Research Highlights
Edited by David P. Hajjar, PhD

Dr. Barry Sleckman was recruited from the Washington University School of Medicine where he was the Conan Professor and Chief of the Division of Laboratory and Genomic Medicine. At Weill Cornell, he holds the title Professor of Pathology and Laboratory Medicine and Vice Chairman for Experimental Pathology.

Dr. Sleckman received his MD degree from Harvard Medical School and PhD (in Immunology) from Harvard University, working in the laboratory of Dr. Steven Burakoff where he defined the role for the CD4 receptor in T cell activation. After completing a residency in Internal Medicine and fellowship in Infectious Diseases at the Brigham and Women’s Hospital in Boston, he joined the laboratory of Dr. Frederick Alt at the Children’s Hospital in Boston for his post-doctoral fellowship. At the Brigham, his work focused on elucidating the molecular pathways required for lymphocyte development. Dr. Sleckman established that transcriptional enhancers have developmental stage specific activities in regulating the expression of genes critical for T cell development.1,2

In 1998, Dr. Sleckman moved from Harvard to start his laboratory in the Department of Pathology and Immunology at Washington University, where he remained until coming to Weill Cornell Medical College. In addition to being Chief of the Division of Laboratory and Genomic Medicine, Dr. Sleckman also served as the Associate Director for Basic Science of the Siteman Cancer Center at Washington University and was the founding Director of the Physician Scientist Training Program in the Department of Pathology. Dr. Sleckman’s laboratory has focused on understanding the integration of DNA damage responses and immune responses. DNA damage response pathways are particularly important to developing lymphocytes that generate and repair numerous DNA double strand breaks (DSBs) as they assemble antigen receptor genes. In addition, DSBs are generated in mature B cells as continued on page 2
they modify their antigen receptor genes in the setting of an active immune response and in cells of the innate immune response that produce genotoxic bactericidal agents, such as nitric oxide (NO) and reactive oxygen species (ROS), when activated.

Dr. Sleckman’s laboratory defined key molecular requirements that limit the generation of DNA DSBs during antigen receptor gene assembly in developing lymphocytes. These pathways are important for appropriately ordering antigen receptor gene assembly. Moreover, they limit the generation of DSBs that are prone to forming potentially dangerous lesions such as chromosomal translocations and deletions that can lead to cellular transformation and lymphoid malignancies. Dr. Sleckman’s lab also has elucidated the components of DSB repair pathways that prevent the aberrant DSB repair. In this regard, his lab demonstrated that at a DSB, the DNA damage response kinase, ATM, functions to retain the two broken DNA ends in a complex until they can be rejoined. This occurs through the activation of the MRN DNA tethering complex by ATM.

The Sleckman lab demonstrated that broken DNA ends that are lost from DSB complexes must be processed by nucleases in order to be joined aberrantly and that the ATM-mediated phosphorylation of the histone variant H2AX in chromatin flanking broken DNA ends prevents this nuclease activity. Using an approach that the lab developed to reveal chromosomal DNA ends structures with single nucleotide resolution, the Sleckman lab demonstrated that this nuclease resection leads to the generation of long 5’ and 3’ single strand DNA overhangs that cannot be repaired through normal DSB repair pathways. Rather, they are repaired aberrantly using protein machinery from different DSB repair pathways.

The Sleckman lab was the first to establish that DNA damage responses to DSBs can regulate tissue specific processes. Specifically, they demonstrated that DNA DSBs made in developing lymphocytes during antigen receptor gene assembly activate a genetic program that includes many genes critical for normal lymphocyte development. This led to an important paradigm by which DNA DSBs generated as intermediates during physiologic processes initiate diverse signals that regulate normal cellular functions unrelated to DSB repair. The lab is currently focused on extending this important paradigm to the function of DSB signaling in innate immune cells. When activated by exposure to bacterial pathogens, these cells generate genotoxic agents, such as ROS and NO, that damage host genomic DNA, thus activating DNA damage responses. These DSBs activate a genetic program important for the function of these innate immune cells in eradicating pathogens.

More recently, the Sleckman lab has turned their attention to elucidating DNA repair pathway activity in cancer cells. In this regard, they have identified pathways with redundant functions in normal cells and shown that cancer cells will frequently inactivate one of these pathways. The inactivation of one pathway leads to a low level mis-repair of DSBs and leads to the genomic evolution and clonal selection of cancer cells that can divide more rapidly, metastasize and become resistant to treatment. The inactivation of these pathways means cancer cells will rely on the other pathway DSB repair. As a result small molecules that inhibit this pathway will block DSB repair in the cancer cells but not normal tissue. Such agents would sensitize tumors to treatment with DNA damaging therapies such as ionizing radiation or radiomimetic drugs. The Sleckman lab is now conducting a large compound screen to identify such agents that could form a novel class of cancer therapeutics.

REFERENCES
Focus
by Daniel M. Knowles, MD

Dr. Alain Borczuk joins the department as Professor of Pathology and Laboratory Medicine, Vice Chairman for Anatomic Pathology and Chief of Pulmonary and Thoracic Pathology. Dr. Borczuk graduated AOA from the Cornell University Medical College in 1991 and subsequently completed an internal medicine internship at the then New York Hospital in 1992. Subsequently, he completed three years of training in anatomic pathology at the Albert Einstein College of Medicine, serving as Chief Resident in his final year. Following completion of his training in pathology, he attained board certification in anatomic pathology and served as an Attending Pathologist at the Jacobi Medical Center where he served as Co-Director of the Electron Microscopy Unit. He subsequently spent two years as an Assistant Attending Pathologist at North Shore University Hospital. Dr. Borczuk relocated to the Columbia-Presbyterian Medical Center in February 1999, where he was appointed Assistant Professor of Clinical Pathology and Assistant Attending Pathologist. He was subsequently promoted to Associate Professor of Clinical Pathology in 2003, to Professor of Clinical Pathology in 2008, and to Professor of Pathology in June, 2014. Dr. Borczuk has extensive clinical experience and expertise in virtually all areas of diagnostic anatomic pathology. However, he is best known for his expertise in pulmonary pathology. He had served as the go-to pathologist for thoracic pathology at the Columbia-Presbyterian Medical Center for many years. His expertise in this field has led to his involvement in professional organizations, the review of medical and scientific papers submitted to the major pathology journals, and numerous invitations to lecture at other medical centers and in post-graduate courses. Dr. Borczuk may be reached at 212-746-5769 or alb9003@med.cornell.edu.

