

DIRECTOR'S CORNER

J. Brooks Jackson, M.D., M.B.A. Baxley Professor and Director Department of Pathology

Despite a significant decrease in available NIH funding, the Department of Pathology had a record year in research funding of over \$60 million with NIH funding reaching an all-time high. Faculty with primary appointments in Pathology published 250 first/ last author papers in 2012-2013.

In terms of education, the Pathobiology graduate student program has grown to 51 students and the number of residents has stabilized at 34/year. Both programs continue to produce a number of future faculty for the department here and at other academic institutions. Several new faculty were recruited from our training programs this past year and include Matthew Olson, M.D., and Chris VandenBussche, M.D., Ph.D., in Cytopathology and Jessica Fogel, Ph.D. in HIV research. ACGME clinical fellows and research fellows currently number 12 and 85, respectively.

On the clinical side of our mission, the test menu has expanded especially in the area of molecular diagnostics where next-generation sequencing is now routinely used to sequence 400 genes to detect actionable

SPOTLIGHT: DIVISION OF TRANSFUSION MEDICINE

The Transfusion Medicine Division provides comprehensive transfusion services to routine and specialized patients in inpatient and outpatient settings. Under the direction of Dr. Paul M. Ness, the Division provides consultative services as well as an array of blood components to meet the transfusion needs of many patient groups, including solid organ and bone marrow transplant recipients, surgical inpatients and outpatients, neonates, obstetrical cases and patients with hematologic and oncologic disorders.

The Transfusion Medicine Division has a dedicated staff of twenty-eight full time Clinical Laboratory Scientists, six Lead Technologists, four Specialists, two Supervisors, a Manager, an Education Coordinator, and a Tissue Coordinator. They provide the much needed support required to care for the many patients transfused here each year. Last year, they prepared and dispensed almost 100,000 blood and tissue products and over 1,000 factor concentrates/derivatives.

In April 2012 the Transfusion Medicine Division moved into a new laboratory on the third floor of the Sheikh Zayed Tower near the Zayed Operating Rooms (OR) and the Weinberg Building. The new lab is approximately 7000 sq. feet in size and has a walk-in refrigerator that provides appropriate storage conditions for an



inventory of over 700 packed red blood cell units.

In addition to the new laboratory, four Hemosafe® refrigerators were placed into each of the Zayed ORs. These state-of-the-art refrigerators may be compared to vending machines. Each Hemosafe® provides crossmatched-ondemand red blood cells units to surgical patients. BloodTrack® software operates the refrigerators enabling continuous monitoring by the Transfusion Medicine staff of the process of requesting, removing and labeling blood units as well as the inventory levels of each blood type. The BloodTrack[®] application is interfaced with the Transfusion Medicine computer system allowing continuous updating of the status of units removed or returned to each Hemosafe®. The software also provides the capability to obtain uncrossmatched group O red cells for emergency transfusions. A small

refrigerator containing red cell units in the Emergency Department is also controlled and monitored by the BloodTrack® application. The Transfusion Medicine Division is in the process of replacing its computer operating system with SafeTrace TX®, a comprehensive computer system that will be installed at The Johns Hopkins Hospital and other Johns Hopkins Health Services affiliates.

The Division is comprised of four sections that include the Main Laboratory, the Reference Laboratory, the Platelet Laboratory, and the Molecular Laboratory.

The Main Laboratory is the heart of the Transfusion Medicine Division where routine testing of patient samples occurs as well as product receipt from the blood and tissue suppliers and component selection, preparation and issue by the Transfusion

Contents

Winter 2014

5



Front

Dr. Brooks Jacksons' Last Director's Corner as Director of Johns Hopkins Pathology



Mabel Smith Retires after 50 Years of Dedicated Service



11

Terry Aman Retiring

14



Inaugural Pathology Educational Symposium Heralds New Venue for Continuing Education



On The Cover

SPOTLIGHT DIVISION Department of Transfusion Medicine



Have you moved or are in the process of moving ?

If so, please email **Ellen Winslow** at ewinslo1@jhmi.edu, and let her know your new address. We don't want you to miss an issue of Pathways.

DIRECTOR'S CORNER

mutations for lung cancer, colon cancer, leukemia, and melanoma. Clinical Microbiology has set up MALDI-TOF technology for use in identifying bacterial organisms within a couple hours. The Department continues to improve the quality of Pathology services consistently meeting patient safety goals and achieving a successful CAP inspection this year.

The expansion of the Hopkins health care system presents a number of opportunities and challenges for Pathology. With the emphasis on better cost utilization at the national level, our larger system will provide economies of scale for cost reduction through larger purchasing orders, standardization and centralization of services, and bringing more expensive send-out tests in-house given the larger volumes. On the other hand, the integration of our new partners will require significant effort on everyone's part in the planning and coordination in the evolution of Johns Hopkins Medicine as it moves towards an accountable care organization model. Such a model will be based on population health management in which reimbursement is likely to be value-based and capitated, and outpatient, preventive, interprofessional care will be emphasized. This model contrasts significantly with our current model which is a volumedriven, fee-for-service system that emphasizes acute care, is treatment oriented, and dominated by specialty physicians. This shift in care delivery has implications for training, clinical care, and research. Greater emphasis will be placed on tests for prevention of disease, point of care testing will increase, more centralization of complex expensive testing, more emphasis on cost utilization, and interdisciplinary patient management. Funding for graduate medical education for specialty areas like pathology may decrease in preference to increasing primary care training programs. While NIH funding will likely remain flat or decrease in the next several years, there are billions of dollars becoming available through the Affordable Care Act for clinical research in how to best integrate care delivery and improve patient outcomes in an accountable care system. Considering approximately 70% of medical decisions are based on a pathology test result, pathologists have significant opportunities to play a lead role in these funded projects.

These changes will likely be difficult, but I believe we can meet these challenges and take advantage of these opportunities while maintaining our tripartite mission.

On a final note, it is with mixed feelings I write to inform you that I will be stepping down as Director of Pathology to assume the position of Dean of the Medical School and Vice President of Health Sciences at the University of Minnesota starting in February 2014.

I have very much enjoyed my tenure at Johns Hopkins and working with the people here, especially in Pathology. We have a great department and I believe I leave it well positioned for the future.

Ralph Hruban to serve as Interim Director of Pathology

Dr. Brooks Jackson has accepted the position of Dean and Vice President for Health Sciences of the University of Minnesota Medical School. The appointment places Brooks at the helm of one of Minnesota's flagship institutions, a school that trains nearly 70 percent of the state's doctors and other health care professionals. We are pleased that **Ralph Hruban**, **M.D.** has agreed to serve as Interim Director of the Department of Pathology until a new Director can be brought in. We are confident that the transition will be a smooth one, as Ralph has been one of the Deputy Directors of the Department since 2000, and the transition will be supported by **Michael Borowitz**, **M.D.**, **Ph.D.**, the Deputy Director for Education and Clinical Affairs. We anticipate that a search committee for the Director's position will form in the summer of 2014.



