Winter
2021

COLUMBIA PATHOLOGY AND CELL BIOLOGY REPORT

A Year Like No Other

NIH Funding

Columbia Pathology Ranks High

Honoring our Community

Years of Service and Retirements

COVID-19 Response

Departmental collection of the clinical response to the pandemic

IN THIS ISSUE

Columbia Pathology and Cell Biology Report

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ON THE COVER:
3d render of planet earth shaped as corona virus
(Source: 9_fingers_ via Twenty20)

A Life Changing Year

Kevin A. Roth, M.D., Ph.D., Chair
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A YEAR like none other. Twelve months of tragedy, death, courage and compassion. And now, here we are trying to comprehend what we have lived through, to learn important lessons from the struggles we've faced, and prepare ourselves for the ongoing challenges of the still raging pandemic.

Personally, I reflect on my own actions and inactions; what I did right, what I did wrong; what would I do differently if I had the chance to turn back the clock? I think about the tragic loss of lives and how it has impacted so many families and communities, including our department. Nearly every day, I am reminded of how much things have changed and how different the "new normal" is from February 2020.

I look back with great pride on how the department responded to what sometimes seemed an insurmountable situation; the list of people who went above and beyond any reasonable expectation of duty and responsibility is long. I will forever cherish the people in the department who were virtual strangers to me one year ago who because of the pandemic, I've gotten to know, trust, and admire. I've learned more clinical pathology and virology in one year than I had in my previous 30 plus years in pathology.

I witnessed residents, fellows, faculty members, graduate students, support staff, researchers and administrators putting the needs of patients and health care workers ahead of their personal comfort and concerns. Despite significant adversity, we somehow managed to advance scientific research and our educational mission, while quickly adapting to reduced laboratory capacity and virtual learning.

I will admit to days this past year when I wasn't sure if I was up to the challenge, if the department was up to the challenge. However, as I reflect today on what we've been through together, and what we've achieved together, I couldn't be prouder to be a member of this esteemed department. ◆

Best wishes,

Kevin A. Roth, M.D., Ph.D.

Honors and Awards

(From left to right) Drs. Glen Markowitz (vice-chair of Anatomic Pathology), Vivette D'Agati, and Kevin Roth (Chair) celebrating Dr. D'Agati's new Delafield professorship

Vivette D. D'Agati, M.D. Awarded Named Delafield Professorship

We are proud to announce that Professor Vivette D'Agati, an internationally recognized expert in renal pathology, has been named the Delafield Professor of Pathology and Cell Biology at Columbia University Irving Medical Center (CUIMC).

Appointment to a named professorship is one of the highest honors a faculty member can attain in recognition for continued scholarly achievement and distinction. The Alumni Association of the College of Physicians and Surgeons established the Delafield Endowed Professorship in 1928 in honor of Dr. Francis Delafield, former Professor of Pathology and Professor Emeritus. During his lifetime, Dr. Delafield was recognized as the leading national authority on diseases of the kidney.

Dr. Vivette D'Agati completed her undergraduate studies at Yale College and attended medical school at Duke and New York University. She completed her residency in Pathology and fellowship in renal pathology at Columbia Presbyterian Medical Center. Her training in renal pathology was under Dr. Conrad Pirani, one of the "Founding Fathers of Renal Pathology". She has been director of the Columbia Renal Pathology Division since 1984 and became Professor of Pathology in 1994. Over this period, she has created one of the largest laboratories of renal pathology in the world, processing over 5000 renal biopsies annually, received from more than 130 hospitals in 12 states. In addition to her clinical and research practice, she has published over 500 peer-reviewed papers and 80 book chapters, and co-edited six textbooks of renal pathology, including the latest editions of Heptinstall's Pathology of the Kidney and the Armed Forces Institute of Pathology (AFIP) Fascicle on Non-Neoplastic Kidney Diseases.

Since 1984, she has organized and directed the annual Columbia University postgraduate course "Renal Biopsy in Medical Diseases of the Kidney", which is the longest running CME course at CUIMC, currently in its 43rd year and attended annually by over 250 domestic and international registrants.

Her list of honors includes Phi Beta Kappa, Summa Cum Laude from Yale University, Alpha Omega Alpha Medical Honor Society from NYU, and numerous teaching awards, including Teacher of the Year from the Columbia University Medical School Classes of 2009 and 2010. In 2018, she received the "Distinguished Alumnus Award" from the NewYork-Presbyterian Society of the Alumni. She is a member of the Association of American Physicians and received the Jacob Churg Award for lifetime achievement from the Renal Pathology Society. Most recently, Dr. D'Agati was named the 2020 recipient of the Edward N. Gibbs Award in Nephrology.

Dr. D'Agati served as President of the Renal Pathology Society (RPS). Each year, the RPS bestows a mid-career achievement award on one of its members. Four of the initial 7 winners of this award were trained by Dr. D'Agati, whose former fellows currently hold faculty positions in renal pathology at Stanford University, Duke University, University of Michigan, Mayo Clinic, Cleveland Clinic, University of Arkansas, University of Nebraska, University of Rochester, Cedars Sinai Los Angeles, and CUIMC. She is especially proud of their accomplishments.

Congratulations to Dr. D'Agati on this special distinction.

Honors and Awards

Dr. Govind Bhagat Recognized As An Expertscape Expert In Peripheral T-Cell Lymphoma

We are pleased to announce that Govind Bhagat, MBBS, professor of pathology and cell biology at CUIMC and director of the hematopathology division, was recently recognized in the Blood Cancer Awareness Month (September 2020) as an Expertscape(link is external and opens in a new window) Expert in Peripheral T-Cell Lymphoma. Dr. Bhagat received this recognition for being in the top 1% of scholars writing about Peripheral T-Cell Lymphoma over the past 10 years.

