NCI JI 2023

NCI Junior Investigator Annual Meeting

Philadelphia, PA | August 17-18, 2023

University of Pennsylvania Campus

Levine Hall/Wu and Chen Auditorium

3330 Walnut Street, Philadelphia, PA

Skirkanich Hall/ Berger Auditorium

210 South 33rd Street

Philadelphia, PA

**All events unless noted will be held on UPenn campus.*

Welcome to the 2023 National Cancer Institute (NCI) Junior Investigator (JI) Meeting! Since 2007, graduate students, postdocs and early career faculty have been planning and attending this event to showcase interdisciplinary cancer research, meet fellow researchers, foster collaborations, and generate synergy between individuals with diverse skills and shared research interests. Over the years, this event has consisted of junior investigators from various NCI programs including the Integrative Cancer Biology Program, the Cancer Systems Biology Consortium (CSBC), the Physical Sciences-Oncology Network (PS-ON) and the Big Data Scientist Training Enhancement Program (BD-STEP). This year, for the first time, the event brings together Cellular Cancer Biology Imaging Research (CCBIR), Innovative Molecular Analysis Technologies (IMAT), Informatics Technology for Cancer Research (ITCR), Metastasis Research Network (MetNet), Patient Derived Models of Cancer (PDMC), , Synthetic Biology and Cancer Program (SynBio & Cancer), and Tissue Engineering Collaborative (TEC), totaling ten NCI programs. Another unique highlight of the event is that almost every JI who submitted an abstract is given an opportunity to talk. We firmly believe that a broadened community of participants will enrich the scientific discourse and interactions throughout the event, and we are delighted to have each of you join us this year.

Twelve concurrent scientific sessions and two interactive poster sessions will highlight research performed by junior investigators. Dr. Eran Segal from the Weizmann Institute of Science will provide a keynote address, and the event will include a special "Just Starting Out" session where early career investigators, representing both academia and industry, will share their experiences and lessons learnt during their career transitions. Five lunchtime discussions will cover patient advocacy, career opportunities and considerations, engagement with the National Postdoctoral association (NPA), and informatics training opportunities. In addition to the main meeting, there were two pre-events: a live, online workshop called Creating Connections, hosted by the Alan Alda Center for Communicating Science, designed to help scientists and researchers learn to communicate effectively; and a virtual poster showcasing 60 posters. Various social networking events are also planned during the meeting. We are especially grateful to the amazing team of junior investigators that dedicated countless hours to pull the meeting together, while balancing full slates of responsibilities across work and life.

We hope that you will find many opportunities to connect with colleagues at this event, interact at poster sessions and networking events. Join the 2023 NCI JI Meeting on Slack. Join the discussion on Twitter at **#NCIJI2023** and engage on LinkedIn. On behalf of the planning committee and everyone involved in the planning for this meeting, we thank you for your participation in this event and for your collective work towards a better understanding of cancer. We look forward to an exciting and productive meeting!

Warmest regards,

Lindsey Fernandez (UPenn)
Maxine Umeh Garcia (Stanford)
Sandhya Prabhakaran (Moffitt)

(2023 JI Planning Committee Co-chairs)

Diversity Statement

The future success of science hinges on diversity.

The junior investigators within the BD-STEP, CCBIR, CSBC, IMAT, ITCR, MetNet, PDMC, PS-ON, SynBio & Cancer, and TEC communities publicly advocate for justice, diversity, equity, and inclusion for all individuals in science. We vehemently condemn discrimination, racism, white supremacy, and violence of all forms. We are committed to creating opportunities for – and uplifting persons of – diverse identities not limited to race, ethnicity, age, sex, gender identity, (dis)ability, national origin, religion, language, dialect, socioeconomic status, neurodiversity, and appearance. Our goal is to show (not just tell) junior investigators that diversity is relevant to science; and that each person, and the differences they bring, is required to make the group more effective. We are committed to working harder towards the highest ideals of justice and equity.

We recognize that academic research, specifically biomedical sciences, has historically excluded and underrepresented many marginalized and underprivileged groups. We seek to identify and denounce systemic practices which perpetuate exclusion and underrepresentation and will work to establish systems which actively incorporate and uplift diverse backgrounds, thoughts, and approaches within the BD-STEP, CCBIR, CSBC, IMAT, ITCR, MetNet, PDMC, PS-ON, SynBio & Cancer, and TEC communities. We are committed to fostering a sense of belonging. We pledge to build an equitable scientific community composed of diverse voices, which: (1) uses existing privileges to uplift underprivileged groups, (2) actively identifies and dismantles biased systems, (3) protects those who cannot defend themselves, and (4) fosters a better, more just environment in our scientific fields, in our communities, and in our society.

We insist on a culture of respect at the 2023 Junior Investigators meeting and will not tolerate bigotry in any form. We urge our participants to maintain open-mindedness and remind them that all words and actions matter.

Agenda

Pre-Meeting Event: Wednesday, August 16, 2023

7:30 PM	**Networking Session** *Meetup in Historic Philadelphia* **Optional Event, registration is not required.*	100 S. Independence Mall W, Philadelphia, PA 19106

Virtual Attendee Information:

Zoom Link: https://roseliassociates.zoomgov.com/meeting/vJItcOysqjsiHuI5wqtE4AQv6Ikr-BazGC0/ics?icsToken=98tyKuiurjwvHtCVuB3BeI89FaP0berrkXhmv4oIiw7xJnRyUxWgH-lQf5B-Cv_z

Meeting ID: 160 754 4084

Passcode: 594445

Day 1: Thursday, August 17, 2023

8:00 AM	**Registration** *Breakfast provided*	Levine Hall Lobby
9:00 AM	**Welcome Session** *Planning Committee Co-Chairs:* **Lindsey Fernandez, Maxine Umeh Garcia, Sandhya Prabhakaran** **Shannon Hughes, Ph.D.** Deputy Director, Division of Cancer Biology, National Cancer Institute, NIH *Patient Advocate*: **Yvonne Florence, M.Div.** Member, National Coalition for Cancer Survivorship, Cancer Policy, and Advocacy Team	Wu & Chen Auditorium, Levine Hall
9:30 AM	*Keynote:* **Eran Segal, Ph.D.** Professor, Weizmann Institute of Science *Moderators:* **Mouhita Humayun, Wisam Fares**	*(Virtual Presentation)* Wu & Chen Auditorium, Levine Hall
10:30 AM	**Mental Health Break**	
10:45 AM	**Concurrent Session I: Podium Talks – Sequencing** *Moderator:* **Hongrong (Demi) Zhang** • **Andrea (Didi) Gardner:** *Therapeutic exploitation of interactions and asymmetric vulnerabilities in isogenic and coexisting TNBC cancer cell subpopulations* • **Ece Eksi:** *Multiplex imaging of localized prostate tumors identifies grade-specific spatial interactions and disease subtypes*. • **Estefania Labanca:** *Integrative molecular characterization of MD Anderson Prostate Cancer Patient-Derived Xenograft (MDA PCa PDX)*	Wu & Chen Auditorium, Levine Hall

- **Kathleen Houlahan:** *Germline-mediated immunoediting sculpts breast cancer subtypes and metastatic proclivity*
- **Yuhan Qiu:** *Adipocyte-origin exosomes induce EMT and metastasis in models of TNBC*

10:45 AM — **Concurrent Session I: Podium Talks - Computational Modeling (Cancer Heterogeneity)** — Berger Auditorium, Skirkanich Hall

Moderator: **Kacey Ronadlson-Bouchard**

- **Gianna Busch:** *Heterogeneity in sensitivity to second-line inhibitors of therapy-resistant melanoma*
- **Cong Ma:** *Inferring spatial tumor evolution and allele-specific copy number aberrations in spatially resolved transcriptomics data*
- **Hugo Miniere:** *Towards a data assimilation framework for predicting the spatiotemporal response of high-grade gliomas to chemoradiation*
- **Robert Vander Velde:** *Cell-cell communication in priming and reprogramming for resistance*
- **Scott Leighow:** *Programmed evolution: Using asexual gene drives to sculpt tumor populations and combat genetic diversity*

12:15 PM — **Mental Health Break**

12:30 PM — **Concurrent Session II: Spotlight Talks - 3D Culture** — Wu & Chen Auditorium, Levine Hall

