to identify readmission risk factors that can be used to predict patient readmission rates and to improve transitional care management, with the objective of reducing readmission rates and racial disparities in readmission rates among kidney transplant recipients. My long-term research objectives are to identify, test, and implement innovative and "learning" models of care that improve patient outcomes and eliminate racial disparities in health outcomes.

Gayenell Smith Magwood, Ph.D., M.S.N., RN, FAHA, FAAN

Professor
Medical University of South Carolina College of Nursing
99 Jonathan Lucas Street, MSC 160
Charleston, SC 29425
Telephone: 843–792–0685
Email: magwoodg@musc.edu

Research Interests
My primary research focuses on socioenvironmental and biobehavioral factors in development and implementation of community-based lifestyle interventions for multiple risk reduction (cardiometabolic risk), particularly diabetes and obesity among African Americans. My interest extends to multi-risk reduction (hypertension, stroke prevention). I have clinical and research experience related to the kidney transplant population. My commitment to multiple risk reduction stems from my long-term commitment to health disparities research. My research experience includes community-engaged diabetes prevention intervention development and implementation. My research combines advocacy and science to inform best practices for building, enhancing, and sustaining partnerships with communities and contributing expertise in the intersection of community and health systems with underserved populations.

Lorena Marcano-Bonilla, M.D.

Ph.D. Candidate
Clinical and Translational Science
Mayo Clinic
200 First Street S.W.
Rochester, MN 55095
Telephone: 787–636–9444
Email: bonilla.lorena@mayo.edu

Research Interests

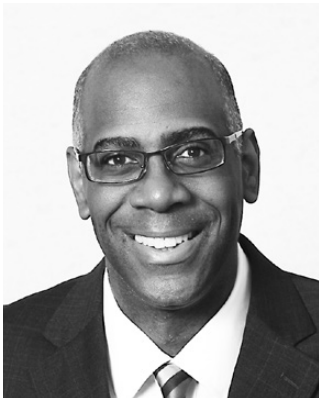
The goal of my current research efforts is to identify the risk and protective factors for biliary tract cancer (BTC), both epidemiologically and genetically. I also am interested in the molecular characterization of these malignancies. At present, I am conducting a nationwide Swedish population-based cohort study investigating if the use of aspirin, other nonsteroidal anti-inflammatory drugs, metformin, and/or statins decrease the risk of BTC and death. This project forms part of an ongoing collaboration between Mayo Clinic and Karolinska Institutet. The data for this project was collected from the Swedish Registries. Our database is comprised of 5.7 million adult individuals with virtually complete enumeration of the use of these medications. Subsequent studies will explore the gene-environment interactions influencing the preventive effect of the previously mentioned agents. In addition to offering insight into the underlying mechanism of cholangiocarcinogenesis, understanding the relationship between genetic markers and the use of these drugs can help identify subgroups that may preferentially benefit from the chemopreventive use of these agents. These studies will be tightly linked to the genome-wide association study (GWAS) that my mentor, Dr. Lewis R. Roberts, is leading. This is the first GWAS on BTC with sample sizes large enough to have a reasonable expectation of finding significant effects with statistical confidence. Our studies have the potential to illuminate the key pathways for the oncogenesis of biliary cancers and to facilitate the development of novel therapeutic approaches.

Vanessa Marshall, Ph.D., M.A.

Research Health Scientist
Louis Stokes Cleveland Veterans Affairs Medical Center
10701 East Boulevard
Cleveland, OH 44106
Telephone: 216–791–3800, ext. 2699
Email: vanessa.marshall2@va.gov

Research Interests

My research interests include health disparities, health services research, community-based participatory research, clinical trials, interventions, quality improvement, evaluation, and implementation science.



Leon McDougle, M.D., M.P.H.

Professor, Family Medicine
Chief Diversity Officer
The Ohio State University Wexner Medical Center
Associate Dean for Diversity and Inclusion
The Ohio State University College of Medicine
Meiling Hall, Room 242
370 W. Ninth Avenue
Columbus, OH 43210
Telephone: 614–293–8007
Email: leon.mcdougle@osumc.edu

Research Interests

My career has been focused on eliminating health disparities and increasing the diversity of the biomedical and behavioral science workforce. I have enjoyed serving as a mentor, cultural competence expert, attending physician, and advisor for undergraduate students, residents, fellows, graduate and postdoctoral students, and faculty. I have had the good fortune to serve a wide range of learners, including a psychology postdoctoral fellow, dietetics graduate student, and Albert Schweitzer fellow. I was recruited to The Ohio State University to establish the Urban Family Medicine Residency program, serving as its founding program director until 2006. I currently serve as a co-principal investigator for a National Institute on Minority Health and Health Disparities R01-funded research initiative led by Dr. Joseph Kitzmiller to determine the influence of CYP3A4*22 on simvastatin pharmacokinetics in African Americans that may help decrease health care outcome disparities. In addition, I serve as a co-investigator for the National Institute of General Medical Sciences–funded DISCOVERY Postbaccalaureate Research Education Program, which aims to increase diversity of Ph.D. and M.D./Ph.D. biomedical scientists.

Allison McElvaine, Ph.D.

Vice President, Research & Scientific Programs
American Diabetes Association
2451 Crystal Drive, Suite 900
Arlington, VA 22202
Telephone: 703–549–1500, ext. 2250
Email: amcelvaine@diabetes.org

Research Interests
I trained in molecular endocrinology at Northwestern University, where my research was focused on gene regulation in the growth hormone axis. Specifically, I studied transcriptional regulation of the Growth Hormone-Releasing Hormone Receptor gene and post-transcriptional modification of the receptor. After completing my Ph.D., I transitioned to a career in scientific and health associations, working first as a grant writer for continuing medical education programs at the Endocrine Society. During my tenure at the Endocrine Society, I became responsible for scientific program development for the organization's annual conference. From there, I took a position leading professional development and publications for a small public health association before starting my current tenure with the American Diabetes Association (ADA) in 2014. At ADA, I serve as Vice President of Research & Scientific Programs. I oversee our grant-funded research programs, research communications, research policy, new grant development, research symposia, and national scientific and health care achievement awards. I also maintain external relationships related to the Association's research programs, helping make scientists aware of our funding opportunities and other ways to be involved with the organization and the diabetes community. I am the staff liaison to our volunteer-led Research Policy Committee, which helps shape organizational priorities and policies related to research funding. One of our key priorities is to increase the diversity and inclusion of investigators, volunteers, and research topics we support to better reflect the community of people with diabetes. Sharing the funding and volunteer opportunities with the Network of Minority Health Research Investigators is important to achieving that goal.

Ketrell L. McWhorter, Ph.D., M.B.A.

Postdoctoral Fellow, Intramural Research Training Award
National Institute of Environmental Health Sciences
National Institutes of Health
111 T.W. Alexander Drive, Building 101, Room A353
Research Triangle Park, NC 27709
Post: P.O. Box 12233, Mail Drop A3–05
Telephone: 919–316–4867
Email: ketrell.mcwhorter@nih.gov

Research Interests
My research interests are in using a life-course perspective to investigate racial, ethnic, and socioeconomic disparities in perinatal and early childhood outcomes (e.g., birth weight, infant mortality, preterm birth, and childhood obesity) by integrating social and lifestyle (e.g., sleep) factors with biological mechanisms. I also seek to integrate upstream factors of the physical and social environment into studies exploring biological mechanisms to more comprehensively investigate the biological underpinnings of disparities in later-life cardiometabolic health. This approach will help to identify modifiable factors in under-resourced populations to address disparities and promote optimum health. My most recent project involved examining the association between traumatic childhood experiences with sleep characteristics in adulthood.

Tesfaye Mersha, Ph.D.

Assistant Professor
Department of Pediatrics
Cincinnati Children's Hospital Medical Center
3333 Burnet Avenue
Cincinnati, OH 45229
Telephone: 513–803–2766
Fax: 513–636–1657
Email: tesfaye.mersha@cchmc.org

Research Interests

My overall research interest and goal includes the use of population genomics and quantitative and statistical genetics methods to understand human genome variation and utilizing this information to dissect complex diseases, particularly allergy disorders, through approaches and methods ranging from linkage, association, admixture mapping, and transcriptional profiling analysis. Complementary to statistical analysis, I also frequently apply biological pathways and functional commonalities analysis to uncover coregulation of gene expression across the genome, data mining, and bioinformatics techniques for candidate gene prioritization procedures from linkage and expression studies. My long-term goals are to reduce childhood morbidity and mortality associated with metabolic and allergic disorders and to eliminate the significant racial disparities in asthma and asthma-related outcomes. To enhance my analytical skills for verifying statistical properties of biological problems as applied to admixed populations—such as ancestry inference, disease gene localization, evolutionary relationship, patterns of molecular diversities, and population structure in disease genetics—I will be actively involved in the Network of Minority Health Research Investigators program.

Nia S. Mitchell, M.D., M.P.H.

Assistant Professor
Department of Medicine
Duke University School of Medicine
DUMC 104427
411 W. Chapel Hill Street, Suite 500
Durham, NC 27701
Telephone: 919–668–7202
Fax: 919–613–9897
Email: nia.s.mitchell@duke.edu

Research Interests

My research involves weight loss interventions for low-income and minority populations. I became involved in obesity management for low-income and minority populations because of my clinical experience. Early in my clinical years of medical school, I recognized that many medical problems were caused or exacerbated by excess weight. Later, as a primary care physician at a clinic with large low-income and minority populations, I have watched in frustration as my patients' attempts to lose weight were hampered by lack of money and access to structured programs. Unfortunately, health care payers, including Medicaid, typically do not cover weight loss programs, and my patients could not afford to pay for expensive commercial programs like Weight Watchers or Jenny Craig. This inspired me to find cost-effective ways to bring successful weight loss interventions to low-income patients, within a primary care or community setting. As I reviewed available weight loss programs to identify those with costs that could possibly be within reach of low-income populations, I found Take Off Pounds Sensibly (TOPS), which is a national, nonprofit, peer-led weight loss program. However, while the annual cost of $92 was likely within reach for most of my patients, there had not been a rigorous scientific evaluation of the TOPS program, and I chose to undertake such an analysis. The results of my initial study, a secondary database analysis, were promising; participants lost a clinically significant amount of weight (≥5% of initial weight) and maintained the weight loss for up to 3 years. However, there were no demographic data associated with the weight change data of the study; therefore, I was unable to determine if the program was effective in low-income or minority populations. With my K01 from the National Heart, Lung, and Blood Institute, I have continued a more in-depth evaluation to estimate the reach and effectiveness of the program among low-income and minority populations. I also have completed a pilot study of TOPS in the African American community. These are the specific aims for my K01: (1) assess the reach of the TOPS into low-income and minority communities using geographic information systems, (2) determine the effectiveness and differential effectiveness among chapters over 7 years; and (3) identify the key characteristics that influence the implementation of TOPS chapters based on the differential effectiveness to develop interventions to maximize all chapter performance.

Tanecia Mitchell, Ph.D.

Assistant Professor
Department of Urology
The University of Alabama at Birmingham
720 20th Street South, Kaul 816E
Birmingham, AL 35294
Telephone: 205–996–2292
Email: taneciamitchell@uabmc.edu

Research Interests

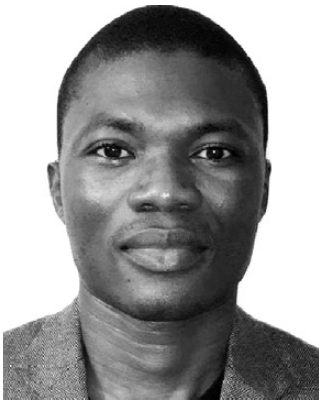
My current research program is NIH-funded and focuses on understanding the role of monocytes in calcium oxalate kidney stone disease. In particular, my laboratory is evaluating the significance of mitochondria, oxidative stress, and inflammation in stone disease using experimental models and clinical samples. We also have an active study investigating the role of dietary oxalate on immune response and crystalluria in humans. It is my hope that our research will provide relevant scientific information to help understand, prevent, and/or treat urological disorders.

Nihal Elamin Mohamed, Ph.D.

Assistant Professor of Urology
Icahn School of Medicine
Department of Urology
1 Gustave L. Levy Place
New York, NY 10029
Telephone: 212–241–8858
Email: nihal.mohamed@mountsinai.org

Research Interests

I have a solid program of research on prostate and bladder cancer (over $2 million as principal investigator; $1.1 million as a co-investigator) funded by the National Institutes of Health (NIH), The Department of Defense (DoD), and the American Cancer Society (ACS). Below I have provided an overview of my areas of expertise and prior research support. In 1998, after receiving my Bachelor's (honors) and Master's degrees in educational psychology, I joined the department of psychology at the University of Khartoum in Sudan as a lecturer. During this time I taught several undergraduate courses and supervised undergraduate research required for the completion of bachelor and diploma degrees in psychology at the University of Khartoum, including Introduction to Statistics and Research Methodology, Physiological Psychology, and Cognitive Psychology. I also supervised undergraduate research that addressed different topics, including coping with cancer and treatment side effects. Supervising undergraduate research in cancer increased my interests in psychosocial and behavioral issues involved in cancer prevention and health care. Because academic resources were very limited at the Department of Psychology, Khartoum University, I applied for The German Academic Exchange Program and received a 4-year scholarship to obtain a Ph.D. in health psychology at the Free University of Berlin, Germany. I received my Ph.D. (magna cum laude) in October 2004. My dissertation research focused on examining the role of personal and social resources and coping for finding meaning in cancer. I was particularly interested in examining the mediation effects of coping strategies in the relationships among personal and social resources and finding meaning in cancer. During this time, I improved my skills in recruitment of newly diagnosed cancer patients, data entry and organization, and quantitative data analyses using SPSS. In 2006, I joined the department of urology at Mount Sinai School of Medicine to continue my postdoctoral training. As a postdoctoral research associate and a senior project manager at Mount Sinai School of Medicine (2006–2009), I developed strong expertise in developing and evaluating multimedia intervention to enhance quality of life and improve symptom management among prostate cancer survivors (funded by the National Cancer Institute and DoD). In 2010, I was appointed Assistant Professor and a faculty member of the Department of Urology, Mount Sinai School of Medicine, New York. Although I did my postdoctoral training at Mount Sinai on prostate cancer, I have moved on to independent status with my own research and laboratory space (2010). I am currently a principal investigator or a co-investigator on several previously funded grants (NIH, DoD, and ACS).



Bolni M. Nagalo, Ph.D., M.Sc., M.S.

Postdoctoral Fellow
Mayo Clinic
Department of Hematology/Oncology
2439 East Fifth Street, CRB 1-265
Tempe, AZ 85281
Telephone: 715–305–1627
Email: bolnimarius@gmail.com

Research Interests

I am very interested in research projects involving the understanding of molecular pathogenesis underlying hepatocarcinoma and cholangiocarcinoma, in order to identify new molecular targets for more effective treatment. The development of biomarkers for early detection of hepatobiliary cancers and the monitoring of high risk of active hepatitis B infected patients. I recently started a project with our collaborators in West Africa to study at the gene level (p53 mutations) those factors that could explain the early-onset of liver cancer in African and African-descent populations.

Susanne Nicholas, M.D., Ph.D., M.P.H.

Associate Professor of Medicine
Director, UCLA Nephrology Training Program
Divisions of Nephrology and Endocrinology
Department of Medicine
David Geffen School of Medicine
University of California, Los Angeles
Warren Hall
900 Veteran Avenue, Suite 24–130
Los Angeles, CA 90095
Telephone: 310–794–7555
Fax: 310–794–7654
Email: sunicholas@mednet.ucla.edu

Research Interests

My research interest is primarily in the area of diabetic kidney disease. My basic science work involves investigating and assessing the pathophysiologic mechanisms and morphometric analyses of diabetic kidney disease with the goal of finding novel biomarkers and therapeutic targets. My research projects involve (1) the delivery of a novel agent using vault nanocapsules for the treatment of diabetic kidney disease and other kidney diseases; (2) a genetic clinical study to identify susceptibility genes responsible for diabetic kidney disease and their linkage relationships in ethnic populations; and (3) the identification of biomarkers for the early diagnosis and management of patients at risk for the development and progression of diabetic kidney disease. Some of our studies include the use of animal models of human diabetic kidney disease and morphometric analysis by light and electron microscopy to accurately assess structural changes related to disease progression in the kidney.

Keith Norris, M.D., Ph.D.

Professor of Medicine
Division of General Internal Medicine and Health Services Research
David Geffen School of Medicine
University of California, Los Angeles
Co-leader, UCLA-CTSI Community Engagement and Research Program
Editor-in-Chief, *Ethnicity and Disease*
911 Broxton Avenue
Los Angeles, CA 90024
Telephone: 310–794–6973
Fax: 310–794–0732
Email: knorris@ucla.edu

Research Interests
My research interests focus on hypertension and chronic kidney disease in African Americans. Other research areas include the role of Vitamin D and oxidative stress in health disparities and enhancing community-academic partnerships. I have extensive experience in patient recruitment and retention and community-partnered research within the South Los Angeles community. I was the Charles Drew University principal investigator for the NIH-funded African American Study of Kidney Disease and Hypertension (AASK) and the AASK Cohort Study. To date, AASK is the largest comparative drug intervention trial focusing on renal outcomes conducted in African Americans. With my community partner, I created the nation's first community faculty track at a medical school as a novel strategy to inculcate social determinants of health from a community level into research and health professional education. I also am active in high school student biomedical summer research.

Diana N. Obanda, Ph.D.

Instructor, Research
Pennington Biomedical Research Center
Louisiana State University
6400 Perkins Road
Baton Rouge, LA 70808
Telephone: 225–270–9455
Fax: 225–763–0274
Email: dobanda@alumni.lsu.edu

Research Interests
My research focuses on lipid metabolite–induced insulin resistance in skeletal muscle and adipose tissue.

Mark Douglas Okusa, M.D., M.S.

Professor
Department of Medicine
University of Virginia
Box 133, Division of Nephrology
Charlottesville, VA 22908
Telephone: 434–242–4736
Fax: 434–924–5848
Email: mdo7y@virginia.edu

Research Interests

Project 1: Pannexin 1 (Panx1) and Acute Kidney Injury (AKI). Panx1, a channel able to release large amounts of ATP to the extracellular space, regulates vital processes, including, but not limited to, ion transport, blood pressure, and immune cell activation through purinergic P2Y and P2X receptor activity. Pharmacological inhibition of Panx1 or global, endothelial, and epithelial tissue specific deletion of Panx1 protects mice from ischemia-reperfusion injury. In cultured cells, Panx1 deletion or overexpression leads to reduced or increased injury, respectively. Therefore, blocking Panx1 is a promising therapeutic strategy, and research centered around ubiquitously expressed pannexin 1 may contribute not only to the field of nephrology, but also to development of a therapeutic strategy against other acute organ dysfunctions. Project 2: Ultrasound (US) for Non-Invasive Prevention of Acute Kidney Injury. This project focuses on a novel approach to modulate inflammation through neural control of inflammation and acute kidney injury; a simple US-based protocol that reduces tissue and systemic inflammation and prevents ischemia-reperfusion injury (IRI) in mice. This effect was a dependent affect which appears to be through the activation of the splenic cholinergic anti-inflammatory pathway (CAP). Our studies will define US characteristics to demonstrate a biomechanical effect to protect kidneys from IRI, define mechanistically the contribution of the CAP to protection from AKI through a unique optogenetic approach to specifically stimulate or silence splenic innervation, and establish the efficacy of US in relevant models of AKI including IRI and septic AKI in mice and AKI in pigs to enable transition to clinical trials in humans. Concepts and therapeutic principles could be pertinent to sepsis, colitis, myocardial ischemia, and arthritis. Project 3: Sphingolipids in Acute Kidney Injury and Disease Progression. Regardless of the cause of injury, a stereotypical response leads to interstitial fibrosis. A key feature is the activation of extracellular matrix-producing myofibroblasts. Sphingosine 1-phosphate (S1P), a pleiotropic lysophospholipid that is involved in diverse functions—such as cell growth and survival, lymphocyte trafficking, and vascular stability—has profound effects on the immune system and kidney injury. S1P is the product of sphingosine phosphorylation by two sphingosine kinase isoforms (SphK1 and SphK2) that have different subcellular localizations. We observed that Sphk2-/- mice had markedly attenuated renal fibrosis compared to Sphk1-/- or WT mice and marked tissue elevation of interferon gamma. These findings led us to focus our effort on the specific role of SphK2 and determine whether intranuclear SphK2 regulates tissue fibrosis.

