RESEARCH EDUCATION CORE

TEMPLE UNIVERSITY | FOX CHASE CANCER CENTER TEMPLE HEALTH | HUNTER The City University of New York

2022 WINTER HIGHLIGHTS

Mentors and trainees have been active this winter, participating in various activities supported by the Temple University, Fox Chase Cancer Center, and Hunter College (TUFCCC/HC) Partnership.

Scientific Conferences: From October 24th to October 27th, 2021, trainees and mentors from Temple University attended the virtual American Public Health Association Annual Meeting and Expo, where they had the opportunity to present their research projects and network with other experts in the field of public health.

Trainee accomplishments: Congratulations to the trainees who received U54 Pre-Pilot and Pilot awards! In addition, a huge congratulations to U54 trainee Ra'Ann Merceir who has been accepted into the Lewis Katz School of Medicine at Temple University, and U54 trainee Wenyue Lu who received the "Anthony Westwater Jong Population Oral Health Pre-Professional Award" at APHA.

WHAT'S INSIDE

APHA Annual Conference Page 2
Mentor Spotlight Page 3
Pilot & Pre-Pilot Awardees Page 4
Trainees' Accomplishments Page 5-6
Where Are They Now? Page 7

AMERICAN PUBLIC HEALTH ASSOCIATION'S 2021 ANNUAL MEETING AND EXPO

Congratulations to the trainees who presented their research at the APHA Annual Meeting:

ORAL PRESENTATIONS

- Ma, G.X., Zhu, L., Zhai, S., Tan, Y., Ma, X.L., Golub, S., Ting, T Y., Wang, M.Q. A patient navigator-led intervention improved psychosocial outcomes among medically underserved Asian Americans with chronic hepatitis B. American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado, Oct. 23 - 27, 2021. Virtual Oral Presentation
- Zhu, L., Yang, W.J., Spence, C., Ma, G.X. Lean yet unhealthy: Asian American adults had higher risks for metabolic syndrome than non-hispanic white adults with the same BMI. American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado, Oct. 23 - 27, 2021. Virtual Oral Presentation
- Duro-Aina, A., Bhimla, A., Park, H., Mann-Barnes, T., Ma, G.X. Individual and societal factors that predict HPV screening and vaccination behavior among young-men-who have-sex-with-men (Y-MSM). American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado, Oct. 23 - 27, 2021. Virtual Oral Presentatio
- Bhimla, A., Ma, G.X., Dumenci, L., Butcher-Poffley, L.A., Kevin A. Henry, K.A., Kaczynski, A., Tagliamonte, W., Sarwer, D.B. The relationship between built environment predictors and physical activity among adults from Asian American subgroups. American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado, Oct. 23 - 27, 2021. Virtual Oral Presentation

POSTER PRESENTATIONS

- Ma, G.X., Zhu, L., Do, P., Foote, P., Tan, Y., Pham, P., Tran, T., Wang, M.Q. A culturally-tailored multilevel intervention in promoting colorectal cancer screening among underserved Vietnamese Americans. American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado, Oct. 23 - 27, 2021. Virtual Poster Presentation
- Park, H., Lu, W., Zhu, L., Ma, G.X. Needs assessment on Alzheimer's disease and related dementias (ADRD) in older Black and Asian American adults: preliminary findings. American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado, Oct. 23 - 27, 2021. Virtual Poster Presentation
- Bhimla, A., Truehart, J., Ma, G.X. Neighborhood environment and colorectal cancer screening behaviors among Asian Americans in Philadelphia and New Jersey. American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado, Oct. 23 - 27, 2021. Virtual Poster Presentation
- Lu, W., Foote, P., Wang, B.H., Yeh, M.C., Ma, G.X. Oral cancer risk assessments among low-income Asian Americans aged 18-50. American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado. Oct. 23 - 27, 2021. Virtual Poster Presentation
- Yeh, M. C., Lau, W., Chen, S., Tung, H. J., Wong, A., Ma, G. X., Wylie-Rosett, J. Adaptation of Diabetes Prevention Program for Chinese Americans – A Qualitative Study. American Public Health Association 2021 Annual Meeting & Expo in Denver, Colorado, Oct. 23 - 27, 2021. Virtual Poster Presentation

