

National Diabetes and Digestive and Kidney Diseases (NIDDK) Advisory Council Meeting

Division of Kidney, Urologic, and Hematologic Diseases Advisory Subcouncil Meeting September 9, 2020

Advisory Council KUH Subcommittee Members:

Dr. Iain Drummond (Mount Desert Island Biological Laboratory)
Dr. Lisa Guay-Woodford (Children's National Medical Center)
Mr. Richard Knight (American Association of Kidney Patients)
Dr. Mark Nelson (University of Vermont)
Dr. David Penson (Vanderbilt University)
Dr. Craig Peters (UT Southwestern) (Guest Councilor)
Dr. Kathleen Sakamoto (Stanford University)
Dr. Ian Stewart (Commissioned Corps of the US Public Health Service)

NIH/NIDDK/KUH Staff:

Dr. Kevin Abbott	Dr. Ziya Kirkali
Dr. Terry Rogers Bishop	Dr. Susan Mendley
Dr. Eric Brunskill	Dr. Chris Mullins
Dr. Kevin Chan	Dr. Deepak Nihalani
Dr. Patrick Donohue	Dr. Afshin Parsa
Ms. Emily Duggan	Ms. Aretina Perry-Jones
Dr. Greg Germino	Dr. Tracy Rankin
Ms. Shannon Givens	Dr. Cindy Roy
Dr. Daniel Gossett	Dr. Anna Sadusky
Dr. Shilpa Hattangadi	Dr. Ivonne Schulman
Dr. Jason Hoffert	Ms. Aliecia Shepherd
Dr. Deborah Hoshizaki	Dr. Victoria Spruance
Dr. Chris Ketchum	Dr. Robert Star
Dr. Paul Kimmel	

Welcome and Introductions

Dr. Star welcomed council members and attendees to the KUH subcouncil meeting. Dr. Star formally welcomed Drs. Hattangadi, Brunskill, and Nihalani to KUH. Councilors approved the meeting minutes from May, and Dr. Star reviewed the list of upcoming meetings and workshops.

KUH Oversight Committees

Mrs. Givens noted that NIDDK is congressionally mandated to provide this information for transparency purposes. Mrs. Givens discussed several informational items regarding KUH Oversight Committees, noting that a Consortium Management Board (CMB) may meet several times a year to provide insight and expertise to consortium members. While CMBs are permitted to meet often, the new External Expert Panel (EEP) will meet only if staff determine that additional input is needed to assess opportunities for project renewal.

Mrs. Givens detailed the following NIDDK/KUH CMB and EEP Boards and commented that rosters are available on the ECB website:

Type	Name	Number of Members
Consortium Management Boards	Cooperative Centers for Excellence in Hematology Consortium Management Board (CCEH)	5
	CKD-Biomarkers Consortium Management Board	12
	GenitoUrinary Development Molecular Anatomy Project (GUDMAP) Consortium Management Board	4
	Kidney Precision Medicine Project (KPMP) Consortium Management Board	11
	Urology O'Brien Centers Consortia Management Board	5
	ReBuilding a Kidney (RBK) Consortium Management Board	4
Contract Management Boards	Urological Diseases of American Contract Management Board	9
	United States Renal System Contract Management Board	12
External Expert Panels	Kidney O'Brien Centers External Expert Panel	10
	Chronic Kidney Disease in Children (CKiD) External Expert Panel	TBD
	Chronic Renal Insufficiency Cohort (CRIC) External Expert Panel	6

COVID-19 Funding Overview

Dr. Schulman stated that the COVID-19 pandemic continues to hinder science and investigator work in the research community. Although NIDDK did not receive congressional COVID-19 funding, KUH staff recognized the need to study COVID-19. Dr. Schulman detailed that efforts are underway to fund studies related to COVID-19 to better understand how this disease effects individuals with acute kidney injury (AKI), how individuals may be impacted post COVID-19 by kidney disease, how individuals with end stage renal disease (ESRD) or transplant patients are affected, and how COVID-19 may affect the kidney physiologically through mechanisms such as fibrosis and sepsis.

Dr. Schulman discussed the following NIDDK efforts to assist investigators and restart science:

- Notice of Special Interest (NOSI): Availability of Urgent Competitive Revision Supplements on Coronavirus Disease 2019 within the Mission of NIDDK (NOT-DK-20-018): Dr. Schulman detailed that this NOSI was focused on immediate research needs. Through this mechanism, NIDDK funded three observational studies that collect biosamples, one randomized, placebo controlled drug therapy clinical trial, and one study on mechanisms of injury and biomarker identification.

