Dr. Ji-hye Paik joined the Weill Cornell Medical College in January 2011 as an assistant professor of Pathology and Laboratory Medicine. She received her PhD in Cell Biology from the University of Connecticut and completed her postdoctoral training with Dr. Ronald A. DePinho in Medical Oncology at the Dana-Farber Cancer Institute in Boston.

Dr. Paik is a New Scholar in Aging of the Ellison Medical Foundation.

Dr. Paik’s work focuses on mammalian forkhead box O family of transcription factors in the context of cancer and aging. Her laboratory combines both in vivo and in vitro systems and uses them to delineate intrinsic and extrinsic control mechanisms of the cellular aging process as well as applies those findings toward the invention of cellular therapeutics for degenerative diseases and a better understanding of cancer. Currently, her laboratory is exploring FoxO and p53-mediated cellular fate decision program in neurodegeneration and brain cancer.

PI3K-Akt-FOXO Pathway in Longevity, Cancer and Stem Cells

PI3K-Akt-FoxO pathway lies at the nexus of aging and cancer. Opposing actions of this pathway on degeneration versus unlimited growth and survival potential serve to maintain stem cells in nearly all tissue throughout their lifetime. The loss of correct cell fate decision program or self-renewal capacity of tissue stem cells underlies certain degenerative diseases and constitutes a part of cellular transformation. Thus it is fundamentally important to identify and understand the genes and pathways governing tissue stem cell reserves and their restorative functions. The FoxO transcription factor family has been validated as key effectors of insulin signaling dependent longevity on the basis of genetic studies in the worm and fly. As in lower organisms, the mammalian FoxOs have been linked to diverse physiologic processes including induction of cell cycle arrest, apoptosis and stress resistance, processes proven to be important for homeostasis of long-lived cells.

Dr. Paik’s work initially interrogated the physiological role of mammalian FoxOs by generating conditional knockout mice for all three FoxOs and dissected their molecular, cellular and organismal role.

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continued on page 2
Her work was the first to establish that FoxOs act to (i) suppress cancer, (ii) maintain vascular stability, and (iii) regulate thymocyte survival and mitogenic responsiveness. In continuation of the effort to better understand the role of FoxOs in tissue stem cells, she examined the impact of FoxO deficiency on mammalian brain physiology and neural stem cell (NSC) biology and showed that FoxOs play central roles in the proliferation and renewal of NSC. Serial analysis of the FoxO deficient brain exhibited initially increased brain size and proliferation of NSC during early adult life, followed by precocious depletion of the NSC pool and compromised neurogenesis in more mature brains (Figure 1). She further performed integrated transcriptomic and functional analyses of FoxO-deficient NSC and identified direct gene targets with known links to the regulation of human brain size and the control of cellular proliferation, differentiation, and oxidative defense (Figure 2).

Despite the overall degenerative and cancer prone phenotype of FoxO deficient mice, the molecular basis remains unclear. Dr. Paik’s laboratory is further investigating the connection between sustained self-renewal capacity and evolutionarily conserved function of PI3K-FoxO in cellular energy metabolism. A popular theory of aging holds that progressive oxidative damage is a major determinant and is associated with dysfunctional mitochondrial reserves which further amplifies reactive oxygen species production and associated damage. Quiescent stem cells are intrinsically more resistant to oxidative damage due to expression of repair, antioxidant, and anti-apoptotic machinery. In addition, an emerging view is that stem cells repartition metabolic energy conversion away from oxidative phosphorylation and toward glycolysis; such an activity serves as an important safeguard against oxidative stress. Yet, the mechanism for metabolic choice remains poorly understood. The Paik laboratory is exploring the impact of FoxO deficiency on NSC oxygen metabolism, which is the major source of intracellular reactive oxygen species that may cause cellular damage (Figure 3).

Furthermore, FoxO function in supporting long-term neurogenesis with an emphasis on defining the feedback regulatory loop between FoxO and microRNA, is another area of current investigation in her laboratory. The outcomes from these studies will be of great use toward extending our knowledge on the mechanism of NSC self renewal as well as serve as a basis of future mechanistic study on stem cell biology in cancer and aging.
Another research focus in Dr. Paik’s laboratory is the identification of targetable molecules that play a causal role in aging and cancer. Her research team combines in vivo animal modeling, stem cell biology, oncogenomic and in vitro pharmacological approaches to systematically delineate molecular and developmental pathways relevant to cancer and aging. Notably, the stem/progenitor reserves of pro-aging mouse models commonly exhibit increased genomic instability and apoptotic depletion along with strong p53 activation. Combined deletion of p53 in these models often leads to cellular transformation. In order to take advantage of these mouse models that recapitulate the human aging phenotype, Dr. Paik has performed somatic reconstitution of p53 coupled with multiple expression analysis. Her group has identified a number of genes that are regulated by tumor suppressor p53 in the context of genomic instability, replication and oxidative stress conditions. They are currently investigating a new class of p53 effectors functioning to restore genomic stability and suppress tumorigenesis. She hopes to rigorously test the importance of these prime candidates as critical elements governing processes of aging and/or cancer in vivo and ultimately to understand their actions on the biochemical level.

In summary, a better understanding of the molecular and epigenetic changes associated with cancer and aging, in particular by PI3K-Akt-FoxOs and p53 in adult neural stem cells governing processes of self-renewal, may provide a framework to understand age-related CNS decline and cellular transformation.