More information on our trainees' and mentors' presentations can be found at: shorturl.at/gDIMS

APHA 2021
ANNUAL MEETING & EXPO
DENVER AND ONLINE | OCT. 24 – 27

MENTOR SPOTLIGHT:
Jill Bargonetti, PhD

Jill Bargonetti, PhD
Hunter College Professor

Jill Bargonetti, PhD is the Hesselbach Professor of Biological Sciences at the City University of New York (CUNY) Hunter College. Dr. Bargonetti is also the Chair of the Molecular Cellular and Developmental PhD subprogram at the CUNY Graduate Center, where she holds Professor appointments in the departments of Biology and Biochemistry. She is also an adjunct professor in the Department of Cell Biology at the Weill Cornell School of Medicine and a preceptor on the mTOR T32 training program. She is a scientist, educator, and choreographer, who in addition to running an active laboratory teaches a class she developed called “Choreographing Genomics.” Dr. Bargonetti also teaches undergraduate Cell Biology and the PhD-level first-year Molecular, Cellular and Developmental seminar.

Dr. Bargonetti is a leader in the field of cancer biology with a focus on wild-type and mutant p53 pathways and their cross-talk modulators MDM2 and MDMX. Much of her research focuses on how breast cancer cells evade normal cell proliferation checkpoint programs when they express high levels of mutant p53, PARP, MDM2, and MDMX. In normal cells, p53 is responsible for turning on the genes that are required for cell cycle arrest and apoptosis. The proteins MDM2 and MDMX keep p53 activity under control. In some cancer cells, MDM2 and MDMX are "hyperactive" and cause cells to inactivate their wild-type p53. Strikingly, 80% of Triple Negative Breast Cancers (TNBC) inactivate the p53 gene and pathway by mutations. Dr. Bargonetti's lab investigates how mutant p53, PARP, MDM2, and MDMX function and cross-talk in cancer cells. Her team is working to understand how these proteins can be used as breast cancer biomarkers to shift TNBC, and other hard-to-treat breast cancers, into treatable diseases.

Dr. Bargonetti is a native New Yorker who never had a Black science teacher. As such, she decided to become one. She went to Hunter Elementary School and Hunter High School, but then transferred to the Bronx High School of Science. She earned her BA in Biology from the State University of New York at Purchase after first being a dance major. She earned her PhD in molecular biology from New York University, working with Richard Novick, PhD, a National Academy of Science member. From 1990 to 1994, she received postdoctoral training under the direction of Carol Prives, PhD, another National Academy of Science member, at Columbia University. In 1994, she returned to where she went to elementary school, CUNY Hunter College. Her notable awards including receiving the Presidential Early Career Award for Scientists and Engineers from former President Bill Clinton in 1997, the New York City Mayor’s Award and the Outstanding Women’s Scientist Award from the Association for Women in Science in 2001, Distinguished Alumni Awards from SUNY Purchase and NYU in 2005, and election to the Bronx High School of Science Hall of Fame in 2017. She is happy to be a mentor to the diverse CUNY student population.

"Teamwork makes the dream work."
-Jill Bargonetti, PhD

SPEECH CANCER HEALTH DISPARITIES PILOT RESEARCH PROGRAM

Congrats to our pre-pilot and pilot awardees! The TUFCCC/HC partnership supports trainees working on cancer-focused research studies by providing pre-pilot and pilot funding opportunities for graduate students and early-stage investigators. Selection criteria include having an impact on cancer health disparities, having an innovative research question and design, collaboration with TUFCCC/HC investigators and community members, and high potential to obtain further funding for future research.

A total of 12 grants were awarded to trainees from diverse backgrounds, working on multidisciplinary projects to address cancer health disparities.