Tatiana Nunes de Oliveira, M.D.

Clinical Assistant Professor
Department of Pediatrics
University of Colorado Anschutz Medical Campus
8572 East 49th Place
Denver, CO 80238
Telephone: 720–891–9311 (Mobile)
Email: tatiana.oliveira@ucdenver.edu

Research Interests
My research interests are in the area of neurology, more specifically in epilepsy and its associations with other nosologies. Currently I am working in a K23 proposal to study the association of epilepsy and cerebral palsy as a side complementary study of a bigger longitudinal study, already funded, called Cerebral Palsy Adult Transition Longitudinal Study at the Center for Gait and Movement Analysis in the Children's Hospital Colorado. The main work will focus on gait alterations and cardiometabolic syndrome due to inactivity and nutritional changes due to the ketogenic diet often used for epilepsy control.

Felix Omoruyi, Ph.D.

Associate Professor
Department of Life Sciences
Texas A&M University–Corpus Christi
6300 Ocean Drive, Unit 5802
Center for the Sciences, 130B
Corpus Christi, TX 78412
Telephone: 361–825–2473
Email: felix.omoruyi@tamucc.edu

Research Interests
My research focuses on (1) the effects of short- and long-term hyperglycemia on the integrity of specific organs and tissues with a focus in identifying biochemical markers for early detection of complications associated with diabetes and (2) the hypoglycemic and hypolipidemic properties of some medicinal plants in animal models of diabetes, the effects of medicinal plant preparations for the treatment of type 2 diabetes (T2D) using *in vitro* models, how thermotherapy affects miRNA and HSP70 gene expression in healthy and T2D human skeletal muscle cell line models, and how thermotherapy influences markers of oxidative stress and inflammation.

Kwame Osei, M.D., FACE, FACP

Professor Emeritus of Medicine and Exercise Physiology
Division of Endocrinology, Diabetes, and Metabolism
Diabetes Research Center
The Ohio State University Wexner Medical Center
561 McCampbell Hall (5 South)
1581 Dodd Drive
Columbus, OH 43210
Telephone: 614–685–3330
Fax: 614–685–3329
Email: kwame.osei@osumc.edu

Research Interests
My research interests include type 2 diabetes mellitus, obesity metabolism, and race/ethnicity.

Patrick Osei-Owusu, Ph.D., FAHA

Assistant Professor
Department of Pharmacology and Physiology
College of Medicine
Drexel University
245 N. 15th Street
Philadelphia, PA 19102
Telephone: 215–762–4145
Fax: 215–762–2299
Email: po66@drexel.edu

Research Interests
The overall research focus of my laboratory is to understand the role of G protein signaling regulation in health and disease. Specifically, we seek to understand how G protein regulation by regulators of G protein signaling proteins are altered in the regulation of blood pressure and kidney function. Currently, one project is to investigate the etiology of hypertension and renal dysfunction resulting from the deficiency of the extracellular metric protein, elastin. Although elastin deficiency in implicated in stiffening of conducting vessels including the aorta, carotid, and femoral arteries, the mechanisms by which the loss of extracellular proteins translates to altered signaling at the cellular level are not known. We have initial data indicating that cell signaling defects in vascular smooth muscle and sodium handling by the renal tubular system may be involved in the augmented blood pressure and abnormal kidney function due to elastin insufficiency.

Abdul Oseini, M.D.

Assistant Professor
Department of Gastroenterology and Hepatology
Mayo Clinic
Guggenheim 17/33
200 First Street, S.W.
Rochester, MN 55905
Telephone: 507–250–2310
Email: oseini.abdul@mayo.edu

Research Interests
The focus of my research is understanding the mechanisms involved in the infection, disease progression, and eventual malignant transformation of liver cells caused by hepatitis B viral integration. We are exploring the role that certain genes (mainly in the Wnt/B-catenin pathway) play, as well the host immune response, in this malignant transformation of infected liver cells. Minnesota is home to a large African—and to a lesser extent, Asian—immigrant community, which is disproportionately affected by hepatitis B virus and hepatitis C virus infection and its disease burden. By working with these communities through education, screening, and improved access to medical care, we are helping to bridge the health disparity gap that separates these communities from the rest of the population in Minnesota. Born in western Africa (Ghana), I obtained my medical degree from Istanbul University (Cerrahpasa) before completing my residency in internal medicine at the Michigan State University/McLaren Program in 2007. After board certification, I went into basic research as a research fellow under an NIH/National Cancer Institute minority supplement at the Mayo Clinic in Rochester, Minnesota. I currently perform clinical duties in hospital medicine within the Mayo Clinic Health System and at the same time continue my basic research at the main campus under my mentor, Dr. Lewis Roberts. Our laboratory is part of the NIH-sponsored Mayo Clinic–University of Minnesota Clinical Center Consortium of the Hepatitis B Research Network.

Orhan K. Öz, M.D., Ph.D.

Professor
Department of Radiology
The University of Texas Southwestern Medical Center at Dallas
5323 Harry Hines Boulevard, MS9058
Dallas, TX 75390–9058
Telephone: 214–648–2881
Fax: 214–648–2727
Email: orhan.oz@utsouthwestern.edu

Research Interests
My research interests include the regulation of bone mass and metabolism by gonadal steroids; the application of *in vivo* nuclear imaging to study the expression and function of specific molecules; and disease pathogenesis, including diabetes and neoplasms.

Betty Pace, M.D.

Professor
Department of Pediatrics
Augusta University
1120 15th Street
Augusta, GA 30907
Telephone: 706–721–6893
Email: bpace@augusta.edu

Research Interests

I am a professor of pediatrics, Francis J. Tedesco Distinguished Chair, and Interim Chief of the Pediatric Hematology/Oncology Division. I provide leadership for a National Institutes of Health–funded basic research laboratory, focused on studies related to globin gene regulation and the design of drugs to induce fetal hemoglobin to treat sickle cell disease. In 2010, I joined the faculty at Augusta University as Professor of Pediatrics with a joint appointment in the Department of Biochemistry and Molecular Biology and m a member of the Augusta Sickle Cell Disease Research Center. I am the Director of the Pediatric Sickle Cell Program, which provides medical services for 700 children at the Children's Hospital of Georgia in Augusta and rural South Georgia outreach clinics. I have maintained an active training program since 1994, providing opportunity for more than 75 trainees, the majority underrepresented, at the high school, undergraduate, graduate, postdoctoral, and junior faculty levels. I also provide leadership for a national NHLBI-funded training Program to Increase Diversity for Individuals Engaged in Health-Related Research; more than 76 junior faculty across the United States have participated. I have dedicated more than 20 years to increasing the diversity of the biomedical research workforce to improve delivery of culturally sensitive medical care. I received the 2017 American Society of Hematology Award for Leadership in Promoting Diversity.

Yvette C. Paulino, Ph.D.

Associate Professor
School of Nursing and Health Sciences, Room 103
University of Guam
Mangilao, GU 96923
Telephone: 671–735–2661
Fax: 671–734–1203
Email: paulinoy@triton.uog.edu

Research Interests

My mission is to help communities achieve health equity, with a special interest in research workforce development in underserved populations. I am interested in the epidemiology of chronic disease (including oral cancer, diabetes, cardiovascular disease, and obesity) risk in underserved populations. I focus on a variety of exposures, including areca (betel) nut chewing, alcohol, tobacco, diet, physical activity, sleep, and stress. I use the results of my studies to refine health messages and develop appropriate intervention strategies. My most recent intervention is the Betel Nut Intervention Trial, funded by the National Cancer Institute. The trial will test a cessation program on helping betel nut chewers to quit chewing. My other program, recently funded by the National Institute on Minority Health and Health Disparities, will help to establish the baseline of a generational epidemiologic cohort to study the burden of cardiometabolic diseases in Guam and Pohnpei. The program will be sustained through the institutionalization of the research into the curriculum of the public health programs at both the University of Guam and the College of Micronesia–FSM.

Rocio I. Pereira, M.D.

Associate Professor of Medicine
Division of Endocrinology, Metabolism, and Diabetes
University of Colorado School of Medicine
Staff Endocrinologist, Medicine Service
Denver Health Medical Center
660 Bannock Street, MC 4000
Denver, CO 80204
Telephone: 303–602–0813
Fax: 303–602–5055
Email: rocio.pereira@dhha.org

Research Interests

My research focuses on the prevention and treatment of type 2 diabetes and obesity among Latinos. I am the Program Director for a community-based diabetes prevention program for Latinos and conduct research on clinical program implementation. I also am interested in mechanisms for insulin resistance and adipose tissue dysfunction.

Ariana Pichardo-Lowden, M.D., M.Ed.

Associate Professor of Medicine
Division of Diabetes, Endocrinology, and Metabolism
The Pennsylvania State University Milton S. Hershey Medical Center
500 University Drive
P.O. Box 850
Hershey, PA 17033–0850
Telephone: 717–531–8395
Fax: 717–531–5726
Email: apichardolowden@pennstatehealth.psu.edu

Research Interests

My research focuses on a system-based intervention to address gaps in the management of diabetes and dysglycemia in the hospital setting. This work is inherently translational and employs advanced information technology through electronic health records to promote and test standards of care. Through the use of our validated Diabetes Clinical Decision Support Tool, we will assess the impact of various modalities of decision support in the management, documentation, and continuity of care domains of practice, and their associated clinical and economic endpoints related to inpatient diabetes.

Manu Platt, Ph.D.

Assistant Professor
Wallace H. Coulter Department of Biomedical Engineering
The Georgia Institute of Technology and Emory University
315 Ferst Drive, Suite 1308
Atlanta, GA 30315
Telephone: 404–385–8531
Email: manu.platt@bme.gatech.edu

Research Interests

My research bridges tissue remodeling and systems biology. Tissue remodeling involves the activation of proteases, enzymes capable of degrading the structural proteins of tissue and organs. The implications of the activation of these enzymes are applicable to many different diseases, and the Platt Laboratory targets sickle cell disease and cancer metastasis. Mathematical models used by the Platt Laboratory add value to experimental systems by explaining phenomena difficult to test at the wet laboratory bench and to make sense of complex interactions among the proteases or the intracellular signaling changes leading to their expression.

Candice Allister Price, Ph.D.

Assistant Adjunct Professor
Department of Molecular Biosciences
University of California, Davis
1089 Veterinary Medicine Drive, 2205 VM3B
Davis, CA 95616
Telephone: 530–752–5379
Email: caaprice@ucdavis.edu

Research Interests

My current research focuses on investigating the mechanisms by which consumption of sugar-sweetened beverages (SSB) increases risks for cardiovascular disease (CVD) and insulin resistance. Current studies apply the use of stable isotopes during a hyperinsulinemic euglycemic clamp for the measurement of hepatic and whole-body insulin resistance, as well as de novo lipogenesis and triglyceride synthesis under non-steady-state conditions. Additional outcomes include quantification of hepatic fat content using magnetic resonance and fecal collections for the measurement of gut microbiome in response to SSB. As a Building Interdisciplinary Research Careers in Women's Health Scholar, I will extend my previous investigations examining metabolic differences between African American versus Caucasian women to address gaps in knowledge regarding the elevated risk for CVD in African American women and understand the potential role of added sugar consumption. Specifically, current and future research studies focus on understanding the potential link between psychological stress and added sugar intake and the potential synergistic effects on metabolic function and risk factors for CVD and insulin resistance. Primary outcomes measures include metabolomic profiling, gut microbiome profiling, and microRNA expression.

Tanjala S. Purnell, Ph.D., M.P.H.

Assistant Professor of Surgery
Epidemiology, and Health Behavior and Society
Associate Director for Education and Training
Johns Hopkins Center for Health Equity
Johns Hopkins University School of Medicine
2000 East Monument Street
Baltimore, MD 21205
Telephone: 410–955–9037
Email: tpurnel1@jhmi.edu

Research Interests

I am a health services researcher and social epidemiologist with primary interests related to promoting patient-centered care and addressing multilevel determinants of disparities in health care quality, shared treatment decision making, and disease self-management for patients with chronic kidney disease, diabetes, and hypertension. I also lead the Johns Hopkins Center for Health Equity's educational and training initiatives for public health and clinical researchers working to advance health equity.

F. Bridgett Rahim-Williams, Ph.D., M.P.H., M.A.

Professor and Associate Dean for Research
Petrock College of Health Sciences/Department of Public Health
Bethune-Cookman University
L. Gale Lemerand School of Nursing Building, Room 121
739 W. International Speedway Boulevard
Daytona Beach, FL 32114
Telephone: 386–481–2596
Email: rahimwilliamsfb@cookman.edu

Research Interests

As a biocultural applied medical anthropologist and a social and behavioral scientist, I investigate minority health and health disparities among individuals with chronic disease comorbidities. I have a specific interest in functional health status, symptom management, patient-centered health outcomes, and health-related quality of life among individuals with diabetes, HIV, gastrointestinal symptom disorders, and pain. I have research training as a Fellow of the Summer Institute on Aging Research, Fellow of the RAND Summer Institute on Aging Research, Fellow of the Health Equity Leadership Institute, and the National Institute on Minority Health and Health Disparities (NIMHD) Health Disparities Summit. I am a Disparities Research and Education Advancing the Mission (DREAM) Fellow with the NIMHD. The DREAM is a (K22) Career Transition Award funded by the NIMHD. The award supports intramural and extramural career training and development in health disparities research.

Gerald Alphonse Rameau, Ph.D.

Morgan State University
Richard N. Dixon, Suite 116
1700 E. Cold Spring Lane
Baltimore, MD 21251
Telephone: 443–885–4685
Fax: 443–885–8285
Email: gerald.rameau@morgan.edu

Research Interests

We examine the mechanism by which the transmission of information across neural synapses regulates the trafficking of glucose transporter type-3 (GLUT3). We hypothesize that neural activity regulates glucose levels by regulating the expression of cell surface GLUT3. We showed that activation of the NMDAR increases glucose uptake through increased expression of cell surface GLUT3. This mechanism is dependent on the nitric oxide and cGMP-dependent kinase pathway. This also confirms the findings that increased brain activity is associated with increased glucose uptake in brain tissues. However, the mechanisms by which neural activity regulates neural glucose uptake and GLUT3 trafficking are unknown. We are testing whether GLUT3 structural motifs interact with the endosomal sorting machinery in dendrites and the regulation of GLUT3 location at synapses or at extrasynaptic sites. Our goal is to gain a molecular view of GLUT3 trafficking and the concerted chain of events, mediating the interplay between NMDAR-mediated signal transduction and the expression of cell surface GLUT3. To do so will require the development of next-generation approaches and sensitive physiological models to elucidate rigorously the mechanisms by which neural activity induces the trafficking and cell surface expression of GLUT3. These studies are important for understanding the role of GLUT3 in neurons and are relevant for health and diseases of the central nervous system and peripheral nervous system.

Marina Ramirez-Alvarado, Ph.D.

Professor of Biochemistry and Molecular Biology
Mayo Clinic
200 First Street, S.W.
Rochester, MN 55905
Telephone: 507–284–2705
Fax: 507–284–3383
Email: ramirezalvarado.marina@mayo.edu

Research Interests

We are particularly interested in light chain amyloidosis, a misfolding disease characterized by the deposition of monoclonal immunoglobulin light chains as amyloid fibrils affecting several organs, causing dysfunction. Understanding the protein misfolding and aggregation mechanisms will help us to understand these diseases and will guide us in designing therapeutic strategies to overcome the amyloid phenomenon. By exploring the role of folding kinetics, misfolding pathways, and stability, it is possible to understand the mechanisms of amyloid formation in light chain amyloidosis, leading to the prediction of the behavior of other amyloid diseases, with the ultimate goal of intervening to prevent progression of the disease.

Marpadga A. Reddy, Ph.D.

Assistant Research Professor
Diabetes Complications and Metabolism
Beckman Research Institute of City of Hope
Gonda South, Room 2019
1500 East Duarte Road
Duarte, CA 91010
Telephone: 626–218–3671
Email: mreddy@coh.org

Research Interests

The major focus of my research is to understand the molecular mechanisms involved in the pathogenesis of diabetic vascular complications. In the early stages of my career, working at prestigious institutions in the United States (Duke University and Children's Hospital Los Angeles) contributed significantly towards my understanding signaling mechanisms involved in oncogenesis and host-microbial interactions. In the past decade at City of Hope, I examined mechanisms involved in the pathogenesis of diabetic vascular disease and diabetic nephropathy. These studies provided significant insights into the signaling, epigenetic, and non-coding RNA (miRNA and lncRNA) dependent mechanisms involved in enhanced pro-inflammatory, -atherogenic, and -fibrotic responses of monocyte/macrophages, vascular smooth muscle cells, and renal mesangial cells in cell culture and diabetic animal models. Key findings include the dysregulation of Src-NF-kB-CREB signaling; epigenetic histone modifications and histone methyl transferases by high glucose, AGEs, and oxidized lipids; the role of persistently altered epigenetic and miRNA dependent mechanisms in "metabolic memory"; and the demonstration that conventional therapies do not reverse all the diabetes-induced epigenetic mechanisms involved in diabetes complications. My recent studies identified the role of novel enhancer-lncRNA dependent mechanisms in vascular inflammation, characterization of diabetes induced changes in monocyte/macrophage transcriptomes, and for the first time demonstrated the role of diabetes-induced lncRNAs in pro-inflammatory phenotype of macrophages. Currently, I am studying transcription mechanisms involved in the dysregulated expression and function of diabetes regulated lncRNAs including interaction with enhancers and transcription regulators using state-of-the art proteomics, transcriptomics, and genome editing approaches to develop novel inhibitors for the diabetes-induced monocyte/macrophage dysfunction and metabolic memory.

Fatima Rivas, Ph.D.

Assistant Member Faculty
Chemical Biology and Therapeutics
St. Jude Children's Research Hospital
262 Danny Thomas Place
Memphis, TN 38105
Telephone: 901–595–6504
Fax: 901–595–5715
Email: fatima.rivas@stjude.org

Research Interests

Our fundamental goals in the laboratory are to generate lead matter to dissect relevant biological pathways through the following mechanism: (1) identify unique natural products from terrestrial sources, (2) establish synthetic protocols for those molecules, and (3) evaluate their structure activity relationship and identify their biological targets through chemical biology experiments. These molecular probes are designed to provide basic mechanistic insight regarding mode of action through pharmacological evaluation at the cellular level first and later at the organismal level. While chemical modifications can advance these compounds from hit to lead, our main objective remains at developing a better understanding of the biological system by using these natural products as chemical tools.

Alexandra Perez Rivera, Pharm.D., M.S.

