

# **MEMORIAL SLOAN KETTERING CANCER CENTER DEPARTMENT OF EPIDEMIOLOGY AND BIOSTATISTICS**

# **BIOSTATISTICS SEMINARS**

**❖** July 26, 2023

Dr. Bin Zhu NIH

# **COMPUTATIONAL ONCOLOGY SEMINARS**

❖September 19, 2023 Rachel O'Neill University of Connecticut

# **MACHINE LEARNING SEMINAR SERIES**

None scheduled for summer.

# **EPIDEMIOLOGY SERVICE MEETINGS**

None scheduled for summer.

**POPULATION SCIENCES RESEARCH PROGRAM SEMINAR SERIES** 

None scheduled for summer.

# **HEALTH OUTCOMES RESEARCH GROUP SEMINARS**

None scheduled for summer.

### STAFF FAREWELLS

After 5 years in the department, Samantha Vasquez will be leaving MSK. A farewell message from Sam: I have had a wonderful 5 years working in Epi/Bio! When I announced that I was leaving, I was met with so much support and appreciation, and it really made me grateful! Thank you for all the kind words that everyone has given me in person or via email. I am truly blessed to have worked with such great people! I am excited to move back to my home state of Florida and into the home I purchased (which has a laundry ROOM and LOTS of closets ; sorry NYC, your lack of laun-

dry and closets is killing me!). I have made great friends and am looking forward to staying in touch. If you can, please join me for Happy Hour on July 19th after work at FREEHOLD Rooftop at POD 39 Hotel!



# JOIN THE BEACH **NEWSLETTER COMMITTEE!**

The Newsletter Committee is always looking for new members. If you're interested in helping work on the newsletter, feel free to contact Joey Kanik!











DEPARTMENT CHAIR - Colin Begg. PhD

### SUMMER STUDENT PROGRAMS AT EPI BIO

The Department is thrilled to welcome another fantastic group of students this summer! This year's group includes the 10 students from the QSURE

program, led by Drs. Colin Begg, Margaret Du and Kay See Tan. The program directors anticipate that QSURE will be renewed for another 5 years of funding - thank you to everyone in the department for your contributions to the program!

Also included in this summer's cohort are the 6 students of the inaugural Genomics Experience for Masters Students (GEMS) program, led by Drs. Kathy Panageas and Ronglai Shen. GEMS, which is a 12-week R25 training program, pairs each student



with a faculty member and several peer mentors from the department's research biostatistician group with whom they work on a genomics research project. Notably, both QSURE and GEMS recently participated in a panel discussion with members of MSK's Patient and Family Advisory Council for Quality (PFACQ), which lent valuable insight into the patient experience at MSK. The Bridge to Biostats Committee will also be welcoming 3 high school students, who will be working with mentors Joanne Chou, Fiona Ehrich and David Nemirovsky. The Joy and Macklowe buildings are also bustling this summer. Computational Oncology is hosting several students from the Computational Biology, HOPP, and Computer Science summer programs.

Please join us in welcoming this year's cohort of summer students to Epi Bio! And as always, thank you to everyone in the department for creating an enriching environment for the students.



GEMS class of 2023 From left: Dhruv Jain, Danielle Vaithilingam, Shang Zeng, Yufei Deng, Weiwei Wu, Xiwen Feng



QSURE class of 2023 From left: Jairam Hathwar, Ivvone Zhou, Kate Colvin, Xinran Bi, Keo Pangan (back), Gabrielle Gonzalez, Boyuan Zhang (back), Niloufar Saririan, Amanda Ferber (not pictured: Hussen Mohammed Ibrahim).

### **GRANT SUCCESS**

Hussein Mohsen of the Carrot-Zhang/Morris lab received the "CCNY-MSKCC Partnership for Cancer Research, Education and Community Outreach" fellowship.

Jian Carrot-Zhang received an R21 award for, "Genomics of Renal Cancer in Patients of African Ancestry."