Moderator: **Rosela Golloshi**

- **Howard Baek:** *Supporting Cancer Researchers Through Education: The ITN* **(Poster #8)**
- **Didi Zha:** *Modeling the malignant transformation of fallopian tube epithelium driven by extracellular vesicles cargos using a microfluidic tissue-on-chip system* **(Poster #9)**
- **Glenn Simmons:** *HMGB1 localization and its effect on the immune response in the lung tumor microenvironment* **(Poster #10)**
- **Mary Kate Macaedonia:** *Modeling Small Cell Lung Cancer Brain Metastatic Invasion in a Cerebral Organoid System* **(Poster #13)**
- **Mouhita Humayun:** *Investigating the role of Rho GTPases on the ability of tumor cells to extravasate during metastasis using a human microphysiological model* **(Poster #14)**
- **Nate Richbourg:** *Physical Environmental Influences on Breast Cancer Dormancy* **(Poster #16)**
- **Nicolas Anselmino:** *Impact of Wnt canonical Activating Mutations on Androgen Deprivation Therapy Treatment Response in Prostate Cancer* **(Poster #17)**
- **Talia Sanazzaro:** *Mimicking the viscoelastic nature of brain tissue using a hyaluronic acid-based interpenetrating polymer network* **(Poster #22)**
- **Taylor Marohl:** *Assessing the effects of a novel mutation in proprotein convertase PCSK5 on the MCF10DCIS model of breast ductal carcinoma in situ* **(Poster #23)**
- **Younghye Song:** *Pancreatic Tumor-Derived Extracellular Vesicles Stimulate Schwann Cell Activation and Perineural Invasion via IL-8 Signaling* **(Poster #25)**

12:30 PM	**Concurrent Session II: Spotlight Talks - Computational Modeling (Cancer Heterogeneity)** *Moderator:* **Olivia Krebs** • **April Williams:** *Are Dietary Patterns and other Environmental Risks Associated with Colorectal Cancer among US Veterans?* **(Poster #7)** • **Jiyeon Park:** *Overcoming CCI+ET resistance in ER+ breast cancer by restoring immune surveillance and tumor control* **(Poster #11)** • **Li Yang:** *The surfeit of phosphatidylethanolamine flux in* • *obesity escalates cancer and Alzheimer's disease* **(Poster #12)** • **Natasha Gurevich:** *Musicatk: a toolkit for mutational signature discovery and prediction* **(Poster #15)** • **Palash Sashittal:** *ConDoR: Tumor phylogeny inference with a copy-number constrained mutation loss model* **(Poster #18)** • **Raymond Van Cleve:** *Long COVID and Social Determinants of Health* **(Poster #19)** • **Robin Baidya:** *Developing an EHR-based model for early detection of colorectal cancer in the VA Healthcare System* **(Poster #20)** • **Rui Yang:** *SETD2-loss mediated H3K36me3 causes disruptions in Topologically Associated Domains (TADs) to promote oncogenic expression in Clear Cell Renal Cell Carcinoma* **(Poster #21)** • **Xinling Li:** *Mathematical Modeling of AND-gated Synthetic Biomarkers for Early Detection of Liver Metastasis* **(Poster #25)**	Berger Auditorium, Skirkanich Hall
1:30 PM	**Lunch & Lunchtime Discussions:** • **Advocacy in Basic Cancer Research** *Moderators:* **Yvonne Florence, Dr. Eric Johnson Chavarria** • **ITCR Training Network** *Moderator:* **Howard Baek** *(Lunch available/on your own)*	Levine Hall Lobby/Quaine Courtyard
2:45 PM	**Networking Session:** Scientific Speed Dating *Moderator:* **Kacey Ronaldson-Bouchard**	Towne Building Active Learning Classrooms
3:15 PM	**Mental Health Break**	
3:30 PM	**Concurrent Session III: Podium Talks - Computational Modeling (Immunology)** *Moderator:* **Didi Zha** • **Digvijay Kumar Yarlagadda:** *Nephron progenitor-like cancer cells contribute to treatment resistance in metastatic renal cell carcinoma* • **Sumin Jo:** *Uncovering context-independent intrinsic N6-methyladenosine (m6A) epitranscriptome and its role in cancer* • **Xiao Huang:** *Control and enhance CAR-T cells with precisely functionalized biomaterials*	Wu & Chen Auditorium, Levine Hall

	• **Yi Zhang:** *MetaTiME integrates single-cell gene expression to characterize the meta-components of the tumor immune microenvironment* • **Yixuan Wang:** *Mathematical Model Predicts Tumor Control Patterns Induced by Fast and Slow CTL Killing Mechanisms*	
3:30 PM	**Concurrent Session III: Podium Talks - 3D Culture** *Moderator:* **Nathan Richbourg** • **Ashleigh Crawford:** *Precision-engineered organoids of the human fallopian tube* • **Furkan Kurtoglu:** *Spatiotemporal Modeling of Colorectal Cancer Organoids* • **Hongrong Zhang:** *Stroma and cell engineering strategies to enhance cytotoxic T lymphocyte migration in pancreatic ductal adenocarcinoma* • **Mohita Tagore:** *GABAergic signaling driven regulation of the melanoma microenvironment* • **Najwa Labban:** *Cell-state Heterogeneity and Variable Treatment Response in Zero-Passage Organoids of Luminal Breast Cancer*	Berger Auditorium, Skirkanich Hall
5:00 PM	**Mental Health Break**	Skirkanich Hall, Basement Lobby
5:15 PM	**Poster Session** *(Posters #1-26)*	
6:30 PM	**Networking/Mental Health Break**	
7:00 PM	**Dinner with Networking Social Bingo** *Moderator(s):* **Nathan Richbourg, Olivia Krebs** **This event is welcome to all however space is limited and sign up is required. Please visit the registration desk.*	The Study at University City 20 South 33rd Street

Day 2: Friday, August 18, 2023

8:00 AM	**Registration** *Breakfast provided*	Levine Hall Lobby
8:45 AM	**Morning Announcements** Planning Committee Co-Chairs	Wu & Chen Auditorium, Levine Hall
9:00 AM	**Concurrent Session IV: Podium Talks - Computational Modeling (Treatment)** *Moderator:* **Olivia Krebs** • **Dylan Schaff:** *Clonal differences underlie differential responses to initial, sequential and prolonged drug treatment* • **Amy Pomeroy:** *A model of combination therapy explains and predicts lymphoma clinical trial results* • **Hui-Yu Chuang:** *A blood-based toolkit for neoantigen and cognate TCR discovery for cancer immunotherapy* • **Toshiro Hara:** *Deciphering phenotypic and functional heterogeneity in glioblastoma ecosystem* • **WenbinMei:** *Abcg5 deficiency promotes murine melanoma metastasis*	Wu & Chen Auditorium, Levine Hall

9:00 AM	**Concurrent Session IV: Podium Talks - Sequencing (Treatment)** *Moderator:* **Kathleen Houlahan** • **Kenry:** *Leveraging Nanoparticles to Modulate Collective Epithelial Cell Migration for Cancer Therapy* • **Lindsey Fernandez:** *Clinical combination therapy optimization through personalized mechanistic models* • **Sravya Prabhala:** *Evaluating Nanoscale Chromatin Alterations for Risk Stratification of Colorectal Cancer using Machine Learning* • **Sukrit Singh:** *Biophysical parsing of cancer drug resistance using exascale supercomputing* • **Xiaoyu Zhao:** *Cancer mutations converge on a constellation of molecular assemblies to predict resistance to replication stress*	Berger Auditorium, Skirkanich Hall
10:30 AM	**Mental Health Break**	
10:45 AM	**Concurrent Session V: Spotlight Talks - Computational Modeling (Tumor Microenvironment)** *Moderator:* **Didi Zha** • **Delaram Nematollahi:** *Using carbon nanotubes for photothermal treatment of cancer* **(Poster #35)** • **Frances Keer:** *Stitch-seq: A Facile and High-Throughput Perturbation Sequencing Method* **(Poster #36)** • **Rebecca Bekker:** *Black Holes in TIME: the Effect of GRID Radiation on the Tumor-Immune Micro-environment* **(Poster #41)** • **Shahira Abousamra:** *Cell Context Understanding in Digital Pathology Using Mathematical Modeling and Deep Learning* **(Poster #42)** • **Shuchen Zhang:** *Mechanical checkpoint regulates monocyte differentiation in fibrotic niches* **(Poster #43)** • **Tae Yoon Park:** *Delineating the epigenetic landscape of T cell exhaustion* **(Poster #45)** • **Thomas Dombrowski:** *Tumor-immune ecosystem dynamics exploration via a high-resolution agent-based model* **(Poster #50)** • **Uthsav Chitra:** *Modeling spatial expression gradients with interpretable deep learning* **(Poster #46)** • **Wisam Fares:** *TGF? Ligand Processing and Signaling are Rewired by TGFBR3 Coreceptor* **(Poster #47)** • **Yue Wang:** *Order of mutation in cancer progression: non-additivity and non-commutativity of mutations in myeloproliferative neoplasm* **(Poster #48)**	Wu & Chen Auditorium, Levine Hall
10:45 AM	**Concurrent Session V: Spotlight Talks – Imaging** *Moderator:* **Mouhita Humayun** • **Apurva Singh:** *Exploring the biological significance of a robust radiomic biomarker of tumor heterogeneity in advanced non-small cell lung cancer patients treated with first- line immunotherapy* **(Poster #32)** • **Carlos Herrera-Montavez:** *MEK1/2-Targeting PROTACs Promote the Collateral Degradation of CRAF in KRAS Mutant Cells* **(Poster #33)** • **Clarice Aiello:** *"Quantum Biology": how nature harnesses quantum processes to function optimally, and how might we*	Berger Auditorium, Skirkanich Hall

