

# Network of Minority Health Research Investigators (NMRI)



NMRI News Fall 2017



National Institute of  
Diabetes and Digestive  
and Kidney Diseases





## *A Message from Dr. Rodgers*

**T**his 15th Anniversary of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Network of Minority Health Research Investigators (NMRI, or the Network) marks a pivotal period of celebration and achievement in which the NMRI remains a vital conduit to advocate for minority researchers and meritorious research. As a signature program of the NIDDK, the Network has inspired other NIH Institutes and Centers to establish similar programs.

From its humble beginnings and first meeting in 2002, the NMRI has evolved into a network of more than 500 investigators from almost 50 universities and centers. The annual workshop has now been expanded to include regional meetings, as well. The power of networking and collaboration to achieve outstanding results when combined with the appropriate follow-up must not be underestimated.

The NIDDK envisions leveraging initiatives focused on sustaining the scientific talent pool, such as the Harold Amos Medical Faculty Development Program, a Robert Wood Johnson Foundation (RWJF) program. These initiatives will serve as a mechanism for RWJF and NMRI leaders to connect and expand on networks for minority health researchers and further develop senior investigators and leaders in the biomedical field.

**Griffin P. Rodgers, M.D., MACP**

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



## *Anniversary Recognition Awards*

At this anniversary workshop, the NIDDK is celebrating 15 years of success and honoring those members whose outstanding participation and commitment have fostered the Network's growth and activities. Dr. Rodgers, accompanied by Winnie Martinez, Program Director, Office of Minority Health Research Coordination (OMHRC), NIDDK, and Lincoln Edwards, D.D.S., Ph.D., University President and Professor, Northern Caribbean University, presented senior NMRI members with medallions in appreciation for their service.



### *Members receiving awards included—*

E. Dale Abel, M.D., Ph.D.  
The University of Iowa

Ricardo Azziz, M.D., M.P.H., M.B.A.  
The State University of New York

Rhonda Bentley-Lewis, M.D., M.B.A., M.M.Sc.  
Harvard Medical School

Shirley Blanchard, Ph.D.  
Creighton University

Lynda M. Brown, Ph.D.  
North Carolina A&T State University

Deidra Crews, M.D., Sc.M.  
Johns Hopkins University School of Medicine

Leonor Corsino, Ph.D.  
Duke University Medical Center

Daisy DeLeon, Ph.D.  
Loma Linda University School of Medicine

Lincoln Edwards, D.D.S., Ph.D.  
Northern Caribbean University

Gregory Florant, Ph.D.  
Colorado State University

Martin Frank, Ph.D.  
American Physiological Society

Trudy Gaillard, Ph.D.  
Florida International University

Eddie Greene, Ph.D.  
Mayo Clinic at Rochester

Michelle Harris, Ph.D.  
University of the District of Columbia

Patricia Heyn, Ph.D.  
University of Colorado, Denver

Carlos Isales, M.D.  
Augusta University

Myra Kleinpeter, M.D., M.P.H.  
Tulane University School of Medicine

Mark Lawson, Ph.D.  
University of California, San Diego

Jesús López-Guisa, Ph.D.  
Seattle Children's Hospital

Rocio Pereira, M.D.  
University of Colorado School of Medicine

Lewis Roberts, M.D., Ph.D.  
Mayo Clinic at Rochester

F. Bridget Rahim-Williams, Ph.D., M.P.H.  
Bethune-Cookman University

Jose R. Romero, Ph.D.  
Harvard Medical School

Sylvia Rosas, M.D., M.S.  
Harvard Medical School

Omaima Sabek, Ph.D.  
Weill Cornell Medical Center

Juan Sanabria, M.D.  
Case Western Reserve University

Virginia Sarapura, M.D.  
University of Colorado, Denver

Carmen Castaneda Sceppe, M.D., Ph.D.  
Northeastern University

Charmaine Stewart, M.D.  
University of Wisconsin Health Center

Jacqueline C. Tanaka, Ph.D.  
Temple University

Heather Tarleton, Ph.D.  
Loyola Marymount University

Francisco Villarreal, M.D., Ph.D.  
University of California, San Diego

Jackson T. Wright, Jr., M.D., Ph.D.  
Case Western Reserve University

Bessie Young, M.D., M.P.H.  
University of Washington

### *Senior members not in attendance receiving awards included—*

Healani K. Chang, Dr.P.H.  
University of Hawai'i at Manoa

Luis Angel Cubano, Ph.D.  
Universidad Central del Caribe

Eva M. McGhee, Ph.D.  
University of California, San Francisco

Susanne Nicholas, M.D., Ph.D., M.P.H.  
University of California, Los Angeles

Keith C. Norris, M.D., Ph.D.  
University of California, Los Angeles.

## Share Your Story

NMRI members were invited to participate in the “Share Your Story” segment for this special 15th anniversary edition of the NMRI newsletter. The following are their statements on the career impact of the Network, expectations from a participant’s perspective, and personal experiences that may be an inspiration to the general membership.



As a Postdoctoral Fellow at the University of Michigan, I attended my first NMRI meeting in 2013. That meeting was very beneficial in educating me on the different types of research grants and funding mechanisms. It also provided the necessary tools to select and apply for grants that were relevant to my interests and increased my understanding of the application process from the mock study section workshops. In 2014, with the support of my mentor, Ernesto Bernal-Mizrachi, M.D., I was successful in securing an NIDDK Mentored Research Scientist Development Award (K01). The following year, I applied for several tenure-track assistant professor positions and received many offers. My mentors guided me through the application and negotiation process. Also in 2014, I met NMRI mentor Dr. Maria Araneta, and throughout our relationship, she has guided me through challenging situations, provided helpful insight on career growth, and introduced me to potential research partners/collaborators. Having established my own laboratory in the Integrative Biology and Physiology Department at the University, mentoring young trainees is one of my priorities. Because the NMRI is a conduit for minority health researchers to be successful, I also strive to unclog the pipeline for scientists by providing them the best nurturing environment and support necessary to succeed in the life sciences.

*Emilyn Alejandre, Ph.D.*

*Assistant Professor, University of Minnesota Medical School*



After joining the NMRI in 2004, I immediately benefited from senior mentor Dr. E. Dale Abel’s suggestion to engage in research to increase our understanding of the complex etiology of the elevated diabetes prevalence in lower-weight Asian American populations. In addition, my gratitude to the NMRI extends to Dr. Sherita Hill-Golden, who I was delighted to learn had mentored one of my former students; Dr. Tiffany Gary-Webb, who chaired the scientific session when I received the 2014 American Diabetes Association’s Vivian Fonseca Scholar Award; and Ms. Winnie Martinez, who continues to encourage strategic collaborations with new members. Furthermore, I am honored to serve on the NIH Advisory Council for the National Institute on Minority Health and Health Disparities with Dr. Eddie Greene. Much appreciation to Dr. Lawrence Agodoa and OMHRC for sustaining the NMRI and for the opportunities and camaraderie it has developed the past 15 years.

*Maria Rosario (Happy) Araneta, Ph.D.*

*Professor of Epidemiology, University of California, San Diego*



My involvement with the NMRI has highlighted for me the value of providing a nurturing environment for training in biomedical research, particularly for persons of disadvantaged backgrounds. I have been personally inspired by the obstacles faced and the accomplishments achieved by NMRI members—junior and senior—and by the organization’s celebration of members’ triumphs (e.g., grants, awards, and promotions). My wish is that current and future NMRI members thrive in leadership positions across the United States in academics, industry, and government during the coming decades and beyond.

*Glenn M. Chertow, M.D.*

*Professor of Medicine, Stanford University School of Medicine*

## Share Your Story



In 2006, while a first-year Endocrinology Fellow at Duke University, I joined the NMRI. Since joining the Network, I have met, collaborated, and engaged with other minority investigators who serve as role models and continue to inspire my work focused on decreasing health disparities and increasing the number of minorities in academic medicine. My close interaction with colleagues across the country, facilitated by the NMRI, provided an opportunity to engage on a very personal level with others, thus paving the way for the next generation of researchers. Although it has been more than 10 years since I joined the Network, I continue to look forward to new opportunities to engage and actively participate with the members of this wonderful community. Being part of this community of minority health research investigators allowed me to foster friendships with colleagues who are on similar paths and are working toward common goals. Having this close interaction with the members of the NMRI is a constant motivation to continue my work in academic medicine. Ways to thank the team and leaders of the NIDDK/NMRI are too vast to enumerate because, on more than one occasion, these interactions prevented my final goal from being derailed.

*Leonor Carsino, Ph.D.*

*Assistant Professor, Duke University Medical Center, Senior NMRI Member*



The NMRI continues to be a viable part of my community of research scientists and academicians. I was recommended by senior mentor, Dr. Kwame Osei, to become involved with the organization. As a new faculty member and researcher, the Network provided a venue for research presentation and discussion of scientific ideas. The Network has provided a supportive community of senior researchers who are invested in the growth, development, and careers of junior faculty. The NIDDK/NMRI senior leadership has provided mentorship, manuscript, and grant critiques.

The annual conference included topics that are pertinent to young faculty, such as negotiation skills for faculty positions, preparing dossiers, grant review strategies, and mock study sessions. The participation and support of all the members of the Network has been invaluable to me. During my tenure, I have received the Translational Research Award, The Medallion Award, as well as travel grants to support my attending the meetings. I have had the pleasure of chairing a workshop and serving on the NMRI Planning Committee. These experiences have provided me opportunities to learn and grow.

I am sincerely grateful to the Network and its leadership for their support and encouragement over the years. My promotion to Associate Professor would not have occurred without the generous support of colleagues and friends. I personally would like to thank Ms. Martinez for organizing the meetings and fostering an environment that is collegial, professional, and goal oriented. Special acknowledgement to Dr. Agodoa for his vision and insight and to Drs. Abel, Blanchard, Chertow, Dagogo-Jack, Greene, Heyn, McDougale, Nicholas, Norris, Osei, Roberts, Sanabria, and Wright for their mentorship and academic advice. Congratulations to the Network for 15 years of mentorship, leadership, and service.