Jian Carrot-Zhang received a Prostate Cancer Research Program Data Science Award from the Department of Defense for her project titled "Exploiting real-world clinical genomic data to discover biomarkers and address outcome disparity for prostate cancer".

Justin Jee from the Shah Lab received a ASCO YIA award for, "Exploiting Driver Mutation Evolution to Overcome Therapeutic Resistance in Non-Small Cell Lung Cancer."

Sohrab Shah, Andrew McPherson, Duaa Al-Rawi and others received an R01 award for, "Exploiting markers of genomic instability in high-risk pre-invasive ovarian cancer."

Sohrab Shah received a New York Genome Center award for, "Bayesian causal models of genetic and epigenetic drug resistance in cancer."

# **EPI/BIO COMMUNITY BUILDING INITIATIVE**

2023 has been filled with fun activities so far!

# UPCOMING EVENTS BOOK CLUB

The next Book Club will be held on August 1st at 4PM. The group will meet at 633 3rd Ave room 381 and via Zoom. The book to be discussed is Bedtime Adventure Stories for Grown Ups by Anna McNuff



### **MOVIE CLUB**

Movie Club is off for Summer '23 and will reconvene in September!

### WARM WEATHER WEDNESDAYS

Come join us in the Collaboration Café for lunch on Wednesdays at noon. We'll plan some summer lunches outside from time-to-time---and we'll send an email out when do!

## **TUESDAYS AT 12**

A new initiative, Tuesdays at 12, was launched at the beginning of May 2023. The target audience is Masters level biostatisticians and QSURE participants with the goal of meeting on Tuesdays when RUG, OSG, Coding workshop, and Masters Seminar are not scheduled. The concept is an informal communal forum as a complement to coding workshop to discuss all things non-coding throughout a project trajectory from conception to reviewer responses. Please contact **Anne Reiner** for further information.

# **PAST EVENTS**

### **FIELD DAY**

On June 15th the long-awaited Epi/Bio Outing was held at Sheep Meadow in Central Park. It was a great opportunity to relax, mingle, and participate in fun field day games. And of course, yummy ice cream was served!



### **PROMOTIONS**

**Juan Arango-Ossa** promoted to Bioinformatics Software Engineer IV

**Esther Drill** promoted to Senior Principal Biostatistician

Margaret Du promoted to Associate Attending

**Anne Hahn** promoted to Senior Project Coordinator

Caroline Kostrzea promoted to Research
Biostatistician

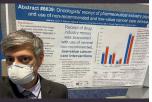
Sabrina Lin promoted to Research Biostatistician

**Elli Papaemmanouil** promoted to Associate Attending

**Allison Snyderman** promoted to Associate Attending

# **STAFF ACHIEVEMENTS**

In early June, Aaron
Mitchell presented two
posters at the Annual
ASCO 2023 symposium!
One abstract discusses
an association of



pharmaceutical industry payments and the type of cancer care services received. The second abstract discusses the role insurance plays on the receipt of cancer treatment.

Kay See Tan was the subject of a recent feature on OneMSK recognizing her accomplishments in honor of Asian American and Native Hawaiian/Pacific Islander (AANHPI) Heritage Month. In the piece, Kay See speaks about her upbringing in Malaysia, Hong



Kong, and Singapore and how different cultures have helped her become the person she is today. Please join in congratulating Kay See on this recognition! The full story can be found here.

# VALUES IN ACTION RECOGNITION PROGRAM

Earlier this year MSK implemented the Values in Action Recognition Program. The goal is to design a way to help employees recognize colleagues who have gone above and beyond in demonstrating MSK's core values. In addition to the recipient being notified, the recognition will also be posted on a feed on the OneMSK site. Types of badges include: Respect, Inclusion, Integrity, Innovation, Stewardship and One MSK.

From our department, **Farheen Madonia** received a badge for participation as a facilitator for the Financial Leadership Community. **Cynthia Berry**, as well as **Genesis Pineda**, received badges for their help in organizing the 2023 Emerging Leaders in Computation Oncology Symposium.