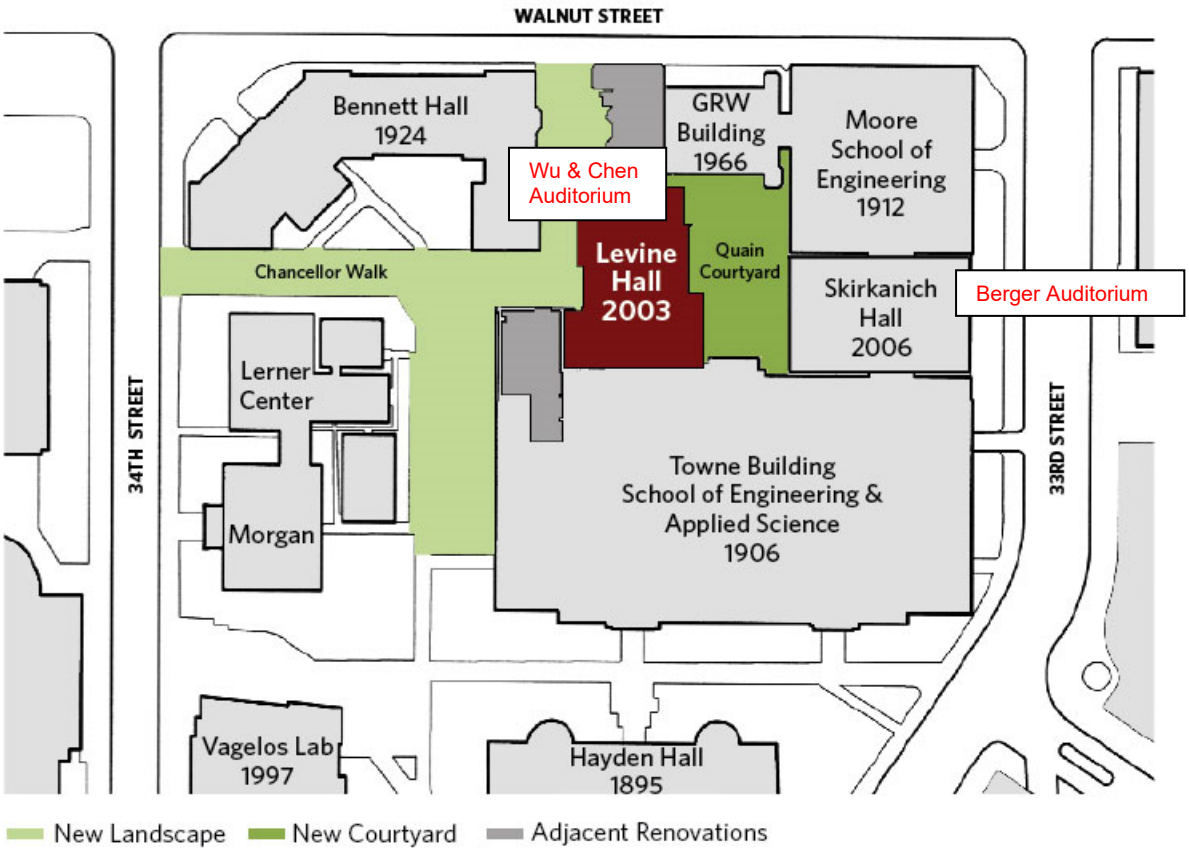
	control such quantum processes to cancer therapeutic advantage **(Poster #34)** • **Ghmkin Hassan:** *Tension modifies exosome morphology and promotes tumor metastasis* **(Poster #37)** • **Jason Zhang:** *Computationally designed sensors for endogenous Ras activity reveal signaling effectors within oncogenic granules* **(Poster #38)** • **Lee Roth:** *Oncogenic protein condensates suppress growth factor perception and modulate drug response* **(Poster #39)** • **Nina Steele:** *Therapeutic modulation of Robo4 in pancreatic cancer* **(Poster #40)** • **Stephanie Harchenko:** *Using CRISPR Prime Editing to rescue mutations in different cancer types* **(Poster #44)** • **Yun Chen:** *Force Generation is Hijacked by Cancer Cells to Promote Tumor Progression via ECM Remodeling, Immunosuppression, and Beyond* **(Poster #49)**	
11:45 AM	**Mental Health Break**	
12:00 PM	**Special Session:** Just Starting Out Panel **Drs. Caroline Bartman, Joel Babador, Linda Kachuri, Kacey Ronaldson** *Moderators:* **Kathleen Houlahan, Demi Zhang**	Wu & Chen Auditorium, Levine Hall
1:00 PM	**Lunch & Lunchtime Discussions:** • **NCI Small Business Innovation Research** *Presenter:* **Saroj Regmi** • **Career Advancement and Transitions: Listening Session** *Presenters:* **Drs. LaKaija Johnson, Julie Bletz** • **Opportunities with the National Postdoc Association** *Presenter:* **Dr. Andrea Joseph** *(Lunch will not be provided, please see list of nearby food options in program book)*	Levine Hall Lobby/Quaine Courtyard
2:15 PM	**Concurrent Session VI: Podium Talks – Imaging** *Moderator:* **Rosela Golloshi** • **Amit Verma:** *Influence of tumor microenvironment on trastuzumab-HER-2 binding using macroscopic fluorescence lifetime FRET in vivo imaging* • **Anindya Sen:** *Long-Term Effects of Exposure to Elevated Extracellular Fluid Viscosity on Cell Motility and Metastasis* • **Jeffrey Roskes:** *Quantifying statistical and systematic uncertainties in predicting clinical outcomes using multiplex immunofluorescence* • **Woong Young So:** *Optical manipulation reveals macrophage mediated mesoscale brain mechanical homeostasis in vivo* • **Yiling Liu:** *Biomimetic Polymeric Hydrogels at Physiological Stiffness Reprogram Melanoma Cells*	Wu & Chen Auditorium, Levine Hall

2:15 PM	**Concurrent Session VI: Podium Talks - Computational Modeling (Mechanobiology & Epidemiology)** *Moderator:* **Alişya Anlaş** • **Hanieh Mazloom Farsibaf:** *Cellular harmonics for the morphology-invariant analysis of molecular organization at the cell surface* • **Joseph Larsen:** *Defining Multimorbidity and Its Impact in Older United States Veterans Newly Treated for Non-Small Cell Lung Cancer* • **Reshma Kalyan Sundaram:** *Bridging Signaling and Transcription to Uncover Mechanotransduction Function of c-Myc Oncogene* • **Yash Chhabra:** *Sexual dimorphism in the aged melanoma tumor microenvironment regulates invasion and therapeutic response* • **Zheng Yin:** *Integrating transcriptomic profiles and in silico metabolic flux modeling to understand prostate cancer in obese patients*	Berger Auditorium, Skirkanich Hall
3:45 PM	**Mental Health Break**	
4:00 PM	**Poster Session** *(Posters #27-50)*	Skirkanich Hall Basement Lobby
5:15 PM	**Closing Session/Award Ceremony** *Planning Committee Co-Chairs:* **Lindsey Fernandez, Maxine Umeh Garcia, Sandhya Prabhakaran** *National Cancer Institute*	Wu & Chen Auditorium, Levine Hall
5:55 PM	**Conference Adjourns**	

University of Pennsylvania Campus

Wu and Chen Auditorium in Levine Hall
3330 Walnut Street
Philadelphia, PA 19104

Berger Auditorium
Quain Courtyard in Skirkanich Hall
210 South 33rd Street
Philadelphia, PA 19104



Public Parking:
Parking Garage: Chestnut 34
3335 Chestnut Street
Philadelphia, PA 19104

Speaker Bios

KEYNOTE: Eran Segal, Ph.D., Professor, Weizmann Institute of Science
eran@weizmann.ac.il

Eran Segal is a Professor at the Department of Computer Science and Applied Mathematics at the Weizmann Institute of Science, heading a lab with a multi-disciplinary team of computational biologists and experimental scientists in the area of Computational and Systems biology. His group has extensive experience in machine learning, computational biology, and analysis of heterogeneous high-throughput genomic data. His research focuses on Microbiome, Nutrition, Genetics, and their effect on health and disease. His aim is to develop personalized medicine based on data from large-scale and deeply phenotyped human cohorts.

