 **COLUMBIA**  
VAGELOS COLLEGE OF  
PHYSICIANS AND SURGEONS

# STATE OF THE SCHOOL

September 30, 2024



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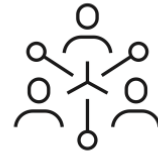
We aspire to transform human health by driving discovery, advancing care, and educating leaders.

We value excellence, respect, and equity.

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# VP&S 5-Year Strategic Plan

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## **PRIORITY 1**

Build the Best Environment for Our People



## **PRIORITY 2**

Create the Clinical Care Model of the Future



## **PRIORITY 3**

Drive Discovery to Transform Human Health



## **PRIORITY 4**

Elevate Education Across the Continuum



## **PRIORITY 5**

Prioritize Partnership to Advance Community Health





# Build the Best Environment for Our People

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## Priority 1

# Build the Best Environment for Our People

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1. Invest in inclusive ways for people to connect, collaborate, and celebrate
2. Drive diversity, equity, and inclusion through innovation, investment, and accountability
3. Enhance inclusive mentoring and career development for all faculty and staff



# CUIMC Cares

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Through CUIMC CARES, we aspire to build a community where every individual feels welcome and accepted, and has opportunities for professional growth and success.



**Civility**



**Acceptance of Differences**



**Respect for All**



**Ethical Behavior**



**Supportive Environment**



# Welcoming New Senior Leadership



**James M. McKiernan, MD**  
Dean, Vagelos College of  
Physicians and Surgeons (Interim)



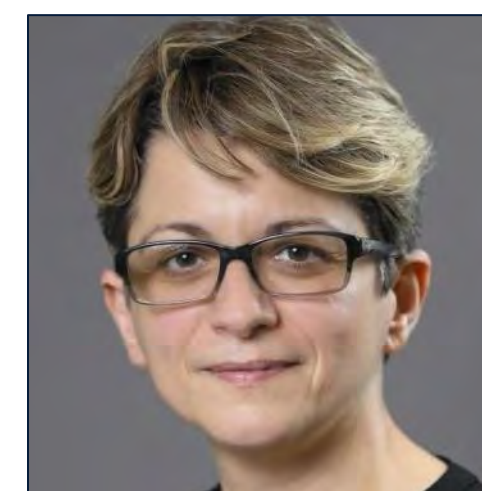
**Sandra Harris**  
Vice President, Community Affairs  
& Partnership Engagement



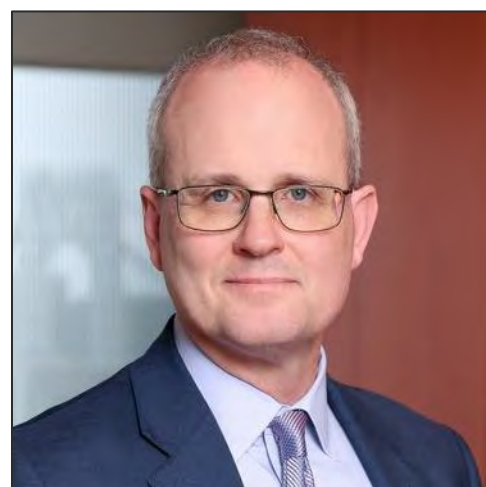
**Kristen Nardullo Mahood**  
Vice President, Development  
(Interim)



**Derek C. Mazique, MD**  
Chief Medical Officer



**Despina Kontos, PhD**  
Chief Research  
Information Officer



**William P. McKoy**  
Chief Operating Officer (Interim)  
Senior Vice President and  
Chief Financial Officer



**Vanita Gowda**  
Chief Communications Officer  
(Interim)



**Jim Bossio**  
Chief Information Officer



**Jennifer Williamson**  
Chief of Staff



# Senior Administrative Leadership



**James M. McKiernan, MD**  
Dean, Vagelos College of  
Physicians and Surgeons (Interim)



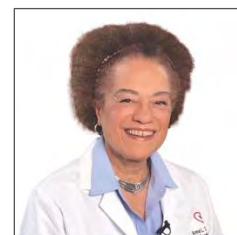
**Rudi Odeh-Ramadan, PharmD**  
Vice Dean for Finance and  
Administration



**Neil McClure**  
Chief Human  
Resources Officer



**Jennifer Williamson, MS, MPH**  
Chief of Staff to Dr. Katrina Armstrong



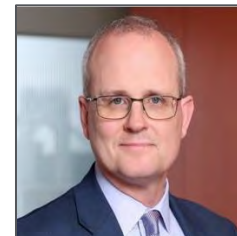
**Anne Taylor, MD**  
Senior Vice President for Faculty  
and Career Development



**Vanita Gowda, MPA**  
Chief Communications Officer  
(Interim)



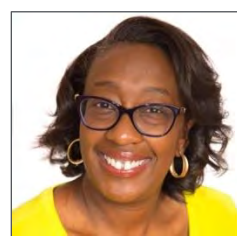
**Michael Shelanski, MD, PhD**  
Senior Vice Dean for Research



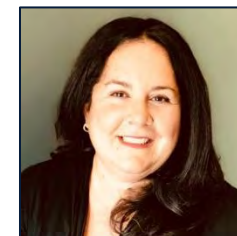
**William P. McKoy**  
Chief Operating Officer (Interim)  
Senior Vice President and Chief  
Financial Officer



**Jim Bossio**  
Chief Information Officer



**Monica Lypson, MD, MHPE**  
Vice Dean for Education



**Kristen Nardullo Mahood**  
Vice President, Development  
(Interim)



**Patrick Burke, III**  
Vice President, Facilities  
Management, Operations  
and Planning



**Olajide Williams, MD, MS**  
Vice Dean for Community Health



**Sandra Harris**  
Vice President, Community Affairs  
& Partnership Engagement



**Diana I. Mejia**  
Vice President, Student  
and Campus Services



**Muredach P. Reilly, MBBCh, MSCE**  
Vice Dean for Clinical and  
Translational Research



**Ross Frommer**  
Vice President, Government Affairs



**Despina Kontos, PhD**  
Chief Research  
Information Officer



# Welcoming New Chairs

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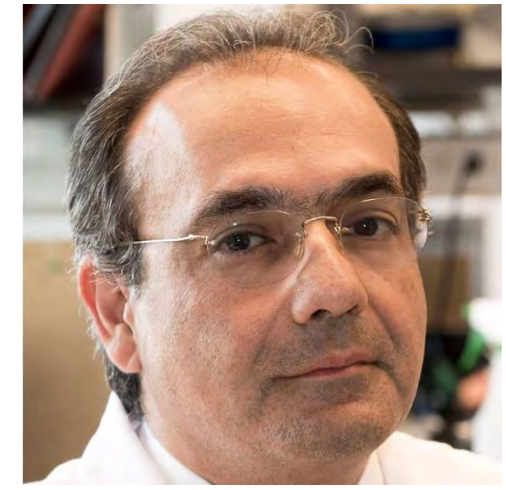
**Tricia Brentjens, MD**  
Anesthesiology (Interim)



**Henry Colecraft, PhD**  
Molecular Pharmacology &  
Therapeutics (Interim)



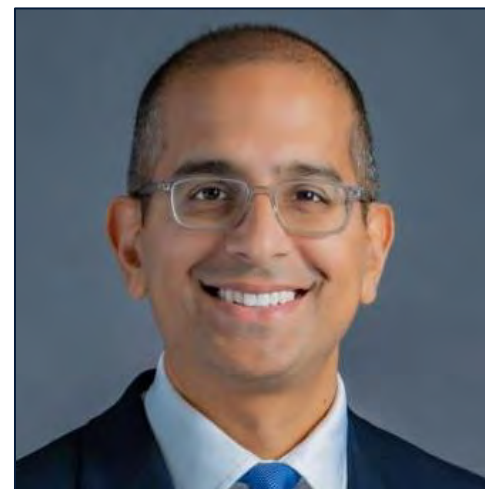
**Kevin Gardner, MD, PhD**  
Pathology & Cell Biology



**Ali Gharavi, MD**  
Medicine



**Joshua Gordon, MD, PhD**  
Psychiatry



**Ajay Gupta, MD**  
Radiology



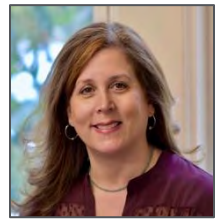
**Harris Wang, PhD**  
Systems Biology (Interim)



**Ojas Shah, MD**  
Urology (Interim)



# Department Chairs



**Tricia Brentjens, MD**  
Anesthesiology  
(Interim)



**Rita Charon, MD, PhD**  
Medical Humanities &  
Ethics



**Steven A. Siegelbaum, PhD**  
Neuroscience



**Jordan Orange, MD, PhD**  
Pediatrics



**Craig R. Smith, MD**  
Surgery



**Stavros Lomvardas, PhD**  
Biochemistry &  
Molecular  
Biophysics



**Ali Gharavi, MD**  
Medicine



**Mary E. D'Alton, MD**  
Obstetrics  
and Gynecology



**Andrew R. Marks, MD**  
Physiology & Cellular  
Biophysics



**Harris Wang, PhD  
(Interim)**  
Systems Biology



**Noémie Elhadad, PhD**  
Biomedical  
informatics



**Sankar Ghosh, PhD**  
Microbiology &  
Immunology



**George A. Cioffi, MD**  
Ophthalmology



**Joshua Gordon, MD, PhD**  
Psychiatry



**Ojas Shah, MD  
(Interim)**  
Urology



**Aimee Payne, MD, PhD**  
Dermatology



**Henry Colecraft, PhD  
(Interim)**  
Molecular Pharmacology  
& Therapeutics



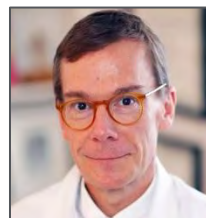
**William N. Levine, MD**  
Orthopedic Surgery



**Lisa Kachnic, MD**  
Radiation Oncology



**Angela M. Mills, MD**  
Emergency Medicine



**E. Sander Connolly, MD**  
Neurological Surgery



**Lawrence Lustig, MD**  
Otolaryngology/  
Head & Neck Surgery



**Ajay Gupta, MD**  
Radiology



**Gerard Karsenty, MD, PhD**  
Genetics &  
Development



**Richard Mayeux, MD**  
Neurology



**Kevin Gardner, MD, PhD**  
Pathology and  
Cell Biology



**Joel Stein, MD**  
Rehabilitation &  
Regenerative  
Medicine



# 2024 Well-Being Survey

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- Short, anonymous survey on workplace experiences, well-being, and professional development opportunities
- Data-driven approach: Build on 2022 survey lessons, which informed Simple is Better, leadership trainings, and more
- Opportunity to win a complimentary prix-fixe lunch at the Faculty Club or \$25 gift card

We Want to Hear from You!