Associate Professor of Pharmacy
Nova Southeastern University College of Pharmacy
3200 S. University Drive
College of Pharmacy
Ft. Lauderdale, FL 33328
Telephone: 954–262–1295
Email: alperez@nova.edu

Research Interests

I have developed a strong scholarly path in the field of pharmacoeconomics and outcomes research, specifically in the areas of diabetes and clinical pharmacy services. I have had different roles in several research projects. I was a co-investigator and an intervention pharmacist in a completed randomized clinical trial evaluating the effect of pharmacist services on diabetes outcomes among the South Florida Latino population. I was a principal investigator in a randomized clinical trial evaluating the effect of text messaging aimed to improve medication adherence among diabetes patients. I was a data analyst for an American Association of Diabetes Educators–funded prospective cohort study evaluating the effect of a multilevel diabetes education team in patient medical homes on diabetes outcomes. I also was a leader in the development of multiple comprehensive primary research reviews on the clinical efficacy, safety, and cost-effectiveness of medical technologies in the diabetes population. These reviews advised the Colombian Health Regulatory Agency (Comision Reguladora de Salud) in the decision-making process for incorporating these technologies into their national public health program formulary. I was a main contributor and second author in a published meta-analysis evaluating the clinical effectiveness of an injectable diabetes drug. I was also a co-investigator and statistician in a retrospective study evaluating the effect of medication therapy management services delivered by a clinical pharmacist in an indigent clinic. I have also been a co-investigator in two systematic reviews of economic evaluations of clinical pharmacy services, one in which I was the first author (2001–2005 White Paper publication). More recently, I have published four studies evaluating the quality of antihyperglycemic, antihypertensive, and antidepressant regimens among Mexican Americans, whites, and African Americans with type 2 diabetes using the National Health and Nutrition and Examination Survey (NHANES) database. I have demonstrated the ability to apply both my clinical and research training with the purpose of pursuing a clear research path in pharmacoeconomic and outcomes research in the area of diabetes and health services at the national and international levels. These are strong building blocks towards the pursuit of a strong scholarly career in my chosen field. I have taught Pharmacoeconomics for 5 years. I also designed an Applied Secondary Data Analysis elective course that teaches pharmacy students how to conduct a study using the NHANES data and SPSS. I am the National Pharmacy Honor Society Gama Theta Chapter advisor.

Lewis Rowland Roberts, M.D., Ph.D., M.B.Ch.B.

Professor of Medicine
Division of Gastroenterology and Hepatology
Mayo Clinic College of Medicine
200 First Street, S.W.
Rochester, MN 55905
Telephone: 507–266–3239
Fax: 507–284–0762
Email: roberts.lewis@mayo.edu

Research Interests

My research interests include studies of the molecular mechanisms of liver carcinogenesis; development of biomarkers and clinical tests to improve the diagnosis and treatment of liver, bile duct, and pancreas cancers; and improvements in prevention, diagnosis, and treatment of hepatitis and liver cancer in Africa, as well as in immigrant African and Asian communities in the United States. My research has been funded by the National Institutes of Health, Robert Wood Johnson Foundation, Foundation for Digestive Health and Nutrition, and Cholangiocarcinoma Foundation. I have authored more than 300 articles, book chapters, abstracts, and letters.

Mayra Rodriguez, M.D.

Mount Sinai Medical Center
6 E. 116th Street, Suite 6B
New York, NY 10029
Telephone: 917–583–8590
Email: mayra.rodriguez@mountsinai.org or mdrodri7@gmail.com

Research Interests

I am currently completing my fellowship in nephrology at Mount Sinai Medical Center in New York City while also earning my Masters in Public Health. My research interests include investigating the social determinants of health in our underserved populations. Hispanics, in particular, have a very high prevalence of diabetes and kidney disease. It is debatable whether this is due to genetics, environment (meaning habits/lifestyle), or poor education and limited access to health care. My goal is to remain in academic medicine and develop as a specialist and clinical researcher with a focus on health care disparities and chronic kidney disease. I would like to study the Hispanic population in particular, and help elucidate the predominant driving force behind the increasing morbidity in this population. Understanding the roles played by nature versus nurture in this rapidly growing population has implications for the development of ethnically driven guidelines, public health initiatives, and controlling and properly allocating health care spending.

Damian Gaston Romero, Ph.D., FAHA

Associate Professor
Department of Cell and Molecular Biology
The University of Mississippi Medical Center
2500 N. State Street
Jackson, MS 39216
Telephone: 601–984–1523
Fax: 601–984–1501
Email: dromero@umc.edu

Research Interests

My major research interests include (1) Molecular mechanisms of aldosterone-mediated cardiac and renal injury and dysfunction. Excess aldosterone (ALDO) causes hypertension and cardiac hypertrophy, inflammation, fibrosis and dysfunction. Primary aldosteronism (PA) is a human pathology characterized by the excess autonomous secretion of ALDO by the adrenal gland and is associated with severe cardio-renal damage. PA is the most common cause of secondary hypertension. Despite the prevalence of PA and its deleterious consequences, the molecular mechanisms that mediate the onset and progression of ALDO-mediated cardiac injury and dysfunction remain poorly understood. We use a variety of experimental models—ranging from cells to whole animals—and apply a range of molecular, cellular, and physiological techniques to elucidate the genes, pathways, and networks modulated by excess ALDO. We aim to elucidate potential targets that we can manipulate to abolish or mitigate the deleterious cardiac and renal effects of excess ALDO observed in patients with PA. (2) Role and regulation of microRNAs in aldosterone-mediated cardiac and renal injury and dysfunction. MicroRNAs (miRNAs) are short, endogenous, non-coding RNAs that exert their biological effects by downregulating the expression levels of specific genes. Several microRNAs have been implicated in cardiovascular disease. However, the role of miRNAs in ALDO-mediated cardiac and renal injury and dysfunction remains largely unknown. We use animal experimental models of PA to elucidate the miRNAs regulated by excess ALDO in the cardiovascular and renal systems. Furthermore, we manipulate candidate target microRNAs by pharmacological or genetic means to elucidate the role of these particular microRNAs in the onset and progression of cardiac and renal injury triggered by excess ALDO. We aim to identify candidate miRNAs to manipulate them by pharmacological means to abolish or mitigate the deleterious cardiac and renal phenotype observed in patients with PA. (3) Role of microRNAs in acetaminophen-induced acute liver failure. Acute liver failure (ALF) is characterized by severe and sudden loss of hepatocellular function in patients with previously normal liver function, leading, in many cases, to multiorgan system failure and death. In the United States, drug-induced liver injury is the main cause of ALF, and acetaminophen (APAP) intoxication accounts for ~50% of the cases. Current therapies are suboptimal; therefore, alternative or complementary pharmacological interventions and therapies are desperately needed for individuals suffering from APAP-induced ALF. miRNAs, as a family, have been implicated in liver zonation but no individual candidates have been identified. Moreover, APAP-induced ALF is a zonal pathological event. We aim to identify miRNAs that temporally disrupting liver zonation, beside other possible mechanisms, may be manipulated by pharmacological means to abolish or mitigate the effects of APAP-induced ALF.

José R. Romero, Ph.D.

Associate Physiologist
Division of Endocrinology, Diabetes, and Hypertension
Department of Medicine
Brigham and Women's Hospital
Harvard Medical School
221 Longwood Avenue
Boston, MA 02115
Telephone: 617–732–4948
Fax: 617–732–5764
Email: jromero@partners.org

Research Interests

My main interest is in cation transport dysregulation in cardiovascular diseases, including hypertension, sickle cell, and diabetes. These studies have focused our research on two problems relevant to patients with diabetes and hypertension: (1) the role of cellular magnesium in the pathophysiology of cardiovascular disease and (2) the role of aldosterone and mineralocorticoid receptor activation in vascular inflammation. My group has led the discovery of a novel mechanism for the rapid/non-genomic effects of aldosterone in vascular tissue using both *in vivo* and *in vitro* approaches. These studies show a prominent role for striatin, a caveolin-1 binding protein, in aldosterone-mediated oxidant stress and inflammation and formed the basis for our most recent NIH R01 grant award, "Aldosterone, Intracellular Leukocyte Magnesium and Inflammation in Diabetes." This was an ancillary clinical trial that used a translational research approach to characterize the role of mineralocorticoid receptor activation in vascular inflammatory processes in patients with type 2 diabetes. A significant part of my professional activities is also devoted to mentoring junior faculty, fellows, and students at local, national, and international levels. I am a consultant for medical research and training institutes in Puerto Rico, Portugal, and Mexico. For my teaching and mentoring contributions, I was honored to receive the A. Clifford Barger Excellence in Mentoring Award at Harvard Medical School (HMS). I also direct a translational research summer program for medical students and recent medical graduates interested in minority health research and was humbled to receive the Harold Amos Faculty Diversity Award at HMS. These recognitions among the 11,000 HMS faculty members led to my appointment as a Scholar of The Academy at HMS, an institution established to advance excellence in education of physicians and scientists throughout Harvard, and my most recent recognition as a member of The Council of Mentors at Harvard, a group of distinguished faculty noted for their accomplishments and excellence in mentoring.

Sylvia E. Rosas, M.D., M.S.

Associate Professor of Medicine
Joslin Diabetes Center/Beth Israel Deaconess Medical Center
Harvard Medical School
One Joslin Place
Boston, MA 02215
Telephone: 617–309–2477
Email: sylvia.rosas@joslin.harvard.edu

Research Interests

My primary research interest is the epidemiology of cardiovascular and metabolic complications of patients with chronic kidney disease. I am a principal investigator for the NIDDK APOLLO Network and the Kidney Precision Medicine Project. I also am an ancillary study investigator for the Chronic Renal Insufficiency Cohort Study and the Multi-Ethnic Study of Atherosclerosis. I am an investigator in the PERL study, which is a randomized trial of the effects of allopurinol on progression of diabetic nephropathy. I also direct the Latino Kidney Clinic at the Joslin Diabetes Center. I am currently the chair for the Minority Affairs Committee for UNOS. In 2017, I received two NIDDK awards: APOLLO Network U01 and Kidney Precision Medicine Project, Ug3/UH3. I recently collaborated on "Choice of Hemodialysis Access in Older Adults: A Cost-Effectiveness Analysis," published by the *Clinical Journal of the American Society of Nephrology* in June 2017.

Juan Sanabria, M.D., M.Sc., FRCSC, FACS, FAASLD

Professor of Surgery
Marshall University Joan Edwards School of Medicine
Vice-Chair and Scientific Director
Professor of Nutrition and Preventive Medicine
Case Western Reserve University (Adjunct)
LCDR U.S. Navy (Reserve)
Navy Federal Health Care Center Naval Station Great Lakes
North Chicago, IL 60064
Telephone: 216–647–8399
Email: jrs83@case.edu or sanabriaj@marshall.edu

Research Interests

My research interest revolves at the levels of basic, translational, and clinical research. We are exploring the chemical-induced pathways of liver regeneration through the inhibition of the PG cascade and its effects in wound healing. Our more recent results were published this year in *Science*. The translational aspect involves the metabolomic prints (metabolomics) and the glutathione species behavior as biomarkers in patients with and without cirrhosis with tumors for the early detection of liver cancer. We have to open randomized trials for the evaluation of stereotactic body radio surgery in the treatment of advanced liver tumors. Last, we have been involved in the study of high-output outcomes at the global level in an attempt to explain the changes in health issues. Our group's work has been published this year in *The Lancet* and in *JAMA Oncology*.

Virginia Sarapura, M.D.

Associate Professor
Division of Endocrinology
Department of Medicine
University of Colorado Anschutz Medical Campus
12801 E. 17th Avenue, MS8106
Aurora, CO 80045
Telephone: 303–724–3931
Fax: 303–724–3920
Email: virginia.sarapura@ucdenver.edu

Research Interests

My research interests focus on autoimmune thyroid disease. During my training, I investigated the mechanism of expression of the alpha-subunit of thyroid stimulating hormone and the regulation of thyrotrope function and thyroid hormone receptor expression by thyroid hormone, and I also explored expression of the glycoprotein hormone alpha-subunit gene in solid tumors, specifically lung cancer. With my basic training in molecular biology research, I became interested in the genetic and epigenetic factors that predispose to autoimmune thyroid disease, which comprise a large part of my clinical practice as an academic endocrinologist. I have established collaborations to study the genetic and immunological processes leading to the development of autoimmune thyroid disease. I have participated in several grant proposals, one of which was successfully funded by the National Institute of Allergy and Infectious Diseases, now completed, resulting in at least two publications.

Melinda Sarmiento-Bender, Ph.D., M.S.N., RN, PNP-BC

Assistant Professor
Department of Family Health Care Nursing
University of California, San Francisco
2 Koret Way, N431C, Box 0606
San Francisco, CA 94143–0606
Telephone: 415–502–5668
Email: melinda.bender@ucsf.edu

Research Interests

My research focuses on health promotion and prevention of obesity-related chronic disease to improve health outcomes and reduce health disparities in underrepresented vulnerable populations, particularly Filipino and Latino Americans at high risk for developing diabetes and cardiovascular disease. To address these disparities, I employ a community-based participatory research (CBPR) approach to culturally adapted lifestyle interventions combining mobile health (mHealth) technologies to promote weight loss through increased physical activity and healthy nutrition. I incorporated various intervention strategies in my studies. First, given the rapid proliferation of digital mobile devices (e.g., smartphone, tablets, and accelerometers), such mobile technology has the potential to benefit lifestyle intervention delivery in many ways, including economy of labor, scalability of reach via real time feedback, and virtual social network support (Facebook). Second, my clinical experience and research with diverse at-risk populations highlights the importance of culturally adapting interventions to be relevant for the intended populations. By using such strategies, I have seen improvement in participant recruitment, engagement, and retention, particularly among hard-to-reach populations, such as Filipino and Latino immigrants. Moreover, I recognize the need to disaggregate racial populations (e.g., Asian, Hispanics and Pacific Islanders) by subgroups (e.g., Filipinos and Hawaiians) to emphasize the high prevalence of obesity, diabetes, and cardiovascular disease among certain subgroups that are often misperceived as low risk and subsequently overlooked in preventive health research. As both an experienced nurse researcher and clinical nurse practitioner, I have extensive knowledge and skills in project management, grant administration, and conducting CBPR preventive health research. These are capabilities necessary to develop and implement culturally relevant interventions for lifestyle behaviors change. My Philippine heritage, multicultural background, language skills (Spanish and Tagalog), and clinical experience have enabled me to effectively serve and interact with diverse racial/ethnic populations. In my capacity as principle investigator or co-investigator on four intervention research studies targeting Filipinos, Latinos, and Asian/Pacific Islanders, I demonstrated the capability to successfully recruit, engage, and retain hard--to-reach, underrepresented populations and to blend digital technology components (mHealth apps, pedometers, social media) with culturally adapted lifestyle health interventions. As one of few Filipino investigators, my plans are to continue research with underrepresented populations, particularly with Filipinos with one of the highest prevalence of obesity and diabetes with a dearth of preventive health research. More research is needed to identify effective interventions to improve health outcomes among Filipinos.

Isabel R. Schlaepfer, Ph.D.

Assistant Professor
Division of Medical Oncology
Genitourinary Cancer Program
University of Colorado School of Medicine
12801 E. 17th Avenue, Room L18-8101D, MS 8117
Aurora, CO 80045
Telephone: 303–724–8867
Fax: 303–724–3889
Email: isabel.schlaepfer@ucdenver.edu

Research Interests
My long-term goal is to use my molecular and lipid metabolism training and apply it to investigate how prostate cancer cells use lipids for growth and survival. My current project focuses on the role of the CPT1A enzyme in prostate cancer growth. CPT1A functions as a gatekeeper, mediating the entry of lipid into the mitochondria for oxidation and growth. I am using clinically safe drugs from the cardiovascular/obesity field to target lipid oxidation and elucidate metabolic weaknesses that can be exploited in the clinic for more effective imaging and therapeutic combinations.

Veronica A. Segarra, Ph.D.

Assistant Professor
Department of Biology
High Point University
One University Parkway
High Point, NC 27265
Telephone: 336–841–9507
Email: vsegarra@highpoint.edu

Research Interests
I am an Assistant Professor in the Department of Biology at High Point University (HPU) in High Point, North Carolina. I completed my Ph.D. in Biophysics and Biochemistry at Yale University and my B.S. in Biochemistry at the University of Miami. My contributions to science have come in the form of research breakthroughs in the study of several yeast proteins that coordinate vesicular trafficking pathways, including clathrin, auxilin, and Atg27. I use budding yeast to investigate the cellular compartments and proteins responsible for trafficking specific lipid membranes and membrane-associated proteins within the cell, particularly in response to conditions of stress. My laboratory is particularly interested in the identification and trafficking of cargo molecules and adaptors involved in the cellular process known as autophagy, a cellular self-eating process that helps cells cope with starvation and cellular damage. This involves the biochemical and genetic manipulation of budding yeast and observation of fluorescent cargo proteins trafficking throughout the cell. My laboratory is located at HPU—a primarily undergraduate institution. My laboratory is not only the home base for my research program, but also a place where undergraduate students receive one-on-one mentoring as they strive to develop their identity in science and research. At HPU, I primarily teach general education courses and upper-level cell biology courses with rigorous laboratory components. My research interests also include science pedagogy innovation and best practices. I am currently Co-Chair of the Minorities Affairs Committee of the American Society for Cell Biology.

Patricia Silveyra, Ph.D., M.S.

Assistant Professor of Pediatrics
The Pennsylvania State University College of Medicine
213 W. Main Street
Hummelstown, PA 17036
Telephone: 717–531–5605
Fax: 717–531–0482
Email: pzs13@psu.edu

Research Interests

My current research is focused on the study of the mechanisms associated with the development and resolution of lung disease and injury caused by environmental stressors, with particular emphasis on gender and inter-individual differences. My laboratory uses a combination of molecular biology, immunology, and endocrinology approaches to study hormonal regulation of pulmonary gene expression and function in response to environmental insults. A separate line of research of my laboratory is focused on the identification of miRNAs as non-invasive biomarkers for pediatric inflammatory lung disease. We currently are profiling miRNA signatures in tracheal aspirates from a cohort of pediatric patients receiving mechanical ventilation in our NICU and PICU. Our goal is to identify miRNA signatures that can serve as biomarkers for identifying children at risk for developing inflammatory lung disease (ILD). We are also interested in studying miRNA regulatory networks that will help us elucidate the molecular mechanisms involved in the development and progression of pediatric ILD, such as bronchopulmonary dysplasia and cystic fibrosis.

Omar Sims, Ph.D.

Assistant Professor
College of Arts and Sciences
The University of Alabama at Birmingham
1720 Second Avenue South, HB 414
Birmingham, AL 35294–1260
Telephone: 205–975–4938
Email: osims@uab.edu

Research Interests

My program of research is focused on public health management and clinical management of liver disease caused by hepatitis C virus (HCV) infection in mono-infected and HCV/HIV co-infected patients. HCV is the leading cause of cirrhosis, hepatocellular carcinoma, and liver transplantation in the United States and in most of the western world. Likewise, liver disease caused by HCV is the leading non-AIDS cause of death among those with HIV infection. The goal of my research in this arena is to publish clinical and translational research to help health professionals improve health outcomes and extend life of those burdened with chronic HCV-associated liver disease. I aim to accomplish this goal by focusing my research efforts on populations heavily burdened with HCV, but often under-researched or underrepresented in liver research: HCV-infected persons with co-existing alcohol, substance use, and psychiatric disorders, HCV/HIV co-infected persons, and African Americans living with HCV.

Jevetta Stanford, Ed.D.

Research Assistant Professor
Clinical and Translation Science Institute
Community Engagement and Research Program–Jacksonville
University of Florida College of Medicine
Third Floor, LRC L–13
653-1 W. Eighth Street
Jacksonville, FL 32209
Telephone: 904–244–3768
Fax: 904–244–5341
Email: jevetta.stanford@jax.ufl.edu

Research Interests
My research interest focuses on racial differences in the clinical progression of low-risk prostate cancer, especially the role of diet in slowing clinical progression of prostate cancer while using active surveillance to manage the disease. My long-term research goal is to understand the role specific nutrients have in preventing the clinical progression of prostate cancer in black men. An emerging area of interest is to explore the role of diet in preventing the clinical progression of other low-risk cancers.

Charmaine Stewart, M.D., FACP

Gastroenterologist
Digestive Health Center
University of Wisconsin Health Center
750 University Row
Madison, WI 53705
Telephone: 608–890–5000
Email: cstewart@medicine.wisc.edu

Research Interests
My research interests include the pathophysiology of cognitive impairment in hepatic encephalopathy and sleep disorders associated with cirrhosis.

Alexis M. Stranahan, Ph.D.

