Welcome from the Chair

Massimo Loda, MD
David D. Thompson Professor and Chairman of Pathology and Laboratory Medicine
Pathologist-in-Chief, NewYork-Presbyterian Hospital/Weill Cornell Medical College

Our Department of Pathology and Laboratory Medicine continues to be recognized as one of the world’s premier pathology programs across clinical care, scientific research, and medical education. Thank you again to all our faculty, trainees and staff for making our department such a special place. Together we have achieved a great deal this past year, as briefly outlined below.

Our strength in basic science cannot be overemphasized. In this respect, our Department is within the top pathology departments around the country. Federal funding in the Division of Cell and Cancer Pathobiology continues to increase, and the quality of publications is exceptional. We have enormous clinical strength with some of the world’s most prestigious pathology leaders among our ranks, who combine clinical advances with innovative clinical research in laboratory testing and anatomic pathology. We have expanded upon our state-of-the-art Clinical Genomics program to extend our innovative genomic testing technology to the underserved populations of the entire Cornell-NYP sphere. This single approach to genetic testing improves equity and it addresses socioeconomic and racial disparities in cancer care. Our laboratory directors oversee the manufacturing of novel CAR-T cells in our cGMP facility, and have facilitated several clinical trials for industry-sponsored and investigator-initiated novel cellular therapy products. Our medical director’s chemistry laboratory developed a machine learning model to steward the use of a frequently overused laboratory test. Our transfusion medicine service developed a new model for an automated full-service blood bank that is the first of its kind in the United States, and helps address the catastrophic blood bank staffing shortage. Our Anatomic Pathology Division is embarking on the conversion from glass slides to digital imaging for clinical diagnosis. The Department’s Computational and Systems Pathology Division uses quantitative methods and mathematical modeling to study human disease processes. The Division has established a HIPAA-compliant, Google cloud-based research infrastructure, with a repository of de-identified, clinical images and NGS data for analysis and use by the institution at large. The Hematopathology Division has focused on developing tests to dissect complex phenotypes of hematological disorders using multicolor flow cytometry and multiparametric imaging.

Finally, we have obtained a new “Next Generation Pathology” training grant (T32), focused on molecular and computational pathology, which is critical for our pathology trainees, especially for the recruitment and retention of physician-scientists to the training program.

Together, we are proud of our accomplishments and look forward to another productive year.

Sincerely yours,

Massimo Loda, MD
Research Highlights

**Dr. Angeles Duran** joined the Department of Pathology and Laboratory Medicine as a Research Assistant Professor in January 2020 in the Moscat/Diaz-Meco Laboratory. Her research centers on signal transduction to investigate the role of the atypical PKC network in human disease. Angeles received her PhD from Autonoma University of Madrid (Spain), where her graduate work focused on discovering the functional role of the atypical PKC zeta (PKCζ) in inflammation and cancer through the control of NF-κB, JAK/STAT, and Ras pathways. She continued as a Post-Doctoral Fellow at the University of Cincinnati, where she made important contributions to understanding the physiological role of p62, a binding partner of the aPKCs, as a signaling hub regulator in diverse biological processes and pathologies, like bone remodeling, obesity, and cancer. As Research Assistant Professor at Sanford-Burnham-Prebys Medical Discovery Institute, her research focused on liver cancer. She uncovered a new and unexpected role of p62 in the liver stroma as a negative regulator of the reprogramming of hepatic stellate cells by vitamin D (Duran et al., Cancer Cell, 2016). In recent years, she furthered her expertise in the tumor micro-environment to investigate the role of the aPKCs in colorectal cancer using in vivo models, 3D organoid cultures, and bioinformatic tools. A seminal discovery has been the generation of a new mouse model that faithfully recapitulates an aggressive subtype of human CRC serrated by simultaneous deletion of both atypical PKCs in the intestinal epithelium and the identification of potential treatments for these tumors targeting the stroma in combination with immune checkpoint therapy. This important finding was published in *Immunity* (Nakanishi et al., Immunity, 2018). She had a critical role in characterizing the desmoplastic stroma of these colorectal tumors using her expertise in single-cell RNAseq sample preparation and bioinformatic analysis. This work resulted in a second author publication in *Developmental Cell* (Kashima et al., Developmental Cell, 2020). Her most recent work in Cancer Cell, in co-authorship with Dr. Anxo Martinez, has addressed the potential pre-clinical efficacy of targeting these highly-stromal tumors degrading the rich hyaluronan stroma with clinical-grade hyaluronidase (PEGPH20) in this endogenous mouse model and at single cell level. Since 2022, Angeles’s research has been supported by an NCI Research Specialist Award (R50).

**Dr. Anxo Martinez-Ordoñez** joined the Department of Pathology and Laboratory Medicine as a Postdoctoral Associate in January 2020 in the Moscat/Diaz-Meco Laboratory from the University of Santiago de Compostela (Spain), where his work focused on discovering new mechanisms in breast cancer metastasis and tumor microenvironmental adaptations. Using zebrafish and mouse in vivo xenograft systems and several genetic approaches using CRISPR/Cas9 technology, Anxo made important contributions to our understanding of how POUF1 transcription factor induces breast cancer metastasis through a chemotactic guidance mechanism (Martinez-Ordoñez, A et al., Oncogene 2018). Also, as a part of his degree, Anxo identified POUF1 as a key regulator of tumor-associated macrophage polarization and cancer-associated fibroblast modulation (Seoane S and Martinez-Ordoñez, A et al., J Pathol. 2019, Martinez-Ordoñez, A et al., Oncogene 2021). After developing an interest in studying how tumor microenvironmental heterogeneity shapes tumor progression using computational biology-based approaches, Anxo pursued his postdoctoral training with Prof. Jorge Moscat and Prof. Maria Teresa Diaz-Meco in the Department. During his postdoctoral training, Anxo used multiplex imaging, 3D in vitro cultures, in vivo models, and single-cell-based approaches to identify hyaluronan depletion (using a clinical-grade hyaluronidase) as a therapeutic vulnerability in mesenchymal colorectal cancer (Martinez-Ordoñez, A and Duran A et al., Cancer Cell 2023). Numerous internal and external awards have supported Dr. Martinez-Ordoñez throughout his training, including a Predoctoral Fellowship from the Spanish government.

