

Network of Minority Health Research Investigators (NMRI)



NMRI News Fall 2018



National Institute of
Diabetes and Digestive
and Kidney Diseases



A Message from Dr. Agodoa

It was 16 years ago this April that the Network of Minority Health Research Investigators (NMRI, or the Network) held its first annual workshop. This historic event occurred because of recognition by the National Institutes of Health (NIH) of the pressing need to increase the representation of minority health researchers among its grantees. The Director of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) took the lead in addressing the need for greater diversity in the biomedical research community by establishing the Office of Minority Health Research Coordination (OMHRC). The Center formed the Network to foster communication among biomedical research investigators and technical personnel interested in minority health research. The NMRI continues to—

- Encourage minority health investigators to conduct research in areas related to the NIDDK's mission, including diabetes; endocrinology; metabolism; digestive diseases; nutrition; and kidney, urologic, and hematologic diseases.
- Promote two-way communication between the NIDDK and NMRI members.
- Recommend strategies to support and advance underrepresented individuals and others in biomedical research.
- Advance scientific knowledge and contribute to reducing and eliminating racial and ethnic health disparities.

More than 580 members have joined the NMRI since 2002, and the Network continues to grow. The NMRI's success in achieving its mission is rooted in the dedication of senior members who mentor and serve as role models for junior investigators. The Network's senior members help junior members develop grant applications, navigate the tenure process, and learn to balance faculty commitments. Mentoring occurs during our annual and regional workshops, by email, and by telephone, with the help of the NMRI Membership Directory to facilitate relationships. The NMRI Membership Directory helps members form mentor-mentee relationships and build collaborations among members with similar research interests.

Best wishes for a successful year of research, mentoring, and community!

Lawrence Y. Agodoa, M.D., FACP

Director, Office of Minority Health Research Coordination, NIDDK, NIH

Awards and Accomplishments

E. Dale Able, M.D., Ph.D., The University of Iowa Carver College of Medicine, is now President Elect of the Endocrine Society and was invited to deliver the NIH 2018 Astute Clinician Lecture.

Jacantha Buggs, M.D., Tampa General Hospital, was selected for an oral abstract presentation at the 2018 American Transplant Congress.

April Carson, Ph.D., The University of Alabama at Birmingham (UAB), was awarded a grant from the Centers for Disease Control and Prevention to examine geographical disparities related to the occurrence of diabetes.

Paulette Chandler, M.D., Harvard Medical School, had a publication accepted into a peer-reviewed journal, and a graduate student she mentored was accepted into a Pharmacy Medical Intern Program.

Tameka Clemons, Ph.D., Spelman College, received a Research Initiation Award (a 3-year grant) from the National Science Foundation for her project titled "Probing Inter-Compartmental Cross-Talk Between Redox and Amylin Signaling Networks."

Deidra C. Crews, M.D., Sc.M., FASN, received the 2018 Johns Hopkins University President's Frontier Award.

Alicia Diaz-Thomas, M.D., The University of Tennessee, had a graduate student to defend her thesis for a Ph.D. in Nursing and get selected for an Assistant Professor of Nursing position.

Celeste Farr, Ph.D., Oakland University William Beaumont School of Medicine, had a publication accepted into a peer-reviewed journal.

Trudy Gaillard, Ph.D., is now Associate Dean for Academic Affairs at Florida International University.

Melawhy Garcia, Ph.D., University of California, San Diego (UCSD), has been offered a position as Assistant Professor of Health Science at UCSD.

Michelle Harris, Ph.D., University of the District of Columbia, was an invited speaker at the 2018 Spring Workshop of the Maryland Dietetics in Healthcare Communities.

Patricia Heyn, Ph.D., University of Colorado Denver Anschutz Medical Campus, was selected Chair of the Gerontological Society of America Mentoring Committee.

Frankie Heyward, Ph.D., Harvard Medical School, was nominated to represent the Beth Israel Deaconess Medical Center in the Regeneron Prize for Creative Innovation contest.

Marja Hurley, M.D., University of Connecticut Health Center, received NIH funding; chaired the 2017 Fibroblast Growth Factor in Development and Disease Gordon Research Conference; and was elected Chair, Translational Program, American Society of Bone and Mineral Research 2018 Annual Meeting Planning Committee.

Chandra Jackson, Ph.D., National Institute of Environmental Health Sciences (NIEHS), was awarded a 2-year NIH Bench-to-Bedside grant in March 2018 to study how multiple metabolites, or products of metabolism, are linked with type 2 diabetes in a racially diverse population.

Maud Joachim-Celestin, Ph.D., Loma Linda University, was invited to participate on the New York Committee of Health Disparities.

Holly Jones, Ph.D., University of Cincinnati, published a paper titled “Sleep Disturbances in Midlife Women at the Cusp of the Menopausal Transition” in the July issue of the *Journal of Clinical Sleep Medicine*.

Joshua Joseph, M.D., The Ohio State University Wexner Medical Center, received an NIDDK Mentored Patient-Oriented Research Career Development (K23) Award to study the role of the Renin-Angiotensin-Aldosterone System, ARMC5, and Nephrylsin in Glucose Metabolism Among African Americans.

Ketrell McWhorter, Ph.D., NIEHS, had a publication accepted into a peer-reviewed journal.

Opeyemi Olabisi, M.D., Ph.D., Harvard Medical School, started his research laboratory in the Department of Nephrology at Massachusetts General Hospital.

Elimelda Onger, Ph.D., North Carolina A&T University, was awarded a grant from the NIH National Institute of General Medical Sciences to investigate Acute Kidney Disease initiated by ischemia-reperfusion injury.

Orhan Oz, M.D., Ph.D., was appointed Chair of the NIH Center for Scientific Research Clinical Molecular and Probe Development Study Section.

Betty S. Pace, M.D., Augusta University, received the inaugural Award for Leadership in Promoting Diversity from the Association of Hematology in 2018.

Rocio Pereira, M.D., University of Colorado School of Medicine, received 2-year funding from the Colorado Department of Public Health to continue her work in the university’s Diabetes Prevention Program.

Ariana Pichardo-Lowden, M.D., was promoted to Associate Professor of Medicine, The Pennsylvania State University.

Candice Allister Price, Ph.D., is now Assistant Adjunct Professor at the University of California, Davis, and received an NIH Office of Research on Women’s Health Building Interdisciplinary Research Careers in Women’s Health K12 Award.

Juan Sanabria, M.D., Marshall University, Joan C. Edwards School of Medicine, Case Western Reserve University, had a scientific publication accepted into *Nature*.

Amanda Brown Tortorici, M.S., University of California, Irvine, received a 3-year Ruth L. Kirschstein Predoctoral Individual National Research Service Award (F31) from the NIDDK.

Etienne Vasconcellos De Macedo, Ph.D., UCSD, was awarded the Daniel O’Connor Pilot Award from the UAB-UCSD O’Brien Center for Acute Kidney Injury (AKI) Research to examine tubular health characterization and correlation with glomerular filtration and injury markers in AKI.

Francisco Villarreal, M.D., Ph.D., UCSD, received the 2018 Veterans Affairs Merit Award.

Karn Wijarnpreecha, M.D., Bassett Medical Center, Cooperstown, NY, will start a gastroenterology fellowship training at Mayo Clinic Jacksonville. He also received the 2018 E. Donnal Thomas Award for Outstanding Research at Bassett and the Young Investigator Bursary from the European Association for the Study of the Liver in 2018.

SAVE THE DATE

Announcing the NMRI Midwest Regional Workshop

November 1–2, 2018, Nashville, TN

Member Collaborations

Virginia Sarapura, Ph.D., University of Colorado Denver, collaborated with NMRI investigators, which culminated in the paper titled “Activation of Thyroid Antigen-reactive B Cells in Recent Onset Autoimmune Thyroid Disease Patients” published in the May 2018 issue of the *Journal of Autoimmunity*.