Assistant Professor
Physiology Department
Augusta University
1120 15th Street, CA 3145
Augusta, GA 30912
Telephone: 706–721–7885
Fax: 706–721–7299
Email: astranahan@augusta.edu

Research Interests

My laboratory uses a multilevel approach to resolve the role of glucocorticoid hormones in hippocampal synaptic deficits in leptin receptor-deficient mice, a rodent model of insulin-resistant diabetes. We also study rats with diet-induced insulin resistance, which more closely resemble the etiology of diabetes in humans. These models are being characterized with regard to glucocorticoid-mediated changes in plasticity in the hippocampus, with the eventual goal of targeting the hippocampal corticosteroid signaling cascade to attenuate cognitive impairment in individuals with insulin-resistant diabetes.

April J. Stull, Ph.D., RD

Associate Professor
Department of Human Ecology
University of Maryland, Eastern Shore
2109 Richard A. Henson Center
Princess Anne, MD 21853
Telephone: 410–651–6060
Fax: 410–651–6285
Email: ajstull@umes.edu

Research Interests

My research interests are in nutrition, botanicals, and diabetes prevention. Most of my research has focused on botanicals and their impact on improving metabolic syndrome risk factors. Specifically, we have found that consuming bioactives in blueberries for 6 weeks improved insulin sensitivity and endothelial function in an obese population with prediabetes and hypertension. In addition, I am interested in studying the effects of other botanicals, especially anthocyanin-rich foods, on improving metabolic syndrome risk factors.

Shakira F. Suglia, D.Sc., M.S.

Associate Professor
Department of Epidemiology
Rollins School of Public Health Emory University
1518 Clifton Road
Atlanta, GA 30318
Telephone: 404–727–8184
Email: shakira.suglia@emory.edu

Research Interests
My research takes a multidisciplinary approach to understanding health disparities beginning in childhood. I have focused most of my work on the role of childhood adversities (i.e., violence, parental incarceration, maltreatment) and its effect on physical health outcomes across the life course. Currently I am the principal investigator of the Boricua Youth Study-Health, which examines the role of childhood adversity on cardio-metabolic health among a cohort of young adults. I am also MPI of the Disparities in Biological Aging study, part of the Child Health and Development Studies. Within this unique cohort of adults followed from birth, we will examine the associations of childhood and adult socioeconomic status and social stressors on methylation age, genome-wide methylation and telomere length in adulthood. This work can thus extend our understanding on how stress "gets under the skin" to alter cardiometabolic health and other chronic health conditions. Understanding how childhood adversities impact cardiometabolic health can inform prevention and interventions for cardiovascular health promotion in childhood.

Mariya Sweetwyne, Ph.D.

Acting Instructor
Rabinovitch Laboratory
Department of Pathology
University of Washington School of Medicine
1959 N.E. Pacific Street
HSB K–081, Box 357705
Seattle, WA 98195–7705
Telephone: 206–616–8201
Email: sandu@uw.edu

Research Interests
My research at the University of Washington focuses on the cellular aspects of aging kidneys and chronic kidney diseases. Specifically, I use my training as a cell biologist to study how the epithelial cells of renal glomerular filtration units respond to various injuries. I am most interested in the mechanisms of when and how these responses either balance tissue homeostasis or result in fibrotic disease pathologies. Most recently, my work has contributed to the understanding of how regulation of mitochondrial structure can prevent age-induced glomerulosclerosis. Beyond my work in basic and translational science, I am committed to finding ways to provide research experiences to students who might not otherwise have access to the bench. I spent the first 3 years of my postdoctoral training as a Research and Teaching Fellow at the University of Pennsylvania, where I performed my teacher training primarily in minority-serving institutions. During this time, I created a project designed to engage students enrolled in a traditional classroom setting through the biomedical research experience of hypothesis-driven experimental design and result interpretation. As I continue to develop my research career, I also intend to discover ways to expand on this outreach experience through collaborations with other researchers and educators.

Frank J. Talamantes, Ph.D., M.S.

Professor of Endocrinology
Molecular, Cell, and Developmental Biology
University of California, Santa Cruz
83 Sierra Crest Drive
El Paso, TX 79902
Telephone: 915–727–9516
Fax: 915–990–2201
Email: lactogen@mouseplacenta.com

Research Interests

My research is in the area of Biochemical Endocrinology. My research studies are on the endocrine function of the placenta as it pertains to biochemical and molecular structure of mouse placenta lactogen and the regulation of secretion mPL. I also have studied and published on the hormonal control of mammary carcinogenesis and on the structure and regulation of expression of the growth hormone receptor. I am the author of 173 manuscripts and 13 book chapters.

Beth Tamburini, Ph.D.

Assistant Professor of Medicine and Immunology
GI and Liver Innate Immune Program
Division of Gastroenterology and Hepatology
School of Medicine
University of Colorado Anschutz Medical Campus
12700 E. 19th Avenue, Room P15-10122, MS B-146
Aurora, CO 80045
Telephone: 303–724–0182
Fax: 303–724–7243
Email: beth.tamburini@ucdenver.edu

Research Interests

The goals of my research are to understand how interactions between lymphatic endothelial cells (LECs) and canonical immune cells shape immune responses to infections, cancer, and chronic inflammation. The following three areas of interest aim to expand the field of stromal cells in immunity by understanding the function of the lymphatic endothelium across tissues and systems. First, my discovery that lymphatic endothelial cells in the lymph node have the capacity to hold onto antigens for long periods of time to educate memory T cells led me to become interested in how the lymphatic endothelium interacts with immune cells. My data suggest that antigens disappear from the lymph node on the order of 4 weeks post-immunization or -infection. Antigen-specific T cells continue to divide 6–8 weeks post-immunization or -infection in response to archived antigen. Thus, one of the remaining questions is how lymphatic vessels interact with immune cells outside of the lymph node in the tissue. As lymphatic vessels are also made up of LECs, it seems likely that there may be storage of antigen within the vessels in addition to antigen retention on lymph node LECs.

In addition to understanding the role of antigen retention by the LECs, we aim to understand the role the lymphatic vessels have in interacting with the immune system during breast cancer. Studies to evaluate the role of lymph node LECs within a tumor-draining lymph node as well as tissue lymphatics are currently underway in a collaboration with Traci Lyons, Ph.D., in the context of breast cancer and mammary gland involution. Our prediction is that increased lymphangiogenesis in Sem7a-expressing tumors affects not only tumor lymphatics, but also lymph node lymphatics.

Last, preliminary data—in collaboration with Matthew Burchill, Ph.D., and Hugo Rosen, M.D.—suggest there is a correlation between liver disease progression, lymphangiogenesis, and tertiary lymphoid structures. There is a significant gap in our understanding of both liver disease progression and the effect lymphangiogenesis has during liver disease. We found that there is an increase in the number of CD45+ lymphoid clusters from patients with liver disease and that these clusters are associated with increased disease severity as measured by increased fibrosis and clinical designation of liver function. Furthermore, these lymphoid clusters are highly associated with lymphatic vessels, and it seems likely that lymphatic vessels associated with tertiary lymphoid clusters are recruiting immune cells. Concurrently, it seems likely that the normal lymphatic vessels associated with the portal triad, which are important for lymphatic flow away from the tissue, may be damaged due to chronic inflammation caused by increased fat, cholesterol, or chronic infection.

Taken together, my work strives to answer questions regarding the role of the previously underappreciated lymphatic stroma in immune function. I expect the bridge between the lymphatic stroma and the immune system to be of utmost importance to future vaccine development, understanding of infection, cancer immunotherapies, and chronic diseases.

Jacqueline C. Tanaka, Ph.D.

Associate Professor of Biology
Director, Temple University Undergraduate Training Program: MARC U-STAR
Faculty and Steering Committee of Professional Science Masters in Biotechnology
Department of Biology
Temple University
1900 N. 12th Street
Philadelphia, PA 19122
Telephone: 215–204–8868 (Laboratory)
Fax: 215–204–6646
Email: jtanaka@temple.edu

Research Interests

My research is focused on delineating the structure-function relationships of photoreceptor cyclic nucleotide-gated (CNG) channels. Mutations in the cone genes *CNGA3* and *CNGB3* are associated with achromatopsia in humans and daylight-blindness in dogs. I work with ophthalmic veterinarians to investigate the molecular pathophysiology of inherited mutations in dogs, and our work leads to insights about the structure, folding, subunit assembly, and function of these channels. As Director of a MARC U-STAR training program, I am engaged in mentoring undergraduate students from underrepresented backgrounds for competitive Ph.D. programs in biomedical and behavioral science. I work with colleagues at Cuttington University in Liberia to help build their science, technology, engineering, and mathematics education training; their faculty; and on providing used laboratory equipment. In my role in the Professional Science Master's program, I teach a course on the ethics of biotechnology, encouraging students to analyze life cycle impacts of drugs and chemicals, considering long-term epigenetic and transgenerational effects of endocrine-disrupting hormones in particular.

Heather Tarleton, Ph.D., M.S., M.P.A.P.

Assistant Professor
Department of Health and Human Sciences
Affiliate Faculty
The Bioethics Institute
Loyola Marymount University
North Hall 211
One LMU Drive, MS 8160
Los Angeles, CA 90045–2659
Telephone: 310–338–4247
Fax: 310–338–5317
Email: heather.tarleton@lmu.edu

Research Interests

My research focuses on cancer epidemiology and cancer survivorship. Within cancer epidemiology, my interests are in gene-environment interactions that contribute to the development of gastrointestinal and gynecologic cancers. Within cancer survivorship, my research interests are in prevalent comorbidity among cancer survivors and behavioral interventions for chronic disease management. Currently, I am conducting a study titled, "IMPAACT: Improving Physical Activity After Cancer Treatment." The IMPAACT study is a collaborative effort with my colleagues in the Department of Health and Human Sciences and is also a research training opportunity for upperclassmen preparing to enter the allied health professions. The study connects epidemiology, exercise physiology, nutrition, and rehabilitation science and recruits participants from the racially and ethnically diverse cities within Los Angeles County. The study was designed to examine the effects of a combined aerobic exercise and resistance training program on the body composition of cancer survivors and on reducing the risk of diabetes, cardiovascular disease, and osteoporosis among cancer survivors. The study also aims to improve cancer survivors' overall capacity to engage in physical activity by addressing fatigue, balance, muscle health, cardio-respiratory fitness, neuropathy, and psychosocial barriers to motivation. In addition to my focus on cancer epidemiology and cancer survivorship research, I also am heavily invested in drawing undergraduates from underrepresented backgrounds and underserved communities into science, technology, engineering, and mathematics research. I am a faculty mentor for the McNair Scholars Program at Loyola Marymount University and a Councilor for the Health Sciences Division of the Council on Undergraduate Research.

Carolyn M. Tucker, Ph.D.

Florida Blue Endowed Chair in Health Disparities Research,
Distinguished Alumni Professor
Department of Psychology
University of Florida
P.O. Box 112250
Gainesville, FL 32611–2250
Telephone: 352–273–2167
Fax: 352–392–7985
Email: cmtucker@ufl.edu

Research Interests

I use an academic-community partnership research approach and a community-based participatory research model. My research focuses on (1) culturally sensitive health promotion and health care to prevent and reduce obesity, hypertension, type 2 diabetes, and colorectal cancer; (2) the integration of health promotion into medicine; and (3) community health empowerment to reduce health disparities that affect racial/ethnic minority and economically disadvantaged communities. My current research studies involve (1) developing and testing interventions to prevent and reduce obesity in at-risk communities; and (2) empirically examining the links between patient-centered, culturally sensitive health care and health outcomes among racial/ethnic minorities and the medically underserved. My health self-empowerment theory and Patient-Centered, Culturally Sensitive Health Care Model are widely used. I have more than 116 published refereed articles and one published book, and have received more than $11 million in research grants.

I am proudest of the fact that under my mentorship, 54 doctoral students have received their Ph.D. degrees, and 50 graduate students have received their Master's degrees. Among my students, more than 40 percent are racial/ethnic minorities.

Crystal C. Tyson, M.D.

Medical Instructor
Division of Nephrology
Stedman Nutrition and Metabolism Center
Duke University Medical Center
3475 Erwin Road, Suite 100
Durham, NC 27710
Telephone: 919–660–6626
Fax: 919–660–6626
Email: cs206@dm.duke.edu

Research Interests

My research interests include nonpharmacologic strategies involving diet modification and weight management to reduce the risk of cardiovascular disease for adults with chronic kidney disease, hypertension, and resistant hypertension, with a focus on minority health. My long-term career goal as a clinical investigator is to reduce racial disparities for patients with chronic kidney disease and hypertension.

Ebele M. Umeukeje, M.D., M.P.H.

Assistant Professor of Medicine
Division of Nephrology and Hypertension
Vanderbilt University Medical Center
1161 21st Avenue South, MCN S–3223
Nashville, TN 37232
Telephone: 615–936–3283
Email: ebele.m.umeukeje@vanderbilt.edu

Research Interests

I am passionate about improving health outcomes in vulnerable patients with kidney disease. My research is aimed towards understanding the influence of key novel psychosocial factors on adherence in patients with kidney disease and will inform evidence-based, patient-centered innovative approaches to improve adherence and critical health outcomes in this patient population. I also have a special interest in health disparities in this patient population, especially those that are mediated by race. I have specifically assessed the impact of autonomy-based psychosocial factors mediated by self-determination theory, such as autonomous motivation and perception of providers' autonomy support on phosphate binder medication adherence and serum phosphorus control in dialysis patients, and discovered that these factors are strongly linked with phosphate binder medication adherence. Phosphate binder adherence also strongly associates with serum phosphorus control. Furthermore, I have found interesting differences by race, which could be useful targets for future intervention. Building directly upon these discoveries of potential pathways, I have tested the feasibility of motivational interviewing to improve these key autonomy-based psychosocial factors, medication adherence and bone mineral health in patients with end-stage renal disease through an National Institute of Diabetes and Digestive and Kidney Diseases F32-funded RCT. Through my Building Interdisciplinary Research Careers in Women's Health K12 award, as well as my recently funded NIH K23 award, I am currently focusing my research interests on identifying novel patient and provider-level psychosocial determinants of adherence among African American dialysis patients. I also intend to develop culturally sensitive strategies to improve dialysis treatment adherence among African American patients. Through community partnerships, I have also conducted formative research to understand barriers to chronic kidney disease screening in non-whites especially those who are at risk for chronic kidney disease.

Etienne Maria Vasconcellos de Macedo, M.D., Ph.D.

Assistant Professor
Department of Medicine
University of California, San Diego
Altman Clinical and Translational Research Institute
9452 Medical Center Drive, L3E 405
San Diego, CA 92037
Telephone: 858–246–2085 ext. 62085
Email: emmacedo@ucsd.edu

Research Interests

My research interests are focused on three related topics: prevention and early diagnosis of acute kidney disease (AKD), timing of renal support in AKD, and factors affecting progression to chronic kidney disease (CKD). The increasing prevalence of AKD in community and hospitalized patients, coupled with high rates of non-complete renal recovery, highlights the need to focus on prevention and promoting recovery from AKD. Awareness of AKD risk factors and availability of methods for early diagnosis of acute kidney injury (AKI) may help prevent and avoid progression of stage severity. In a multicenter international study, we screened health care center patients to determine signs and symptoms, comorbidities, and exposures associated with higher risk of AKI. Based on their risk profiles, we provided serum creatinine POC test at six sequential time points and evaluated the impact of management in renal function recovery. Determining parameters to indicate and follow renal support in AKD patients will allow us to establish guidelines for treatment and improve outcomes. In a research project not yet initiated, we will evaluate a novel approach to quantify factors that define the need for renal support to AKD patients. This approach is based on the principle that, at any given time, the need for renal support depends on the balance between the demand and the renal functional capacity, and a mismatch of demand and capacity indicates the need for renal support. Knowledge of factors influencing renal recovery and affecting progression to CKD may direct research and clinical efforts to modifiable factors that could facilitate renal function recovery and decrease end-stage renal disease from AKD progression. I am involved in a study evaluating the effect of diet on progression of AKD to CKD. In a proposed research project, I plan to characterize patterns of care experienced by patients who meet the criteria for AKD and will analyze how racial/ethnic and socioeconomic disparities affect CKD progression after an AKD episode.

Janelle Vaughns, M.D.

Associate Professor
Departments of Anesthesia and Clinical Pharmacology
Children's National Medical Center
111 Michigan Avenue, N.W.
Washington, DC 20010
Telephone: 202–476–2025, ext. 4165
Fax: 202–476–5999
Email: jvaughns@childrensnational.org

Research Interests

I am an Associate Professor within the Departments of Anesthesia and Clinical Pharmacology at Children's National Medical Center in Washington, D.C. My research focuses on the unique population of obese and morbidly obese pediatric anesthetic patients. These patients are susceptible to the development of significant comorbid disease states which may require frequent surgical care. As a result, it is imperative that accurate drug dosing before, during, and after surgical procedures be employed. Currently, there is a paucity of dosing guidelines in the pediatric population as most drugs administered to children are used off-label. This is particularly seen in the obese pediatric surgical population because dosing is extrapolated from adult data. The purpose of my research is to capitalize on standard-of-care dosing regimens used in the surgical setting to better understand the effects of obesity on perioperative outcomes.

Francisco Villarreal, M.D., Ph.D.

Professor
Division of Cardiology
Department of Medicine
University of California, San Diego
Biomedical Sciences Building, Room 4028
9500 Gilman Drive, 0613J
La Jolla, CA 92093
Telephone: 858–534–3630
Fax: 858–534–0522
Email: fvillarr@ucsd.edu

Research Interests

Diabetes mellitus is the fastest-growing pathology in the United States. In the last 2 years, 3 million more Americans have been diagnosed with the disease. Under the umbrella of an NIH-sponsored program project (National Center on Minority Health and Health Disparities-sponsored EXPORT grant, Dr. Sandra Daley, principal investigator), we have undertaken a research effort jointly with Dr. Wolfgang Dillmann, Chief of Endocrinology at the University of California, San Diego, to examine the *in vitro* and *in vivo* effects that diabetes has on cardiac diastolic function. Efforts focus on alterations that arise in both cardiac myocytes and fibroblasts. Animal models of type 2 diabetes are used, including transgenic animal models. Our laboratory also has undertaken a project related to the characterization of the cardioprotective actions of cocoa flavanols on animal models of ischemia reperfusion injury, currently sponsored by a National Center for Complementary and Integrative Health R21. Cocoa flavanols are known to have beneficial effects in humans within a large dose range and with no toxic effects. Our intention is to demonstrate that the cocoa flavanol epicatechin can exert cardioprotective actions. For this purpose, we are currently pursuing studies *in vitro* and *in vivo*. Our expectation is to take our concept to initial clinical trials within a short time frame.

Cynthia Warrick, Ph.D., M.S., RPh

President
Society for Diversity in the Biomedical Sciences
Stillman College
7807 Glenn Cliff Drive
Houston, TX 77064
Telephone: 301–526–1730
Email: cwarrickphd@gmail.com

Research Interests
Having served as an Administrator (Chair, Dean, President) of Historically Black Colleges and Universities (HBCUs), I have witnessed significant funding cuts in higher education accompanied by a decrease in research involvement by faculty and students. My research interest is currently focused on the development of models and programs to enhance HBCU faculty and students' interest, involvement, and success in research and toward advanced degrees in the biomedical sciences. This work is critical to the success of African American and Hispanic students' exposure and development as future biomedical scientists. Because of my father's medical history with chronic kidney disease and my work as a pharmacist, I am very interested in developing successful pharmacist intervention models to assist patients with diabetes and hypertension to prevent chronic kidney disease and dialysis. I am interested in developing a study to look at the spatial relationships between dialysis centers, race, and socioeconomic conditions.

A. Valance Washington, Ph.D., M.S., RPh

Associate Professor
Department of Biology
University of Puerto Rico
P.O. Box 23360
San Juan, PR 00931
Telephone: 787–764–0000, ext. 2732
Email: anthony.washington@upr.edu

Research Interests
Trem-like transcript-1 (Treml-1) is a receptor found in the alpha-granules of platelets megakaryocytes. In platelets, Treml-1 translocates to the plasma membrane upon platelet activation where it may bind to their putative ligand and play a role during an inflammatory response and platelet aggregation. The precise mechanism of TLT-1 function remains unknown. Recent studies using evaluating SNPs in the Treml-1 gene unveiled a surprising role in glucose metabolism. Individuals homozygote or heterozygote for the causative SNP that changes H231P were less likely to have diabetes in the JHS cohort. This finding was supported by studies in the mouse model where mice appear to be hyposensitive to insulin and become obese on a high fat diet and are hyperreponsive to insulin. We are interested in deciphering this obese/insulin regulation phenotype.