- Mechanistic Studies of the Interaction between SARS-CoV-2/COVID-19 and Diseases and Organ Systems of Interest to NIDDK (RFA-DK-20-021): Dr. Schulman noted that this RFA is focused on mechanistic research related to SARS-CoV-2/COVID-19 susceptibility, routes of infection, course of disease, and morbidity and mortality in the CKD population or in those individuals who develop AKI (and subsequent CKD), including mechanistic studies in tissues, cells, organoids, etc. Dr. Schulman noted the application deadline is December 16.
- NIH Rapid Acceleration of Diagnostics (RADx Underserved Populations [RADx-UP] and RADx Radical [Rad]): Dr. Schulman noted that, although staff included KUH science within the scope of this announcement, a limited number of responses was received from KUH applicants.
 - National COVID Cohort Collaborative (N3C): Dr. Schulman stated that this effort is a collaboration among the National Center for Advancing Translational Sciences, The National Cancer Institute, the National Institute of General Medical Sciences, NIDDK, and the All of Us consortium. This collaboration serves to rapidly collect and aggregate clinical, lab, and imaging data from hospitals, health plans, and CMS as well as to develop a robust, flexible infrastructure to enable rapid response to COVID-19 and the next emerging threats. Ultimately, the collaborative will serve to:
 - provide rules for safe data storage and governance,
 - create a phenotype for individuals with a past history of COVID-19 testing,
 - harmonize electronic health record data using collaborative analytics (machine learning and artificial intelligence), and
 - find associations and insights.

Dr. Schulman noted that a challenge to this collaboration is promoting scalability while harmonizing EHR data.

Councilor Presentation

Dr. Sakamoto discussed her training experiences with underrepresented minorities (URM) and emphasized the importance of developing and maintaining a pipeline for URM investigators. Dr. Sakamoto added that there are fewer women and URM investigators entering the pipeline, and she cited that a summary of studies have been published on how to support and retain URM and women in research. One such recommendation from these studies was to create specific programs that address the disparities between URM faculty and other faculty members to ensure URM and women have sufficient mentorship representation in academia. Dr. Sakamoto noted other recommendations to support URM success rates included:

- engaging investigators through mentorship and multiple mentors,
- maintaining contact with URM investigators often,
- encouraging investigators to be strategic about their financial situation,
- advising investigators to consider applying for small grants, and
- creating networking opportunities for URM investigators.

Dr. Sakamoto also commented on the need for URM investigators to negotiate protected time for their research and the need to obtain the appropriate training for their area of research. Dr. Sakamoto noted that efforts to recruit more URM scientists at Stanford University included hiring more diverse faculty members for key outreach positions, holding an annual diversity and inclusion forum, and recruiting URM graduate students and establishing the Stanford Postdoctoral Recruitment Initiative in Sciences and Medicine (PRISM) program that encourages URM applicants.

Dr. Sakamoto discussed using efforts similar to the American Society of Hematology (ASH) to recruit URM scientists and added that ASH has several specific opportunities for URM applicants:

- Minority medical Student Award Program (summer or year; \$5K or \$36K)
- Minority Hematology Graduate Award (\$40K/2 years)
- Minority Resident Hematology Award Program (\$7K)
- Minority Hematology Fellow Award (\$100K/2-3 years)
- Harold Amos Medical Faculty Development Award (\$100K/year x 4 years)

Dr. Sakamoto also detailed several other ASH training opportunities open to URM scientists and the larger community:

- Physician Scientist Career Development Award program (\$42K x 1y)
- Research Training Awards for Fellows (MD or MD/PhD) (\$70K x 1y)
- Honors Program for medical students and residents (summer; \$6K/year x 2 years)
- Fellow/Junior Faculty (Scholar awards) – but not specific to URM (\$100K-150K)
- Mentoring opportunities (includes mentors and courses/lectures) within the Translational Research Training in Hematology Program and the Clinical Research Training Institute
- Loan Repayment program for URM residents/fellows
- R13 grants to support workshops at national meetings (e.g., ASH/ASPHO to discuss how to support URM in Hematology research)

Dr. Sakamoto concluded her presentation with several questions for meeting participants to consider:

- Could any of these opportunities be implemented through NIDDK for URM students, residents, fellows, and junior faculty?
- How can we promote URM physician scientists at our own institutions?
- How can we retain URM faculty and make sure they are successfully promoted and obtain positions of leadership?
- Training awards for URM high school students or younger?
- Better representation at NIH study sections?