Marino Bruce, Ph.D., Vanderbilt University, collaborated with **Keith Norris, M.D., Ph.D.**, University of California, Los Angeles, on “Sex, Obesity, and Blood Pressure Among African American Adolescents: The Jackson Heart KIDS Pilot Study,” which was published in the June 2017 issue of *American Journal of Hypertension* and featured in *Time Magazine* and on the NBC Today Show.



Lawrence Y. Agodoa, M.D., FACP

Annual Workshop Travel Award

Attending the NMRI Annual Meeting is a great way to learn more about the Network. Scholarships are available to support attendance.

Are you a nephrologist or kidney researcher?

The ASN offers a limited number of travel awards to attend the NMRI Annual Workshop. Application materials are available on the ASN website: www.asn-online.org/grants/travel/nmri.aspx.

Never attended an NMRI workshop? Junior faculty member? Have an abstract to present?

Limited travel awards are available through the generosity of our professional society sponsors for eligible members to attend the NMRI Annual Meeting. For more information, contact Ms. Winnie Martinez, NIDDK, winnie.martinez@nih.gov.

START PLANNING:

Announcing the NMRI 17th Annual Workshop

April 2019, Bethesda, MD



NMRI 16th Annual Workshop Sponsors

The NMRI would like to acknowledge the following organization for sponsoring the NMRI Network Reception:

- [Council on Undergraduate Research](#)

The NMRI would like to thank the following professional societies for sponsoring travel awards to the NMRI 16th Annual Workshop:

- [American Association for the Study of Liver Diseases \(AASLD\)](#)
- [American Diabetes Association \(ADA\)](#)
- [American Society for Bone and Mineral Research \(ASBMR\)](#)
- [American Society of Nephrology \(ASN\)](#)

NMRI 16th Annual Workshop Travel Award Recipients

AASLD Travel Award Recipients

Karn Wijarnpreecha, M.D.
Nicole Kim, M.D.

ADA Travel Award Recipients

Joshua Joseph, M.D.
Frankie Heyward, Ph.D.

ASBMR Travel Award Recipient

Alexandra Aguilar-Perez, Ph.D.

ASN Travel Award Recipients

Senu Apewokin, M.D.
Amanda Brown-Tortorici, M.S.
Marino Bruce, Ph.D.
Jacentha Buggs, M.D.
Carmen De Miguel, Ph.D.
Gwendolyn Derk
Etienne Vasconcellos De Macedo, M.D., Ph.D.
Wairimu Magua, Ph.D.
Anberitha Matthews, Ph.D.

Tenecia Mitchell, Ph.D.
Elimelda Onger, Ph.D.
Stanford Mwasongwe, M.P.H.
Opeyemi Olabisi, Ph.D.
Luis Perez, B.S.N.
Tanjala Purnell, Ph.D.
Mariya Sweetwyne, Ph.D.
Stephanie Toth-Manikowski, M.D.
Clintoria Williams, Ph.D.

Report from the NMRI 16th Annual Workshop

Highlights of the NMRI 16th Annual Workshop follow. A full meeting summary is available on the NMRI website at www.niddk.nih.gov/news/meetings-workshops/2018/nmri-16th-annual-workshop.

The NMRI met for its 16th Annual Workshop April 11–13, 2018, at the DoubleTree Hotel in Bethesda, MD. Participants' careers ranged from premedical and predoctoral students to tenured professors. Research areas of study included diabetes, epidemiology, endocrinology, health disparities, hematology, nephrology, nutrition, and obesity. **Jose Romero, Ph.D.**, Associate Physiologist, Brigham and Women's Hospital, Harvard Medical School, and Chair of the NMRI Planning Committee, which was charged with organizing the meeting, welcomed attendees and expressed appreciation to NMRI leadership for their continuous support.

Lawrence Agodoa, M.D., Director, Office of Minority Health Research Coordination (OMHRC), NIDDK, also welcomed the participants to the 16th Annual Workshop and remarked that the NMRI 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.

KEYNOTE ADDRESS

During her presentation titled "Development of Novel Therapies for Sickle Cell Disease" **Betty S. Pace, M.D.**, Professor, Department of Pediatrics, Augusta University, enlightened participants about the development of novel therapies for sickle cell disease (SCD) and her research. Sharing her story, she talked about how her family's humble beginning, hard work ethic, and values shaped her early life. Her college education and training included critical decisions and mentorship at each stage.

Dr. Pace first encountered SCD at the age of 13 while in middle school, when her good friend was diagnosed with the disease and later died at a young age. This experience affected her decision to study SCD several years later. She currently is an established investigator at the National Heart, Lung, and Blood Institute (NHLBI).

Dr. Pace told the diverse audience of health researchers—established and aspiring—that

SCD accounts for more than 350,000 deaths worldwide each year and is more prevalent in African countries. Although a single point mutation in the beta-globin (β -globin) gene—a subunit of hemoglobin (Hb)—leads to the abnormal red blood cells (hemoglobin S) commonly referred to as sickle red blood cells (sickle cells), the effects are dire, and there is no cure. The sickle cells block blood flow, causing vaso-occlusive crisis (VOC) events that result in ischemia; the cells also are susceptible to chronic hemolysis, which leads to severe anemia and organ damage.

Although effective therapies for SCD exist and advancements have been made since the first U.S. Food and Drug Administration (FDA)-approved treatment in 1998, developing novel and innovative therapies should remain a priority for the United States and the rest of the world. In fact, developing new therapies and affordable, easy-to-use treatments for patients in African countries remains the focus of the SCD research community.

Throughout her career, Dr. Pace has been conscious of diversity issues and sought to make a personal contribution as a minority investigator. She serves as program director of the NHLBI Programs to Increase Diversity Among Individuals Engaged in Health-Related Research training program. She shared these final thoughts on diversity and paying mentoring forward:

- Adopt a mindset of diversity by learning more about it and practicing it daily.
- Understand that teams of diverse people support creativity.
- Make a personal commitment to promote diversity.



Betty Pace, M.D.

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

Patricia Heyn, Ph.D., Associate Professor, University of Colorado Denver, Anschutz Medical Campus, and **Lillian Hoffecker, Ph.D.**, Research Librarian, University of Colorado Denver, Anschutz Medical Campus, 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. Session I provided an overview of the fundamentals of publishing a narrative review and the review synthesis methodology. In Session II, participants were led through an exercise for conducting a scientific review (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.

WELCOME REMARKS

Griffin P. Rodgers, M.D., Director, NIDDK, welcomed participants to the NMRI's 16th workshop. He remarked on how many organizations try to emulate the main work of the Network. Dr. Rodgers stated that the research mission of the NIDDK—one of 27 NIH Institutes and Centers—is to support research that addresses the most common, costly, and consequential diseases affecting many people in the United States and abroad. NIDDK's research focuses on diabetes and other endocrine and metabolic disorders; digestive diseases, nutritional disorders, and obesity; and kidney, urologic, and hematologic diseases. In addition, 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, and that the research is dynamic and circular, from bench to bedside, rather than a linear trajectory. NIDDK's discoveries and advances, including the recent FDA-approved sodium-glucose co-transporter-2

(SGLT2) inhibitor to lower glucose in people with type 2 diabetes, have informed clinical application. In a timeline that extends from 1980 to 2014, NIH investments enabled key basic research discoveries and advances that have led to new treatment. Technological advances supported by NIDDK-sponsored research and NIDDK's small business programs have informed the development of the artificial pancreas (AP) technology. Finally, these advances have led to the launch of four pivotal NIDDK-supported multicenter trials in 2017–2018: (1) the International Diabetes Closed Loop Trial; (2) a full-year trial of the AP in youth ages 6–18; (3) a Comparative Effectiveness Research trial of Medtronic hybrid AP to next-generation AP; and (4) a 6-month trial in adults of bihormonal AP.