Prof. Segal published over 200 publications, and received several awards and honors for his work, including the Overton prize, awarded annually by the International Society for Bioinformatics (ICSB) to one scientist for outstanding accomplishments in computational biology, and the Michael Bruno award. He was also elected as an EMBO member and as a member of the young Israeli academy of science. During the COVID-19 pandemic, Prof. Segal developed models for analyzing the dynamics of the pandemic and served as a senior advisor to the government of Israel.

Before joining the Weizmann Institute, Prof. Segal held an independent research position at Rockefeller University, New York.

Education: Prof. Segal was awarded a B.Sc. in Computer Science summa cum laude in 1998, from Tel-Aviv University, and a Ph.D. in Computer Science and Genetics in 2004, from Stanford University.

Lab website: http://genie.weizmann.ac.il

LUNCH DISCUSSION: Eric M. Johnson Chavarria, Ph.D., Program Director, National Cancer Institute

Dr. Eric M. Johnson Chavarria is a Program Director of the Physical Sciences-Oncology Network within the Structural Biology and Molecular Applications Branch in the Division of Cancer Biology.

Prior to joining the Division of Cancer Biology (DCB), Eric served as Program Director of the Intramural Continuing Umbrella of Research Experiences (iCURE) program within NCI's Center to Reduce Cancer Health Disparities and as an AAAS Science & Technology Policy Fellow in DCB. In these roles, he served as training and mentoring navigator for intramural trainees and leveraged open innovation approaches to bridge emerging technology to address health challenges. These approaches included innovation labs and challenge prize competitions.

Eric received his B.S. in physics from the University of Texas, San Antonio and his Ph.D. in biophysics and computational biology from the University of Illinois, Urbana-Champaign for developing an automated microfluidic platform for confinement of single cells in free solution using planar extensional flow. He then went on to complete postdoctoral research at Yale University in the Molecular Biophysics and Biochemistry Department, focusing on actin cytoskeleton force modulation and regulatory protein interactions under microfluidic flow induced tension.

LUNCH DISCUSSION: Howard Baek, M.S., Software Development Engineer, Fred Hutchinson Cancer Center
howardbaek@fredhutch.org

Howard Baek is a Software Development Engineer at the Fred Hutch Data Science Lab interested in using R and other programming languages to build tools that help data scientists get their job done. He has a M.S in Biostatistics from the University of Washington am starting a postbaccalaureate computer science online program at Oregon State University in September.

LUNCH DISCUSSION: Julie Bletz, Ph.D., Director of Science Coordination, Sage Bionetworks

Dr. Julie Bletz is the Director of Science Coordination and Community Engagement at Sage Bionetworks and leads a team of data coordinators, curators, scientists, project managers and community managers to support resource sharing and drive collaboration in interdisciplinary scientific communities. She leads the coordinating center for six NCI-funded Division of Cancer Biology research consortia, including CCBIR, CSBC, MetNet, PDMC, PS-ON and TEC. She co-leads the data management core for an NIH-funded coordinating center that is focused on aggregating all available data from across cohorts of Down Syndrome individuals. She is also a Director for DREAM challenges (dreamchallenges.org), a competition framework that engages diverse disciplines to solve complex biomedical problems.

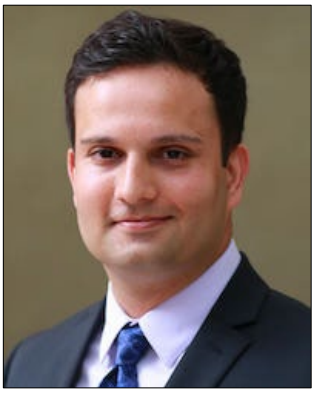
LUNCH DISCUSSION: LaKaija Johnson, Ph.D., Principal Scientist in Team Science, Sage Bionetworks

Dr. LaKaija Johnson is a population health scientist, educator, and strategist with over a decade of experience leading and evaluating the implementation of strategies to build capacity and strengthen infrastructure to advance systems change in academic, government, and non-profit settings.

LaKaija currently serves as a Principal Scientist in Team Science at Sage Bionetworks, where she provides leadership on how to implement and evaluate best practices for collaboration building and team science on the Science Coordination & Community Engagement team.

LaKaija is a graduate of the University of Arkansas for Medical Sciences, where she earned a master's degree in public health, the University of Arkansas Clinton School of Public Service, where she earned a master's degree in public service, and the University of Nebraska Medical Center, where she earned her Ph.D. in health promotion and disease prevention research.

LaKaija's career is built on a passion for health equity and social justice that she leverages to identify opportunities to take collective action by implementing innovative evidence-based strategies, programs, and policies to create more diverse, equitable, and inclusive research and practice environments.



LUNCH DISCUSSION: Saroj Regmi, Ph.D., Program Director, National Cancer Institute

Dr. Saroj Regmi is a Program Director at the National Cancer Institute's Small Business Innovation Research (SBIR) Development Center. In his role, he provides oversight, guidance, administers funding, as well as offers networking assistance for small businesses to accelerate the translation of cancer-related technologies.

Prior to joining the NCI, Saroj was a Program Officer at the National Institute on Aging Office of Strategic Extramural Programs (OSEP) where he led the development of entrepreneurship-focused REDI program and played a key role in planning and implementation of a suite of programs to help small businesses and early-career scientists.

Saroj conducted his postdoctoral work at NIH using CRISPR/Cas9-based approaches to study cellular processes. He received his Ph.D. in molecular and cellular biology from Dartmouth Medical School. He has received several prestigious awards and honors, including the 2019 Intramural Research Fellowship at NICHD, as well as 2021 & 2022 NIA, and NIH Director's Awards.

NCI WELCOME: Shannon Hughes, Ph.D., Deputy Director, Division of Cancer Biology, National Cancer Institute

Dr. Shannon Hughes is the Deputy Director of the National Cancer Institute's Division of Cancer Biology (DCB). Shannon joined the DCB in 2015 as a Program Director for the Cancer Systems Biology Consortium and the Physical Sciences in Oncology Network. Her interest in cancer systems biology and physical oncology stems from her background in applying chemical and biomedical engineering principles to investigate cell signaling pathways involved in cell migration, invasion, and cancer metastasis. Following completion of her BS in Chemical Engineering from Iowa State University, Shannon spent three years as a process engineer working in the field of drug delivery at 3M in St. Paul, MN. Industry research motivated her Ph.D. in Biomedical Engineering at Washington University in St. Louis where she studied the molecular mechanisms underlying bioactive sphingolipid-mediated endothelial cell migration. After moving to MIT, she obtained a DOD Breast Cancer Research Postdoctoral Fellowship to systematically investigate the role of the cytoskeleton in receptor tyrosine kinase-mediated breast cancer metastasis. Before coming to NCI, Shannon served as a lead technical research instructor in the Biological Engineering Department at MIT. In addition to her role as DCB Deputy Director, she currently co-leads of the NCI Human Tumor Atlas Network and additionally oversees the NCI Cancer Systems Biology Consortium and the DCB Cooperative Agreement Program team.

PATIENT ADVOCATE: Yvonne Florence, MDiv, Member, National Coalition for Cancer Survivorship, Cancer Policy, and Advocacy Team

Yvonne is a breast cancer survivor, independent patient advocate and the former President/Founder of Sisters R Us Circle of Survivors.