"I am extremely grateful to the U54 Partnership for awarding me a pilot study to support my career as a researcher and postdoctoral fellow. I hope that by conducting this study, the research findings will contribute to cancer health disparities research and help to reduce colorectal cancer disparities among Black/African and Latino/Hispanic communities in Philadelphia."-
Aisha Bhimla, PhD, MPH, Temple University-Pilot Award

"I am excited to pursue a new direction in my project with the funding of my U54-SPEECH pre-pilot study. Grant writing and navigating the application process is an essential skill that I hope to cultivate beyond my time as a Ph.D. Candidate."- Jason Wasserman, Temple University - Pre-Pilot Award Recipient

Pre-Pilot and Pilot Award Recipients

PRE-PILOT AWARDEES	INSTITUTION	PROJECT TITLE
Jorge Canar	Temple University	Characterizing the Biological Effect of STAT2 Mutations of Tumorigenesis and Type I Interferon Signaling
Priyanka Ghosh	Hunter College	Reciprocal Regulation of MiR-1207-3p by its Molecular Target FNDC1 in Prostate Cancer
Rusia Lee	Hunter College	Identifying Ubiquitin Substrates of MDM2 and MDMX in Triple Negative Breast Cancer Cells
Devorah Natelson	Hunter College	"Effects of BRCA1-Mediated Ubiquitination of HuR on RNA Metabolism in Breast Cancer"
Zachary Reichenbach	Temple University	Examination of Factors Affecting Barrett's Esophasgus and Esophageal Adenocarcinoma in African American Patients
Jason Wasserman	Temple University	Elucidating the Cell Cycle Role of the PP2A/B55a Inhibitor FAM122A in Normal and Cancer Cells
Kenneth Bonett	Temple University	Adherence to Lung Cancer Screening App
Veronica Gomes	Temple University	The Influence of Ethnic Enclaves on Colon Cancer Stage at Diagnosis among New Jersey Hispanics

PILOT AWARDEES	INSTITUTION	PROJECT TITLE
George Annor	Hunter College	Determining the Role of the Oligomerization and C-terminal Domains on Gain-of- Function Mutant p53 Functions
Alvaro Garcia	Temple University	Reversing the Effects of Lipid Dysregulation in Glioma
Jayashri Ghosh	Temple University	Effect of Ancestry Informative Variants on Epigenetic Outliers Among African American Colon Cancer Patients
Aisha Bhimla	Temple University	Examining the Neighborhood Environment and Associations between Obesity and Colorectal Cancer

TRAINEE ACCOMPLISHMENTS

Lin Zhu, PhD, Temple University was awarded an NCI-funded R03 grant

Dr. Lin Zhu is a tenure-track Assistant Professor at the Center for Asian Health in the Department of Urban Health and Population Science at Lewis Katz School of Medicine, Temple University.

A medical sociologist and social epidemiologist by training, Dr. Zhu bridges intersectionality theory from multiple disciplines with research on health disparities in disease prevention and treatment. Dr. Zhu leveraged the findings from her U54 pilot project to support a successful R03 grant submission.

R03 Study Title: Examining the Integrative Effects of Adolescent, Parent, Provider, and Practice Level Factors on Adolescents' HPV Vaccine Uptake across Six Asian American Subgroups (02/01/2022 – 01/31/2024)

This NCI-funded R03 project will leverage the existing data of a nationally representative sample of Asian American adolescents from the 2010–2019 National Immunization Survey-Teen (NIS-Teen) to examine the integrative effects of adolescent, parent, provider, and practice-level factors in six Asian American subgroups. The study sample includes 6,019 boys and girls aged 13–17 of Chinese, Filipino, Japanese, Indian, Korean, and Vietnamese ethnicity. The findings of this proposed study will provide subgroup-specific epidemiological data, guide the improvement of clinical practices, and inform the development of evidence-based strategies to reduce missed opportunities and improve adolescent vaccination in Asian American adolescents.

KEY DATES TO REMEMBER

4TH ANNUAL SPEECH CONFERENCE (VIRTUAL)

MAY 12TH, 2022 | HUNTER COLLEGE, NEW YORK

At the SPEECH conference, students/trainees in the field of cancer research have the opportunity to present their ongoing research work. Do not miss the opportunity to submit an abstract!

For more information please visit: www.speechregionalpartnership.org

SCRI TRAINEE SPOTLIGHT

Daaimah Dratsky is a 2nd year Master's student at Hunter College. She will earn her Master's Degree in Nutrition in May 2022. She was a trainee in the 2021 Summer Cancer Research Institute (SCRI) where she worked with her mentor Dr. Rishi Jain. She thoroughly enjoyed her experience with SCRI and is forever grateful to Dr. Jain for exposing her to the world of nutrition research and for allowing her to develop her skills in cancer research.