Dr. Bhagat leads the hematopathology division of the department of pathology and cell biology at Columbia University Irving Medical Center (CUIMC). The division boasts nationally and internationally recognized experts who provide expedient and accurate diagnoses for a variety of hemato-lymphoid neoplasms. They are actively engaged in translational research efforts to define the molecular bases of lymphomas and leukemias and elucidate novel diagnostic and prognostic biomarkers.

OTHER HONORS AND AWARDS

Paulette Bernd, PhD, Professor of Pathology and Cell Biology

Recently featured in Colgate University's Magazine as one of 13 alumnae who graduated in the first few years that Colgate became a coeducational university. Read the detailed story here.

Vivette D'Agati, MD, Professor of Pathology and Cell Biology at CUIMC

Named the 2020 recipient of the Edward N. Gibbs Award in Nephrology. She is the first woman and the first pathologist to receive this award. Read the detailed story here.

Adolfo Ferrando, MD, PhD Professor of Pediatrics and Pathology and Cell Biology and of Systems Biology (in the Institute for Cancer Genetics)

Inducted into the Association of American Physicians, an honorific society of the nation's leading physician-scientists

Serge Przedborski, MD, PhD Professor of Neurology (in Pathology and Cell Biology and Neuroscience) & **Ira Tabas,** MD, PhD Professor of Medicine (Immunology) and Pathology and Cell Biology (in Physiology and Cellular Biophysics)

Named to the Clarivate Analytics Highly Cited Researchers 2020 list that identifies researchers who have demonstrated influence in their field through the publication of multiple highly cited papers during the past decade. Their names were drawn from the publications that rank in the top 1% by citations for field and publication year in the Web of Science citation index.

VP&S Event

2020 VP&S Crown Awards Gala

This year's Crown Awards event celebrated the front line heroes of Columbia - the physicians, researchers, staff, students, and trainees - who responded courageously to the COVID-19 pandemic. In Pathology and Cell Biology, our own Dr. Susan Whittier and Dr. Eldad Hod, who were recognized at this event, shared their experiences during these unprecedented times. Their interview portion starts at 25:25 of the CROWN Awards Virtual Benefit.

The event also paid tribute to Dr. Lee Goldman for his 14-year tenure as Dean of VP&S and Chief Executive of CUIMC. Dr. Jennifer Ashton, VP&S alumna, ABC News Chief Health and Medical Correspondent was the event emcee. A special highlight of the evening was the musical performance by two-time Tony award winner, Brian Stokes Mitchell.

Click here to watch the full video of this event.

Useful Information

Updating online faculty profiles – Faculty members can update their online profiles at http://columbiaprofiles.org/. Regularly updating your profile is strongly encouraged. If you have any questions, please contact PathWebMaster@columbia.edu.

How to update website content – If you find any outdated, incorrect, or missing content on our department website (www.pathology.columbia.edu), and would like to have it updated, please contact PathWebMaster@columbia.edu.

How to post images on touchscreen directories – Have interesting images (research, events, people, celebrations, etc.) that you wish to post on our three touch-screen directories located near the main elevators of the P&S and PH buildings, please contact PathNews@cumc.columbia.edu.

Honors and Awards

FACULTY PROMOTIONS

Francesca Bartolini, PhD
Promoted to Associated Professor of Pathology and Cell Biology at the Columbia University Medical Center

Chyuan-Sheng (Victor) Lin, PhD
Promoted to Associated Professor of Pathology and Cell Biology at the Columbia University Medical Center

Andrew Turk, PhD
Promoted to Associated Professor of Pathology and Cell Biology at the Columbia University Medical Center

PROMOTIONS AND LEADERSHIP APPOINTMENTS

Ladan Fazlollahi, MD
Assistant Professor of Pathology and Cell Biology at the Columbia University Medical Center, assumed the position of Director of Surgical Pathology Fellowship

Anne Koehne de Gonzalez, MD
Assistant Professor of Pathology and Cell Biology at the Columbia University Medical Center, assumed the position of Associate Director of laboratories at Lawrence Hospital

Stephen Lagana, MD
Associate Professor of Pathology and Cell Biology at the Columbia University Medical Center, assumed the position of Associate Director of Surgical Pathology

Michael Lee, MD
Assistant Professor of Pathology and Cell Biology at the Columbia University Medical Center, assumed the position of Co-Director of Quality Assurance for Anatomic Pathology

Kathleen O'Toole, MD
Professor of Pathology and Cell Biology at the Columbia University Medical Center, assumed the position of Director of Anatomic Pathology Labs, in addition to her current position of Director of Surgical Pathology

Helen Remotti, MD
Associate Professor of Pathology and Cell Biology at the Columbia University Medical Center, assumed the position of Director of the Section of Gastrointestinal & Liver Pathology

Brie Stotler, MD, MPH
Associate Professor of Pathology and Cell Biology at the Columbia University Medical Center, will be the Medical Director of Transfusion Medicine and Cellular Therapy.

Renu Virk, MD
Assistant Professor of Pathology and Cell Biology at the Columbia University Medical Center, assumed the position of Associate Director of the Division of Cytopathology.