*Trudy Gaillard, Ph.D.*

*Interim Associate Dean for Academic Affairs, Florida International University*

## Share Your Story



The NMRI has been a primary connection for me as a scholar and researcher ever since I became a member as a doctoral student. I strongly advocated to be accepted into the Network because I was not an obvious candidate for the NMRI in terms of external funding. Yet, with creativity, I convinced the NMRI Membership Committee to consider the in-kind support I received from several companies as acceptable funding. These in-kind donations were substantial and enabled me to complete my research project in a timely manner. Over the years, I have received quality mentoring as an NMRI member, and becoming a member of the NMRI has proven to be the strongest link to countless resources for my continued growth as a scholar. Now, at this stage in my career, I am available to serve as a mentor to others, in both small and more significant ways.

This, the 15th anniversary celebration of the NMRI, marks my renewed commitment to the Network. I have had the opportunity to serve on the NMRI Oversight Committee, to serve as a judge for NMRI poster competitions, to present posters, and to hear scientific presentations from several talented investigators at the annual meetings. This 15th Anniversary Workshop will be my first year as Senior Investigator. It feels a bit strange to be considered “senior,” given that my research portfolio is relatively modest. Undoubtedly, I credit the NMRI as the main inspiration for training the next generation of researchers. For example, when I examine how I have integrated research into all the courses I teach; guided my students through the Institutional Review Board process, including the protection of human participants; and conveyed the importance of incorporating cultural competence in service and research—the NMRI has been the common mediator.

I feel blessed to have discovered the NMRI. My expectations have been exceeded. This Network has never abandoned me, even during the most difficult and challenging years that I have experienced at my institution. I will actively support the growth of the NMRI through its next 15 years and beyond.

*Michelle Harris, Ph.D.*

*Associate Professor, University of the District of Columbia, Senior NMRI Member*



Before joining the NMRI, I viewed the NIH Study Sections and grant review process as barriers to my success as a research scientist. After engaging with the Network, I realized that the NIH and its Center for Scientific Review are not adversaries but are very interested in researchers’ being successful in funding their research ideas. I am grateful to Dr. Agodoa, Ms. Martinez, and the NMRI for holding fast to its mission to encourage minority health investigators to be researchers in fields of interest to the NIDDK. The Network helps to build quality relationships with mentors who are purposefully interested in the mentee’s career. It helped me to face the challenges of balancing the duties of being a new faculty member and setting up a new research program with other academic responsibilities. The Network has been invaluable to me as a minority health research investigator in assisting with realistic goal setting, providing training, establishing supportive mentorship, and providing networking opportunities. I credit the NMRI as key to my accomplishments of rising through the academic ranks from Assistant Professor in 2002 to my current position as Professor in the Department of Neuroscience and Regenerative Medicine at Augusta University.

*Carlos Isaacs, M.D.*

*Professor, Augusta University, Senior NMRI Member*



## Share Your Story



**D**r. Mary McLeod Bethune, the famous Black educator and civil rights leader who founded my undergraduate institution in 1904 with \$1.50 and a heart full of faith and determination, once said that “Faith is the first factor in a life devoted to service. Without it, nothing is possible. With it, nothing is impossible.” It is one of my favorite quotes because it reminds me of the many people who have actively displayed great faith in my sincere desire and ability to serve others (especially the underserved). I have easily added the NIDDK’s NMRI to the list of strong supporters. As a first-generation college graduate from an historically Black institution who has been using my training as an epidemiologist to conduct racial/ethnic and socioeconomic health disparities research into such conditions as type 2 diabetes, I have found it incredibly useful to participate in an organization so genuinely focused on both the professional and personal development of underserved researchers.

As a member since 2013, I have received very useful advice from junior and senior colleagues while participating in our annual meetings, which have both literally and figuratively taken place in comfortable and receptive environments. I expected to meaningfully network with investigators of color at all career stages, given our similar research interests, in addition to receiving sound mentorship relevant to my unique reality (e.g., navigating a career with a limited professional network; addressing macro- and micro-aggressions in professional settings) as a Black person in the United States. I also hoped to present my research at each of the annual meetings I attended, and I was fortunate to deliver an oral presentation in 2013 on the relationship between sleep duration and type 2 diabetes among both Blacks and Whites in the United States with funds from the NMRI Travel Award. With the American Society of Nephrology Travel Award to the 2015 NMRI Annual Workshop, I was also fortunate to win the 2015 Marco Cabrera Poster Award for Translational Research describing how Black/White differences in the work-sleep relationship may contribute to disparate health conditions, such as type 2 diabetes.

Of note, I am particularly grateful for the travel awards to attend both annual meetings, as I would not have been able to participate without the funds provided. My expectations for this 15th Annual Workshop were high and have been surpassed. Furthermore, I am certain that this level of research recognition contributed to my recent job offers from Stanford University, The University of North Carolina at Chapel Hill, and the NIH. In January 2017, I started as tenure-track Earl Stadtman Investigator in the Epidemiology Branch of the National Institute of Environmental Health Sciences, focused on investigating social and environmental determinants of health. I am incredibly grateful for the NMRI’s tangible support over the years and will work tirelessly to prove myself worthy of the organization’s faith in me and my research program.

*Chandra L. Jackson, Ph.D., M.S.  
Earl Stadtman Investigator, National Institute of Environmental Health Sciences, NIH*

## Share Your Story



In the spring of 2016, I had the opportunity to meet one of the few principal investigators in my local region who focused on sickle cell anemia research, a field I had an interest in pursuing after receiving my Ph.D. After having been introduced to the NMRI, I joined and received a travel award to attend the 14th Annual Workshop in 2016. For the first time in my academic and collegiate career, I was in a room with intellectual underrepresented minorities who were scientists and physicians; they for once, were the majority. By the end of the workshop, I had met colleagues who will forever be in my network and be my mentors. The NMRI has made a profound impact on my career in many ways. For example, as a member, I am now part of an extensive network that intersects fields of research, such as hematologic, kidney and metabolism disorders. Also, the NMRI serves as a network of colleagues who are experts in various fields who can provide advice, guidance, or collaborations for research grants. In my brief time as an NMRI member, I have been offered faculty positions and have been asked to collaborate on a research study by other members.

Although it has taken 20 years to reach my goal of earning a Ph.D., it would not have been possible without my mentors. Finding good mentors has been a challenge, which the NMRI is now helping to resolve. It is my desire, in turn, to be that mentor who assists and guides others toward their goals and career paths. Through its continued efforts to increase diversity in biomedical research and encourage investigators to conduct research in areas that pertain to the NIDDK, the NMRI is indeed an example of how actions speak louder than words. Also, the Network provides a strong base for communication and helps to reduce racial disparities through knowledge. Words cannot express how much the NMRI has impacted my career or how it has exceeded my expectations. For a moment, I became discouraged toward the end of my Ph.D. work and was uncertain of staying in academia or choosing a career in industry. My decision to pursue a career in academia, to be that mirrored face for minorities to see themselves, is primarily attributed the NMRI's impact on my life. To everyone who is reading my story and is not a member, please join. If you are an NMRI member, thank you.

*Letitia Jones, Ph.D.*

*Postdoctoral Scholar, Duke University Medical Center*



It has been great to be a member of the NMRI. This opportunity has allowed me to meet many esteemed colleagues, discuss our research, and exchange ideas on work and academic-life balance. Attending the NMRI Annual Workshops and participating in the various sessions benefitted my grant applications and manuscript submissions. As a member of the Network, I am reminded of the importance in encouraging first-generation college students from underrepresented groups to achieve their goals. I like to remind them that they will not be alone and that networking is an important element to success. The NMRI is an excellent organization that makes one feel supported in many ways by colleagues experiencing the same professional life challenges. I am grateful to the NIDDK/NMRI leadership, especially Dr. Agodoa, for the encouragement and efforts they have shown throughout the years.

*Jesús M. López-Guisa, Ph.D.*

*Associate Professor, Clinical Researcher, Seattle Children's Hospital, Senior NMRI Member*



## Share Your Story



Prior to becoming affiliated with the NMRI, my career mentorship was minimal. Attending the workshops, networking, and hearing the lectures gave me broader insight into the types of interactions I was not experiencing locally. I learned more about career and personnel management at NMRI workshops than from any other organization or institution. The NMRI leadership, senior members and their career paths, as well as featured speakers at the annual meetings, have inspired me. In addition, I always felt a sense of belonging, refreshment, and inspiration during these workshops and left with a heightened desire to give back to others. It was my pleasure to serve the NMRI by initiating the scientific poster session, which was later renamed the Marco Cabrera Poster Session to honor the memory of Dr. Cabrera, who was one of the Network's esteemed members. Also, I served on the NMRI Planning and Oversight Committees. Continued success and longevity to the NMRI! I extend best wishes to those attending this 15th Anniversary Workshop.

*Orhan K. Öz, M.D., Ph.D.*

*Professor, The University of Texas Southwestern Medical Center at Dallas*



The NMRI has been a valuable asset to me during my professional career. I have gained more insight into grant writing and professional presentations, which have assisted my transition from being mentored to the role of mentoring other junior faculty and fellows. The small group setting of the Network allows for close interaction with other members. In addition, opportunities for leadership roles are open to everyone. Not only have I established scientific collaborations, lasting friendships that have encouraged me to pursue my research interests have unfolded. The NMRI is a gem in the NIDDK and I feel invigorated every time I attend the Annual Meetings.

*Sylvia E. Rosas, M.D.*

*Joslin Diabetes Center, Harvard Medical School*



The immense support from the NMRI leadership and the senior members has been critical to my overcoming the continuous challenges encountered during my academic development process, including progression and maturation.

*Juan Sanabria, M.D.*

*Professor, Case Western Reserve University*



## *15th Anniversary Workshop Dinner Address*

**E**ddie Greene, Ph.D., Associate Professor of Medicine, Department of Medicine, Nephrology, and Hypertension, and Medical Director, Office of Diversity in Education, Mayo Clinic at Rochester, presented the inaugural Dr. Marion Sewer Honorary Lecture, titled “NMRI: Creating Your Future, Being Mentored, and Becoming a Mentor.” Dr. Greene reflected on his experiences of being mentored and becoming a mentor, and he emphasized several key points in his presentation. First, NMRI participants are the future, and opportunity will knock. He urged the audience to be resilient and to give back when they are at the pinnacle of success. Those who practice servant leadership will be emulated and followed. The destination and journey are equally important, but critical to the journey is recognizing that mentors are essential to guide the initial steps on the path to the destination.