**Dr. Alexia Martínez de Paz** joined the Dr. Steven Josefowicz laboratory in the Department of Pathology and Laboratory Medicine in 2018. Before her appointment, she completed her PhD in the Cancer Epigenetics and Biology Program at the University of Barcelona (Spain), under the guidance of Dr. Manel Esteller. Her doctoral research primarily focused on the epigenetic protein MeCP2, a methyl DNA binding protein vital for neuronal function. Highlighting its importance, mutations in MeCP2 are responsible for the onset of Rett syndrome, a prevalent cause of cognitive impairment in females. Alexia’s findings shed light on the remarkably dynamic nature of the neuron-enriched isoform, revealing how various stimuli, including neuronal depolarization and circadian cues, impact MeCP2 expression and degradation rates, in turn influencing chromatin accessibility and the transcriptional regulation of target genes.

Fascinated by the epigenetic orchestration of transcriptional responses to external cues, Alexia joined the Josefowicz lab, which focused on investigating signaling-to-chromatin pathways inducing rapid transcriptional activation in different immune responses. As she initiated her research projects within the lab, Alexia also participated very actively in a collaborative effort that unveiled the signaling-induced phosphorylation of Serine 31 on Histone H3.3 (H3.3S31ph) and downstream associated chromatin mechanisms necessary for the response of macrophages to bacterial lipopolysaccharide (Armache, Nature 2020, Martinez de Paz, Imm Rev 2021). Currently, she leads an independent research area of the lab dedicated to studying signaling-induced histone phosphorylation driving B-cell fate transitions, as well as the co-option of these pathways in Diffuse Large B cell lymphomas and viral lymphomas. She has discovered two histone phosphorylation events (H3.3S31ph and H3S28ph) downstream of the T-cell to B-cell immune synapse and necessary for naïve B cell activation and positive selection of germinal center B-cells.

Read More
Dr. Amy Chadburn presented at the 2023 Lymphoma, Leukemia & Myeloma Conference held October 18-21 in New York City. The title of her talk was "What You Need to Know about the Updates in Lymphoma Classification."

Dr. Melissa Cushing presented "Patient Blood Management: How and Why," at the Bleeding Management Masterclass in Toronto, Canada on September 29th. Dr. Cushing also was the Chair of the Selection of Abstracts Committee at the Association for the Advancement of Blood & Biotherapies (AABB) annual conference in Nashville from October 13-17. Dr. Cushing presented "Cryoprecipitate for hemorrhagic shock" at Trauma Hemostasis and Oxygenation Research THOR Network meeting on October 14th.

Dr. Robert DeSimone attended the Association for the Advancement of Blood & Biotherapies (AABB) annual conference in Nashville from October 13-17, and was the Program Chair for the Session "Effects of Blood Donor Social Behaviors on the Quality and Efficacy of Red Blood Cell Transfusions." He was also speaker for the session, "Managing the Media: Tools to Communicate with the Public Effectively."

Dr. Julia T. Geyer traveled to Sao Paolo Brazil for the 3rd Latin American Congress of Hematopathology (May 17-May 20) and presented 2 talks discussing updates in acute leukemia and myelodysplastic syndrome. Dr. Geyer was also invited to become a member of the bone marrow pathology study group, a selective American society of experts in myeloid neoplasms. She presented a virtual academic session on myeloproliferative neoplasms, entitled "The platelet count is 500k. Is this an MPN? Which one?" for the Sociedad Latinoamericana de Hematopathología (SOLAHP) on October 21st.

Dr. Matthew B. Greenblatt’s recent research that discovered a new type of stem cell that causes the frequent metastasis of breast tumors and other cancers to the spine generated attention from news outlets like Scientific American, Genetic Engineering & Biotechnology News, Inside Precision Medicine, Healio, and a Nature podcast.

Dr. Domenick J. Falcone was named to the Senior List at the 2023 Weill Cornell Medicine Convocation by the graduating class. The Senior List is selected by the graduating class to recognize 16 faculty members who have demonstrated dedication to medical education and excellence in teaching.

Dr. Giorgio Inghirami presented at the 3rd Cuneo City Immunotherapy Conference (CCITC) Immunotherapy In Hematological Malignancies at Rondo of Talents, Cuneo, Piedmont, Italy. He also gave an invited talk on "Pre-clinical PDX models as platform lymphoproliferative disorders," at the 2023 meeting of the EurOPDX Consortium from June 20-21.

Dr. Khani also moderated a session at this meeting on "Pathology Serum Markers and Genomic Classifiers."

Dr. Ben Kleaveland co-organized an EMBO Workshop in Cavtat, Croatia (May 23-May 26) 2023 on the crosstalk between RNA and protein decay. He also gave a short talk during the meeting entitled "Cis-acting elements enhance Cyano-directed miR-7 degradation."

Dr. Neal Lindeman with Dr. Louis Sussman from NYP-Queens Pathology visited Capitol Hill on April 18th for Pathology/Laboratory Medicine advocacy. Dr. Neal Lindeman was also featured in a CAP Today article, "Growing pains put (molecular) gene panels in a pinch," on April 30th. He also presented on the forthcoming updated lung cancer biomarker guidelines, as Co-Chair and Steering Committee Member of the Guideline Development Team, during the CBCVI meeting of the College of American Pathologists, International Association for the Study of Lung Cancer, and Association for American Pathology on September 16th.