Fern J. Webb, Ph.D., M.S.

Associate Professor
Department of Community Health and Family Medicine
University of Florida
Learning Resource Center, 3rd Floor
653 W. Eighth Street
Jacksonville, FL 32209
Telephone: 904–244–7525
Fax: 904–244–9234
Email: fern.webb@jax.ufl.edu

Research Interests

I trained family medicine/primary care physicians in epidemiology, research methods, and statistics to increase physicians' practice of evidence-based medicine and provide quality health care. Since graduating the last class of family medicine residents in 2007, I began to focus my research on innovative health interventions developed for faith-based communities. I collaborate with other researchers on various investigations, all designed to understand disease states and processes, reduce or eliminate diseases and poor health behaviors, or promote health in clinical and community-based populations. As a social epidemiologist and translational researcher, my tests seek to implement interventions that improve health, specifically related to obesity and chronic disease outcomes. For example, the Winning Over Weight (WOW) Wellness was designed to decrease obesity in African American women, concluding that interventions conducted in faith-based settings are effective to decrease obesity and improve social support. Since WOW, my research is modeled from Motivators for Change Theory, Choice Theories, and Incentive theories in efforts to understand what intrinsically motivates African American women to eat healthier, exercise more, rest adequately, and cope with stress effectively. Another developing area of research is community-engaged research (CEnR); through a Diversity Supplement provided by NIH National Institute on Drug Abuse (PI: Linda Cottler, Transformative Approach to Reduce Research Disparities Towards Drug Users [2012–2014]), I am becoming increasingly proficient in the conduct of CEnR research, and in particular, engaging under-engaged populations in research involving topics and issues that concern them, or of a particularly sensitive matter. This is becoming increasingly important as health professionals seek to engage out-of-treatment populations in efforts to reduce chronic diseases. I also lead and help to coordinate community research investigations to assist with increasing access to health/medical resources, as well as promote opportunities to participate in research and mechanisms that promote bi-directional communication between underrepresented and underserved populations and health researchers. I currently serve as co-investigator on three federally funded grants: the Centers for Disease Control and Prevention–funded Telemedicine project (R Grewal, PI: 2017-202); the NIH-funded JAX-ASCENT project (M Pahor, PI: 2017–2020); and the Patient-Centered Outcomes Research Institute–funded Health-Smart project (C Tucker, PI: 2017–2020). I also serve on civic boards as well as scientific and national committees aimed to improve population health.

Richard O. White III, M.D., M.Sc.

Assistant Professor of Medicine and Pediatrics
Division of Community Internal Medicine and Family Medicine
Mayo Clinic Florida
4500 San Pablo Road
Jacksonville, FL 32224
Telephone: 904–953–8842
Fax: 904–953–0655
Email: white.richard@mayo.edu

Research Interests
I was trained as an Internist and Pediatrician at Vanderbilt University and completed my Master's degree in Clinical Investigation at Meharry Medical College in 2010. My research focuses on the impact of health literacy and health communication on diabetes and obesity prevention/management for Latino and African American adults and children. I currently am involved in several community-engaged efforts to understand better the nature of the patient-provider interaction on diabetes care and the facilitators and barriers to healthy lifestyle among adults and youth in northeast Florida. I am beginning my fourth year of a K23 Career Development Award through the NIDDK and hope to move toward research independence with a career that focuses on the development, cultural tailoring, and implementation of family-based interventions to improve health outcome for minority patients and address disparities of care.

Julius Wilder, M.D., Ph.D.

Assistant Professor
Duke Division of Gastroenterology
Duke Clinical Research Institute
Duke University School of Medicine
6 Springhouse Place
Durham, NC 27705
Telephone: 919–684–3262
Fax: 919–684–8264
Email: julius.wilder@duke.edu

Research Interests
My research focuses on the role of the fundamental causes of disease and how they contribute to health disparities within the context of gastroenterology, hepatology, and transplant hepatology. My specific areas of focus include contextualizing how socioeconomic and psychosocial factors mediate racial/ethnic disparities regarding outcomes in hepatitis C, colon cancer screening, and access to liver transplantation. I also serve as a primary investigator for multiple clinical trials assessing outcomes for hepatitis C, primary sclerosing cholangitis, and primary biliary cholangitis.

Clintoria R. Williams, Ph.D.

Assistant Professor of Physiology and Medicine
Emory University
Atlanta VA Medical Center
Physiology Department
Department of Medicine, Renal Division
Whitehead Research Building
615 Michael Street, Room 643
Atlanta, GA 30322
Telephone: 404–727–7406
Email: clricha@emory.edu

Research Interests

My research interest focuses on the pathophysiology of kidney disease. I engage an interdisciplinary approach to explore the underlying mechanisms of kidney damage and how those mechanisms contribute to cardiovascular health. My long-term research goal is to develop novel therapeutics to improve the treatment of kidney and cardiovascular disease. Currently, my work is funded by the American Heart Association (National Scientist Development Grant) and an Industry Innovative Grant. I have been recognized as an outstanding early career scientist by the American Physiological Society, where I have been an active member of several committees. In addition, I was a founding member of the Minority Postdoctoral Council at Emory University and am a passionate mentor of undergraduate and graduate student scientists.

Lovoria B. Williams, Ph.D., M.S.N., B.S.N., APRN-BC

Associate Professor
College of Nursing
University of Kentucky
531 College of Nursing Building
Lexington, KY 40536-0232
Telephone: 859–323–5579
Fax: 859–323–1057
Email: lovoria.williams@uky.edu

Research Interests

My research interests are diabetes prevention, behavioral interventions, obesity management, and translation science. My primary population of interest is African Americans in faith-based settings. My passion is translating evidenced-based interventions, such as the diabetes prevention program, into real-world settings. Over the last 5 years, I have worked with my mentor to culturally adapt the Diabetes Prevention Program and deliver it in African American churches. We conducted a pilot and later received funding to conduct a randomized control trial.

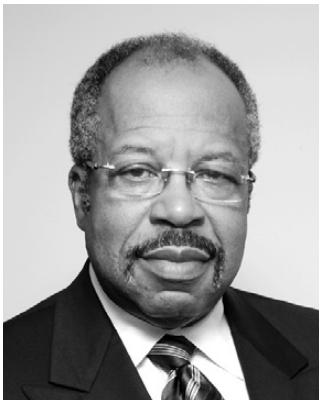
Greta Berry Winbush, Ph.D.

Director, Health Empowerment Technology Project
Professor of Psychology and Gerontology
Department of Social and Behavioral Sciences
Central State University
Room 106, Stokes Center on Aging
P.O. Box 1004
Wilberforce, OH 45384
Telephone: 937–376–6310
Fax: 937–376–6471
Email: gwinbush@centralstate.edu

Research Interests

Behavioral health, health care services, and health care policy research on African Americans have been the focus of my research for the past 25 years. Personal care experiences through multiple health care systems fueled a strong commitment to eliminating health disparities among vulnerable and underserved African Americans through research, teaching and community service. My current research program is the Health Empowerment Technology (HET) Project. The HET Project is a translational science research program purposed to eliminate health disparities among African Americans and other minority groups through the merger of evidence-based health disparity research and culturally centered health empowerment technology. Using Web-based health empowerment technology, attention is given to reducing disparities in health literacy, health communication, and health outcomes among disparate groups. Another intent is to increase their inclusion in virtual health communities. Recent study populations consist of African American elderly and their doctors and African American women with disabilities.

The research on African American elderly is part of a Minority Eldercare Disparity Initiative at the University's Stokes Center on Aging. This initiative targeting minority elders, especially African Americans, in the areas of health and health service disparities represents an interdisciplinary effort at Central State University that includes gerontology academic programming, minority aging and health services research, and health outreach.



Jackson T. Wright, Jr., M.D., Ph.D., FACP

Professor of Medicine, Case Western Reserve University
Program Director, William T. Dahms, M.D., Clinical Research Unit
Director, Clinical Hypertension Program
Case Western Reserve University
Bolwell Suite 2200
11100 Euclid Avenue
Cleveland, OH 44106–6053
Telephone: 216–844–5174
Fax: 216–844–1530
Email: jackson.wright@case.edu

Research Interests

I am Professor of Medicine and Program Director of the William T. Dahms, M.D., Clinical Research Unit at Case Western Reserve University (CWRU) and a member of the Executive Committee of CWRU's Clinical and Translational Science Award program. I am also Director of the Clinical Hypertension Program at University Hospitals Case Medical Center. My research experience includes having had a major or leadership role in nearly all of the major cardiovascular and renal clinical outcome trials conducted in black populations over the past two decades. I am currently co-principal investigator (PI) of one of seven clinical networks in the National Institute of Diabetes and Digestive and Kidney Diseases–sponsored Chronic Renal Insufficiency Cohort Study (40 percent black) and PI of one of the five clinical center networks in the National Heart, Lung, and Blood Institute–sponsored Systolic Blood Pressure Intervention Trial.

Nicole C. Wright, Ph.D., M.P.H.

Assistant Professor
Department of Epidemiology
The University of Alabama at Birmingham
1665 University Boulevard, RPHB 230N
Birmingham, AL 35294
Telephone: 205–975–7686
Fax: 216–844–1530
Email: ncwright@uab.edu

Research Interests

I earned a Bachelor of Science from Elon University in Elon, North Carolina, and both my Master of Public Health and Doctorate of Philosophy in Epidemiology from the University of Arizona in Tucson, Arizona. My research encompasses the umbrella of osteoporosis and musculoskeletal diseases epidemiology. I have become one of the national leaders in using population data to assess the prevalence of osteoporosis and evaluating trends in fragility fractures. My early work focused on identifying risk factors for fractures using the nationwide Women's Health Initiative cohort study, including rheumatoid arthritis, hip structural geometry, calcium and vitamin D supplementation, admixture, and the role specific fractures play in fracture recurrence. During a 2-year postdoctoral fellowship in the University of Alabama at Birmingham (UAB) Department of Epidemiology, I expanded from traditional cohort-based observational studies to studies in administrative claims data. Specifically, I focused on the incidence of osteoporotic fractures in the U.S. Medicare population, with interest in identifying potential race and ethnic disparities in fracture incidence and outcomes. During this time, I also became involved with developing and validating claims-based algorithms to identify osteoporosis prevention activities, medications, and outcomes. I joined the UAB Department of Epidemiology faculty as an Assistant Professor in December of 2012. In addition to continuing previous lines of research, I became interested in two unique areas within the osteoporosis field: (1) understanding patient activation and optimizing patient participation in osteoporosis related clinical trials and (2) evaluating racial disparities in osteoporosis management and outcome. With funding from the Agency for Healthcare Research and Quality K12 and pilot funding from the Resource Centers for Minority Aging Research, I have been able to use quantitative and qualitative methods to investigate racial differences in osteoporosis knowledge and utilization of prevention activities. I currently have a K01 award from the National Institute of Arthritis and Musculoskeletal and Skin Diseases to investigate racial differences in fractures outcomes.

Regina Sims Wright, Ph.D.

Associate Professor
University of Delaware School of Nursing
331 McDowell Hall
25 N. College Avenue
Newark, DE 19716
Telephone: 302–831–8364
Fax: 302–831–2382
Email: rsims@udel.edu

Research Interests

My research examines sources of variability in neurocognitive functioning in older adults. I have focused primarily on older African Americans, with an emphasis on the role of cardiovascular risk factors—such as hypertension, impaired glucose tolerance, elevated lipids, and obesity—on such neurocognitive abilities as working memory, perceptual speed, verbal memory, visuospatial ability, executive function, and inductive reasoning. My interest in African American neurocognitive functioning developed from a variety of research experiences focused largely on issues surrounding racial/ethnic disparities in health.

Bessie A. Young, M.D., M.P.H., FACP, FASN

Professor, Department of Medicine
Adjunct Professor of Epidemiology and Health Services
University of Washington
Interim Chief of Nephrology, VA Puget Sound Health Care System
1660 S. Columbian Way, RDU 111A
Seattle, WA 98108
Telephone: 206–277–3586
Fax: 206–764–2563
Email: youngb@uw.edu

Research Interests

Chronic kidney disease (CKD) is widely prevalent and disproportionately affects minorities. Health disparities contribute to differences in CKD and end-stage renal disease (ESRD) outcomes. The overarching goal of my research program is to evaluate disparities in CKD/ESRD and to develop interventions aimed at decreasing kidney disease-associated health issues. My research program currently focuses on the development of a CKD working group for the National Institutes of Health (NIH)–funded Jackson Heart Study of 5,300 African Americans from Jackson, Mississippi. In addition, I have a project that is evaluating community, researcher, and clinician attitudes toward apolipoprotein L1 genetic polymorphism testing. My prior research projects included the NIH-funded Increasing Kidney Disease Awareness Network Transplant project, which involves the development and testing of new educational materials for patients with late-stage CKD. Clinically, within the U.S. Department of Veterans Affairs (VA), we have developed a kidney disease telemedicine intervention programs that focuses on increasing specialty-primary care interaction using the Extension for Community Health Outcomes (VA-ECHO) model to improve rural access to nephrology care. Finally, we are collaborating with the Caribbean Health and Education Foundation to develop a CKD registry to monitor the prevalence and incidence of CKD in Eastern Caribbean states. Currently, my research program receives NIH and VA funding, which supports several co-investigators and graduate students.

Anna Zamora-Kapoor, Ph.D.

Assistant Research Professor
Initiative for Research and Education to Advance Community Health
Division of Adolescent Medicine
Department of Pediatrics
University of Washington
1100 Olive Way, Suite 1200
Seattle, WA 98101
Telephone: 206–708–8624
Emails: anna.zamora-kapoor@wsu.edu and azkapoor@uw.edu

Research Interests

I am an Assistant Research Professor at Washington State University, committed to studying populations that are poor, discriminated against, and exhibit compromised health. I have expertise in the social determinants of health and health disparities and a special interest in identifying the most important strategies to prevent obesity, type 2 diabetes, and hypertension in American Indian and Alaska Native populations.

National Institutes of Health
National Institute of Diabetes and Digestive and Kidney Diseases

Network of Minority Health Research Investigators
16th Annual Workshop

DoubleTree Hotel Bethesda
Bethesda, Maryland

April 12–13, 2018

Meeting Summary

Thursday, April 12, 2018

INTRODUCTIONS

Jose Romero, Ph.D., Associate Physiologist, Brigham and Women's Hospital, Harvard Medical School
Lawrence Agodoa, M.D., Director, Office of Minority Health Research Coordination (OMHRC), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health (NIH)

Dr. Jose Romero, chair of the Network of Minority Health Researchers (NMRI) Planning Committee, welcomed participants to the NMRI 16th Annual Workshop, which represents the beginning of the next stage of the Network. He remarked on the full agenda and the networking sessions included. Dr. Romero expressed appreciation to NMRI leadership for their continuous support.

Dr. Lawrence Agodoa, Director, OMHRC, also welcomed participants and noted that the NMRI was established in 2002 by the OMHRC at the NIDDK to encourage new investigators and foster mentoring relationships. This model has worked well to propel its members to higher levels of achievement in academia. The OMHRC's current role in relation to the NMRI, a member-led network, is to provide the necessary resources for members to succeed. Dr. Agodoa invited meeting participants to introduce themselves and describe their recent awards or accomplishments. Participants ranged from premedical and predoctoral students to tenured professors. Research areas of study included diabetes, epidemiology, endocrinology, health disparities, hematology, nephrology, nutrition, and obesity. Recent accomplishments included accepted manuscripts, new grants and research funding, speaker invitations, promotions, and new collaborations. Some participants were first-time attendees of a national NMRI workshop.

KEYNOTE SPEAKER

Development of Novel Therapies for Sickle Cell Disease

Betty S. Pace, M.D., Professor, Department of Pediatrics, Augusta University

Dr. Betty Pace, an established National Heart, Lung, and Blood Institute (NHLBI) investigator, thanked the organizers for the invitation to speak and noted that this was her first time attending a NMRI workshop. She reported on the development of novel therapies for sickle cell disease (SCD) and the work of the Pace research laboratory, and she shared her story. Dr. Pace remarked on how the influences of family and friends, education and training, and an academic career have helped shape her journey. Her family's humble beginning, hard work ethic, and values shaped her early life. She first encountered SCD at the age of 13 while in middle school, when her good friend was diagnosed and later died at a young age. This experience had an effect on her decision to study SCD several years later. Her college education and training included critical decisions and mentorship at each phase, starting as a computer programmer after graduating Marquette University. She continued her education at the Medical College of Wisconsin, where she later became director of the Sickle Cell Program and then moved to train at the University of Colorado after receiving a hematology/oncology fellowship. Her advanced training and enhanced skills included a Robert Wood Johnson Minority Medical Faculty Development Program Award (since renamed in honor of Dr. Harold Amos) to study at the University of Washington. Strong mentorship and advanced laboratory skills allowed her to become an independent investigator and led to her recruitment to a faculty position at the University of South Alabama in 1994. She continued

her academic career at the University of Texas at Dallas (UTD) in 2002 and received funding from the NHLBI Summer Institute Program to Increase Diversity in Health-Related Research (SIPID) training program. Dr. Pace currently is a faculty member at Augusta University, where she serves as program director of the NHLBI Programs to Increase Diversity Among Individuals Engaged in Health-Related Research (PRIDE) training program. Dr. Pace next detailed her research and training experience, including work as academic faculty, funding from the NHLBI and the NIH, and participation in additional research and training programs.

SCD accounts for more than 350,000 deaths worldwide each year, is more prevalent in the African countries, and has been shown to be present in regions with high incidences of malaria. A single point mutation in the beta-globin (β-globin) gene—a subunit of hemoglobin (Hb)—leads to the clinical manifestation of SCD: abnormal red blood cells (hemoglobin S), commonly referred to as sickle red blood cells (sickle cells). These sickle cells block blood flow, causing vaso-occlusive crisis (VOC) events that result in ischemia, and also are susceptible to chronic hemolysis, which leads to severe anemia and organ damage. Although effective therapies for SCD are limited, the first drug discovered to treat SCD—Droxia® (generic name hydroxyurea)—was approved by the U.S. Food and Drug Administration (FDA) in 1998 for use in adults and in 2017 for use in children. Droxia, a deoxyribonucleotide reductase inhibitor, is a nitric oxide donor and a cyclic guanosine monophosphate (cGMP) activator of fetal hemoglobin (alpha$_2$ gamma$_2$ [$\alpha_2\gamma_2$]-globin or HbF) induction. In 2017, a second drug, Endari™, an over-the-counter L-glutamine supplement, was FDA-approved for treatment of SCD in those 5 years of age and older. Endari acts to improve the nicotinamide adenine dinucleotide (NAD) redox potential of sickle cells by increasing the reduced glutathione levels and reducing oxidative damage, resulting in a reduction in VOC. Developing new therapies and affordable and easy-to-use treatments for patients in African countries remains the focus of the SCD research community.

Dr. Pace remarked that research has shown the benefits of HbF. In fact, the NHLBI Cooperative Study of SCD, a natural history study conducted from 1978 to 1998 that followed approximately 4,000 individuals with SCD, showed that long-term survival correlated to HbF levels and that HbF levels greater than 8.6 percent improved survival. Hydroxyurea has been effective in achieving this HbF level but often is not accepted as a treatment by families because of its dual indication as a chemotherapeutic agent and its high level of cytotoxicity. The clinical and translational efforts of the Pace laboratory have focused on developing improved treatments for SCD. Dr. Pace was the site principal investigator for the Penicillin Prophylaxis in SCD (PROPS) study and the Evaluation of Purified Poloxamer 188 in Vaso-Occlusive Crisis of SCD (EPIC) multicenter trial testing the efficacy of MST-188. Her laboratory was able to show that n-acetyl cysteine improves glutathione levels, and the laboratory performed high-throughput screening (HTS) of 10,000 FDA-approved or European Medicines Agency–approved drugs to identify novel HbF-inducing drugs.