Yvonne holds a Master's of Divinity from Palmer Theological Seminary formerly Eastern Baptist Seminary. She completed the Project LEAD program in 2018 and participated in the University of Pennsylvania Community Research Scholar Program. She is currently involved in research and public policy advocacy with emphasis on clinical trials, community driven research, DEI, quality of care/life and survivorship.

Yvonne represents Delaware County in the PA Breast Cancer Coalition's Traveling Exhibit "67 Counties, 67 Women Affected by Breast Cancer. She has served as a consumer reviewer for DOD Breast Cancer Research Program and an Advocate Stakeholder for the American Cancer Society Research Program Cell Structure and Metastasis Committee. She currently serves as a Mentor for GRASP, peer reviewer for NIH/NCI SPORE program, Patient advocate reviewer for PCORI Merit Review Program.

Yvonne is a member of the National Coalition for Cancer Survivorship CPAT and serves on the Ellen Stovall Awards Selection Committee.

SPECIAL SESSION: Caroline R. Bartman, Ph.D., Assistant Professor, University of Pennsylvania
cbartman@pennmedicine.upenn.edu

Dr. Caroline R. Bartman completed a postdoctoral fellowship studying the metabolic fluxes of tumors in vivo in the Joshua Rabinowitz at Princeton University. She is starting at the Department of Systems Pharmacology and Translational Therapeutics, University of Pennsylvania as an Assistant Professor in fall 2023. Her lab will study the metabolic fluxes of tumors and of tumor immune cells, with the goal of targeting metabolism to boost tumor immunity. Caroline likes the TCA cycle, reading science fiction, and bad jokes.

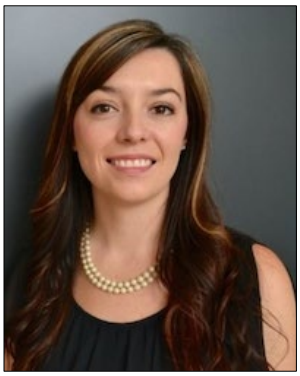
LUNCH DISCUSSION: Andrea Joseph, PhD, Chair of the Postdoctoral Council of the National Postdoc Association

Dr. Andrea Joseph, PhD is a postdoctoral researcher at the Icahn School of Medicine at Mount Sinai. She received her Bachelor of Science in chemical and biomolecular engineering from Johns Hopkins University in 2016, and a doctoral degree in chemical engineering from the University of Washington in 2021. In the lab of Michal Elovitz, Ph.D., in the Department of Obstetrics and Gynecology, she studies the etiology of preterm birth, and as a preterm survivor herself, Joseph's long-term career goal is to establish an academic lab to investigate nanotechnology for the prevention of preterm birth and treatment of its downstream effects. She serves as the Chair of the Postdoctoral Council of the National Postdoc Association which works at the individual, organizational, and national levels to improve the postdoctoral experience.

SPECIAL SESSION: Joel Babdor, Ph.D., Assistant Professor, University of Pennsylvania
Joel.Babdor@Pennmedicine.upenn.edu

Dr. Joel Babdor is an Assistant Professor in the Department of Systems Pharmacology and Translational Therapeutics at the University of Pennsylvania. He leads the Precision Immunology and Microbiome Medicine laboratory that aims at understanding immune health, through a multi-systems approach that explores the dialogue between the human immune system and the microbial exposome. The lab uses high-throughput, high-dimensional profiling approaches and multimodal computational methods to study clinical and animal model data. One of his long-term goals is to better define immune health and contribute to the development of precision microbiome-medicine therapies to improve immune interventions for patients.

Joel received his M.S. at Sorbonne Université in Paris and his Ph.D. in immunology at Université de Paris. There, he studied the mechanism of regulation of the microbial sensor Toll like receptor 9 (TLR9) in Dendritic cells. Using cell biology and confocal microscopy, he identified how endosomal compartmentalization of TLR9 is responsible for the regulation of the immune response in response to pathogens. After completing his Ph.D., he turned his interest toward cancer immunotherapy and worked as a scientist at a startup on the effects of an experimental cancer immunomodulatory strategy that reprograms tumor infiltrating cells. Joel then trained at UCSF, where he led clinical and translational projects, including the “ImmunoMicrobiome Study”, a prospective longitudinal human subject research study that he designed to perform a comprehensive analysis of the peripheral immune system, the gut/oral/skin microbiome, and the metabolome of 100 healthy individuals. Other projects explored clinical settings where the immune system is harnessed to treat patients, spanning multiple medical indications such as autoimmunity, cancer, and organ transplantation. His lab at the University of Pennsylvania combines translational systems exploratory approaches and mechanistic investigation to understand and harness the power of microbes to modulate the immune system for preventative and therapeutic treatments.



SPECIAL SESSION: Kacey Ronaldson-Bouchard, Ph.D.
Postdoctoral Fellow, Columbia University

Dr. Kacey Ronaldson-Bouchard is an Associate Research Scientist at Columbia University’s Department of Biomedical Engineering in New York City and the Chief Scientific Officer/Co-Founder of Link Biosystems. She received her Ph.D. at Columbia in 2015 under the advisement of Dr. Gordana Vunjak-Novakovic. Her research focuses on engineering multicellular systems from pluripotent stem cells, including the advanced maturation of iPSC-derived cardiomyocytes into mature, functional cardiac microtissues. In addition, Dr. Ronaldson-Bouchard has an interest in integrating multiple engineered tissue models for studying inter-organ interactions, towards the development of patient avatar models for the realization of personalized medicine. She has published peer-reviewed articles in journals including Nature, NatureBME, Cell, Cell Stem Cell and is a co-founder of Link Biosystems, a NYC-based startup seeking to democratize precision medicine by commercializing user-friendly products for organotypic culture of patient cells, and co-founded TARA Biosystems, recently acquired by Valo Health, to leverage its advanced cardiac models for drug discovery, testing, and precision cardiology. Kacey is a junior investigator in TEC and a member of the 2023 NCI Junior Investigator planning committee.

SPECIAL SESSION: Linda Kachuri, Ph.D., M.P.H.
Assistant Professor, Stanford University

Dr. Linda Kachuri is an Assistant Professor in the Department of Epidemiology and Population Health at Stanford University and Member of the Stanford Cancer Institute. As a cancer and genetic epidemiologist her research synthesizes methods from population health, statistical genetics, population genetics, and bioinformatics. Her work focuses on unravelling genetic mechanisms of cancer susceptibility and leveraging genetic data to improve risk prediction. Her methodological interests include development of polygenic risk scores (PRS) view a towards reducing disparities, integrative analyses of transcriptomic and proteomic data, and methods for causal inference, such as Mendelian Randomization.

VIRTUAL PRE-EVENT: Alix Dehayem, Ph.D.
Coordinator, Women in STEM Leadership Program, Alan Alda Center for Communicating Science, Stony Brook University

Dr. Alix Dehayem is the coordinator of the Alda Center's Women in STEM Leadership Program. She leads the program's efforts to build interactive, connected, and interdisciplinary cohorts of women and their allies in STEM. The program aims to support their growth as leaders and to foster more diversity, equity, and inclusion in the STEM fields. She oversees and supports the implementation of the program participants' proposed empowerment projects, which are designed to address a particular need related to diversity and inclusion in the STEM fields.

Alix has 17 years of previous experience, across cultures and national boundaries, in teaching and conducting research in applied physics. She is passionate about using science to positively impact the lives of individuals and communities. She believes strongly in cultivating talent and promoting full inclusion to support scientific innovation, across the social spectrum. She spent more than a decade leading transformative projects to advance this vision in Kenya and East Africa.

Alix holds a Ph.D. in physics from the University of Paris-Sud 11, France.

VIRTUAL PRE-EVENT: Julie Burrill, Ph.D.
Postdoctoral Associate, Forensic Science, University of Dundee in Scotland, and Stony Brook University

Dr. Julie Burrill is a Postdoctoral Associate focused on forensic science communication in the courtroom. Her research examines science communication challenges specific to the legal and forensic contexts. She works in partnership as an affiliated staff member of the Leverhulme Research Centre for Forensic Science at the University of Dundee in Scotland.

Julie has a forensics background, having worked on the 9/11 World Trade Center recovery project, in a DNA testing laboratory, and served as a staff scientist for the Public Defender for the District of Columbia. She has also taught forensic science at the graduate and professional levels. She is passionate about improving the quality of forensic science evidence and testimony in legal proceedings nationally and internationally.