Dr. Matthew Greenblatt joins us as Assistant Director of the Central Laboratory and Point of Care Services, with an academic appointment as Assistant Professor of Pathology and Laboratory Medicine. Dr. Greenblatt graduated from the combined MD/PhD program at Harvard Medical School in 2012. He completed his PhD under the mentorship of Dr. Laurie Glmicher, his program focusing on “Novel Regulators Of Signal Transduction In A Skeletal System.” From there, he joined the Pathology Residency Training Program at Brigham and Women’s Hospital in 2012 and served as Chief Resident in academic year 2013-2014. When Dr. Glmicher relocated to Weill Cornell as Dean, Dr. Greenblatt remained behind serving as a senior member of Dr. Glmicher’s laboratory. He relocated to Weill Cornell to complete his training requirements in Laboratory Medicine. Dr. Greenblatt has already established himself as a highly recognized investigator, having received a Burroughs Wellcome Fund Award and the DP5 (Early Independent Investigator) award from the NIH. Dr. Greenblatt may be reached at 212-746-2084 or mag3003@med.cornell.edu.

Dr. Marcin Imieliński joined the department in March. Dr. Imieliński is a graduate of the combined MD/PhD program at the University of Pennsylvania School of Medicine. Following graduation in 2008, he entered the Anatomic Pathology Residency Training Program at the Massachusetts General Hospital, completing that program in June 2011. He served as a Clinical Fellow in Molecular Pathology at the Brigham and Women’s Hospital in 2012 and had served as a Research Fellow in Molecular Pathology at the Massachusetts General Hospital since July 2012.

Dr. Imieliński is certified in Anatomic Pathology and in Molecular Genetic Pathology by the American Board of Pathology. His combined training in anatomic pathology, molecular pathology and computational biology provides him with a unique phenotype and renders him ideally suited to establish a career in genomic pathology and genomic medicine. Those credentials are further enhanced by his appointment at the Broad Institute of Harvard and MIT where he spent the last three years in the laboratory of Dr. Matthew Meyerson. Dr. Imieliński has been appointed Assistant Professor of Pathology and Laboratory Medicine with a joint appointment in the Institute for Computational Biomedicine at Weill Cornell. Dr. Imieliński will participate in the Institute for Precision Medicine where he will endeavor to develop his own independent research program in computational cancer genomics. To that end, he has received a Burroughs Wellcome Fund Award. He will also enjoy an appointment at the New York Genome Center where he will serve as the principal point person between the New York Genome Center and the Weill Cornell Institute of Precision Medicine. He will also participate in the clinical activities of the Molecular and Genomic Pathology Laboratory Division. Dr. Imieliński may be reached at 646-962-6997 or mii9037@med.cornell.edu.

Dr. Francesca Khani joins our Surgical Pathology group as Assistant Professor of Pathology and Laboratory Medicine, focusing on urologic and breast pathology. Dr. Khani is an excellent, academic surgical pathologist. Dr. Khani received her medical degree from Rutgers-Robert Wood Johnson Medical School in 2010. She then joined our residency training program, completing her training in anatomic and clinical pathology in June 2014. She was an outstanding resident in every way. Dr. Khani received our Pathology Resident Distinguished Research Award in 2012 and again in 2014. She received a Certificate of Merit for the Stowell-Orbison Award from the United States and Canadian Academy of Pathology in 2012. She also served as our Department Representative for the NewYork-Presbyterian Housestaff Quality Council in 2011-2013. After completing her residency training with us, she was accepted into the highly competitive urologic pathology fellowship at the Johns Hopkins School of Medicine. Dr. Khani is certified in anatomic and clinical pathology by the American Board of Pathology. Dr. Khani may be reached at 212-746-6163 or frk9007@med.cornell.edu.

Dr. Michael Kluk joins the department as Director of Molecular and Genomic Pathology, with an appointment as Assistant Professor of Pathology and Laboratory Medicine. Dr. Kluk completed his MD and PhD degrees at the University of Connecticut School of Medicine in 2004 receiving Honors distinction for his PhD thesis entitled: “Regulation of Vascular Smooth Muscle Cell Proliferation and Migration by Sphingosine-1-Phosphate,” which was completed in the laboratory of Dr. Timothy Hla. Dr. Kluk then went on to complete his residency training in both Anatomic and Clinical Pathology at Yale-New Haven Hospital from 2004-2008. Subsequently, he completed fellowship training in Hematopathology at Massachusetts General Hospital in 2009 and fellowship training in Molecular Genetic Pathology at Brigham and Women’s Hospital (BWH) in 2010. This was followed by a year as a post doctoral research fellow in the Department of Pathology at BWH. continued on page 4
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Dr. Michael Kluk continued
He then joined the faculty of the Department of Pathology at Brigham and Women’s Hospital/ Harvard Medical School (2011-2015) working as a Hematopathologist/Molecular Pathologist and also conducting translational research in these areas. Dr. Kluk holds certification in Anatomic Pathology and Clinical Pathology and subspecialty certifications in Hematopathology and Molecular Genetic Pathology from the American Board of Pathology. Dr. Kluk may be reached at 212-746-3972 or mk9095@med.cornell.edu.

Dr. Teresa Sanchez joins the Center for Vascular Biology, having been appointed Assistant Professor of Pathology and Laboratory Medicine. Dr. Teresa Sanchez received her PhD in Physiology/Cell Biology from the University of Barcelona, Spain in 2001. She subsequently served as a post-doctoral fellow in Vascular Biology under the mentorship of Dr. Timothy Hla at the University of Connecticut School of Medicine. After four years as a post-doctoral fellow and having been awarded a National Scientist Development grant from the American Heart Association, she was appointed Assistant Professor of Cell Biology at the University of Connecticut in 2005. In 2008 she was recruited to the Departments of Surgery and Emergency Medicine in the Center for Vascular Biology Research at the Beth Israel Deaconess Medical Center. Dr. Sanchez’s research has focused on sphingosine-1-phosphate (SIP) as a modulator of vascular integrity. She has demonstrated the critical role of the S1P-S1PR2 pathway in the induction of vascular permeability and the perpetuation of systemic inflammation in sepsis. Her laboratory has also demonstrated a role for this pathway in the disruption of cerebrovascular integrity in stroke. Dr. Sanchez may be reached at 212-746-6820 or tes2015@med.cornell.edu.