In 2015, the Pace laboratory reported that novel inducers of HbF identified through HTS were active *in vivo* in anemic baboons (the large-animal model) and β-yeast artificial chromosome (YAC) transgenic mice (β-YAC mouse model). The laboratory investigated two promising candidates—benserazide, a dihydroxyphenylalanine decarboxylase inhibitor approved in Canada and the United Kingdom for treatment of Parkinson's disease, and dimethylfumarate (DMF or Tecfidera®), an anti-inflammatory drug that was FDA-approved in 2013 for the treatment of multiple sclerosis. Results showed that benserazide induces HbF and stimulates red blood cells in the large-animal model and induced sustained HbF levels in the β-YAC mouse model. Preclinical safety and efficacy studies are being conducted in collaboration with Leidos Biomedical Research Inc., (Leidos Biomed) and an FDA investigational new drug application is in progress. To determine whether DMF would be effective in SCD, the Pace laboratory developed a primary erythroid culture system using human peripheral blood cells from normal donors. Results showed that DMF induced HbF in human sickle erythroid cells, that DMF plus hydroxyurea (HU) produced a higher induction of HbF compared to DMF or HU alone, and that DMF reduced red blood cell sickling under hypoxic conditions. Dr. Pace hypothesized that DMF induces HbF, which produces a hybrid of hemoglobin S and HbF cells, leading to a reduction of sickling under hypoxic conditions.

Prior studies have shown that DMF exhibits its effects (e.g., HbF induction) via activation of the nuclear factor erythroid 2-related factor 2 (Nrf2) antioxidant pathway. Oxidative stress has been shown to play a role in the effects of SCD. The Pace laboratory demonstrated *in vivo* that DMF activated the Nrf2 pathway to induce γ-globin and mediated Nrf2 translocation to the nucleus, which was confirmed by its association with macrophage-activating factor (MAF) proteins. The laboratory also showed that DMF increases HbF in a sickle cell mouse model and that the loss of Nrf2 decreased γ-globin gene expression in a sickle cell/Nrf2 knockout mouse model they generated. These data clearly show that Nrf2 is critical for the HbF production in normal development and that Nrf2 activation is beneficial in SCD to improve symptoms and decrease complications. Studies are ongoing in the Pace laboratory to further develop DMF for clinical trials and as a treatment for SCD.

Throughout her career, Dr. Pace has been conscious of diversity and sought to make a personal contribution as a minority investigator. Understanding the meaning and importance of diversity in the workforce, in general, is key. Dr. Pace embraced this diversity of thought in her laboratory and appreciates how it fuels creativity in training new biomedical researchers. Dr. Pace has personally trained more than 80 individuals who have spanned the educational and career spectrum from middle and high school students to postdoctoral fellows. UTD was one of three institutions to receive funding in 2006 to support an NHLBI-sponsored SIPID program, which Dr. Pace led. Since 2010, Augusta University has been one of six institutions funded in the PRIDE program, of which Dr. Pace is the program director. The SIPID program ended in 2010, and the new initiative, PRIDE, began. The SIPID/PRIDE program involves mentoring and research training built specifically for junior faculty from underrepresented groups or disabled persons who are conducting blood disorders research at U.S. academic institutions. The Pace group has trained and mentored 76 underrepresented faculty members from 40 U.S. institutions in the SIPID/PRIDE program. Of these, the majority were African American, Hispanic, or American Indian; 70 percent were women; 42 percent received mentored career development awards (K01, K08, K12, or K23) or Research Program Grants (R01, R03, or R23); and, collectively, they have published more than 500 peer-reviewed papers. The Pace SIPID/PRIDE Group also established an effective peer mentoring program.

Dr. Pace shared final thoughts on diversity and paying forward the help received. She encouraged participants to adopt a mindset of diversity by learning more about it and practicing it daily, understanding that teams of diverse people support creativity, and making a personal commitment to promote diversity.

Discussion

A meeting participant noted the odds of having to resubmit before receiving a first K award and asked about ways to encourage and motivate new clinical investigators, given the challenge current researchers face in securing NIH funding. Dr. Pace acknowledged that resubmitting the application is the likely scenario for most K awards. To increase the odds of success, applicants should set aside 6 months to prepare before applying and continue to refine the application or grant proposal after it has been submitted. Regarding a first R01, a 2011 report indicated that underrepresented minorities had a much lower probability of receiving funding and were less likely to resubmit an application. The NIH is actively working to address these issues. Funding mechanisms have been implemented to support early stage investigators (ESIs) so that they are not competing with established investigators early in their careers. Dr. Pace pointed out some of the opportunities available to clinicians desiring to receive research experience, including health disparities research and implementation science. As a longtime mentor, she finds that a career path should be tailored to the individual, not broadly based on models.

When asked about the effects of overexpressing Nrf2 in the SCD model and other targets, Dr. Pace replied that Nrf2 overexpression experiments have not been done and would be a challenge in the existing mouse models. Work is ongoing with the potential drugs dimethyl fumarate and its control of the transcription factors Nrf2 and MAF that regulate gamma globin gene expression and fetal hemoglobin levels as a treatment for sickle cell disease. A Nrf2/SCD mouse model has been established to expand these efforts in Dr. Pace's lab.

WRITING WORKSHOP—SESSION I: ABCS OF PUBLISHING A NARRATIVE REVIEW

Patricia Heyn, Ph.D., Associate Professor, University of Colorado Denver, Anschutz Medical Campus
Lillian Hoffecker, Ph.D., Research Librarian, University of Colorado Denver, Anschutz Medical Campus

Dr. Patricia Heyn and Dr. Lillian Hoffecker presented a writing workshop that addressed the growing amount of scientific evidence and knowledge available in the biomedical field and how that affects an investigator's future research. Dr. Heyn noted that Session I would be an overview of the fundamentals of publishing a narrative review and the review synthesis methodology, and Session II would be an interactive session on how to conduct a systematic review (SR) and its practical application. She emphasized that conducting a literature review, the main component of an SR, is an art and a journey, as well as a process. An SR is defined by the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. Similar to a research report, the steps of conducting an SR include formulating answerable questions, gathering the evidence, synthesizing and appraising the evidence, reporting the evidence, and evaluating and making recommendations. The SR is in demand today because judgment is heavily influenced by opinion and bias, conclusions that are drawn without the benefit of evidence may be erroneous, and the health sciences rely on scientific discovery to advance public health.

The synthesis methodology involves rigorous quality research that requires the systematic application of the scientific method, the fundamental feature of which is the testable hypothesis. Dr. Heyn remarked that the SR is a critical analysis highlighting the strengths and weaknesses of existing research in the field of interest. It requires critical understanding of the field; provides opportunities to reflect on the similarities, patterns, trends, and differences of existing research; and defines gaps in the literature that would justify future research. Key features of an SR that make it desirable to researchers are its structure and orientation, as well as descriptive and well-organized data tables. The appraisal—the interpretation and discussion of the strength of the evidence, potential biases of the review, generalizability of the results, weighted benefit to risk, and implications—is critical to the SR. Dr. Heyn reiterated that synthesis of an SR is similar to a process of discovery that begins with the identification of a problem or issue to study. The next steps are to review the literature, specify the purpose of the study (design), formulate a research plan (methods), gather data in a systematic manner, and perform the appraisal; this process culminates in a published report that is evaluated and used by the scientific community.

Dr. Hoffecker detailed the comprehensive search process, core databases and other sources used to conduct a literature search, and ways to manage the data. The literature search is specific, and citations are screened based on the study inclusion and exclusion criteria. Three core databases—PubMed or Ovid Medline, Embase, and Cochrane Library—are used in the SR. Embase, often referred to as the Western PubMed, is a large biomedical database that includes conference abstracts and citations and is becoming popular for SRs, especially at academic institutions. Other resources include bibliographies of reviews, subject-specific databases (e.g., Web of Science), literature published in non-mainstream platforms (e.g., dissertations or conference abstracts), and communication with previous authors. Prior to beginning a search, a table or search matrix is developed consisting of the databases used and search criteria or concepts to address the question being asked. For example, using the PICO (patient/problem, intervention, comparator, outcome) model for such clinical questions as, "is digoxin effective in reducing readmission in congestive heart failure patients?" the primary searchable concepts in PubMed using a basic Boolean operator—AND/OR—would be "digoxin," "readmission," and "congestive heart failure." The challenge lies in arriving at a single clinical question for the SR. The manuscript must include descriptions of the search methods, including names of resources (e.g., databases) and years covered; the date and time the author spent searching; the search concepts; the citation management software; and the search limits applied. All edits or updates to the search record should be tracked and retained. Dr. Hoffecker led participants in interactive search exercises using the PubMed and Embase databases.

WELCOME REMARKS

Griffin P. Rodgers, M.D., Director, NIDDK, NIH

Dr. Griffin Rodgers welcomed participants to the 16th workshop of the NMRI and noted that many organizations try to emulate the main work of this research network. The NIDDK evaluates its successful programs and initiatives, such as NMRI, to better understand what makes them successful. Dr. Rodgers stated that the mission of the NIH is to seek fundamental knowledge about the nature and behavior of living systems and apply that knowledge to enhance health, lengthen life, and reduce illness and disability. The research mission of the NIDDK—one of 27 NIH Institutes and Centers—supports research on diabetes and other endocrine disorders and metabolic disorders; digestive diseases, nutritional disorders and obesity; kidney diseases, urologic, and hematological diseases. These comprise the most common, costly, and consequential diseases affecting many people in the United States and abroad. The NIDDK biomedical research programs include basic and applied research for knowledge acquisition, clinical investigations and clinical trials for knowledge validation, and dissemination and education research for knowledge transfer.

Dr. Rodgers remarked that knowledge acquisition is an ecosystem of research discovery extending from basic or fundamental research conducted at the molecular and cellular levels and in animal models to translational research, clinical studies, and clinical trials. He emphasized that research is dynamic and circular, from bench to bedside, rather than a linear trajectory. Discoveries advance and inform clinical application; therefore, it is critical to support a broad range of research in a multidisciplinary approach in which researchers collectively advance this research ecosystem. One example of translation from discoveries to a new class of diabetes drugs in the NIDDK is the recent FDA-approved sodium-glucose co-transporter-2 (SGLT2) inhibitor to lower glucose in people with type 2 diabetes. In a timeline that extends from 1980 to 2014, NIH investments enabled key basic research discoveries and advances that led to new treatment. In the 1980s and 1990s, researchers identified the genes for sodium-glucose co-transporters (SGLTs) and gained insights into the role of SGLT2 in glucose reabsorption in the kidney. Researchers also were able to reverse hyperglycemia in the diabetic rat model using phlorizin, a natural compound that had been studied decades earlier but was toxic to humans and needed further investigation. Building on prior NIH-funded research, further studies revealed that SGLT2 genetic variants caused glucose loss in the urine in familial renal glucosuria. Researchers from industry and academic and medical institutions developed a phlorizin derivative that lowers blood glucose by inhibiting SGLTs in a small-animal model. In subsequent research, largely funded by industry, researchers developed improved SGLT inhibitors, which were tested in clinical trials, leading to the first FDA-approved medication in this new class of diabetes drugs in 2013 and others in 2014.

The Artificial Pancreas (AP) technology, a closed-loop system that would replace a non-functioning pancreas in type 1 diabetes patients, is an example of how the research ecosystem advances basic discovery to technology development to treatments. Technological advances supported by NIDDK-sponsored research and NIDDK's small business programs that have informed the development of the AP technology include the insulin pump (1970–current), self-monitoring of blood glucose (1970s–1980s), and interstitial glucose monitoring (1980s–current). Clinical studies that helped moved these devices into clinical practice led to the proven benefits of glucose control and reduced the risk of diabetes-related complications (e.g., diabetic retinopathy). In 2006, the FDA approved electrode-based continuous glucose monitors. Wireless technologies, microprocessors, and cell and smart phones also have helped to advance the AP technology. Finally, these advances led to the launch of four pivotal NIDDK-supported multicenter trials in 2017–2018: the International Diabetes Closed Loop Trial; a full-year trial of AP in youth ages 6–18; a CER trial of Medtronic hybrid AP to next-generation AP; and a 6-month trial in adults of bihormonal AP.

Dr. Rodgers called attention to efforts within the NIDDK to offset the perception that a career in biomedical research is a mountain of staggering obstacles. The NIDDK supports research training and career development programs for the next generation of biomedical researchers by building a ladder to transverse the obstacles. He highlighted NIDDK programs and activities that support critical moves between career levels, including the Loan Repayment Program (LRP) and workshops focused on life after a K award and new principal investigators. The LRP repays up to

$35,000 annually (up to $50,000 under the 21st Century Cures Act) of a researcher's qualified educational debt in return for a commitment to engage in NIH mission-relevant research. The NIDDK also provides benefits to ESIs by setting more generous paylines for ESIs compared to established investigators. Participants were encouraged to visit the NIDDK website, which has been extensively updated and serves at the central point of contact for the Institute.

Discussion

A participant who is a registered dietician and 4th year Ph.D. student in nutrition research, wondered about the timeline and eligibility for the LRP and asked for advice on applying for a postdoctoral fellowship. Dr. Rodgers explained that NIDDK's Division of Digestive Diseases and Nutrition might be the best fit for nutrition research, but recommended contacting Dr. Tracy Rankin, Deputy Director, Division of Kidney, Urologic, and Hematologic Diseases, for details on applying for F32 fellowships.

ROUNDTABLE DISCUSSIONS—SESSION I

Participants attended one of five roundtable discussions focused on various career-oriented topics and emerging research related to NIDDK's mission. Meeting participants attended the session of their choice. Moderators facilitated each roundtable discussion.

Table 1: Community-Based Participatory Research
A. Celeste Farr, Ph.D., Assistant Professor, Oakland University William Beaumont School of Medicine

Table 2: Epigenetics Mechanisms in Diabetes Complications
Marpadga Reddy, Ph.D., Assistant Research Professor, Beckman Research Institute of City of Hope

Table 3: NIH Intramural Research
Roland Owens, Ph.D., Assistant Director, Office of Intramural Research, NIH

Table 4: Research Supplements to Promote Diversity and the NIH Funding Mechanism
Robert Rivers, Ph.D., Program Director, NIDDK, NIH

Table 5: Successful Approaches for Grant Funding
Francisco Villarreal, Ph.D., Professor, University of California, San Diego

ROUNDTABLE DISCUSSIONS—SESSION II

Session II provided participants the opportunity to switch discussion tables.

PARALLEL SESSION I

Session I provided the opportunity for participants to attend mock study sessions for different types of NIH awards—R01 Basic/Clinical, K01 Basic/Clinical, and R21 Basic/Clinical. During these sessions, session leaders were given sample grant applications to review and critique. Meeting participants attended the session of their choice.

Mock Study Section 1: R01
Francesco Villarreal, M.D., Ph.D., Professor, University of California, San Diego
Ann Jerkins, Ph.D., Scientific Review Officer, NIDDK, NIH

Mock Study Section 2: K01 Awards
Mark Lawson, Ph.D., Professor, University of California, San Diego
Karn Wijarnpreecha, M.D., Chief, Training and Mentored Research Section, NIDDK, NIH

Mock Study Section 3: R21
Jose Romero, Ph.D., Associate Physiologist, Brigham and Women's Hospital, Harvard Medical School
Ryan Morris, Scientific Review Officer, NIDDK, NIH

CHARTING YOUR COURSE FOR SUCCESS

Ricardo Azziz, M.D., M.P.H., M.B.A., Chief Officer, Academic Health and Hospital Affairs, The State University of New York

Dr. Ricardo Azziz pointed out that minority researchers have a dual role as effective investigators and as role models and leaders. For perspective, he relayed to participants that their educational attainment placed them in the top 5 percent of the U.S. population and top 1 percent of the world's population. Additionally, underrepresented minorities (URMs) comprise less than 1 percent of individuals with doctorate degrees in the United States. Per the 2016 U.S. Census report, 0.77 percent of African Americans had earned a professional degree, and 0.91 percent had earned a doctoral degree. Furthermore, 0.65 percent of Hispanics had earned a professional degree, and 0.69 had earned a doctoral degree. He emphasized to the participants that solely by being in attendance at the workshop they had beaten those odds, and they have a responsibility as minority researchers to lead. Charting a course for success involves hard work, perseverance, and leadership.

Dr. Azziz pointed out that leadership is a learned skill and a trained art, and he noted the differences between administration, management, and leadership. Leaders serve as external agents for the company or organization, manage change, and interpret the environment; they also provide a vision, empower and create teams, engage communities, and model good behavior. Dr. Azziz elaborated on basic lessons for being an executive leader, such as understanding politics with a small 'p' and learning the necessary leadership skills and competencies; developing a network and finding good mentors; understanding expectations, spoken or unspoken; and learning how to "manage up" by enhancing your manager's work. Executive leaders also understand their roles, responsibilities, and career path; expand their skill sets and experience; quantify their skills and experience; and are involved.

Dr. Azziz discussed some of the unique challenges that minority faculty may encounter as they develop as leaders. U.S. medical schools and universities have fewer faculty from URM groups than from majority groups, and more URM faculty are assistant professors than associate and full professors. Therefore, the pool of role URM models in the biomedical sciences is limited. Issues of racial inequality, stereotyping, and discrimination remain challenges, and further work is required in the areas of cultural competency, emotional intelligence, and language and communication. In addition, URMs often face the so-called "minority tax"—the minority faculty disparity of additional duties and responsibilities to promote diversity. Furthermore, considering the higher levels of leadership in academia, only 13 percent of the nation's university presidents are URMs. Dr. Azziz encouraged participants to make investments to develop their own leadership competencies and skills, leverage their strengths and compensate for weaknesses, and proactively document their achievements.

PARALLEL SESSION II

Session II provided the opportunity for participants to learn the aspects of a mentoring training program for clinical and translational researchers, engage in case studies activities, and work in teams to address guiding questions. Moderators facilitated each activity. The session was intended to allow informal, interactive discussions among participants.

Mentoring Training Program—Session I: Aligning Expectations
Mark Dewhirst, D.V.M., Ph.D., Gustavo S. Professor of Radiation Oncology, Associate Dean of Faculty Mentoring, Duke University Medical Center

Mentoring Training Program—Session II: Assessing Understanding
Leonor Corsino, M.D., Associate Professor of Medicine, Duke University School of Medicine

Mentoring Training Program—Session III: Fostering Independence
Stephanie Freel, Ph.D., Director, Clinical Research Education and Research, Duke University School of Medicine

MARCO CABRERA POSTER AND NETWORKING SESSION

All meeting participants were invited to view the posters submitted to the NMRI 16th Annual Workshop and to converse with their presenters. Judges examined the posters and discussed the described research with each poster's presenters. Winners were selected for each of three categories—Basic Science, Translational Science, and Clinical Science—and awards were presented to the winning recipients in the final session of the workshop.

DR. LAWRENCE Y. AGODOA HONORARY LECTURE OF THE NETWORK OF MINORITY HEALTH RESEARCH INVESTIGATORS

Dr. Romero welcome participants to the Dr. Lawrence Y. Agodoa Honorary Lecture. Each year, the Planning and Oversight Committees honors exemplary achievers, leaders, and mentors; Dr. Agodoa is this year's honoree. His dedication, hard work, contributions, and leadership of the NMRI have been outstanding and unmatched. Dr. Agodoa is a trained nephrologist, director of the OMHRC, and program director at the NIH who established the annual workshop that has continued for 16 years and, through his conceptualization and vision, has led this network to the success it is today.