Julie holds a Ph.D. in Molecular Biology from King's College London and a Master's of Forensic Science from George Washington University. Her doctoral research was funded in part by her 2016 Fulbright Scholarship and focused on the origins of "touch DNA" deposits.

Planning Committee

***Lindsey Fernandez, Ph.D.**
Postdoctoral Fellow, University of Pennsylvania

Dr. Lindsey Fernandez, a PS-ON junior investigator and planning committee co-chair, is determining the mechanisms by which exosomes and microRNAs modulate tumor-immune cell interactions, which contribute to differences in the response the therapy.
https://ldi.upenn.edu/fellows/fellows-directory/lindsey-rose-fernandez-phd/

***Maxine Umeh Garcia, Ph.D.**
Postdoctoral Fellow, Stanford University

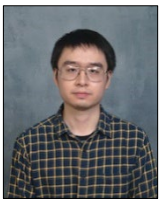
Dr. Maxine Umeh Garcia, a MetNet junior investigator and planning committee co-chair, is studying breast cancers that metastasize to the brain.
https://profiles.stanford.edu/maxine-umehgarcia.

***Sandhya Prabhakaran, Ph.D.**
Applied Research Scientist, Moffit Cancer Center

Dr. Sandhya Prabhakaran, a CSBC junior investigator and planning committee co-chair, is developing and applying mathematical models to address research questions in cancer biology.
http://sandhyaprabhakaran.com/

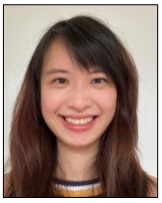
Alişya Anlaş, Ph.D.
Postdoctoral Fellow, University of Pennsylvania

Dr. Alişya Anlas, a junior investigator with PS-ON, studies the role of extracellular matrix stiffness in cancer.
https://www.linkedin.com/in/alisyaanlas/



Dake Liu, Ph.D.
Postdoctoral Fellow, University of Florida

Dr. Dake Liu, a SynBio & Cancer junior investigator, examines the roles of proteins in drug metabolism and bioactivation.
https://pharmacy.ufl.edu/research/annual-research-showcase/2022-research-showcase-program/dake-liu/



Didi Zha, M.S.
Graduate Student, University of Illinois Chicago

Didi Zha, a TEC junior investigator, is using an organ-on-a-chip model to study the role of extracellular vesicles in ovarian cancer initiation.
https://www.linkedin.com/in/didi-zha/

Fabio Caliendo, Ph.D.
Postdoctoral Fellow, Massachusetts Institute of Technology

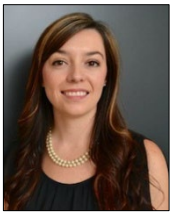
Dr. Fabio Caliendo, a SynBio & Cancer junior investigator, works at the intersection of synthetic biology and clinical immunology.
https://www.linkedin.com/in/fabio-caliendo-a3b727177/

Hongrong (Demi) Zhang, M.S.
Graduate Student, University of Minnestota

Hongrong "Demi" Zhang, a CCBIR junior investigator, is determining mechanisms of engineered T cell migration to enhance immune cell infiltration into the tumor microenvironment.
https://provenzanolab.umn.edu/hongrong-demi-zhang

Joanna Lankester, Ph.D.
Postdoctoral Fellow, Stanford University and Palo Alto Veterans Affairs

Dr. Joanna Lankester, a BD-STEP junior investigator, is a data scientist analyzing the effects of risk factors on chronic diseases using genetics.
https://www.herc.research.va.gov/include/page.asp?id=bd-step-fellows



Kacey Ronaldson-Bouchard, Ph.D.
Postdoctoral Fellow, Columbia University

Dr. Kacey Ronaldson-Bouchard, a TEC junior investigator, focuses on engineering multicellular systems from pluripotent stem cells, including the advanced maturation of iPSC-derived cardiomyocytes into mature, functional cardiac microtissues.
https://gvnlab.bme.columbia.edu/people/kacey-ronaldson-bouchard

Kathleen Houlahan, Ph.D.
Postdoctoral Fellow, Stanford University

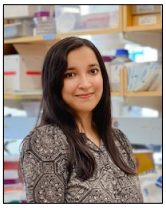
Dr. Kathleen Houlahan, a MetNet junior investigator, is studying mechanisms of breast cancer evolution and metastasis.
https://profiles.stanford.edu/kathleen-houlahan

Mohammad (Hadi) Khorrami, Ph.D.
Postdoctoral Fellow, Emory University

Dr. Mohammad Khorrami, an ITCR junior investigator, uses artificial intelligence and machine learning to develop diagnostic and predictive tools for lung cancer.
https://www.linkedin.com/in/mohammadhadi-khorrami-2a8a8311a/

Mohita Tagore, Ph.D.
Postdoctoral Fellow, Memorial Sloan Kettering Cancer Center

Dr. Mohita Tagore, a CSBC junior investigator, studies cell-cell communication in melanoma.
https://www.mskcc.org/research/ski/labs/members/mohita-tagore



Mouhita Humayun, Ph.D.
Postdoctoral Fellow, Massachusetts Institute of Technology

Dr. Mouhita Humayun, a MetNet junior investigator, uses microfluidic cancer models to study the effects of mechanical stressors on the ability of tumor cells to extravasate and survive during metastatic dissemination.
http://web.mit.edu/meche/mb/kamm-mb/people/mouhita.html

Nathan Richbourg, Ph.D.
Postdoctoral Fellow, University of Massachusetts Amherst

Dr. Nate Richbourg, a SynBio & Cancer junior investigator, is studying how cell-extracellular matrix interactions play a role in breast cancer progression.
https://www.linkedin.com/in/nate-richbourg-750736105/

Olivia Krebs, B.S.
Graduate Student, Case Western University

Olivia Krebs, an ITCR junior investigator, is developing bioactive surface modifications to chronically implanted neural electrodes for improved biologic response.
https://engineering.case.edu/ebme/Capadona/Personnel

Raymond (Ray) Van Cleve , Ph.D.
Postdoctoral Fellow, Stanford University and Palo Alto Veterans Affairs

Dr. Ray Van Cleve, a BD-STEP junior investigator, is leveraging data to study disruptions in care caused by the COVID-19 pandemic.
https://www.herc.research.va.gov/include/page.asp?id=bd-step-fellows
https://framilyveteranhealth.stanford.edu/people/ray-van-cleve

Rosela Golloshi, Ph.D.
Postdoctoral Fellow, Johns Hopkins University

Dr. Rosela Golloshi, a CCBIR junior investigator, is studying mechanisms of cancer progression and metastasis.
https://cellbio.jhmi.edu/people/rosela-golloshi/

Snighda Kanadibhotla, B.S.
Graduate Student, Stony Brook University

Snigdha Kanadibhotla, a PS-ON junior investigator, is studying evolutionary mechanisms of PARP inhibitor resistance in ovarian cancer.
https://damaghilab.com/team/

Wisam Fares, B.S.
Graduate Student, University of Virginia

Wisam Fares, a CSBC junior investigator, is studying receptor dynamics in TNBC.
https://systemsbioe.org/lab-member/wisam-fares/

Scientific Sessions

SEQUENCING

Sequencing
Podium Talks: Concurrent Session I (Wu & Chen Auditorium, August 17th 10:45 am)

Rapid advances in 'omics technology enable basic scientific discovery, novel diagnostic tools, and precision medicine. This session features sequencing-enabled research in the areas of cancer heterogeneity and evolution, prevention and prognosis, and the tumor microenvironment.

Treatment
Podium Talks: Concurrent Session IV (Berger Auditorium, August 18th 9:00 am)

There is increasing appreciation for the role of intertumoral heterogeneity in cancer aggression and therapy response. This session features research that dissects phenotypic and functional heterogeneity in the tumor ecosystem, the effect of heterogeneity on the development of drug resistance, and a novel approach to quantitate immune cell heterogeneity.

COMPUTATIONAL MODELING

Cancer Heterogeneity
Podium Talks: Concurrent Session I (Berger Auditorium, August 17th 10:45 am)
Speed Talk: Concurrent Session II (Berger Auditorium, August 17th 12:30 pm)

Understanding the mechanisms that drive the spatial and temporal cellular heterogeneity, phenotype switching, and plasticity opens new avenues for the development of effective strategies for therapeutic interventions. This session features research on the role of heterogeneity, cancer evolution and intercellular communication on cancer progression and treatment response. Speakers explore the possibility of leveraging tumor heterogeneity to optimize therapeutic strategies.

