

Research Education Core

Core Co-Leaders:

Dr. Karen Hubbard (CCNY)

Dr. Bao Vuong (CCNY)

Dr. Hedvig Hricak (MSK)



Staff:

Kelsey Schobert, MPH, Program Manager (CCNY)

Nicole Roberts, MPH, Program Manager (MSK)

Sheila Fortunato, MS, MSK Training Director

Nadia Noman, MSED, Operations Manager (CCNY)

Nkem Stanley, Training Coordinator (CCNY)



Overview - Education and Training Programs

- Students
 - High School education
 - Undergraduate research
 - Graduate student training (Masters and PhD)
- Research Technician training at MSK
- Medical Fellows
- Postdoctoral Fellows
- Early Stage Investigators



High School Program with the New York City Department of Education

Radiology: Giving Back to NYC

- High School educational event (20th anniversary)
 - Scientific seminars
 - Ultrasound workshop
 - Student essay presentation
 - Participants - **13 high schools** and **171 students**
 - 15 students will receive awards for their essays
 - 10 of the 15 high school students will be awarded the opportunity to participate in summer internships at MSK, which are funded by the CCNY-MSK Partnership
- 2022 summer internship
 - 7 students participated in a hybrid internship program
 - Worked on a clinical research retrospective project, which included examining disparities in clinical research trials.
 - Attended weekly seminars given by MSK faculty, post-doctoral trainees, and data scientists.
 - Observed clinical imaging modalities with instruction by MSK Imaging Modality Leaders.

Undergraduate Training Summary

- 182 (2009-2023) undergraduate trainees
- 725 presentations
- 45 peer-reviewed publications
- 43 poster/oral awards
- 30 Prestigious Awards
- 147 graduated
 - 100% graduation rate for those eligible, vs 47% for CCNY overall
 - Average GPA of 3.55



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Undergraduate Training Summary

- 82.3% of our trainees have pursued/are pursuing higher academic tracks
 - 6 - MS program
 - 1 - PA program
 - 36 - MD program
 - 5 enrolled, 5 applying - PhD Program
 - 15 - Physicians
 - 24 - Clinical Medicine Residents
 - 2 - Clinical Assistant Professors
 - 1 - Postdoc
 - 1 - Clinical Fellow
 - 22 are working in medical/research–related jobs



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Partnership Graduate Training Summary (2010-2023)

- 15 total trainees (10 graduated, 5 current)
 - 40% URM, 60% female
 - 23 presentations (oral & poster)
 - 12 peer-reviewed publications
 - MS trainees
 - 1 completed medical school; currently in a surgical residency
 - 1 completed PhD program
 - PhD trainees:
 - 1 - currently an Assistant Attending faculty member at MSK (following a postdoc in a T32 in psycho-oncology at MSK)
 - 1 - Senior Data Scientist at Apple
 - 2 - Senior scientists in industry
 - 1 - Clinical faculty member/Psychologist at NYU, Associate Director of Medical Student Health Service and the house Staff Mental Health Program



MSK HOPP (Human Oncology and Pathogenesis Program) Research Technician Pipeline (ResTeP) Program

- Provides introductory laboratory skills training and laboratory administration lectures

CCNY students trained:

2022:

Michael Obodai

Curtis Edwards

Goodness Njoku Austin

2023:

Suzanne Kanj

Harmanpreet Kuar

Sandra Deutou

Haroon Kanishka



2022 HOPP ResTeP cohort

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Scholars of the Future

1. Rahul Sharma, PhD

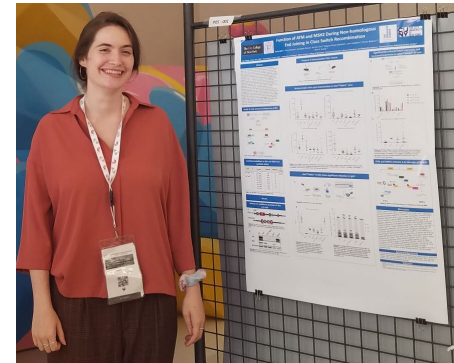
- Study recombination, genomic integrity, and heterogeneity in B cells
- 3 scientific presentations and 3 publications from 2021-2023
- Mentored teaching – Graduate course in molecular biology
- Currently scientist at Pfizer

