

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

Division of Kidney, Urologic, and Hematologic Diseases Advisory Subcouncil Meeting January 25, 2023

Advisory Council KUH Subcommittee Members:

Dr. Iain Drummond (MDI Biological Laboratory)
Dr. Mark Nelson (University of Vermont)
Dr. Keith Norris (University of California at Los Angeles)
Dr. David Penson (Vanderbilt University)
Dr. Aylin Rodan (University of Utah) (Subject Matter Expert)
Dr. Kathleen Sakamoto (Stanford University)

NIH/NIDDK/KUH Staff:

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

Welcome and Introductions

Dr. Star welcomed council members and attendees to the KUH subcouncil meeting. Dr. Star welcomed Dr. Aylin Rodan, an Associate Professor of Internal Medicine and Adjunct Associate Professor of Human Genetics at the University of Utah as a subject matter expert and detailed that Ms. Miya McKeython will be serving as his new Executive Assistant. Councilors approved the meeting minutes from last year. Dr. Star noted upcoming meetings and workshops and encouraged councilors to share with their colleagues.

FY2022 Portfolio Analysis

Dr. Ketchum provided an overview of the FY2022 KUH portfolio and began his presentation with the following overall observations:

- KUH is growing slower than DK as a whole (due to lagging R01 apps). Ave R01 total costs matched inflation; however, the Division needs more ESIs and diversity.

- Kidney applicant pool is growing, resulting in more R01 applications and more total dollars.
- Urology applicant pool is growing (lots of MPIs), and they continue to submit more applications. Variable success rates affect total dollars.
- Hematology success rates remain high, but still losing people and applications (mostly to NCI and HL). DK R01s are more basic research driven with fewer MDs.

In terms of funding for underrepresented science, Dr. Ketchum noted that NIH implemented the Research, Condition, and Disease Categorization (RCDC) system, which uses text data mining in conjunction with NIH-wide definitions. Minority Health is defined as “the scientific investigation of distinctive health characteristics and attributes of minority racial and/or ethnic groups who are usually underrepresented in research.” Dr. Ketchum emphasized that NIH awards are coded as “Minority Health” if the applicant studies diseases or conditions that primarily affect minorities or examine disparities or if the application includes clinical recruitment of racial and ethnic minorities (the allocation is prorated). Dr. Ketchum commented that both NIDDK and KUH continue to allocate budget resources for Minority Health and added that while the numbers for Black and Hispanic investigators have risen, more effort is needed to recruit underrepresented investigators and individuals into the NIDDK portfolio. In terms of gender, Dr. Ketchum commented that the data continues to show an increase in the number of NIH research program grants for female investigators with the number of female fellowship awardees also trending upward. Dr. Ketchum commented that public data from [NIH RePORT](#) is available on the NIH website.

In closing, Dr. Ketchum provided the following highlights from the FY2022 portfolio analysis:

- KUH overall: ESI R01 success rates are good; however, ESI applications are lagging and more diverse applicants are needed.
- Kidney: The kidney applicant pool and total dollars are trending upward, although ESI R01 applications are flat.
- Urology: Urology investigators lead MPI R01 Team Science applications and awards; however, R01 success rates and total dollars are down.
- Hematology: The hematology portfolio analysis shows that R01 success rates remain high but R01 applications and total dollars are falling.

Council and meeting participants offered the following feedback:

- Dr. Rodan queried if NIDDK hematology applications are similar to those submitted to NHLBI. Dr. Ketchum commented that NIDDK applications are generally smaller and less clinical.
- Councilors expressed concern over the number of researchers going into industry rather than academia due to increased costs of living and financial incentives.
- Dr. Roy noted that NIDDK Hematology tends to attract the hematology leaders in the field (who are “in the know”). Also, when there are so few applications, the NIDDK SHINE set aside for Hematology (which pays only a few SE applications per year) adds a significant “bump” to our success rate.
- Dr. Stewart queried if there was historical data available for minority PIs. Dr. Ketchum noted no granular race and ethnicity data is available and added that this information is self-reported by investigators and not required.

KUH Training Program Update

Dr. Rankin noted that KUH invested over \$54 million in FY2022, supporting over 480 trainees and scholars (including R25 participants) and began her discussion with a snapshot of the training portfolio, noting the following highlights:

- KUH has made significant investments in early stages for both undergraduate and pre-doctoral students.
- MDs remain well-represented in training and career development pipeline vis a vis R01 portfolio.
- There has been a steady decline over time in absolute numbers of both MDs and PhDs.
- Fellowship numbers are overall slightly increasing—driven by graduate student fellowships
- KUH remains competitive in career development applications and awards, showing encouraging trends for the urology pipelines.
- Career development awardees show the highest retention rates while trends show that T32 trainees are least likely to be retained.
- There have been no apparent effects of the pandemic on investigators time to R01; contrarily median time to the first R01 for KUH career development awardees has lowered over time. This may be due to the aggressive ESI funding policies enacted over the last several years.