Immunology
Podium Talks: Concurrent Session III (Wu & Chen Auditorium, August 17th 3:30 pm)

Dynamic tumor/immune interactions are critical to the course of disease and response to treatment. Computational modeling provides an avenue to dissect the complexities of these complex systems to uncover basic mechanisms and novel therapeutic approaches. This session will feature talks will dissect immune cell diversity, examine dynamic tumor-immune interactions, and explore cell engineering approaches to enhance anti-tumorigenic activity.

Treatment
Podium Talks: Concurrent Session IV (Wu & Chen Auditorium, August 18th 9:00 am)

Dissecting tumor behavior and cancer progressing using computational approaches can uncover novel therapeutic vulnerabilities and personalized treatment strategies. In this session, speakers employ approaches from mechanobiology, nanomedicine, biophysics, machine learning, and mathematical

modeling to improve risk stratification, optimize therapeutic approaches for individual patients, and mitigate the development of treatment resistance.

Tumor Microenvironment
Speed Talks: Concurrent Session V (Wu & Chen Auditorium, August 18th 10:45 am)

Dynamic interactions between diverse malignant and non-malignant cells drives tumor behavior and response to therapy. Talks in this session will apply approaches from nanotechnology, mechanobiology, cell engineering, math modeling and deep learning to dissect tumor ecosystem dynamics, examine the effect of treatment on the microenvironment, and explore the possibility of manipulating the microenvironment as a therapeutic approach.

Mechanobiology & Epidemiology
Podium Talks: Concurrent Session VI (Berger Auditorium, August 18th 2:15 pm)

Modeling approaches are key to dissecting complex systems, from the scale of molecules to human populations. This session applies such approaches to dissect molecular organization and mechanotransduction, tumor invasion, and the effect of multimorbities on cancer patients,

IMAGING
Speed Talks: Concurrent Session V (Berger Auditorium, August 18th 10:45 am)
Podium Talks: Concurrent Session VI (Wu & Chen Auditorium, August 18th 2:15 pm)

Advanced imaging technologies and analytics have transformative potential in cancer research, from basic studies to clinical application. Speakers in these sessions employ imaging approaches to study the effect of cellular and environmental mechanobiology on tumor progression and metastasis, and to improve predictions of drug response, tumor progression, and clinical outcomes.

3D CULTURE
Speed Talks: Concurrent Session II (Wu & Chen Auditorium, August 17th 12:30 pm)
Podium Talks: Concurrent Session III (Berger Auditorium, August 17th 3:30 pm)

Engineered systems enable systematic dissection of complex tumor behaviors in controlled, physiologically relevant environments. Application of these approaches have led to significant advances in the understanding of angiogenesis, migration, and therapy resistance. Clinically, engineered systems can enable rapid pre-clinical testing, free from ethical and species-specific challenges inherent to mouse modeling. In these sessions, speakers discuss the development, optimization, and use of engineered systems to study cell signaling and migration, the microenvironment and drug response.

Special Sessions

Pre-meeting event: Creating Connections program hosted by the Alan Alda Center for Communicating Science
Live, online workshop designed to help scientists and researchers learn to engage and inspire diverse audiences through effective communication. Participants will learn how to establish an engaging and personable online presence, make their message memorable, and avoid complex jargon. *Note: This event requires pre-registration, which is now closed.*

Just Starting Out Panel
In this session, early career investigators will share their experiences and lessons learnt during their career transitions. Discussion will focus on common questions junior investigators have as they transition to their next opportunity. The session features 4 scientists starting out in faculty positions and as small business entrepreneurs, including Drs. Caroline Bartman, Joel Babador, Linda Kachuri, Kacey Ronaldson.

Lunchtime Discussions
Day 1 (August 17, lunch provided)
Advocacy in Basic Cancer Research
Learn how Junior Investigators can engage with research advocates, and about NCI resources in research advocacy. Hear from a local research advocate perspective and NCI program officer perspective. Join moderators Yvonne Florence and Dr. Eric Johnson Chavarria on *Thursday August 17* for lunch (1:30-2 pm) and discussion (2-2:45 pm).

ITCR Training Network (ITN)
Learn about the Informatics Technology for Cancer Research (ITCR) Training Network (ITN), which provides training opportunities in cancer informatics. The ITN aims to support cancer informatics by providing free online courses to help researchers use ITCR tools and learn about best practices, free software to help researchers develop courses and videos, and live education opportunities for researchers and trainees. Join members of the ITN on *Thursday, August 17* at 1:30 – 2:45 pm.

Day 2 (August 18, lunch is on your own, please grab your lunch and join)
NCI Small Business Innovation Research
The goal of the table is to introduce funding opportunities aimed at supporting early career academic scientists interested in transitioning to entrepreneurship while also supporting the transfer of technology from academic laboratories into small businesses. Join NCI Project Director Dr. Saroj Regmi on Friday, *August 18* at 1:00 – 2:15 pm.

Career advancement and transitions: listening session
Join Dr. LaKaija Johnson and Dr. Julie Bletz on Friday, *August 18th* at 1:00 – 2:15 pm for a listening session to discuss key considerations for graduate students, post-docs, and early-career staff scientists preparing for career transitions. Learn more & contribute to plans for upcoming workshops, trainings, and offerings from the Multi-Consortia Coordinating (MC^2) Center

Opportunities with the National Postdoc Association
Come to meet with Dr. Andrea Joseph, Chair of the Postdoctoral Council of the National Postdoc Association, on Friday, August 18th at 1:00 – 2:15 pm to learn more about opportunities and resources.

Poster Session I: Thursday, August 17, 2023

#	First Name	Last Name	Title
1	Dake	Liu	Engineering a native gut Escherichia coli to diagnose and treat colorectal cancer
2	Diviya	Sinha	Low-Frequency Sonophoresis Assisted Cancer Immunotherapy
3	Gretchen	Long	Genetic and epigenetic spatial analysis of glioblastoma tumor core and periphery
4	Guhan	Qian	Uncovering the hidden immunosuppressive landscape in pancreatic ductal adenocarcinoma
5	Justyna	Gleba	Stearoyl-CoA desaturase 1 as a molecular therapeutic target against hepatocellular carcinoma
7	Sneha	Mitra	Role of regulatory T cells in colorectal cancer
7	April	Williams	Are Dietary Patterns and other Environmental Risks Associated with Colorectal Cancer among US Veterans?
8	Howard	Baek	Supporting Cancer Researchers Through Education: The ITN
9	Didi	Zha	Modeling the malignant transformation of fallopian tube epithelium driven by extracellular vesicles cargos using a microfluidic tissue-on-chip system
10	Glenn	Simmons	HMGB1 localization and its effect on the immune response in the lung tumor microenvironment
11	Jiyeon	Park	Overcoming CCI+ET resistance in ER+ breast cancer by restoring immune surveillance and tumor control
12	Li	Yang	The surfeit of phosphatidylethanolamine flux in obesity escalates cancer and Alzheimer's disease
13	Mary Kate	Macaedonia	Modeling Small Cell Lung Cancer Brain Metastatic Invasion in a Cerebral Organoid System
14	Mouhita	Humayun	Investigating the role of Rho GTPases on the ability of tumor cells to extravasate during metastasis using a human microphysiological model
15	Natasha	Gurevich	Musicatk: a toolkit for mutational signature discovery and prediction
16	Nate	Richbourg	Physical Environmental Influences on Breast Cancer Dormancy
17	Nicolas	Anselmino	Impact of Wnt canonical Activating Mutations on Androgen Deprivation Therapy Treatment Response in Prostate Cancer.
18	Palash	Sashittal	ConDoR: Tumor phylogeny inference with a copy-number constrained mutation loss model
19	Raymond	Van Cleve	Long COVID and Social Determinants of Health
20	Robin	Baidya	Developing an EHR-based model for early detection of colorectal cancer in the VA Healthcare System
21	Rui	Yang	SETD2-loss mediated H3K36me3 causes disruptions in Topologically Associated Domains (TADs) to promote oncogenic expression in Clear Cell Renal Cell Carcinoma
22	Talia	Sanazzaro	Mimicking the viscoelastic nature of brain tissue using a hyaluronic acid-based interpenetrating polymer network
23	Taylor	Marohl	Assessing the effects of a novel mutation in proprotein convertase PCSK5 on the MCF10DCIS model of breast ductal carcinoma in situ
24	Xinling	Li	Mathematical Modeling of AND-gated Synthetic Biomarkers for Early Detection of Liver Metastasis
25	Younghye	Song	Pancreatic Tumor-Derived Extracellular Vesicles Stimulate Schwann Cell Activation and Perineural Invasion via IL-8 Signaling
26	Nonthakorn	Olaranont	A Mechanical Model for Confined Tumor Growth with Elastic Relaxation