**Deadline Oct. 11, 11:59 pm**



Survey design led by  
**Bernard P. Chang, MD, PhD**  
Associate Dean of Faculty Health and  
Research Career Development  
Scientific Lead, Office of Well-Being



# Community & Connection Learning Series

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- Led by Office of Well-Being
- Aim to cultivate empathy and community connection
  - Tools to promote effective communication and enhance understanding of diverse perspectives
- 6 webinars – 379 total attendees, average 63 attendees per session
- 94% of attendees rated sessions as “Excellent” or “Good”
- 93% of attendees said they would likely recommend sessions to a colleague



# Simple is Better

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Commitment to simplifying our processes and our ways of working to achieve higher levels of efficiency and opportunity for all

- 303 projects identified from 419 submissions
- Completed Projects
  - Facilities: 50 Haven Gym Redesign, New Dining Options at CUIMC
  - IT: System Risk Assessment Fees Removal, MS Teams Shared Channels
  - Research: Phlebotomy Training Pilot

Learn more about  
projects and status





# Diversity, Inclusion, and Belonging

## Employee Resource Groups

- 2 new groups: Islamic Cultural group; Southwest Asian and North African group; additional ERGs to come
- 12 ERG groups total: Support approx. 30 events annually
- Promote ERG cross-collaboration throughout the year

## Faculty Affinity Networks

- Black Women in Medicine – led by Hetty Cunningham, Jean-Marie Alves Bradford
- Columbia University Asian Faculty Association – led by Anil Lalwani
- VP&S Latino Faculty Association – led by Ana Cepin and Mara Minguez
- VP&S LGBTQ Faculty Group





# Career Ladders: Administration

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## FINANCE

### In progress:

- Academic Finance
- Budget and Planning
- Clinical Finance
- Financial Services



## MEDICAL EDUCATION

### Completed:

- Admissions
- CERE
- Education Administration and Finance
- Student Diversity, Inclusion, Belonging



## RESEARCH

### Completed:

- Pre & Post Award Administration

### In progress:

- Clinical Research Coordinators
- Research Management

# Launching the Division of Nursing Practice

- Founded by ColumbiaDoctors and School of Nursing to enhance patient care and career pathways available to nurses and advanced practice providers
- Led by Maura Abbott, PhD, RN, and Stephen Ferrara, DNP, RN, with Michelle DiVito serving as division's administrative lead
- Presented first-ever Nursing Excellence awards
- Kicked off first-ever Nurses Week Celebration with panel "Getting to Know Columbia Nursing: Academics, Clinical Practice, Community, and Research"





# Enhancing Inclusive Mentorship

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## Research Faculty

### Mentor Trainings – “The Hidden Curriculum”

- Led by Bernard Chang, Daichi Shimbo, Marisa Spann, Jeanine Genkinger, Clara Lapiner
- New mentor curriculum under CTSA, with Office of Faculty Professional Development, Diversity and Inclusion
- Active learning, coaching techniques, facilitating networks, supporting Community of Practice of master mentors

## Clinical Faculty

### ACE Career Guidance and Advisory Service

- New resource for faculty and trainees with questions about careers or life at Columbia
- Problem-directed guidance and mentoring from ACE Inductees

## Leadership Development

### In partnership with the Columbia Business School

- Launch of CUIMC / NYP Department Chair Leadership Executive Education Program
- New sessions for alumni of CUIMC Leadership and Management for Faculty Program

# Enhancing Faculty Onboarding

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Launched April 2024 to enhance and streamline onboarding experience for new hires

- Improving accountability by designing single owner for all onboarding tasks
- Increased efficiency by reducing duplication of effort and eliminating unnecessary tasks
- Enhancing the overall experience by standardizing the relationship management framework and creating a positive experience for new providers

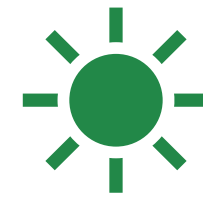


# Faculty Clinical Compensation Model

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Improve recruiting and retaining top talent



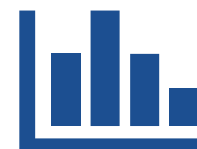
Increase transparency



Further align productivity and compensation to increase pay equity



Develop standardized institutional definitions



Apply consistent market-driven benchmarks

# Thank you, Dr. Anne Taylor!

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- Senior Vice President for Faculty Affairs and Career Development
  - Retiring 6/25 after 18 years with Columbia
- Transformed faculty development pathways and our commitment to faculty diversity, equity, and inclusion
- Dr. Taylor launched:
  - VP&S Office of Academic Affairs
  - CUIMC Office of Faculty Professional Development, Diversity, and Inclusion
  - CUIMC Office of Professionalism
  - CUIMC Office of Conflict of Interest on Education, Clinical Care, and Administration







**Create the Clinical Care  
Model of the Future**

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## Priority 2

# Create the Clinical Care Model of the Future

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1. **Become tomorrow's cutting-edge care through interdisciplinary innovation and integration of scientific inquiry**
2. **Lead in quality of care, including clinical excellence, patient experience, and health equity**
3. **Streamline clinical processes to support high-performing teams**



# ColumbiaDoctors Strategic Goals

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1. Align as a cohesive multispecialty group practice providing cutting-edge care through interdisciplinary innovation and integration of scientific inquiry with outstanding care quality and patient outcomes
2. Ensure compassionate, equitable, timely access and seamless experience to our community and to all patients for all levels of care
3. Recruit and retain the best clinical faculty & staff by creating an engaged, mission-driven work environment with streamlined work processes supporting high performing teams
4. Create new revenue opportunities and optimize margin

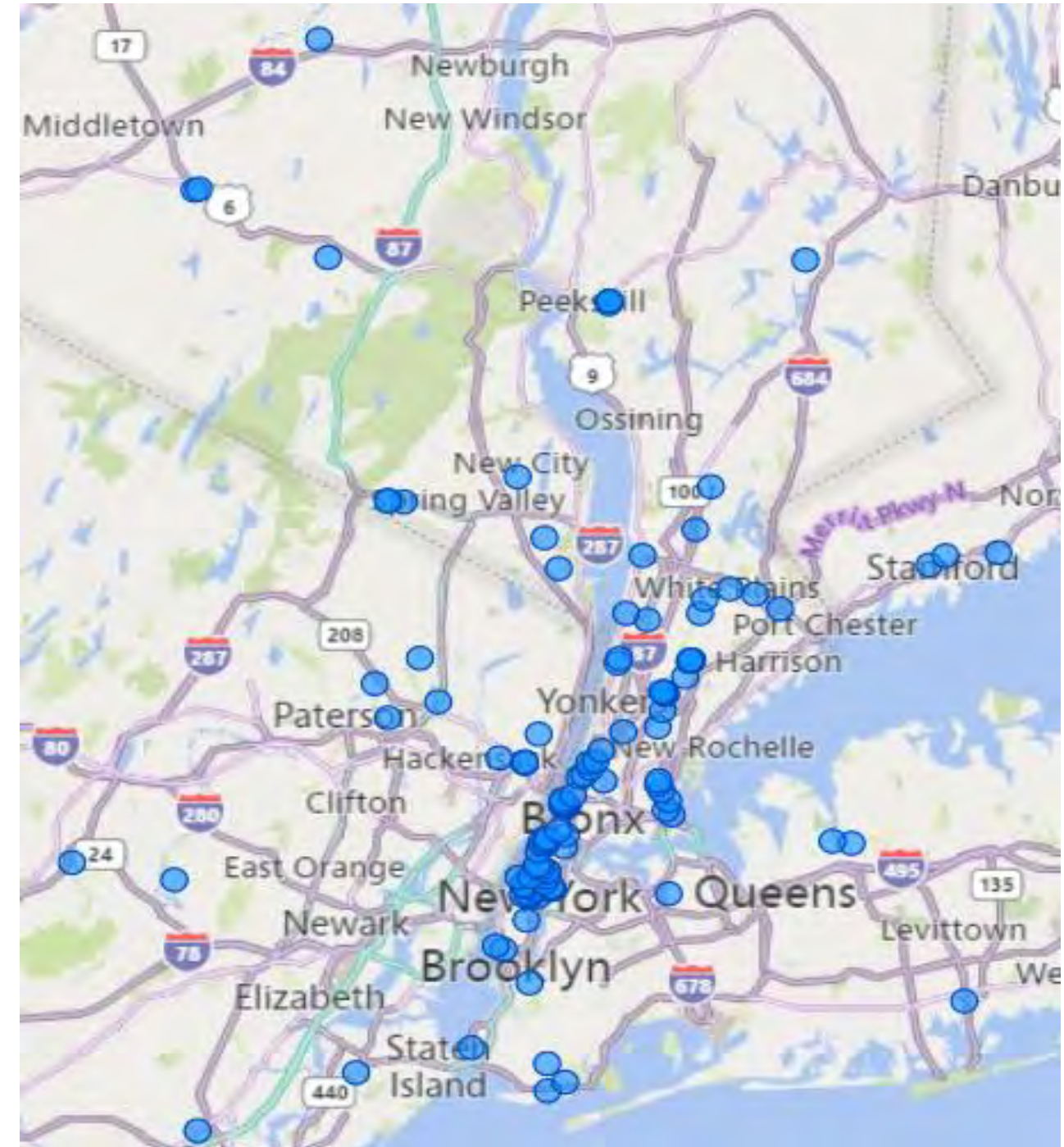
# Patients & Practices

More than 100 sites, from Midtown Manhattan to Westchester/Rockland, New Jersey, and Connecticut