Dr. Rodgers called attention to two key NIDDK programs and activities that support critical moves between career levels: the Loan Repayment Program, and workshops focused on life after a career development award (K award) and new principal investigators. Participants were encouraged to visit the NIDDK website, which serves as the Institute's central contact point.

ROUNDTABLE DISCUSSIONS—FROM CAREER DEVELOPMENT ADVICE TO THE GRANT WRITING AND REVIEW PROCESS

Workshop attendees participated in two separate sessions of roundtable discussions, where they had a choice of five roundtable discussion groups focused on career-oriented topics: community-based participatory research, epigenetics mechanisms in diabetes complications, NIH intramural research, research supplements to support diversity and NIH funding mechanisms, and successful approaches to grant funding. Session II provided participants the opportunity to switch discussion tables. The discussion leaders were **A. Celeste Farr, Ph.D.**, Assistant Professor, Oakland University William Beaumont School of Medicine; **Marpadga Reddy, Ph.D.**, Assistant Research Professor, Beckman Research Institute of City of Hope; **Roland Owens, Ph.D.**, Assistant Director, Office of Intramural Research, NIH; **Robert Rivers, Ph.D.**, Program Officer, NIDDK; and **Francisco Villarreal, M.D., Ph.D.**, Professor, University of California, San Diego.

PARALLEL SESSIONS

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. Workshop participants had the option of attending two mock study sections that covered different types of NIH awards—R01 Basic/Clinical and K01 Basic/Clinical—or a session on non-NIH behavioral and social sciences research. Each mock study section was composed of an NIDDK Scientific Review Officer (SRO) and a Chair. This year's mock study sections were led by SROs **Ann Jerkins, Ph.D.**, and **Ryan Morris, Ph.D.** The sections were chaired by **Francisco Villarreal, M.D., Ph.D.**, Professor, University of California, San Diego; **Mark Lawson, Ph.D.**, Professor, University of California, San Diego; **Karn Wijarnpreecha, M.D.**, Bassett Medical Center, Cooperstown, NY; and **Jose Romero, Ph.D.**, Associate Physiologist, Brigham and Women's Hospital, Harvard Medical School.

Session II provided the opportunity for participants to learn the aspects of a mentoring training program for clinical and translational researchers, engage in case study activities, and work in teams to address guiding questions. Workshop participants had the option of attending one of three discussions led by **Mark Dewhirst, D.V.M., Ph.D.**, Gustavo S. Montana Professor of Radiation Oncology, Associate Dean for Faculty Mentoring, Duke University Medical Center; **Leonor Corsino, M.D.**, Associate Professor of Medicine, Duke University School of Medicine; and **Stephanie Freel, Ph.D.**, Director, Clinical Research Education and Outreach, Duke University School of Medicine.

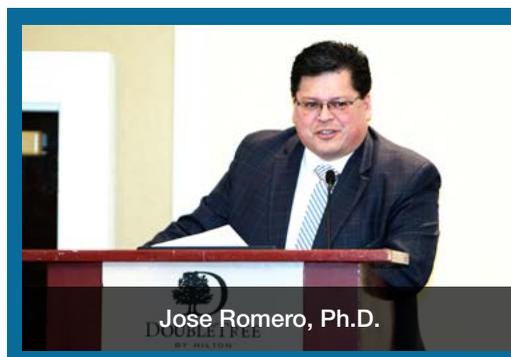
CHARTERING YOUR COURSE FOR SUCCESS

Ricardo Azziz, M.D., Chief Officer, Academic Health and Hospital Affairs, State University of New York, who spoke about "Chartering Your Course for Success," noted to participants that minority researchers have a dual role as effective investigators and as role models and leaders. He next 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. Dr. Azziz elaborated on how leadership is a learned skill and a trained art, and he emphasized the differences between administration, management, and leadership. He 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 underrepresented minority (URM) groups than from majority groups, and more URM faculty are assistant professors than associate and full professors. In closing, 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.

DINNER ADDRESS—DR. LAWRENCE Y. AGODOA HONORARY LECTURE OF THE NMRI

Jose Romero, Ph.D., welcomed participants to the NMRI Honorary Lecture and expressed appreciation to this year's honoree—Dr. Lawrence Y. Agodoa—for his dedication, hard work, contributions, and leadership of the NMRI, which have been outstanding and unmatched. Dr. Agodoa, a trained nephrologist, director of the OMHRC, and program director at the NIH, was humbled to be honored at this workshop and reflected on the 16 years of NMRI and the beginning of the OMHRC at the NIDDK. Dr. Romero next invited **Guillermo Umpierrez, M.D.**, Professor of Medicine, Emory University School of Medicine, to deliver the dinner address.





Guillermo Umpierrez, M.D.

In “Racial and Ethnic Disparities in Diabetes Care in the United States,” Dr. Umpierrez, also director of diabetes and endocrinology at Grady Health System, discussed diabetes mellitus (DM) in minority populations. Concomitant to the steadily increasing percentage of minority populations in the United States since 1960 has been the increasing prevalence of DM in U.S. adults ages 20–79 from 1980–2012. In addition, 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 2013–2015; this trend was higher among women in the minority populations than among men.

Further complicating matters is the fact that 30 percent of people with DM in the United States are not being diagnosed, as reported by the ADA. Elaborating on the genetic, medical, and lifestyle factors that may play a role in the increased prevalence of DM in minority populations, Dr. Umpierrez observed that diabetes—obesity-related diabetes—is the driver of the DM epidemic in the United States. Body mass index (BMI) is linked to the relative risk of DM, and the prevalence of type 2 diabetes significantly increases in African Americans and Hispanics with a BMI greater than 25 kg/m² and in Asian Americans with a BMI greater than 23 kg/m². Dr. Umpierrez asserted 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.

Pointing out that the health disparities in DM in minority populations have been known for more

than 20 years, Dr. Umpierrez noted that the NIH has been actively addressing this issue. Potential sources of care disparities are seen at the patient, provider, and health care system levels, he added. He described intervention strategies to address racial and ethnic disparities in the United States, including intensified glucose control being implemented in the Diabetes Management Program within the Grady Health System. Dr. Umpierrez strongly 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. He highlighted key points to consider in developing DM prevention programs to address diabetes in the United States.

First, DM care in minority populations requires a unique approach due to heterogeneity within populations regarding socioeconomic status, language, diet, and religion. Second, randomized controlled clinical trials must include Asian Americans of similar demographics and genetics. Third, all studies should consider cultural and social factors more broadly, and clinical practice guidelines must account for the diversity of these factors. Fourth, the low clinical trial participation rates for minority populations must be addressed to better understand responses to treatment.

MENTORING AT THE 16TH ANNUAL WORKSHOP

During the 16th Annual Workshop’s “Mentor/Mentee Session,” junior investigators met with one of several senior investigators willing to serve as mentors. Each mentor hosted a roundtable discussion with his or her mentees, answering questions and offering advice about career- or research-related topics. The session was designed to promote active mentoring relationships between senior and junior members.

ROLES OF SCIENTIFIC SOCIETIES AND PROFESSIONAL ORGANIZATIONS

Workshop participants heard about the roles and activities of scientific societies and professional organizations that are important to the NMRI’s work. Dr. Agodoa thanked the societies and organizations for their continued support and acknowledged the 16th Annual NMRI Workshop travel award winners.