Poster Session II: Friday, August 18, 2023

#	First Name	Last Name	Title
27	Alisya	Anlas	Matrix stiffness suppresses growth, induces chromosome missegregation and genomic variation in cancer spheroids
28	Jane	Miglo	Effects of Ovulatory Secretions on Pre-Neoplastic Lesions Using Microfluidic PREDICT Platform
29	Kolade	Adebowale	A tissue-like platform for studying dynamics of macrophage tumor infiltration
30	Kshitiz	Parihar	Unraveling the dependence of cancer cell mechanotypes on ECM stiffness and composition
31	Nehal	Dwivedi	Role of Tropomyosin 2.1 in anchorage-independent growth of cancer cells.
32	Apurva	Singh	Exploring the biological significance of a robust radiomic biomarker of tumor heterogeneity in advanced non-small cell lung cancer patients treated with first-line immunotherapy
33	Carlos	Herrera-Montavez	MEK1/2-Targeting PROTACs Promote the Collateral Degradation of CRAF in KRAS Mutant Cells
34	Clarice	Aiello	“Quantum Biology”: how nature harnesses quantum processes to function optimally, and how might we control such quantum processes to cancer therapeutic advantage
35	Delaram	Nematollahi	Using carbon nanotubes for photothermal treatment of cancer
36	Frances	Keer	Stitch-seq: A Facile and High-Throughput Perturbation Sequencing Method
37	Ghmkin	Hassan	Tension modifies exosome morphology and promotes tumor metastasis
38	Jason	Zhang	Computationally designed sensors for endogenous Ras activity reveal signaling effectors within oncogenic granules
39	Lee	Roth	Oncogenic protein condensates suppress growth factor perception and modulate drug response
40	Nina	Steele	Therapeutic modulation of Robo4 in pancreatic cancer
41	Rebecca	Bekker	Black Holes in TIME: the Effect of GRID Radiation on the Tumor-Immune Micro-environment
42	Shahira	Abousamra	Cell Context Understanding in Digital Pathology Using Mathematical Modeling and Deep Learning
43	Shuchen	Zhang	Mechanical checkpoint regulates monocyte differentiation in fibrotic niches
44	Stephanie	Harchenko	Using CRISPR Prime Editing to rescue mutations in different cancer types
45	Tae Yoon	Park	Delineating the epigenetic landscape of T cell exhaustion
46	Uthsav	Chitra	Modeling spatial expression gradients with interpretable deep learning
47	Wisam	Fares	TGF? Ligand Processing and Signaling are Rewired by TGFBR3 Coreceptor
48	Yue	Wang	Order of mutation in cancer progression: non-additivity and non-commutativity of mutations in myeloproliferative neoplasm
49	Yun	Chen	Force Generation is Hijacked by Cancer Cells to Promote Tumor Progression via ECM Remodeling, Immunosuppression, and Beyond
50	Thomas	Dombrowski	Tumor-immune ecosystem dynamics exploration via a higher-resolution agent-based model

Restaurants within walking distance

**Breakfast will be available on both days of the meeting with a box lunch option on Day 1 (8/17)*
Recommended for lunch for quick convenience - Franklin's Table (food hall on campus, 3401 Walnut St)
Other nearby options are listed below.

Sabrina's Café
227 N 34th St, Philadelphia, PA 19104
(215) 222-1022
Weekend waits are given at this local mini-chain known for its brunch. The University City location is housed in a striking Victorian building where diners can look out onto the corner of 34th and Powelton while enjoying blueberry-topped challah French toast, tofu scrambles, and tater tots covered with sausage hash and over-easy eggs.

Dim Sum House by Jane G's- University City
3939 Chestnut St 2nd Floor, Philadelphia, PA 19104
(215) 921-5377
Right in the heart of University City is a little slice of the Jiang Nan region of China. The space offers a swanky feel with dim lighting, tufted leather booths, and a pool table. Dim Sum House is open for lunch or dinner featuring both Shanghai and Cantonese styles of dim sum. Expect truffle edamame dumplings, shrimp siu mai, honey-vinegar spareribs, dan dan noodles, and bao buns.

Hadramout Restaurant
136 S 45th St, Philadelphia, PA 19139
(215) 386-0919
Hadramaout in the Spruce Hill section of West Philadelphia offers an astounding introduction to Yemeni cuisine. Here diners can try giant flatbreads baked on the walls of a clay oven, and the specialty of the house, fahsah, a lamb and vegetable stew brimming with flavor. The chicken mandi is another strong option, spiced with cumin, coriander, cardamom, and clove.

Manakeesh Cafe Bakery & Grill
4420 Walnut St, Philadelphia, PA 19104
(215) 921-2135
Stop by this all-purpose Lebanese restaurant for a quick coffee and Middle Eastern pastry, a restorative fresh-pressed juice or smoothie, or a full brunch of crepes, omelets, and waffles. The savory selections include family-style mezze platters and the Lebanese flatbreads the restaurant is named for, topped with ground lamb, garlicky chicken, and za'atar-dusted labneh.

Terakawa Ramen
125 S 40th St, Philadelphia, PA 19104
(215) 516-6818
Regardless of the season, this minimalist ramen shop is busy putting out bowls of shoyu, miso, and tan tan ramen. Don't miss out on the non-noodle offerings, as Terakawa has a menu of excellent izakaya standards like karaage, Japanese Berkshire pork sausages, and takoyaki.

White Dog Café
3420 Sansom St, Philadelphia, PA 19104
(215) 386-9224
When this University City institution opened back in 1983, founder Judy Wicks' tenets of keeping food local, seasonal, and sustainable were almost unheard of in the Philadelphia dining scene. Now, 36 years later, the canine-themed restaurant and bar is putting out locally sourced cheese plates and serving seasonal plates of eggplant Milanese and watermelon panzanella while the bar pours glasses of made-in-Pennsylvania wine.

Restaurants within walking distance

Louie Louie
3611 Walnut St, Philadelphia, PA 19104
(267) 805-8585
For date nights or, more likely, when parents are footing the bill, this chic restaurant and lounge at the Inn at Penn hotel is the place to be. Secure a spot on a plush couch for a couple of cocktails and a dozen oysters or grab a table for a full meal of beef carpaccio followed by rainbow trout amandine.

Franklin's Table Food Hall
University of Pennsylvania, 3401 Walnut St, Philadelphia, PA 19104
(215) 746-0123
This student- and faculty-filled food hall is packed with quick-serve versions of a who's who of Philly favorites. Stop by Franklin's Table for Neapolitan-style pizzas from Pitruco, sushi via the folks behind Double Knot, Goldie's falafel and shawarma-spiced fries, and tasty sandwiches from High Street on Market.

Don Barriga
4443 Spruce St, Philadelphia, PA 19104
(267) 292-5741
In a part of town where Mexican fare is usually underrepresented, this newcomer has been racking up rave reviews since its early-summer opening. Daytime offerings include tacos, overstuffed tortas, and a breakfast of chilaquiles with bacon, beans, and eggs, while dinnertime sees platters of sizzling fajitas and the parrillada, an impressive mixed grill of chicken, chorizo, steak, and cactus.

Walnut Street Café
2929 Walnut St, Philadelphia, PA 19104
(215) 867-8067
Sometimes a classy space and a touch of refinement for a lovely luncheon is what you need, and Walnut St. Cafe offers that. The menu is American comfort food with a simple but polished approach. Their bright space also boasts a seasonal influence on food, with locally sourced organic produce from nearby farms. The wine selection, on the other hand, has a much further reach (think wines from Greece, Germany, and Australia). Head in for Golden Hour (read: happy hour) for well-priced cocktails and sumptuous snacks like whipped ricotta and salmon tartare.

Renata's Kitchen
3940 Baltimore Ave, Philadelphia, PA 19104
(267) 275-8254
For brunch any day of the week, look no further than Renata's, situated on the edge of The Woodlands Park. After moving to their new (and much larger space) in 2020, they were also able to acquire a liquor license to offer delicious Middle Eastern-tinged cocktails to match their menu. Try a harissa Bloody Mary with your shakshuka merguez with a side of crunchy spiced chickpeas.