- Unique Patients: 456,653
- Total Outpatient Visits: 2 million
- New Outpatient Visits: 315,322
- Gross Revenue: \$1.1 billion
- RVUs: 8.1 million

## Significant Growth in New Jersey

- Nearly 20,000 visits to 13 practice locations in NJ
- 200K ambulatory visits by patients in NJ
- 54% of northeastern NJ visits from Bergen County





# Growth Strategy

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- Strategic growth in Primary Care
- Expansion of key clinical programs: Cancer, Ophthalmology, Neuroscience
- Expansion of services: Ambulatory Surgery Center, Full Imaging, Infusion
- Relationship building with NJ Health Systems
- Expansion of Community Health Model

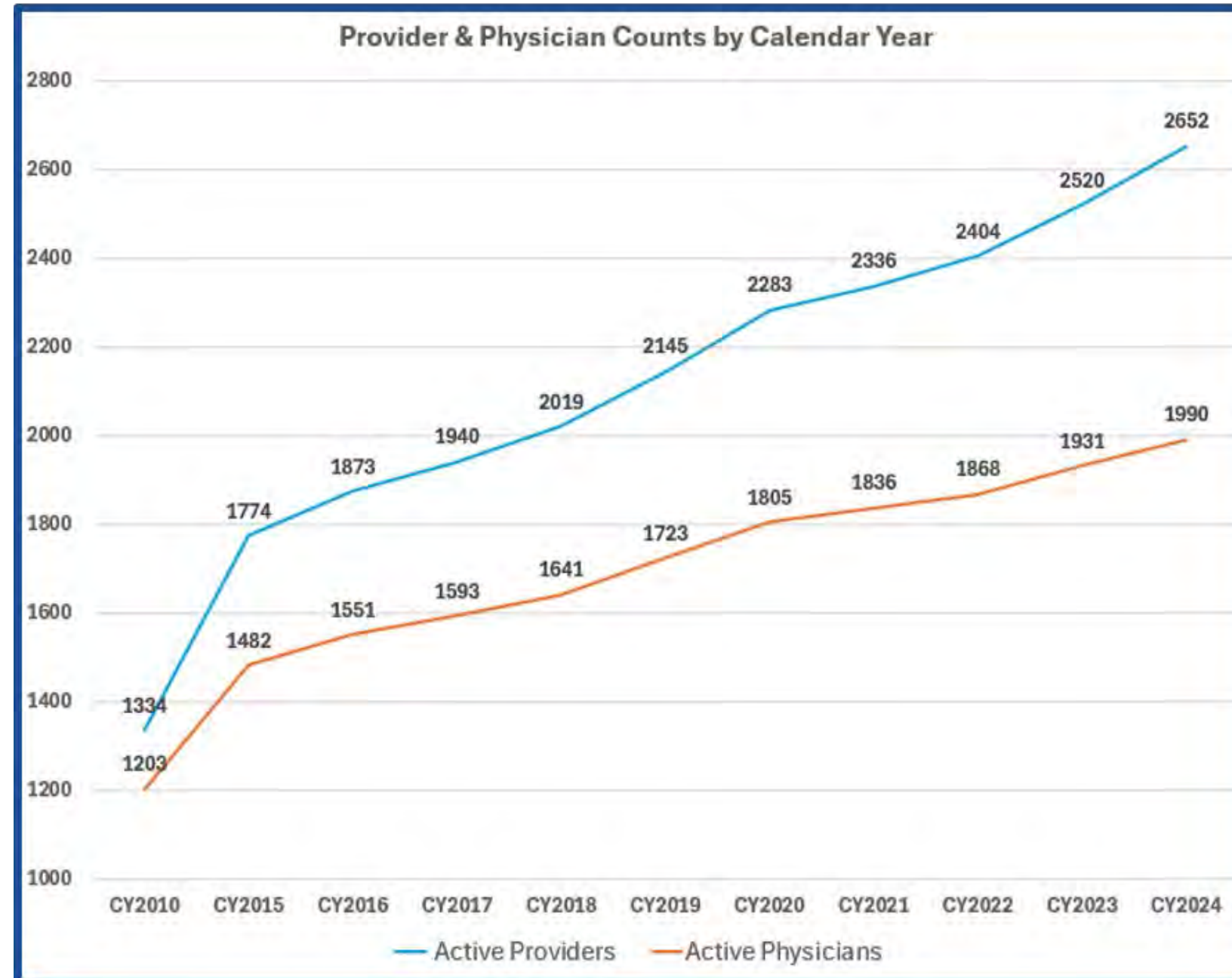


Spiral Building

# ColumbiaDoctors Provider and Physician Counts

**All Providers**  
44% Overall  
5% Annual

**Physicians**  
32% Overall  
3% Annual

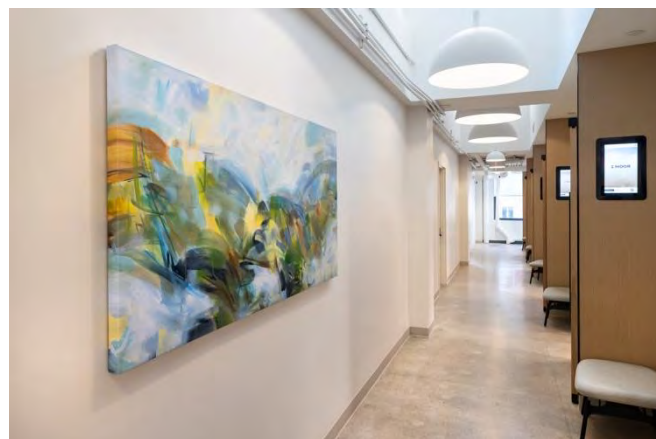


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IntelliCred

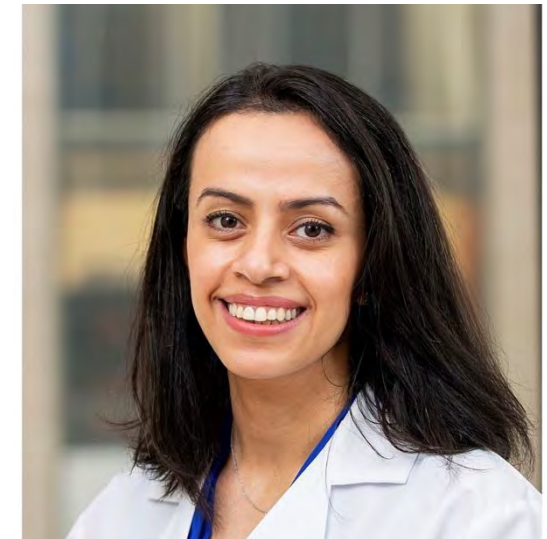
**Timeframe:**  
January 1<sup>st</sup> of each Calendar Year



# Primary Care Expansion



- Primary Care opened at 37 W. 65th St on 9/12 - newest and largest location
  - Nearly 11K SF with 17 exam rooms
  - Opened with 3 Family Medicine physicians, 2 Pediatricians, and embedded Behavioral Health
  - Will accommodate 7–8 providers
- Ophthalmology in same building in 2025
- Expands on previously opened Manhattan Valley (11/20), Midtown at 51st St (9/21), Tarrytown (6/22)



**Nehal Galal, DO**  
Medical Director,  
Columbia Primary Care

# Multidisciplinary Care – Och Spine at the Spiral Building

- Spine Center in Hudson Yards to open 1/25
  - 75K SF with 34 exam rooms, ambulatory practice space, 6 room procedure space, diagnostic imaging, and physical therapy
- Surgical and non-surgical spine specialists from Columbia, Weill Cornell, and NYP to provide integrated spine care
- Columbia providers include:
  - Orthopedic and neurosurgical surgeons
  - Neurologists
  - Physical medicine and rehab physicians
  - Pain management specialists





# Multidisciplinary Care – Centers of Excellence

- Columbia & NYP ambulatory care in White Plains to open 9/25
  - State-of-the-art 4-story, 225K SF multidisciplinary space
- Five Centers of Excellence – Cardiovascular, Children’s Health, Neuroscience, Men’s Health, Women’s Health – and Cancer Plus
- Clinical services will include:
  - Ambulatory Practice & Surgery
  - Diagnostic & interventional radiology
  - Infusion
  - Physical/occupational/speech therapy
- Existing and new providers – nearly 100 providers by year 5



# Leading and Innovating in Quality and Patient Safety

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## Columbia Center for Patient Safety Science

- Research, advancement through education and training, and improving patient safety
- Strengthen current program, personnel, policies, and practices with assessment by external thought leaders
- Invest in predictive model identifying high-risk behaviors
- Increase internal communication regarding patient safety involving multidisciplinary groups of learners, practitioners, and faculty



**Jason Adelman, MD, MS**

Chief Patient Safety Officer and  
Executive Director of Patient Safety Research



# Patient Safety and Health Services Research Fellowship



## Developing Clinicians-Researchers as Innovative Leaders in Patient Safety, Quality, and Informatics

- 2-Year Program with >80% protected research time for post-docs (MD, DO, DDS, RN-PhD)
- Funded Masters program at Mailman School of Public Health
- Alumni career paths include independent research funding, leadership in quality and operations

Learn More and Apply



# Streamline Clinical Operations

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## Clinical Optimization Project

Helps departments standardize operational and clinical workflows, and enhance the well-being of everyone involved

- Partnering with Office of Well-Being to address provider burnout, improve employee retention, other well-being objectives
- Current projects with Electrophysiology, Urology, Digestive and Liver Diseases, Radiation Oncology, and more