Mark D. Okusa, M.D., President, ASN, described the ASN, which has 18,300 members from 125 different countries, and its commitment to diversity and inclusion, career development, and mentorship within the Society. The guiding principles of the ASN's values statement on diversity and inclusion—inclusiveness, mentorship, health equity, patient advocacy, and engagement—have not changed, he added. Dr. Okusa noted that the Diversity and Inclusion Work Group that was established in 2013 was renamed the Diversity and Inclusion Committee in 2017 and remarked on the NMRI's vital role in the Committee's activities. He elaborated on the ASN's commitment to career development for kidney professionals; the Society's threefold goals in these efforts; and funding opportunities for students, trainees, and early career professionals.

Charles Howell, M.D., Chair of the American Association for the Study of Liver Disease (AASLD) Diversity Committee, emphasized that the Society was founded in 1950 and has become the leading organization of scientists and health care professionals committed to preventing and curing liver diseases. In its activities to foster diversity and inclusion, an AASLD Diversity Committee was established in 2016. The Committee defines the demographic composition of the AASLD membership; proposes strategies to promote recruitment and increase engagement of diverse groups underrepresented in the medical profession; and promotes health disparities education and research within the AASLD by sponsoring workshops and receptions in parallel to the Annual Liver Meeting. Dr. Howell emphasized that the AASLD Foundation, the largest private supporter of hepatology research and training in North America, invests in innovative hepatology research and the people who study and treat liver disease.

Alexandra Aguilar-Perez, Ph.D., ASBMR travel award recipient, remarked that 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. The Society's programs and education initiatives, including the ASBMR Annual Meeting and travel grants, 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. Dr. Aguilar-Perez highlighted ASBMR publications: the *Journal of Bone and Mineral Research* (JBMR), *JBMR Plus*, and *The Primer on the Metabolic Bone Diseases and Disorders of Mineral Metabolism*. She remarked that the Diversity in Bone and Mineral Research Committee has advocated for increased travel grant funding for underrepresented minorities (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.

Allison McElvaine, Ph.D., Director, Research Communications, ADA, described the increasing trend in Diabetes Mellitus (DM) across the United States from 1994–2017. 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. Dr. McElvaine discussed the ADA's investments in DM research and the advances, impact, and return on investments from that research. Despite the ADA Core Research and Targeted Research Programs achieving their goals, challenges in DM research remain. 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. 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.

Rocio Pereira, M.D., former chair of the Endocrine Society's Diversity and Inclusion Committee, emphasized that the Society is an international community of clinical practitioners and basic and clinical researchers representing 122 countries. The membership is more than 18,000 strong: 60 percent of members live in the United States, and 40 percent are international. The Society's activities include publishing three peer-reviewed journals, *Endocrine Reviews*, *Endocrinology*, and the *Journal of the Endocrine Society*; convening an annual meeting (commonly called ENDO); and featuring an online career center (Endocareers). Dr. Pereira explained that 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. One of the Society's diversity initiatives she highlighted is the NIDDK-sponsored Future Leaders Advancing Research in Endocrinology (FLARE) program to support training in endocrine research for URMs.

MARCO CABRERA POSTER CONTEST WINNERS ANNOUNCED

The 40 posters submitted to the 2018 Dr. Marco Cabrera Poster Contest were assessed for content, presentation, and the presenter's response to questions. Awards were presented for exemplary poster presentations in the areas of basic (**Yaritza Inostroza-Nieves, Ph.D.**, San Juan Baustista School of Medicine, Rio Grande, PR), translational (**Wairimu Magua, Ph.D.**, Emory University; **Elimelda Moige Onger, Ph.D.**, North Carolina A&T University), and clinical science (**Melawhy Garcia, Ph.D.**, University of California, San Diego). The winning abstracts are presented here.



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

Abstract

Molecules of the Major Histocompatibility Complex (MHC), and, in particular, specific human leukocyte antigen (HLA) alleles, have been proposed in the pathophysiology of immune and vascular alterations leading to vaso-occlusive crises (VOC) and stroke in sickle cell disease (SCD). Endothelial cells express MHC molecules following exposure to cytokines. SCD is characterized, in part, by vascular endothelial cell activation, increased oxidative stress, sickle cell adhesion, and excess levels of the potent mitogen, endothelin-1 (ET-1). ET-1 activates endothelial cells, induces oxidative stress and inflammation in the vascular wall, and regulates erythrocyte homeostasis. However, the role of ET-1 on MHC regulation in SCD is not clear. We first characterized the effect of ET-1 on MHC expression in the human endothelial cell

line, EA.hy926. We observed dose-dependent increases in the expression of MHC class I (HLA-A2 4.8 ± 2.1 folds $p < 0.01$ $n = 4$), MHC class II (HLA-DR 4.4 ± 1.7 folds $p < 0.01$ $n = 4$) and MHC transcription factor (CIITA 3.5 ± 1.8 folds $p < 0.05$ $n = 4$) in EA.hy926 cells. ET-1-stimulated expression of HLA-A2, HLA-DR and CIITA were significantly blocked by pre-incubation of cells with 10 μ M BQ788, a selective blocker of ET-1 type B receptors ($p < 0.01$, $n = 4$). Chromatin immunoprecipitation (ChIP) studies in EA.hy926 cells showed that ET-1 increased Histone H3 acetylation of the promoter region within MHC molecules (HLA-A2 $62\% \pm 5\%$, HLA-DRB $33\% \pm 18\%$, $p < 0.01$, $n = 4$); an event that was likewise blocked by BQ788. We then studied two sickle transgenic knockout mouse models of moderate to severe disease phenotype, β SAntilles and Berkeley (BERK) mice, respectively. We observed significant increases in MHC molecule, H2-Aa mRNA levels ($n = 7$; $p < 0.01$) in spleens from sickle transgenic mice when compared to transgenic knockout mice expressing human hemoglobin A (HbA). We then treated BERK, β SAntilles and HbA mice for 14 days with ET-1 receptor antagonists and observed significant reductions in H2-Aa mRNA levels in spleen tissue from sickle transgenic mice but not in HbA mice ($n = 7$; $p < 0.05$). These results implicate ET-1 as a novel regulator of MHC molecules and suggest that ET-1 receptor blockade represents a promising therapeutic approach to regulate both immune and vascular responses in SCD.



Translational Science: Wairimu Magua, Ph.D., 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"

Abstract

Disparities in transplantation access persists even after the United Network for Organ Sharing (UNOS) implemented a new kidney allocation system (KAS) in December 2014 addressing kidney allocation disparities among recipients. Dialysis facilities have a central role in educating ESRD patients about their care modalities, including organ transplantation, yet nephrologists and other care providers may not be aware



of the impact of new KAS system on patient care. The objective of this study is to evaluate the effectiveness of a system-level intervention on creating awareness of the impact of KAS on patient care.

The 1,073 participants were medical directors, care providers, and facility administrators from 655 facilities with low wait-listing and drawn from all 18 ESRD networks. The facilities (clusters) were randomly assigned to the intervention group (51%), which received an educational webinar and videos developed for medical directors, care providers, and facility staff. The control group (49%) received a standard UNOS education brochure describing the new KAS. Baseline measures were initiated in October 2016 with a 3-month follow-up. Outcomes were survey questions that measured KAS knowledge on wait-listing, kidney matching, time-on-dialysis disparities, impact of KAS on time-on-dialysis, and the absence of absolute contraindications for referring patients for transplant. The effect of the intervention was evaluated using a linear mixed effect model.

The treatment effect, measured as the difference between the knowledge gap existing among the intervention and the control groups at baseline and the knowledge gap resulting from the intervention among the intervention and control

groups at follow-up, was statistically significant at a 95% confidence level ($P = 0.043$).

The study provides evidence on the effectiveness of a pragmatic system-level multicomponent intervention in increasing awareness of the impact of new KAS on the dialysis of patients among medical directors, providers, and staff in dialysis facilities.