GRANTS AWARDED (SINCE AUGUST 2020)

PI	Sponsor	Title
Dritan Agalliu, PhD	National Institute of Neurological Disorders and Stroke/NIH/DHHS	The role of autophagy in the neurovascular unit for the physiological response to stress
Ottavio Arancio, MD, PhD	US Army Medical Research Acquisition Activity	Role of Amyloid Precursor Protein in Alzheimer's Disease-Related Impairment of Synaptic Function and Memory Induced by Abnormal Tau Following TBI
Francesca Bartolini, PhD	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Pathogenic role of d2 tubulin in peripheral neuropathy
Peter Canoll, MD, PhD	Incoming Subcontract w/ Research Foundation of City University of New York (originating sponsor: National Institute of Neurological Disorders and Stroke/NIH/DHHS	Mechanisms of Regulation of Progenitor Proliferation and Transformation
Alex Chavez, MD, PhD	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Focused Ultrasound-mediated Delivery of Gene-editing Elements to the Brain for Neurodegenerative Disorders
Vivette D'Agati, MD	Incoming Subcontract w/Icahn School of Medicine at Mount Sinai (originating sponsor: National Institute of Diabetes and Digestive and Kidney Diseases/ NIH/DHHS)	Role of RTN1A in the Progression of Diabetic Nephropathy
Osama Al Dalahmah, MD, PhD	National Institute on Aging/ NIH/DHHS	Alzheimer's Disease Research Center- Research Education Core (Pilot Award - HICCC)
Kevin Gardner, MD, PhD	National Cancer Institute/NIH/ DHHS	The linkage between Race, Kaiso and the tumor microenvironment in breast cancer health disparities
Gregg Gundersen, PhD	National Cancer Institute	Nuclear Dysfunction in Cancer: The Role of Mechanical Stresses Transmitted by the LINC Complex
Rebecca Haeusler, PhD	National Heart, Lung, and Blood Institute/NIH/DHHS (Administrative Supplement)	Mechanisms linking insulin action with lipoprotein metabolism

GRANTS AWARDED (SINCE AUGUST 2020)

PI	Sponsor	Title
Gunnar Hargus, MD, PhD	National Institute on Aging/NIH/DHHS	Using a human stem cell model of tauopathy to evaluate the effects of tau filaments on cell metabolism at a single cell level in vitro and in vivo
Gunnar Hargus, MD, PhD	National Institute of Neurological Disorders and Stroke	Elucidating the role of microglia and neurotrophin receptor p75 on neuronal degeneration in frontotemporal dementia
Ulrich Hengst, PhD	National Institute of Neurological Disorders and Stroke	Advanced Graduate Training Program in Neurobiology and Behavior
Syed Hussaini, PhD	National Institute on Aging	Electrophysiological Evaluation of Brain Regions Vulnerable to Alzheimer's Disease
Tae-Wan Kim, PhD	National Institute on Aging	Microglial TREM2 Interactome in Alzheimer's Disease
Yueqing Peng, PhD	National Institute of Neurological Disorders and Stroke	Basal forebrain cholinergic dysfunction in sleep-related epilepsy
Li Qiang, PhD	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS (Administrative Supplement)	PPARgamma Deacetylation in the Restoration of Metabolic Homeostasis
Michael Shelanski, MD, PhD	National Institute on Aging/NIH/DHHS	Targeting Caspase-2 in Alzheimer's Disease
Gloria Su, PhD	Internal Award: Irving Drug Discovery Funds	Identification of novel YAP1 inhibitors with innovative platforms
Stephen Tsang, MD, PhD and Janet Sparrow, PhD	National Eye Institute	Therapeutic Gene Editing and Multimodal Imaging in Juvenile Macular Degeneration
Clarissa Waites, PhD	National Institute of Neurological Disorders and Stroke/NIH/DHHS (Administrative Supplement)	Uncovering the roles of ubiquitination and the ESCRT pathway in degradative sorting of SV proteins
Sandeep Wontakal, MD, PhD	National Institute of Neurological Disorders and Stroke	Elucidating the spatiotemporal regulation of a long non-coding rna required for neurodevelopment
Andrew Yates, PhD	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Modeling the ecology of tissue-resident T cells
Lori Zeltser, PhD	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Developmental programming of brown adipose tissue sympathetic tone

Anniversaries

As of July 2020

10 Years
Julie C. Canman
John Mark Fisk
Abel Arnoldo Gonzalez
Susan Hsiao
Maria N. Kouimanis
Elena M Lucchetta
Maria Elena Pero
Jaya Sarin Pradhan
Ismael Santa-Maria Perez
Simha Sastry
Daniel Mordecai Schreiber
Markus D. Siegelin
Shatiqua Janet Williams
Alexis A. Zaiter

15 Years
Eldad Arie Hod
Yuis J. Jimenez-Cortez
Brynn Levy
Wenhong Li
Emily Lowry
Yinghui Mao
Maria Mordan
Geo Serban
Brie Alexandra Stotler
Lourdes Ulerio-Zaiter
Qing-Yin Zhang
Yinghui Mao
Teresa Palomero
Adolfo A. Ferrando

20 Years
Hynek Wichterle
Ritchie Alsberry
Peter D. Canoll
Lorraine N. Clark
Samantha K. Davenport
Wilbur I. Estrada
Richard Oscar Francis
Kim Johnson
Ling Kahn
Tae-Wan Kim
Muyang Li
Xinrong Li
Edgar Lugo
Thomas Mathews
Linda M. McCamery
Jose A. Nunez
Hynek Wichterle
Fann Wu
Shufang Yang
Lori M. Zeltser
Wen Zhang
Hynek Wichterle
Katia Basso