Dr. Agodoa was humbled to be honored at this workshop. He reflected on the 16 years of NMRI and the beginning of the OMHRC at NIDDK. Observing that minority investigators were not well represented in his portfolio as program director, he saw the opportunity to prompt change and broadly address health disparities for the NIDDK. The OMHRC staff at the time included Dr. Agodoa, Ms. Winnie Martinez, and a third staff member who has since left the office; the staff now comprises six members. In 2000, Dr. Agodoa and the OMHRC led the efforts to develop NIDDK's Strategic Plan on Minority Health Disparities. The goal was to build the research pipeline by developing special initiatives and diversity programs that span the stages of a career. Current programs include summer internships for high school students, the NIDDK Diversity Summer Research Training Program (DSRTP) for Undergraduate Students, Short-Term Research Experience for Underrepresented Persons (STEP-UP), and the NMRI. Early on, the OHMRC recognized that the NMRI, which was established in 2002, should not be regulated on an institutional level; its members could better regulate and implement its mission. The NMRI has a mentoring program that is unique to the NIDDK. Dr. Agodoa remarked on the interesting journey of the NMRI and expressed gratitude to the members for their participation in making the NMRI a success and addressing disparities research.

Racial and Ethnic Disparities in Diabetes Care

Guillermo Umpierrez, M.D., Professor of Medicine, Emory University School of Medicine

Dr. Guillermo Umpierrez, director of diabetes and endocrinology at Grady Health System, presented an overview of diabetes mellitus (DM) in minority populations. The percentage of minority populations in the United States has increased steadily since 1960; the Hispanic population has seen the largest increase, followed by Asian and African Americans. The prevalence of DM in U.S. adults ages 20 to 79 also increased from 1980 to 2012. The estimated age-adjusted prevalence of DM was higher in U.S. adults 18 years and older in minority populations than in non-Hispanic whites from 2013 to 2015 and was higher among women in the minority populations than among men. The overall prevalence of DM in the United States is 7.2 percent and is higher in the eastern United States. The American Diabetes Association (ADA) reports that 30 percent of people with DM in the United States are not being diagnosed.

Genetic, medical, and lifestyle factors may play a role in the increased prevalence of DM in minority populations. A genetic basis for DM was first proposed in 1962 by geneticist Dr. James V. Neel in his thrifty gene hypothesis, which suggests that genes associated with fat storage in the body during periods of famine would, in times of caloric excess, predispose the body to obesity and diabetes. Genome-wide association studies and whole-exome sequencing studies have revealed more than 100 genetic variants associated with the modified risk for type 2 diabetes, including population-specific variants in African Americans, Hispanics, and American Indians. Yet genetic factors account for a small percentage of the estimated heritability of diabetes. Minority

populations show increased prevalence of DM after relocating to the United States. Furthermore, a 1994 study comparing the lifestyle of Pima Indians living in Arizona to their counterparts in Mexico revealed similar genetic markers in both groups, but Arizona Pima Indians had higher body mass indexes (BMIs) and spent fewer hours doing hard work each week than Mexican Pima Indians.

Such lifestyle factors as obesity, dietary change, physical inactivity, and insulin resistance are known to play a role in the increased incidence of DM. The Centers for Disease Control and Prevention (CDC) reported a correlation of age-adjusted prevalence of obesity and diagnosed DM in U.S. adults in 2014. Findings from National Health and Nutrition Examination Survey (NHANES) data from 1988 to 1994 and 1999 to 2002 and from the Racial and Ethnic Approaches to Community Health (REACH) study investigating the prevalence of obesity (BMI greater than 30 kg/m^2) and overweight (BMI of 25 to 30 kg/m^2) in the diabetic population showed similar results, linking obesity to diabetes. Dr. Umpierrez emphasized the need to address the industrialized and urbanized diet to define the underlying cause of the diabetes epidemic in minority populations. Given that long-term dieting in adults often leads to decreased metabolic rates, increased appetite, and a tendency to regain the weight, adopting early prevention strategies is critical. Starting places include decreasing consumption of high sugar content soft drinks and increasing physical activity in youth.

Dr. Umpierrez remarked that diabesity—obesity-related diabetes—is the driver of the DM epidemic in the United States. BMI is linked to the relative risk of DM, and the prevalence of type 2 diabetes significantly increases in African Americans and Hispanics with BMIs greater than 25 kg/m^2 and in Asian Americans with BMIs greater than of 23 kg/m^2. Reports show that obesity leads to inflammation and insulin resistance, resulting in epigenetic changes in adipose tissue macrophages. Fifty percent of obese persons with intra-abdominal subcutaneous fat accumulations (i.e., apple-shaped) and a compromised pancreas (abnormal levels of adipocytokines and/or fatty acids) will more than likely develop diabetes during their lifetime. Additionally, insulin resistance is more prevalent in minority populations. Dr. Umpierrez speculated that epigenetic changes predispose insulin-resistant minority populations to physical inactivity and weight gain, leading to an increase in complications from DM, such as retinopathy, end-stage renal disease, and lower-extremity amputation. African Americans have higher incidences of diabetes-related complications than other minority groups due to other risk factors (e.g., hypertension). The relative risk of lower-extremity amputations is highest in Native Americans and lowest in Asian Americans. The CDC reports that diabetes-related mortality rates were higher in minority populations and that diabetes-related conditions are the sixth leading cause of death in these groups.

Dr. Umpierrez pointed out that the health disparities in DM in minority populations have been known for more than 20 years; the NIH has been actively addressing this issue. Potential sources of care disparities are seen on the patient, provider, and health care system levels. For example, ethnic minorities tend to have worse glycemic control and age-adjusted Hb A1c levels greater than 9 percent, but these trends have been improving for all minority groups except Mexican Americans. Adherence to extensive insulin therapy and glucose self-monitoring is less in ethnic minorities than non-Hispanic whites. Racial disparities were observed in the Medicare managed care system, such that routine eye exams and glucose and cholesterol screenings were less frequent in African Americans, as reported in 1999 and 2003. From 2009 to 2014, ethnic minorities had worse hypertension and DM control when treated in community health centers.

Dr. Umpierrez described intervention strategies to address racial and ethnic disparities in the United States, including the efforts in the Diabetes Management Program within the Grady Health System. Intensified glucose control was an effective intervention to reduce A1c levels in African Americans and Hispanic patients, but Hispanic patients tend to drop from the system on follow-up. A shortage of community-based physicians to care for DM patients likely plays a role in the access to DM care. Evidence showed no difference in diabetic patient health outcomes between patients treated by doctors and those treated by appropriately trained nurses (e.g., certified diabetes educators). In the Hispanic population, low English proficiency and overall low literacy are factors. Intervention and programs should be tailored to the community, and health

care workers improve DM care in the community, especially in the Hispanic population. DM care in ethnic groups also is affected by care disparities; removing access to care barriers would help reduce the disparity in diabetes-related complication rates.

Dr. Umpierrez emphasized the importance of developing programs to prevent and improve DM care in minority populations, educating the health care workforce, and improving access to care. DM care in minority populations requires a unique approach due to heterogeneity within populations regarding socioeconomic status, language, diet, and religion. Randomized controlled clinical trials must include Asian Americans of similar demographics and genetics. All studies should consider cultural and social factors more broadly, and clinical practice guidelines must account for the diversity of these factors. Additionally, the low clinical trial participation rates for minority population must be addressed to better understand responses to treatment.

Discussion

Dr. Francisco Villarreal asked about the low incidences of diabetes in Cuban populations. Dr. Umpierrez pointed out that the Caribbean populations in general have high incidences of obesity, which could be related to diet or genetics. He was aware of those details on diabetes in Cuban populations.

A participant in the surgical field pointed out that glucose levels precipitously drop to a nondiabetic level 1 week after bariatric surgery and asked whether any mechanisms for this rapid change are known. Dr. Umpierrez observed that age-adjusted BMIs and body weight do not correlate equally to complications from fatty acid disease across racial groups. Prior to bariatric surgery, patients are required to adhere to a strict diet, which decreases glucose levels. Hormones that monitor insulin and glucagon secretion (e.g., integrin) then increase in the gastrointestinal tract and contribute to this effect that occurs before surgery. Patients likely are exhibiting a remission from DM rather than a cure; weight gain will reverse the effect.

When asked about community-based intervention in diabetes control, Dr. Umpierrez noted the various community efforts that are occurring in cities and states such as engaging the local farmer's market, adopting exercise and fitness initiatives, and providing nutritional meals.

Friday, April 13, 2018

MENTOR/MENTEE SESSION

Junior investigators who had signed up for this session had the opportunity to meet with one of several senior NMRI investigators who offered to serve as mentors. During the session, each mentor hosted a roundtable discussion with his or her mentees, answering questions and providing advice.

ROLE OF SCIENTIFIC SOCIETIES AND PROFESSIONAL ORGANIZATIONS

Dr. Agodoa thanked the societies and organizations for their continued support and acknowledged the 16th Annual NMRI Workshop travel award winners.

American Society of Nephrology (ASN)
Mark D. Okusa, M.D., President, ASN

Dr. Mark Okusa described the ASN, which has 18,300 members from 125 different countries, and its mission to prevent, treat, and cure kidney diseases throughout the world by educating health professionals and scientists, advancing innovation, communicating knowledge, and advocating for patients. He noted that the ASN is committed to diversity and inclusion, career development, and mentorship within the Society. To frame the nephrologists' perspective, Dr. Okusa first reviewed kidney disease statistics. More than 850 million people worldwide are estimated to have kidney diseases; of the 850 million, 843 million have chronic kidney disease (CKD) stages 1–5; 13.3 million have acute kidney injury (AKI); 7 million have end-stage renal disease (ESRD); 3.9 million are treated with renal replacement therapy; and more women than men have CKD. The ASN

enterprise includes the Foundation for Kidney Research, the Kidney Health Initiative (KHI), and the Nephrologists Transforming Dialysis Safety (NTDS) initiative. Recognizing the need to continuously fund kidney research, the ASN established the Foundation for Kidney Research in 2012. The KHI, a collaboration between the FDA and the broader nephrology community, was started in 2012 to optimize kidney health and evaluate the safety of drugs, devices, biologics, and food products. More than 25 organizations from academia, private industry, and the pharmaceutical industry are members of the KHI. In 2016, ASN partnered with the CDC to form the NTDS to actively pursue eliminating preventable infections in dialysis facilities.

Dr. Okusa discussed the ASN's diversity and inclusion efforts. He pointed out that the guiding principles of the ASN's values statement on diversity and inclusion—inclusiveness, mentorship, health equity, patient advocacy, and engagement—have not changed. A Diversity and Inclusion Work Group established in 2013 was renamed the Diversity and Inclusion Committee in 2017. Dr. Okusa acknowledged Committee chair and NMRI member Dr. Diedra Crews and noted the diverse background of the members, and he highlighted the Committee's activities and accomplishments. The Committee has provided travel awards to 72 NMRI workshop participants from 2015 to 2018, recommended strategies for improving the diversity of ASN speakers and presenters, and nominated Committee member Dr. Jason Cobb to represent the ASN on the National Collaborative for Improving the Clinical Learning Environment Health Care Disparities Work Group. The Committee's 2018 priorities include expanding the ASN member demographic metric collection; funding a second ASN-Harold Amos Medical Faculty Development Program (AMFDP) Award; presenting an abstract at the American Association of Medical Colleges' Health Workforce Research Conference; establishing an LGBTQI (Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, and Intersex) and ally member networking event during Kidney Week; and engaging in outreach related to NIH's *All of Us* Research Program.

ASN's commitment to career development for kidney professionals is threefold. Its first goal is to improve opportunities for sponsorship and mentorship by connecting early and mid-career professionals with influential leaders in the field. A new online mentor-mentee curriculum tool tailored specifically for this purpose will be linked to the new ASN Career Advancement Community for interactive dialogue. The ASN Career Advancement, Diversity and Inclusion, and Workforce and Training Committees have been engaged to develop animated presentations, case studies, and informational guides related to this goal. The second goal is to develop, support, and disseminate career development and leadership training resources and best practices for all career levels. The ASN Career Advancement Committee, charged with identifying gaps in advancing careers for kidney professionals, was established in 2017 and has made significant accomplishments in the first year. The third goal is to develop tools for broader information exchange between professionals. To date, the ASN Career Advancement Community has had 1,121 contributors, 15 communities, and 3,868 international logins.

Dr. Okusa detailed the ASN funding opportunities for students, trainees, and early career professionals. Research fellowships for M.D.'s, D.O.'s, and Ph.D.'s include the Ben J. Lipps Research Fellowship Program Award and the William E. Mitch International Scholars Program Travel Award. The new ASN Predoctoral Fellowship Award Program is available to Ph.D. students. The Kidney Students and Residents at Kidney Week Travel Award supports students, residents, and Ph.D. candidates. Medical and graduate students are supported by the Student Scholar Grants Program and the Kidney Tutored Research and Education for Kidney Scholars (TREKS) Award. Two TREKS program sites are available: Mount Desert Island Biological Laboratory in Bar Harbor, Maine, and the University of Chicago in Chicago, Illinois. The ASN supports early career professionals through career development grants, the William and Sandra Bennett Clinical Scholars Program, and the AMFDP Award.

American Association for the Study of Liver Disease (AASLD)
Charles Howell, M.D., Professor, Howard University

Dr. Charles Howell described the activities intended to foster diversity and inclusion in the AASLD and provided an overview of the AASLD Foundation and Research Program. The AASLD was founded in 1950 and has become the leading organization of scientists and health care pro-

fessionals committed to preventing and curing liver diseases. The mission of the AASLD is to advance and disseminate the science and practice of hepatology and to promote liver health and quality patient care. Dr. Howell emphasized that the AASLD is committed to diversity and inclusion; the AASLD Diversity Committee, which he currently chairs, was established in 2016. The Diversity Committee is tasked with defining the demographic composition of the AASLD membership and proposing strategies to promote recruitment and increase engagement of diverse groups that are underrepresented in the medical profession. The Diversity Committee also will promote health disparities education and research within the AASLD, improve health outcomes, and reduce disparities. The Diversity Committee will sponsor a workshop on ethnic and racial disparities in liver disease at the 2018 Annual Liver Meeting on November 12, 2018, in San Francisco, California, as part of its health disparities education and research-first initiative. In addition, the Diversity Committee will continue to host the Annual Liver Meeting Diversity Reception, which has been ongoing since 2016. Dr. Howell acknowledged the Diversity Committee members, many of whom also are NMRI members.

Dr. Howell informed participants that the AASLD Foundation is the largest private supporter of hepatology research and training in North America, with goals to invest in innovative hepatology research and the people who study and treat liver disease. The Foundation's Research and Career Development Awards Program supports basic, clinical, and translational and outcomes research; travel awards; and career awards that extend from the advanced practice provider to the mid-career researcher. From 2000 to 2017, the AASLD invested $42.9 million in hepatology research and supported 1,133 total awards. In 2017 alone, more than $3.5 million was made available for research to support 114 awards. Among all the research awardees funded from 2008 to 2015, 48 percent later received federal funding as independent investigators. This success speaks to the positive outlook and bright future for hepatology researchers. Additional information on grants and funding can be accessed at the AASLD website.

American Society for Bone and Mineral Research (ASBMR)
Alexandra Aguilar-Perez, Ph.D., Postdoctoral Fellow, Indiana University (Travel Award Winner)

Dr. Alexandra Aguilar-Perez described the ASBMR, its mission, and its activities. The ASBMR has served the bone, mineral, and musculoskeletal scientific community for more than 40 years and has a diverse membership of approximately 4,000 members worldwide; 52 percent are in the United States and 48 percent are international; 54 percent are Ph.D.'s; 46 percent are M.D.'s; and 18 percent are early-stage investigators (ESIs). The Society's programs and education are driven by its mission to advance excellence in bone, mineral, and musculoskeletal science worldwide and promote translation of basic and clinical research to improve human health. The ASBMR Annual Meeting is the world's largest and most diverse meeting in the bone, mineral, and musculoskeletal research field, attracting more than 3,000 attendees from more than 70 countries. In 2017, 1,100 posters and more than 100 educational sessions were presented. More than 100 travel grants and awards are available to U.S. and international members at every stage of their career. The 2018 Annual Meeting will be held in Montreal, Quebec, Canada, from September 28, 2018, to October 1, 2018.

Dr. Aguilar-Perez highlighted the ASBMR Annual Meeting travel grants, including the Young Investigator Diversity Travel Grant, which provides $500 for the top-scoring abstract submitted by a young investigator from a URM group. The Mid-Career Faculty Travel Grant, the Research Team Travel Grant, and the Young Investigator Emerging Country Travel Grant were introduced in 2017 and are continuing. Other awards presented at the Annual Meeting include the President's Award, the Phoebe Leboy Professional Development Award, and the Fund for Research and Education Research Grant Award. The Society's newest award is the Federation of American Societies for Experimental Biology (FASEB) Mentored Poster/Platform Presenter Travel Award to attend the 2018 Annual Meeting, which is available to students from URM groups and postdoctoral/clinical trainee fellows.

The ASBMR publishes the *Journal of Bone and Mineral Research (JBMR), JBMR Plus,* and *The Primer on the Metabolic Bone Diseases and Disorders of Mineral Metabolism.* Members receive online access to all publications free of charge, are afforded significant discounts on article submissions, and

have free access to the online Education Resource Center. In addition, members receive more than $350 in savings on Annual Meeting registrations, engage with a global network of scientific researchers and clinician scientists to foster future collaborations, and are provided the opportunity to apply for research funding and travel grants exclusive to ASBMR members.

Dr. Aguilar-Perez remarked that the ASBMR continues to increase its activities and visibility of underrepresented members throughout the Society. The Diversity in Bone and Mineral Research Committee has advocated for increased travel grant funding for URMs in the United States and globally, has secured funding in perpetuity to ensure that the NMRI Travel Grant is offered annually, and has secured funding for the new FASEB Mentored Poster/Platform Presenter Travel Awards. The Diversity Committee also is working to continue its annual programming and networking activities at the 2018 Annual Meeting—including a Networking Reception, a Networking Lounge in the Discovery Hall, and a Poster Competition—as well as working to increase the visibility and representation of diverse members in the program's speakers and moderators. Dr. Aguilar-Perez encouraged participants to join the ASBMR and to visit the website for additional information.

American Diabetes Association (ADA)
Allison McElvaine, Ph.D., Director, Research Communications, ADA

Dr. Allison McElvaine described ADA's research programs and noted the increasing trend in DM across the United States from 1994 to 2017. In fact, DM affects 1 in 11 Americans; increases the risk of serious health complications; disproportionately affects individuals from racial and ethnic minority groups; and accounts for rising health care costs of more than $327 billion annually. Dr. McElvaine emphasized that to address its mission to prevent and cure DM and improve the lives of all people affected by DM, the ADA recognizes that the only way to ultimately end the burden of DM is through research. Advances in research have resulted in 12 classes of medications to treat DM; the ADA's Standards of Care for DM; and reduced complications from the disease. To date, the ADA has invested more than $807 million in DM research, including $37.4 million in 2017. The return on investment shows that within 5 years of completing an ADA project, nine out of 10 ADA-funded researchers successfully received funding from other sources to expand their work.

Dr. McElvaine informed participants that the Association's research activities consist of three distinct programs: the Core Research Program, the Collaborative Targeted Research Program, and the Pathway to Stop DM Program. The objective of the Core Research Program is to support innovative early stage research and ESIs. Funding opportunities support topics relevant to all types of DM, DM risk, and complications and are available at all career stages. Specific funding mechanisms are available to support minority undergraduate students and postdoctoral fellows. The Core Research Program has been successful in retaining scientists dedicated to DM research (99 percent), leveraging investments ($7.36 gained for each $1 invested), and advancing the science (six publications per grant).

The Collaborative Targeted Research Program supports research on specific high-need, emerging, or promising topic areas not represented in the core research portfolio. Dr. McElvaine emphasized that grants are made available only when a sponsor or donor provides funding. Recent projects include the GlaxoSmithKline-supported initiative to explore the emerging connections between the microbiome, nutrition, and metabolism and the Pfizer Inc.–supported initiative that funds postdoctoral fellows in cardiometabolic research at institutions in the New England region.