**References**


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**The Department of Pathology Makes Major Capital Investment in Research**

The Department of Pathology and Laboratory Medicine’s new Flow Cytometry Core assists researchers in flow cytometry-based cell analysis studies and cell sorting. Cell samples can be quickly analyzed based on phenotypic markers and functional assays. Characterization of distinct cell populations based on these techniques is widely employed in biomedical research. Flow cytometry is especially useful for physically separating distinct sub-populations defined by specific parameters using a fluorescence activated cell sorter (FACS). Services include:

- Fluorescence-activated cell sorting (FACS)
- Sterile sorting
- Tube and microscope slide-based sorting
- Single Cell Deposition into 6, 12, 24, 48, 96 and 384 well microtiter plates for cloning

The Department of Pathology and Laboratory Medicine operates a Becton Dickinson FACSARiaII-SORP Cell Sorter consisting of 5 lasers capable of simultaneous 14 color detection for apoptosis, DNA/Cell Cycle analysis, detection of novel living color fluorescent proteins (DsRed, mCherry, tdTomato, mOrange, mPlum, etc.), immunophenotyping and calcium flux experiments. The custom configured FACSARia II SORP high-speed cell sorter is capable of rapid sorting of cells, bacteria, yeast, and other small particles based on multiple parameter characteristics into highly pure populations.

The flow cytometric separation of cells from unfixed animal and human tissue is possible on the BD FACSARia cell sorter with a ULPA aerosol management system. However we are unable to sort BSL3 specimens. Before the initial sort is performed, each user is required to provide biosafety information including cell type, origin of sample and special requirements. The form also allows us to prepare for your sort and advise on the time required for its completion. Interested investigators should e-mail: stm2019@med.cornell.edu or contact Dr. Mikhail Roshal, Core Director at: mir9079@med.cornell.edu

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**Photo: courtesy BD Biosciences.**
Welcome New Incoming Faculty

It is my great pleasure to announce the successful recruitment and appointment of four new faculty to the Department of Pathology and Laboratory Medicine. These are Doctors Garrett Desman, Navneet Narula, Gillian Levy, and Nicole Panarelli.

Dr. Garrett T. Desman will be appointed Assistant Professor of Pathology and Laboratory Medicine at Weill Cornell Medical College and Assistant Attending Pathologist at New York-Presbyterian Hospital/Weill Cornell. Dr. Desman received his medical degree from the University of Cincinnati College of Medicine in 2004. He completed residency training in Anatomic and Clinical Pathology at Mount Sinai School of Medicine, followed by an Oncologic Surgical Pathology fellowship at Memorial Sloan-Kettering Cancer Center and by a Dermatopathology Fellowship in the joint Memorial Sloan-Kettering Cancer Center-New York-Presbyterian Hospital Dermatopathology Fellowship Program. He is certified by the American Board of Pathology in Anatomic and Clinical Pathology and in Dermatopathology. During his residency and fellowship training, he participated in many clinical studies. These resulted in several publications in the pathology and dermatopathology literature. He presented his work at the annual meetings of the United States and Canadian Academy of Pathology. He also participated in teaching pathology and dermatopathology residents and fellows. He very much enjoyed his scholarly activities and his teaching experiences at Weill Cornell Medical Center and thus has decided to accept our offer to join the faculty in the Department of Pathology and Laboratory Medicine at the Weill Cornell Medical Center.

In summary, Dr. Desman is an excellent, academically-oriented dermatopathologist who we know well, who is well liked by his resident and fellow peers as well as by the faculty and support staff, all of whom think highly of him as a diagnostician and a potential academician. We are delighted that he has accepted our offer to join the Dermatopathology Division under the leadership of Dr. Cynthia Magro.

Dr. Navneet Narula has been appointed Professor of Clinical Pathology and Laboratory Medicine at Weill Cornell Medical College and Attending Pathologist at New York-Presbyterian Hospital/Weill Cornell. Dr. Narula received her medical degree from the Maulana Azad Medical College in her native India in 1988. She completed her training in pathology in her native India as well. Subsequently, she immigrated to the United States where she continued her education and training. She spent four years as a research fellow in pathology at the Massachusetts General Hospital, followed by residency in pathology at the New England Deaconess Hospital, followed by an additional year of residency at the Massachusetts General Hospital. Upon the completion of her training in the United States in 1997, she was appointed Assistant Professor of Pathology and Laboratory Medicine at the University of Pennsylvania. She remained in that position for six years before being recruited to the University of California Irvine, where she was appointed Associate Professor of Pathology in 2004. She was promoted to Professor of Pathology in 2008. Dr. Narula is well known and respected throughout the American pathology community as an excellent diagnostician. During her several years at the University of Pennsylvania, she practiced in multiple organ systems, acquiring considerable expertise in virtually all areas. However, over time, she became the local expert in pulmonary and cardiac pathology, an area of expertise that remains a major focus of her clinical and scholarly activities today. She continued to grow clinically while at the University of California Irvine, acquiring significant additional expertise in urologic pathology. Dr. Narula has always been drawn to medical student teaching and resident training. To that end, she gave all the medical student lectures concerning pulmonary and cardiac pathology while at the University of California Irvine. She led small group discussions in these areas as well. She was actively engaged in resident education, becoming the predominant teacher during morning conference. In addition, she taught pulmonary pathology to the pulmonary medicine fellows and also taught urologic pathology to the urology residents and fellows. Dr. Narula’s teaching activities at the University of California Irvine School of Medicine garnered her an “Excellence in Teaching Award” in 2009 and again in 2010. Her clinical expertise and knowledge in pulmonary and cardiac pathology has resulted in invitations for her to participate in many clinical and basic research studies conducted by pulmonologists, cardiologists, and basic scientists working in cardiac and pulmonary disease. She has contributed approximately 75 papers to the peer-reviewed medical and scientific literature. In addition, Dr. Narula has contributed a dozen review articles and textbook chapters, often as first author. She currently serves as co-principal investigator on an NIH-funded R01 and has contributed to other extramural awards as a co-principal investigator. She has contributed to research in other ways as well, including serving as Associate Director of the current institution’s tissue bank.