Dr. Lars Westblade joins the department as Associate Director of the Clinical Microbiology Laboratory with an appointment as Assistant Professor of Pathology and Laboratory Medicine. Dr. Westblade received his PhD at the University of Birmingham in the United Kingdom in 2002. He then spent five years as a post-doctoral associate at Rockefeller University. Dr. Westblade completed a clinical microbiology fellowship at Washington University at St. Louis School of Medicine in June 2012. It should be noted that this is one of the foremost laboratory medicine programs in the United States. From there, he was appointed Assistant Professor in the Department of Pathology at the Emory University School of Medicine where he began his professional career as a clinical microbiologist. Dr. Westblade may be reached at 212-746-6296 or law9067@med.cornell.edu.

Dr. Jessica Tyler joined the Division of Experimental Pathology this fall, having been appointed Professor of Pathology and Laboratory Medicine. Dr. Tyler received her PhD in Virology at the University of Glasgow in Scotland in 1994. Subsequently, she completed three years of post-doctoral fellowship in the Department of Biology at the University of California, San Diego under the mentorship of Dr. James Kadonaga. Her research focused on the characterization of the mechanism of chromatin assembly. In 1997, she was appointed Assistant Project Scientist at that institution. In 2000, she was appointed Assistant Professor in Biochemistry and Molecular Genetics at the University of Colorado School of Medicine. She was promoted to Associate Professor with tenure in 2006 and to Professor in 2009. Dr. Tyler relocated to the University of Texas MD Anderson Cancer Center where she was appointed Professor in Biochemistry and Molecular Biology in 2010, Professor of Epigenetics and Molecular Carcinogenesis in 2014, and the Edward Rotan Distinguished Professor in Cancer Research in 2015. Dr. Tyler has a long and successful track record in scientific research as evidenced by her publications in high impact journals and her ability to acquire extramural funding to support her research programs. Dr. Tyler has contributed significantly to our understanding of cancer epigenetics, having served as Co-Director of the Center for Cancer Epigenetics at the MD Anderson Cancer Center since 2012. Dr. Tyler may be reached at 212-746-4092 or jet2021@med.cornell.edu.

Dr. Scott Ely traveled to Lilongwe, Malawi to perform a site visit of the The University of North Carolina Project-Malawi, a collaboration between UNC and the Malawi Ministry of Health. It is based on the campus of Kamuzu Central Hospital (pictured).

Dr. Rhonda Yantiss attended the 13th OESO Congress. Photo is taken at the Monte Carlo Yacht Club. Pictured left to right: Henry Appelman, Robert Riddell, Rhonda Yantiss, Hala El-Zimaity, Andrew Bellizzi.

Dr. Timothy Hla received an outstanding investigator award from Eicosanoid Research Foundation. Photo taken at the (http://www.bioactivelipids.org/achievement.php) awards ceremony in Budapest, Hungary, July 2015.

Global travel itineraries from our renowned pathology faculty

Dr. Surya Seshan directed the 2nd International Renal Pathology Conference in Tsukuba City, Japan from March 4th-7th, 2015. Dr. Seshan visited the Asakusa Kannon Buddhist Temple in Tokyo while directing the 2nd International Renal Pathology Conference and lecturing there in March.

Dr. Timothy Hla attended the international conference on phospholipase A2 and related lipid mediators held in Tokyo, Japan, Feb. 2015. Photo depicts Dr. Hla posing with a Kabuki dancer at the awards ceremony.
Keynotes
by Domenick J. Falcone, PhD

Dr. Ethel Cesarman has been continuing to focus her research on understanding the pathobiology, and improving diagnosis and treatment of cancers frequently associated with viral infection. She has been involved in supervising the pathologic diagnosis of Kaposi’s sarcoma and lymphoma in Africa, and improving the diagnostic methodologies by developing new point-of-care assays. She has participated in a number of NIH study sections and site visits. Dr. Cesarman has been invited to give seminars nationally and internationally, and present her work on viral oncogenesis, including the following: Laboratorio de Inmunopatologia, Instituto de Biologia y Medicina Experimental (IBYME), Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires, Argentina in June 2015; AIDS Malignancy Symposium, Cape Town, South Africa. July 1-Aug 1, 2015; University of Wisconsin, Cancer Biology Seminar Series, Madison, WI, September 2015; New York Hematopathology Group Meeting, New York, NY, Oct 2015; University of Pittsburgh Cancer Institute Seminar Series, Pittsburgh PA, Oct 2015; and The Society for Hematopathology/European Association for Haematopathology Workshop, Long Beach, CA, Oct 2015. He was also invited to teach a course at the University of the State of Sao Paulo, Brazil, in May 2015.

In March 2015, Dr. Scott Ely spoke in Boston, MA at the Practice Changers Special Session of the United States and Canadian Academy of Pathology meeting, delivering a symposium called, “Multiplex Immunostaining: The Feasible Solution Right Under Your Nose.” Shortly after, he traveled to New Orleans, LA, where he delivered two talks at Tulane University School of Medicine: “Multiplex analysis of myeloma: the best tool for risk assessment and for measuring MRD,” to the Division of Hematology-Oncology, and “Multiplex Immunostaining: the feasible solution, right under your nose,” to the Department of Pathology. In the summer of 2015, Dr. Ely spoke at the 6th Annual Papanicolaou Tutorial on Updated Diagnostic Cytopathology, here at Weill Cornell, where he delivered the talk, “Fine Needle Aspiration in Hematopoietic Lesions.” He then traveled to Africa for the 4th time in the past 5 years, where he performed a site visit of a cancer hospital, The University of North Carolina Project/Kamuzu Central Hospital, in Lilongwe, Malawi for the purpose of accrediting that site for participation in NIH/NCI/ATCG AIDS-Kaposi Sarcoma and lymphoma clinical trials. He then traveled to Cape Town, South Africa, where he was invited to attend the symposium, “Confronting the Challenges to HIV/AIDS Malignancies in Sub-Saharan Africa,” and to contribute observations from site visits to Nigeria, Kenya and Uganda.