Meeting participants provided the following input:

- Dr. Penson suggested that NIDDK engage professional societies such as the American Urological Association and commented that it is important to encourage URM scientists and women to enter the research pipeline. Dr. Penson also suggested an outreach program for high school students and suggested that NIDDK partner with predominantly URM institutions to encourage students.
- Mr. Knight commented on the importance of motivating and encouraging URM students and suggested that NIDDK partner with historically black colleges and universities. In addition to encouraging more URM students to enter research, the partnership would also outline various NIH-related training opportunities and resources.
- Dr. Drummond suggesting engaging African American students in science by presenting topics of interest to the African American community such as hypertension or sickle cell disease.
- Dr. Nelson commented on the importance of community spirit and mentorship to influence students to pursue careers in science. He also suggested an initiative to support investigators who are starting families and are not considered fellows or faculty. Dr. Nelson referenced the Howard Hughes Medical Institute program as a possible model for

NIDDK to consider: <https://www.hhmi.org/science-education/programs/inclusive-excellence>.

- Dr. Guay-Woodford commented that it is important to focus on granular to systemic issues and emphasized the importance of networking and peer to peer mentorship. She also echoed Dr. Nelson's comment that younger investigators within the 35-40 year age range are particularly vulnerable as many have increased parental responsibilities due to the current pandemic. Dr. Guay-Woodford also noted it is important for URM investigators to feel a sense of community within their institute and added that institutions with a limited number of URM faculty should implement mitigation strategies to further recruitment of URM investigators at all levels.

Underrepresented Science/Scientists Discussion

Dr. Hattangadi opened her presentation "Tackling structural racism in KUH" and discussed how KUH may promote workforce diversity by broadening KUH science. Although NIDDK programs have funded the training of several thousand individuals from underrepresented communities, this has not increased the proportion of investigators from underrepresented communities who successfully compete for R01 awards.

Dr. Hattangadi cited a journal article from the "Proceedings of the National Academy of Sciences of the United States of America," which discusses how grant topic choice contributes to the lower rate of NIH awards to African-American/black scientists. The article states that these applicants tend to propose research on topics with lower award rates such as research at the community and population levels as opposed to mechanistic investigations. Topic choice alone accounts for over 20% of the funding gap after controlling for multiple variables, including the applicant's prior achievements. Dr. Hattangadi commented that NIH has not historically funded areas of research that address the social determinants of health disparity and disease. Dr. Hattangadi asked meeting participants to consider the following discussion questions:

- What kind of research is needed to understand these determinants?
- How can we help create environments that support this type of research?
- What are the barriers to furthering this type of science?
- How can we address these barriers at the program or review level?
- How can we incentivize this research to investigators? To academic institutions?
- What types of resources do investigators doing this type of research need?
- Once we initiate these programs, how do we define success?

Councilors provided the following feedback:

- Dr. Drummond noted that researchers are attracted to prestigious research topics such as research in oncogenes versus social determinants of health research and added that URM investigators are prone to working within historical silos. Dr. Drummond suggested incentivizing URM investigators with more funding opportunities and commented that a mission change is needed to adopt to new research priorities by African Americans.
- Dr. Guay-Woodford suggested pairing personal incentives with institutional advantages (opportunities for invited speakers).
- Dr. Pension recommended incentivizing different types of research such as social and anthropological issues and commented that there is value to qualitative research as it may create findings which can turn into translational science.
- Dr. Drummond suggested encouraging young people to consider entering science by explaining how science is relevant to their lives (e.g., such as predisposition to a health issues). Dr. Drummond also commented that study sections do not necessarily value

- public health issues, and he emphasized that NIH should select reviewers who value this science to participate in the study section.
- Mr. Knight emphasized the importance of valuing diversity in thought and noted that PCORI was initially set up to work in nonprofits.
 - Dr. Guay-Woodford noted CTSA community pilot programs were structured with different review criteria as this was a different space in research. Dr. Guay-Woodford added that reviewers on study sections involving population or social science applications should be populated by reviewers with expertise from a PCORI-type background.

CLOSED SESSION

During closed session council members noted concurrence with staff recommendations for a special council review, restorations, and funding plans. In addition to KUH business items, staff presented several special emphasis candidates for funding consideration.