Dr. Massimo Loda participated in the Planning Committee meeting at the 34th Pezoller Symposium in Trento, Italy (June 19–20). He also presented "Exploiting Prostate Cancer Metabolism for Cure," at the PCF Coffey-Holden Prostate Cancer Academy Meeting (June 22 - 25). In addition, he also co-led a discussion, "Translating Novel Targets in Hormone-Related Cancers into the Industry Setting," on August 10th during the 2023 Hormone-Dependent Cancers Gordon Research Conference. After dedicating years to in-depth investigations into lipogenesis and the continued...
crucial role of the Fatty Acid Synthase enzyme in prostate cancer, the Loda lab is excited to enroll patients for an upcoming "Phase I, Open-Label, Dose-Finding Study of TVB-2640 Administered in Combination with Enzalutamide in Men with Metastatic Castration-Resistant Prostate Cancer." Led by the distinguished Dr. David Nanus, this trial aims to contribute to developing a new treatment in mCRPC by targeting for the first time the intricate interplay between the Androgen Receptor pathway and the metabolic processes within cancer cells, particularly the FASN enzyme, its rate-limiting step. The trial will be conducted at two affiliated institutions, NYP-Brooklyn Methodist Hospital and NYP Queens, with the aim of not only increasing the number of PC pts, but also including under-represented populations.

Dr. Massimo Loda also presented the 2023 Newton-Abraham Lecture, "Lipids in prostate cancer pathobiology: friends and foes," before the Nuffield Department of Surgical Sciences at Oxford University on September 20th. Dr. Loda presented a Tri-I Physician Scientist Seminar lecture, "Role of the prostate stromal microenvironment in prostate cancer progression," on October 25th. This virtual seminar series features outstanding physician-scientists in the Departments of Medicine, Pathology, and Pediatrics, and within the Tri-I, who showcase their translational research.

The Weill Cornell Pathology Department was selected for a visit by Ms. Alison Cohen, Legislative Assistant for Congressman Jerry Nadler (Congressional Representative from New York), on June 29th.

Dr. Sanjay S. Patel has been invited to serve as a lead author on the section of "AML with mutated NPM1" in the forthcoming International Consensus Classification compendium for hematologic malignancies. He was also invited to join the Program Committee for the New York Pathological Society. He will be one of six members, and the sole representative from WCM, to join this prestigious committee. Dr. Patel gave an invited talk, "Spatial Mapping of Human Hematopoiesis at Single Cell Resolution Reveals Aging-Associated Topographic Remodeling," at the New York Hematopathology Group meeting on October 25th. The meeting is designed to provide an update on hematologic malignancies and its importance in the practice of hematopathology.

Dr. Surya V. Seshan spoke at the 5th International Renal Pathology Conference, in Zagreb, Croatia sponsored by the Renal Pathology Society & European Society of Pathology. She presented "Classification systems of glomerular diseases — a critical appraisal," on May 18th and "Efforts to better characterize antiphospholipid antibody nephropathy," on May 19th.

Dr. Paul Simonson, presented a Becich-Friedman Distinguished oral presentation on using a natural language processing to annotate hematopathology reports for myeloid neoplasms at the annual Association for Pathology Informatics meeting in Pittsburgh on May 24th. He also received a full-ride travel award to attend and present on comparing machine learning models to classify B cell neoplasms using flow cytometry data at the annual Association for Pathology Informatics meeting in Pittsburgh on May 24th. Dr. Simonson also presented two invited talks at last month's annual International Cytometry Society meeting in New Orleans. The first was a plenary session presentation, "Introduction to the concepts of computational high-dimensional flow analysis and practical considerations for using machine learning algorithms." Dr. Simonson also presented "Applications of computational and artificial intelligence in clinical cytometry," during an ICCS workshop session.

Dr. Andrea Sboner was elected to the Clinical Practice Committee of the Association for Molecular Pathology (AMP) representing the Informatics Subdivision.

Dr. Momin Siddiqui delivered two International Academy of Cytology Tutorials in Lahore, Pakistan on July 14-15, including "Updates in Urinary Cytology," and "Pulmonary Cytology: A Review" as well as presenting "Pancreaticobiliary Cytology: An Overview of the WHO Reporting System," at the International Academy of Pathology (HK Division) and Hong Kong Society of Cytology meeting in Hong Kong on August 13th. He also presented "Urinary Cytopathology Terminology Updates," at the same meeting on August 13th.

Dr. Lars Westblade was the primary editor for Larone’s Medically Important Fungi: A Guide to Identification. Dr. Davise Larone was a former medical director of the Microbiology Laboratory in our department for many years and founder of the textbook. Dr. Lars Westblade spoke on "Diagnostic Dilemmas" at the ID Week event at the Boston Convention and Exhibition Center on October 15th.

Dr. Sarina Yang moderated a scientific session at the American Association for Clinical Chemistry and gave a presentation titled "AACC PTHrP data challenge and beyond: strategies to evaluate and improve machine learning model generalizability." Dr. Yang also chaired the 43rd North American Chinese Clinical Chemists Association Annual Banquet (NACCCA), with more than 200 participants, including past and current presidents, and board members. She also completed her term as the NACCCA president in July. The WCM Institute of Artificial Intelligence for Digital Health will host a roundtable discussion, "ChatGPT in Clinical Medicine," on June 16th, speakers include Dr. Sarina Yang. Dr. Yang was interviewed by Impact journal regarding the potential utilities of chatbots in lab medicine https://impact.weill.cornell.edu/fall-2023/second-opinion/ai-rx
Dr. Tobias Cohen was honored by the American Society for Clinical Pathology (ASCP) in the 40 Under Forty program that recognizes members under the age of 40 for their achievements and leadership qualities that are making an impact on pathology and laboratory medicine.

Dr. Matthew Greenblatt earned a Pershing Square MIND Prize to support his work studying how bone cells may influence Alzheimer’s disease progression.