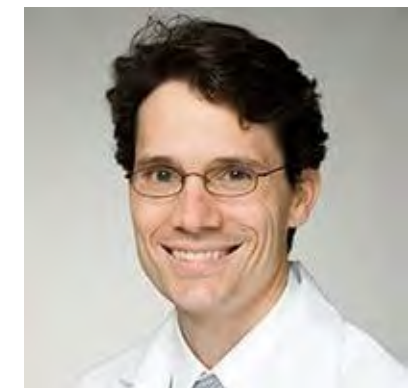
**Rae Vagg**

Chief Operating Officer,  
ColumbiaDoctors

## Clinical Hiring Funds Flow

Map clinical hiring workflow between CUIMC and NYP

- Comprehensive assessment of current state workflow to identify inefficiencies
- Re-engineer workflow to create more efficient and organized process
- Developed current state process map of multiple teams across CUIMC and NYP; reviewed current state, proposed process changes with CUIMC and NYP



**Timothy Crimmins, MD**  
Chief Medical Information  
Officer



# Celebrating 100 Robotic Heart Surgeries

- Congrats to Surgical Heart Valve Program, led by Dr. Amar Geirsson!
- Robotic mitral valve repair began more than 20 years ago
- Technique only recently widely adopted
- Advances such as Da Vinci robot make procedures more efficient and accessible







**Drive Discovery to  
Transform Human Health**

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## Priority 3

# Drive Discovery to Transform Human Health

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1. **Attract and empower the most creative and collaborative scientists**
2. **Create the leading ecosystem for scientific discovery and translation**
3. **Enhance scientific impact through collaboration and partnership**

# VP&S Departments Rank in Top 10 for NIH Funding

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**#2 Biochemistry and Neurology**

**#3 Medicine and Psychiatry (with NYSPI)**

**#5 Anesthesiology**

**#6 Obstetrics & Gynecology**

**#7 Orthopedics**

**#8 Ophthalmology, Pathology, and Physical Medicine & Rehab**

**#9 Neurosciences**



# Large Grants Advancing Critical Research

## ARPA-H Contract to Fund Columbia's NOVAJoint

- \$38.95M contract over 5 years from ARPA-H
- Clark Hung, PhD; Nadeen Chahine, PhD (Biomedical Engineering, Orthopedic Surgery)

## NIH Funding for Silent ALS

- \$15.5M in funding over 3 years from NIH's Ultra-rare Gene-based Therapy (UrGenT Network)
- Neil Shneider, MD, PhD (Neurology)

## NIH Funding to create the 3D Aging & Alzheimer Brain Program

- \$31.4M over 5 years from NIA
- Philip De Jager, MD, PhD; Vilas Menon, PhD; Hemali Phatnani, PhD (Neurology and Taub Institute)

## NIH Funding to create NY-CHAMP

- \$16.8M over 7 years from NICHD
- Uma Reddy, MD, MPH (Obstetrics and Gynecology); Kelli Hall, PhD (Population and Family Health); Jacquelyn Taylor, PhD (Nursing)

## Intermediate-sized Expanded Access Protocol for CNM-Au8 in Amyotrophic Lateral Sclerosis (ALS)

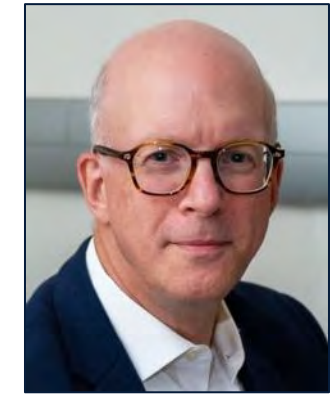
- \$56.6M over 4 years from NINDS
- Jinsy Andrews, MD, MSc (Neurology)



Nadeen Chahine, PhD



Clark Hung, PhD



Neil Shneider, MD, PhD



Philip De Jager, MD, PhD



Vilas Menon, PhD



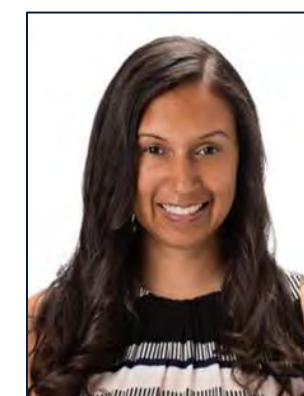
Hemali Phatnani, PhD



Uma Reddy, MD, MPH



Kelli Hall, PhD



Jacquelyn Taylor, PhD

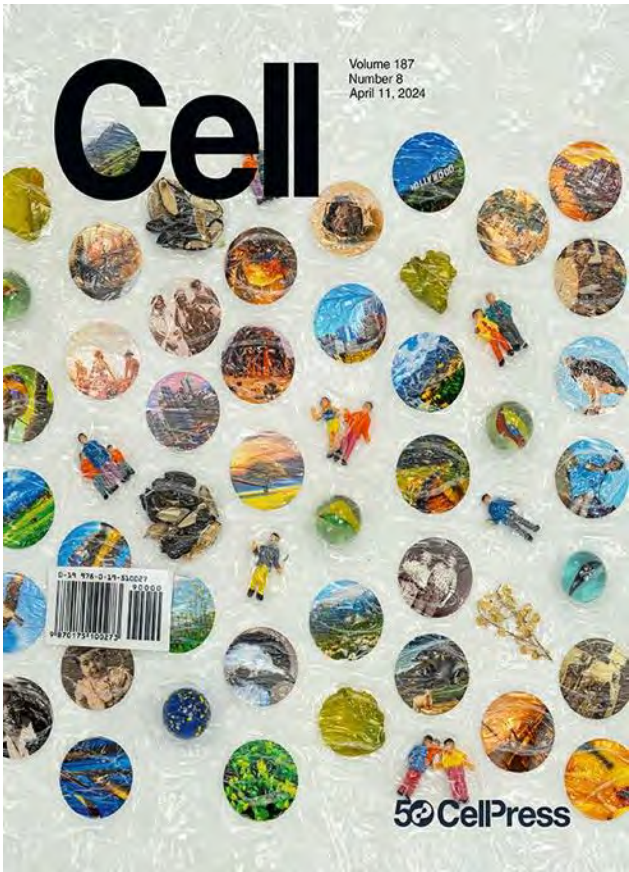


Jinsy Andrews, MD, MSc



# Notable Publications

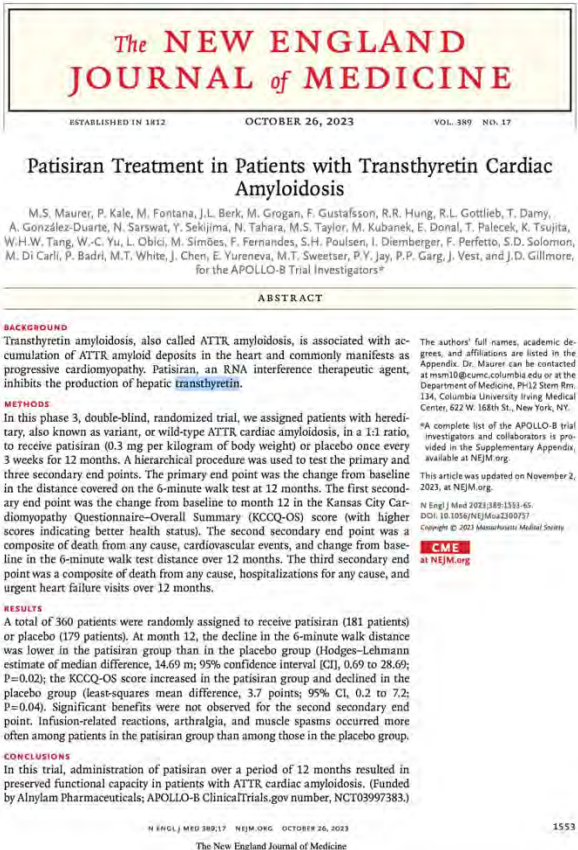
Our scientists have accelerated their groundbreaking discoveries



18 Articles



29 Articles



22 Articles



16 Articles



# National Achievements

## National Academy of Medicine



Siddhartha Mukherjee, MD  
2023



Brent Stockwell, PhD  
2023

## National Academy of Sciences



Oliver Hobert, PhD  
2024



Arthur G. Palmer III, PhD  
2024

## More Honors and Awards

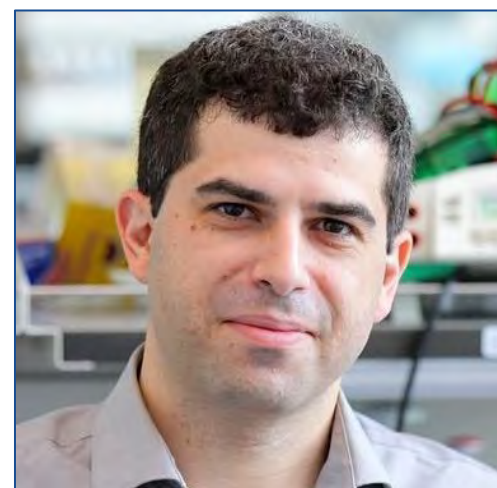


## American Association for the Advancement of Science

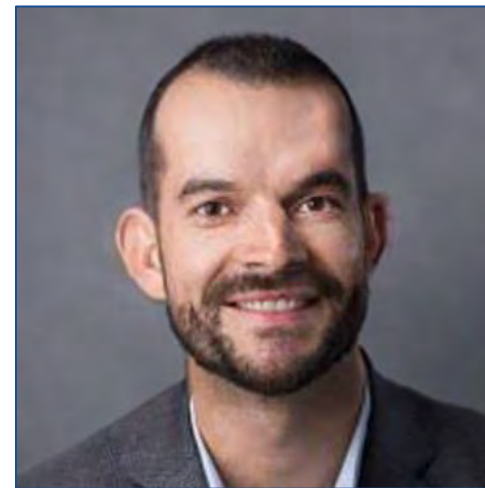


Jonathan Dworkin, PhD  
2024

## Howard Hughes Medical Institute Investigators



Dmitriy Aronov, PhD  
2024



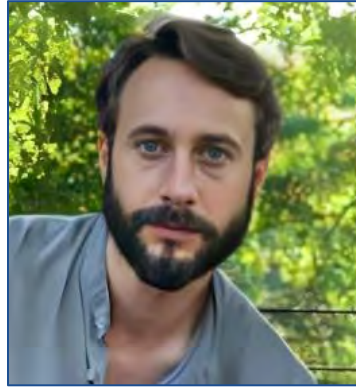
Samuel Sternberg, PhD  
2024

## Royal Society of Medicine



Lorraine Symington, PhD  
2024

# Attracting Top Scientists



**Philippe J. Batut, PhD**  
Assistant Professor,  
Genetics & Development



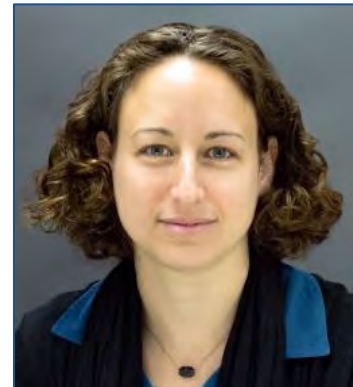
**Despina Kontos, PhD**  
Professor,  
Radiological Sciences