In summary, Dr. Navneet Narula is an experienced, expert diagnostician in multiple organ systems. She has particular expertise in pulmonary, cardiac and urologic pathology. She is also a committed and excellent teacher at the medical student, resident and fellow levels. This is evidenced by her teaching awards, and extensive involvement in the educational process. Lastly, Dr. Narula has proven to be an excellent colleague and has participated in collaborative studies with multiple clinical and basic researchers, thereby facilitating the research efforts of many investigators.

Currently, the Department of Pathology and Laboratory Medicine does not have an anatomic pathologist with special expertise and academic interest in pulmonary or cardiac pathology. This has made it difficult for us to adequately support the thoracic surgical services and also to assist the research community at Weill Cornell with respect to pulmonary and cardiac pathology. The recruitment of Dr. Narula to the Weill Cornell Medical Center should have a very positive impact on the medical and surgical services, enhance our educational programs in the medical school and resident training in the hospital, and facilitate the research programs in pulmonary medicine. For all these reasons, Dr. Narula is a welcome addition to the Department.

Dr. Gillian Helen Levy has been appointed Assistant Professor of Pathology and Laboratory Medicine at Weill Cornell Medical College and Assistant Attending Pathologist at NewYork-Presbyterian Hospital-Weill Cornell. Dr. Levy received her medical degree from Ohio State University College of Medicine. While there, she took a one year leave of absence from her formal education to complete a post-sophomore fellowship in pathology at Yale University School of Medicine. Subsequently, she completed training in anatomic and clinical pathology as well as a fellowship in cytopathology at Yale University-Yale New Haven Hospital. She is certified by the American Board of Pathology in Anatomic and Clinical Pathology and is Board eligible in Cytopathology.

Dr. Gillian Helen Levy
Dr. Gillian Helen Levy continued

During her residency training, she pursued clinical research with several nationally renowned breast and gynecologic pathologists. These academic activities resulted in several presentations at the annual meetings of the United States and Canadian Academy of Pathology and as well as in several peer-reviewed publications. She also became interested in quality assurance, a very important aspect of modern pathology practice, which is not often pursued by pathology residents in training. Dr. Levy comes to us as a well-trained diagnostician in surgical pathology and cytopathology, who possesses a strong desire to develop an academic career. She will join our Cytopathology Division, where she will become actively involved in the diagnostic interpretation of exfoliative and non-exfoliative gynecologic and non-gynecologic specimens.

Dr. Nicole Panarelli has been appointed Instructor in Pathology and Laboratory Medicine at Weill Cornell Medical College and Assistant Attending Pathologist at New York-Presbyterian Hospital-Weill Cornell. Dr. Panarelli received her medical degree from New York Medical College in 2007. She joined our residency training program in July 2007. She excelled as a resident, rapidly becoming an excellent diagnostic pathologist for her level of training and years of experience. For that reason, she was selected as our gastrointestinal pathology fellow in July 2010. During that year she continued to excel. In addition, she became actively involved in several clinical research projects, resulting in presentations at the United States and Canadian Academy of Pathology and in peer-reviewed papers in the American Journal of Surgical Pathology and the Journal of Hematopathology. In addition, she has several review articles and a monograph either recently published or in press.

In summary, Dr. Nicole Panarelli is an excellent academically oriented gastrointestinal pathologist. We believe she has great potential for a successful academic career. We are delighted that she has accepted our offer to join our Gastrointestinal Pathology Service.

Keynotes
by Domenick J. Falcone, PhD

Dr. Yashpal Agrawal was invited to teach medical students at WCMC in Qatar and was an invited speaker at the Hamad Medical Corporation Hospital, Qatar. Dr. Agrawal was appointed as Vice-Chair of the College of American Pathologists (CAP) Toxicology Resource Committee. Also, the CAP has appointed him as one of two subject matter experts in the field of Toxicology and Therapeutic Drug Monitoring. Dr. Agrawal continues to serve on several CAP committees, such as the Toxicology Resource Committee, the Pharma-cogenomics Surveys committee and the Pharma-cogenomics Advanced Practical Pathology Program (AP3) working group. In addition, Dr. Agrawal continues to serve on two other Clinical Standards Laboratory Institute (CLSI) working groups.

Dr. Rebecca Baergen was elected as the first Chair of the Perinatal Committee of the Society for Pediatric Pathology, a division of the United States and Canadian Academy of Pathology. She was also appointed to the Council for the Society for Pediatric Pathology, and was appointed as a member of the Continuing Medical Education Committee for the Society for Pediatric Pathology. Along with Dr. Cynthia Kaplan, Dr. Baergen gave a short course at the United States and Canadian Academy of Pathology on “Placental Pathology: A systemic approach.” She was also appointed as Guest Editor for an edition of Surgical Pathology Clinics on Fetal and Placental Pathology. Finally, Dr. Baergen participated in a course held in Granada, Spain sponsored by the European Society of Pathology, entitled “Understanding Placental Pathology.”

Drs. Domenick J. Falcone and Faisal Khan attended the American Society of Investigative Pathology meeting in Washington DC (April 2011) to present their poster: “Matrix metalloproteinase-induced microsomal prostaglandin synthase 1 expression by macrophages is dependent on the release of TNF-α, induction of Cox-2 expression and PGE2 engagement of EP4.” In May, Dr. Falcone traveled to WMC in Doha, Qatar to lecture on chronic inflammation and teach histopathology laboratory exercises. He continues to serve as director of the Host Defenses course and associate director of the Human Structure & Function course. During the convocation in June, Dr. Falcone was named to the Senior List by the graduating class of 2011 for excellence in teaching.