2. Shami Chakrabarti, PhD

- Determine the molecular mechanisms of chemotherapy induced cognitive impairment
- 2 manuscripts in preparation and 1 presentation in 2023
- Mentored teaching – Undergraduate course in cell and molecular biology
- Currently postdoctoral fellow at Columbia University

3. Emily Sible, PhD

- Examine DNA repair pathways and genomic stability
- 4 publications and has given 4 presentations from 2021 -2023
- Mentored teaching – Undergraduate lab course in biotechnology
- Currently postdoctoral fellow at École Normale Supérieure de Lyon (France)



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Partnership Scholars Program for DEIA mentorship

1. Hussein Moshen, PhD

Working on projects at the intersection of interpretable machine learning, biological networks, and trans-population cancer genomics. In particular, he aims to develop computational approaches to prioritizing infrequently mutated genes across cancer types.

Biomedical Research Mentors at MSK: Quaid Morris, PhD; and Jian Carrot-Zhang, PhD

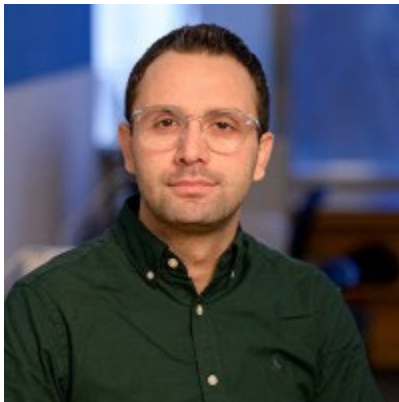
Teaching Mentor at CCNY: Sanna Goyert, PhD

2. Soumendu Boral, PhD

Examining drug- and coactivator-induced changes in the structure and dynamics of the HIF-2 transcriptional activator complex. Such information will provide insights into mode-of-action of this new class of targeted cancer therapeutics, suggest potential mechanisms of resistance, and guide future drug discovery efforts

Biomedical Research Mentor at CCNY: Kevin H Gardner, PhD

Teaching Mentor at CCNY: TBD



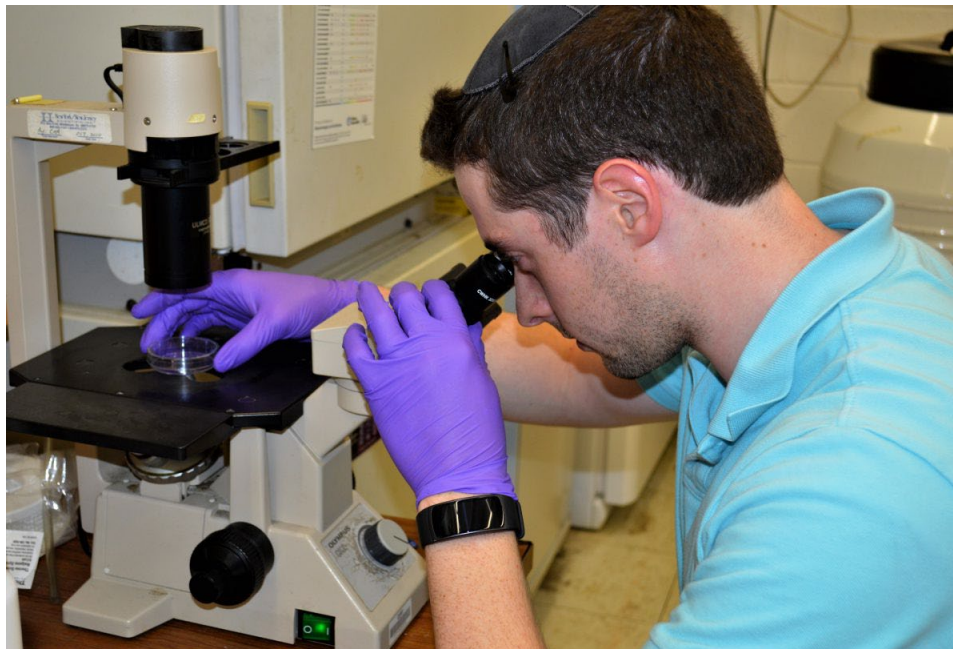
Partnership Scholars Program for DEIA Mentorship

3. Himanshu Singh, PhD

Understanding cancer evolution and identifying how potential therapeutic implications such as optimizing the timing of invasive treatments like surgery and sequencing treatments could impact tumor composition. The goal of Dr. Singh's training at CCNY is to enhance his teaching skills as well as equip him with the skills to effectively communicate with students and trainees.