SPOTLIGHT: DIVISION OF TRANSFUSION MEDICINE

Medicine staff. Last year Transfusion Medicine technologists performed approximately 100,000 ABO/Rh types and antibody screens and more than 70,000 crossmatches utilizing manual hemagglutination, micro-column gel system, and automated solid phase methods. In November 2013, the Main Laboratory replaced its two Immucor Galileo® instruments with two new Immucor NeoTM instruments. The upgrade provided faster throughput and additional stat testing capabilities. The non-testing bench stations provide appropriate blood components that provide the maximum benefit to patients while mitigating the risk of an adverse transfusion event. In many ways, the staff perform functions in a "wet pharmacy." The Transfusion Medicine staff prepares these products by irradiating, thawing, washing, aliquoting, concentrating, and pooling. These manipulations must be performed as close to the time of need as possible due to the resulting changes in the component expiration. Last year the staff washed 1,165 RBCs and apheresis platelets for patients with histories of moderate to severe

allergic transfusion reactions, irradiated more than 38,000 blood products for immunocompromised patients and prepared 2,800 aliquots for neonatal/ pediatric patients. The non-testing bench stations are also actively involved in the Massive Transfusion Protocol. The staff takes the activation phone call and jumps into action by quickly preparing red cells, thawed plasma, apheresis platelets, and cryoprecipitate and packing the red cell and plasma units into containers that must be ready every 20 - 30 minutes while the protocol remains active. The staff also work directly with clinicians to monitor blood usage and assure that patients are receiving blood transfusions for evidenced-based indications. A blood management program which is a cooperative venture with Anesthesiology and Transfusion Medicine has been operating for several years with support from Pathology and has resulted in a 10% decrease in red cells transfused to surgical patients.

The Reference, Platelet, and Molecular Laboratories work together to provide patients with both specialized diagnostic services and

optimize component selection through serologic and molecular studies. The Reference Laboratory evaluates samples from patients with ABO/Rh typing discrepancies, positive antibody screens, positive direct antiglobulin tests, and unexplained clinical hemolysis. The work performed in the Reference Laboratory ranges from the resolution of simple to complex antibody problems that may require extensive testing utilizing multiple techniques performed over the course of several days. The techniques used include antibody identification studies (more than 11,000 were performed last year), phenotyping, adsorptions, elutions, chemical treatment, the use of rare cells and typing sera, antibody titrations, serologic drug studies, cold agglutinin screens and Donath-Landsteiner testing. Coming in 2014, an Immucor EchoTM instrument will be added to the laboratory to further automate antibody identification and the selection of donor units.

The Reference Laboratory and the American Red Cross work together closely to provide the patients of The

Continued on page 4



The Transfusion Medicine Team

SPOTLIGHT: DIVISION OF TRANSFUSION MEDICINE

Johns Hopkins Hospital and Outpatient Center with blood products for transfusion. Some of our patients, especially those with sickle cell disease require red cell units negative for multiple antigens. Some of these phenotyped units are quite uncommon or rare in the general population, requiring searches across the U.S. lasting days to weeks to identify, acquire and prepare for transfusion to our patients. In the past few years, the clinical indications for simple transfusions or chronic red cell exchange programs for adult and pediatric sickle cell patients have greatly expanded, making these testing programs much more challenging. Since the launching of The Johns Hopkins Hospital ABO Incompatible Kidney Transplant Program in 1999, the Reference Laboratory has played an important role by performing ABO antibody titers on serial samples collected before and after transplantation to monitor ABO antibody levels to improve the survival of the transplanted kidney. Initially performed by conventional hemagglutination methods in test tubes, ABO antibody titers are now determined by a micro-column gel method that has reduced the turnaround time by 50%.

The Platelet Laboratory assists in identifying patients who fail to benefit from platelet transfusions by performing screening to detect anti-platelet alloantibodies and autoantibodies by enzyme immunoassay (EIA) methods. These tests can also be applied to patients with acute or chronic thrombocytopenia. In addition, samples from pregnant women whose fetuses may be affected with neonatal alloimmune thrombocytopenia are evaluated in the Platelet Laboratory by panel studies for detection of platelet specific alloantibodies, such as anti-PlA1. Apheresis platelets, negative for the corresponding platelet-specific antigen may be obtained from the American Red Cross if an intrauterine transfusion is indicated.

In 2009, the Transfusion Medicine Molecular Laboratory was opened to support the resolution of complex antibody studies performed in the Reference Lab. The Molecular Lab utilizes the BioarrayTMHEA BeadChipTM technology for RBC antigen genotyping of patients with alloantibodies, autoantibodies or a diagnosis of sickle cell disease. This technology has enabled the identification of additional rare antibodies, as well as the selection of blood with extensive phenotypes previously limited by our serologic methods.

In addition to providing patient care, the Division is actively involved in education. The staff demonstrates techniques and teaches Pathology Residents, Transfusion Medicine and Hematology Fellows, and Medical Laboratory Science and Medical Laboratory Technician students. The Division is also involved in education programs in the local community and internationally with our Visiting Scholars Program in Transfusion Medicine with recent trainees from China and Ethiopia. The Johns Hopkins Hospital Specialist in Blood Banking Technology Program is also part of the Transfusion Medicine Division. It is a CAHEEP-accredited onsite work-study, graduate-level training program for certified Medical Technologists, Medical Laboratory Scientists, and Technologists in Blood Banking with at least two years of fulltime Blood Bank experience. Upon completion of the program, Specialists in Blood Banking are prepared for careers in laboratory management, quality assurance, patient safety, blood management and industry.

The Transfusion Medicine is actively involved in research nationally and internationally. Seven faculty attendings direct extensive programs including clinical trials through the NHLBI Transfusion Medicine Hemostasis Clinical Trial Network, blood donor and recipient epidemiology studies in China through the REDS III program funded by NHLBI, extensive involvement in HIV clinical trials in Africa and around the world, studies to understand the genetic underpinnings of alloimmunization, and cooperative studies with industry to bring new technologies in immunohematology and therapeutic apheresis into clinical practice. The faculty also play important roles with national organizations including Dr. Ness serving as Editor of Transfusion, Dr. Tobian's role as editor of Transfusion News, and Dr. Jackson's position as Chair of the FDA Blood Products Advisory Committee.

"THE ART OF STORYTELLING: Lies, Enchantment, Humor & Truth"

Pathology Webmaster Jim Doran's artwork was recently featured in the American Visionary Art Museum exhibit "THE ART OF STORYTELLING: Lies, Enchantment, Humor & Truth." Jim makes tiny dioramas inside of recycled containers, such as Altoid tins, old sardine cans and spoons. His work has been exhibited in Baltimore, Washington, DC, New York City, Germany and Ireland. He recently received an artist grant from the State of Maryland for his "works on paper." Jim's work can be seen at http://jimdoran.net







Mabel Smith Retires after 50 Years of Dedicated Service

After 51 years of devoted service to the Department of Pathology, **Mabel Smith** retired in July 2013. Mabel joined the Department in 1961, and over her tenure she served under five

department chairs. At the time of her retirement, she oversaw approximately 140 full-time faculty as the Administrator of Academic Affairs. Mabel will best be remembered for her untiring and dedicated support of the faculty and trainees in the Department.

Under her administrative leadership, training programs in Pathology and Pathobiology greatly expanded, successfully recruiting top applicants, and the Department became the

No. 1 NIH-funded department of pathology in the United States. Perhaps most notable is the energy, interest, and care Mabel took to ensure that individual faculty and trainees had the administrative support and advice they needed to be successful in building successful careers in teaching and research.



A farewell reception in Mabel's honor was held on July 12. Smiling broadly, she was accompanied by her daughter Linda and grandson Seth to the reception, and warmly greeted and hugged by faculty and staff,

including many retirees.

Many tributes were given, most notably by Department Director **Dr. Brooks Jackson** who said he "could not understate the contributions she made to the Department." He attributed much of his success and the success of others in the department to Mabel.

Dr. John Boitnott shared many memories and humorous anecdotes of the "early days." Soon after retiring, Mabel took a trip with her grandson to England, Scotland and Ireland and a trip

to New England to enjoy the autumn foliage. Mabel is planning on warm winters in Myrtle Beach, and a future vacation with her daughter to Australia.