Dr. Domenick J. Falcone was named co-director of the Essential Principles of Medicine (EPOM) course and vice-chair of the Executive Medical College Curriculum Committee. Dr. Falcone continues to serve as basic science theme leader for the medical college curriculum, and leader of the Injury, Infection, Immunity and Repair learning unit of EPOM. During Convocation 2015, he received two teaching awards: The Charles L. Bardes, MD Teaching Prize and the Medical Student Executive Council First Year Teaching Award. In May, Dr. Falcone traveled to Doha, Qatar to present a progress report to the WCMC-Qatar faculty on the rollout of the new curriculum.

In 2015, Dr. Matthew Greenblatt was awarded one of the NIH Director’s Early Independence Awards and a Burroughs Wellcome Career Award for Medical Scientists. Additionally, he won a John Haddad Young Investigator Award from Advances in Mineral Metabolism and the American Society for Bone and Mineral Research, and the Harold M. Frost Young Investigator Award from the Orthopaedic Research Society. Dr. Greenblatt was invited to give a lecture, “Osteoimmunology: a new science?” during the Pediatric Academic Societies annual meeting (April 25-28, 2015).

Bone Marrow Pathology Group Annual Meeting

The Bone Marrow Pathology Group (BMPG) recently held their annual meeting in New York, NY on September 11, 2015.

The event, which was hosted by Dr. Attilio Orazi, took place in the Department of Pathology and Laboratory Medicine at WCMC. The BMPG members include Drs. John Anastasi, Daniel Arber, Adam Bagg, Carlos Bueso-Ramos, Kathryn Foucar, Tracy George, Robert Hasserjian, Eric Hsi, William Morice, Attilio Orazi, LoAnn Peterson and Sa Wang.

The Bone Marrow Pathology Group discussed ongoing project and planned new studies. The group activity has resulted in several high profile publications and meeting presentations in recent years.

The Bone Marrow Pathology Group will hold their next annual meeting in Houston, TX in September 2016.

Dr. Tim Hia visited the following universities and research institutes to present the latest research from his lab in 2015: National Institutes of Child Health Diseases, NIH, Bethesda, MD (Jan 13), and the Cardiovascular Research Institute, Northwestern University Feinberg School of Medicine, Chicago, IL (June 3). He was an invited speaker at the following Gordon Research Conferences: Vascular Cell and Molecular Biology (January 18) in Ventura, CA, and Biomaterials and Bioengineering (July 19) in Gerona, Spain. He visited Tokyo Japan in February to attend the International conference on phospholipase A2 and related lipid mediators. He was invited as a keynote speaker for the McAllister Cardiovascular Institute annual meeting at the University of North Carolina, Chapel Hill in March. He attended a bi-annual meeting of investigators for his Fondation Leducq transatlantic grant in Paris, France in April.

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Dr. Tim Hla continued
Dr. Hla was awarded the Eicosanoid Research Foundation Outstanding Investigator Award at the Eicosanoids and other lipid mediators annual meeting in Budapest, Hungary, and he delivered the award lecture. In August, he attended the FASEB summer research conference on Lysolipid mediators in Banff, Canada to present his latest work.

Dr. Rana Hoda served as Course Director and lectured at the 6th Annual Papanicolaou Tutorial on Updated Diagnostic Cytopathology held at Weill Cornell in July. Dr. Hoda served as Committee Member for the new classification for urinary cytology, “The Paris Reporting System for Urinary Cytology.” She serves as Chair for Papanicolaou Society Education & Training Task Force Committee and member of the United States and Canadian Academy of Pathology (USCAP) Castleman Awards Committee. At the 104th Annual Meeting of USCAP, held in March at Boston, MA, Dr. Hoda presented a short course on “Second Opinions and Discrepancies in FNA Cytology.” Dr. Hoda was an invited speaker at the Emirates Society of Pathology meeting held in Dubai in February where she presented lectures in gynecological and FNA cytology. She presented an online seminar for the International Academy of Cytology on the subject of liquid-based preparations in FNA. Dr. Hoda was the keynote speaker at the 45th Australian Society of Cytopathology at Brisbane in October of this year. She will give five lectures on various topics including the new Paris classification system for urinary cytology and gynecological cytology. She is invited to speak at the Mexico Society of Cytology in Cancun where she will speak on FNA of lymph nodes. Dr. Hoda will lecture on challenges in FNA cytology at the 27th annual meeting of the Arab Division of International Academy of Pathology in November at Dubai.

Dr. Syed Hoda was active on the lecture circuit wherein he presented mainly on mammary malignancy-related topics. He was invited to lecture at the School of Breast Oncology in Atlanta, and to the Emirates Society of Pathology in Dubai, United Arab Emirates. He also presented Grand Rounds at North Shore-Long Island Jewish Hospital in Lake Success, NY.

Dr. Daniel Knowles organized the Northeast Association of Pathology Chairs annual meeting in Cambridge Beaches, Bermuda (September 16–20). He represented Weill Cornell Medical College and gave a presentation on “Mergers, Acquisitions, Physician Networks and System Integration.” Other agenda items included “Global Issues around Genomics” and “Advocacy Priorities.” Earlier this year, Dr. Knowles, Dr. Orazi and Dr. Chadburn attended the annual tutorial on Neoplastic Hematopathology, directed by Dr. Knowles, in Naples, Florida (January 19-23). The program consisted of lectures, case presentations and discussions designed to provide pathologists with an in-depth discussion of diagnostic problems that arise in neoplastic hematopathology. Dr. Chadburn presented on “Immune Deficiency-Associated Lymphoproliferative Disorders” and Dr. Orazi presented on “Myelodysplastic Syndromes” and “Myelodysplastic/Myeloproliferative Neoplasms.”