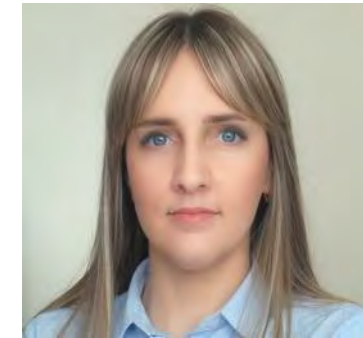
**Aimee Payne, MD, PhD**  
Professor, Dermatology



**Dusan Bogunovic, PhD**  
Professor,  
Pediatric Immunology



**Michal Levo, PhD**  
Assistant Professor,  
Biochemistry and  
Molecular Biophysics



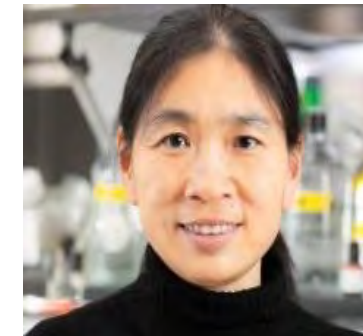
**Sviatlana Samovich, PhD**  
Assistant Professor, Pediatrics



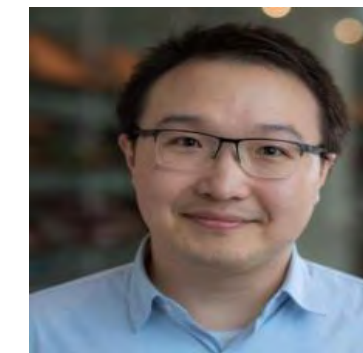
**Lea Duncker, PhD**  
Assistant Professor,  
Neuroscience



**Zachary Mannes, PhD, MPH**  
Assistant Professor,  
Emergency Medicine



**Xiao Xu, PhD**  
Associate Professor,  
Reproductive Sciences



**Dian Yang, PhD**  
Assistant Professor, Molecular  
Pharmacology and Therapeutics



# Leading Ecosystem: Scientific Research Advisory Committee



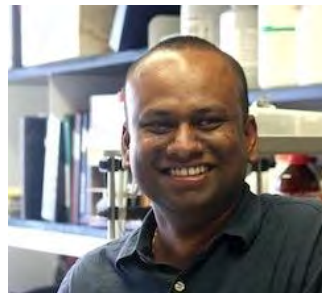
**Filippo Mancia, PhD (chair)**  
Professor, Physiology  
and Cellular Biophysics



**David Fidock, PhD**  
Professor, Microbiology  
and Immunology



**Richard Mann, PhD**  
Professor of Biochemistry  
and Molecular Biophysics



**Uttiya Basu, PhD**  
Professor,  
Microbiology and  
Immunology



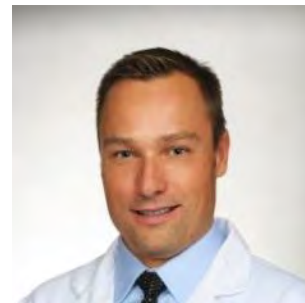
**Laura Johnston, PhD**  
Professor, Genetics and  
Development



**Chunhua Weng, PhD**  
Professor, Biomedical Informatics



**Henry Colecraft, PhD**  
Professor, Physiology  
and Cellular Biophysics



**Krzysztof Kiryluk, MD**  
Associate Professor,  
Medicine



**Ai Yamamoto, PhD**  
Associate Professor, Neurology,  
Pathology and Cell Biology



**Donna Farber, PhD**  
Professor of Surgical  
Sciences (in Surgery)



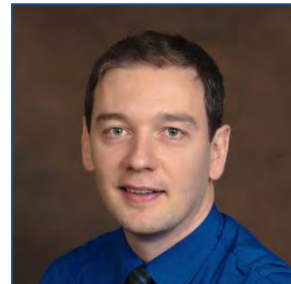
**Stavroula Kousteni, PhD**  
Professor, Physiology and  
Cellular Biophysics



**Lori Zeltser, PhD**  
Professor, Pathology and Cell  
Biology

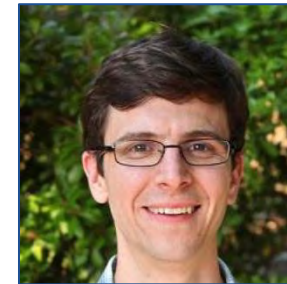
# Scientific Platform and Research Core Advisory Committee (SPARC)

Advising on forward-looking tools, technology, and services in our research core facilities



**Remi J. Creusot, PhD**

Associate Professor, Medical Sciences Faculty  
Director, CCTI/DRC/HICCC Flow Cytometry  
Core Facility



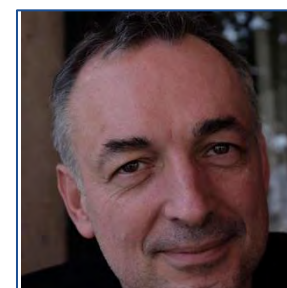
**Peter A. Sims, PhD**

Associate Professor, Systems Biology  
Faculty Director, Single Cell Analysis Core



**Darcy S. Peterka, PhD**

Senior Scientist, Director, Team Science  
Scientific Dir., Cellular Imaging, Zuckerman Institute



**Hans-Willem Snoeck, MD, PhD**

Professor, Medicine  
Director, Columbia Center for Stem Cell Therapies



**Liza A. Pon, PhD**

Professor, Pathology & Cell Biology  
Faculty Director, Confocal and Specialized  
Microscopy Shared Resource  
Associate Director, Shared Resources



**Anne-Catrin Uhlemann, MD, PhD**

Associate Professor, Medicine  
Faculty Director, Microbiome Core



**John Seeley, PhD**

Senior Director, Core Research Technologies



**Chunhua Weng PhD, FACMI, FIAHSI**

Professor, Biomedical Informatics



# Precision Medicine Initiative Working Groups

## Research Infrastructure

Develop recommendations for infrastructure to support genomic research



### **Josh Milner, MD (Lead)**

Martin Che, PhD

Barry Fine, MD, PhD

Peter Fleischut, MD

Matt Harms, MD

Krzysztof Kiryluk, PhD, MS

Steven Kushner, MD, PhD

Soumitra Sengupta, PhD

TJ Singh, PhD

Mary Beth Terry, PhD

Chif Umejei, MS

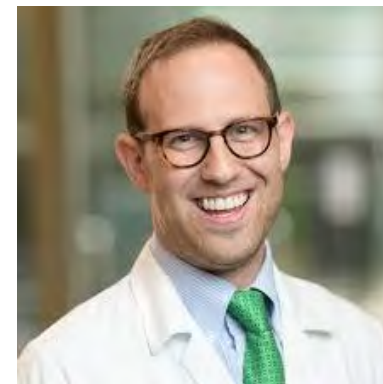
Badri Vardarjan, PhD, MS

Neil Vasani, PhD

Ronald Wapner, MD

## Clinical Activities

Develop recommendations for shared resources, best practices to support clinical genetics/genomics



### **Ben Herzberg, MD (Lead)**

Aliaa Abdelhakim, MD, PhD

Amanda Bergner, MS

Peter Fleischut, MD

Kevin Gardner, MD, PhD

Matt Harms, MD

Dawn Hershman, MD, MS

Eldad Hod, MD

Susan Hsiao, MD, PhD

Steve Kernie, MD

Mahesh Mansukhani, MD

Aimee Payne, MD, PhD

Anil Rustgi, MD

Meghna Trivedi, MD, MS

Ronald Wapner, MD

# Improving IT Coordination and Collaboration

Reduce system barriers to improve coordination and collaboration

## Research IT Services

- New CUIMC EPIC REDCap Service
- Training Grant Database under development
- New research faculty "meet and greets"

## Research Information Technology and Computing (RITC)

- Inaugural CRIO, Despina Kontos; Director of RITC, Mike Faucher
- Major investments in the CUIMC High-Performance Computing (HPC) Center (w/Systems Biology, CUIMC IT)

Most powerful HPC cluster at Columbia and one of the most powerful academic HPCs nationally