Translational Science: Elimelda Moige Onger, Ph.D., 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”

Abstract

African Americans are disproportionately burdened by diabetic kidney disease (DKD), which is the leading cause of end stage renal disease (ESRD). Health disparities in DKD are attributed to many factors, including genetic, socioeconomic, and cultural/behavioral. African American men are underrepresented in biomedical studies. This is in part due to mistrust of the biomedical research community and lack of culturally/gender-sensitive approaches in recruitment. Meprins are metalloproteases that are abundantly expressed in the brush border membranes of proximal kidney tubules. Several studies have identified meprins as susceptibility genes for DKD in humans as well as rodent models of DKD. The goals of the current study were (1) to evaluate DKD in uninsured and underinsured African American men in the city of Greensboro, North Carolina, and (2) to determine if the levels of urinary meprins and meprin targets correlate to diabetic kidney injury.

We partnered with the Cone Health Community Health and Wellness Center (which serves a large population of uninsured and underinsured

Why did you attend the NMRI 16th Annual Workshop?

“It’s always nice to meet new people and network to build collaborations.”

patients) and local faith-based communities to recruit three groups of African American men aged 18–65 years: (1) diabetic patients without known kidney disease, (2) diabetic patients with diagnosed kidney disease, and (3) age-matched, nondiabetic controls without kidney disease. Fasting urine and blood samples were obtained from all participants. Enzyme-linked immunosorbent assays (ELISA) and calorimetric assays were used to determine the levels of biomarkers of kidney injury, namely urinary albumin and creatinine, kidney injury molecule-1 (KIM-1), cystatin C, and neutrophil gelatinase-associated lipocalin (NGAL). The urinary albumin-to-creatinine ratios (UACR) were used to stratify patients into three categories: (1) normoalbuminuria (UACR < 30 mg/g), (2) microalbuminuria (30 ≤ UACR ≤ 300 mg/g), or (3) macroalbuminuria (300 mg/g ≤ UACR). Western blot analysis was used to determine the urinary levels of meprin A, meprin B, and nidogen-1 (a meprin target). ELISA was also used to determine the levels of a second meprin target, macrophage chemoattractant protein-1 (MCP-1). The data were analyzed by two-way ANOVA (GraphPad Prism).

Based on the UACR, undiagnosed kidney injury was predicted in a significant proportion of the diabetic patients. This was confirmed by increased levels of other recently developed proteomic kidney injury markers. Patients in the macroalbuminuria group had significant increases in plasma cystatin C, as well as urinary KIM-1, cystatin C, and NGAL. Plasma KIM-1 levels were also significantly higher in the microalbuminuria group. An interesting finding was that increases in the urinary levels of meprin A, meprin B, and two meprin targets (nidogen-1 and MCP-1) positively correlated with the severity of kidney injury.

Early diagnosis of kidney injury is important for targeted interventions to prevent progression

to ESRD. Our data demonstrates a need for increased screening for kidney injury in diabetic African American men. The increases in urinary meprins and meprin targets suggest a role for meprins in the pathophysiology of kidney injury in this sub-population.



Clinical Science: Melawhy Garcia, Ph.D., University of California, San Diego, “Correlates of Low Adherence to Oral Hypoglycemic Medications Among Hispanic/Latinos with Type 2 Diabetes”

Abstract

Hispanic/Latino adults have disproportionately high rates of uncontrolled diabetes, which may be explained by low medication adherence. The present study aimed to identify modifiable health conditions and social/economic factors related to low medication adherence and to examine sex differences among Hispanic/Latino adults with Type 2 diabetes. Baseline self-report and electronic health record data for 279 Hispanic/Latino adults collected for a randomized controlled trial were used in cross-sectional analyses. Bivariate analyses tested the association of demographics; health conditions (depression, anxiety, and stress) and social/economic factors (type of insurance, health literacy, social support); and different medication adherence levels (low, medium, and high). Stratified by sex, adjusted logistic regression analyses examined associations between low medication adherence and both modifiable health conditions and social/economic factors. More males than females reported low adherence to hypoglycemic medications (54.8% vs. 46.9%) ($p < 0.05$). Similarly, the Proportion of Days Covered (PDC) method showed that a greater percentage of men demonstrated low adherence (males 75% and females 70%), although differences were not significant. Bivariate analyses revealed significant differences between levels of social support, depressive symptomatology, anxiety disorder, perceived stress, and medication adherence ($p < 0.05$). In logistic regression analyses, social support predicted low medication adherence (OR = 2.22; 1.03–4.76) among males, but not among females (OR = 1.15; 0.64–2.08). Although no differences were observed in bivariate analysis, the odds of

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The NMRI Network can connect NMRI alumni to collaborate on meaningful research.

low adherence were 6.26 (1.06–37.10) higher among males with limited health literacy, compared to males with adequate health literacy. Health literacy did not predict low adherence for females (OR = 1.35; 0.38–4.77). Other variables of interest, including depression symptomatology, anxiety disorders symptomatology, and perceived stress, did not predict low adherence among the study population. Approximately 50% of Hispanic/Latino adults are not adherent to their hypoglycemic regimen. A couple of psychosocial predictors of low medication adherence were significantly predictive of medication adherence in men, but not women. Therefore, interventions may consider targeting health literacy to improve medication-taking behaviors among Hispanic/Latino adult males.

NEWS FROM THE NMRI OVERSIGHT AND PLANNING COMMITTEE

Oversight Committee

At the NMRI 16th Annual Workshop, **Rocio Pereira, M.D.**, University of Colorado School of Medicine, Oversight Committee Chair, reported on the activities and responsibilities of the committee. She explained that the Oversight Committee, in guiding the NMRI, relies heavily on member feedback. The 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 expressed appreciation to current members of the Oversight Committee and acknowledged the incoming Chair.

Planning Committee

Jose Romero, Ph.D., Harvard Medical School, provided an update on the 2017 activities. The Planning Committee convened via monthly conference call to share and discuss ideas and make decisions related to the broad mandate of the Committee. Dr. Romero introduced the incoming chair, Dr. Francisco Villarreal, who noted that the theme of the 2019 NMRI Annual Workshop will focus on NIDDK women investigators. Members are welcome to provide input on the theme and topical sessions.

Lawrence Agodoa, M.D., Director, OMHRC, accompanied by **Winnie Martinez**, Program

Director, OMHRC, presented NMRI Committee chairs with certificates in appreciation of their service.

SCIENTIFIC PRESENTATIONS

Out of 40 NMRI members who submitted abstracts, four were invited to present their research at the NMRI 16th Annual Workshop. The selected speakers and their abstracts are presented below.



Lorena Marcano-Bonilla, Pre-doctoral Student, Mayo Clinic, “Aspirin and Other NSAIDs Reduce the Risk of Biliary Tract Cancers: A Swedish Population-Based Cohort Study”

Abstract

Since the risk factors most strongly associated with biliary tract cancers (BTCs) are characterized by chronic inflammation, low-dose aspirin, other nonsteroidal anti-inflammatory drugs (NSAIDs), and statins are promising drugs for chemoprevention of BTC. Case control studies have attempted to address this question, but these, by their nature, have substantial limitations. Our aim was to perform a large population-based study to address whether the use of these drugs decrease the risk of BTC.

We conducted a nationwide Swedish population-based cohort study comparing a cohort of patients exposed to maintenance therapy (≥ 180 days) with low-dose aspirin, other NSAIDs, or statins with unexposed adult individuals. Our cohort includes all adult individuals (≥ 18 years) residing in Sweden who received at least one dispensed prescription, recorded in the Swedish Prescribed Drug Registry. Individuals were followed up from July 1, 2005, until December 31, 2012. The outcome of interest was the first diagnosis of BTC (intrahepatic cholangiocarcinoma [iCCA], extrahepatic cholangiocarcinoma [eCCA] or gallbladder cancer [GBC]) recorded in the Swedish Cancer Registry, according to the International Classification of Diseases (ICD) 10th Edition, or death in the Swedish Cause of Death Registry. ICD 10 codes were used to abstract data on potential confounders from the Swedish Patient Registry. We used Cox proportional hazard models to generate hazard ratios (HR).