This past year, Dr. Cynthia Magro has given numerous presentations nationally and has been prolific in her contributions to the medical literature.

In November 2014, she spoke at the American College of Rheumatology meeting in Boston on “The Pathology of Degas. Degas Disease Study Group.” She was also invited to speak at the American Society for Clinical Pathology at the 2015 Las Vegas meeting on the topic “Contemporary Diagnostic Criteria and Strategies.” At the 2014 ASDP annual meeting, four presentations were given on “Juvenile Dermatomyositis presented as elbow and knee rash,” “Cutaneous plasmacytosis co-existing with Rosai-Dorfman disease,” “Acanthosis nigricans variant of mycosis fungoides,” and “Follicular Psoriasis: A common but underreported entity” by resident Shahnab Momtahan and Esther Cheng. At the USCAP 2015 meeting, Dr. Magro and resident Shahnab Momtahan presented “Primary Cutaneous Small Cell Variant of Anaplastic Large Cell Lymphoma: A Case Series” and “Epidermotropic B Cell Lymphoma.”

Dr. Juan Miguel Mosquera was promoted to Associate Professor, and selected to serve as Lead Reviewer of the USCAP Abstract Subcommittee for the Pathobiology Category, for the 2015-2018 term.

In September 2014, Dr. Attilio Orazi attended the Bone Marrow Pathology Group Fourth Meeting held at Massachusetts General Hospital in Boston, MA on September 19. Having been responsible for program development prior to the meeting, he chaired the meeting and gave several presentations. On September 24, he gave the presentation “Preview of Istanbul EAHP/ EBMWG Bone Marrow Program” during the meeting of the NY Hematopathology Group at MSKCC. Dr. Orazi and Dr. Ahmet Dogan (MSKCC) are co-founders of this group. In October 2014, Dr. Orazi attended the 17th EAHP meeting Istanbul, Turkey (from October 17-October 22). In Istanbul, he presented the Bone Marrow Workshop Session 2 - Bone marrow manifestations of LPL, MZL, SRPL, HCL-v and HCL and gave two Meet the Professor Sessions entitled: “Myeloproliferative Neoplasms: Practical Tips Based on Personal Experience.” In December 2014, he visited Mayo Clinic Arizona where he gave a lecture entitled “The WHO 2008 Classification of Myeloproliferative Neoplasms: Close Reading, Personal Notes, and Proposed Updates.” In January 2015, Dr. Orazi presented lectures on “Myelodysplastic Syndromes,” “Myelodysplastic/Myeloproliferative Neoplasms,” and “Myeloproliferative Neoplasms” at the Tutorial on Neoplastic Hematopathology directed by Dr. Daniel Knowles which was held in Naples, Florida from January 19-January 23. In addition, Dr. Orazi, who is the Associate Director of the Tutorial, chaired two sessions. At the end of January, Dr. Orazi participated as a panelist in the slide review conference held in Milan, Italy from January 30-February 1, organized in preparation for the EBMWG International Course and Workshop which was held in Milan in April (see below). From February 27-March 1, he participated as panelist and invited speaker at the Novartis-sponsored GOLS program for MPN entitled “Diagnosis and Current Standard of Care for MPN.” He also gave the lecture “Updates in MPN diagnosis.” In March, Dr. Orazi participated to the 103rd Annual Meeting of the United States and Canadian Academy of Pathology (USCAP) from March 21-March 27, 2015 at the Hynes Convention Center in Boston, MA. He attended the annual meetings of the editorial boards upon which he serves. He authored/co-authored five USCAP presentations. He was a one of the invited speakers for the Companion Meeting of the Society for Hematopathology on Sunday, March 22. Together with Dr. D. Arber (Stanford University), Dr. Orazi continued to direct Short Course number 18, entitled “Modern Approach to the Diagnosis of Neoplastic Splenic Disorders.” He was one of the four invited panelists at the USCAP Hematopathology Specialty Conference on Thursday evening on March 26. During the USCAP, he attended with Drs. Swerdlow, Jaffe, Harris, Campo, Arber and Hasserjian the Editors/Senior Advisor Meeting in preparation for the Updated WHO Classification of Tumors of the Hematopoietic and Lymphoid Tissues (expected date for the book release mid 2016). From April 17-April 19, Dr. Orazi participated as session chair and presenter to the 12th International Course and Workshop on Bone Marrow Pathology held in Milan, Italy organized by the Universities of Milan and Pavia.

Publishing in 2016!
A Comprehensive Guide to Core Needle Biopsies of the Breast
Edited by: Sandra J. Shin, MD

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Dr. Attilio Orazi continued
In September 2015, he attended the Fifth Meeting of the Bone Marrow Pathology Group. This yearly event that was hosted by Dr. Orazi, took place on Friday September 11 in the Department of Pathology and Laboratory Medicine at WCMC. The BMPG members are expert hematopathologists from ten large medical institutions. They include Drs. John Anastasi, Daniel Arber, Adam Bagg, Carlos Bueso-Ramos, Kathryn Foucar, Tracy George, Robert Hasserjian, Eric Hsi, William Morice, Attilio Orazi, LoAnn Peterson and Sa Wang. From September 24-September 25, he attended the Scientific and Business Meeting of the EBMWG held in Frankfurt, Germany where he delivered three scientific presentations and chaired one of the sessions. Dr. Orazi serves on the EXCO of the EBMWG (past president). Dr. Orazi continues to serve as Vice-Chairman for Hematopathology and Director of the Division of Hematopathology. For the sixth year in a row, Dr. Orazi has made the list of “Super Doctors” in the New York Times Magazine as well as “Best Doctors” published by the New York Magazine. He is also named in Castle Connolly’s America’s Top Doctors for Cancer, Top Doctors: New York Metro Area, and America’s Top Doctors.