Dr. Greene stated that the NMRI, a strong support group, builds diversity and inclusion capacity for biomedical research teams, as well as educational and clinical structures and processes. He emphasized the importance of seeking and selecting the right mentor. Mentors do matter and do make a difference, and the NMRI fosters good mentoring relationships. Mentoring begins with teamwork (e.g., pioneers, guardians, drivers, and integrators), and people should choose a role on the team and make a difference. Good collaboration networks and team dynamics are effective in building research portfolios.

Dr. Greene expressed his sincere appreciation to the NIDDK and the NMRI for their leadership and strong support of minority researchers. He closed by reiterating to participants what he had said at the beginning of his speech: You are the future. Opportunity will knock. The destination and journey are equally important. Be resilient. Give back when you are at the pinnacle of success. Practice servant leadership, and you will be emulated and followed.



## A Message from Dr. Agodoa

It was 15 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 Resource Center. 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 500 members have joined the NMRI since 2003, 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.C. Agodoa, M.D., FACP**

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

## Awards and Accomplishments

**E. Dale Able, M.D., Ph.D.**, has been selected as President-Elect of the Endocrine Society.

**David B. Allison, Ph.D.**, was named Dean of the School of Public Health, Indiana University. He also was elected into the Academia Europaea, honored to receive the 2017 Thomas A. Wadden Award for Distinguished Mentorship from the Obesity Society, and elected as Fellow to the Academy of Behavioral Medicine Research in 2017.

**Kirk Campbell, M.D.**, was promoted to Associate Professor and Vice Chair, Diversity and Inclusion, Department of Medicine, Icahn School of Medicine at Mount Sinai.

**Glenn M. Chertow, M.D.**, Stanford University School of Medicine, was selected by the National Kidney Foundation to receive the 2018 David M. Hume Award.

**Leonor Corsino, M.D.**, was promoted to Associate Professor, Duke University Medical Center.

**Deidra C. Crews, M.D., Sc.M.**, was appointed incoming Chair, Diversity and Inclusion Committee, American Society of Nephrology.

**Michelle T. Foster, Ph.D.**, is now Associate Professor at Colorado State University.

**Patricia Heyn, Ph.D.**, was inducted into the American Congress of Rehabilitation Medicine and the Gerontology Society of America.

**Lenette M. Jones, Ph.D.**, Assistant Professor, University of Michigan, was selected as the Midwest Nursing Research Society's 2018 New Investigator Award winner of the Health of Diverse Populations Research Interest Group.

**Letitia Jones, Ph.D.**, Postdoctoral Scholar, Duke University Medical Center, was accepted into the Duke Scholars in Molecular Medicine Program.

**Leon McDougale, M.D.**, was promoted to Professor, The Ohio State University College of Medicine, and was honored as 2017 Alumnus of the Year by the University of Toledo College of Natural Sciences and Mathematics.

**Patrick Osei-Owusu, Ph.D.**, Assistant Professor, Drexel University, was selected as Fellow of the American Heart Association.

**Sylvia E. Rosas, M.D.**, Assistant Professor of Medicine, Joslin Diabetes Center, Harvard Medical School, received the NIDDK APOL1 Long-term Kidney Transplantation Outcomes Network U01 grant and the NIDDK Kidney Precision Medicine Project UG3/UH3 grant in 2017.

**Juan Sanabria, M.D.**, is now Professor of Surgery, Vice-Chair, Department of Surgery and Scientific Director, Marshall University Joan Edwards School of Medicine, Case Western Reserve University and was promoted to CDR O-5 Navy (Reserve). He was the recipient of the 2016–2017 Maestros Award for Professional Achievement and Marshall University's Community Service Award.

**Isabel R. Schlaepfer, Ph.D.**, Assistant Professor, University of Colorado School of Medicine, received a 4-year American Cancer Society Research Scholar grant award.

**Ebele Umeukeje, M.D.**, was promoted to Assistant Professor at Vanderbilt University Medical Center.

## SAVE THE DATE

Announcing the NMRI 16th Annual Workshop

April 11–13, 2018, Bethesda, MD



## Member Collaborations

**Rasheeda K. Hall, M.D.**, Duke University School of Medicine, collaborated with **Sylvia E. Rosas, M.D.**, Joslin Diabetes Center, Harvard Medical School, on “Choice of Hemodialysis Access in Older Adults: A Cost-effectiveness Analysis,” published in the June 2017 issue of the *Clinical Journal of the American Society of Nephrology*.

**Cheedy Jaja, Ph.D.**, Associate Professor, University of Cincinnati, in collaboration with Jericho Road Community Health Center and BioMedomics, Inc., founded the Sickle Cell Clinic in Sierra Leone.

**Juan Sanabria, M.D.**, was invited by NMRI members to speak at Grand Rounds at the Multidisciplinary Research Institute, Marshall University, and Naval Hospital Jacksonville in 2017. He also was invited to speak internationally at the 10th Annual World Cancer Congress, Macau, China, and the World Congress of Gastroenterology, Toronto, Canada, in 2017, and the 12th World Congress of the Hepateo-Pancreato-Biliary Association, São Paulo, Brazil, in 2016.

## NMRI Annual Workshop Travel Awards

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

- **Are you a nephrologist or kidney researcher?** The American Society of Nephrology (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](http://www.asn-online.org/grants/travel/nmri.aspx).
- **Never attended an NMRI Annual 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 Workshop. For more information, contact Ms. Winnie Martinez, NIDDK: [winnie.martinez@nih.gov](mailto:winnie.martinez@nih.gov).

## NMRI 15th Annual Workshop Sponsors

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

- [Council on Undergraduate Research \(CUR\)](#)

The NMRI would like to thank the following professional societies for sponsoring travel awards to the NMRI 15th Annual Workshop:

- [American Diabetes Association \(ADA\)](#)
- [American Society for Bone and Mineral Research \(ASBMR\)](#)
- [American Society of Nephrology \(ASN\)](#)
- [The Endocrine Society](#)

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## NMRI 15th Annual Workshop Travel Award Recipients

### *ADA Travel Award Recipients*

Cristal Hill, Ph.D.  
Omaima Sabek, Ph.D.  
Terry Thompson, M.D.

### *ASBMR Travel Award Recipient*

Nicole Wright, Ph.D.

### *ASN Travel Award Recipients*

|                             |   |
|-----------------------------|---|
| Oreoluwa Adedoyin, Ph.D.    | Anberitha Matthews, Ph.D.                   |
| Akinwande Akinfolarin, M.D. | Tesfaye Mersha, Ph.D.                       |
| Senu Apewokin, M.D.         | Arnita Norwood, Ph.D.                       |
| Jacantha Buggs, M.D.        | Patrick Osei-Owusu, Ph.D.                   |
| Marianne Camargo, M.D.      | Sylvia Rosas, M.D.                          |
| Glenn Chertow, M.D.         | Eunice Samuels-Hamilton, Ph.D.              |
| Ilse Daehn, Ph.D.           | Mariya Sweetwyne, Ph.D.                     |
| Joseph Lunyera, M.D.        | Ebele Umeukeje, M.D.                        |
| Gayenell Magwood, Ph.D.     | Etienne Vasconcellos de Macedo, M.D., Ph.D. |
| Sandeep Mallipattu, M.D.    | Cynthia Warrick, Ph.D.                      |

### *Endocrine Society Travel Award Recipients*

Joshua Joseph, M.D.

## Report from *the* NMRI 15th Annual Workshop

Highlights of the NMRI 15th Annual Workshop on April 27–28, 2017, follow. A full meeting summary is available on the NMRI website at [www.niddk.nih.gov/news/meetings-workshops/2017/nmri-15th-annual-workshop-04-2017](http://www.niddk.nih.gov/news/meetings-workshops/2017/nmri-15th-annual-workshop-04-2017).

The NMRI celebrated its 15th Anniversary in hosting the Annual Workshop on April 27–28, 2017, at the DoubleTree Hotel in Bethesda, Maryland. Participants from across the Americas, including the United States and Jamaica, joined in the celebration. **Lincoln Edwards, D.D.S., Ph.D.**, University President and Professor, Northern Caribbean University, and Chair of the NMRI Planning Committee, which was charged with organizing the meeting, welcomed attendees and emphasized the value of new members' engaging with senior members. The growth and achievements of the Network have been exemplary, he added. The NMRI's members are researchers and technical personnel interested in minority health research, including individuals from traditionally underserved populations. Dr. Edwards expressed appreciation to Ms. Winnie Martinez, the senior members, and sponsors, as well as to NMRI's committees for ongoing support of the Network.

Ms. Martinez, Program Director, Office of Minority Health Research Coordination, NIDDK, welcomed the participants to the 15th Anniversary Workshop and remarked that the Network has grown to 584 members with more than 700 meeting participants over the past 15 years, after having started with 30 members and 50 participants at the inaugural workshop in 2002. Ms. Martinez encouraged members to update their NMRI profiles to maintain a current and accurate status of the Network.

### KEYNOTE ADDRESS

During her presentation titled "NIH Addresses the Science of Diversity: Where Are We Now?" **Hannah Valantine, M.D.**, the NIH's first Chief Officer for Scientific Workforce Diversity (SWD), enlightened participants to the fact that diversity matters to the NIH for many reasons. She discussed the cross-cutting diversity challenges and the NIH's prompt actions to address these

challenges, including incorporating into its fiscal year 2016–2020 NIH-Wide Strategic Plan the principle of enhancing stewardship, which involves increasing workforce diversity. Dr. Valantine described the establishment and continued operations of the SWD Office, which is charged with coordinating diversity programs across the NIH. Underrepresented groups (URG), regardless of gender, she said, hold very few tenured faculty positions—this is a pattern the NIH is committed to improving through the mission of the SWD. For example, a recruitment tool developed by the SWD has identified junior and senior career stage candidate pools to expand diversity in the biomedical sciences. Efforts to foster outreach and promote knowledge and awareness about scientific career opportunities in the Intramural Research Program, including the NIH Future Research Leaders Conference and the Diversity Consortium Program and its components, are underway. The SWD designed the Implicit Bias Education and Research program to raise awareness of implicit bias and reduce its effect on the candidate search process. Targeted interventions to enhance R01 submission and resubmission rates, as well as mentoring and coaching for grant preparation, are in progress. Dr. Valantine closed by introducing the NIH's integrated national strategy for scientific workforce diversity, which has an overarching goal to eliminate transition barriers and achieve sustainable transformation in scientific workforce diversity.