**Vinod Gupta**

Director, High-Performance Computing



**Mike Faucher**

Director, Research Information Technology and Computing





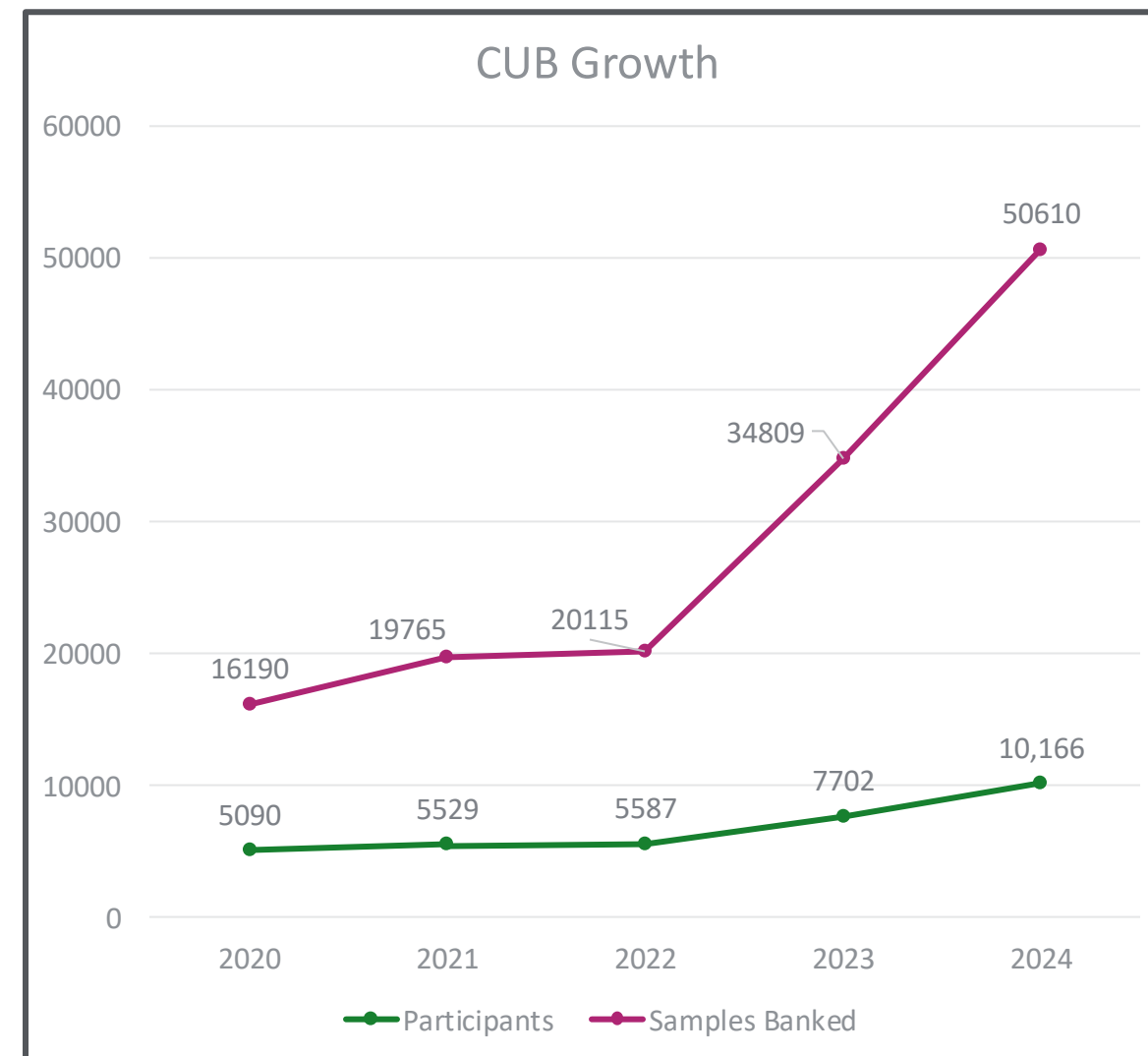
# Expanding Our Biobanking Capabilities

Biobank Resource for Investigating Disease, Genes, and the Environment Facility (BRIDGE)

Opening November 2024



## Columbia University Biobank (CUB)



### Active Recruitment

- Emergency Medicine
- Cardiology
- Normal Marrow Hip Surgery
- Pancreas
- Leukemia
- Pediatric ICU
- Pediatric Allergy Immunology
- Neonatal ICU
- Congenital Heart Center
- Otolaryngology
- Pulmonary Allergy and Clinical Care
- Transplant Clinic Research Center

# Launching the VP&S AI Initiative

Spearhead innovative, safe, and equitable AI through collaborative research, transformative education, bi-directional community engagement, and patient-centered and clinician-supportive approaches; led by Noémie Elhadad

**AI Governance and Oversight:** Noémie Elhadad, Jennifer Williamson

**Clinical:** Tim Crimmins

**Community:** Olajide Williams

**People & Business Processes:** Wil McKoy, Jonathan Touson

**Research:** Noémie Elhadad, Jennifer Williamson

**Training & Education:** Rosa Lee, Lauren Richter

## AI & Social Determinants of Health Innovation Day

Develop and test efficacy of AI-driven social determinants of health-responsive approaches to optimize patient outcomes and inform health policy



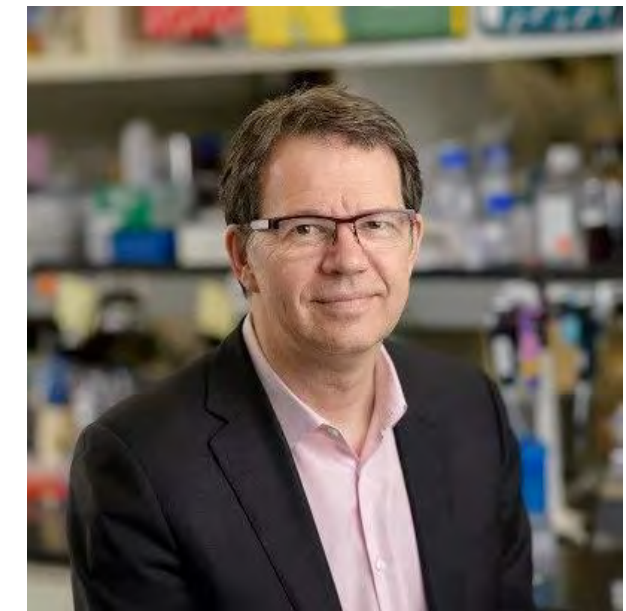


# Welcome Michel Sadelain, MD, PhD

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Globally recognized pioneer of chimeric antigen receptor T cell (CAR-T) immunotherapy, groundbreaking approach to cancer treatment

- Inaugural director of the Columbia Initiative for Cell Engineering and Therapy (CICET); Director of the Cancer Cell Therapy Initiative in HICCC
- CAR-T therapy uses genetic engineering on patient's own T cells in the lab to transform them into "living drugs" for the treatment of cancer.
  - First CAR-T therapies were approved by the FDA in 2017, ushering new class of drugs based on T cell engineering
- University-wide CICET will drive integration of work in disease modeling, bioengineering, genome editing, systems biology, synthetic biology, and machine-learning/AI, among other areas



**Michel Sadelain, MD, PhD**  
Inaugural Director, Columbia Initiative  
for Cell Engineering and Therapy

# Cell and Gene Therapy Facility



- New 3,700 SF facility in Russ Berrie Pavilion – mid-2025
- 3 Procession suites, 1 Vector Production suite will more than double production capacity and services
  - Autologous and allogeneic CAR-T therapies
  - Viral vector and gene therapy product production
  - mRNA-based therapies
  - Stem cell-based therapies
- Expand on existing Columbia Cellular Immunotherapy Laboratory



# Collaborations and Partnerships

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## Chan Zuckerberg Biohub

Collaborating on new Genome Engineering Core (GECO) to develop CRISPR tools and screens and enable spatial profiling for CU research projects



## New York Genome Center

Expanded use of NYGC services to gain economies of scale in raw sequence data generation and CU access to new technology platforms

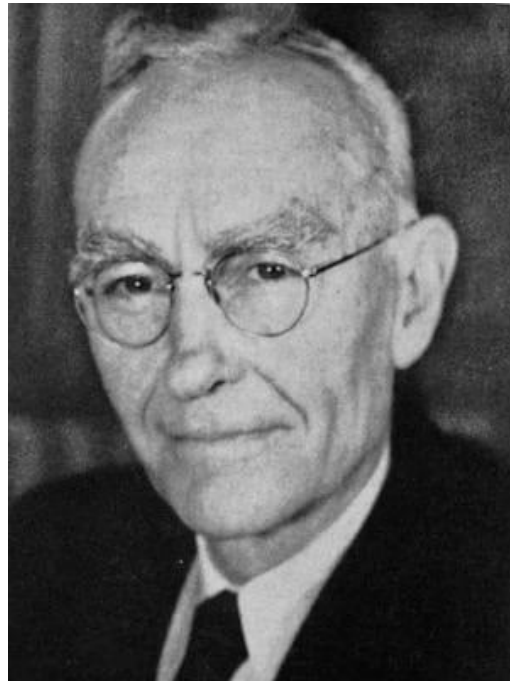


## New York Structural Biology Center

Improve uptime of instruments at CU and explore additional joint training programs



# Groundbreaking Achievements in Pancreatic Cancer



**Allen O. Whipple, MD  
(P&S 1908)**  
Established the Whipple Triad and Whipple procedure in the 1930's at Columbia



**Kenneth Olive** led a Columbia team with Revolution Medicines Inc. to discover a new cancer therapeutic for pancreatic cancer by inhibiting RAS-driven cancers

**Triple-combination Therapy**  
Gulam Manji, MD, PhD, is testing cytokine inhibitor, an immunotherapy drug, and gemcitabine as therapeutic treatment for pancreatic cancer in a clinical trial



**Multidisciplinary Pancreas Center**  
John Chabot, MD, is exec. director of the Pancreas Center, which offers state-of-the-art clinical care, genetic counseling, nutrition, support services, prevention, and early diagnosis programs





**Elevate Education Across the Continuum**

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## Priority 4

# Elevate Education Across the Continuum

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1. **Deliver best-in-class development programs to advance educator success and satisfaction**
2. **Ensure learners thrive in all settings, including the classroom, clinic, and laboratory**
3. **Lead the nation in sustainable, inclusive programs that create pathways to biomedical careers**



# 2024 VP&S MD Graduate Profile

142 MD Graduates; 140 Entering Residency

## Class of 2024

- 53 did dual degree or research year; 23 completed extra year of research
  - 11 MD/PhD
  - 1 MD/MPH
  - 14 in MD/MS Biomedical Sciences program
  - 2 MD/MBA
  - 2 MD/DDS
- 68 matched New York program
- 40 matched categorical or advanced program at NewYork-Presbyterian/VP&S
- 28 students from backgrounds underrepresented in medicine
- 62 women, 80 men