The Department of Pathology will always be grateful to Mabel for her innumerable contributions and wishes her good health and much happiness in her retirement.





Hopkins Team Recognized for Advancing Pancreatic Cancer Research

The Pancreatic Cancer Sequencing Team in the Sol Goldman Pancreatic Cancer Research Center at Johns Hopkins received the 2013 Team Science Award from the American Association for Cancer Research at it's annual meeting held in Washington, D.C. This award recognizes an outstanding interdisciplinary research team for its innovative and meritorious scientific work that has advanced or will likely advance cancer research, detection, diagnosis, prevention or treatment.



Pictured above with Katie Couric are Drs. Michael Goggins, Alan Meeker, James Eshleman, and Ralph Hruban

Vanessa Rodas-Eral Joins Pathology as Assistant Administrator, Academic Affairs and Grant Development

Vanessa Rodas-Eral joined the Department of Pathology in September as the Assistant Administrator, for Academic Affairs and Grant Development. She looks forward to working with faculty and staff on sponsored grant and contract submissions, educational programs, finance and operations.

Vanessa holds a bachelor's degree in Business Administration/Finance. She earned a Health Finance & Management Certificate from Johns Hopkins Bloomberg School of Public Health and is completing her master's degree in health care administration at the University of Maryland University College.

Vanessa brings a wealth of experience including the last 13 years within the Johns Hopkins family, beginning at JHPIEGO Corporation as a Financial Analyst. She then spent several years at the Johns Hopkins Bloomberg School of Public Health Center for Communication Programs as Senior Finance Administrator and Senior Proposal and Sponsored Projects Administrator. Most recently, Vanessa was with the JHSPH Department of International Health as the Financial and Administrative Manager in the Divisions of Global Disease and Epidemiology, and Social Behavioral Interventions, where she managed a \$100 million portfolio of programs.

Well-versed in financial, administrative and program activities, Vanessa has extensive finance and grant/contract experience including NIH, USAID, CDC, as well as other federal and



state agencies and private foundations. She is passionate about global operations, having lived and traveled abroad to support major program offices throughout Africa, Asia, and Latin America. When she is not working, Vanessa enjoys spending time with her family and traveling. Welcome Vanessa!

Department of Pathology Incoming House Staff, 2013-2014



Heather Ames was born in Acton, Massachusetts. She received her B.S. in Neuroscience and Biology and M.S. in Neuroscience from Brandeis University in Waltham, Massachusetts. During her time at Brandeis, she performed research on amygdala development in the Structural and Molecular Neuroscience Laboratory at McLean Hospital. After college, Heather spent a year as a laboratory technician at the Massachusetts Institute of Technology where she studied dendrite maturation in primary neuron culture. She then earned an M.D./Ph.D. degree in Medicine and Cellular and Molecular Biology from the University of Michigan Medical School in Ann Arbor. Her Ph.D. work focused on receptor tyrosine kinase endocytosis and trafficking in normal and tumorigenic cells. During her time at the University of Michigan, she also served as a member of the Medical Scientist Training Program Operations and Admissions Committee and was an invited speaker on the subject of research ethics for multiple campus research groups. Heather enjoys reading, hiking, running, singing, travel, and enjoying regional cuisines. Heather will be pursuing AP training.



Jennifer Bynum was born in Jackson, Tennessee. She received a Bachelor of Music Education from Florida State University and taught elementary music and band for five years, winning the Teacher of the Year Award for her school in 2007. She then earned an M.D. from the University of Alabama at Birmingham, where she was Vice-President of the University of Alabama chapter of Alpha Omega Alpha and involved with UAB's Medical Education Committee and the LCME review process. In 2013, she was awarded the Hugh J. Dempsey Memorial Award for the Outstanding Student in the School of Medicine and the Dean's Award for Academic Excellence. Her research as a medical student focused on the clinical and laboratory diagnosis of Heparin-Induced Thrombocytopenia (HIT), and she was involved in the design and implementation of a new testing protocol for HIT at UAB. Jennifer enjoys playing piano and clarinet, reading, cooking, and spending time with her family. She pretends to enjoy running. Jennifer will be pursuing AP/CP training.



Judd Fite was born and raised in Benton, Arkansas. This happens to be the town where the Burt Reynolds 1970's blockbuster, "White Lightning," and the more recent Billy Bob Thornton breakout movie, "Sling Blade," were filmed. He attended the U.S. Air Force Academy in Colorado Springs where he played football, earned a B.S. in Biology, and was commissioned as an officer in the U.S. Air Force in 1996. Judd spent 8-1/2 years active duty Air Force as a Navigator/Electronic Warfare Officer. He was also in charge of his Air Force Base Life Support and Survival, Evasion, Resistance, and Escape units. While stationed in Nebraska, Judd earned his MBA from the University of Nebraska. Judd separated from the Air Force in 2005 and used his education in business and biology to become a surgical sales representative for Ethicon Endo-Surgery. He spent 2-1/2 years selling surgical instruments in Portland, Oregon before deciding to pursue medical school. Judd was able to return to his home state of Arkansas, where he graduated from the University of Arkansas for Medical Sciences (UAMS) in 2013. Judd's personal interests include outdoor activities. He is an avid herpetologist and his biggest thrill comes from searching for various snake species in the field. He has found and photographed some amazing snakes to include the bushmaster in Peru, the terciopelo in Costa Rica, and the very reclusive ridge-nosed rattlesnake in Arizona. Judd is married to Danielle, a 747 pilot, whom he met while in the Air Force. Judd is pursuing AP/CP training.



Andrew Guajardo was born in Ossining, New York. His family is originally from Chile. He received his B.S. in Forensic Science with a concentration in Toxicology from John Jay College of Criminal Justice in New York City. After college, Andrew briefly worked in a forensics lab conducting case work in the Arson, Trace, and Drug Chemistry Departments. He earned an M.D. from New York Medical College. During medical school, as a member of the Gold Humanism Honor Society, Andrew was part of multiple projects benefiting the medical students and the local community including donation drives, mentoring, and developing student's humanistic skills. Andrew enjoys cooking, trying new foods, hiking, soccer, and playing computer games. Andrew will be pursuing AP training.

Department of Pathology Incoming House Staff, 2013-2014



Casey Inouye was born and raised in Honolulu, Hawaii. She received her B.S. in Biological Sciences from the University of Southern California, and stayed at USC to earn her M.D. at the Keck School of Medicine. As a medical student, she reestablished the Rookies In Pathology student interest group and worked in the USC Immunohistochemistry Laboratory, manually performing IHC staining for the Keck Medical Center. She also studied the clinicopathologic characteristics of EBV+ DLBCL in the Los Angeles County and USC Hospital population of predominantly Hispanic patients. Casey enjoys dancing hula, hiking, swimming, building airplane models, painting, and jigsaw puzzles. Casey will be pursuing AP/CP training.



Jason Kern was born and raised in St. Louis, Missouri. He received his B.S. in Biological Sciences from the University of Missouri - Columbia, where he was involved in research on neural stem cells as a treatment vector for glioblastoma multiforme. He then spent a year at Washington University researching genetic risk for substance dependence. Jason earned his M.D. from the University of Missouri - Columbia School of Medicine, where he was the Vice President of the pathology interest group and received the W.B. (Pete) Stewart Memorial Pathology Award. Jason also enjoys professional sports, playing guitar, kayaking/canoeing, and hiking. Jason will be pursuing AP/CP training.



