

MESSAGE FROM THE DIRECTOR



Lawrence Appel, MD, MPH
 Director, Welch Center

Despite the daunting challenges of 2020, the Welch Center remains a vibrant, albeit virtual, academic unit with an impressive portfolio of accomplishments. This report shares a portion of those accomplishments, with a focus on training. A major section of this report includes commentaries from four early investigators who describe the influence of the Welch Center on their careers to date. A consistent theme is connections, that is, the broad network of people in the Welch Center who comprise the Welch Center community [interdisciplinary faculty, committed staff, stellar trainees, and East Baltimore residents] and who have nurtured their careers. Please join me in celebrating the accomplishments of these trainees and of our entire Welch Center community.

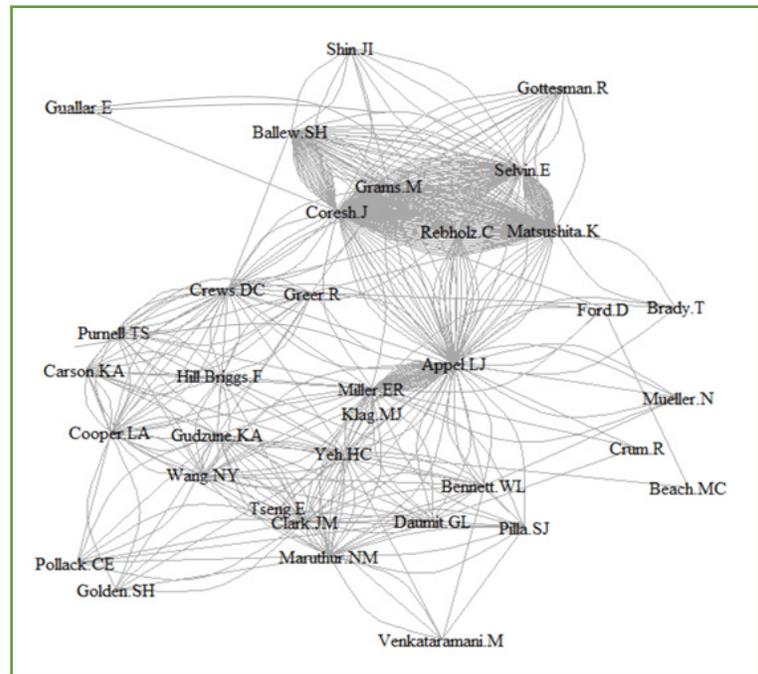
35 Core Faculty 48 Associate Faculty 3 Research Facilities Research Revenue: ~\$39 million

STAYING CONNECTED

Over the course of 2020, the pandemic has necessitated the physical distancing of the faculty, staff, and trainees at the Welch Center; however, we have still maintained our connections with one another. The heart of the Welch Center is the people. The Welch Center connects researchers across disciplines to improve health and spur innovation. Anyone who has trained or worked at the Welch Center inherently understands the value of this network, although it is sometimes hard to describe in words.

Given the challenges of this past year, we wanted to create a visual representation of how we, as core faculty members, continued to collaborate, despite working remotely. One way is through the network map (see image on right) that illustrates these connections through co-authored publications in 2020. A few key takeaways... all core faculty members published with two or more other core faculty members in 2020 – most have many more. We can also see the numerous faculty who provide connection across the center. While this figure does not include trainees, you can imagine the network richness and research opportunities for any individual who is mentored by Welch Center faculty.

If we can maintain such a strong network in the midst of a pandemic, our ability for reconnection and productivity post-pandemic is certain. We look forward to welcoming faculty, trainees and staff physically back to the Welch Center in Fall 2021.



ACHIEVEMENTS OF EARLY CAREER INVESTIGATORS



MEET SCOTT PILLA, MD, MHS
 Assistant Professor of Medicine at the Johns
 Hopkins University School of Medicine
 Welch Center Core Faculty Member

SCOTT PILLA DISCUSSES THE IMPACT OF HIS RECENTLY FUNDED K23:

Among patients with diabetes, hypoglycemia is a common and severe adverse effect of treatment and a major limiting factor in achieving blood glucose control. It is associated with poor patient outcomes and negatively impacts quality of life. Hypoglycemia is also preventable through patient counseling and medication adjustment, although physicians need to know it is happening in order to take action. Currently, there is no evidence-based tool for hypoglycemia assessment and prevention in the primary care setting, and communication around hypoglycemia is poorly understood.

The central hypothesis of my K23 is that improving the frequency and quality of communication about hypoglycemia will result in

clinicians detecting more hypoglycemic events, performing more effective hypoglycemia prevention practices, and ultimately reducing incident hypoglycemia. I was inspired to focus my career on this area because I feel strongly that one of my core roles as a primary care doctor is to protect patients from harm. I witnessed some of the potentially devastating consequences of hypoglycemia as a medical resident, and it struck me that much of this harm was preventable and unnecessary.