Dr. Hanna Rennert has been invited to serve on a Roche Diagnostics Advisory Board for Laboratory Developed Tests (LDTs) in June 2015. The purpose of this board is to examine the scientific parameters, considerations and technical specifications involved in the development of LDTs in clinical laboratories. In November 2014, at the ADPKD Genetic Modifier Consortium meeting in Philadelphia during Kidney week, she gave a presentation regarding the Data Repository Research Program of the Rogosin Institute and the role of genetic testing in that program. In conjunction with the Institute for Precision Medicine she has developed and validated a CLIA-compliant whole exome sequencing-based test for mutations identification in cancer. A manuscript based on this work has been published in JAMA Oncology in July 2015. Additionally, Dr. Rennert presented a poster describing the development of this test at the Association for Molecular Pathology annual meeting in November 2014. In collaboration with Altona Diagnostics GmbH, Dr. Rennert has also presented a poster describing the development of quantitative real-time PCR assay for monitoring adenoviral load levels in plasma samples from transplant patients at the Clinical Virology Symposium in April of 2015.

Dr. Surya Seshan directed the 2nd International Renal Pathology Conference in Tsukuba City, Japan from March 4th-7th, 2015. She was a member of an International Consensus meeting on “Classification and Reporting of Proliferative Glomerulonephritis” on February 20th, 2015 at the Mayo Clinic, Rochester, Minnesota. She was an invited speaker and moderator (2 sessions) at the World Congress of Nephrology, Cape Town, South Africa on “Amyloidosis and monoclonal immunoglobulin-induced renal diseases” and “Status of renal pathology in Africa.” Dr. Seshan served as a visiting professor to University of Toronto, Canada to the Department of Pathology and Medicine (Nephrology) and delivered the “Andrew M. Herzenberg Memorial Lecture” on American Pathologists and American Society of Nephrology, annual meetings. She has contributed 13 chapters to the 2nd edition of “Diagnostic Pathology: Kidney Diseases,” 2015.

Dr. Wayne Tam is currently serving as an Editorial Board Member in Leukemia and Lymphoma, starting July 1, 2015. He is also a member of the Stowell-Orbison Awards Committee of the USCAP.

Dr. Rhonda Yantiss lectured in the Arthur Purdy Stout Society Companion meeting and presented a short course entitled “Open Confession is Good for the Soul: Memorable Mistakes and What I’ve Learned” at the 2015 United States and Canadian Academy of Pathology National Meeting in Boston, Massachusetts. She had a number of national and international speaking engagements, including presentations at the Scientific Symposia course in Williamsburg, VA, the Texas Society of Pathologists Annual Meeting in San Antonio, TX, the Suffolk County Society of Pathologists Meeting in Stony Brook, NY, and the 13th ESPO Congress in Monte Carlo, Monaco. She lectured at the University of Texas in San Antonio, TX, the University of Utah in Salt Lake City, UT, the University of Florida, Gainesville, FL, and the Brigham and Women's Hospital at Harvard Medical School in Boston, MA, as well as the Division of Gastroenterology and Hepatology at Weill Cornell Medical College in New York, NY. She also directed and spoke at the Tutorial on Pathology of the GI Tract, Pancreas, and Liver at the Walt Disney World Swan and Dolphin Resort in Orlando, FL. Dr. Yantiss continues to serve as an ad hoc reviewer for fifteen journals, member of the editorial boards of the Archives of Pathology and Laboratory Medicine, Modern Pathology, American Journal of Clinical Pathology, Seminars in Diagnostic Pathology, and The American Journal of Surgical Pathology, and Associate Editor of Archives of Pathology and Laboratory Medicine. She is an abstract reviewer for the College of American Pathologists. Dr. Yantiss also wrote several manuscripts and co-edited her fifth book entitled “Neoplastic Gastrointestinal Pathology: An Illustrated Guide.” Dr. Yantiss served on the Education Committee and the Unique Live Course Offerings Subcommittee of the United States and Canadian Academy of Pathology, and was also a member of the Nominations Committee of the Rodger C. Haggitt Gastrointestinal Pathology Society. She is a member of the Continuing Medical Education committee and Center for Advanced Digestive Care at Weill Cornell Medical College. She is the Gastrointestinal and Liver Pathology Fellowship Director and serves as Chief of the Gastrointestinal Pathology Service at Weill Cornell Medical College.

Congratulations to our Docs!

Attilio Orazi, MD
New York Magazine
Best Doctors 2015

Newsweek
Top Cancer Doctors 2015

New York Times
Super Doctors 2015

Castle Connolly’s America’s Top Doctors for Cancer
Top Doctors: New York Metro Area and America’s Top Doctors 2015

Alain Borczuk, MD
New York Magazine
Best Doctors 2015

Syed Hoda, MD
Newsweek
Top Cancer Doctors 2015

“Drug-induced Renal diseases” and a case seminar on May 6th, 2015. Dr. Seshan was an invited speaker at the 52nd ERA-EDTA Congress in London, UK on “Ischemic injury of podocyte as a cause of collapsing glomerulopathy” on May 29th, 2015 and directed and lectured at the International Summer School in Renal Pathology in Bari, Italy from July 24th–30th, 2015. Dr. Seshan is a member of the Renal Pathology Committee of the International Society of Nephrology and served as the Abstract Reviewer for “Kidney and Genitourinary Pathology” for the College of
Welcome to our New Residents

Clifton Fulmer, MD, PhD
PGY-1 (AP/EP)
Dr. Clifton Fulmer graduated in May 2015 from the MD/PhD program at Rutgers, Robert Wood Johnson Medical School. He is a member of Alpha Omega Alpha (AOA). He received his BS (Biology) in 2006 from The College of New Jersey.

Patrick McIntire, MD
PGY-1 (AP/CP)
Dr. Patrick McIntire graduated in May 2015 from Rush Medical College. He is a member of Alpha Omega Alpha. He received his BS (Economics) in 2010 from the University of Illinois.

Lauren Mecca, MD
PGY-1 (AP/CP)
Dr. Lauren Mecca graduated in May 2015 from Oakland University William Beaumont (OUWB) School of Medicine. She is a member of Alpha Omega Alpha. She received her BA (Biochemistry) in 2011 from Barnard College.

Ami Patel, MD
PGY-1 (AP/CP)
Dr. Ami Patel graduated in May 2015 from the University of South Alabama College of Medicine. She received her BS (Biology) in 2010 from the University of Central Florida.