Daaimah presented her work on the relationship between food insecurity and diet quality in African American patients with gastrointestinal cancers at the American Institute for Cancer Research (AICR) Annual Conference in November 2021. After she graduates this spring, Daaimah hopes to pursue a career as a Clinical Research Dietitian in the field of oncology nutrition.

Daaimah Dratsky
Hunter College -2021 SCRI Trainee

Food Insecurity and Dietary Quality in African American Patients with Gastrointestinal Cancers: a Feasibility Study

Daaimah A Dratsky, BS[1], Erin McGillivray, BS[2], Juhi Mittal, MD[3], Elizabeth Handorf, PhD[4,5], Giuliana Berardi, MD[3], Igor A Astsaturov , MD, PhD[3], Michael J Hall, MD[3,4,6], Carolyn Y Fang , PhD[4], Rishi Jain , MD[3,4]

[1]Hunter College School of Urban Public Health, Temple University; [2]Lewis Katz School of Medicine [3]Department of Hematology/Oncology, Fox Chase Cancer Center at Temple University Hospital; [4]Cancer Prevention and Control Program, Fox Chase Cancer Center; [5]Department of Biostatistics and Bioinformatics, Fox Chase Cancer Center; [6]Department of Clinical Genetics, Fox Chase Cancer Center

Background:

- Food insecurity is more common in African Americans (AA) and has been related to poor dietary patterns in the general population.
- Validated assessments of food insecurity and dietary quality are available but seldom done in oncology settings.
- We sought to evaluate the feasibility of conducting these assessments in AA patients with gastrointestinal (GI) cancers and to determine the relationships between these measures.

Results:

Baseline Characteristics	n = 40 16 at FCCC; 24 at TUH
Gender	17 Male 23 Female
Median Age (range)	64 (34-85)
Education Level	14 Some High School or Less 14 High School Diploma 12 Some College or More
Insurance	15 Medicare Only 7 Medicaid Only 5 Both 14 Private +/- Medicare
Cancer Stage	14 Early; 26 Late (Recurrent and/or Metastatic)
Cancer Type	21 Colorectal, 5 Pancreatic, 4 Liver, 3 Gastric, 3 Gallbladder/Biliary Tract, 2 Esophageal, 1 Small Bowel, 1 Anal

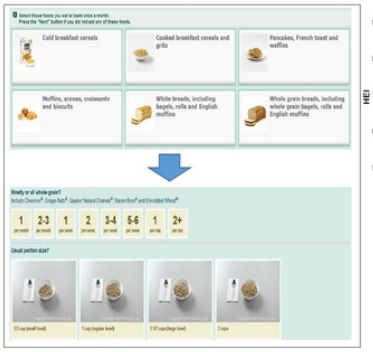
Demographic Comparisons for TUH vs. FCCC

	Temple University Hospital (n = 24)	Fox Chase Cancer Center (n = 16)	Total (n= 40)	P value
Average Age	66	58	63	0.05
Average BMI	30	30	29	0.35
Average HEI 2015 Score	58.22	72.77	58	<0.001
Education				
- Some High School	12	2	14	0.018
- High School Diploma/GED	9	5	14	
- Some College or More	3	9	12	
Prevalence of Food Insecurity	12.5%	2.5%	15%	0.04

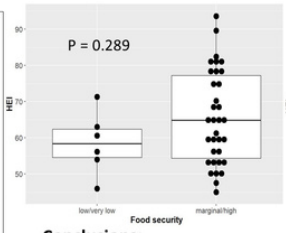
Methods:

- Forty AA patients presenting for GI oncology care at two sites [Fox Chase Cancer Center (FCCC) and Temple University Hospital (TUH)] were recruited in person between February and July 2021.
- The US Household Food Security Survey Module was used to assess for food insecurity and a computerized food frequency questionnaire (FFQ) VioScreen™ was used to assess dietary patterns with an automatically calculated Healthy Eating Index (HEI) 2015 score.
- Feasibility was designed as (≥70%) of patients completing both assessments.
- Differences between groups were tested using the Wilcoxon rank-sum test or Fisher's exact test.