25 Years
Paulette Bernd
Rene M. Deknatel
Deborah D. Desrouilleres
Diane Hamele-Bena
Patricka Jeremie
Anna X. Qu
Susan Whittier
Tilla S. Worgall
Howard J. Worman

30 Years
Joann G. Li
Xiaolin Liu-Jarin
Liza A. Pon
Josefa Y. Salcedo
Matthias Szabolcs
David L. Diuguid
Wei Gu

35 Years
Jeanette Rodriguez
Ira A. Tabas

40 Years
Jay Harris Lefkowitch
Charles C. Marboe
Hermann Schubert

45 Years
Michael D. Gershon

In Memoriam

Taube Rothman (1932-2020)

BY MICHAEL GERSHON, MD
Professor of Pathology and Cell Biology

Taube P. Rothman, Ph.D., Professor Emerita of Clinical Pathology (in Anatomy and Cell Biology and in the Center for Neurobiology and Behavior), died peacefully at the age of 88 on December 11, 2020.

Taube Rothman received a PhD for work in my laboratory when I was a young faculty member at Cornell. Before I met Taube, I had already begun my work on the physiology and cell biology of the enteric nervous system. Taube opened a new research vista for me. She was intrigued, as I was, with the analysis of enteric neurons and the microcircuits in which they are arranged, but Taube wanted above all else to understand how they developed.

Taube began that work with me and then left to study the role of the cell cycle in the differentiation of autonomic neurons as a post-doctoral fellow in the laboratory of Howard Holzer at the University of Pennsylvania. Ultimately, her interest in enteric nervous system development, caused her to move to Columbia so that she could again collaborate with me after I became Chair of Anatomy & Cell Biology.

Taube's accomplishments were great and included the first detection of the route and timing of the colonization of the bowel by the émigrés from the neural crest that give rise to the enteric nervous system. Taube was able to collaborate, not only with me but with Nicole Le Douarin, the great French scientist who developed the use of quail-chick chimeras to trace the migration of neural crest-derived cells through developing embryos. Taube and Nicole became great friends and kept the airlines busy as they exchanged home and home visits.

Taube was, above all else, a dedicated and talented teacher. Generations of Columbia medical and dental students benefitted hugely from her efforts in Histology and Human Development. When Taube retired, her absence led to a palpable sense of loss at Columbia. Now that she has passed away, there is no doubt that a similar sense of loss is being felt among the countless friends and acquaintances whose lives, like mine, she made just a little better

Retirements

Dr. Jean Paul Vonsattel Becomes Professor Emeritus of Pathology and Cell Biology at the Columbia University Irving Medical Center

The Columbia University Provost has recently approved the appointment of Dr. Jean Paul Vonsattel, MD, as Professor Emeritus of Pathology and Cell Biology at the Columbia University Medical Center.

Dr. Vonsattel received the M.D. degree from Centre Hospitalier Universitaire Vaudois (Switzerland) in 1978, and the Doctorate from University of Lausanne in 1980. He was Professor of Pathology at the Columbia-Presbyterian Medical Center January 2001-2004, Professor of Pathology at the New York-Presbyterian Hospital at the Columbia University Medical Center, 2004-06, Professor of Pathology and Cell Biology at the New York-Presbyterian Hospital at the Columbia University Medical Center, 2007-13, and Professor of Pathology and Cell Biology at the Columbia University Medical Center, 2013-December 2020. He was a member of the Faculties of Health Sciences and Medicine, January 2001-December 2020.

Dr. Vonsattel was the director of the New York Brain Bank. At autopsy, he and other neuropathologists examine brains for cytoskeletal protein abnormalities (tangles), amyloid deposition (plaques), synaptic density, and neuronal cell loss. They also give a definitive diagnosis, which can only be made upon examination of the brain. Dr. Vonsattel has implemented a state-of-the-art barcode inventory system to track the storage and disbursement of the tissue samples. Requests for tissue samples are made online at the Brain Bank website which is linked to the inventory database. This computerized system facilitates the process of retrieving and distributing samples to clinicians and scientists at Columbia University and other institutions.

In his congratulatory email to Dr. Vonsattel, Dr. Roth Kevin, the department chair, said that the new appointment “is well deserved recognition of your twenty plus years of outstanding service and research at Columbia University”.

It is with mixed emotions that we announce the retirement of **Carmen Caraballo**, our most senior Accounts Payable Rep. She has provided us with 31 years of devoted service. I don’t know how we will get along without her!

Carmen’s attention to detail has been invaluable. Her willingness to put in extra time and effort to help process all aspects of Accounts Payable entries has demonstrated a commitment we have come to depend upon. Her hard work and diligence have greatly contributed to our success. In addition to her incredible competence and skill, she has been a friend to all with her thoughtfulness and quiet encouragement.

While she will be missed, she certainly deserves her retirement. Our warmest wishes go with her. **By Jeanette Rodriguez**

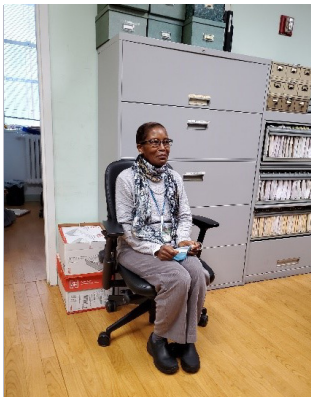
Retirements

It is with personal regret but warm wishes that I announce the retirement of **Elnora Johnson** this past November. Elnora joined Columbia as a secretary in 1981, in the Office of Student Financial Aid. She quickly advanced to Financial Assistant and soon after assumed the role of Department Administrator in the Philosophy Department. She worked in Student Development and Activities and also served as the Mathematics Department Administrator before joining the Department of Pathology and Cell Biology in 2002. Elnora held several senior leadership positions in the department's central administrative unit and, over the years, was responsible for business office operations, budget and finance reporting, accounting and financial management. The scope of her responsibilities was broad and crossed over into every business aspect within the department. Her understanding of our complex medical center enabled her to successfully navigate our systems and overcome challenges despite many changes, advancements, and increased regulations.