We completed the first population-based study of the effect of aspirin, other NSAIDs, and statins on BTC risk. Of the 5,760,482 subjects studied, 1,061,528 (18.4%) used low-dose aspirin for 180 days or more, 3,347,889 (58.1%) were exposed to other NSAIDs, and 950,635 (16.5%) were statin users. Malignancies developed in 2,160 patients (0.04%): 1,008 (0.02%) were GBCs, 609 (0.01%) were iCCAs, and 543 (0.01%) were eCCAs. There was a significant inverse association of low-dose aspirin use with all BTC subtypes, with adjusted hazard ratios (HRs) of 0.56 (95% CI, 0.48–0.66), 0.74 (0.60–0.92), and 0.49 (0.39–0.62) for GBC, iCCA, and eCCA, respectively. Similar trends were observed for the use of other NSAIDs: 0.76 (0.67–0.86), 0.71 (0.60–0.84), and 0.68 (0.57–0.81) for GBC, iCCA, and eCCA, respectively. The association between statins use and BTC subtypes was also inverse: 0.72 (0.60–0.87) for GBC, 0.57 (0.45–0.73) for iCCA, and 0.62 (0.49–0.80) for eCCA.

Overall, low-dose aspirin reduced the risk of biliary tract cancers by 1.7-fold, other NSAIDs by 1.6-fold, and statins by 1.6-fold. Our cohort has virtually complete enumeration of the use of these medications in the Swedish population. Thus, our results provide strong epidemiological evidence in favor of the chemo-preventive roles of low-dose aspirin, other NSAIDs, and statins in the context of BTCs.



Etienne Vasconcellos De Macedo, M.D., Ph.D.,

Assistant Adjunct Professor, University of California, San Diego, “Impact of Education and Protocol-Based Management of Community-acquired Acute Kidney Injury: Preliminary Results from the Oby25 Pilot Feasibility Project”

Abstract

The Oby25 pilot feasibility project aims to assess the feasibility of implementing interventions to optimize care of acute kidney injury (AKI) in resource-constrained regions. In each of three countries, the study cluster was a tertiary hospital and a selection of the community health clinics and district hospitals feeding that hospital. The clusters were in Cochabamba, Bolivia; Blantyre, Malawi; and Dharan, Nepal.

The study was implemented in three phases: observation, education/training, and intervention. Patients seen in community health care centers were screened and assigned a risk for AKI based on presenting symptoms. Patients with moderate-to-high risk were approached for consent, enrolled in the study, and underwent a point-of-care (POC) finger prick stick test for serum creatinine (StatSensor® Creatinine Xpress™ Meter, Nova Biomedical) and a urine dipstick test. Patients were followed for their dispositions and outcomes. During the intervention phase, health care providers also contacted a physician in the supporting hospital for guidance on patient management.

Based on the history and POC test results, patients were categorized at presentation as having a history of chronic kidney disease (CKD), acute kidney disease (AKD), or no renal dysfunction. Repeat creatinine testing was used to identify development of acute kidney injury by 7 days. Patient course and renal and overall outcomes were determined at 1, 3 and 6 months.

A total of 3,577 patients were screened. Observation phase included 1,929, and intervention phase included 1,630; 91% of patients were adults, 9% children. At enrollment, more than two-thirds of the patients had evidence of renal dysfunction, 9.4% had a history of CKD, and 66.3% were considered AKD. More patients with AKI were identified in the intervention phase (35%) than in the observation phase (25%).

Patients with AKD at enrollment and with AKI at 7 days were more likely to be admitted in community health centers or hospitals. Fluid therapy was more frequent in the intervention

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**Really great setting for networking.
Excellent opportunity to learn.**

phase, and volume of oral and IV fluid therapy was higher in the intervention than in the observation phase. Mortality rate in patients with moderate AKI (stage 2) was significantly lower in the intervention than in the observation phase.

The Oby25 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 urine dipstick test, to detect kidney disease in patients presenting to health care centers in low-resource settings. Recognition and management of patients were facilitated and improved with the combination of staff education and training about AKI, the POC test, and guidance through teleconsultation.



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

Abstract

The obesity epidemic is projected to increase diabetes, the leading cause of kidney failure. The shortage of transplant donors coupled with increased obesity makes this an important matter to evaluate. We hypothesized outcome differences based on donor/recipient combinations of obesity and nonobesity. We conducted a retrospective cohort study of kidney transplants (KT) from 2012–2016 using categories: (1) Obese donor and recipient (ODR),

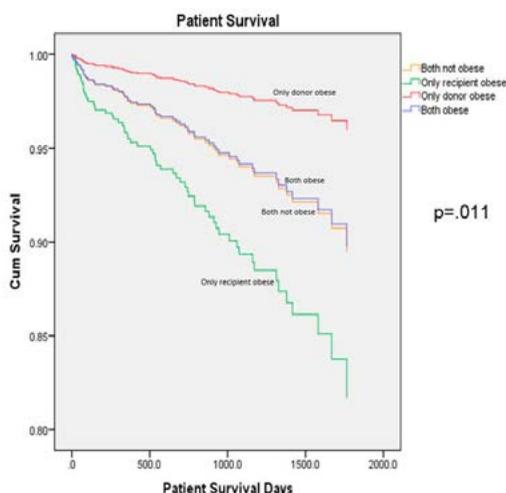
(2) Nonobese donor and recipient (NODR), (3) Obese donor and non-obese recipient (OD/NOR), and (4) Nonobese donor and obese recipient (NOD/OR). We performed 1,131 KT (608 NODR, 219 NOD/OR, 208 OD/NOR, and 96 ODR). There were no differences based on graft survival and 1-year readmissions and complications. Delayed graft function was significant for ODR (25%) vs. NODR (10.4%); $P < 0.0001$ and ODR (25%) vs. OD/NOR (11.5%); $P = 0.003$. Length of stay was significant when comparing NODR (8 days) to NOD/OR (7 days); $P = 0.043$. Overall patient survival was significant for OD/NOR (98.1%) vs. ODR (94.8%), NODR (94.7%), and NOD/OR (90.9%); $P = 0.011$. Kidney transplantation using all combinations of obese and nonobese donors and recipients is a viable option to expand the donor pool without adverse outcomes to patient or graft survival.