For more information on the program, or to send a badge to a colleague, <u>click here</u>.

### **PUBLICATIONS**

**Andrew Vickers,** along with colleagues including **Sigrid Carlsson**, published "Current policies on early detection of prostate cancer create overdiagnosis and inequity with minimal benefit" in *BMJ*. Most high-income countries do not have national programs of prostate cancer screening but allow prostate specific antigen test on request. They point out that this has led to the worst possible outcomes. The conclusion? Either do screening properly, or not at all.



Trivia question: Who received the first mRNA vaccine in New York City? No, it was not COVID-related, but rather an individualized mRNA vaccine for patients with pancreatic cancer. Published recently in *Nature*, the study "Personalized RNA neoantigen vaccines stimulate T cells in pancreatic cancer", led by co-corresponding MSK authors Vinod Balachandran and **Benjamin Greenbaum**, enrolled pancreatic ductal adenocarcinoma patients in a phase I clinical trial. Of the 16 patients who received multiple doses of vaccine against selected neoantigens, 8 patients responded with significantly expanded T cell clones. Remarkably, this T cell response correlated with no disease recurrence in all 8 patients after 18 months, compared to a median RFS of only 13.4 months for the non-responders. The study was featured in the *New York Times*, and a follow-up global randomized trial is coming.

High risk neuroblastoma is an embryonal tumor, often already metastasized widely at time of diagnosis. Despite intensive treatment of chemotherapy, surgery, radio- and immunotherapy, 50% of patients face fatal outcomes. To better understand how the cancer spreads and its vulnerabilities, a team led by MSK's **Elli Papaemmanuil** characterized the subtype-specific genetic evolutionary trajectories in 470 samples from 283 patients from diagnosis through progression and end-stage disease. In their study "Clonal evolution during metastatic spread in high-risk neuroblastoma", published recently in *Nature Genetics*, they could track the initiation of the disease back to embryogenesis, and found distinct mutational patterns at diagnosis. Clonal reconstruction during disease progression painted a complex picture of subclonal trajectories with a continuous acquisition of genomic structural variants. This rapidly evolving disease argues for the inclusion of select targeted agents in upfront therapy.

**I-Hsin Lin** and colleagues from MSK's Gastroenterology Service published a paper in *The Oncologist*, entitled "Exocrine Pancreatic Insufficiency (EPI) Induced by Immune Checkpoint Inhibitors." This is the largest matched case-control study evaluating the incidence, risk factors, and clinical characteristics of patients with ICI-related EPI among cancer population. The authors concluded that ICI-related EPI is a rare but clinically significant event that should be considered in patients with late onset diarrhea after ICI treatment and often is associated with development of hyperglycemia and diabetes.

# **EPI BIO @ SOCIETY FOR CLINICAL TRIALS 2023**

Below are some of the highlights of our group at the 2023 meeting of the Society for Clinical Trials.

- Colin Begg, Editor-in-Chief of the Journal of the Society for Clinical Trials and past SCT President spoke and called for submissions.
- Mithat Gonen, past-President of SCT, reviewed important elements of the 2018 Strategic Plan.



- Marion Kerioui presented a poster on information-borrowing designs for Phase II clinical trials with multiple patient subgroups, which was a joint work with Andrea Arfe, Mithat Gonen, and Alexia
- Alexia lasonos was recognized as an outgoing Director of the Board
- Audrey Mauguen chaired the "Statistical Challenges in Pragmatic Stepped-Wedge Cluster Randomized Trials" session.
- I-Hsin Lin served as a co-editor of the SCT Newsletter Group, was appointed as the incoming 2023-2024 co-chair of the SCT Communications Committee, and will be Chair of the same committee in 2024-2025



### **NEW STAFF**

### MaryLena Bleile, Research Fellow

MaryLena recently joined the department of Epidemiology and Biostatistics as a Research Fellow under Dr. Ronglai Shen. She completed her Ph.D in Biostatistics at Southern Methodist University in Dallas, TX this May, with research taking place at the UT Southwestern Medical AI and Automation lab, where she worked on optimizing radiobiology experiments via Bayesian mixed modelling and Reinforcement Learning. She is excited to continue mathematical oncology in the context of spatial transcriptomics, where she will be working with Dr. Shen's team as well as Dr. Margaret Callahan's lab to identify biomarkers associated with immunotherapy response in melanoma.