Ellie is a respected senior administrator who spent nearly 40 years serving Columbia and our department. Her reputation on both CU campuses was as a leader, problem solver and facilitator. We are indebted to her for her years of service and commitment to excellence. We invite you all to extend your good wishes to Elnora in her new endeavors. **By Joann Li**

Jane Netterwald, Manager of the Center for Advanced Laboratory Medicine (CALM) since 2013, retired at the end of 2020. Jane has been working in various laboratory roles for New York Presbyterian Hospital, both at the Allen Hospital and Columbia University Medical Center campus, since 1981. Although she started out as a Microbiology medical technologist, Jane became famous in the Blood Bank, where she was responsible for training scores of new medical technologists and clinical pathology residents. She was both the first and last person one went to with a question and she always encouraged young trainees to continue learning and growing.

In her role as Manager of CALM, Jane grew the laboratory into a successful and happy place to work. Jane continues to cultivate new medical technologists and staff to continue learning and growing in their roles in the lab. Furthermore, Jane leads by example and is dedicated to making every year more successful than the last. She will be sorely missed and we will be forever grateful for her years of service. **By Eldad Hod, MD, PhD**



Bernetta Abramson and I began working with each other while we were still at the Albert Einstein College of Medicine, and we have been together ever since, through the move to Columbia to the NYSPI laboratory and then to a succession of labs in the Black and P&S buildings. Bernetta managed the lab and did many of our experiments over these years with her usual outstanding care and attention. Bernetta welcomed students, postdocs, and research fellows into our lab with her customary graciousness and cooperation and humor and helped all of them progress through their many projects, yet holding all of us to high standards of being good laboratory citizens. In recent years, Bernetta has been a go-to person for the Department and to many labs other than ours for answers to institutional questions and for help in setting up new laboratories. So many people have benefitted from her vast, accumulated knowledge of the many rules and regulations that we all follow. It has been a privilege working with Bernetta for so many years.

On a personal note, I have always felt that Bernetta has not only been part of our laboratory family, but also a part of my personal family. We watched the trials and tribulations and joys of raising children and watching them grow into adulthood. Bernetta knows my grandchildren and no doubt is looking forward to her own. Liz used to refer to Bernetta as my laboratory "wife." We have spent many years together and have learned much from each other. We will keep in touch (electronically for now) and will visit personally after we eventually will be able to do so. **By James Goldman, MD**

New Faculty

Huaibin Mabel Ko, MD
Assistant Professor of Pathology and Cell Biology at CUMC

Huaibin Mabel Ko completed her undergraduate studies at the University of California, Los Angeles, graduating with a BFA in Design/Media Arts. After moving to New York, she studied medicine at the Icahn School of Medicine at Mount Sinai, staying for residency and a fellowship in GI pathology. After training, she went on to become an Assistant Professor in the Department of Pathology at Mount Sinai in 2015 and was subsequently granted secondary appointments in the Departments of Medicine (Gastroenterology) and Medical Education in 2016. In addition to clinical care, Dr. Ko's main interests include medical education and research. She was actively involved in medical student and resident education at Mount Sinai and received the Junior Faculty Teaching Award in 2016. Her clinical research focuses on inflammatory bowel disease, eosinophilic diseases of the gastrointestinal tract, and common variable immunodeficiency. She received the Collaborative Translational Research Award from the Department of Medicine at Mount Sinai in 2018. She is an executive committee member of the Pancreatobiliary Pathology Society and contributes to the Rodger Haggitt Gastrointestinal Pathology Society's Journal Watch. In 2018, she received the Saferstein award, which provided her $50,000 in support of further studies in biostatistics. She completed a Masters program in Biostatistics at the Mailman School of Public Health at Columbia University in 2020. Dr. Ko is thrilled and honored to join the faculty at Columbia. She pledges to work diligently to further the mission of this institution contributing to the outstanding clinical care, translational research, and education.

Sandeep N. Wontakal, MD, PhD
Assistant Professor of Pathology and Cell Biology at CUMC

Born in India, Sandeep Wontakal immigrated to NYC with his family at age 5 and his entire primary education was within the NYC public school system. He got hooked onto biomedical research and molecular biology as a high school student working in a research lab at the local CUNY campus. Sandeep then completed his undergraduate degree at Rutgers University – Rutgers College majoring in Molecular Biology & Biochemistry with minors in Mathematics and Philosophy. His undergraduate thesis focused on transcriptional regulation of developmentally regulated genes in budding yeast, which showed him the awesome power of genetics and the advantages of using tractable model systems. Subsequently, he matriculated into the M.D./Ph.D. program at the Albert Einstein College of Medicine. His main graduate work centered around transcriptional regulation of erythropoiesis, which introduced him to various genomics approaches. After graduating from Einstein in 2013, he joined the Department of Pathology and Cell Biology at CUIMC and completed his Pathology residency (CP only) and fellowships in Molecular Genetic Pathology. Prior to joining the faculty, he was a post-doctoral research fellow at Columbia working on trying to understand the functions of long non-coding RNAs using C. elegans as a model system. In addition, he is working to understand the functional consequence of rare human variants associated with genetic diseases through studying their effects in the C. elegans orthologs. His long-term interests include helping to expand and further develop a genetic taxonomical system to categorize rare inherited diseases.