Dr. Priya Velu has been accepted into the prestigious 2023 Early Career Women Faculty Leadership Development Seminar.

Dr. Lars Westblade was presented with the 2023 Children’s Health Champion Award by the Weill Cornell Medicine Department of Pediatrics.

Dr. Amy Chadburn and Cynthia Magro are recipients of the Exceptional Women in Medicine, Castle Connolly 2023.

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2023 Pathology and Laboratory Medicine Faculty Award Recipients

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Dr. Syed Hoda

Paul Peter Rosen Clinical Service Award

Dr. Annacarolina DaSilva

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Scholarly Activity continued

Department Meetings

Pathology Research Trainee Day

The Eleventh Pathology Trainee Research Day was held on Wednesday, May 10, 2023 in the Belfer Research Building. There were 21 poster presentations with 2 winners. The winners of the oral presentations were Dr. Seoyeon Bok for the Basic Research Presentations category and Dr. Majd Al Assad for the Clinical and Translational Research Presentation category. Congratulations to all for the excellent presentations and participation.

The Department of Pathology and Laboratory Medicine and the Meyer Cancer Center hosted the Weill Cornell Medicine Cell and Cancer Pathobiology Symposium on September 14th. The following presentations were delivered by our faculty:

- **Dr. Massimo Loda** presented "Stromal determinants of prostate cancer evolution in mice and men."

- **Dr. Jorge Moscat** presented "Molecular mechanisms of stem cell loss and metaplasia driving malignancy in colorectal cancer."

- **Dr. Maria T. Diaz-Meco** presented "PKCiota, a new node in the metabolic and epigenetic control of lineage transitions in prostate cancer."

- **Dr. David Rickman** presented "Epigenomic reprogramming associated with lineage plasticity in advanced prostate cancer."

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Cell and Cancer Pathobiology Symposium

Stromal and epithelial plasticity in cancer progression and therapy resistance

September 13-14, 2023
Belfer Research Building
Weill Cornell Medicine
AUDITORIUM

Online registration:
https://tinyurl.com/cellcancernyc
Scholarly Activity  continued

Department Meetings  continued

The Mary Elizabeth and Donald West King Lectureship in Pathology
Pathology and Laboratory Medicine Grand Rounds
November 20, 2023
Speaker:
William G. Kaelin, Jr, MD
Sidney Farber Professor of Medicine
Dana-Farber Cancer Institute and
Harvard Medical School
Investigator, Howard Hughes Medical Institute

2019 Nobel Prize in
Physiology or Medicine

The Mary Elizabeth and Donald West King Lectureship in Pathology was established in 2012. This lectureship honors the memory of Dr. Elmer Kramer (1914-1997), Clinical Professor of Pathology and Laboratory Medicine at Weill Cornell Medical College (1969-1985) and Dr. John Ellis (1920-1998), Chairman of the Department of Pathology and Laboratory Medicine at Weill Cornell Medical College and Pathologist-in-Chief at NewYork-Presbyterian from 1968 to 1994.

We were happy to welcome Dr. William Kaelin to present “The von Hippel-Lindau Hereditary Cancer Syndrome: Insights into Oxygen Sensing, Cancer, and Drugging the Undruggable.”

Shefali Shah, Administrative Director of Research and Administration, is a participant as a peer mentor in the Mentoring Program for Research Administrators, a career development program. The goal of the program is to enhance career advancement and have benefits in the realms of diversity, equity, and inclusion.

“I am interested in mentoring staff who are new to grants administration. There are ample resources, however, it is always valuable to have someone to reach out to when there are certain instances and situations that arise with work. I feel it would be beneficial to provide that lending support and guidance. Also, I want to be available when a mentee feels frustrated or wants information on how to grow a career in research administration. Having worked here for 25 years, and grown tremendously, I’d like to provide that help to others.”

Shefali was also invited to be a speaker on the panel “Career Development Week Panel Discussion” occurring on 11/13/23. Shefali was suggested to join the panel based on her impressive tenure and inspiring career growth. Shefali has been at Cornell since 1996.

Practical Genomics Workshop
Jointly organized by John Hopkins and Weill Cornell Medicine
(Dr. Luigi Marchionni)
pathology.well.cornell.edu/education/practical-genomics-workshop

WCM Employee Service Awards: Career Milestones
We commend your loyalty and support to Cornell!

Monique Adams 10 Years
Stephen Ceneus 10 Years
Mandisa Dobie 10 Years
Giorgio Inghirami, MD 10 Years
Oleg Ivanov 10 Years

David Lewis 10 Years
Aisha Owens 10 Years
David Pisapia, MD 10 Years
Yu Yan 10 Years
Bingfang Liu 15 Years

Alexandria Nunez 15 Years
Kui Nie 20 Years
Joelle Racchumi 20 Years
Vincent Sarno 20 Years
Taotao Zhang 20 Years
Notable Publications


https://pathology.well.cornell.edu/news/cholesterol-lowering-therapy-may-hinder-aggressive-type-colorectal-tumor
Molecular and Genomic Pathology

Neal Lindeman, MD
Vice Chair of Laboratory Medicine and Molecular Pathology

In this newsletter, we highlight the Molecular and Genomic Pathology division of the Department of Pathology. It is dedicated to applying clinical laboratory methods that assess DNA, RNA, and chromosomes from patient samples for the diagnosis, monitoring, and prediction of diseases and associated treatment responses. What distinguishes Molecular and Genomic Pathology from other Divisions of Laboratory Medicine is (1) our heavy use of diagnostic tests that were developed and validated, under CLIA, by our team here at Weill Cornell Pathology, and (2) the individualized, patient-specific test interpretation and reporting conducted by our faculty Pathologists and Geneticists for each test result. Our most complicated assays, next generation sequencing panels for cancers, are also reported into an institutional database, along with scanned histology slide images and basic clinical data, to form a searchable database that can be used by institutional researchers interesting in exploring the relationships between genetic alterations, pathologic findings, and clinical outcomes.