Hannah Valantine, M.D.

## WELCOME RECEPTION ADDRESS

**Eliseo Perez-Stable, M.D.**, Director, National Institute on Minority Health and Health Disparities (NIMHD), welcomed participants to the 15th Anniversary of the NMRI and discussed the NIMHD's vision on minority health and health disparities research. After briefing attendees on the definitions of minority health and health disparity, Dr. Perez-Stable elaborated that health disparity research is devoted to (1) advancing scientific knowledge around defining mechanisms of how health determinants affect disparities and (2) how this knowledge is translated into interventions to reduce disparities. He discussed mechanisms leading to health disparities, health disparities in diabetes and chronic kidney disease, and NIMHD-funded results and initiatives. To spark enthusiasm for health disparities research among the attendees, Dr. Perez-Stable announced that the 2017 NIMHD Health Disparities Research Institute

online application is now open. He highlighted NIMHD grants that are focused on NIDDK topics. In closing, Dr. Perez-Stable encouraged participants to connect with the NIMHD via its website and social media accounts.



## ROUNDTABLE DISCUSSIONS—FROM CAREER DEVELOPMENT ADVICE *to* the GRANT WRITING *and* REVIEW PROCESS

Workshop attendees participated in two sessions of roundtable discussions. During the first session, participants had a choice of six roundtable discussion groups focused on career-oriented topics: community-based participatory research, behavioral and social sciences research, epigenetics research, NIH intramural research, successful approaches for grant writing, and research supplements to support diversity. The discussion leaders were **Lovoria Williams, Ph.D.**, Associate Professor, Augusta University; **Joyce Balls-Berry, Ph.D.**, Assistant Professor, Mayo Clinic; **Nia Mitchell, Ph.D.**, Assistant Professor, Duke University School of Medicine; **Patricia Heyn, Ph.D.**, Associate Professor, University of Colorado Anschutz Medical Campus; **Pamela Shiao, Ph.D.**, Associate Dean, Augusta University; **Roland Owens, Ph.D.**, Assistant Director, Office of Intramural Research, NIH; **Robert Rivers, Ph.D.**, Program Director, NIDDK, NIH; and **Cynthia Warrick, Ph.D.**, President, Society for Diversity in Biomedical Sciences.

In a parallel session, 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 **Michelle Barnard, Ph.D.** The sections were chaired by **Nia Mitchell, Ph.D.**, Assistant Professor, Duke University School of Medicine, and **Francisco Villarreal, Ph.D.**, Professor, University of California, San Diego. The third section, grant resources for non-NIH behavioral and social sciences research, was led by **Patricia Heyn, Ph.D.**, Associate Professor, University of Colorado Anschutz Medical Campus.

## RESEARCH APPLICATIONS *in* BIOMEDICAL INFORMATICS

**Timothy Huerta, Ph.D.**, Associate Professor, The Ohio State University College of Medicine, began his presentation on "Research Applications in Biomedical Informatics" by concisely defining biomedical informatics and describing the five "Vs" of data that distinguish biomedical informatics from others: velocity, veracity,

volume, variety, and value. He emphasized that integrated technologies that allow individuals to engage in managing their health are examples of the types of challenges that create the need for biomedical informatics. Dr. Huerta pointed out the three primary skills necessary to succeed in biomedical informatics:

- Data mining
- Domain experience
- Statistics, including graph theory and network analysis

Future contenders in this field were thoroughly engaged on the ways in which research applications in biomedical informatics cross-cut these three skills to study all aspects of biomedical information. Dr. Huerta elaborated on the opportunities for clinicians interested in research to work with biomedical informatics experts to solve key questions that address gaps in knowledge. He remarked that funding agencies readily support solving these types of problems to address gaps in health care.

## MENTORING AT *the* 15TH ANNUAL WORKSHOP

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.

Two parallel workshop sessions provided the opportunity for participants to engage in career development activities. The sessions were intended to allow informal, interactive discussions among participants. Meeting participants attended the session of their choice. In one session, participants discussed the challenges

and opportunities in the fields of endocrinology and nephrology with **Carlos Isales, Ph.D.**, Professor, Augusta University; **Ayotunde Dokun, Ph.D.**, Associate Professor, The University of Tennessee Health Science Center; and **Crystal Gadegbeku, M.D.**, Professor, Temple University School of Medicine. In a parallel session, participants engaged with **Ricardo Azziz, M.D.**, Chief Officer, Academic Health and Hospital Affairs, State University of New York, who discussed charting the course of success and leadership skills for young professionals.

## 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 work of the NMRI.

**Deidre Crews, M.D.**, Incoming Chair, Diversity and Inclusion Committee, American Society of Nephrology (ASN), updated participants on the efforts to address diversity and inclusion in the Society. The ASN Diversity and Inclusion Work Group, established in December 2013, has had 4 successful years of accomplishments, including establishing the ASN-Harold Amos Medical Faculty Development Program (AMFDP) Award in 2016 and providing travel awards to 55 NMRI workshop participants from 2015 to 2017. The Work Group transitioned into the Diversity and Inclusion Committee in January 2017; several of its members also are NMRI participants. Dr. Crews described the committee's priorities; highlighted updates to the ASN-AMFDP award to include Ph.D.-level nurses; and noted the efforts to expand on its diversity and inclusion initiatives by establishing, in 2014, the Michelle P. Winn, M.D., Endowed Lectureship, in memory of the Duke University Medical School professor and nephrologist. Dr. Crews conveyed the ASN's commitment to career development for kidney professionals and highlighted efforts to support students, trainees, and early career professionals.

**Nicole Wright, Ph.D.**, American Society for Bone and Mineral Research (ASBMR) travel award recipient, discussed the Society's mission to promote excellence in bone and mineral research to foster integration of basic and

**How has the NMRI helped your career?**

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



clinical science and facilitate translation of these sciences into clinical practice. The ASBMR convenes annual and topical meetings; publishes the *Journal of Bone and Mineral Research (JBMR)* and *JBMR Plus*; and incorporates activities for minority researchers into its annual and topical meetings, which are planned by the ASBMR's Diversity in Bone and Mineral Research Subcommittee.

**Allison McElvaine, Ph.D.**, Director, Research Communications, American Diabetes Association (ADA), emphasized that the ADA has invested more than \$770 million in diabetes research and supported 4,600 research projects. These investments have led to advances in biomedical research, resulted in improved treatments, established the ADA's *Standards of Medical Care in Diabetes*, and reduced diabetic complications. The ADA's research programs include the Core Research Program, Collaborative Targeted Research Program, and Pathway to Stop Diabetes Initiative. She explained that funding opportunities are available at all career stages and include minority undergraduate internships; postdoctoral and minority postdoctoral fellowships; junior faculty development awards; and innovative basic science, clinical, or translational science awards for junior and senior faculty. Dr. McElvaine encouraged participants to apply for grants, present and submit their research findings at ADA's annual meetings, volunteer to serve on committees, or become a diabetes advocate and support the ADA's mission.

**Rocio Pereira, M.D.**, former chair of the Endocrine Society's Diversity and Inclusion Committee, remarked on the Society's resources for

biomedical scientists and its activities related to minority populations. Since the inaugural Reducing Health Disparities summit in 2014, the Endocrine Society has incorporated health disparities into many of its activities, including the publication of feature articles. Dr. Pereira pointed out that the Society convenes an annual meeting, ENDO, and features Endocareers, which provides a mentor exchange program, in-training, and early career resources, as well as board certification training for clinical endocrinologists. Dr. Pereira informed participants 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. In addition, the NIDDK-sponsored Future Leaders Advancing Research in Endocrinology program to support training and endocrine research for URG is one of the Society's diversity initiatives.

**Liz Fray**, Membership Coordinator, Council on Undergraduate Research (CUR), emphasized the strength of the organization, which has a membership of more than 12,000 individual participants and approximately 700 academic institutional members representing more than 900 colleges and universities. Ms. Fray elaborated on the CUR's mission to support and promote high-quality undergraduate student-faculty collaborative research and scholarship and described the five strategic pillars that are most important to this mission. She pointed out resources that the organization provides, including meetings for students and faculty, nationally recognized awards, a mentor network, and an undergraduate researchers registry. In addition, 2- to 3-day meetings, commonly referred to as CUR Institutes, are held on college campuses, during which small groups meet to discuss an issue related to undergraduate research and faculty development.

## How has the NMRI helped your career?

“The NMRI has been so beneficial for me.”



## Marco Cabrera Poster Contest Winners Announced

The 29 posters submitted to the 2017 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 (**Oreoluwa Adedoyin, Ph.D.**, The University of Alabama at Birmingham), translational (**Ketrell McWhorter, Ph.D.**, National Institute of Environmental Health Sciences [NIEHS]), and clinical science (**Ebele Umeukeje, M.D.**, Vanderbilt University School of Medicine). The winning abstracts are presented here.



*Basic Science:* **Oreoluwa Adedoyin, Ph.D.**, The University of Alabama at Birmingham, "Lack of Heme Oxygenase-1 Increases Susceptibility to Ferroptosis in Proximal Tubule Epithelial Cells"

### Abstract

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 (AKI). Heme Oxygenase-1 (HO-1) is a microsomal cytoprotective enzyme induced in response to injury and cellular stress, and is protective against kidney

injury. HO-1, however, 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.