Despite Utility, NGS Testing for Cancer Often Denied Insurance Coverage

Source: Journal of Clinical Pathways/October 1, 2020

Expanded genomic panel testing was clinically impactful in nearly two-third of patients with high-risk cancer, yet payers reimbursed only 10.75% of the charge on average, if reimbursed at all, according to findings from a study published in JCO Precision Oncology (2020. doi:10.1200/PO.20.00048).

"The routine use of large next-generation sequencing (NGS) pan-cancer panels is required to identify the increasing number of, but often uncommon, actionable alterations to guide therapy," wrote Susan J Hsiao, MD, PhD, Columbia University Irving Medical Center., New York, New York, and colleagues.

"Inconsistent coverage and variable payment is hindering NGS adoption into clinical practice," they continued.

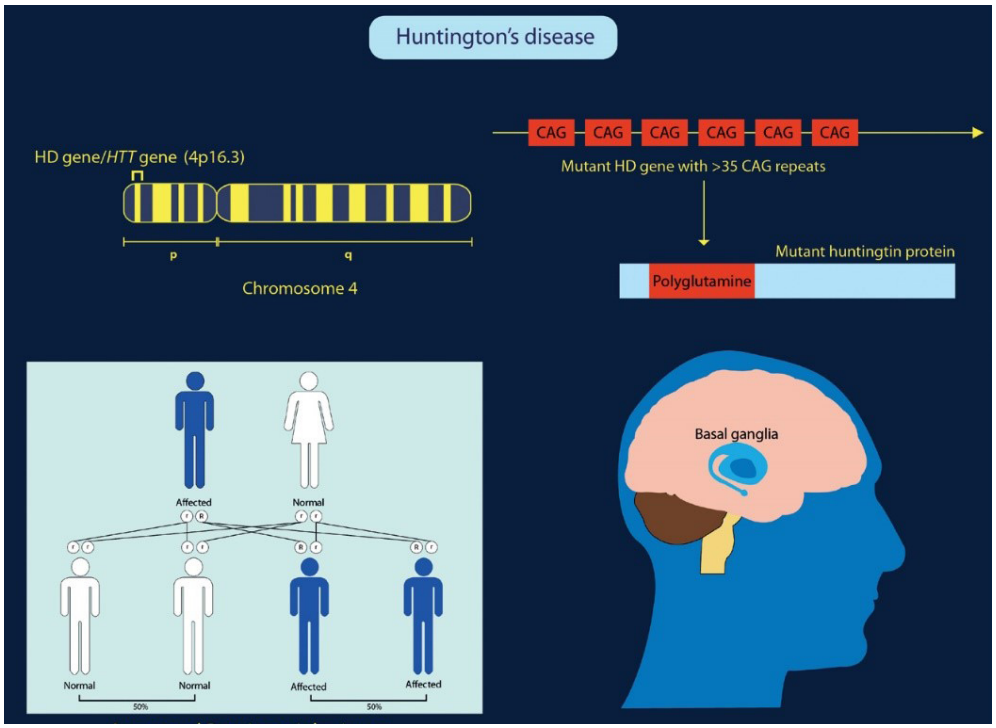
The study included 349 patients diagnosed with high-risk cancer who received the 467-gene Columbia Combined Cancer Panel as part of their clinical care. Designed to detect DNA variations in solid and liquid tumors, the panel was performed on 359 high-risk tumors in the Laboratory of Personalized Genomic Medicine at the Columbia University Irving Medical Center.

The NGS panel proved clinically impactful in 64% of cases, per a multidisciplinary molecular tumor board. In 42% of cases, molecular alternations were found that could inform future therapy in the event of progression or relapse, according to the study. In 6.6% of cases, a targeted therapy was initiated.

However, among the 246 cases with reimbursement data, 77% of tests were denied coverage by insurers, researchers found. When they did pay, insurers covered just 10.75% of the total NGS service charge.

"Limited coverage and low reimbursement remain barriers, and broader reimbursement policies are needed to adopt pan-cancer NGS testing that benefits patients into clinical practice," Dr Hsaio and colleagues concluded.—*Jolynn Tumolo*

Dr James E. Goldman | Dr Osama Al-Dalahmah – Confronting the Challenge of Huntington Disease



Source: Biology Editor's Pick – Health and Medicine /October 14, 2020

Huntington disease (HD) is an inherited and progressive neurological disorder which is currently fatal. Dr James E. Goldman and Dr Osama Al-Dalahmah, both at Columbia University, USA, are utilising new techniques in molecular biology to better understand the brain pathology associated with HD. Their vision is to develop therapeutics that can slow the progression of the disease, and ultimately, treat and even prevent it.

Read the full story here.