Dr. Timothy Hla was an invited speaker at the following scientific meetings: International Vascular Biology Meeting (IVBM2010; June 20-24, 2010), Los Angeles, CA; Naito Conference on Biomembranes and Lipid Mediators, Sapporo, Japan (June 27-30, 2010); European Union League Against Rheumatism (EULAR) annual meeting 2011, London, U.K. (May 25-28, 2011) and International Society for Thrombosis and Hemostasis 2011, Kyoto, Japan (July 23-28, 2011). He was also invited to present his research on sphingolipids and vascular biology at the Vascular Biology seminar series, Harvard Medical School, Boston, MA (April 2010); University of North Carolina, Chapel Hill, NC (May 17, 2010); Cornell University, School of Veterinary Medicine, Ithaca, NY (Sept 27, 2010); Columbia University College of Physicians and Surgeons, New York, NY (May 2, 2010), New York University Langone Medical Center, New York, NY (June 3, 2011) and Novartis Institute for Biomedical Research, Boston, MA (April 2011). He was invited as a Visiting Professor at the Center for Vascular Biology, Beth Israel Deaconess Medical Center in Boston, MA (April, 2010). Dr. Hla also served as a grant reviewer at the NHLBI project review committees (fall 2010 and spring 2011), and the Center for Scientific Review of the NIH (Atherosclerosis and Inflammation of the cardiovascular system) – spring 2011. He was chosen to be a member of the College of CSR reviewers for the NIH and served as a member of the NHLBI working group on translational research (July 2010). Dr. Hla’s lab was awarded a competitive renewal for the research project grant R01-HL49094 (2010-2014) entitled “Post-transcriptional mechanisms in vascular inflammation.” At the National level, he served on the scientific program committee of Atherosclerosis, Thrombosis and vascular biology section of the American Heart Association, and as the President-elect of the North American Vascular Biology Organization (NAVBO). He also was elected as the co-organizer of the Gordon conference on vascular cell biology in 2011 (Feb. 21-24, 2011).

Dr. Rana S. Hoda is course director of the “Papanicolaou Tutorial in Diagnostic Cytopathology” hosted at WCMC by the Department of Pathology and Laboratory Medicine. The first meeting was held in July, 2010 and the second was held July 2011. Both meetings were well-received. Dr. Hoda also lectured on various cytopathology related topics at multiple national and international meetings including the 2011 USCAP Annual Meeting at San Antonio, TX, where she presented, for the second time, a short course entitled: “Glandular Lesions in Liquid-Based Pap Tests.” Dr. Hoda also had several speaking engagements at the ASCP Annual Meeting at San Francisco, CA in October 2010 and the American Society of Cytopathology in November 2010, held at Boston. Dr. Hoda also presented courses at various international meetings in 2010 and 2011 including International Academy of Cytopathology Congress at Edinburgh in May 2010, Royal College Pathology Conference at London in December 2010 and Emirates Pathology Society meeting at Dubai, UAE in January 2011. The topics included FNA of breast and pancreas. Dr. Hoda presented a poster at 2010 annual ASC meeting and at the 2011 USCAP annual meeting she had a platform presentation and two posters. Most of her published papers and scientific presentations at national meetings involved the cytopathology fellow and several pathology residents. She continues to serve on the Scientific Abstract Review Board for Cytopathology at USCAP, as Section Editor for Diagnostic Cytopathology and Associate Editor for Cyto Journal.
Dr. Joan G. Jones was an invited speaker at the following international scientific meetings: Mammary Gland Biology Gordon Research Conference, Lucca (Barga), Italy (June 2010), the 50th Anniversary Meeting of the British Association for Cancer Research, Edinburgh, Scotland (June 2010), and the Irish Association for Cancer Research, Cork, Ireland (March 2011). Since 2010, Dr. Jones has served as a member on the Scientific Advisory Board for MetaStat, a newly formed company which is supporting the development of TMEM as a clinical test for the assessment of metastatic risk in breast cancer. MetaStat was awarded the 2010 DeBakey Memorial Life Science Award which is given to a newly formed life science company “with the highest potential to commercialize its technology.”

Dr. Cynthia M. Magro presented Case Presentations in Dermatopathology in Columbus, Ohio in January 2010 at the Ohio State University. Dr. Magro also presented her work on Pseudolymphoma at the United States and Canadian Academy of Pathology Meeting in Washington DC in March 2010. She was also part of the faculty for the Dermpedia Scottsdale Course in Scottsdale, Arizona in April 2010. Dr. Magro presented Case Presentations in Dermatopathology at the Florida Society of Pathologists in Key Biscayne, Florida in June 2010. She was also part of the faculty for the course held by American Society of Clinical Pathology in San Francisco, California in October 2010. Dr. Magro was an invited speaker for several meetings this year. Her abstracts were presented in the United States and Canadian Academy of Pathology (USCAP) meeting held in San Antonio, Texas. The topics included Susac Syndrome, Degas disease, androgenetic alopecia, and the novel use of soluble adenyl cyclase (sAC) antibody in the assessment of pigmented lesions. She was an invited speaker at the Mount Sinai School of Medicine Big Apple Meeting, where she lectured on “The WHO - EORTC Classification of Cutaneous Lymphomas." Dr. Magro also lectured in the Dermpedia Comprehensive Course on Melanoma and Melanocytic Proliferations in Scottsdale, Arizona in April 2011. She was also an invited speaker at the Pittsburgh Pathology Meeting on April 28, 2011 where she lectured on the various forms of cutaneous lymphomas and the subtypes of melanomas. Dr. Magro participated in the American Society of Clinical Pathology 2011 Educational Course: “Dermatopathology: Contemporary Diagnostic Criteria and Strategies” held in Las Vegas in June 2011.