Dr. McElvaine noted that the ADA Core and Targeted Research Programs are achieving their goals, yet challenges remain. Few scientists are choosing DM research careers, and many experts in the field are retiring; the innovation process can take time to advance; and the prevalence of DM and diabetes-related complications continues to grow. Furthermore, DM research is underfunded at the federal level in terms of prevalence and research dollars allotted compared to other diseases, including cancer and HIV/AIDS. To address these challenges, the ADA launched the Pathway to Stop DM Program in 2013 to attract brilliant minds at the peak of their creativity,

invest in people rather than projects, and provide freedom, autonomy, and resources to researchers. Three Pathway to Stop DM funding mechanisms are available: the Initiator Award available to postdoctoral fellows, the Accelerator Award for ESIs, and the Visionary Award, which is open to scientists established in other disciplines who are interested in applying novel approaches to DM research. From 2012 to 2017, 29 researchers were selected from more than 540 nominations; six Pathway Initiator awardees have secured faculty positions; and Pathway awardees have collectively published 60 papers and filed seven patents.

Dr. McElvaine encouraged participants to apply for grants, share data at the ADA's annual Scientific Sessions and in peer-reviewed journals, volunteer to review grants or serve on committees, and support the ADA in its mission.

Endocrine Society
Rocio Pereira, M.D., Assistant Professor, Joslin Diabetes Center

Dr. Rocio Pereira informed participants that the Endocrine Society is an international community consisting of clinical practitioners and basic and clinical researchers representing 122 countries. The Society has more than 18,000 members, 60 percent in the United States and 40 percent international. Peer-reviewed publications include *Endocrine Reviews, Endocrinology,* and the *Journal of the Endocrine Society.* The Endocrine Society has incorporated health disparities into many of its activities, including the publication of feature articles. The Society convenes an annual meeting (commonly called ENDO), and features an online career center (Endocareers), which provides a mentor exchange program, in-training and early career resources, as well as board certification training for clinical endocrinologists.

The Endocrine Society awards program spans all career levels and includes ENDO travel awards, scientific achievement awards, summer research fellowships, and student and early career awards. In addition, one of the Society's diversity initiatives is the NIDDK-sponsored Future Leaders Advancing Research in Endocrinology (FLARE) program to support training in endocrine research for URMs. Components of the FLARE program include workshops, internship paths, mentorship paths, and ENDO travel awards.

WRITING WORKSHOP—SESSION II: LET'S START WITH THE SYSTEMATIC REVIEW

Patricia Heyn, Ph.D., Associate Professor, University of Colorado Denver, Anschutz Medical Campus
Lillian Hoffecker, Ph.D., Research Librarian, University of Colorado Denver, Anschutz Medical Campus

Drs. Heyn and Hoffecker led participants in an exercise to perform the steps for conducting a SR using the synthesis methodology discussed in Session I. Participants were introduced to SR software and tools and reviewed examples of search data tables, checklists, and published SRs. Participants selected one of four protocol topics and worked in teams to develop an SR question.

POSTER SESSION AWARDS

The workshop's four scientific presenters, who were selected from the pool of submitted abstracts, were presented with plaques commemorating their achievements. All the meeting participants who presented posters at this year's workshop were thanked for their time and willingness to share their research with the NMRI community. The four winners of the poster session awards were then announced and congratulated:

Basic Science Poster Award
Yaritza Inostroza-Nieves, Ph.D., Assistant Professor, University of California, San Diego
"Endothelin-1 Regulates Molecules of the Major Histocompatibility Complex: Role in Sickle Cell Disease"

Translational Science Poster Awards
Wairimu Magua, Ph.D., Postdoctoral Fellow, Emory University
"A System-Level Multiple Component Intervention to Increase Awareness of the Impact of the New Kidney Allocation System on Patient Care in Dialysis Facilities"

Elimelda Moige Ongeri, Ph.D., Associate Professor, North Carolina A&T University
"Undiagnosed Kidney Injury in Uninsured and Underinsured Diabetic African American Men and Putative Role of Meprin Metalloproteases in Renal Pathology"

Clinical Science Poster Award
Melawhy Garcia, Ph.D., Postdoctoral Research Fellow, University of California, San Diego
"Correlates of Low-Adherence to Oral Hypoglycemic Medications Among Hispanic/Latinos with Type 2 Diabetes"

BUSINESS MEETING AND COMMITTEE REPORTS

Oversight Committee Report
Rocio Pereira, M.D., Assistant Professor, Joslin Diabetes Center

Dr. Pereira explained that the Oversight Committee helps to guide the NMRI and relies heavily on the feedback of its members. The Oversight Committee advocates for funding, recruits new members, and coordinates with professional societies and organizations to facilitate informal gatherings at scientific conferences, such as the NMRI Annual Workshop. Dr. Pereira reminded members to complete the evaluation survey, increase awareness of the Network among their peers and home institutions, and share news of accomplishments and personal anecdotes to be included in the 2019 NMRI Newsletter.

Planning Committee Report
Jose Romero, Ph.D., Associate Physiologist, Brigham and Women's Hospital, Harvard Medical School

Dr. Romero encouraged members to forward comments and suggestions for future NMRI meetings to the Planning Committee, and he provided an update on the 2017 activities. The Planning Committee convened by conference call once each month to share and discuss ideas and make decisions related to the broad mandate of the Committee. He introduced the incoming chair, Dr. Francisco Villarreal, who noted that the 2019 Annual Workshop is being planned and is scheduled to be held in Bethesda, Maryland; the dates are to be determined. The theme of the 2019 workshop will focus on NIDDK women investigators. Members are welcome to provide input on the theme and topical sessions.

Dr. Agodoa, accompanied by Ms. Martinez, presented NMRI Committee chairs with certificates in appreciation of their service.

SCIENTIFIC PRESENTATIONS

Aspirin and Other NSAIDs Reduce the Risk of Biliary Tract Cancers: A Swedish Population-Based Cohort Study
Lorena Marcano-Bonilla, Predoctoral Fellow, Mayo Clinic

Ms. Lorena Marcano-Bonilla presented her research on the population-based study of the risk and protective factors of biliary tract cancers (BTCs). Originating in the bile duct epithelium, bile duct cancer or cholangiocarcinoma (CCA) is classified into two categories: intrahepatic CCA (iCCA) or extrahepatic CCA (eCCA). The eCCA type is further divided into perihilar CCA (pCCA) and distal CCA (dCCA). BTCs are comprised of gall bladder cancers (GBCs) and CCAs. Previous case control studies have shown that the use of aspirin significantly decreased the risk of CCA and its subtypes. Case control studies, although informative, may overestimate the treatment effects.

The aim of this study was to determine whether the use of low-dose aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs) affects the risk of BTC and its subtypes in a nationwide population-based cohort of Swedish adults. The hypothesis is that the use of low-dose aspirin and NSAIDs decreases the risk of BTC. The Mayo Clinic (Dr. Lewis R. Roberts) collaborated with the Karolinska Institutet (Dr. Nele Brusselaers) to conduct this study, which compared cohorts of adult patients exposed to maintenance therapy with low-dose aspirin, other NSAIDs, or statins to unexposed adult patients. Exposure was determined by the Anatomical Therapeutic Classification

codes recorded in the Swedish Prescribed Drug Registry. Outcomes were evaluated using the International Classification of Diseases (ICD) codes recorded in the Swedish Cancer Registry. Information on the covariates was obtained from the Swedish National Patient Registry. The cohort consisted of 5.76 million unique individuals. Patients younger than 18 years of age and those having a preexisting cancer, other than non-melanoma skin cancer, were excluded from the study. Statistical analysis was performed using a time-dependent Cox proportional hazard model to determine hazard ratios (HR).

Ms. Marcano-Bonilla discussed the study results. The baseline characteristics of low-dose aspirin users revealed that 18 percent of the cohort used low-dose aspirin, whereas 82 percent did not. Data were graphically illustrated in a forest plot in which a hazard ratio (HR) of 1 indicates no effect, a HR of less than 1 indicates decreased risk, and a HR greater than 1 indicates increased risk. The HRs were adjusted for BTC and associated diseases, cirrhosis and viral hepatitis, autoimmune diseases, cardiovascular and metabolic diseases, and lifestyle habits. Users of low-dose aspirin were 19 percent less likely to develop BTCs. Similar results were observed for CCA, GBC, and eCCA, but not for iCCA. The baseline characteristics of users of other NSAIDs showed that 42 percent of the study cohort used other NSAIDS and 58 percent did not. Use of other NSAIDs appears to increase the risk of BTC, and the effects hold for all subtypes. This effect could be due to an indication bias rather than the drugs themselves.

In summary, Ms. Marcano-Bonilla presented a population-based cohort study that investigated the risk and protective factors for BTC and its subtypes. The cohort of 5.7 million adults represents with virtually complete enumeration the use of low-dose aspirin and other NSAIDs in the Swedish population. This study provides strong epidemiological evidence in favor of the chemopreventive role of low-dose aspirin and has important translational implications. Ms. Marcano-Bonilla acknowledged her mentor, Dr. Roberts, Mayo Clinic; study collaborator, Dr. Brusselaers, Karolinska Institutet; and the Mayo Clinic statistical team.

Discussion

Dr. Crews pointed out that this epidemiological study assessed the association of aspirin use on the risk of developing BTCs, an observation that differs from inferring protection from the use of aspirin. She also asked about the number of study participants that developed BTCs who did not use aspirin. Ms. Marcano-Bonilla commented that additional studies are needed to further clarify the protective role of aspirin. Animal studies would be essential to elucidate the mechanism of action. If further preclinical evidence supporting aspirin as a chemopreventive agent is generated, clinical trials would be the next steps. These, however, would be challenging because this is a rare form of cancer that would require a large number of participants to be followed for a prolonged period of time. A viable option would be conducting trials on patients with primary sclerosing cholangitis, who are known to be at high risk for developing BTCs.

A participant asked whether other antiplatelet therapies were considered for this study. Ms. Marcano-Bonilla explain that only aspirin and other non-aspirin NSAIDs were used in the study. Assessing other antiplatelet therapies could be considered for the future.

Impact of Education and Protocol-Based Management of Community-Acquired Acute Kidney Injury: Preliminary Results from the 0by25 Pilot Feasibility Project
Etienne Vasconcellos DeMacedo, M.D., Ph.D., Assistant Adjunct Professor, University of California, San Diego

Dr. Etienne Vasconcellos DeMacedo presented preliminary results of the International Society of Nephrology's AKI Zero Preventable Deaths by 2025 (0by25) pilot project, which aims to assess the feasibility of implementing interventions to optimize care of AKI in low-resource settings. Preventable deaths are those involving missed identification or delayed recognition of a diagnosis of AKI. Most of the studies assessing AKI have focused on critical care patients in hospital intensive care units; very few have addressed community-acquired AKI, in which the patient had developed AKI prior to hospitalization. Community-acquired AKI often is undiagnosed, associated with worse outcomes, and more prevalent in low-resource settings.

The first part of the feasibility study was conducted at three sites—Dharan, Nepal; Blantyre, Malawi; and Cochabamba, Bolivia—and was implemented in three phases: observation, education/training, and intervention. Patients receiving care in community health care centers were screened and assigned a risk score for AKI based on their symptoms. Patients with moderate to high risk were consented and enrolled in the study. Serum creatinine levels were tested using two methods: StatSensor® Point-of-Care Creatinine Analyzer and the conventional urine dipstick test. Patients were monitored and outcomes measured. During the intervention phase, health care providers also contacted a physician in the supporting hospital for guidance on patient management.

Patients were assigned to one of two disease categories—CKD or acute kidney disease (AKD)—based on history and point-of-care test results. Repeat creatinine testing was used to identify development of AKI by 7 days. Patient course outcomes, renal outcomes, and overall outcomes were determined at 1, 3, and 6 months.

A total of 3,577 patients were screened, 1,929 in the observation phase and 1,630 in the intervention phase. Of these patients, 91 percent were adults and 9 percent were children. At enrollment, more than two-thirds of the patients had evidence of renal dysfunction, 9.4 percent had a history of CKD, and 66.3 percent were considered to have AKD. More patients with AKI were identified in the intervention phase (35 percent) than in the observation phase (25 percent). Patients with AKD at enrollment and at 7 days were more likely to be admitted in community health centers or hospitals. Fluid therapy was more frequent in the intervention phase, and the volume of oral and intravenous fluid therapy was higher in the intervention phase than in the observation phase. The mortality rate in patients with moderate or stage 2 AKI was significantly lower in the intervention phase than in the observation phase.

Dr. DeMacedo noted that the 0by25 pilot feasibility project successfully demonstrated the utility of a symptom-based health assessment risk score, coupled with a point-of-care serum creatinine test and a urine dipstick test, to detect kidney disease in patients presenting to health care centers in low resource settings. Recognition and management of patients was facilitated and improved with the combination of staff education and training about AKI, the point-of-care test, and guidance through teleconsultation. Dr. DeMacedo thanked the study participants, study collaborators, and health care providers for supporting this work.

Discussion

A participant observed that creatinine is a late marker for AKI asked whether patients in this setting would likely be diagnosed properly based on creatinine levels. Dr. DeMacedo explained that most patients would not be diagnosis in this setting due to a lack of resources and barriers to care.

Outcomes of Donor and Recipient Obesity in Kidney Transplantation
Jacentha Buggs, M.D., Procurement Surgeon and Research Physician, Tampa General Hospital

Dr. Jacentha Buggs described a study to evaluate kidney transplant outcomes relative to donor and recipient obesity. The increasing trend in obesity has been linked to increases in type 2 diabetes, ESRD, and kidney failure, therefore increasing the odds of a patient's needing a transplant. Prior studies on transplant outcomes and obesity have focused on obese recipients, rather than obese donors. This study investigated the outcomes of donor and recipient obesity in kidney transplantation and tested the hypothesis that the outcomes differ based on the combination of obesity in the donor and recipient. The objective was to evaluate kidney transplant patient and graft survival based on different combinations of donor and recipient obesity.

A retrospective cohort study of all consecutive kidney transplants performed at Tampa General Hospital (TGH) from January 1, 2012, to December 31, 2016, was conducted. Patients were stratified into four categories: (1) obese donor and obese recipient (ODR), (2) non-obese donor and non-obese donor recipient (NODR), (3) obese donor and non-obese recipient (OD/NOR), and (4) non-obese donor and obese recipient (NOD/OR). Variables used included delayed graft function, graft survival, and patient survival. The TGH study reviewed 1,131 kidney transplants: 96 ODR (8.5 percent); 608 NODR (53.8 percent); 208 OD/NOR (18.4 percent); and 219 NOD/OR

(19.4 percent). The BMIs ranged from 13 to 63 kg/m^2. The kidney donor profile index (KDPI) is a measure of donor quality. Lower KDPI values indicate better quality. In this study, KDPIs were significantly lower when both donor and recipient were not obese and higher when both donor and recipient were obese, suggesting that poor donor quality is related to donor/recipient obesity. The delayed graft function was significant for ODR (25 percent) compared to NODR (10.4 percent) and for ODR (25 percent) compared to OD/NOR (11.5 percent). There were no differences in overall graft survival. Overall patient survival was significant for OD/NOR (98.1 percent) compared to ODR (94.8 percent), NODR (94.7 percent), and NOD/OR (90.9 percent).

Dr. Buggs noted that the national transplant population profile evaluated during the same study period and stratified accordingly was similar to the TGH study population. The next step was to conduct a retrospective cohort study of the national population from the same study period, this time investigating one donor/two recipient kidney transplants, stratified into the four categories described earlier. Living, pediatric, multi-organ, bilateral, and *en bloc* kidneys were excluded. The single-donor national population consisted of 18,104 kidney transplants—3,291 ODR (18.2 percent); 5,761 NODR (31.8 percent); 3,291 OD/NOR (18.2 percent); and 5,761 NOD/OR (31.8 percent)—and confirmed the prior findings.

Dr. Buggs concluded that outcomes with obesity in kidney transplantation vary based upon the combination of obesity in both the donor and the recipient. Delayed graft function was significantly worse with obesity in both the donor and recipient (local [i.e., TGH], national, and single donor). Graft survival outcomes were significantly worse when both donor and recipient were obese in the national and single-donor studies. Patient survival outcomes were significantly worse when both the donor and recipient were obese in the local and national cohorts.

Dr. Buggs thanked the study team, LifeLink of Florida Legacy Fund, and the University of South Florida for supporting this work.

Loss of Endothelin B Receptor Function Activates NOD-Like Receptor and Inflammasome Pathways in Renal Outer Medulla During Type 1 Diabetes Through an ER Stress-Independent Mechanism

Carmen De Miguel, Ph.D., Instructor, The University of Alabama at Birmingham (UAB)

Dr. Carmen De Miguel described the results of a study on the loss of endothelin B (ET_B) receptor function and activation of the nucleotide-binding oligomerization domain-like (NOD-like) receptor and inflammasome pathways in type 1 diabetes. Endothelin-1 (ET-1) has been shown to be involved in diabetes-related inflammation, has proinflammatory properties in renal tissue, and mediates its actions via two receptors, the endothelin A (ET_A) receptor and the ET_B receptor. The objective of this study was to determine the role of the endothelin system in the activation of the inflammasome pathways in the kidney during type 1 diabetes. In the experimental design, ET_B-deficient rats and transgenic (TG) control rats were used, and baseline urine samples were collected prior to the study. Total lack of the ET_B receptor is lethal, so this rat strain was rescued years ago by the reintroduction of the ET_B receptor exclusively in the neuronal tissue. These rats have elevated levels of circulating ET-1, and have overactivation of the ET_A receptor. Animals (four to six per group) were dosed intravenously with 65 mg/kg of streptozotocin to induce type 1 diabetes. Insulin pellets were implanted 1 day after injections, and animals were monitored for 10 weeks. Ten weeks after diabetes was induced, kidneys and urine were collected and analyzed.

Results showed that diabetic ET_B-deficient rats developed exaggerated renal damage that was not observed in diabetic TG control rats. This effect was persistent in the cortex and renal outer medulla regions of the kidney. Markers of kidney damage, albumin and protein excretion, and Kidney Injury Molecule-1 (KIM-1) were significantly higher in ET_B-deficient rats than in the diabetic TG control rats. The expression of inflammasome genes was assessed in the kidney renal outer medulla, because this area of the kidney also presented elevated cell death. DM led to statistically significant upregulation of the NOD-like receptor family pyrin domain containing 5 (NLRP5) and interleukin-1 beta (IL-1β). Endoplasmic reticulum (ER) stress has been identified as an inducer of inflammasome activation. In this study, there were no differences in ER stress markers between diabetic ET_B-deficient rats and TG control rats.

Dr. De Miguel noted that loss of ET_B receptor function leads to overactivation of the renal inflammasome and worsening of diabetic kidney disease. Activation of the inflammasome pathway is not mediated by ER stress in this diabetic animal model. She proposed a working hypothesis that ET-1 is upregulated in type 1 diabetes, leading to activation of the ET-1 receptors. When the ET_B receptors are dysfunctional, as in many diabetic patients, ET_A receptors are overactivated and subsequent inflammasome activation occurs, resulting in kidney injury. Dr. De Miguel thanked her mentors, Drs. Jennifer S. and David M. Pollock, UAB, for their support and the UAB Division of Nephrology.

NEXT STEPS AND ADJOURNMENT

Jose Romero, Ph.D., Associate Physiologist, Brigham and Women's Hospital, Harvard Medical School

Dr. Romero thanked participants for attending the 16th Annual NMRI Workshop and Meeting.

Ms. Martinez thanked everyone for attending and noted that the NMRI South Regional meeting is scheduled for November 2018. Members wishing to participate in planning that meeting were encouraged to use the signup sheet in the foyer. Ms. Martinez reminded members to update their NMRI profiles to keep the Network current and accurate.

Dr. Agodoa remarked that the NMRI, which started as an experiment 16 years ago, is a success today because of the members. He thanked participants for supporting the meeting and expressed appreciation to Ms. Martinez for her continued support. Members are welcome to send any comments or suggestions to the NIDDK.

National Institute of
Diabetes and Digestive
and Kidney Diseases