COVID-19 Related Publications

SINCE AUGUST 2020

Impact of COVID‐19 pandemic on functioning of cytopathology laboratory: Experience and perspective from an academic centre in New York
Renu K. Virk, Teresa Wood, **Patricia G. Tiscornia Wasserman**
Cytopathology

Detection of SARS-CoV-2 in placental but not fetal tissues in the second trimester
Jacob E. Valk, Alexander M. Chong, Anne-Catrin Uhlemann & **Larisa Debelenko**
Journal of Perinatology

Trophoblast damage with acute and chronic intervillositis: disruption of the placental barrier by severe acute respiratory syndrome coronavirus 2
Larisa Debelenko, **Igor Katsyv**, Alexander M Chong, Leonore Peruyero, **Matthias Szabolcs**, Anne-Catrin Uhlemann
Human Pathology

An Autopsy Review: "COVID Toes"
Mine M. Yilmaz, MD, Matthias J. Szabolcs, MD, Larisa J. Geskin, MD, and George W. Niedt, MD
The American Journal of Dermatopathology

Distinct antibody responses to SARS-CoV-2 in children and adults across the COVID-19 clinical spectrum
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Maxwell D. Weidmann, MD, PhD, Kenneth Ofori, MD, MHS, and **Alex J. Rai, PhD, DABCC, FAACC**
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Evidence of Structural Protein Damage and Membrane Lipid Remodeling in Red Blood Cells from COVID-19 Patients
Tiffany Thomas, Davide Stefanoni, Monika Dzieciatkowska, Aaron Issaian, Travis Nemkov, Ryan C. Hill, **Richard O. Francis, Krystalyn E. Hudson**, Paul W. Buehler, James C. Zimring, **Eldad A. Hod**, Kirk C. Hansen, **Steven L. Spitalnik***
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Laboratory Testing of Severe Acute Respiratory Virus Coronavirus 2 - A New York Institutional Experience
Marie C. Smithgall, Susan Whittier, and **Helen Fernandes**
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SARS-CoV-2 Viral Load Predicts Mortality in Patients with and Without Cancer Who Are Hospitalized with COVID-19
Las F. Westblade, Gagandeep Brar, Laura C. Pinheiro, Demetrios Paidoussis, Mangala Rajan, Peter Martin, Parag Goyal, Jorge L. Sepulveda, Lisa Zhang, Gary George, Dakai Liu, **Susan Whittier**, Markus Plate, Catherine B. Small, Jacob H. Rand, Melissa M. Cushing, Thomas J. Walsh, Joseph Cooke, Monika M. Safford, Massimo Loda, Michael J. Satlin
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Forty Postmortem Examinations in COVID-19 Patients: Two Distinct Pathologic Phenotypes and Correlation With Clinical and Radiologic Findings
Simona De Michele, MD, Yu Sun, MD, PhD, Mine M Yilmaz, MD, Igor Katsyv, MD, PhD, Mary Salvatore, MD, Amy L Dzierba, PharmD, **Charles C Marboe, MD,** Daniel Brodie, MD, Nina M Patel, MD, Christine K Garcia, MD, PhD, **Anjali Saqi, MD, MBA**
American Journal of Clinical Pathology

Neuronophagia and microglial nodules in a SARS-CoV-2 patient with cerebellar hemorrhage
Osama Al-Dalahmah, Kiran T. Thakur, Anna S. Nordvig, Morgan L. Prust, William Roth, Angela Lignelli, Anne-Catrin Uhlemann, Emily Happy Miller, Shajo Kunnath-Velayudhan, **Armando Del Portillo, Yang Liu, Gunnar Hargus, Andrew F. Teich, Richard A. Hickman, Kurenai Tanji, James E. Goldman, Phyllis L. Faust & Peter Canoll**
Acta Neuropathologica Communications

Campus News

NIH Funding: VP&S Ranks No. 5, Nursing No. 4, Mailman No. 6

In federal fiscal year 2020, Columbia University Department Pathology and Cell Biology ranked No. 3 among departments of pathology nationally in NIH funding

Source: CUIMC Newsroom/February 8, 2021

The Columbia University Vagelos College of Physicians and Surgeons reached its highest ranking ever by ranking No. 5 among medical schools in National Institutes of Health (NIH) funding for the most recent federal fiscal year (FFY20), which ended Sept. 30, 2020. Funding amounts were finalized by the NIH in January 2021. Columbia's nursing and public health schools also continue to rank among the top schools of their kind.

The School of Nursing ranked No. 4 among nursing schools, the same ranking it achieved in FFY19. The school received $9.9 million in NIH funds, a 2% increase over FFY19. Since FFY09, when it received $3.2 million, Nursing has risen from No. 15 to No. 4 in the rankings. The FFY20 awards reflect a 213% increase since 2009. The only other New York City nursing school ranked in the top 10 is NYU, which ranked No. 7.

The Mailman School of Public Health ranked No. 6, a move up from its No. 8 ranking in FFY19. For FFY20, Mailman researchers received $46 million, a 10% increase over the previous federal fiscal year.

VP&S received $496 million in NIH funding, enabling its jump from No. 9 in FFY19. Since FFY09, VP&S has moved from No. 14 to No. 5, the largest increase among the top 10 medical schools. The $496 million in NIH funding for FFY20 is an 18% increase from FFY19 and a 119% increase since FFY09, when NIH grants to VP&S totaled $227 million. Of the $496 million, $6 million was granted for COVID-19 research. Much of the COVID-19 research conducted at VP&S during 2020 was subcontracted through grants to other universities and is not reflected in the total VP&S received.

Among New York City medical schools, VP&S is the only school ranked in the top 10 in NIH funding for FFY20.

"The research excellence throughout our medical center is well-known by our researchers, physicians, students, alumni, patients, and peers and is testimony to Dean Emeritus Lee Goldman," says Anil K. Rustgi, MD, interim executive vice president and dean of the Faculties of Health Sciences and Medicine at Columbia. "Rankings confirm the rigor of our research mission and complement other rankings that put us undoubtedly among the eminent medical centers of our nation. We are motivated by our overarching mission to improve health care."