Dr. Daniel Knowles, Chairman and Pathologist-in-Chief, continues to direct the Tutorial on Neoplastic Hematopathology. He has directed the Tutorial for the past 15 years. This is widely considered the premier postgraduate course in Hematopathology offered in the United States. This five-day course covers all aspects of malignant lymphoproliferative and myeloproliferative disease occurring in nodal, bone marrow and extra-nodal locations. The faculty includes a small roster of outstanding, internationally recognized expert hematopathologists. This past year, the course was held in Marco Island, Florida in January 2011. In addition to directing the Tutorial Dr. Knowles lectured on “Pathology of Immune Deficiency Associated Lymphoproliferative Disorders.” Dr. Knowles actively participated in the Annual Meeting of the United States and Canadian Academy of Pathology held in San Antonio, Texas in March 2011. In addition to attending the annual meetings of the several editorial boards upon which he serves, Dr. Knowles co-authored abstracts with other members of the Weill Cornell Hematopathology group and residents and fellows. In September 2010, Dr. Knowles attended the Annual Meeting of the Northeast Pathology Chairs in Bermuda. He serves as Program Chairman for the meeting. Dr. Knowles continues his role as Chief Medical Officer of the Weill Cornell Physician Organization. He also serves as Chair of the Strategic Plan III Clinical Implementation Committee. This committee is charged with coordinating all clinical programs and recruitment included in Strategic Plan III and in the planning initiatives of the Physician Organization. The committee is responsible for developing recommendations to the Dean for sequencing priority funding and investments in people, space and programs. Dr. Knowles also co-chairs the Board of Directors of Well Cornell Imaging at NewYork-Presbyterian Hospital with Dr. Steven Corwin, Chief Executive Officer of NewYork-Presbyterian Hospital. Lastly, he serves as Chairman of the Internal Advisory Board charged with developing the administrative, clinical and scientific infrastructure necessary to eventually develop an NCI-designated Comprehensive Cancer Center at the Weill Cornell Medical Center.

Dr. Attilio Orazi, Vice-Chair for Hematopathology, attended the Annual Meeting of the Myeloproliferative Disorders Research Consortium held at Mount Sinai Hospital, New York, in April 2010. Dr. Orazi continues to serve as the Pathology Chair of the Consortium. He is responsible for the central pathology review of diagnostic material of patients accrued to the clinical trials sponsored by the Consortium. In June 2010, Dr. Orazi was an invited speaker at the Working Conference on Standards in Hematopathology in Myelodysplastic Syndromes organized by Dr. Peter Valent, Hematology Chair of the University of Vienna, Austria. Dr. Orazi gave a lecture entitled “Pathology of myelodysplastic syndromes and their differential diagnosis.” He also presented two cases which highlighted current diagnostic problem areas in WHO 2008. The outcomes of the conference and resulting recommendations were reported in a published consensus paper providing guidelines to assist in the diagnosis, classification, and prognostication of myelodysplastic syndromes in daily practice as well as in clinical trials. Dr. Orazi was a panelist and chaired a session of the Workshop on Bone Marrow Pathology organized by the European Bone Marrow Working Group (EBMWG) of the European Association for Hematopathology (EAHP) held in Uppsala, Sweden in September 2010. At the business meeting, Dr. Orazi was elected incoming chairperson of the EBMWG (effective 2012). At the EAHP meeting, Dr. Orazi was one of the three invited professors for the “Meet the Professor” session where he gave an interactive presentation with audience participation on how to diagnose early transformation to acute leukemia in bone marrow and in extramedullary sites. Later in the Fall, Dr. Orazi was the course director and solo invited speaker for “Diagnostic approach to myeloproliferative disorders,” a three-day course for fifty participants held in Rimaggiore, Italy (October, 2010). In November, Dr. Orazi gave a lecture at the New York Pathological Society (NYPs) entitled “How to Recognize and Classify Overlap Myeloid Neoplasms.” During the year 2010-2011, Dr. Orazi has continued in his role as Vice-President of the NYPs and has coordinated the selection of speakers for four successful NYPs regular meetings. Later in 2011 he will become president of the NYPs. In January 2011, Dr. Orazi presented lectures on “Myelodysplastic Syndromes” and “Myelodysplastic/Myeloproliferative Neoplasms” at the Tutorial on Neoplastic Hematopathology directed by Dr. Daniel Knowles, held in San Marco Island, Florida. In addition, Dr. Orazi chaired one of the sessions and gave the concluding remarks. In March 2011, Dr. Orazi participated in the 100th Annual Meeting of the United States and Canadian Academy of Pathology (USCAP) held in San Antonio, TX, February-early March 2010. At the USCAP, Dr. Orazi attended the annual meeting of the Executive Committee of the Society for Hematopathology where he serves as member-at-large. He attended the annual meetings of the editorial boards upon which he serves. At the USCAP, Dr. Orazi co-authored six posters and one proffered paper. Together with Dr. D. Arber (Stanford University), Dr. Orazi continues to direct the short course: “Modern Approach to the Diagnosis and Classification of Myeloid Neoplasms.” In March 2011, Dr. Orazi participated as panelist to the slide review conference held at St. Thomas Hospital in London, UK organized in preparation for the EBMWG Course and Workshop. The actual Course and Workshop was held in Greenwich, UK in April 2011. Dr. Orazi presented a lecture entitled “MDS/MPN and other overlap syndromes: the grey zone myeloid neoplasms.” He also chaired one of the workshop sessions, presented one of the workshop cases, and co-authored a second case presentation. Dr. Orazi was an invited faculty at the 6th Annual Houston Conference Myelodysplastic Syndromes & Myeloproliferative Neoplasms-Advancing Knowledge in the Biologic and Therapeutic Approach, which was held at MD Anderson Cancer Center in Houston, TX, May 2011. Dr. Orazi presented a lecture entitled “Uncommon types of disease progression and other diagnostic challenges in myeloproliferative neoplasms.” He also actively participated in the Q&A session of the meeting that focused on diagnostic issues not well addressed by the current WHO classification. In June 2011, Dr. Orazi attended the Annual Meeting of the Myeloproliferative Disorders Research Consortium held at the Upper East Side Marriott Hotel, New York, NY. Dr. Orazi continues to serve as the Pathology Chair for all the clinical trials of the Consortium. For the third year in a row Dr. Orazi has made the list of “Best Doctors” published by the New York Magazine.
**Keynotes continued**

Dr. Edyta Pirog was an invited editor of the miniseries “Cervical pathology” for Diagnostic Histopathology. Dr. Pirog presented a lecture entitled “Molecular markers and HPV detection in the diagnosis of lower genital tract lesions” as part of a doctoral thesis defense at the Vrije Universiteit, Amsterdam, Netherlands. In addition Dr. Pirog presented posters at the 26th International Papillomavirus Conference in Montreal, Canada, the Congress of International Academy of Pathology in Sao Paulo, Brazil and USCAP in San Antonio. She was a coauthor of platform presentations presented at USCAP and the Europin Congress in Lisbon, Portugal.