Armen Khararjian was born and raised in the San Francisco Bay Area of California, spending countless winter days skiing in Lake Tahoe. He attended UC San Diego as an undergrad where he majored in Economics and interned in New York City for AXA Equitable analyzing portfolio investment options for clients. In a year off before starting medical school at UC Irvine, he worked for Kaiser Permanente in the Department of Pathology helping design and implement workflow processes for the gross room of a brand new hospital, among other duties. At UCI, he completed both an M.D. and M.B.A. degree. Aside from skiing, Armen is an avid sports fan, enjoys playing racquetball, and cycling. He will be pursuing AP/CP training.



Emily Nelson was born in Boston, Massachusetts and grew up in the San Francisco Bay Area. She received her B.S. in Biology from UCLA and subsequently worked for a year at UCSF investigating the use of mesenchymal stem cells in cardiac disease. She earned her M.D. from UCSF and spent two years during medical school in a regenerative medicine laboratory at Stanford University. Her main areas of research involved elucidating molecular pathways in palate development and the use of adipose-derived stem cells for bone regeneration. In her free time, Emily enjoys exploring new restaurants, playing tennis, running, and watching the San Francisco Giants and UCLA Bruins. She will be pursuing AP/CP training.



Marissa White was born in Washington, D.C. She received her B.A. in Biology from the University of Richmond, where she also competed as a sprinter and hurdler on the women's Division 1 track and field team. She then went on to earn her M.D. from Morehouse School of Medicine in Atlanta, Georgia. During her time at Morehouse, she was involved with planning community health initiatives at a local church, and served as Vice President of her class. She was also involved with tutoring first and second year medical students in the subjects of Pathology and Biochemistry. Marissa enjoys running, volleyball, travelling, hiking, cooking, and spending time with family and friends. Marissa will be pursuing AP/CP training.

New Grants and Contracts Awarded to Pathology Faculty, 11/01/12 - 1/1/14

Faculty Member	Award Type	Agency	Dates	Total Funding
Borowitz, Michael	Contract	Amgen	2/15/12-2/14/17	46,560
Borowitz, Michael	Contract	Medimmune	1/7/13-1/6/15	104,532
Burns, Kathleen	R01 Grant	NIH/NCI	3/4/13-2/28/18	1,680,750
Burns, Kathleen	R01 Grant	NIH/NIGMS	5/2/13-2/28/17	1,211,410
Burns, Kathleen	Grant	Department of Defense	9/15/13-9/14/15	486,000
Carroll, Karen	Contract	Advandx Inc.	11/13/12-11/12/13	30,140
Carroll, Karen	Contract	Nanosphere Inc.	1/11/13-1/10/14	38,060
Carroll, Karen	Contract	Curetis	7/1/13-12/31/13	145,000
Carroll, Karen	Contract	Great Basin Scientific	3/2/12-4/30/14	27,999
Caturegli, Patrizio	Contract	Ipsen Pharmaceuticals	1/1/13-7/31/15	60,000
Chan, Daniel	R13 Grant	NIH/NCI	3/5/13-2/28/14	20,000
Clarke, William	Contract	Thermo Finnegan	6/1/12-5/31/14	59,000
Clarke, William	U01 Grant	Food and Drug Administration	9/15/13-9/14/14	205,621
DeMarzo, Angelo	R03 Grant	Prostate Cancer Foundation	9/1/13-8/31/15	250,000
Detrick, Barbara	Contract	Inova Diagnostics	5/1/13-11/30/13	10,000
Eberhart, Charles	R01 Grant	NIH/NINDS	9/1/13-8/31/17	1,431,483
Eberhart, Charles	Grant	Childrens Cancer Foundation	11/1/13-10/31/14	50,000
Epstein, Jonathan	Contract	MDX Health	1/1/13-9/30/13	76,200
Eshleman, James	Grant	The Stringer Foundation	7/1/13-6/30/14	125,000
Eshleman, Susan	Grant	NIH/NIAID	1/1/14-11/30/20	23,218,375
Fowler, Mary / Jackson, B.	Grant	NIH/NIAID	12/10/13-11/30/20	5,587,972
Goggins, Michael	Grant	AACR	7/1/13-6/30/16	1,000,000
Goggins, Michael	R01 Grant	NIH/NCI	7/1/13-6/30/18	2,083,360
Halushka, Marc	Grant	American Heart Association	7/1/13-6/30/15	154,000
Hamad, Abdel	R01 Grant	NIH/NIAID	3/1/13-2/28/18	1,802,995
Heaphy, Christopher	Grant	State of Maryland DHMH	7/1/13-6/30/14	99,971
Iacobuzio-Donahue, Chris	R01 Grant	NIH/NCI	9/1/13-6/30/17	1,369,727
Jackson, Brooks	Grant	NIH/NIAID	1/1/14-11/30/20	59,815,718
King, Karen	Contract	Terumo BCT	1/1/13-12/31/13	121,663
Kohr, Mark	K99 Grant	NIH/NHLBI	8/23/13-7/31/15	214,974
Koliatsos, Vassilis	Grant	The Libra Group	7/1/13-6/30/17	600,000
Lai, Shenghan	R01 Grant	NIDA	5/1/13-3/31/16	2,101,251
Le Thi, Quy Hoa	R21 Grant	NIH/NCI	4/1/13-3/31/15	387,585
Lotan, Tamara	Grant	Department of Defense	9/30/13-9/29/16	364,500
Makahon-Moore, Alvin	F31 Grant	NIH/NCI	9/20/13-9/19/18	211,160
Mao, Chih-Ping	F30 Grant	NIH/NCI	4/1/13-3/31/15	94,464
Martin, Lee	R01 Grant	NIH/NINDS	8/15/13-7/31/15	708,750
Meeker, Alan	R01 Grant	NIH/NCI	1/3/13-12/31/17	1,694,600
Miller, Robert	Contract	NIH/NHLBI	11/15/12-11/14/19	16,492,594
Miyamoto, Hiroshi	Grant	Department of Defense	9/23/13-9/22/16	345,375
Ning, Yi	Grant	State of Maryland DHMH	7/1/13-6/30/14	100,000
Riedel, Stefan	Contract	Meridian Bioscience	9/27/12-3/26/14	131,833
Rodic, Nemanja	Grant	HERA Foundation	4/1/13-3/31/14	20,000
Rodriguez, Fausto	Grant	Knights Templar Eye Fdtn.	7/1/13-6/30/14	60,000
Troncoso, Juan	Contract	Lieber Institute	9/1/12-8/31/14	240,762
Valsamakis, Alexandra	Contract	Quidel Corporation	11/1/12-10/31/13	26,428
Vang, Russell	Contract	Inovio Pharmaceuticals	5/8/13-5/7/18	10,175
Yuyu, Fnu	Grant	HERA Foundation	4/1/13-3/31/14	20,000
Zhang, Sean	Contract	Advandx Inc.	10/17/12-10/16/13	14,272

Total \$125,150,259

Funding Our Future

The Grover M. Hutchins, M.D. Memorial Fund

The friends and family of Grover Hutchins have joined together to establish The Grover M. Hutchins, M.D. Memorial Fund. Grover spent 56 years at Johns Hopkins and had a profound impact on our residency training program, as well advancing the understanding of cardiovascular and pediatric diseases. This year's recipient is **Dr. Justin Poling**.

The Joseph Eggleston Fund in Surgical Pathology

The Joseph Eggleston Fund in Surgical Pathology honors one of the true giants in the field of surgical pathology. **Dr. Eggleston** was not only a leading authority on the pathology of lung cancer, but he also educated a generation of outstanding surgical pathologists. This year's grantees are Drs. Mohammed Lilo and Ian Rosenthal.

The William Welch Award

The William Welch Award is named for the preeminent pathologist who was one of the founding fathers of The Johns Hopkins Hospital and School of Medicine. It was established to acknowledge outstanding achievement in pathology by a second year medical student.