Our four laboratories (Cytogenetics, Molecular Diagnostics, Molecular Hematopathology, Clinical Genomics) offer a wide range of testing, from simple karyotype analysis and PCR-electrophoresis, to large next generation sequencing panels of tumors, blood samples for circulating cell-free DNA, and RNA-based fusion detection. Future projects include epidemic pathogen identification by next generation sequencing, methylation profiling for glioma characterization, and optical genome mapping and nanopore sequencing as new technical platforms.

Most recently, we have launched an exciting new project to bring state-of-the-art tumor sequencing testing to our partner institutions, Brooklyn Methodist Hospital, Lower Manhattan Hospital, and New York-Presbyterian Queens. This will broaden our reach and help the Meyer Cancer Center to achieve its goal of bringing the same model of cancer care and innovation across the entire Weill Cornell sphere.

Goals:

- increase the integration across our four constituent laboratories
- Collaborate with colleagues at the Meyer Cancer Center and Englebinder Institute of Precision Medicine, to create a shared, tripartite, comprehensive program that will lead the nation in application of precision oncology to care, discovery, and population health.
- Introduce concurrent germline and tumor analysis for cancer patients, to identify patients with hereditary cancer risk
- Innovate novel methods and applications for clinical diagnostics

We welcome our newest member of the division. Jiajing Wang is the Assistant Laboratory Technical Director of the Molecular Pathology Laboratory at Weill Cornell Medicine in New York City. Dr. Wang received her PhD in Molecular Biology and Genetics from Wayne State University in 2013. She received M.S. in Bioinformatics from New York University in 2021. She joined Molecular Pathology at Weill Cornell Medicine in 2023.

Dr. Wang’s clinical and research focus involves leveraging advanced diagnostic technologies to provide high-quality laboratory support for personalized medicine. Dr. Wang’s goal is to implement new tools and technologies in clinical laboratory settings to increase diagnostic precision to improve patient care and provide insight into disease biology.
Newly Awarded Grants

Arthritis National Research Foundation
Title: An articular cartilage stem cell mediating cartilage regeneration for the treatment of osteoarthritis
Principal Investigator: Seoyeon Bok, PhD
Period of Support: 7/01/2023 – 6/30/2024
Total Direct Costs: $125,000

National Institutes of Health (R01 grant)
Title: Role of the CD44/Hyaluronan axis in mesenchymal prostate cancer
Principal Investigator: Maria Diaz-Meco Conde, PhD
Period of Support: 08/01/2023-07/31/2028
Total Direct Costs: $1,621,735

The American Society for Bone and Mineral Research
Title: A multi-stem cell basis for craniosynostosis
Principal Investigator: Shawon Debnath, PhD
Period of Support: 01/01/2023 – 12/31/2023
Total Direct Costs: $15,000

Manhasset Women’s Coalition Against Breast Cancer
Title: Carbon Monoxide-Based Approach for Metastatic Breast Cancer Prevention and Therapy
Principal Investigator: Yi Chieh (Nancy) Du, PhD
Period of Support: 10/25/2023 – 10/25/2025
Total Direct Costs: $86,956

Mary Kay Foundation
Title: New Approaches to Target Vertebral Metastases in Breast Cancer
Principal Investigator: Matthew Blake Greenblatt, MD, PhD
Period of Support: 7/01/2023 – 6/30/2025
Total Direct Costs: $100,000

Pershing Square Foundation
Title: A Bone to Brain Axis Controlling Alzheimer's Disease Progression
Principal Investigator: Matthew Blake Greenblatt, MD, PhD
Period of Support: 7/01/2023 – 6/30/2026
Total Direct Costs: $750,000

SPROUT award (Cornell University, Ithaca, NY)
Title: Matrix-regulation of tumor dormancy and immunoregulation in breast cancer bone metastasis
Principal Investigator: Matthew Blake Greenblatt, MD, PhD
Period of Support: 7/01/2023 – 6/30/2024
Total Direct Costs: $13,000

William Rhodes and Louise Tilzer-Rhodes Center for Glioblastoma
Title: A novel calvarial stem cell regulating glioblastoma anti-tumor immunity metastasis
Principal Investigator: Matthew Blake Greenblatt, MD, PhD
Period of Support: 7/01/2023 – 6/30/2024
Total Direct Costs: $100,000

Children’s Tumor Foundation
Title: A skeletal stem cell basis and novel therapeutic approaches for fracture healing defects in Neurofibromatosis type 1
Principal Investigator: Sun Jun, PhD
Period of Support: 7/01/2023 – 6/30/2025
Total Direct Costs: $157,830

United States Department of Defense
Title: Elucidating the oncogenic role of EMSY in non-small cell lung cancer
Principal Investigator: Antonio Marzio, PhD
Period of Support: 01/01/2024-12/31/2026
Total Direct Costs: $374,877

National Institutes of Health (R01 grant)
Title: Elucidating mechanisms of therapy-resistance to interferon-alfa in myeloproliferative neoplasm stem cells
Principal Investigator: Seung Ha Nam, MD
Period of Support: 08/15/2023-05/31/2027
Total Direct Costs: $2,167,872

continued on next page
Alzheimer’s Association
Title: The mechanisms driven by microglial FOXO3 underlying AD progression
Principal Investigator: Jihye Paik, PhD
Period of Support: 11/01/2023 – 10/31/2026
Total Direct Costs: $181,818

National Institutes of Health (R01 grant)
Title: DNMT and TET1 reprogramming as a targetable mechanism of resistance in advanced prostate cancer
Principal Investigator: David Rickman, PhD
Period of Support: 06/01/2023-05/31/2028
Total Direct Costs: $2,579,570