Dr. Surya V. Seshan was Co-Director of the 1st International Renal Pathology Conference, a joint meeting of several International Societies of Renal Pathology in La Coruna, Spain in June 2010, and lectured on “The pathophysiology of VEGF in renal disease.” In addition, she was Co-Director of the Pediatric Renal Pathology Course at the 15th Congress of International Pediatric Nephrology Association in New York on August 2010, and lectured on “Pediatric lupus nephritis” and “Fibry disease and other inherited metabolic renal diseases.” Dr. Seshan was an invited speaker at the Department of Pathology and Laboratory Medicine in the New York City area, including those at the New York University Langone Medical Center in New York City and Mount Sinai Medical Center in New York City, in addition to serving as a reviewer for fifteen journals, member of the editorial boards of the Archives of Pathology and Laboratory Medicine, Modern Pathology, American Journal of Clinical Pathology, and the American Journal of Surgical Pathology, and Associate Editor of Archives of Pathology and Laboratory Medicine. She was an abstract reviewer for the College of American Pathologists. Dr. Yantiss wrote several manuscripts, served as guest editor for special sections in Pathology Research International and Archives of Pathology and Laboratory Medicine, and published several abstracts.

Dr. Maria Shevchuk was an invited speaker at several national and international symposia, including: the Independent Satellite Symposium “Robotic Prostatectomy Case Presentation: Optimizing Patient Outcomes and Improving Clinical Efficiencies” at the AUA Meeting in San Francisco, 2010; the Prostate Cancer Institute Lecture Series, Weill Cornell Medical Center, 2010; and the Annual International Symposium on Prostate Cancer at the New York Academy of Medicine, 2011. Dr. Shevchuk also presented Grand Rounds for the Urology and Pathology Departments of Weill Cornell Medical College. Dr. Shevchuk received the following awards: “First Prize for Video Presentation” at the AUA Meeting in San Francisco, 2010; “Best Poster in Session” at the World Congress of Endocrinology in Chicago, 2010; Second Runner-up Award for “Owl or Seahorse: Brenner Tumor” at the 20th Medical Complex Art Show of Weill Cornell Medical College. Currently, Dr. Shevchuk is a section editor and chapter author in “Prostate Cancer, a Comprehensive Textbook” (ed. A. Tewari). She is also a member of the CAP Committee on Emerging Technologies, chaired by Dr. Debra Leonard.

Dr. Y. Lynn Wang’s Lab actively conducts both clinical and translational research, in addition to functioning as a CLIA-certified clinical laboratory. On the clinical research front, Dr. Wang continued to play an active role in the International BCR-ABL RQ-PCR Standardization Group. She presented a talk “BCR-ABL RQ-PCR in North America: A Summary of multi-lab surveys by the College of American Pathologists” to the group in New Orleans. She was also invited to Vanderbilt University Medical Center and Southern Medical University in China to speak on “International Standardization of BCR-ABL RQ-PCR for CML Monitoring.” Five-year work by the international group led to the establishment of the 1st WHO International Genetic Reference Panel for quantification of BCR-ABL mRNA that was recently published in Blood. A review article by Dr. Wang, “Translating trial-based molecular monitoring into clinical practice: Importance of International Standards and Practical Considerations for Community Practitioners” was pre-published online at the website of Clinical Lymphoma, Myeloma & Leukemia (Jun 13, 2011). In collaboration with Dr. Richard Silver in Hematology and Professor Nick Cross from the UK, Dr. Wang contributed to the finding that JAK2 haplotype is a major risk factor for the development of myeloproliferative neoplasms, and JAK2V617F allele burden in polycythemia vera correlates with grade of myelofibrosis. On the translational research front, the Wang lab continues to employ various signal transducer inhibitors to probe the pathogenesis of a variety of non-Hodgkin lymphomas. They have found that the activity of SYK and PLCγ2 predict apoptotic response of CLL cells to SRC tyrosine kinase inhibition, and the early events of B-cell receptor signalling are not essential for their proliferation and viability of AIDS-related lymphoma. This work has been published in Leukemia. Dr. Wang presented their work on SYK inhibition and response prediction in diffuse large B-cell lymphoma at USCAP. Besides USCAP, Dr. Wang was invited to present her translational lymphoma research findings at various institutions including MD Anderson, University of Pittsburgh, University of Maryland, Portola Pharmaceuticals, Chinese Academy of Sciences, and medical universities in Shanghai, Guangzhou and Tianjin. She also presented her work and chaired sessions at the 2nd and 4th World Cancer Congress. Dr. Wang continues to serve as a reviewer for various journals.