The purpose of this study was to elucidate the role of HO-1 in regulating ferroptotic cell death in renal proximal tubule cells (PTCs). Immortalized PTCs obtained from HO-1<sup>+/+</sup> and HO-1<sup>-/-</sup> mice were treated with erastin or RSL3 (ferroptosis inducers), in the presence or absence of anti-oxidants, an iron source, or an iron chelator. Cells were assessed for changes in morphology and metabolic activity as an indicator of cell viability, as well as HO-1 mRNA and protein induction under these conditions.

Treatment of HO-1<sup>+/+</sup> PTECs with erastin resulted in a time- and dose-dependent increase in HO-1 gene expression, and protein levels, compared to vehicle-treated controls. At the 16h time point, maximum increase in HO-1 expression, compared with vehicle-treated control was observed. To test if ferroptosis is dependent on HO-1, both HO-1<sup>+/+</sup> and HO-1<sup>-/-</sup> PTCs were treated with either 0.1 or 1  $\mu$ M erastin. Compared to HO-1<sup>+/+</sup> PTCs, HO-1<sup>-/-</sup> cells showed greater dose-dependent reduction in percent viability (HO-1<sup>+/+</sup> vs. HO-1<sup>-/-</sup> PTCs: 0.1  $\mu$ M erastin: 91.6  $\pm$  2.5% vs. 68.7  $\pm$  2.2%; 1  $\mu$ M erastin: 58.3  $\pm$  0.9% vs. 44.0  $\pm$  0.7%  $p < 0.0001$ ,  $n = 3$ /group; 6–8 replicates each). Treatment with another ferroptosis inducer (RSL3) also resulted in increased susceptibility to cell death in HO-1<sup>-/-</sup> compared to HO-1<sup>+/+</sup> PTCs. Iron supplementation with ferric ammonium citrate (FAC) in erastin-treated cells resulted in greater reduction in cell viability in HO-1<sup>-/-</sup> PTCs



( $71.5 \pm 2.5\%$  to  $50 \pm 0.1\%$ ;  $0.1 \mu\text{M}$  erastin vs.  $0.1 \mu\text{M}$  erastin + FAC) compared with HO-1<sup>+/+</sup> cells ( $97 \pm 1.5\%$  to  $81 \pm 1.5\%$ ;  $0.1 \mu\text{M}$  erastin vs.  $0.1 \mu\text{M}$  erastin + FAC). Interestingly, co-treatment with  $0.1 \text{ mM}$  deferoxamine (iron chelator), or  $0.5 \text{ mM}$  N-acetyl-L-cysteine (glutathione replenisher) significantly increased cell viability, reduced HO-1 levels, and attenuated erastin-induced ferroptosis in both HO-1<sup>+/+</sup> and HO-1<sup>-/-</sup> PTCs. In addition, co-treatment with  $0.5 \mu\text{M}$  ferrostatin-1 (ferroptosis inhibitor) significantly increased cell viability in both HO-1<sup>+/+</sup> and HO-1<sup>-/-</sup> PTCs.

HO-1 deficiency increases susceptibility to erastin-induced ferroptosis in PTCs. HO-1 induction appears to attenuate erastin-induced ferroptotic cell death in renal epithelial cells; therefore, it may serve as a viable therapeutic target for intervention in AKI.



*Translational Science: Ketrell McWhorter, Ph.D.*, NIEHS, “Impact of Excessive Gestational Weight Gain and Prepregnancy BMI on the Prevalence of Large-for-Gestational Age Infants of Women with Type I Insulin-Dependent Diabetes”

## Abstract

Despite improvements in treatment modalities, large-for-gestational age (LGA) prevalence has consistently remained between 30% and 40% among infants of mothers with Type I Insulin-Dependent Diabetes Mellitus (T1DM). Higher

birthweight is associated with increased risk of obesity and Type II Diabetes Mellitus in later life among offspring. Few studies have examined long-term trends in LGA prevalence across BMI subgroups in the T1DM population. Therefore, we aimed to establish the change in LGA prevalence and associations between gestational weight gain (GWG) and LGA outcomes among mothers with T1DM between the periods 1978–1995 and 2002–2008.

We conducted a cross-sectional analysis of 333 pregnancies in the Diabetes in Pregnancy Program Project Grant (PPG), a prospective cohort from 1978 to 1995, as well as 358 pregnancies in the Consortium on Safe Labor (CSL), a multicenter cross-sectional study from 2002 to 2008. Prepregnancy BMI in each cohort was calculated by using the participants’ self-reported weight (kg) prior to pregnancy and height (m) at initial visit. LGA was defined as birthweight > 90th percentile adjusted for gestational age, sex, and race. GWG adherence was determined utilizing the 2009 Institute of Medicine (IOM) guidelines and was classified as under, within, or over IOM guidelines. Logistic regression and generalized estimating equations were used for each cohort to estimate odds ratios, while adjusting for maternal age, race, parity, preeclampsia, and prepregnancy BMI.

Mean maternal age was  $25.7 \pm 5.0$  years for PPG and  $27.5 \pm 6.0$  years for CSL,  $p < 0.001$ . Eighty-five percent in the PPG vs. 62.7% in CSL were white; 14.1% vs. 19.5% were black; and 1.2% vs. 17.8% were other. LGA prevalence showed no significant improvement over a

30-year period (PPG: 40.2% vs. CSL: 38.7%). Normal-weight women within IOM guidelines showed a reduction in LGA (PPG: 39.8% vs. CSL: 32.1%),  $p < 0.001$ . More women entered pregnancy as overweight from PPG (16.8%) to CSL (27.0%),  $p < 0.001$ . There was an increase in women who exceeded IOM guidelines from PPG (42.3%) to CSL (56.3%),  $p < 0.001$ . In CSL, normal-weight women exceeding IOM guidelines [OR 2.14 95% CI (1.17, 3.91),  $p = 0.013$ ] and overweight women exceeding IOM guidelines [aOR 2.25, 95% CI (1.18, 4.28),  $p = 0.013$ ] were at higher risk of LGA compared to normal-weight women within IOM guidelines.

Despite advancements in treatments for T1DM, increases in BMI and GWG may be hindering expected improvements in LGA. Normal-weight women who remained within IOM guidelines saw a reduction in LGA prevalence, confirming the importance of adherence to IOM guidelines for GWG to reduce LGA rates, particularly for women with T1DM who enter pregnancy as overweight.



**Clinical Science: Ebele Umeukeje, M.D.**, Vanderbilt University School of Medicine, “Increasing Autonomous Motivation for Phosphate Binder Adherence in End-Stage Renal Disease”

## Abstract

Non-adherence to phosphate binder therapy complicates hyperphosphatemia management and increases mortality risk in end-stage renal disease (ESRD). We aimed to evaluate motivational interviewing (MI) to improve phosphate binder medication adherence through improvement in two novel psychosocial factors: *autonomous regulation*, a patient’s belief that a behavior is controllable because it is consistent with their value system, and *autonomy support*, a patient’s perception of their clinician’s promotion of their self-care.

We conducted an RCT (NCT02215655) of adults with ESRD at an academic medical center who reported low adherence to phosphate binders. Subjects were randomized to two MI counseling sessions versus usual care over a 2-month period. Primary outcome was

improvement in self-reported medication adherence. Secondary outcomes were improvement in *autonomous regulation* (Autonomous Regulation [AR] scale), *autonomy support* (Health Care Climate [HCC] scale) and serum phosphorus. Intention-to-treat analyses were performed. Independent samples and paired  $t$  tests were used for comparison between intervention and control groups and change within subjects, respectively.

A total of 130 subjects were enrolled, and 115 subjects completed the study. Self-withdrawal or death accounted for failure to complete the study. Subjects were female (53%), non-white (62%), and received in-center hemodialysis (75%); mean age was 53 years (SD = 15). No differences were observed in baseline patient characteristics between groups. All subjects showed improvement in self-reported medication adherence over time, but no differences between intervention and control were observed. There were also no significant differences observed between groups for AR and HCC scores or serum phosphorus levels. However, significant improvement in AR scores were found in the intervention group (M (SD) [95% CI] = 0.30 (0.83) [0.07–0.53];  $p = 0.013$ ), but not in the control group.

In this pilot study, we demonstrated the feasibility of MI as a behavioral intervention to improve *autonomous regulation* of phosphate binder adherence. Additional research in a longer-duration study is warranted to fully examine the use of MI as an effective tool to improve adherence and optimize mineral bone health in ESRD.

## Why did you attend the NMRI 15th Annual Workshop?

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

## START PLANNING

Announcing the NMRI South Regional Workshop

November 2018

## SCIENTIFIC PRESENTATIONS

Three NMRI members were selected from 29 who submitted abstracts and invited to present their research at the NMRI 15th Annual Workshop. The selected speakers and their abstracts are presented here.



**Joshua J. Joseph, M.D.**, Assistant Professor, Werner Medical Center, The Ohio State University, “An Optimal Modifiable Lifestyle Risk Factor Score Is Associated with Lower Risk of Type 2 Diabetes Mellitus in African Americans: The Jackson Heart Study”

### Abstract

**Background:** The associations of combined modifiable risk factors for incident diabetes (physical activity, television watching, dietary intake, sleep-disordered breathing, and smoking) are less well investigated in African Americans (AAs).

**Hypothesis:** We hypothesized that an optimal modifiable lifestyle risk factor score would be inversely associated with incident diabetes among AAs.

**Design and Methods:** Data on modifiable risk factors was collected by questionnaire at baseline (2000–2004) in a population-based sample of AAs in the Jackson Heart Study. Incident diabetes (fasting glucose  $\geq 126$  mg/dL, physician diagnosis, use of diabetes drugs, or HbA1c  $\geq 6.5\%$ ) was assessed over 12 years among adults without prevalent diabetes at baseline. Participants were excluded for missing data on baseline covariates or diabetes follow-up. Incidence rate ratios (IRR) were estimated using Poisson regression modeling adjusting for age, sex, education, current occupation

status, systolic blood pressure, and body mass index (BMI). Modifiable lifestyle factors (regular exercise, healthy diet, smoking avoidance, lower amounts of television watching, and low sleep-disordered breathing burden) were combined in risk score categories of poor (0–3 points), average (4–7 points), and optimal (8–11 points).