In terms of training support for underrepresented investigators, Dr. Rankin commented that the NIDDK participates in the Pre-doctoral Fellowship Program (Diversity F31) solicited through PA-21-052 and added that there are supplemental slots available through the T32/TL1 Diversity Supplement Program. Dr. Rankin added that the T32/TL1 Diversity Supplement Program is a long-standing program to promote recruitment of under-represented trainees and commented that programs may apply for an additional slot if all slots are full to support a trainee.

Regarding entry into the KUH workforce, Dr. Rankin shared data that demonstrate that many R01 ESIs and K awardees enter the KUH workforce without having prior support from training or career development awards. Dr. Rankin noted that in terms of median time until KUH Career Development Awardees to first R01, the average is 5.7 years, with dual-degree holders taking the least amount of time from the end of their K award. Dr. Norris queried if there was data on the impact of COVID on women with Career Development Awards; Dr. Rankin commented that access to PI data on gender is not readily available. Dr. Norris commented that this is a highly vulnerable population that was adversely impacted. Dr. Nelson noted that in his lab, this impacted both men and women, as they had to balance childcare with work as opposed to fellows without children.

In summary, Dr. Rankin presented the following general observations for trainees and scholar below:

- Trainees engaged in kidney research continue to dominate training pool.
- Large cohort of undergraduates; increase in pre-docs continues—opportunity to enhance diversity.
- Steady continued decline in MDs overall.
- T32 trainees continue to have the lowest retention in NIH-funded research.
- Career development awardees committed to pursuing academic research.
- Trainees rarely “run the table”—demonstrating a need for multiple on-ramps.
- No apparent effect of pandemic on time to R01 but overall median time to first R01 has decreased for supported scholars.

Additionally, Dr. Rankin detailed the following general observations in terms of grants:

- K23 and K08 applications are increasing.
- Career development award numbers indicate increases in K08 and K99; slight declines in K01s.
- While KUH fellowship application and award numbers are up, KUH still lags far behind other NIDDK divisions
- Consider if the F99 program is under-performing.
- Consider if the F32 program is under-utilized.
- U2C/TL1 remains a work in progress, although early signs are encouraging.
- U2C/TL1: made 7 awards. Robust response for review in March. Many slots are being filled. There are more predocs supported by the TL1 than with the T32 mechanism.

Council and meeting participants offered the following feedback:

- Dr. Rodan suggested that staff develop a workshop for applicants to further assist those who are transitioning from the F to K award mechanism. Dr. Rankin noted she will discuss this with Program Officers around NIDDK who focus on fellowship applications and awards.
- Dr. Nelson commented that many individuals complete their postdoctoral degrees in other countries and noted that he completed his in Germany while being supported by the Alexander von Humboldt Foundation.
- Dr. Drummond noted the cost of education is driving individuals away from academia and suggested a loan repayment program for graduate students. Dr. Rankin commented that NIDDK stipend levels have not matched those with the private sector.
- Dr. Nelson noted his institution funds their investigators at the same rate as NIH; however, industry pays 50% higher. A salary of \$55-60K does not provide for sufficient cost of living expenses. He also suggested an analysis of whether individuals are receiving funding on NIDDK topics from other ICs, IMGs, or agencies such as Veteran's Affairs as missing data may explain different paths. If this data is unavailable, he suggested that staff survey a cohort of NIDDK applicants and try to find a random/representative group. He added that individuals need compensation to build up their skills and infrastructure before they are competitive to receive an R01 or other major funding.
- Dr. Chan commented that NIDDK is unable to match funds provided by industry for this purpose and added that the staff should consider allowing more academic flexibility in for these individuals that will result in a sustainable career. Dr. Hattangadi echoed Dr. Chan's comments and noted that NIDDK could develop a pathway back to academia in leadership positions after being in industry for a period. Dr. Chan also commented that returning to an academic position after being employed in industry is difficult given the current focus on productivity in review and added that individuals will need a protected three years to build back their labs.
- Councilors also discussed the cost of daycare for young families and noted this is the cause of many pipeline issues. Dr. Star noted the need to develop a sustainable model.

CLOSED SESSION

Councilors voted to accept the CMB and EEP recommendations for all studies to continue with minor changes. During closed session, council members noted concurrence with staff recommendations for a special council review, a restoration, and a foreign application. In addition to KUH business items, staff presented several special emphasis candidates for funding consideration.