National Institutes of Health (R50 grant)
Title: Molecular mechanisms driving therapy-induced lineage plasticity
Principal Investigator: Juan Francisco Linares Rodriguez, PhD
Period of Support: 09/19/2023-08/31/2028
Total Direct Costs: $474,115

American Urological Association
Title: Characterizing the mechanistic co-operation of DNMT and EZH2 in mediating lineage plasticity in advanced prostate cancer
Principal Investigator: Richa Singh, PhD
Period of Support: 11/20/23-11/19/25
Total Direct Costs: $80,000

National Institutes of Health (R01 grant)
Title: Discovering how autophagy is sufficient to extend yeast replicative lifespan
Principal Investigator: Jessica Tyler, PhD
Period of Support: 09/01/2023 – 04/30/2028
Total Direct Costs: $1,583,845

National Institutes of Health (R01 subaward)
Title: Development of Targeted Antipseudomonal bacterial prodrugs
Principal Investigator: Lars Westblade, PhD
Period of Support: 02/04/2023-01/31/2028
Total Direct Costs: $199,995

Hospital For Special Surgery T32
(T32AR071302-01) from NIH-NIAMS.
Title: HSS Research Institute Rheumatology Training program
Principal Investigator: Alisha Yallowitz, PhD
Period of Support: 2/1/2023 – 1/31/2024
Total Direct Costs: $86,550

Well Cornell Medicine Internal Grants
2023 Tri-Institutional Breakout Award
Title: Research study on skeletal stem cells
Principal Investigator: Shawn Debnath, PhD
Period of Support: 7/01/2023 – 6/30/2024
Total Direct Costs: $25,000

Primary Parents (RAPP) Award of the Mastercard Diversity-Mentorship Collaborative
Title: Identifying the skeletal adipocyte/osseoblast bipotent cell
Principal Investigator: Alisha Yallowitz, PhD
Period of Support: 7/01/2023 – 6/30/2024
Total Direct Costs: $50,000

SPORE in Prostate Cancer WCM
Developmental Research Program (DRP)
Title: Investigating the Role of Lipid Metabolism in Overcoming Androgen Resistance in Metastatic Castration-Resistant Prostate Cancer
Principal Investigator: Pier Nuzzo, MD, PhD
Period of Support: 11/01/2023-10/31/2024
Total Direct Costs: $75,000

SPORE in Prostate Cancer WCM
Developmental Research Program (DRP)
Title: A Stem Cell Basis for Prostate Cancer Vertebral Metastases and Osteoblastic Lesions
Principal Investigator: Matthew Blake Greenblatt, MD, PhD
Period of Support: 11/01/2023 to 10/31/24
Total Direct Costs: $75,000

Industry Sponsored Research Agreements
Hardy Diagnostics Inc.
Title: NG-Test CTX-M Multi assay
Principal Investigator: Lars Westblade, PhD
Period of Support: 7/10/2023-07/09/2024
Total Direct Costs: $22,310

Bio-Rad Laboratories
Title: Deciphering PCa Bone Metastasis Mechanisms through Targeted CTC Isolation
Principal Investigator: Mohammad Omar, MBBCH
Period of Support: 09/01/2023-08/31/2024
Total Direct Costs: $50,000

Fellowships
American Italian Cancer Foundation
Title: Investigating the role of KEAP1 in the modulation of anti-tumor immunity in non-small cell lung cancer (NSCLC)
Principal Investigator: Alessandra Ferri, PhD
Period of Support: 08/01/2023-07/31/2024
Total Direct Costs: $40,000

American Italian Cancer Foundation
Title: Generation of fully humanized murine avatars of B-ALL patients for the study of refractoriness and relapse in a bedside approach
Principal Investigator: Giovanni Medico, MD
Period of Support: 08/01/2023-07/31/2024
Total Direct Costs: $40,000

American Italian Cancer Foundation
Title: Loss of Stromal Androgen Receptor (AR) Signaling Contributes to Progression in Prostate Cancer
Principal Investigator: Filippo Pederzoli, MD, PhD
Period of Support: 08/01/2023-07/31/2024
Total Direct Costs: $40,000

American Italian Cancer Foundation
Title: Untangle the role of tumor microenvironment in prostate cancer initiation, progression, and metastatization with single-cell analysis technologies
Principal Investigator: Giuseppe Nicolo Fanelli, MD PhD
Period of Support: 08/01/2023-07/31/2024
Total Direct Costs: $40,000

Industry Sponsored Research Agreements
Hardy Diagnostics Inc.
Title: NG-Test CTX-M Multi assay
Principal Investigator: Lars Westblade, PhD
Period of Support: 7/10/2023-07/09/2024
Total Direct Costs: $22,310

Bio-Rad Laboratories
Title: Deciphering PCa Bone Metastasis Mechanisms through Targeted CTC Isolation
Principal Investigator: Mohammad Omar, MBBCH
Period of Support: 09/01/2023-08/31/2024
Total Direct Costs: $50,000
Residents’ Corner

**Welcome New Residents and Fellows**

**Residents 2023**

**Claire Bise, MD**
Dr. Claire Bise has joined us as an AP/CP resident. She received her MD from Louisiana State University School of Medicine in New Orleans with an undergraduate degree from Missouri State University in Cell and Molecular Biology and a Master’s Degree in Pharmacology from Tulane University School of Medicine. She is a running enthusiast and will also be our expert in Cajun culture.

**Jordan Driskill, MD, PhD**
Dr. Jordan Driskill has joined us on a physician scientist-track, AP-only (AP/PSTP) resident. Dr. Driskill performed his undergraduate studies at the University of Pennsylvania before the MD PhD program at the University of Texas Southwestern. During his PhD, he studied in the lab of Dujia Pan and established that translocations activating the Hippo signaling pathway are central to the pathogenesis of epithelioid hemangioendothelioma (Driskill et al., Genes and Development 2021).