Carmen De Miguel, Ph.D.,
Instructor, The University of
Alabama, Birmingham, “Loss of
Endothelin B Receptor Function
Activates NOD-like Receptor
and Inflammasome Pathways
in Renal Outer Medulla Dur-
ing Type 1 Diabetes Through
an ER Stress-independent
Mechanism”

Abstract

Renal infiltration of immunocompetent cells and increased production of inflammatory markers are key in the pathogenesis of diabetic kidney disease. Endothelin-1 (ET-1), a potent vasoactive peptide that acts through two receptors (ET_A and ET_B), has been implicated in diabetes and is upregulated in patients with diabetic nephropathy (DN) and in animal models of diabetes-induced kidney injury. ET_B receptors are highly expressed in renal outer medulla (OM). ET-1 exerts proinflammatory actions in the kidney; however, the mechanism(s) by which ET-1 mediates these effects are unclear. The present studies were designed to determine the role of the ET_B receptor in the activation of inflammasome and NOD-like receptor signaling pathways in the renal OM during type 1 diabetes (T1D). ET_B -deficient (ET_B def) and transgenic (TG) control rats were made diabetic by IV injection of streptozotocin (STZ). Ten weeks later, OM was isolated and expression of inflammasome genes was assessed by RT-PCR array. Diabetes



NMRI Leadership Opportunities

The NMRI Planning, Regional Planning, and Oversight Committees offer opportunities to become more involved in the Network. Annual and regional planning committees are responsible for planning all aspects of upcoming meetings, from identifying speakers to setting agendas. The Oversight Committee facilitates the development of mentoring relationships, the identification of new members, and the recruitment of professional organizations to support the network. These committees are described in detail on the NMRI website at www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/nmri-committees/Pages/nmri-committees.aspx.

led to upregulation of NLRP5 (4-fold increase vs. TG controls; $n = 3/\text{group}$; $p < 0.05$) and IL-1 β (~3-fold increase vs. TG controls; $n = 3/\text{group}$; $p < 0.05$) in OM of ET $_B$ def rats. In addition, PSTPIP1, a negative regulator of the inflammasome, was decreased in OM of diabetic ET $_B$ def rats compared to TG controls. Together, these results demonstrate an overactivation of the downstream signaling of NOD-like receptor and inflammasomes in the absence of functional ET $_B$ receptor. Recently, endoplasmic reticulum (ER) stress has been identified as an inducer of inflammasome activation; thus, we tested if diabetic ET $_B$ def rats had an exaggerated ER stress response in the OM. RNA expression of GRP78, ATF-4, ATF-6, s-XBP-1, CHOP, and caspase-12 was not different in OM of diabetic TG control and ET $_B$ def rats. Our data suggest that the activation of NOD-like receptor and inflammasome signaling pathways in this diabetic model are not mediated by ER stress.

The NMRI on the Web

The NMRI website contains several resources for members:

NMRI workshops and meetings: Upcoming NMRI events are announced at www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators. Please visit this site for additional information about future meetings and access to past meeting reports, presentations, and other resources.

Resources for junior investigators and mentoring and career development: Information about the funding process, tips for reviewers, and mentoring and career development resources, including for the fields of endocrinology and hematology, are available at www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/nmri-member-resources/Pages/nmri-member-resources.aspx.

The 2017 NMRI Membership Directory:

Contact information NMRI members is available at www.niddk.nih.gov/-/media/Files/Research-Funding/Research-Programs/NIDDK_NMRI-2017-Directory_508.pdf?la=en.

The NMRI Mentor/Mentee Program: This program gives young investigators the opportunity to work closely with senior investigators in research areas of interest to both the mentor and mentee. Forms to sign up to be a mentor or and mentee are available at www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/mentor-program/Pages/mentor-program.aspx.

The NMRI newsletter: Previous editions are available at www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/nmri-newsletters/Pages/nmri-newsletters.aspx.

NMRI Frequently Asked Questions

Who is eligible for NMRI membership?

NMRI membership is available only to investigators who are—

- At the postgraduate doctoral level or higher
- Interested in minority health research, including individuals from traditionally underserved communities (African American, Hispanic American, American Indian, Alaska Native, Native Hawaiian, and Pacific Islanders)
- Conducting research in diabetes; endocrinology; metabolism; nutrition; or digestive, kidney, urologic, or hematologic diseases
- U.S. citizens or individuals with permanent resident status

Medical students from underrepresented minority groups are welcome to attend NMRI meetings if they are conducting research in one of the NIDDK mission areas noted above.

How do I apply for membership?

Individuals who qualify should apply for membership on the NMRI website. Please visit www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/Pages/default.aspx and click the “NMRI Online System” link to create an account and apply for membership.

Whom do I contact with questions about the NMRI?

Direct your questions or comments to NIDDK Program Officer Ms. Winnie Martinez, who oversees the NMRI, at winnie.martinez@nih.gov.

Does the NMRI have a website with more information?

The NMRI maintains and frequently updates its website at www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/Pages/default.aspx. The website contains information about the NMRI, including meeting announcements, NIDDK funding opportunities, the NMRI Membership Directory, and summary reports from past NMRI meetings.

How can I find a mentor if I am an NMRI member?

The NMRI Oversight Committee, which created the NMRI Mentor Program, maintains a list of



NMRI members who have volunteered to serve as mentors. The biographies and research interests of NMRI members are listed in the NMRI Membership Directory available at www.niddk.nih.gov/-/media/Files/Research-Funding/Research-Programs/NIDDK_NMRI-2017-Directory_508.pdf?la=en.

How do I sign up to be a mentor if I am an NMRI member?

If you are a member and would like to volunteer as a mentor, go to the NMRI Mentor/Mentee Program page and complete the form found at www.niddk.nih.gov/research-funding/research-programs/diversity-programs/network-minority-health-research-investigators-nmri/mentor-mentee-program.

How has the NMRI helped your career?

“The networking opportunities and guidance from NMRI colleagues have been invaluable to me.”

NMRI Members Are a Vital Force in the Biomedical Research Community

We know about the 2017 NMRI Annual Workshop attendees, but we would like to update the career progress that has been made by all of our members. NMRI members, please complete the NMRI Questionnaire at www.scgcorp.com/NMRI_Survey and update your NMRI profile for the NMRI directory so we can analyze how the careers of our membership and our members' impact on the biomedical research community have grown over the course of the network's 16-year history.

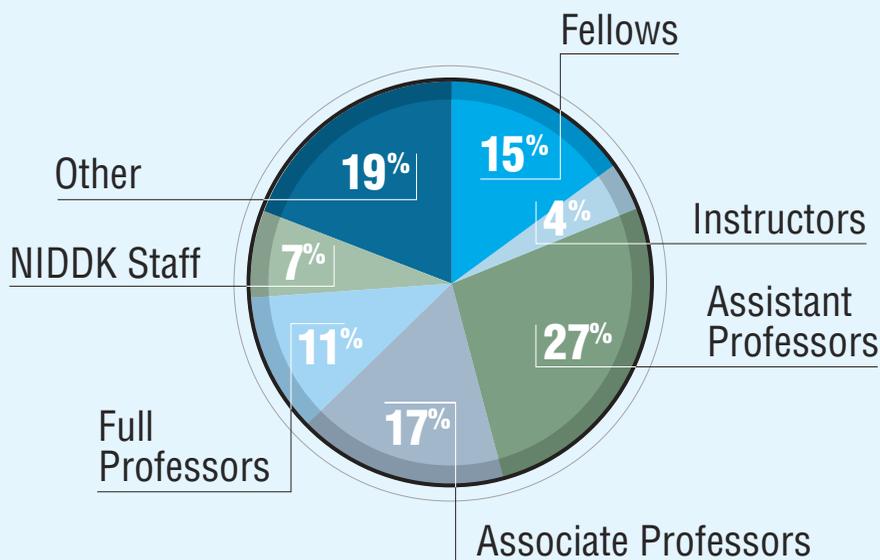
SNAPSHOT OF THE NMRI

Established in 2003, the NMRI is nearly 600 members strong and growing. The 16th NMRI Annual Meeting attracted more than 100 attendees from across the biomedical research community. Several attendees were new NMRI members, and many of those were travel and/or K awardees. The attendees

came from all levels of the biomedical research community.

Among the attendees from outside academia were leaders from professional societies (**Mark D. Okusa, M.D.**, President, ASN, and **Allison T. McElvaine, Ph.D.**, Director of Research Communications for the ADA).

Snapshot of NMRI Attendees



NMRI 16th Annual Workshop Poster Abstracts

The posters submitted for presentation at the NMRI 16th Annual Workshop represented outstanding research being conducted at a broad range of academic institutions. The poster authors and titles are listed below. Abstracts are available in the 2018 NMRI Annual Meeting Program book. To obtain a copy, contact NIDDK Program Officer Ms. Winnie Martinez at winnie.martinez@nih.gov.