During my fellowship in General Internal Medicine, I was drawn to the study of diabetes because of the complex interactions between a patient's life, health, and treatment decisions. My work in individualized diabetes care has made it clear that evidence-based interventions are needed to advance hypoglycemia prevention and improve the safety of diabetes treatment. Over my career to date, I have been fortunate to be a part of a number of interventional research studies led by Welch Center faculty, which has encouraged me to pursue my own interventional research and given me the experience and mentorship to plan this successfully.

TRAINEE SUCCESS & EDUCATIONAL IMPACT

FAST FACTS FOR 2020

- 9 trainees received honors and awards
- 7 trainees were inducted into honor societies
- 6 training programs are funded by the National Institutes of Health (NIH)

- 10 core faculty have been recognized by students for their excellence in teaching
- 18 courses/programs are directed in the Johns Hopkins Bloomberg School of Public Health
- 8 courses/programs are directed in the School of Medicine



MEET KARLY MURPHY, MD, MHS, MSc

*Assistant Professor of Medicine at the Johns Hopkins University School of Medicine
Welch Center Associate Faculty Member
Former Welch Center Graduate Trainee*

As a trainee, I really enjoyed participating in weekly journal club where I applied my growing epidemiology skills and clinical background. My Welch Center mentors have worked with me to shape research projects based on my interests. I have been deeply impressed by their dedication to mentoring and encouragement to expand my skill set through new collaborations. Mentors help trainees by discussing their work, troubleshooting, and providing input for ongoing projects.

Being at the Welch Center, I have had a breadth of research experiences, from examining patient-provider interactions through the lens of chronic kidney disease, estimating contributions of comorbidity and social determinants of health to patients with end-stage renal disease eligible for transplant, and evaluating health service delivery for people with serious mental illness. I was fortunate to present this work at national conferences and even received an award from a leading nephrology journal, all of which would not have been possible without my mentors' support. **Now that I recently joined the Welch Center as an associate faculty member, I am excited to be a part of this generous, intellectually stimulating interdisciplinary community.**



MEET RUEY HU, MD, MPH

*Cardiology Fellow at Yale University
Former Welch Center Graduate Trainee*

Joining the Welch Center was one of the best decisions of my life. While a medical student, I met Dr. Josef Coresh and Dr. Morgan Grams, who trained me in using metabolomics to study disease, and taught me rigorous methods and a style of writing and responding to reviewers that have influenced my subsequent papers. From other Welch Center faculty, I learned how to handle meta-analyses and randomized trials. From other graduate students and post-docs I found a sense of community inside and outside the university. In Hagerstown, I saw how study participants were treated with respect and thoughtfulness. In Baltimore and at scientific conferences every year, I saw how faculty and trainees stimulate and engage in each others' research in ways that uplift each other. **So yes, to say the Welch Center has influenced my career path would be an understatement.**



MEET JONATHAN MARTINEZ

*MD/MPH Candidate at the University of Miami Miller School of Medicine
Former Welch Center Undergraduate Trainee*

As a Public Health Studies major at Johns Hopkins, I knew I wanted to be involved in research that had a focus on community health. Fortunately, I found out about the Welch Center. A summer of knocking on doors to recruit participants turned into two years of working on a social network intervention to reduce sugary beverage intake among public housing residents, culminating in a full time Research Coordinator position, once I graduated, on a population health study piloting a mobile application on meal timing.

In my time at the Welch Center, I got an incredible wealth of experience in project management, study design, writing research protocols, conducting quantitative and qualitative evaluations, and analyzing data. Most importantly, I got the chance to speak with hundreds of people from all over Baltimore about their health and how it influences other aspects of their lives. **I will always fondly remember the relationships I made at the Welch Center, particularly with everyone on the study teams I was a part of, and look forward to fostering that same sense of community in my future career.**

HOW HAS THE WELCH CENTER INFLUENCED YOUR CAREER PATH?

DISSEMINATION

- 430 publications authored by core faculty in 2020
- 12 publications on average per year per faculty member in 2020
- 125 publications appeared in high impact journals
- 2,026 citations of published material in 2020
- On average, a Welch Center faculty member has an **h-index of 43 (highest individual score: 143)** and an **i10 index of 120 (highest individual score: 745)**

WEBSITE, COMMUNICATIONS, & SOCIAL MEDIA PRESENCE

- 20,000+ website views
- 100+ events were held (virtually and in-person)
- 50 weekly newsletter issues distributed to 800+ subscribers
- 1,000+ Twitter followers