The Gerald S. Spear JHU-UCI Medical **Student Pathology Fellowship**

This program was established in 2005 to commemorate Dr. Spear's retirement. The Spear Fellowship provides a UC Irvine student with the opportunity to participate in a one-month elective in the Department of Pathology at Johns Hopkins. The goal is to inspire respect for, and possibly a career in, pathology. Brian Luu received this year's award.

The Fred and Janet Sanfilippo Research Fund

The Fred and Janet Sanfilippo Research Fund honors the many contributions of our former Director, Fred Sanfilippo, M.D., Ph.D. to the Department of Pathology, as well as his many contributions to the field of organ transplantation pathology. The fund supports innovative research by our residents and fellows. This year's recipient is Dr. Nemanja Rodić.

Please consider supporting one or more of these activities. We are enclosing a self-addressed return envelope to facilitate your contribution. If you have any questions please contact Dr. Ralph Hruban (rhruban@jhmi.edu or 410-955-2163). If you would like to donate to one of these funds on-line, please visit our secure server at: http://pathology.jhu.edu/department/giving.cfm.

If you would like to use a separate envelope, please send your taxdeductible contributions payable to Johns Hopkins University to:

> **Fund Office Department of Pathology** The Johns Hopkins Hospital Carnegie 439 600 North Wolfe Street Baltimore, MD 21287-6417

Our New Faculty Fellowship Recipients for 2013-2014



John K. Boitnott Fellow

Changqing Ma



Chad McCall



Peter C. Burger Fellow William Bell



Athena Kantarzis-Petrides





Patricia Charache Fellow Jonathan I. Epstein Fellow Andres Matoso

Nuntra Suwantarat





Xuguang Nie

Yener S. Erozan Fellow Ramneesh Bhatnagar

Constance A. Griffin Fellow Robert H. Heptinstall Fellow Guoli Chen





Paul M. Ness Fellow Olga Chajewski

Srinivas Gottipati



Dorothy L. Rosenthal Fellow Christopher VandenBussche



John H. Yardley Fellow Sabrina Sopha



Blast from the Past



Guess Who? Answer on page 19

Terry Aman Retiring

On January 31, 2014, Terry Aman will retire from The Johns Hopkins Hospital. She has served as Education Program Coordinator in Pathology since 1999. In this position she has managed all fellowship programs as well as the general residency training program in pathology. For her first two years at Hopkins she worked closely with Dr. Risa Mann, the Residency Director. For the next twelve years she worked with Dr. Edward McCarthy who took over the Residency Program.

We have always felt that Johns Hopkins Pathology has one of the strongest academic residency programs in the country. But there is something more to our program: a warm, mutually supportive, family-like community among our residents and fellows. They get

along fabulously with each other. They study together, commute together, party with each other, and take care of each other's kids. Our Department is a place where residents like to come to work. Terry Aman is the foundation, perhaps even the creator, of this atmosphere. She is a warm, friendly, competent person and is seldom seen without a smile. All our residents, past and present, adore her.

Terry interacts with the residents from the first day they come to our Department for their interviews until the day they graduate when she helps hand out their diplomas. During the interview season, each resident candidate spends their first half hour with Terry. She is the first person each candidate talks at Hopkins, and often the first person they talk to in Baltimore. During that half hour, Terry tells them about Baltimore and Johns Hopkins. One resident remembers, "She made me feel welcome, and I can see why Baltimore might be called 'Charm City.' She made me feel that I would be comfortable in Johns Hopkins Pathology." Another candidate went even further, declaring that Terry was the best thing about the training program.



In addition to interacting with residents at the beginning of their stay at Johns Hopkins, Terry

has a critical role at the end of each academic year. She plans the Awards Banquet, starting preparations months in advance. This is a large affair with some 600 guests. Because of her organizational skills and fun-loving spirit, this banquet is the highpoint of the year. It is a great feast with lots of joking and laughing, and every detail is skillfully overseen by Terry. For those residents who are graduating, saying goodbye to Terry is painful for both them and her. Often residents keep up their relationship with Terry long after they have left our program, and her office is filled with photos of them and their children.

Although Terry's involvement with the residents at the beginning and at the end of their residency is important, it is during the intervening four years that Terry creates the spirit of our Department. Her office is next door to the large room where all the residents have their cubicles and they wander in and out of her office all day long to chat or ask for advice. She is never too busy for them.

Department of Pathology - New Faculty



Naima Carter-Monroe, M.D., M.S., a native Baltimorean, received her undergraduate degree in Chemical Engineering from the University of Maryland Baltimore County and her medical degree from Howard University College of Medicine. She subsequently completed her residency in Anatomic and Clinical Pathology at the University of Maryland Medical Center. As a result of an interest in Pathology Informatics developed during residency, she was awarded a National Library of Medicine fellowship in the Division of Health Informatics at the Johns Hopkins University School of Medicine. She also earned a Masters in Health Sciences, with a master's thesis focused on the diffusion of digital microscopy/telepathology among pathologists in the United States as compared the adoption curve of teleradiology among radiologists. Dr. Carter-Monroe began fellowship training in Cardiovascular Pathology at CVPath Institute, Inc. in Gaithersburg, Maryland becoming a staff pathologist in 2009. There she began developing a relational database encompassing decades of clinical, demographic and histologic data generated by the institute. In addition, she also developed a histologic grading system for the assessment of tissue damage related to renal nerve ablation for intractable hypertension in several animal models. To pursue an interest in transplant pathology, Dr. Carter-Monroe accepted the Lorraine Parent Racusen Fellowship in Renal Pathology in July 2012. Dr. Carter-Monroe recently joined the Department of Pathology, Division of Genitourinary – Renal Pathology, with an interest in the correlation of histologic data and socioeconomic disparities in renal allograft transplant survival and Polyomavirus nephropathy.



Ali Elbireer, Ph.D., M.B.A., M.T. (ASCP) emigrated from Sudan to the United States at an early age where he transitioned his biochemistry undergraduate studies into the field of Laboratory Medical Technology Sciences and acquired the American Society for Clinical Pathologist (ASCP) certification as a Medical Technologist. He obtained a Masters of Business Administration (MBA) from Pfeiffer University in North Carolina, and a Doctoral degree in Healthcare Administration from Northcentral University in Arizona. Dr. Elbireer has a long time experience working in several healthcare establishments in medical laboratories and hospitals administration leadership positions in the United States. Dr. Elbiereer returned to Africa – Uganda in 2004 as the Laboratory Administrative Director for Makerere University-Johns Hopkins University (MU-JHU/IDI) at the Infectious Diseases Institute in Kampala, Uganda. MU-JHU/IDI Core Laboratory is the first College of American Pathologist (CAP) Accredited laboratory in West, Central, & East Africa. Dr. Elbireer has published several papers about clinical laboratory, and quality of lab services in Sub-Saharan Africa. He participated in the creation of the first Ugandan Laboratory health policy that was approved and published in 2009. Under Dr. Elbireer's leadership the MU-JHU/ IDI Core Laboratory was selected as 2008 Laboratory of the Year (second runner-up) by the "Medical Laboratory Observer- MLO" Magazine - the MU-JHU/IDI Core is the 1st International Lab to be selected for this honor. In December 2012 the MU-JHU/IDI laboratory was recognized by African Society for Laboratory Medicine (ASLM) and awarded the Best Practice and Laboratory Medicine trophy in Cape Town, South Africa.