### Kiana Chan, Senior Project Manager

Kiana recently started working as a Senior Project Manager for the MATCHES Study with Dr. Katherine Panageas and her team. Kiana completed her Master of Public Health (MPH) in Epidemiology at the Columbia Mailman School of Public Health. During her MPH, Kiana worked with an organization called ICAP Global Health, where she examined the sociodemographic characteristics of telehealth usage among older adults in New York City. Prior to this position, she worked as a Program Manager at the Columbia University Irving Medical Center, where she managed a National Institute of Aging-funded study aimed towards providing mentorship to undergraduates from diverse backgrounds. Kiana is excited to be working in the telehealth-oncology space at MSK!



### Emily Cioppa, Research Technician

Emily recently began working at MSK as a Research Technician for Dr. Irene Orlow's lab in the Epidemiology-Biostatistics Department. She graduated from Stony Brook University in May 2023, where she obtained a B.S. in biology and a minor in Health, Medicine, and Society. She also worked as a research assistant at Stony Brook, where she studied protein-protein interactions in baker's yeast. At MSK, Emily is interested in joining the team's efforts to discover the potential biomarkers associated with the risk for developing melanoma. She plans to eventually attend graduate school to complete a PhD in biochemistry.



### Megan Mills, Clinical Research Coordinator

Megan joins the Epidemiology Department as a Clinical Research Coordinator, working primarily with Dr. Helena Furberg. Prior to becoming a CRC, Megan earned a Master of Fine Arts degree in Costume Design from Boston University. Moving to New York, she worked as a Costume Designer and Assistant Designer in the city and around the country. She is excited to be transitioning careers into public health and cancer research. Megan is grateful for the opportunity to work at MSK and contribute to the institution's mission of "ending cancer for life."



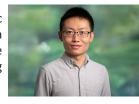
### Anya Steinhart, Research Technician

Anya Steinhart joined the Molecular Epidemiology lab in May of 2023. She graduated with a BS in Biological Science from the University of Vermont in May of 2021. While at UVM, she assisted in research on marine invertebrates' resiliency to climate change. Anya will contribute to collaborative multidisciplinary research. Among others, she will help unveil the potential biomarkers associated with the response to acupuncture in cancer patients. She will also contribute to the MSK Pancreatic Cancer Family Registry. Anya is incredibly excited to join Dr. Orlow and her team and is looking forward to learning more about cancer epidemiology while exploring her interests in genetics and genomics.



# Peng Wang, Research Scholar

Peng joined the department as a postdoctoral research scholar in Dr. Du's lab after graduating from Rutgers School of Public Health with a PhD in Public Health, Epidemiology. He is working with Dr. Du and Dr. Kantor mainly on a drug-wide association study (DWAS) to explore potential associations of prescription drugs and digestive cancer risk. His research interests include sampling methods, epidemiological methods (e.g., causal inference and bias analysis), and cancer risk among people living with HIV.



# PERSONAL MILESTONES



Akriti Mishra and her husband welcome baby Suhaani on 5/27/2023. Mommydaddy duties have begun and they are thrilled to get to know their little bundle of joy in the coming days.



Christy Rajcoomar graduated from Saint Joseph's University in PA with a Master of Science in Health Administration. The department celebrated on June 14th. Congratulations, Christy!



Xiaohui Sun gave birth to Xichen Wang on 5/23/2023. The family is doing well and enjoying time together.