[Sarah E. Cohn](#) and [Shirley A. Blanchard](#): “Take Charge: A Diabetes and Wellness Program for Omaha Housing Authority.”

[Manuel Britto](#), [Todd Knepper](#), and [Howard McLeod](#): “Racial Composition and Globalization of Pivotal Trials from Neurologic and Psychiatric Medications.”

[Jacentha Buggs](#), [Radhe Mehta](#), [Jasmine Boone](#), [Maryam Adesunkanmi](#), [Ebonie Rogers](#), [Ambuj Kumar](#), and [Victor Bowers](#): “Outcomes of Donor and Recipient Obesity in Kidney Transplantation.”

[Paulette D. Chandler](#), [Raji Balasubramanian](#), [Nina Paynter](#), [Franco Giulianini](#), [Teresa Fung](#), [Lesley Tinker](#), [Linda Snetselaar](#), [Simin Liu](#), [Charles Eaton](#), [Deirdre Tobias](#), [JoAnn E. Manson](#), [Edward Giovannucci](#), [Clary Clish](#), and [Kathryn E. Rexrode](#): “Metabolic Signatures Associated with Western and Prudent Dietary Patterns in Women.”

[Camille Clarke](#), [Maud Celestin](#), [Marisol Lara](#), and [Susanne Montgomery](#): “Addressing Obesity and Its Root Causes Among Latinos: Insights from Community Health Workers.”

[Tameka A. Clemons](#): “Analyzing Similarities between SH-SY5Y Cells and RIN-5F Cells.”

[Haiying Qi](#), [Liping Yu](#), [Shaolin Shi](#), [Gabriella Casalena](#), [Erwin Bottinger](#), and [Ilse Daehn](#): “Genetic Susceptibility of Diabetic Kidney Disease in Mice.”

[Gwendolyn Derk](#), [Amy Pai](#), [Hisham Sayed](#), [Rifat Alam](#), and [Ken Wilund](#): “Implementation of an Anti-hypertensive Deprescribing Protocol in Maintenance Hemodialysis Patients.”

[Melawhy L. Garcia](#), [Sheila F. Castaneda](#), [Matthew Allison](#), [John P. Elder](#), [Bess Marcus](#), and [Gregory A. Talavera](#): “Correlates of Low Adherence to Oral Hypoglycemic Medications among Hispanic/Latinos with Type 2 Diabetes.”

[Symielle A. Gaston](#), [Ketrell L. McWhorter](#), [Yong-Moon M. Park](#), [Dale P. Sandler](#), and [Chandra, L. Jackson](#): “Poor Sleep and Metabolic Syndrome Risk among White, Black, and Hispanic/Latina Women in the United States.”

[Patricia C. Heyn](#), [Zhaoxing Pan](#), [Alex Tagawa](#), and [James Carollo](#): “The Prevalence of Metabolic Syndrome and Cardiovascular Disease Risk Factors in the Cerebral Palsy Adult Transition Longitudinal Study (CPAT).”

[Frankie D. Heyward](#): “Cell Type-specific Epigenomic Profiles as a Tool to Identify Novel Transcriptional Pathways Regulating Food Intake Basic Research.”

[Spencer Mamer](#), [Colin Castleberry](#), and [Princess I. Imoukhuede](#): “Discovery, Measurement, and Simulation of PDGF-VEGFR Interactions.”

[Yaritza Inostroza-Nieves](#), [Gisela Delgado](#), [Gregory N. Prado](#), [Jose R. Romero](#), and [Alicia Rivera](#): “Endothelin-1 Regulates Molecules of the Major Histocompatibility Complex: Role in Sickle Cell Disease.”

[Maud Joachim-Célestin](#), [Susanne B. Montgomery](#), [Hildemar Dos Santos](#), and [Thelma Gamboa-Maldonado](#): “Adapting the National Diabetes Prevention Program to Its Target Population.”

[Holly Jones](#): “Leukocyte Telomere Length as a Predictor of Healthy Aging.”

[Bjoern Kluwe](#), [Robin Ortiz](#), [James Odei](#), [Justin B. Echouffo Tcheugui](#), [Mario Sims](#), [Rita R. Kalyani](#), [Alain G. Bertoni](#), [Sherita H. Golden](#), and [Joshua J. Joseph](#): “Higher Morning Serum Cortisol Is Associated with Glycemic Markers and Prevalent Diabetes among African Americans: The Jackson Heart Study.”

[Marisol Lara](#), [Maud Joachim-Celestin](#), [Camille Clarke](#), and [Susanne Montgomery](#): “Assimilation’s Impact on Obesogenic Behaviors in Recent Latino Immigrants.”

Continued next page



Griffin P. Rodgers, M.D.

Wairimu Magua, Kayla Smith, Mohua Basu, Jennifer Gander, Sumit Mohan, Cam Escoffery, Laura Plantinga, Taylor Melanson, Teri Browne, Nicole Turgeon, Rebecca Zhang, Stephen Pastan, Rachel E. Patzer: “A System-level Multiple Component Intervention to Increase Awareness of the Impact of the New Kidney Allocation System on Patient Care in Dialysis Facilities.”

Ketrell L. McWhorter, Christine L. Parks, Symielle A. Gaston, Aimee A. D’Aloisio, Darlynn M. Rojo-Wissar, Dale P. Sandler, and Chandra L. Jackson: “Traumatic Childhood Experiences and Risk of Type 2 Diabetes Among White, Black, and Hispanic/Latina Women: The Sister Study.”

Mikita Patel, Vidhush Yarlagadda, Adam Ambrosetti, John Knight, Dean Assimos, Ross Holmes, and Tanecia Mitchell: “Dietary Oxalate Induces Crystalluria and Alters Monocyte Responses in Healthy Subjects.”

Opeyemi Olabisi and Savannah Moore: “Patient Stem Cell-derived Podocyte as Screening Tool for Apol1-Nephropathy.”

Lei Cao, Ava M Boston, Olugbemiga Jegede, Scott H. Harrison, Robert H. Newman, and Elimelda Moige-Ongeri: “Undiagnosed Kidney Injury in Uninsured and Underinsured Diabetic African American Men and Putative Role of Mepirin Metalloproteases in Renal Pathology.”

Luis Perez, Hsin-Yu Fang, Brett Burrows, Ryan Larsen, and Kenneth R. Wilund: “Exploring the Associations of Nonosmotic Tissue Sodium Accumulation to Age and Hypertension.”

Ariana Pichardo-Lowden, Matthew D. Bolton, Brian Binder, Guillermo E. Umpierrez, and Paul M. Haidet: “Electronic Health Record Tool to Recognize Patients at Risk of Diabetes and Its Complications and Address Healthcare Barriers to Improve Diabetes Care.”

Candice Allister Price, Valentina Medici, Vivien Lee, Marinelle V. Nunez, Nancy L. Keim, and Kimber L. Stanhope: “Changes in Cardiometabolic Risk Factors Following 2 Weeks of Sugar Sweetened-beverage Consumption in African American Versus White Women.”

Taotao Ling, Darcie J. Miller, Walter Lang, Elizabeth Griffith, Richard Leeand, and Fatima Rivas: “Mechanistic Insight on the Mode of Action of Colleteic Acid.”

M. Schade, J.A. Sanabria, R. Aguilar, M. Andryka, A. Mallick, J. Fannin, and J. Sanabria: “The Effects of PNA/K-Tide and SW033299 on Nash Associated Cirrhosis in the Rodent.”

Mariya T. Sweetwyne, Huiliang Zhang, Jeremy Whitson, Peter S. Rabinovitch: “Persistent Mitochondrial Improvement and Reduced Reactive Oxygen Species Following Elamipretide Treatment in Aged Glomerular Epithelium.”

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