Hiroshi Miyamoto, M.D., Ph.D. completed his medical school and urology residency training followed by six years of clinical urology practice and translational research in genitourinary cancers in Yokohama, Japan. In 1996, he moved to the United States to conduct postdoctoral research in the laboratory of Chawnshang Chang, Ph.D., who cloned human androgen receptor cDNA, at the University of Wisconsin - Madison and University of Rochester. Between 2001 and 2005 he continued his research focused on studying androgen receptor in prostate cancer as a Research Assistant Professor at the University of Rochester. He then completed anatomic pathology residency training at the University of Rochester Medical Center and a clinical fellowship in urologic pathology at Johns Hopkins University. Dr. Miyamoto returned to Rochester to join the faculty again in the Department of Pathology and Laboratory Medicine in 2009. Dr. Miyamoto was recruited to Johns Hopkins as an Associate Professor in the Division of Urologic Pathology beginning July of 2013. His research interests include molecular biology of steroid hormone receptors in genitourinary tumors. Specifically, he has been investigating the role of androgen receptor signals in the development and progression of bladder cancer. He also assesses the effects of new classes of androgen receptor antagonists on prostate cancer progression and characterizes novel androgen receptor coregulators in prostate cancer cells.

Primary Faculty Changes - 2012-2013

New Faculty

Faculty Name	Rank	Division
Miyamoto, Hiroshi	Associate Professor	Urologic Pathology
Ning,Yi	Associate Professor	Cytogenetics Lab
Olson, Matthew	Assistant Professor	Cytopathology
Wood, Laura	Assistant Professor	GI/Liver Pathology
Carter-Monroe, Naima	Instructor	Renal Pathology
Blanco, Luis	Assistant	Gynecologic Pathology
Cruise, Michael	Assistant	GI/Liver Pathology
Goicochea, Lindsay	Assistant	Surgical Pathology
Huebner, Thomas	Assistant	Surgical Pathology
Morrison, Jane	Assistant	Gynecologic Pathology
Tilson, Matthew	Assistant	Surgical Pathology
Wang, Mark	Assistant	Surgical Pathology
Elbireer, Ali	Research Associate	Transfusion Medicine

Promotions

Faculty Name	Rank	Division
Netto, George	Professor	Surgical Pathology
Begum, Shahnaz	Assistant Professor	Surgical Pathology
Shah, Punit	Research Associate	Chemistry
Thomas, Stefani	Research Associate	Chemistry
Yang, Shuan (lake)	Research Associate	Chemistry

Departures

Faculty Name	Rank	Division
Dumler, Steven Fanaian, Na'im Gupta, Sonal Heath, Jonathan Hebbar, Sachidanand Iacobuzio-Donahue, Christine Maitra, Anirban Maniar, Kruti McDonald, Oliver Nasseri-Nik, Niloofan Sathiamoorthy, Srividya Schwartz, Lauren Tatsas, Armanda Tian, Yuan Tong, Wenjing Torbenson, Michael Wasowska, Barbara Wentz, Sabrina	Professor Assistant Research Associate Assistant Research Associate Professor Professor Assistant Assistant Assistant Instructor Assistant Instructor Assistant Professor Research Associate Research Associate Professor Assistant Professor Assistant Professor Assistant Professor	Microbiology Surgical Pathology Gl/Liver Pathology Gl/Liver Pathology Gl/Liver Pathology Gl/Liver Pathology Gl/Liver Pathology Gl/Liver Pathology Gynecologic Pathology Gynecologic Pathology Cytopathology Surgical Pathology Clinical Chemistry Informatics Gl/Liver Pathology Immunology Surgical Pathology
Terrery arrova, 7 viria	733131411110103301	Cynecologie r athology

The Johns Hopkins iCareBook for Pancreatic Cancer

To help educate patients and their family members and friends about pancreatic cancer, members of the Sol Goldman Pancreatic Cancer Center, the Department of Pathology, and the Department of Art as Applied to

Medicine have created the Johns Hopkins iCareBook for Pancreatic Cancer. This unique app for the iPad and iPhone includes both educational material and patient-centered tools. The app is divided into three main sections. The "My Disease" section contains information about the pancreas and pancreatic cancer with emphasis on diagnosis and treatment. The content was created by leading experts in the field and includes text,



illustrations, animations and videos. The "My Team" section describes the role of each specialty in a multidisciplinary care team and can be personalized with the names and pictures of the user's caregivers. Finally, the "My Care Journal" section has tools that help a patient track appointments, take notes, record symptoms, and document medications. These features of the iCareBook are designed to integrate seamlessly with the Contacts and

> Calendar applications built into iOS. The app even has a "kiosk" (or "waiting room") mode that doesn't store data and is appropriate for shared iPads. The app was released for iPad on September 11, 2013, and can be downloaded at https://itunes.apple.com/us/app/ icarebook-hd/id697194060?mt=8. The Johns Hopkins iCareBook for Pancreatic Cancer is available free of charge, and we hope it helps empower patients and their loved ones as they navigate the health care system with a diagnosis of pancreatic cancer. The application was supported by gifts from the

Blum-Kovler Foundation and is dedicated to the patients treated at Johns Hopkins Hospital and their families. The app recently won an "Award of Merit" from Web Health Awards.

Inaugural Pathology Educational Symposium Heralds New Venue for Continuing Education



The Inaugural Pathology Educational Symposium was held on September 10-12, 2013, in the Turner Building on the Johns Hopkins East Baltimore campus. The innovatives symposium was organized under the planning and direction of the Department of Pathology's Continuing Education Committee. Nearly 500 pathology employees from The Johns Hopkins Hospital, Johns Hopkins Bayview Medical Center, Howard County General Hospital, Suburban Hospital, and Sibley Memorial Hospital, attended. Thirty-six sessions were offered, ranging from one hour to three hours in length, over the course of the three days. Session topics were wide-ranging and included infectious

diseases, autoantibodies, Epic LIS, flow cytometry, MALDI-TOF, generational differences, zygomycosis, next-generation sequencing, the legal pitfalls of social media, proficiency testing, thromboelastography, laboratory audits, and stress and resilience. Presenters included, but were not limited to, many Pathology faculty, as well as Pathology residents and laboratory leadership. This first-of-its-kind educational symposium was very successful from the overwhelming positive feedback of the attendees. All courses were PACE-accredited and plans are underway to hold the second Pathology Educational Symposium in the fall of 2014.





Welcome to the Graduate Training Program in Pathobiology 2013-2014 Incoming Students



Hee Sun Choi was born in Seoul, South Korea and received her B.S. and M.S. in Biotechnology from Yonsei University in 2009 and 2011 respectively. While at Yonsei, she conducted research mainly on protein folding. She is interested in infectious diseases and translational research. She would like to deepen her understanding of host-pathogen interactions and apply this knowledge to developing innovative therapies. She believes that the Pathobiology Graduate Program at Johns Hopkins will provide a solid foundation for her future career as a creative research scientist. Her long term goal is to contribute to developing more effective ways to prevent and treat human diseases. Hee Sun enjoys playing the piano, swimming and traveling. Hee Sun is one of our new Margaret Lee students.



Tahani Dada was born in Jeddah, Saudi Arabia and received her M.D. degree from King Abdulaziz University, Jeddah in 2009. Her fascination in Obstetrics and Gynecology led her to join the Governmental Maternity and Child Hospital in Jeddah. As a result of her achievements in residency and community service, she received a full scholarship from the Ministry of Higher Education to receive further education in the United States. She applied to Johns Hopkins School of Medicine as a post-doctoral fellow and was accepted into the program. Her current project integrates the fields of Pathobiology, Neurology and Obstetrics. For the past year, she studied the impact of fetal exposure to intrauterine inflammation on fetal brain development. As a graduate student, she plans to continue these studies. Her medically-related research and its influence for social betterment (decreasing prematurity related morbidity) have caused her to understand her calling, and how her country needs to ensure that its trained medical practitioners get the most advanced knowledge in the field. Joining this graduate program opens several opportunities for her. When she returns back to Saudi Arabia, she plans to practice evidence-based medicine, to conduct patient-oriented research, and to empower other women in her community to seek higher education. She promises to make Johns Hopkins University and her country proud of her achievement in the future.