Biomedical Research Mentor at MSK: Etay Ziv, MD, PhD

Teaching Mentor at CCNY: TBD



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Early-Stage Investigators

- 25 ESIs total
 - 12 are URM
- In 2020-2023
 - Former ESIs
 - 73 presentations
 - 91 peer-reviewed publications
 - 22 grants awarded with an additional 31 submitted. The majority of the grants awarded were from external funding sources and included 1 K01, 2 R03s, 3 R01s and 1 P30 supplement.
 - Current ESIs
 - 119 presentations
 - 163 reviewed publications
 - 2 publications under review and 4 publications in preparation.
 - 58 grants awarded and an additional 58 proposals were submitted. Many of the grants awarded were from external funding sources and included 1 R35, 1 R03, 2 R21, 1 K99/R00 and 1 K08.



New Additions

■ Grants

- **Awarded** a Diversity Supplement Grant (expand Scholars for the Future Post-Doc Program and Mentor Training)
- **Submitted** YES Grant (R25 Youth Enjoy Science)
 - ❖ The grant will provide sustainable funding for the *Radiology: Giving Back to NYC high school program*. It will include additional community outreach components. The grant received a favorable score and will go to Council in May.

■ Development of New Trainee Tracking Database



Ryan Walters

New Additions to CCNY

Press Release

Mayor Adams Invests \$27 Million To Accelerate Growth of Life Sciences In NYC

By NYCEDC | AUG 24 2022
press@edc.nyc

<https://edc.nyc/press-release/mayor-adams-invests-27-million-accelerate-growth-life-sciences-nyc>

New CCNY center for advancing medical technologies wins \$750K federal grant

October 04, 2021

<https://www.ccnycunyu.edu/news/ccny-center-designed-advance-medical-technologies-wins-750k-federal-grant>

CCNY Receives \$4.5 million state grant to complete life sciences incubator

February 02, 2023

City Innovations Collaborative life sciences incubator

<https://www.ccnycunyu.edu/news/ccny-receives-45-million-state-grant-complete-life-sciences-incubator>

Seymour and Pearl Moskowitz gift \$2.4 million to CCNY's master's in translational medicine program