# **ED&I CORNER**

- ED&I began a collaboration with Chasity Walters (Vice President of Educational, Clinical, and Patient Communication within Marketing and Communication) to develop novel initiatives in patient communication and data collection.
  - Let us know if you have interest in:
    - Collecting data with the EPIC/NEXUS integration, including details about disability, race/ethnicity, social determinants of health, and patient-reported outcomes
    - Patient communication, including large-scale messaging with the MSK patient population

Keep your eyes open for our new standardized accessibility guidelines for all seminars!

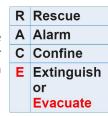
Fall events: Workshop: Effective and accessible presentations; Journal club: algorithmic bias in research and clinical practice

Snapshot of recommended reads and resources for anyone who is interested in reading more on health disparities:

- Health Insurance Coverage And Access To Care Among LGBT Adults, 2013–19 (Bolibol, Buchmueller, Lewis, and Miller, 2023) discusses disparities in insurance coverage among LGBT and non-LGBT adults before and after the implementation of the Affordable Care Act.
- News: DHHS recently proposed a new rule to combat discrimination in clinical practice through the use of clinical algorithms. Read more in this JAMA
   Viewpoint: <a href="https://web.yammer.com/main/org/mskcc.onmicrosoft.com/threads/eyJfdHlwZSI6IlRocmVhZCIsImlkIjoiMjMyMjEwMDY1MjQ2NjE3NiJ9">https://web.yammer.com/main/org/mskcc.onmicrosoft.com/threads/eyJfdHlwZSI6IlRocmVhZCIsImlkIjoiMjMyMjEwMDY1MjQ2NjE3NiJ9</a>
- News: Texas becomes the latest state to ban ED&I initiatives in higher education: https://www.theguardian.com/us-news/2023/jun/14/new-texas-bans-law-diversity-offices-state-higher-education
- For upcoming workshops and seminars, join our <u>Yammer page</u> to stay up-to-date on the latest events and news related to ED&I.

### **FIRE SAFETY AT 633 3RD AVE**

Did you know there's a Fire Safety lesson for 633 3rd Ave offered on the MSK Learning Hub via Saba? The course covers identifying fire alarms, warden stations, pull alarms, and fire extinguishers. In addition, it reviews which stair ways each floor uses, where to evacuate, and when to take action. The course also covers non-fire emergency plan provisions. You can access the course by clicking here.





### **EMPLOYEE BENEFITS**

MSK's annual Staff Appreciation Week has come and gone, boasting an exciting week of events, raffles, swag and icecream. But did you know that MSK also provides other benefits throughout the year?

# Trip to the Zoo

MSK Employees and up to three guests can receive FREE general admission to a designated Wildlife Conservation Society (WCS) park during their respective free weekend. The next free weekend is for the Queens Zoo on September 30 & October 1st. Reservations for tickets open up September 25. Click here for more information.



# Discounts on cellphone plans, gym memberships, movies and more!

MSK has discounts all year round! A comprehensive list of all MSK discounts can be found on OneMSK by navigating to the "My Career & Benefits" tab at the top of the page and selecting "My Benefits" and "Employee Discounts." Or you can click here!







### LIFEMART DISCOUNTS

### **TECHNOLOGY DISCOUNTS**

PLUM BENEFITS DISCOUNTS

There are exciting discount opportunities for wireless plans with AT&T and Verizon, as well as both hardware and software deals from Apple, HP, Lenovo and more! Select the **Technology Discounts** tab to read all about it.

Other discounts include savings at health clubs such as Equinox, Blink Fitness, and New York Sports Club, or save on classes from Soul Cycle and New York Yoga. Afterwards, replenish with 10% off from Just Salad, Bagel Express, and 16 Handles. Find out more information regarding these discount opportunities and more through the **Lifemart Discounts** tab.

Plum benefits, the final tab, offers savings on entertainment and travel. You can enjoy up to 40% off on this summer's blockbuster movie season. If you are looking for vacation ideas then explore the exciting opportunities with preferred partners Walt Disney World, Universal Orlando, Six Flags, and more!

Keep an eye on the Employee Discounts page on OneMSK for more benefits!