**Results:** Among 3,252 adults (mean age 53.3 years, 64% female) there were 560 incident diabetes cases (median follow-up 7.6 years). An average or optimal compared to a poor modifiable lifestyle risk score was associated with a 21% (IRR 0.79, 95% CI: 0.62, 0.99) and 31% (IRR 0.69, 95% CI: 0.48, 1.01) lower risk of diabetes, respectively, in a monotonic fashion ( $p = 0.03$ ). BMI and glycemic status at baseline modified the association of lifestyle risk score with diabetes—among participants with BMI  $< 30$  kg/m<sup>2</sup>, IRRs for average or optimal compared to poor categories were 0.60 (95% CI: 0.40, 0.91) and 0.53 (95% CI: 0.29, 0.97), respectively, compared to 0.90 (95% CI 0.67, 1.21) and 0.83 (95% CI: 0.51, 1.34) among participants with BMI  $\geq 30$  kg/m<sup>2</sup>. For participants with normoglycemia (normal fasting glucose and HbA1c) at baseline, the IRRs for average or optimal compared to poor categories were 0.64 (95% CI: 0.43, 0.96) and 0.57 (95% CI: 0.31, 1.04), respectively, compared to 0.90 (95% CI: 0.69, 1.19) and 0.80 (95% CI: 0.52, 1.23) among participants with prediabetes at baseline.

**Conclusions:** Modifiable lifestyle factors are associated with a lower risk of diabetes among AAs, with greater effects among those with lower adiposity and normoglycemia. Lifestyle interventions to reduce obesity have focused on individuals with high BMI and/or prediabetes

## Why did you attend the NMRI 15th Annual Workshop?

“I made some great connections that have already begun to materialize into collaborations.”

(high-risk approach). Our study suggests that AAs at the lower end of the diabetes risk spectrum may derive significant long-term benefit from diabetes prevention strategies focused on the outlined modifiable lifestyle risk factors.



**Ariana Pichardo-Lowden, M.D.,**  
Assistant Professor, Milton S. Hershey Medical Center, The Pennsylvania State University, “Diabetes Educators and In-person Culturally Competent Medical Interpreters Collaborative: A Diabetes Education Group for Hispanic Patients with Limited English Proficiency”

## Abstract

Diabetes (DM) is increasingly prevalent among Hispanics. This ethnic group is disadvantaged by worse clinical outcomes related to uncontrolled DM in comparison to non-Hispanic whites and African Americans. Hispanics with type 2 DM show poor adherence to self-management recommendations by the American Diabetes Association. Diabetes self-management skills and behaviors are necessary for achieving glycemic control and avoiding complications. This scenario is confounded by the fact that Hispanics are less likely to be insured and those who speak Spanish are less likely than those who speak English to have a usual source of care. From 1980 to 2010, there was a drop in the number of Hispanic providers from 135 per 100,000 Hispanics to 105 per 100,000 Hispanics even though this population grew by 243% in that timeframe. Therefore, inadequate access to health care—including cultural, socioeconomic, and linguistic barriers—contributes to the existing health disparities among this population. Diabetes education programs offered to patients with limited English proficiency often have limitations. These may include telephonic translation services that restrict efficiency of communication and patients-educators interactions; educators’ limited understanding about the impact of culture on lifestyle, dietary habits, treatment adherence, disease management, and coping; and patients’ fragmented engagement in the educational program. Bilingual health care providers and trained in-person

interpreters positively affect satisfaction, quality of care, and outcomes of patients with limited English proficiency. The purpose of this educational program is to develop and implement a learning-centered and culturally competent DM curriculum in Spanish for Hispanic patients with low English proficiency and to assess its impact on patients’ self-management and DM control.

Limited English proficiency (LEP) Hispanic patients with a new diagnosis of DM or with glycohemoglobin levels over 8% are being enrolled in three 1-hour DM education sessions to take place over the course of 9 months. The course emphasizes active learning activities related to self-management of DM focused on the seven goals of American Association of Diabetes Educators (AADE7). The AADE7 are healthy eating, increased activity, glucose monitoring, taking medications, problem solving, reducing risks, and coping. The instructional methods for this program are guided by L. Dee Fink’s Taxonomy of Significant Learning, which includes foundational knowledge, application, integration, human dimension, caring, and learning how to learn. Collaboration was developed between DM educators, Endocrine and Family and Community Program faculty, and members of the Latino(a) Medical Student Association (LaMSA) at The Pennsylvania State University College of Medicine (PSUCoM) to design and implement this education program. The in-person interpreters are certified by the PSUCoM’s medical interpretation course sponsored by LaMSA and the Office of Diversity, Equity, and Inclusion.

The interpreters’ training emphasizes both language interpretation and cultural awareness. The evaluation of the quality of instruction will be



conducted through debriefing after each session by DM educators, certified in-person medical interpreters, and a diabetologist observing the sessions. Assessment of program logistics will include issues related to resources coordination, scheduling, patients' responsiveness to attending the educational program, and access to education. Evaluation also will include patients' satisfaction. Measures of health-related outcome will include changes on self-management skills related to AADE7, adherence with clinic visits, attitude toward DM care, and overall changes in capillary glucose control and glycohemoglobin level. Evaluation of health outcomes will include a combination of assessment designs, such as post-session questionnaires, report of self-care smart goals prior to second and third sessions, and a final focus group.

This curriculum is being implemented. It is anticipated that this program will have a positive impact in four important domains: (1) access to DM education at our academic center, (2) patients' satisfaction related to DM education, (3) improvements in self-management skills or behaviors, and (4) DM control among LEP Hispanic patients.



**Mariya Sweetwyne, Ph.D.,**  
Acting Instructor, University of Washington, "Mitochondrial Protection in Aged Kidneys Reduces Parietal Epithelial Cell Senescence"

## Abstract

Aged kidneys are more susceptible to disease-induced injury.<sup>1</sup> Even in healthy adults, typical renal aging manifests in part as nephron loss. The remaining nephrons often exhibit glomerulosclerosis, including expansion of mesangial cells and loss of glomerular epithelial cells, namely podocytes and parietal epithelial cells (PECs).<sup>2</sup> Because podocytes are required for the filtration slit diaphragm and are terminally differentiated, efforts for glomerular protection have largely focused on their preservation. However, a subset of PECs has been identified as presumptive progenitor cells for podocyte replacement and it may be that the health and cell cycle regulation within this population dictates cellular responses to glomerular aging.<sup>3</sup> Kidneys are mitochondrial rich, and

mitochondrial dysfunction has been proposed as a mechanism contributing to renal aging. Accordingly, to address the cellular plasticity within the aging glomerulus, we targeted mitochondrial health as a mechanism underlying changes to the aging glomerulus and the induction of cellular senescence.

We recently demonstrated that treating aged mice with the mitochondrial protective peptide, SS-31, reduced age-induced glomerulosclerosis.<sup>4</sup> 24-month-old mice (~ equivalent to 70-year-old human) were randomized to receive either SS-31 peptide, or the control saline vehicle continuously by osmotic pump for 8 weeks. Semi-quantitative analysis of transmission electron microscopy showed that SS-31-treated animals had more preserved mitochondrial structure in both podocytes and PECs. Podocyte number and density did not differ between groups. In contrast, PEC number and density was improved in 26-month-old SS-31-treated mice, over both saline treated and 24-month-old aged baseline animals (SS-31 PEC density increased 24% +/- 12%,  $p = 0.02$ ). Moreover, PECs in animals treated with SS-31 did not exhibit the pathological phenotype associated with fibrotically activated PEC proliferation. Specifically, collagen IV,  $\alpha$ -SMA and phospho-ERK1/2 staining all were lower at the capsule in SS-31-treated aged mice (CollIV: Saline 61% capsule thickening vs. SS-31 43.9% increased capsule thickening,  $p = 0.02$ ; pERK: Saline 49.6% of PECs positive vs. SS-31 29.0% of PECs positive,  $p < 0.001$ ).

To address the mechanism behind these changes, our current studies assessed signs of oxidative stress and cellular senescence in aged SS-31-treated PECs. Expression of

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“Really great setting for networking.

Excellent opportunity to learn.”

ROS-generating enzyme, Nox4 was reduced in SS-31 treated PECs (Saline 90.37% of PEC vs. SS-31 78.25% of PEC,  $p = 0.007$ ), as was expression of nitrotyrosine. PEC senescence was measured by expression of senescence-associated- $\beta$ -gal (SA- $\beta$ -gal) and by nuclear localization of cell cycle senescence markers p16<sup>ink4a</sup> and p21<sup>Cip1</sup>. SS-31 treatment significantly reduced the presence of SA- $\beta$ -gal in all renal compartments (saline 18.15% cortex area vs. SS-31 9.67% cortex area;  $p = 0.017$ ) including in PECs. Expression of p16 was also reduced in PECs of SS-31-treated animals (saline 55% of PEC vs. SS-31 29.6% of PEC,  $p < 0.003$ ). Unexpectedly, p21 demonstrated an inverse relationship to p16 with p21 expression increasing in the PECs of the SS-31-treated animals. Closer examination of glomeruli in serial sections revealed that there is a differential expression of p16 and p21 in the PEC at the Bowman's capsule with cells expressing one or the other protein, but not both. This reciprocal relationship did not pertain to the other cells of the glomerular tuft, podocytes, endothelia, mesangial cells. To determine if p16 PEC expression could be directly regulated by mitochondrial damage, we subjected immortalized mouse PECs to oxidative and mitochondrial insult via hydrogen peroxide or sodium azide treatment. In the treated cells, p16 but not p21 nuclear expression increased by immunocytochemistry. Thus, increased p16 expression, but decreased p21 expression, corresponds to mitochondrial regulation of PEC specific senescence. These findings will allow us to approach preservation of the PEC progenitors to prolong renal repair plasticity in older individuals.