January 13, 2020

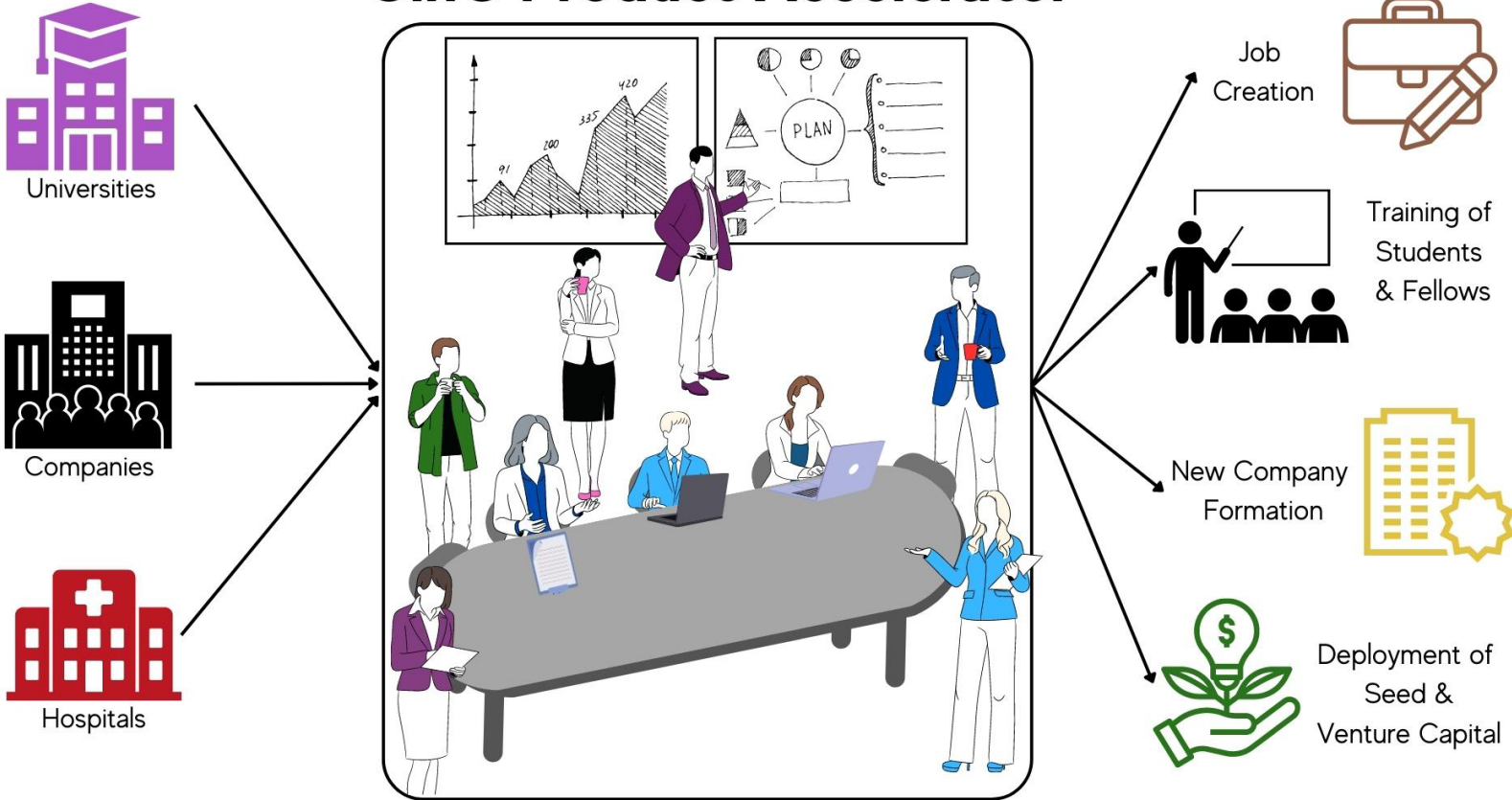
<https://www.ccnycunyu.edu/news/seymour-and-pearl-moskowitz-gift-24-million-masters-translational-medicine-program>

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Future Directions

CInC Product Accelerator



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Future Initiatives

- **Grants**
 - **R25 Educational Grant** for Postdoctoral Scholars to continue our current DEIA mentored training program
 - **T32 training grant for Masters students** - Bridges to the Doctorate Program (T32)
- **Develop training partners in industry**

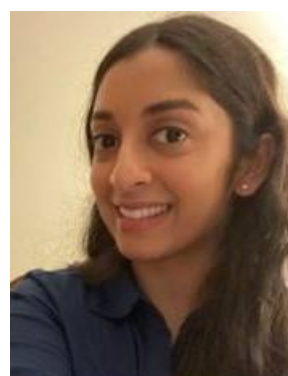
Thank you!



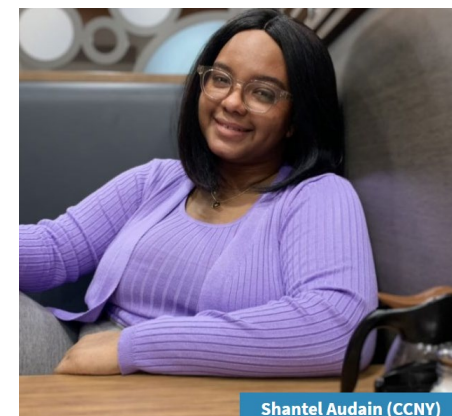
Francesca Gany, MD, MS



Tim Ahles, PhD



Lakshmi Menon



Shantel Audain

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