Dr. Rhonda Yantiss was awarded the M. Desmond Burke, MD Award for Outstanding Contributions to Resident Education in the Department of Pathology and Laboratory Medicine at Weill Cornell Medical College. Last year, she directed the second annual Tutorial on Pathology of the GI Tract, Pancreas, and Liver at the Westin Diplomat Resort & Spa in Hollywood, Florida. This Tutorial is a comprehensive 5-day post-graduate course that features a panel of internationally recognized faculty from across the United States and draws registrants from around the globe. Dr. Yantiss was also invited to deliver three lectures at the International Academy of Pathology 2010 Meeting in Sao Paolo, Brazil. She served as chairperson of the Rodger C. Haggitt Gastrointestinal Pathology Society education committee and member of its executive committee. In that capacity, she organized educational sessions at the American Society of Clinical Pathology 2010 Annual Meeting in San Francisco, California, the 2011 United States and Canadian Academy of Pathology National Meeting in San Antonio, Texas, and the 2011 Digestive Disease Week in Chicago, Illinois. Dr. Yantiss was invited as a visiting professor to Ball Memorial Hospital in Muncie, Indiana and The Methodist Hospital in Houston, Texas, and was invited to speak at Weill Cornell Medical College in Doha, Qatar. She also delivered several lectures in the New York City area, including those at the 2010 Update in Gastroenterology, Hepatology, Nutrition Post-Graduate Course sponsored by Columbia University College of Physicians & Surgeons and Weill Cornell Medical College, and the 2011 Big Apple Review and Update: The Art and Science of Surgical Pathology at Mount Sinai Medical Center. She served as an ad hoc reviewer for fifteen journals, member of the editorial boards of the Archives of Pathology and Laboratory Medicine, American Journal of Clinical Pathology, and the American Journal of Surgical Pathology, and Associate Editor of Archives of Pathology and Laboratory Medicine. She was an abstract reviewer for the College of American Pathologists. Dr. Yantiss wrote several manuscripts, served as guest editor for special sections in Pathology Research International and Archives of Pathology and Laboratory Medicine, and published a frozen section handbook. Dr. Yantiss is a member of the Continuing Medical Education committee and Center for Advanced Digestive Care at Weill Cornell Medical College. She co-directs the combined WCC/MSSC gastrointestinal pathology fellowship and the gastrointestinal pathology section of the Biology of Disease medical school course.

Weill Cornell Hematopathology Comprehensive Diagnostic and Consultation Service

The leading choice of pathologists, clinicians and patients who seek an expert opinion in hematopathology.

Faculty (front, left-right) Attilio Orazi, MD, Daniel M. Kissoules, MD, Wayne Tam, MD, PhD, Sonam Prakash, MD (back, left-right) Scott Ely, MD, MPH, Julia Geyer, MD, Y. Lynn Wang, MD, PhD (not pictured) Edhel Cesarman, MD, PhD, Susan Mathen, PhD.
Welcome to Our New Fellows

- **Daniel DiBartolo, PhD** will be in his second and final year as the Clinical Cytogenetics Fellow in the American Board of Medical Genetics (ABMG) accredited Cytogenetics Fellowship Program.

- **Joanna Chan, MD** will be completing her AP/CP training in our Pathology Residency Training Program in June 2011 and will be our Gynecologic Pathology Fellow.

- **Olca Basturk, MD** graduated in 1998 from Ege University School of Medicine, Turkey. From 1999 to 2003, she was an anatomic pathology resident at Celal Bayar University School of Medicine where she also served as the chief resident from 2001-2003. From 2003 to 2006, she was a Research Scholar in the Department of Pathology at Wayne State University School of Medicine. From 2006 to 2010, she was an AP/CP resident at the New York University School of Medicine, where she served as the Chief Resident from 2009-2010. Currently, she is completing her Oncologic Surgical Pathology Fellowship at MSKCC and will be a Gastrointestinal Pathology Fellow in our joint NYPH-MSKCC Program.

- **Brendan Camp, MD** graduated in 2007 from SUNY Syracuse School of Medicine and then did an internship year in Internal Medicine at the University of Chicago. In 2008, he entered the NYPH-Cornell Dermatology residency-training program and will be completing his training this month. He will be a Dermatopathology Fellow in the joint NYPH-MSKCC program.

- **Timothy D’Alfonso, MD** will be completing his AP training in our Pathology Residency Training Program in June 2011 and will be our Breast Pathology Fellow. In addition, he will serve as the AP Chief Resident for 2011-2012.

- **Min Guo, MD, MS** graduated from Hunan Medical University, China, in 1982 and received her MS in tumor immunology from the same institution in 1988. From 1988 to 1991, she was a resident in Internal Medicine/Oncology at Shenzhen People’s Hospital, China, and was an attending physician from 1991 to 1994 at the same institution. From 1994 to 1999 she was a postdoctoral fellow in the Laboratory of Radiation Biophysics at Memorial Sloan-Kettering Cancer Center. From 1999 to 2000, she was a clinical technologist in the Laboratory of Diagnostic Molecular Pathology at MSKCC. From 2000 to 2007, she was a Senior Research Scientist at Wyeth in Pearl River, NY and then entered the Pathology Residency Training Program at Nassau University Medical Center, where she will be completing her training this month. She will be our Cytopathology Fellow.

- **Rachel Hudacko, MD** graduated in 2006 from the Robert Wood Johnson Medical School. From 2006 to 2010, she was an AP/CP resident at the Robert Wood Johnson Medical School-UMDNJ, where she served as the Chief Resident from 2008 to 2010. Currently, she is completing a Cytopathology Fellowship at New York University Medical School and will be our Gastrointestinal Pathology Fellow in the joint NYPH-MSKCC program.

- **Yen-Chun Liu, MD, PhD, MS** graduated in 2002 from the National Taiwan University. She received her MS from the Harvard School of Public Health Epidemiology Graduate Program, and her PhD from The Johns Hopkins University. Currently, she is completing her anatomic pathology residency training at the National Cancer Institute/National Institutes of Health. She will be a Hematopathology Fellow.

- **Steven Salvatore, MD** will be completing his AP/CP training in our Pathology Residency Training Program in June 2011, having been our Chief Resident in his final year, and will be our Renal Pathology Fellow.

- **Scott Wenson, MD** graduated in 2007 from the University of Massachusetts Medical School. He did a post-sophomore fellowship in the Department of Pathology during 2004 – 2005. From 2007 – 2011, he was an AP/CP resident at Beth Israel Deaconess Medical Center and during the year 2010-2011, he served as the chief resident in Anatomic Pathology and will be graduating this month. He will be a Dermatopathology Fellow in our joint MSKCC-NYPH program.