Byung Woo Kim was born in Daegu, South Korea. He received his Bachelor's degree in Biochemistry from the University of Oklahoma in 2011. His research experience during his undergraduate years included studying integration of phage display technology and nanomaterial for breast cancer cell imaging and treatment and investigation of a membrane transport protein of a gram-positive bacterium, Corynebacterium glutamicum, which is a relative of Mycobacterium tuberculosis. While conducting research during his undergraduate years, he developed a strong desire to engage in research that can contribute to the development of medical treatment of human diseases. Considering the program's emphasis on translational research along with its prominent professors, Byung Woo believes that studying in the Pathobiology Ph.D. program at Johns Hopkins University will undoubtedly play a crucial role in fulfilling his desire and expanding his expertise. Byung Woo is one of our new Margaret Lee students.



Jonathan Ling

Jonathan Ling comes from the charming, historic city of Boston, Massachusetts. He received his B.S. in Biomedical Engineering from Johns Hopkins in 2010. After taking several neuroscience classes, he joined a lab at Johns Hopkins and began researching the role of TARDBP and c9orf72 in the pathophysiology of FTD/ALS. Jon hopes to take advantage of the synergy between basic science and translational medicine that the Pathobiology program provides to further supplement his research experience. In his free time, Jon enjoys music festivals, skydiving, playing piano, and singing in a graduate student a cappella group.

In Memoriam



Gary S. Hill 1939 - 2013

Continued from page 15

Welcome to the Graduate Training Program in Pathobiology 2013-2014 Incoming Students



Zoila Areli Lopez Bujanda was born in Hermosillo, Mexico. She graduated with honors in 2007 from University of Sonora with a B.S. in Biochemistry. During her undergraduate, Areli was granted a scholarship to do an internship at University of Santiago de Compostela in Spain, where she developed an interest in genetics. To that end, she decided to go back home and pursue a M.S. in Molecular Biology. Aware of the cutting edge research achieved in the United States, Areli came to Johns Hopkins Medicine first to do a graduate internship in a cancer epigenetics lab (2009), and later to formally join the lab as a Research Specialist in DNA methylation analysis (2010). Since then, she has been working on developing and troubleshooting an assay for analyzing and monitoring cancer-specific methylated DNA in serum from breast cancer patients. Areli chose to attend the Johns Hopkins Pathobiology Program for its incredible faculty and its focus on translational research since her goal is to perform research aimed to improve cancer therapy once she concludes her Ph.D. training. Besides doing research, Areli enjoys bicycling, dancing, playing soccer, hiking, and reading.



Carolyn Tallon was born in Toronto, Canada. She graduated from McGill University in May 2013, with a B.S. in Physiology with distinction and first class honors in physiology. She has done research in quite a few different areas including determining antibiotic resistance in bacteria, analyzing neuronal firing patterns in vestibular neurons, as well as studying the dynamics of murine breast cancer cell metastasis. Her main interest is neuropathology, especially the mechanisms underlying neurodegenerative diseases. Outside of the lab, Carolyn enjoys reading, skiing, cooking, and watching movies. Carolyn is looking forward to studying south of the border and hopes that her time at Johns Hopkins will help her grow as an independent researcher.

Department of Pathology - New Faculty



Yi Ning, M.D., Ph.D. was appointed Associate Professor in the Department of Pathology, Division of Molecular Pathology, in March 2013. She earned her M.D. from Shanghai Medical University, Shanghai, China in 1984, and her Ph.D. from Baylor College of Medicine, Houston, Texas, in 1991. She completed her postdoctoral training at the Diagnostic Development Branch, National Human Genome Research Institute, National Institutes of Health, in 1996. Dr. Ning's work is published in journals including Science and Nature Genetics. She is an American Board of Medical Genetics certified Clinical Cytogeneticist, and served as Director of Prenatal Cytogenetics Lab at George Washington University for 4 years, and the Director of Cytogenetics Lab at University of Maryland School of Medicine for 12 years. In joining Johns Hopkins Pathology, she serves as Director of Cancer Cytogenetics Lab to provide cytogenetic diagnosis and also conducting research to delineate molecular mechanisms of novel chromosome translocations in oncogenesis. Her research at Johns Hopkins is funded by the Maryland Cigarette Restitution Grant.



Matthew Olson, M.D. joined the Department of Pathology, Division of Cytopathology, as an Assistant Professor in July 2013, after completing his pathology residency in Anatomic and Clinical Pathology and fellowship in Cytopathology here at The Johns Hopkins Hospital. He completed his undergraduate training, followed by medical school at The George Washington University in Washington, DC. Dr. Olson's research interests center on developing ancillary tests for cytopathology to achieve actionable clinical results more frequently. He is currently working on multiple levels including development, implementation, usefulness evaluation, practical issues, and clinical outcomes. His strengths lay in computer programming, database management, data-mining, and analytical chemical techniques involving mass spectrometry. Subcategories of his research include test development of desorption electrospray ionization mass spectrometry (DESI-MS) on cytological preparations; bioinformatics approaches that benefit molecular testing in cytological samples; and adequacy assessment, metrics, and assurance for ancillary testing in cytological samples, including the role of cytotechnologists, telecytology, and on-site evaluation of adequacy for this important step of the diagnostic process.



Laura Wood, M.D., Ph.D. joined the Department of Pathology, Division of Gastrointestinal and Liver Pathology as an Assistant Professor in July 2013. Dr. Wood received her B.S. in Biology from the College of William & Mary, graduating Summa Cum Laude with membership in Phi Beta Kappa. She went on to earn both her M.D. and Ph.D. from The Johns Hopkins University School of Medicine, with membership in Alpha Omega Alpha. She completed her Ph.D. research in the laboratory of Dr. Bert Vogelstein, where she led the first whole exome sequencing studies in human cancers. These landmark studies were published in Science, and she received several awards for this work, including the Michael A. Shanoff Research Award at The Johns Hopkins University School of Medicine Young Investigators' Day and First Place for Basic Research at the Johns Hopkins Kimmel Cancer Center Fellows' Research Day. Dr. Wood then went on to complete a residency in Anatomic Pathology (serving as Chief Resident in her final year) and a fellowship in Gastrointestinal and Liver Pathology here at The Johns Hopkins Hospital. Now, as an Assistant Professor, she is launching her own basic science laboratory focused on genetic and morphological characterization of pancreatic and liver cancers. In addition, she signs out clinical specimens on the Gastrointestinal and Liver Pathology services.

Continued from page ||

Terry Aman Retiring

One resident said, "She is our mother, our therapist, our financial advisor, our real estate advisor, and our friend all in one." And as if these roles were not enough, she is also sometimes a babysitter. When a resident gets stuck at the last minute without childcare, Terry is delighted to look after the child in her office for an hour or so.

Despite Terry's giving so much personal time to residents, she manages to organize all the paperwork for the current residents as well as the immense files for all past residents. It is almost by magic that any ancient record appears at her fingertips when needed. A former Chief Resident summed up Terry perfectly when he said, "You never have to worry about anything. Terry is always on top of every detail." We are grateful to have known Terry Aman for fourteen years, and we will miss her very much.

Awards/Recognition



President's Award of the American Society of Cytopathology

Syed Ali, M.D., Director of Cytopathology, received the President's Award at the annual scientific meeting of the American Society of Cytopathology in Las Vegas. The President's Award was established in 1992 and is presented annually to an ASC member. Dr. Ali was nominated as Editor-in-Chief of the *Journal of the American Society of Cytopathology (JASC)*.