**Khalia-Cheyenne (Khalia) Moreau, MD**
Dr. Khalia Moreau is a native New Yorker with strong familial roots in Trinidad and Grenada. She graduated from St. George’s University School of Medicine in Grenada with an MD and MPH. Her undergraduate degree is from the University of Virginia. Khalia is also an accomplished fiction writer with a soon to be published book entitled “The Princess of Thornwood Drive.” She is an AP/CP resident.

**Fellows July 2023**

**Mohamed Alhamar, MD** received his MD at Arabian Gulf University in Bahrain and completed his AP/CP residency at Henry Ford Hospital in Michigan. He completed his Oncologic Surgical Pathology and Cytopathology fellowships at Memorial Sloan Kettering Cancer Center and is our Genitourinary Pathology Fellow.

**Salam Ashour, MBBS** obtained her MBBS at Jordan University of Science and Technology in Jordan and completed her AP/CP residency at The Cleveland Clinic. She is our Gastrointestinal Pathology Fellow.

**Mohamad Mazen Gafeer, MD** received his MD at University of Aleppo School of Medicine in Syria and completed his AP/CP residency at Temple University Hospital in Pennsylvania and completed his Surgical Pathology fellowship at the Hospital University of Pennsylvania. He is our Cytopathology Fellow.

**Kuan Ting (Michael) Chen, MD** obtained his MD at University of Western Ontario and completed his AP residency at Queens University in Ontario, Canada. He is our Gynecologic Pathology Fellow.

**Nadine Demko, MD** received her MD and completed her AP residency at McGill University in Ontario, Canada. She is our incoming Hematopathology Fellow.

**Alicia Dillard, MD** received her MD at Howard University College of Medicine in Washington, DC and completed her AP/CP residency at NewYork-Presbyterian/Weill Cornell Medicine. She is our Molecular Genetics Pathology fellow.

**Beth Raju, MD** received her MD at Oklahoma College of Medicine in Oklahoma City, OK. She is our Transfusion Medicine fellow.

**Diana Vulcain, MD** received her MD at Howard University College of Medicine in Washington, DC and completed her AP/CP residency at NewYork-Presbyterian/Weill Cornell Medicine. She is our Breast Pathology fellow.

**James Yip, MD** obtained his MD from Wayne State University in Michigan and completed his AP/CP residency at the University of Hawaii. He is our Hematopathology fellow.
Residents’ Corner continued

Resident Events and Wellness Activities

**New York City Cruise**
Residents and fellows attended a city cruise along the Hudson River, departing from Chelsea Piers.

**Welcome**
Faculty and residents welcome the incoming residents and fellows at Bedford Falls in NYC.

**Central Park Outing**
Residents and faculty engaged in a picnic and volleyball game in Central Park.

**Restorative Yoga Session**
Residents joined a relaxing yoga session at a nearby studio.

**Scavenger Hunt**
Residents worked together as teams to find various places among the Cornell and hospital grounds such as the Sandy Weill life sized bronze statue and the New York Presbyterian archives.

1. Dr. Papanicolaou bust
2. Sandy Weill life size bronze statue
3. Life-size skeleton
4. Wall mounted Alfred Lee Loomis bronze plaque
5. Hyperbaric Chamber entrance
6. Patient Services main entrance
7. General Stores main entrance
8. NYP equipment center
9. NYP mailroom

House Staff Graduation Dinner

**Departing 2022-2023 Residents and Fellows Future Plans**

- **Andrew Plata** (Hemepath fellow) - Staff Pathologist at Charleston Area Medical Center in West Virginia.
- **Jeremy Miyauchi** (GU fellow) - Attending physician at Northern Westchester Hospital/Phelps Memorial Hospital.
- **Michaud Olivier** (Breast fellow) - Breast Pathologist at Université Laval in Quebec City.
- **Kemin Xu** (Molecular Path fellow) - Assistant Professor at Indiana University.
- **Ola Folarin** (Cyto Fellow) - Breast Pathology Fellow at Memorial Sloan Kettering Cancer Center.
- **Muhammad Ahmad** (Gyn fellow) - Assistant Professor at Indiana University.
- **Charles Ng** (resident) - Research fellow with our department.
- **Tobias Cohen** (resident) - Transfusion Medicine faculty in our department.
- **Shaham Beg** (resident) - Cytopathology Fellowship at Memorial Sloan Kettering Cancer Center.
- **Diana Berman Vulcain** (resident) - Breast Pathology Fellow with our department.
- **Alicia Dilliard** (resident) - Molecular Pathology Fellow with our department.
Faculty Recruitment and Promotions

Recruitment

Baris Boyraz, MD, PhD joined our department as Assistant Professor of Pathology and Laboratory Medicine. He joined the Breast and Gynecologic Pathology teams. He comes to us from Massachusetts General Hospital, where he completed his Breast and Gynecologic Fellowship this past year. He also did his AP training at MGH and served as Chief Resident.

Tobias Cohen, MD joined our department as Assistant Professor of Pathology and Laboratory Medicine as voluntary faculty in August and full time faculty in January 2024. Dr. Cohen graduated from Brown University with honors and then went on to complete his MD and PhD in Microbiology at the Icahn School of Medicine at Mount Sinai in New York City. He completed his AP/CP pathology residency at NewYork-Presbyterian/Weill Cornell and is now in his fellowship year in transfusion medicine at New York Blood Center. Dr. Cohen will focus on transfusion medicine and clinical laboratory diagnostics at WCM.