Rebecca Marrero Rolon, MD
PGY-1 (AP/CP)
Dr. Rebecca Marrero Rolon graduated in May 2015 from the San Juan Bautista School of Medicine. She was ranked in the top 10% of her class (No AOA chapter). She received her BS (Biology) in 2007 from the University of Puerto Rico.

Justin Snow, MD
PGY-1 (AP/CP)
Dr. Justin Snow graduated in May 2015 St. George's University. He received his BS (Biology) in 2011 from the University of Louisville.

Welcome to our New Fellows

Ruchika Goel, MD, MPH
Transfusion Medicine
Dr. Goel received her MD in 2005 from the All India Institute of Medical Sciences. She received her MPH in 2008, from the School of Public Health at the University of North Carolina at Chapel Hill. She completed her residency in 2011, at the University of Pittsburgh Medical Center and this past June, completed a Pediatric Hematology-Oncology fellowship at Johns Hopkins University.

Alan Marcus, MD
Cytology
Dr. Marcus graduated in 2010 from the University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School. From 2010 to 2014, he was an AP/CP resident at Rutgers-Robert Wood Johnson Medical School. He then trained in a one-year GYN/Perinatal Pathology fellowship at New York University and graduated this past June.

Michaela Nguyen, MD
Breast Pathology
Dr. Nguyen graduated from the University of South Florida College of Medicine in 2010. She completed one year of Internal Medicine residency at Boston University College of Medicine before joining our AP/CP residency-training program in July 2011 and graduated from the program this past June.

Kseniya Petrova, MD, PhD
Hematopathology
Dr. Petrova graduated in 2011 from the New York University School of Medicine Medical Scientist Training Program. She joined our AP/CP residency-training program in July 2011 and graduated from the program this past June.

James Wang, MD
Dermatopathology
Dr. Wang graduated in 2011 from Harvard Medical School. He did a preliminary year in Internal Medicine at UCLA-Olive View Medical Center before joining the Dermatology residency program at UCLA-The David Geffen School of Medicine, which he completed this past June.

Sophie Weidner, MD
Gastrointestinal Pathology
Dr. Weidner graduated in 2009 from the University of Pennsylvania School of Medicine. She completed one year of Internal Medicine residency training at Mt. Sinai, before joining our AP/CP residency-training program in July 2011, and graduated from the program this past June.

Elizabeth Margolskee, MD, MPH
Hematopathology
Dr. Margolskee received her MD in 2010 from the Mount Sinai School of Medicine and in 2014 received her MPH in epidemiology from the Mailman School of Public Health at Columbia University. This past June, she graduated from the AP/CP residency-training program at Columbia University.

Hamid Zia, MD
Molecular Genetics
Dr. Zia graduated in 2006 from the King Edward Medical University, Pakistan. Following graduation, he completed a one-year internship in General Surgery and Internal Medicine at Mayo Hospital, Pakistan. From 2007 to 2010, he held positions as a medical officer in Pakistan, before immigrating to the United States in 2010. In August 2010, he joined the AP/CP residency-training program at the University of Missouri-Kansas City School of Medicine and completed the program in July 2014. This past July, he completed a Hematopathology Fellowship at UT Southwestern Medical Center.
Faculty Publications in 2015


Residents’ Research Day

The Sixth Annual Residents’ Research Day was held May 11, 2015 in the Griffith Faculty Club. There were 8 oral presentations with 2 winners. The winners of the oral presentations were Dr. Esther Cheng (PGY-2) Cystic Neutrophilic Granulomatous Mastitis: The Corynebacterial Connection?

and Dr. Erika Hisssong (PGY-1) Characterization of Carbapenem-Resistant Bacteroides fragilis Group Isolates by Phenotypic and Genotypic Methods. The winners were presented with gift certificates.

In addition, a Digital Photo Contest was held and won by Dr. Esther Cheng for “Petrifield” Myxoma.

(1-r): Dr. Daniel M. Knoeles, Dr. Esther Cheng (PGY-2); Dr. Sandra J. Shin.

(1-r): Dr. Daniel M. Knoeles, Dr. Erika Hisssong (PGY-1); Dr. Sandra J. Shin.

Congratulations on your excellent presentations!


Ozdemir U, Hla SA: Endosalpingiosis of axillary sentinel lymph node: a mimic of metastatic breast carci-


DeSimone RA, Hla RS: Primary malignant melanoma of the urethra detected by urine cytology in a male pa-


DeFilippis EM, Macrog CM, Jorizzo JL: Bowel-associated dermatitis – arthritis syndrome in a patient with ulcer-


de la Calle C, Patil D, Wei JT, Scherr DS, Sokol L, Chan DW, Siddiqui J, Mosquera JM, Rubin MA, Sanda MG: Multicenter evaluation of the prostate health index (PHI) for detection of aggressive prostate cancer in biopsy-


Robinson D, Van Allen EM, Wu YM, Schultz N, Loni-


Lee PC, Osakwe NC, Narula N, Port JL, Paul S, Stiles BM, Andrews WG, Nasar A, Altorki NK: Predictors of disease-


Faculty Publications continued


Newly Awarded Pathology Grants continued on page 12

◆ Starr Cancer Consortium Research Grant Title: Role of linker histone H1 mutations in lymphoma pathogenesis Principal Investigators: Ethel Cesarman, MD, PhD; Ari Melnick, MD; Robert Roeder, MD; David Allis, MD Period of Support: 01/01/2016-01/01/2018 Total Direct Costs: $996,000

◆ Prostate Cancer Foundation Challenge Award Title: Integrative Genomics of Prostate Cancer Progression Principal Investigator: Mark A. Rubin, MD Period of Support: 07/31/2015-07/30/2017 Total Direct Costs: $560,000

◆ The Daedalus Fund for Innovation Research Grant Title: Ubiquitin Ligase Inhibitors as Protective Agents Against Cancer Principal Investigator: Pengbo Zhou, PhD Period of Support: 07/01/2015-06/30/2016 Total Direct Costs: $100,000

◆ Burroughs Wellcome Fund Career Award for Medical Scientists Title: Novel Mechanisms of Bone Formation Principal Investigator: Matthew Greenblatt, MD, PhD Period of Support: 09/01/2015-08/31/2020 Total Direct Costs: $630,000