## References

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2. Denic, A., R.J. Glasscock, and A.D. Rule. 2016. "Structural and Functional Changes with the Aging Kidney." *Advances in Chronic Kidney Disease* 23: 19–28.
3. Eng, D.G., M.W. Sunseri, N.A. Kaverina, S.S. Roeder, et al. 2017. "Glomerular Parietal Epithelial Cells Contribute to Adult Podocyte Regeneration in Experimental Focal Segmental Glomerulosclerosis." *Kidney International* 88: 999–1012.
4. Sweetwyne, M.T., J.W. Pippin, D.G. Eng, K.L. Hudkins, et al. 2017. "The Mitochondrial-Targeted Peptide, SS-31, Improves Glomerular Architecture in Mice of Advanced Age." *Kidney International* 91: 1126–45.



## LUNCH ADDRESS

In "Patient-Centered Outcomes Research Institute (PCORI) Disparities Research: Opportunities, Process, and Impact," **Parag Aggarwal, Ph.D.**, PCORI, discussed research priorities, funding opportunities, and efforts to address disparities research. Dr. Aggarwal noted that comparative clinical effectiveness research at PCORI is patient-centered and seeks answers to real-world questions that matter to patients and other clinical decision makers. He emphasized the importance of having a clear understanding of patient-centeredness, as well as patient and stakeholder engagement, when developing projects. Dr. Aggarwal next outlined PCORI's five national priorities for research and pointed out that to date, the Institute has supported 26 diabetes-related projects, totaling \$54 million in investments, with the majority of the projects focusing on underrepresented populations. Similarly, PCORI has invested \$32.7 million to fund 12 kidney disease-related projects; again, these projects largely focused on underrepresented populations. Dr. Aggarwal closed by describing the application and merit review process and encouraged applicants to adhere to the funding announcement and application guidelines and to not hesitate contacting a program officer with questions.

## NMRI Leadership Opportunities

The NMRI Planning, including 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](http://www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/nmri-committees/Pages/nmri-committees.aspx).

### NEWS FROM *the* NMRI OVERSIGHT and PLANNING COMMITTEES

#### Oversight Committee

At the NMRI 15th Annual Workshop, **Sylvia E. Rosas, M.D.**, Joslin Diabetes Center, Harvard Medical School, 2016–2017 Oversight Committee Chair, reported on the activities and responsibilities of the Committee. She expressed appreciation to current members of the Oversight Committee and acknowledged the incoming Chair, **Rocio Pereira, M.D.**, University of Colorado School of Medicine.

The Oversight Committee is composed of 10 members and two *ad hoc* members who convene quarterly by conference call every 3 months; the fourth meeting coincides with the annual meeting of the Network. The Committee broadly—

- Facilitates the development of active mentoring relationships between senior and junior members.
- Identifies new members and plans outreach efforts to new organizations.
- Establishes specific groupings of Network members by research/professional interest or geographical location.
- Coordinates with professional societies that host annual meetings attended by Network members with the potential goal of organizing an informal gathering at one of these meetings.

**Patricia C. Heyn, Ph.D.**, University of Colorado Anschutz Medical Campus, NMRI Chapter Organizer, reported that currently there are no

active NMRI chapters and encouraged members of the Network to consider establishing chapters at their respective institutions. Individual chapters will provide an opportunity to engage students early in their studies, and Dr. Heyn and others in the Network will assist those who are interested.

#### Planning Committee

**Lincoln Edwards, D.D.S., Ph.D.**, 2016–2017 Planning Committee Chair, expressed appreciation to Committee members for their role in planning and organizing this and prior NMRI Annual Workshops and acknowledged the incoming Chair, **Jose Romero, Ph.D.**, Brigham and Women's Hospital, Harvard Medical School.

The priorities for the 2017 workshop and meeting were to—

- Provide opportunities for network and collaboration.
- Honor senior members and those who have made significant contributions to the development of the NMRI.
- Provide the necessary tools to inspire and empower participants to make tangible progress and achieve goals in their research and careers.

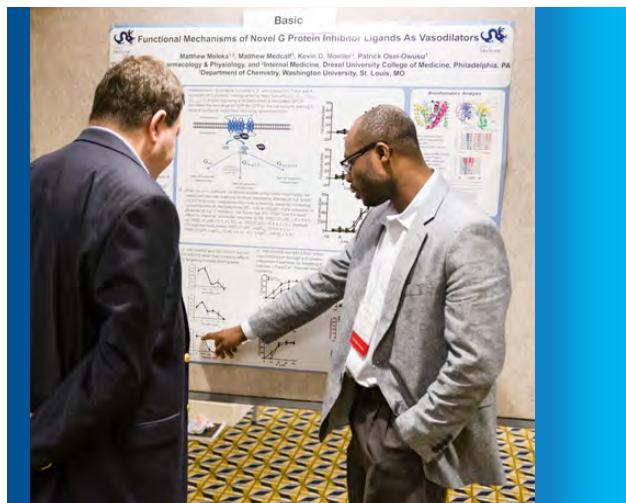
Dr. Edwards noted that 29 new members were in attendance and presented at this 2017 Workshop, partly due to the efforts of the existing members to increase awareness about the Network. He remarked that the NMRI leadership and the Committee listens and values attendees' feedback and emphasized the importance of completing the meeting survey.



## THE NMRI ON *the* WEB

The NMRI website contains a number of 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](http://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 and 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](http://www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/nmri-member-resources/Pages/nmri-member-resources.aspx).
- The 2016 NMRI Membership Directory:**  
Contact information about NMRI members is available at [www.niddk.nih.gov/-/media/Files/Research-Funding/Process/NIDDK\\_NMRI-2016-Directory\\_P3\\_508.pdf?la=en](http://www.niddk.nih.gov/-/media/Files/Research-Funding/Process/NIDDK_NMRI-2016-Directory_P3_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](http://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](http://www.niddk.nih.gov/research-funding/process/diversity/network-minority-research-investigators/nmri-newsletters/Pages/nmri-newsletters.aspx).



# NMRI Members Are a Vital Force in the Biomedical Research Community

We know about the 2016 NMRI Annual Workshop attendees, but we would like an update on the career progress that has been made by all of our members. NMRI members, please complete the NMRI Questionnaire at [www.scgcorp.com/NMRIQuestionnaire](http://www.scgcorp.com/NMRIQuestionnaire) and update your NMRI profile for the NMRI Membership Directory so we can analyze how the careers of our membership and our members' impact in the biomedical research community have grown in the course of the 15-year history of the Network.

## NMRI Frequently Asked Questions

### Who is eligible for NMRI membership?

NMRI membership is available only to investigators who are—

1. At the postgraduate doctoral level or higher
2. Interested in minority health research, including individuals from traditionally underserved communities (African American, Hispanic American, American Indian, Alaska Native, Native Hawaiian, and other Pacific Islanders)
3. Conducting research in diabetes; endocrinology; metabolism; nutrition; or digestive, kidney, urologic, or hematologic diseases
4. 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](http://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](mailto: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](http://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/Process/NIDDK\\_NMRI-2016-Directory\\_P3\\_508.pdf?la=en](http://www.niddk.nih.gov/-/media/Files/Research-Funding/Process/NIDDK_NMRI-2016-Directory_P3_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](http://www.niddk.nih.gov/research-funding/research-programs/diversity-programs/network-minority-health-research-investigators-nmri/mentor-mentee-program).

## SNAPSHOT OF *the* NMRI

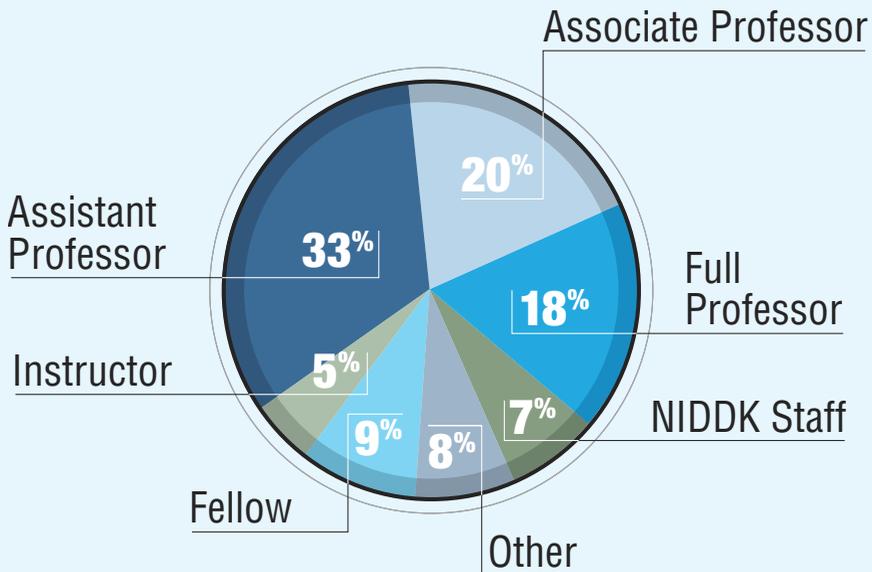
Established in 2002, the NMRI is 584 members strong and growing. The 15th NMRI Annual Meeting attracted more than 100 attendees from across the biomedical research community. Twenty-nine of the attendees were new NMRI members, and many of those were K award-ees. The attendees came from all levels of the biomedical research community.

Among the attendees from outside academia were leaders from professional societies (**Martin Frank, Ph.D.**, Director, American Physiological Society; **Liz Fray**, Membership Coordinator, CUR; and **Allison T. McElvaine, Ph.D.**, Director of Research Communications, ADA).

## How has the NMRI helped your career?

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

## Snapshot of NMRI Attendees



## NMRI 15th Annual Workshop Poster Abstracts

The posters submitted for presentation at the NMRI 15th 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 2017 NMRI Annual Workshop Program book. To obtain a copy, contact NIDDK Program Officer Ms. Winnie Martinez at [winnie.martinez@nih.gov](mailto:winnie.martinez@nih.gov).

[Oreoluwa Adedoyin](#), [Ravindra Boddu](#), [Amie T aylor](#), [Jeremie M. Lever](#), [Subhashini Bolisetty](#), [James F. George](#), and [Anupam Agarwal](#): “Lack of Heme Oxygenase-1 Increases Susceptibility to Ferroptosis in Proximal Tubule Epithelial Cells.”