- **Yu Wu, MD, PhD** graduated from Nanjing Medical University, China, in 1993. She received her MS in Nutritional Science from the University of Connecticut and in 2003 she received her PhD from the University of Connecticut Health Center. From 2003 to 2007, she was a postdoctoral fellow in the Department of Pathology at Yale University School of Medicine. Currently, she is completing her AP residency training at Yale-New Haven Hospital. She will be a Hematopathology Fellow.
Resident’s Research Day

The 2nd Annual Department of Pathology and Laboratory Medicine Resident’s Research Day was held in Griffis Faculty Club in the afternoon of April 14, 2011. The purpose of this annual event is to share the residents’ research findings with the faculty and other members of the Department of Pathology and Laboratory Medicine, and to recognize the best research through three monetary awards. All residents who participated in research or presented a poster or platform presentation at a national meeting over the past academic year, gave a brief presentation of one of their research projects and answered audience questions. Faculty judges graded each resident on the quality of their research and presentation and the handling of audience questions. Research posters of additional resident projects and fellow research projects were available for viewing and discussion during the reception following the presentations.

This year’s winners were:

▶ Dr. Kathy Kawaguchi, AP/CP PGY-3, for her work entitled “Differentiating Between Metastatic Carcinoma of Breast Origin (MCBO) and Primary Lung Carcinoma: A Search for the Ideal Immunopanel” with Dr. Sandra Shin as her research mentor.

▶ Dr. Dara Ross, AP/CP PGY-4, for her work entitled “The Diagnostic Utility of the ‘Minimal Carcinoma (MC) Triple Stain’ in Breast Carcinomas” with Dr. Sandra Shin as her research mentor.

▶ Dr. Jiong Yan, AP/CP PGY-4, for her work entitled “Promoter and Exon 1 Hypermethylation of the Tumor Suppressor Gene PRDM1/Blimp-1 Indicates its Pathogenetic Role in EBV(+) Burkitt Lymphoma” with Dr. Wayne Tam as her research mentor.

Congratulations to our Research Award winners, and to all our residents and fellows for their research accomplishments!


Zepf J, Schnei r AN: A pain in the neck: Fusobacterium necrophorum infection. ASCP CHECK Sample BM11-6, 2011.


CME Conference Update

Tutorial on Neoplastic Hematopathology
January 22-27, 2012
Marco Island Marriott Resort, Golf Club & Spa
Marco Island, Florida
Course Director: Daniel M. Knowles, MD

Target Audience: Pathologists, pathologists-in-training and medical oncologists/hematologists.

Course Goals and Objectives: This course is designed to update physicians on the latest advances in Neoplastic Hematopathology. The program will consist of lectures, case presentations and discussions designed to provide pathologists, pathologists-in-training and medical oncologists/hematologists with an in-depth discussion of diagnostic problems that arise in neoplatic hematopathology. In addition to discussions of recent advances in the morphologic classification of hematopoietic tumors, the application and interpretation of immunological and cytochemical studies and molecular techniques in the diagnosis and classification of these diseases will be presented.

Accreditation:
36.25 AMA PRA Category 1 Credit(s)™ and
20.0 SAM Credit(s)

Reserve early! Space is limited.
For more information or to register, contact:
Ms. Jessica Pfeifer (212) 746-6464
jep2018@med.cornell.edu • www.cornellpathology.org

Newly Awarded Grants in Pathology

National Institutes of Health
National Cancer Institute
Title: Comprehensive Prostate Cancer Characterization by Genomic and Transcriptomic Profiling
Principal Investigator: Mark A. Rubin, MD
Period of Support: 07/01/11-06/30/13
Total Direct Costs: $1,000,000

Starr Cancer Consortium Research Grant Award
Title: Transforming Genomics Data Visualization for Cancer Research
Principal Investigator: Mark A. Rubin, MD
Period of Support: 08/01/11-07/31/14
Total Direct Costs: $1,257,945

National Institutes of Health
National Cancer Institute
Title: Targeting VFLP for the treatment of KSHV-associated malignancies
Principal Investigator: Ethel Cesarian, MD, PhD
Period of Support: 03/15/11-01/31/16
Total Direct Costs: $1,037,500

Department of Defense Synergistic Idea Award
Title: Functional Validation of Prostate Cancer Driving Mutations
Principal Investigator: Mark A. Rubin, MD
Period of Support: 05/15/11-05/14/14
Total Direct Costs: $135,000

Prostate Cancer Foundation Challenge Award
Title: Recurrent SPOP Mutations in Prostate Cancer: Characterization of a Potentially Targetable Subclass of Prostate Cancer
Principal Investigator: Mark A. Rubin, MD
Period of Support: 07/01/11-06/30/13
Total Direct Costs: $1,257,945

National Institutes of Health
National Institute of Neurological Disorders and Stroke
Title: Development of high throughput assays to identify small molecule inhibitors of CR4 ubiquitin ligase
Principal Investigator: Pengbo Zhou, PhD
Period of Support: 04/01/11-03/31/12
Total Direct Costs: $100,000

Leukemia Research Foundation Correlative Grant
Title: Targeting CDK4/CDK6 in Sequential Combination with Bortezomib in MCL
Principal Investigator: Selina Chen-Kiang, PhD
Period of Support: 04/15/11-04/14/13
Total Direct Costs: $160,000

American Heart Association Postdoctoral Fellowship Award
Title: Novel role of cytoskeleton scaffold protein IQGAP1 in vascular endothelial junction dynamic
Principal Investigator: Kezhi Dai, PhD (Dr. Timothy Hla’s lab)
Period of Support: 07/01/11-06/30/13
Total Direct Costs: $90,000

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