"The sizable jump in the VP&S ranking brings considerable pride to researchers who were encouraged by Dean Emeritus Lee Goldman during his 14-year tenure as dean," says Rudi Odeh-Ramadan, PharmD, vice dean for finance and administration. "The No. 5 ranking reflects Dr. Goldman's vision and persistent encouragement to our researchers and also reflects the quality of our research."

The increase in the number of grants funded occurred in spite of last year's ramp down of research during the height of the Spring 2020 pandemic. "This shows the dedication and demonstrates the resilience of our faculty, research staff, postdoctoral research scientists/fellows, and students and also highlights the robust nature of our core facilities and our Office of Research under the leadership of Michael Shelanski," adds Dr. Rustgi.

In FFY19, eight VP&S departments ranked in the top 10 of NIH funding. In FFY20, that number increased to 11: Biochemistry & Molecular Biophysics (#1), Neurology (#2), **Pathology & Cell Biology (#3)**, Medicine and Ophthalmology (#4), Neuroscience (#5), Dermatology and Obstetrics & Gynecology (#6), Emergency Medicine (#7), Rehabilitation & Regenerative Medicine (#8), and Urology (#10).

The 18% increase in NIH funding to VP&S surpassed the increase in the federal government's appropriation to the NIH (15%).

The first months of FFY21 are off to a good start: Proposals are up 23% over the previous year. Additionally, the number of awards through the first quarter of FFY21 has increased 37%, with a 26% increase in dollars awarded. "It is still very early in the federal fiscal year," says Dr. Odeh-Ramadan, "but the trend for another record-breaking year has been set."

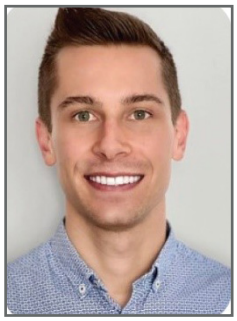
The upward trend in rankings is also seen in the annual Nature Index tables, which rank the number of scholarly publications in high-impact scientific journals. The medical center typically ranks among the top centers in the health care sector. CUIMC was No. 1 in 2018, with the University of Texas Southwestern Medical Center in the No. 2 spot; in the 2019 ranking, UT Southwestern was No. 1, and CUIMC was No. 2. ◆

Graduate Students

Four new students enrolled in the Pathobiology and Mechanisms of Disease Graduate program for the 2020-2021 academic year.

Mia Burke

Mia graduated from Carnegie Mellon University in May 2020. She is interested in neurodegenerative diseases and neuroimmunology. She did a research internship in Neuroimmunology and Harvard Medical School during the summer of 2019. Since she started in the Pathobiology graduate program, she has completed a laboratory rotation in the laboratory of Dr. George Mentis and is currently doing a rotation with Dr. Dritan Agalliu.



Tanner Dalton

Tanner did his undergraduate work at Johns Hopkins University. Following graduation, he took a position in the Department of Pathology at Weill Cornell School of Medicine. He enrolled at NYU for his M.Sc. studies and worked as a research assistant at New York University Langone Medical Center investigating the role of immunity in pancreatic cancer. Tanner is interested in investigating the mechanisms of cancer. He did his first rotation with Christine Chio and is currently rotating in the laboratory of Ken Olive.

Haley (Lei) Huang

Haley received both a B.Sc. in Biology and an M.Sc. in Cancer Biology from Emory University. As an undergraduate, she worked in a C.elegans laboratory, where she studied meiotic silencing. For her Masters degree, she studied cancer immunotherapy. After finishing her M.Sc. degree, she stayed in the laboratory for another year to write up her research findings. Haley continues to be interested in cancer research. Due to travel restrictions, her start date in the program was postponed until the spring semester and she is doing her first rotation with Alex Chavez.

Graduate Students

Logan Schwanz

Logan received a BA in Biochemistry and Molecular, Cellular and Developmental Biology from the University of Colorado at Boulder. His research as an undergraduate included research on catalytic design and computational modeling. Logan is broadly interested in research in the mechanisms of disease and did his first rotation with Harris Wang. He is currently rotating with Sam Sternberg. Logan received Honorable Mention for his NSF fellowship application last year.

Graduating Students in 2020

YoungJoo Yang finished her PhD in Ai Yamamoto's laboratory. The title of her thesis is: ***Understanding autophagy from the perspective of the autophagosome***. Young is starting a post-doctoral position in Austria.

Francesca Garetti finished her Ph.D. in David Sulzer's and Dritan Agalliu's laboratories. The title of her thesis is: ***Alpha-synuclein autoimmunity in Parkinson's disease.***
Francesca has started her post-doctoral studies in Dr. Allison Goate's laboratory at Mt. Sinai.

Nick Gallerani completed his Ph.D. studies in Ed Au's laboratory. The title of his dissertation is: ***The spatial distribution of cortical interneurons***. The role of clustered protocadherins. Nick just accepted a position at Nu Pro.

Graduating Student Fellowship

Nora Lam (G3) was awarded an NSF Graduate Research Fellowship last year for her studies in Donna Farber's laboratory.

Samantha Tener (G3) received Honorable Mention.

Useful Information

How to get your news story published on department website/newsletter – For interesting and relevant news stories that you wish to get published on our department website and/or in our newsletter, please use our online submission form at https://form.jotform.com/pathnews/news-submission-form. Contact PathNews@cumc.columbia.edu if you have any questions.

How to reserve a conference room – To reserve a Pathology conference room, please refer to our general room reservation and use policy at https://www.pathology.columbia.edu/conference-room-reservation.

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