◆ National Institutes of Health (NIH) Early Independence Award Title: Modulation of Bone Formation by SHN3 Principal Investigator: Matthew Greenblatt, MD, PhD Period of Support: 09/18/2015-08/31/2020 Total Direct Costs: $1,250,000

◆ Burroughs Wellcome Fund Career Award for Medical Scientists Title: Reconstructing Complex Loci in Lung Adenocarcinoma with Large-insert Whole Genome Sequencing Principal Investigator: Marcin Imielinski, MD, PhD Period of Support: 09/01/2015-08/31/2020 Total Direct Costs: $630,000

◆ The Leukemia & Lymphoma Society SCOR Grant Title: Translational Discovery in Peripheral T-Cell Lymphomas Project Leader: Giorgio GA Inghirami, MD Period of Support: 10/01/2015-09/30/2020 Total Direct Costs: $1,175,000

◆ National Institutes of Health (NIH) Research Grant Title: The Identification and Validation of Mechanisms and Biomarkers for Relapse in Diffuse Large B-Cell Lymphoma Co-Principal Investigator: Wayne Tam, MD, PhD Period of Support: 06/17/2015-05/31/2020 Total Direct Costs: $578,435
2016 CME Conference Calendar

New Orleans, LA

Tutorial on Neoplastic Hematopathology
◆ January 25-29, 2016
The Westin
New Orleans, Louisiana
Course Director: Daniel M. Knowles, MD
Associate Course Director: Attilio Orazi, MD

Targeted Audience
Pathologists, pathologists-in-training
and medical oncologists/hematologists

Course Goals and Objectives
This 5-day 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 neoplastic 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.

New York, NY

7th Annual Papanicolaou Tutorial on Updated Diagnostic Cytopathology
◆ July 28-29, 2016
Weill Auditorium and Archbold Commons
New York, New York
Course Director: Rana S. Hoda, MD

Targeted Audience
Cytopathologists, pathologists, residents
and cytotecnologists

Course Goals and Objectives
This 2-day program will consist of lectures, case presentations and discussions designed to provide pathologists with a special interest in cytopathology, pathologists-in-training and cytotecnologists with an in-depth discussion of current criteria and changing concepts in Diagnostic Cytopathology. Diagnostic cytopathology performs a vital role in the evaluation and treatment of patients with non-neoplastic and neoplastic disease. This course is needed to advance the specialized knowledge of practicing cytotecnologists and further, to encourage the exploration of current approaches and concepts in classification, differential diagnosis and management. It is designed to provide updated practical, problem-solving knowledge and information for cytopathologists, pathologists, residents and cytotecnologists.

New Orleans, LA

8th Annual Symposium
Tutorial on Pathology of the GI Tract, Pancreas and Liver
◆ November 7-11, 2016
The Westin
New Orleans, Louisiana
Course Director: Rhonda K. Yantiss, MD

Targeted Audience
General surgical pathologists and
pathologists-in-training

Course Goals and Objectives
This course is designed to update physicians on advances in our understanding of gastrointestinal diseases, address problems faced during the pathologic evaluation of tissue samples, and provide pathologists with a framework for interpretation of both histologic patterns of disease and results of molecular analyses. The program will consist of lectures, case presentations and discussions designed to provide attendees with an in-depth discussion of diagnostic problems that arise when evaluating materials obtained from the gastrointestinal tract, pancreas, and liver, and inform them regarding the application and interpretation of immunohistochemical and molecular studies in the diagnosis and classification of these diseases.

Reserve early. Space is limited! CME Information/Registration: Ms. Jessica Misner (212) 746-6464 • jep2018@med.cornell.edu

Newly Awarded Pathology Grants
continued from page 11

◆ New York State Department of Health Prostate Cancer Program Grant
Title: Prostate Cancer Research
Principal Investigator: Mark A. Rubin, MD
Period of Support: 11/01/2015-01/31/2017
Total Direct Costs: $75,000

◆ Bayer Healthcare Pharmaceuticals Sponsored Research Agreement
Title: Genomic Analysis: A Phase I Trial of Copanlisib in Patients with Previously Treated Mantle Cell Lymphoma
Principal Investigator: Selina Chen-Kiang, PhD
Period of Support: 10/01/2015-04/30/2017
Total Direct Costs: $252,932

◆ American Italian Cancer Foundation Post-Doctoral Research Fellowship
Title: Targeting EZH2 in Neuroendocrine Prostate Cancer
Principal Investigator: Loredana Puca, PhD
Period of Support: 08/01/2015-07/31/2016
Total Direct Costs: $40,000

◆ Qatar National Research Fund (QNRF) Research Grant
Title: IRE1α and XBP1 Dependent MicroRNAs and Their Role in Hepatic Lipid Metabolism
Co-Principal Investigator: Ann-Hwee Lee, PhD
Period of Support: 01/01/2015-12/31/2017
Total Direct Costs: $310,357

◆ Kenneth Horowitz Family Foundation Research Grant
Title: Kaposi Sarcoma Herpesvirus Research
Principal Investigator: Ethel Cesman, MD, PhD
Period of Support: N/A
Total Direct Costs: $100,000

◆ Tumor Microenvironment Program Pilot Project Research Grant
Title: Targeting the Cooperating S1p and IL6 Pathways in EMT-related Chemoresistance in Breast Cancer
Principal Investigator: Timothy Hia, PhD
Period of Support: 09/01/2015-08/31/2016
Total Direct Costs: $75,000

◆ National Institutes of Health (NIH) Research Subgrant
Title: Origins of Ovarian Carcinoma
Sub-site PI: Lora Hedrick Ellenson, MD
Period of Support: 05/18/2015-04/30/2020
Total Direct Costs: $387,730

◆ Dysregulated S1P Signaling and Vascular Injury in SLE Clinical Translational Science Center (CTSC)
Title: Dysregulated S1P Signaling and Vascular Injury in SLE
Principal Investigator: Timothy Hia, PhD
Period of Support: 06/01/2015-05/31/2016
Total Direct Costs: $20,000

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