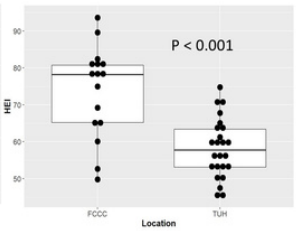
Computerized FFQ's Questioning Pathway:



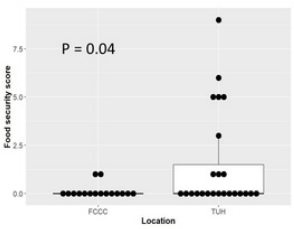
Food Security and Dietary Quality



Dietary Quality and Location



Food Security and Location



Conclusions:

- Conducting assessments for food insecurity and dietary patterns is feasible in patients with GI cancers.
- Further research is warranted to better understand how food security affects diet quality. Additionally, the discrepancies in diet quality between the populations at FCCC and TUH (an urban hospital located in a socioeconomically disadvantaged neighborhood) highlight the challenges this population faces to maintain healthy eating habits.
- Future interventions should focus on diet quality in AA GI cancer patients, particularly those from underserved populations.

WHERE ARE THEY NOW? SCRI ALUMNI

George Kramarenko obtained his Bachelor of Science in Bioengineering (2020) and Master of Science in Bioengineering (2021) from Temple University. He had the opportunity to participate in the SCRI program in the summer of 2021, and he worked in Dr. Swayam Prabha's lab under the guidance of Dr. Vishnu Revuri (post-doctoral researcher) at the Fels Institute of Personalized Medicine.

His research project for the summer was called "Optimization of Mesoporous Silica Nanoparticles as a Drug Delivery System for Tumor Targeting" and the goal was to determine how certain formulation procedures would affect the physical properties of synthesized nanoparticles. During this summer research opportunity, he was able to learn about the nanomedicine field and gain valuable lab experience. This experience was also beneficial since it allowed him to solidify his interest in the drug delivery/nanomedicine field and further pursue this area in his future graduate school studies.

George Kramarenko, Temple University-2021 SCRI Trainee

He is now a first-year Biomedical Engineering PhD student at the University of Delaware where he is a member of Dr. Emily Day's Lab, which develops innovative nanomaterials that enable high precision therapy of cancer and other diseases. He has become quite passionate about this type of research since cancer affects millions of individuals all around the world, including several members of his family who have suffered from this disease. He believes this type of research is important since current treatment methods can damage cells in the body, and in his research pursuits he hopes to better understand the underlying mechanisms behind cancer and how certain delivery techniques can be implemented to achieve better results for patients.

In addition to the skills that he hopes to gain while working in the Day Lab, George also hopes to obtain experience as a trainee in the NSF-funded Fellowship Program: Computing and Data Science Training for Materials Innovation, Discovery, and AnalyticS (NRT-MIDAS). In January 2022, he was selected to participate in this fellowship, where he will work closely with the biotech/pharmaceutical industry to help solve real-world problems that many companies are currently facing. Lastly, once he graduates with his PhD in Biomedical Engineering, George would like to find a job in the biotherapeutics/biopharmaceutical research field.

Dr. Swayam Prabha's lab at the Fels Institute of Personalized Medicine.

Research Education Core Leaders:
Carolyn Fang, PhD - Fox Chase Cancer Center
Olorunseun Ogunwobi, MD, PhD - Hunter College

For questions regarding the Research Education Core and any upcoming events, please contact one of our program coordinators:
Yuku Chen, MPH - Yuku.Chen@fccc.edu
Rubia Shahbaz, BA - rs1650@hunter.cuny.edu

SPEECH
Synergistic Partnership for Enhancing Equity in Cancer Health

FOLLOW US ON

LINKEDIN (TUFCCC_HC RESEARCH EDUCATION CORE) **TWITTER** (@REC_U54) **INSTAGRAM** (U54_REC_SCRI)

WINTER CANCER AWARENESS MONTHS

DECEMBER
HIV/AIDS-Related Cancer

JANUARY
Cervical Cancer

FEBRUARY
National Cancer Prevention
Gallbladder and Bile Duct Cancer