Medical Education Award of the BioCommunications Association

Norman Barker, M.A., M.S., RBP, Director of Pathology Photography, was recognized, along with **Christine Iacobuzio-Donahue, M.D., Ph.D,** at the 83rd annual meeting of the BioCommunications Association in the international salon; they received the BioCommunications Associations Medical Education Award. Their collaboration on the book, *Hidden Beauty: Exploring the Aesthetics of Medical Science*, by Shiffer books was recognized for its design and contribution to medical education.



Swami Institute for International Medical Education Excellence in International Medical Education Award

Marc Halushka, M.D., Ph.D., received the Swami Institute for International Medical Education Excellence in International Medical Education Award. The Institute seeks to improve medical care worldwide by continually improving the standards of medical education.



2013 Ruth Leff Siegel Pancreatic Cancer Research Prize from Columbia University and The Johns Hopkins University Alumni Association Distinguished Alumnus Award

Ralph H. Hruban, M.D. received the 2013 Ruth Leff Siegel Pancreatic Cancer Research Prize from Columbia University for his contributions to the genetic and pathologic characterization of pancreatic cancer. In June 2013, Ralph also received The Johns Hopkins University Alumni Association Distinguished Alumnus Award at the Biennial Meeting and Reunion. The award honors an alumnus who exemplifies the Johns Hopkins tradition of excellence and has brought credit to the University through their personal accomplishment, professional achievement, and/or humanitarian service.



Honorary Fellow in the Royal College of Pathologists

Robert J. Kurman, M.D. was elected an Honorary Fellow in the Royal College of Pathologists in London, England in 2012. In addition, the 138th Reunion of the College of Medicine at Upstate Medical Center – Syracuse, he received the Distinguished Alumni Award on September 27, 2013.

5th Annual Herbert Perkins Scientific Lectureship / Award by the California Blood Bank

Paul Ness, M.D. was awarded the 5th Annual Herbert Perkins Scientific Lectureship and Award by the California Blood Bank Society on April 26, 2013. Each year the lectureship is awarded to an individual actively involved in education, training, research and/or the practice of a scientific nature pertaining to transfusion medicine. The recipient is a scientist who has demonstrated a commitment to transfusion medicine or cellular therapy, and has applied new insights or new technologies to relevant scientist questions that have led to seminal contributions to the field.



Samuel P. Asper Award for Achievement in Advancing International Medical Education Johann G.A. Offerhaus, M.D., M.P.H., Ph.D., adjunct Professor, received the Samuel P. Asper Award for Achievement in Advancing International Medical Education from the Johns Hopkins Medical and Surgical Association at the Biennial Meeting and Reunion in June 2013. The Asper Award is the result of the vision of the late Samuel P. Asper, M.D., '40, who understood the value of contributions made by those who were educated and trained at Johns Hopkins and who then return to their home countries.



First recipient of the Thomas J. Walsh Young Investigator Award from the Medical Mycology Society of Americas

Sean Zhang, Ph.D. was the first recipient of the Thomas J. Walsh Young Investigator Award from the Medical Mycology Society of Americas in May 2013. The award recognizes a junior faculty member for distinguished achievements and promising potential for future contributions to the field of medical mycology.

...On The Web

As the Pathology Web presence continues to grow, we've branched out into several social media channels to make it easier to follow the department and the latest news.

Our Web office has posted a handful of new videos on YouTube, including new animations, interviews and presentations. The Pathology YouTube channel can be found here: http:// www.youtube.com/user/HopkinsPathology

A new, mobile friendly Cytopathology "Case of the Week" conference site is now available at http://apps.pathology.jhu.edu/cyto/. Look for similar updates to our other conference sites.

Watch http://pathology.jhu.edu/ for news on this and other departmental happenings. "Like" us on Facebook.



You Tube "



Blast from the Past



ANSWER

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Dr. Kevin Winn, Dr. Grover Hutchins,
and Grover's technician, Erica Bohanan
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...In The Photography and Graphics Area

Pathology Photography provides world-class quality, service, and turnaround for printing your custom large format scientific, research and business posters. All poster orders are processed and printed on a one-day turnaround. Remember, when you need custom posters, just think Path Photo.

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Don't forget about our new foldable fabric for poster printing. This poly fiber fabric is perfect for packing in a suitcase or keeping tightly rolled in a poster tube.

Award-winning photographers... Congratulations again are in order: Fred Dubs, RBP, medical photographer, is a multiple winner in this years BioImages from the BioCommunications Association annual meeting, held in Monterey Peninsula, California. Fred won BCA Medical Education Award - Still Media, and Award of Excellence - Still Media: General Illustrative for *Trache Tube Assembly*.

Faculty members **Norm Barker & Christine Iacobuzio-Donahue** have developed a touring exhibition from the book *Hidden Beauty: Exploring the Aesthetics of Medical Science.* It was first exhibited in Turner Auditorium in the spring and will be traveling to the Mütter Museum in Philadelphia in late 2014 and then to the American Museum of Natural History in New York. More venues are pending.





Calendar of Events

March I - 7, 2014

United States and Canadian Academy of Pathology 103rd Annual Meeting San Diego Convention Center San Diego, California

March 3, 2014, 5:30 - 7:30 p.m.

United States and Canadian Academy of Pathology Johns Hopkins Pathology Alumni Reception San Diego, California

April 3, 2014, Noon – 4:00 p.m.

Pathology Young Investigators' Day Turner Concourse Johns Hopkins University School of Medicine Baltimore, Maryland

April 25, 2014

Pathology Awards Dinner The Belvedere Baltimore, Maryland

Department of Pathology The Johns Hopkins Medical Institutions 600 North Wolfe Street, Carnegie 417 Baltimore, MD 21287-6417 (410) 955-9790

J. Brooks Jackson, M.D., M.B.A. Baxley Professor and Director

Editors:

Ralph Hruban, M.D. Vanessa Rodas-Eral Sandy Markowitz

Technical Advisor/Graphic Arts: Rick M. Tracey, R.B.P.

Photography: Pathology Photography Staff

Department of Pathology Web site: http://pathology.jhu.edu

Congratulations to the 15th Annual Pathology Young Investigators' Day Awardees

Congratulations to the Award Recipients

Basic: Teraneh Zarififar Jhaveri Clinical: Mark Samols, M.D., Ph.D. Translational: Ruey-Shyang Soong, M.D.

For Excellence in Basic Research

Yu-Min Chuang, M.D., Ph.D. Bin Guan, Ph.D. Teraneh Zarififar Jhaveri Jillian Legault, M.S. Quan M. Nhu, M.D., Ph.D. Punit Shah, Ph.D. Stefani Thomas, Ph.D. Jun Yu, M.D., Ph.D.

For Excellence in Clinical Research

Carla Ellis, M.D., M.S. Thomas Gniadek, M.D., Ph.D. Cheng-Ying Ho, M.D., Ph.D. Monica Pagano, M.D. Justin Poling, M.D. Lisa Rooper, M.D. Mark Samols, M.D., Ph.D.

For Excellence in Translational Research

Jacqueline Brosnan, B.A. Saniya Fayzullina, B.S. Berrak Gumuskaya, M.D. Christopher Heaphy, Ph.D. Chaoxin Hu, Ph.D. Sarah Karram, M.D. Kah Suan Lim, B.Sc. Samantha Semenkow, B.S. Ruey-Shyang Soong, M.D. Meng Su, B.S. Joshua Wang, B.Sc.

The Department of Pathology again enjoyed an excellent turnout for this year's Young Investigators' Day.