[R. Aguilar](#), [Z. Hunter](#), [M. Shade](#), [J.A. Sanabria](#), [R. Klug](#), [M. Modarresi](#), [B. Gillon](#), [J. Sanabria](#), and the [GBD Collaborators](#): “Geographical and Temporal Variation in the Incidence, Prevalence and Mortality of Opioid Use at a Global, National and State Level: 1990–2015.”

[Akinwande Akinfolarin](#), [Venkata Sabbiseti](#), [Amrendra Ajay](#), [Sarah Hill](#), and [Joseph V. Bonventre](#): “The DNA Damage Response Protein, Breast Cancer Factor 1 (BRCA1) Induces Interstitial Fibrosis through Cell Cycle Arrest Following Tubular Injury.”

[Dan Baumann](#) and [Emilyn Alejandro](#): “Reduced Placental mTOR Signaling Induces Fetal Programming of Type 2 Diabetes.”

[Hamdi Alil](#), [Hawa Alil](#), [Fatima Hassan](#), [Sra-vanthi Lavu](#), [Nasra Giama](#), [Essa Mohamed](#), [Ju Dong Yang](#), [Abdirashid Shire](#), and [Lewis Roberts](#): “Are Viral Hepatitis Screening Practices of a High Prevalence Somali Immigrant Population by Primary Care Physicians (PCP) More Influenced by Peer-Reviewed Publication or CDC Screening Recommendations.”

[Victor Bowers](#), [Jacantha Buggs](#), [Chloe McKillop](#), [Jasmine Boone](#), [Jessica Frank](#), [Bradley Yurkanin](#), and [Morgan Brazel](#): “Bovine Carotid Artery Patch Helps Reduce the Incidence of Renal Artery Stenosis in Living Kidney Transplants.”

[Kerstin Ebefors](#), [Robert Wiener](#), [Liping Yu](#), [Evren Azeloglu](#), [Börje Haraldsson](#), and [Ilse Daehn](#): “Loss of Glomerular Endothelial Surface Layer and Cell Integrity in FSGS Is Mediated by Podocyte Derived Endothelin-1.”

[Patricia Heyn](#), [David Robertson](#), [Zhaoxing Pan](#), and [James Carollo](#): “Association between Metabolic Markers and Gross Motor Function Level in Young Adults with Cerebral Palsy.”

[Cristal M. Hill](#), [Thomas Laeger](#), [Diana C. Albarado](#), [David H. McDougal](#), [Hans-Rudolf Berthoud](#), [Heike Münzberg](#), and [Christopher D. Morrison](#): “Increases in FGF21 Induced by Low-Protein Diet Influence UCP1-Dependent Metabolic but not Thermoregulatory Endpoints.”

[Chandra L. Jackson](#), [Ichiro Kawachi](#), and [Susan Redline](#): “The Relationship between Sleep Duration and Alcohol Drinking Patterns among Black and White Men and Women in the United States.”

[Patricia Jones](#), [Lauren Smith](#), [Joselin Gonzalez-Diaz](#), [Stephanie Ioannou](#), [Jennifer Rodriguez](#), [Erin Kobetz](#), and [Paul Martin](#): “Screening for Hepatitis B Infection in Blacks from Hepatitis B Endemic Countries: A Missed Opportunity.”

[Joshua J. Joseph](#), [Justin B. Echouffo-Tcheugui](#), [Sameera Talegawkar](#), [Valery S. Effoe](#), [Victoria Okhomina](#), [Mercedes Carnethon](#), [Willa Hsueh](#), and [Sherita H. Golden](#): “An Optimal Modifiable Lifestyle Risk Factor Score Is Associated with Lower Risk of Type 2 Diabetes Mellitus in African Americans: The Jackson Heart Study.”

[Rebecca Klug](#), [Milad Modarresi](#), [Rodrigo Aguilar](#), [Brad Gillon](#), [Zach Hunter](#), [Mathew Schade](#), [Jackie Sanabria](#), and [Juan Sanabria](#): “Trends on Pancreatic Cancer and Associated Risk Factor at the Global, National and State Level: 1990–2015.”

[E.M. Macedo](#), [U. Hemmila](#), [S. Sharma](#), [R. Claire-Del Granado](#), [J. Cerda](#), [E. Burdman](#), [M. Rocco](#), and [R. Mehta](#): “Detection and Management of Acute Kidney Injury in Low- and Middle-Income Countries: Initial Data from the ISN Oby25 Pilot Feasibility Project.”

[Ketrell L. McWhorter](#), [Katherine Bowers](#), [Lawrence Dolan](#), [Ranjan Deka](#), [Chandra L. Jackson](#), and [Jane C. Khoury](#): “Impact of Excessive Gestational Weight Gain and Prepregnancy BMI on the Prevalence of Large-for-Gestational-Age Infants of Women with Type I Insulin-Dependent Diabetes.”

[Tesyfaye B. Mersha](#): “Use of Race, Ethnicity and Genetic Ancestry Information in Kidney and Kidney-Related Research.”

[Bolni Marius Nagalo](#): “Epidemiology of Transfusion-Transmissible Infections in West African Blood Transfusion Center.”

[Matthew M. Melaka](#), [Matthew Medcalf](#), [Kevin D. Moeller](#), and [Patrick Osei-Owusu](#): “Anti-hypertensive Mechanisms of Novel G Protein Inhibitor Ligands.”

[Christian Parry](#), [Andrey Ivanov](#), [Palaniappan Ramanathan](#), [Philipp A. Ilinykh](#), [Xionghao Lin](#), [Tatiana Ammosova](#), [Alexander Bukreyev](#), and [Sergei Nekhai](#): “Global Phosphoproteomic and Structural Analyses of Ebola Virions.”

[Ariana Pichardo-Lowden](#), [Valerie Mouery](#), [Michael Ward](#), [Matthew D. Bolton](#), and [Paul M. Haidet](#): “Diabetes Educators and In-person Culturally Competent Medical Interpreters Collaborative: A Diabetes Education Group for Hispanic Patients with Limited English Proficiency.”

[Ariana Pichardo-Lowden](#), [Valerie Mouery](#), [Michael Ward](#), [Matthew D. Bolton](#), and [Paul M. Haidet](#): “Optimizing Inpatient Diabetes Care Using a Comprehensive Real-Time Electronic Medical Records Clinical Decision Support Tool.”

[Maryam Syed](#), [Jana P. Ball](#), [Keisa W. Mathis](#), [Michael E. Hall](#), [Michael J. Ryan](#), [Marc E. Rothenberg](#), and [Damian G. Romero](#): “MicroRNA-21 Ablation Exacerbates Aldosterone-Mediated Cardiac Injury, Remodeling, and Dysfunction.”

[Sylvia E. Rosas](#), [Catalina Morales](#), [Gabriela Garcia-Dolagaray](#), and [A. Enrique Caballero](#): “Clinical Parameters Associated with Rapid Decline of Renal Function: A Report from Joslin’s Latino Diabetes Initiative.”

[Mariya T. Sweetwyne](#), [Kelly Hudkins-Loya](#), [Ying-Ann Chaio](#), [Diana G. Eng](#), [Hazel Szeto](#), [Jeffrey W. Pippin](#), [Charles E. Alpers](#), [Peter S. Rabinovitch](#), and [Stuart J. Shankland](#): “Mitochondrial Protection in Aged Kidneys Reduces Parietal Epithelial Cell Senescence.”

[Jacqueline Tanaka](#): “The Value of Undergraduate Training Programs to Diversify the Next Generation of Biomedical Researchers.”

[Terry Thompson](#), [Chelsea Singleton](#), [Sparkle Springfield](#), and [Angela Odoms-Young](#): “A Comparison of Diet-Related Risk Factors for Chronic Disease between Black and White Men with Type 2 Diabetes: Findings from NHANES, 2007–2012.”

[Ebele Umeukeje](#), [Lesla R. Abne](#), [Joseph R. Merighi](#), [Marcus G. Wild](#), [Heidi Chen](#), [Consuelo H. Wilkins](#), [Julia Lewis](#), and [K.L. Cavanaugh](#): “Increasing Autonomous Motivation for Phosphate Binder Adherence in End-Stage Renal Disease.”

[Tarik D. Walker](#), [Julia Powers](#), [Marvin I. Schwarz](#), [Avram Waltz](#), and [David A. Schwartz](#): “The Global Idiopathic Pulmonary Fibrosis (IPF) Collaborative Network: A Platform for IPS Genetics.”

[Nicole C. Wright](#), [Ivan I. Herbey](#), [Susan L. Davies](#), [Kenneth G. Saag](#), [Emily B. Levitan](#), and [Nataliya V. Ivankova](#): “Evaluating Racial Differences in Medical Experiences among Women with Osteoporosis.”



## In Memory



### **Sherilyn A. Gordon-Burroughs, M.D., FACS**

1969 – 2017

**Sherilyn A. Gordon-Burroughs, M.D., FACS**, was a transplant surgeon at the J.C. Walter Jr. Transplant Center, Associate Professor of Surgery, and served as the first physician Designated Institutional Official and the Residency Director for the Department of Surgery at the Houston Methodist Hospital in Houston, Texas. She also was the Assistant Dean, Graduate Medical Education, at Texas A&M Health Science Center and was a longtime NMRI supporter.

Dr. Gordon-Burroughs received her undergraduate degree *magna cum laude* from Howard University and her M.D. from Washington University School of Medicine in St. Louis. After an internship/residency in surgery at Howard University Hospital, she completed a research fellowship at the University of Pittsburgh School of Medicine and then general surgery residency at Howard University Hospital. She completed her clinical fellowship in multi-organ transplant at the Dumont Transplant Center, University of California, Los Angeles.

Numerous colleagues and associates noted that Dr. Gordon-Burroughs was a gifted surgeon and mentor to residents, medical students, and everyone on staff at Houston Methodist Hospital. Many commented that she pushed everyone to excel professionally and academically, wore many hats, and wore them all well.



National Institute of  
Diabetes and Digestive  
and Kidney Diseases