# VP&S MD Class of 2028

	<b>2028</b>	<b>2027</b>
Women	<b>52.1%</b>	51.4%
Men	<b>47.9%</b>	48.6%
White	<b>46.3%</b>	50%
Black	<b>20.3%</b>	18.1%
Asian	<b>30.4%</b>	27.5%
Hispanic	<b>10.1%</b>	15.9%
American Indian or Alaskan Native	<b>2.17%</b>	1.44%
Native Hawaiian	<b>0%</b>	1.44%
Other	<b>3.6%</b>	2.17%



# PhD and MD/PhD Admissions

Area	Female	International	URM
Integrated	56%	23%	15%
Genetics and Development	54%	15%	20%
Nutritional and Metabolic Biology	58%	29%	10%
Biomedical Informatics	42%	53%	3%
Microbiology and Immunology	65%	12%	23%
Neurobiology and Behavior	55%	18%	25%
Pathobiology and Mechanisms of Disease	56%	24%	16%
Molecular Pharmacology and Therapeutics	47%	41%	12%
Cellular and Molecular Physiology & Biophysics	56%	37%	7%
<b>Total</b>	<b>55%</b>	<b>25%</b>	<b>16%</b>

# Vagelos Institute Biomedical Research Education PhD Pathway

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## Implementation Priority Areas



Reimagine the training program areas



Develop an outstanding curriculum



Prioritize quality mentoring



Expand resources to launch students' careers



Ensure student wellness



**Hashim M. Al-Hashimi, PhD**  
Professor, Biochemistry  
and Biophysics



# VP&S and CUIMC Educator Development Certificate

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- Educator Development Certificate of Participation (CEDC) program is an innovative, evidence-based, faculty-driven, professional development series
- Led by VP&S and CUIMC faculty, CERE, and CTL
- Develop shared understanding of being an educator at VP&S and CUIMC
- Provide common knowledge for CUIMC educators, particularly in clinical space

## Format

- 8 sessions
- 5 required courses
- 3 required electives (10 offered)

# Success in Occupational Therapy

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- 10-year accreditation for entry-level MS program's reaccreditation cycle with no notes
- 51 MS, 15 post-professional OTD students graduated in 2024
- LCME 2026 accreditation underway with 2025 site visit
- OT and Physical Therapy students in Modifications and Assistive Technology plan and build low-cost adaptive designs for local children





# LCME Timeline

- Data Collection Instrument
- ISA report
- Address issues from self-study
- Survey visit logistics

- Mock survey visit
- Survey logistics
- Reports to LCME

Fall  
2024

Spring  
2025

Summer  
2025

Fall  
2025

LCME  
Survey  
Visit

- LCME Launch Party
- Task Force and Subcommittees
- ISA survey to students

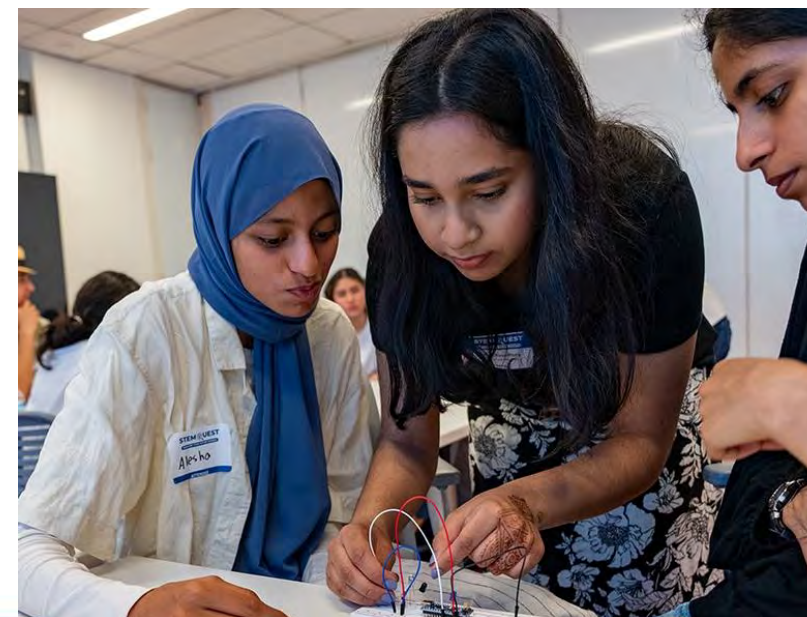
- Resurvey students
- Self-Study  
Summary report

**January 26–28, 2026**



# Promoting Student Diversity

- HICCC and LaGuardia Community College in Queens launched internship program in clinical research
- First STEMQUEST for 620 high school students; Dentistry, Cardiology, Neuroscience, Biomedical Engineering, and more hosted 26 sessions
- Office of Student Diversity, Inclusion, and Belonging provided academic support, college readiness, and early exposure to more than 240 students through S-PREP, SHPEP, and NERA MedPrep pathway programs
- Columbia Stem Cell Initiative Outreach Program brought together local students for hands-on activities and panels





# Meet Halil Beqaj

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Halil Beqaj graduated VP&S this year with MD and MS in biomedical sciences – while running marathons. He also worked with the Columbia Human Rights Initiative Asylum Clinic to help increase chances of asylum seekers successfully attaining asylum.



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*“It was around the age of 12, when a close relative died suddenly from a complication during a procedure that was supposed to be relatively routine, that I discovered a passion for medicine. Seeing how consequences of the healthcare disparity in the region impacted my family, I developed a deep sense of wanting to make sure nobody else had to experience what my family had.”*

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# Prioritize Partnership to Advance Community Health

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## Priority 4

# Prioritize Partnership to Advance Community Health

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1. Leverage all assets across our missions to advance the well-being of our local communities
2. Grow bi-directional community-based research
3. Improve health care quality and access in our local communities
4. Cross-cutting strategic plan: pipeline and inclusive pathways programs

# Office of Academic and Community Partnerships

- Launched in 2024 to foster equitable community engagement initiatives and create better health in Northern Manhattan and Washington Heights
- Manage bi-directional community service and education programs, youth, community research, and campus-wide community support efforts
- Liaison to local CBOs and Community Boards
- Coordinate new Community Health Leaders Advisory Council
- Manage Medical Center's Neighborhood Fund



**Sandra Harris**

Vice President, Community Affairs  
and Partnership Engagement



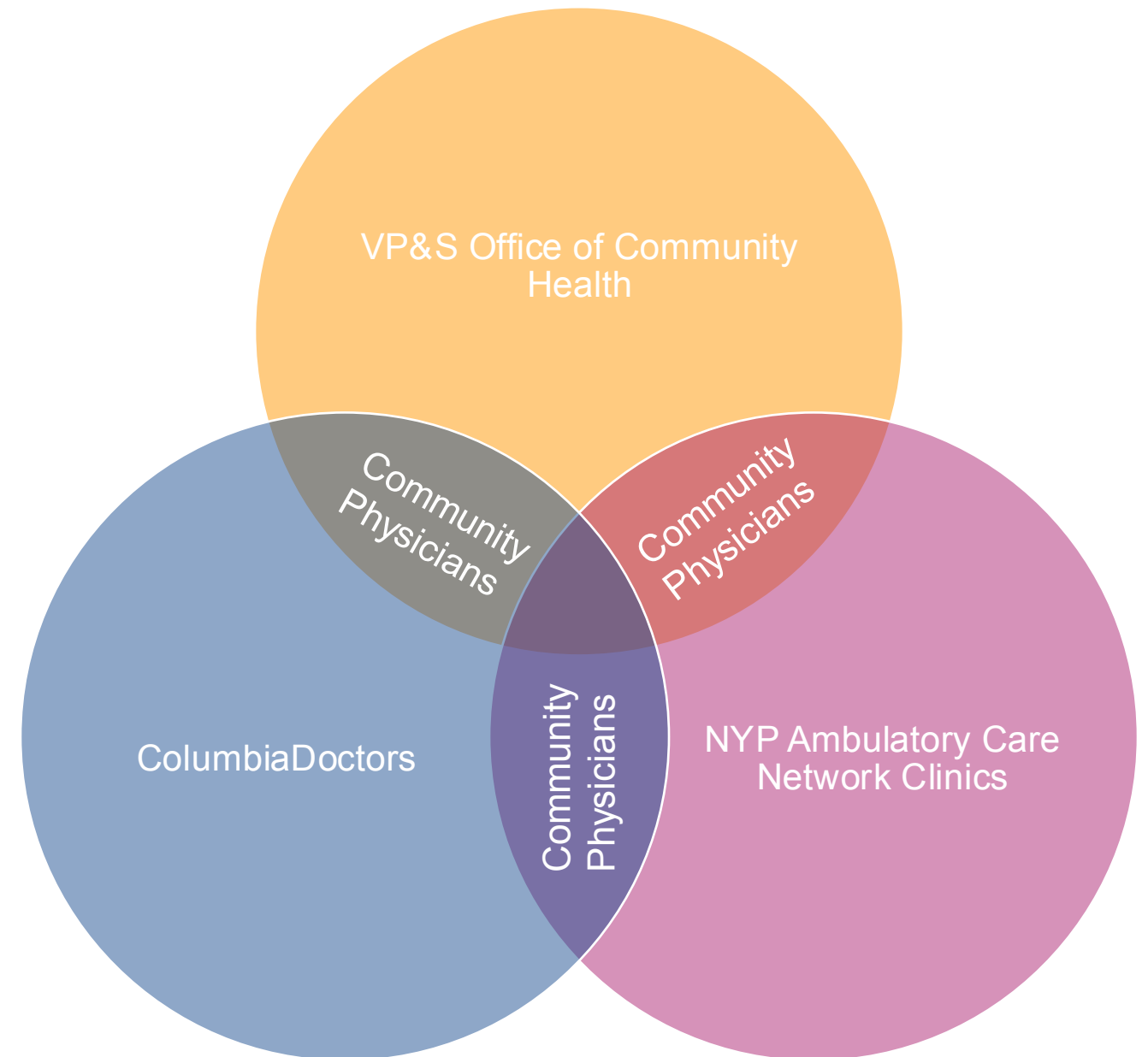


# Improve Health Care Quality and Access in Our Local Communities

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## Community Physician Initiative