Alexandra Jimenez, MD joined the clinical pathology/transfusion medicine division in September. Dr. Jimenez obtained her undergraduate degree in Molecular and Cell Biology at Johns Hopkins University. She obtained her MD at Universidad Central del Caribe in Puerto Rico and trained in anatomic and clinical pathology at the University of Puerto Rico, Medical Sciences Campus. Alexandra completed her fellowship in transfusion medicine at Columbia University Medical Center and New York Blood Center. Since graduating from fellowship, Dr. Jimenez has been a Medical Director and Vice President at New York Blood Center, where she oversaw myriad services, including an HLA laboratory, transfusion services, a cord blood program, and an apheresis service.

Daniel Levitan, MD joined the department as Assistant Professor of Pathology & Laboratory Medicine in October. Dr. Levitan will be working at Brooklyn Methodist Hospital. Daniel received his MD, degree at St. George’s University at St. George, Grenada in 2013 and awarded magna cum laude, and completed his AP/CP residency at SUNY Downstate in 2008. He completed an oncologic and surgical pathology fellowship at Memorial Sloan Kettering Cancer Center in 2018 and completed a gynecologic and perinatal pathology fellowship at NewYork-Presbyterian/Weill Cornell Medicine in 2019. He comes to us from Maimonides Medical Center and SUNY Downstate where he conducted clinical services in surgical pathology.

Christina Ombres, MD joined our department as Assistant Professor in Pathology and Laboratory Medicine in the Breast Pathology division. She received her Bachelor of Arts in Economics and Spanish from Allegheny College in 2003, and subsequently worked as a Financial Advisor for Merrill Lynch and other firms until 2010 when she decided to pivot to a career in medicine. She completed her Post-Baccalaureate Pre-Medical Studies at Pennsylvania State University in 2011 and then worked as a Clinical Research Associate until her matriculation into medical school in 2013. She received her Doctor of Medicine in 2017 from the Medical University of the Americas. After graduating medical school, Dr. Ombres completed a fellowship in Anatomic and Clinical Pathology at the University of South Florida (2017-2021) followed by a Breast Pathology Fellowship at the Hospital of the University of Pennsylvania (2021-2022) and an Oncologic Surgical Pathology Fellowship at Memorial Sloan-Kettering Cancer Center (2022-2023).

Nicole Panarelli, MD joined our department in January as Professor of Pathology and Laboratory Medicine. Dr. Panarelli will be Vice Chair for Education and Faculty Development and Chief of Gastrointestinal and Liver Pathology. She is joining us from Albert Einstein College of Medicine. She completed a Pathology residency at Cornell and was previously on our faculty between 2011-2015.

Madhu Pantrangi, PhD joined the clinical cytogentic division this summer. Dr. Pantrangi received her doctoral degree in Genetics from the University of Delhi, followed by postdoctoral research at the Marshfield Clinic, and clinical service in Molecular Genetics at Prevention Genetics. Dr. Pantrangi then pursued formal clinical training in the Laboratory Genetics and Genomics (LGG) Fellowship Program at Columbia, from which she graduated earlier this summer.

Yihe Yang, MD joins the department as Assistant Professor of Pathology and Laboratory Medicine in the Renal Pathology division. Dr. Yang received her MD at Peking University in Beijing, China and a master of science in Epidemiology and Biostatistics in 2014 at Northwestern University in Chicago. She joins us for Brigham and Women’s Hospital in Boston where she was a Renal Pathology fellow.

Annika Windon, MD joined the department as Assistant Professor of Pathology & Laboratory Medicine, who recently joined the GI and Liver teams. She comes to us from Vanderbilt University where she was also an Assistant Professor since 2020. She completed her residency in AP/CP at UPenn and both her Surgical Pathology and GI/Liver Pathology fellowships at Johns Hopkins.
Lita M. Alonso, MD

Dr. Lita Alonso passed away peacefully in her home in Scarsdale, NY on March 17, 2023. Dr. Alonso, Associate Professor of Clinical Pathology and Laboratory Medicine at Weill-Cornell, served as Director of the Laboratory of Cytogenetics at New York-Presbyterian Hospital, where she was responsible for diagnosing chromosomal disorders. She held that position from 1980 until her retirement in 2008. Lita was warm, generous, and kind, and was much loved by friends, family, and former colleagues.

https://www.dignitymemorial.com/obituaries/scarsdale-ny/m-alonso-11208671

Ellinor Peerschke, MD, PhD

Dr. Ellinor Peerschke, Professor of Pathology and Laboratory Medicine served as Chief of the Clinical Hematology Laboratory Service from 1996-2007. Dr. Peerschke was an academic “triple threat,” having developed and implemented new coagulation assays while maintaining a robust independent research program and enjoying leadership positions in several nationally and internationally recognized societies and organizations. She was considered one of the leading experts in coagulation in the United States. Dr. Peerschke was well respected by all and always had excellent collegial working relationships.

Retirement

Daniel M. Knowles, Pathology Conference Room

Congratulations and best wishes to Michele Maimone-Schoen, Manager of Anatomic Pathology (NYP), who retired this past summer. Michele worked closely with the Pathology and Laboratory Medicine Weill Cornell team during her 18-year career at NYP-WCM. She will be missed!
Department News & Events

Team Building Activities

Top of the Rock Observation Deck

July 2023
From left to right: Julio Cordero, Dave Lewis, Jessica Misner, Shefali Shah, Gina Imperato, Melissa Lopez, Cong Shen, Alex Nunez, Jeff Hernandez.

Central Park Walk
September 2023

From left to right:
Back row: Cong Shen, Jeff Hernandez.
Middle row: Julio Cordero, Alisa Ramineni, Ann-Marie Ewell, Gina Imperato, Jessica Misner, Nector Garcia.
Front row: Melissa Lopez, Kristen Gonzalez, Nalini Scarpa.

Holiday Party
December 2023

Our Housestaff

From left to right: Nadia Demko, MD, Amy Chadburn, MD, Ivo Sah Bandar, MD, PhD, Chandler Sy, MD, PhD.

From left to right: Nalini Scarpa, Kristen Gonzalez, Jessica Misner, Shefali Shah.