- Bi-directional relationship with community-based medical providers
- Community-based physicians engage in clinical research, facilitate patient recruitment into trials, and provide education, training, and networking opportunities



# Create Inventory of Assets and Formalize Management Structure

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## Community Engagement Representatives

- **Anesthesiology:** Maya Hastie, MD, Professor
- **Dermatology:** Rolando Perez-Lorenzo, PhD, Assistant Professor
- **Emergency Medicine:** Betty Chang, MD, Assistant Professor
- **Medicine:** Maria Hamm De Miguel, MD, MPH, Associate Professor; Christopher Irobunda, MD, Associate Professor
- **Neurology:** Olajide Williams, MD, MS, Professor
- **Neurosurgery:** E. Sander Connolly Jr., MD, Professor and Chair
- **Obstetrics and Gynecology:** Ana Cepin, MD, Associate Professor
- **Ophthalmology:** Lisa Hark, PhD, MBA, Professor; Lisa Park, MD, Associate Professor
- **Orthopedics:** Wakenda Tyler, MD, Associate Professor
- **Otolaryngology:** Oscar Trujillo, MD, Assistant Professor
- **Pathology:** Eileen Fuentes, Clinical Coordinator
- **Pediatrics:** Dodi Myer, MD, Professor
- **Psychiatry:** Milton Wainberg, MD, Professor
- **Radiation Oncology:** Luqman Dad, MD, MBA, Assistant Professor
- **Radiology:** Ernst Garcon, MD, Associate Professor
- **Rehabilitation Medicine:** Samantha Sawade, PT, DPT, PCS, Instructor
- **Surgery:** Lisa Weichmann, MD, Assistant Professor
- **Urology:** Guarionex DeCastro, MD, Associate Professor



# HICCC Community Partnerships

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Increase participation of underrepresented minorities in clinical trials and enhance diversity of clinical researchers

## Community Health Worker Training Program

- Olajide Williams, MD, Mary Beth Terry, PhD; Alejandra Aguirre, DrPH, MPH
- Nationally recognized program advancing healthcare access and education in Washington Heights & Harlem communities

## Diversity in Clinical Trials Training Program

- Mary R. Welch, MD; Andrew B. Lassman, MD
- Exploring how trial design impacts inclusivity and impacts data for decision-making

## 2nd Annual Diversity, Equity, and Inclusion in Clinical Trials Day

- Gathering community members, faculty, staff, and industry professionals to raise awareness about health equity in clinical trials



**Andrew Lassman, MD**  
Professor, Neurology and  
Assoc. Director, Clinical Trials



# Connecting HICCC Patients and Community to Clinical Trials

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## Clinical Trial Navigation Program

National leader in diverse clinical trial accrual, with 50% URM enrollment in interventional trials

## Oncology Research Nurse Navigators Program

- Enrolled 115 patients (627 inquiries) across 11 disease-based teams
  - 18% of total intervention trial accruals
  - 37% of URM enrollment in interventional treatment trials
- Enrolled 45 patients in early-phase trials with Phase 1 team
- Collected data from all patient inquiries to guide disease-based teams in clinical trial selection and design



# Community Health Worker Training Center

CHW Training Center trains NYC residents recruited from houses of faith and CBOs using C3 projects national standards

- 252 CHWs trained and certified from 72 Black churches and CBOs
- Created online CHW Executive Program with Columbia School of Social Work
- Impact:
  - > 30,000 BP, A1C, Lipid screenings
  - > 5000 adults referred to healthcare system
  - > 600 without health insurance now insured
  - 480 depression and 54 colorectal cancer screenings





# Inclusive Pathway Programs

- 127 pathway programs stratified by type, age, zip codes, goals/objectives, focus areas
- VP&S student-led *Adolescents Caring for Community by Promoting Literacy on Insurance, Stroke, Health Education, Emergencies, and Dementia* (ACComPLISHED)
- 26 education programs for high-schoolers and undergrads across Columbia



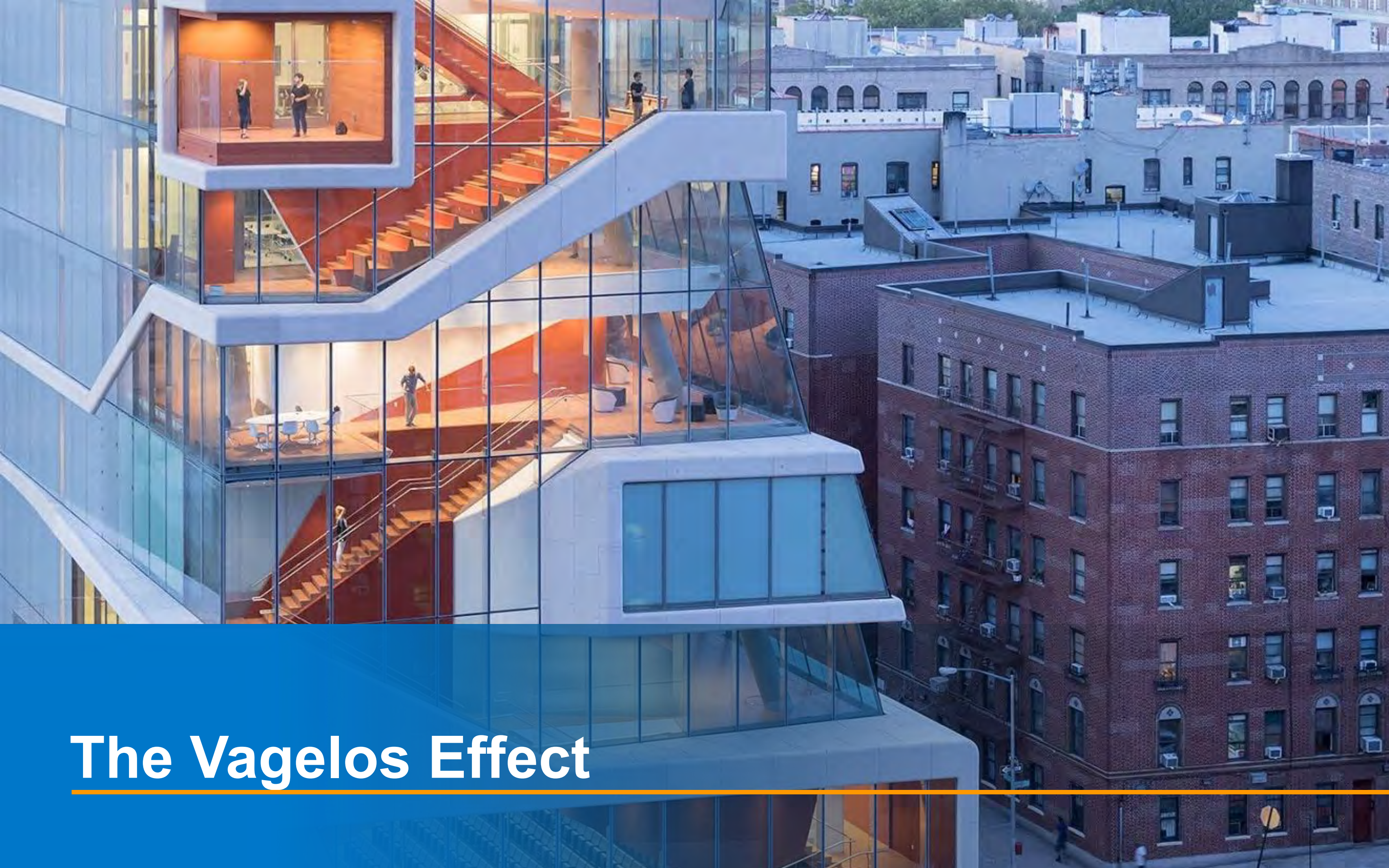


# Future Scientists at the Curiosity Cube

- Curious Minds Science Zone on Haven Plaza featured interactive workshops in Curiosity Cube, 22x10-foot mobile science lab
- More than 1,280 students from five public Washington Heights elementary schools engaged with hands-on science experiments and learned about STEM careers from CUIMC volunteers
- Featured programming from the Columbia Stem Cell Initiative Outreach Program







# The Vagelos Effect

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# Building the World's Leading Ecosystem for Biomedical Research

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The vision of the Roy and Diana Vagelos Institute for Basic Biomedical Science

- New academic model encourages and accelerates intellectual risk-taking to make historic advances
- VP&S hub of the basic sciences for the advancement of medicine, including basic science departments, research, graduate programs, and physician-scientist career development
- Promote innovative and collaborative science
- Support the recruitment of future generations of exceptionally creative scientists
- Foster partnerships across the University



# The Vagelos Innovation Laboratories

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Our world class biomedical research building will set new standards for science and sustainability

- Eight-story, 77,000 SF building at W. 167th Street and Audubon Avenue, opening summer 2026
- State-of-the-art research laboratories, community engagement spaces
- Main Columbia hub to develop treatments for most significant threats to human health; genetic and genomic science to treat neurodegenerative diseases and cancers
- Highest level of sustainability in scientific research infrastructure in NYC
  - First university-owned research building in NYC that doesn't rely on fossil fuels
  - Biophilic elements, such as green walls of living plants and natural, renewable materials, provide well-being, health, environmental benefits



# Honoring Roy and Diana Vagelos



- Join us **Oct. 8** for “The Vagelos Effect: An Evening of Celebration Honoring Roy and Diana Vagelos”
- A tribute to the enduring impact of our partners Roy and Diana Vagelos in our work to transform human health by driving discovery, advancing care, and educating leaders
- Featuring a live performance from the upcoming Broadway musical, *Buena Vista Social Club*

**RSVP**  
Promo Code: **VPS168**











**THANK YOU**

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