Big Picture Gifts
Investing in Young Researchers

Four Celebrated Careers
The Importance of Mentorship
Dear Duke Pathology family and friends:

I am pleased to share our 2019 annual report with you. Inside, you will find fascinating stories of individuals who have worked in our department for decades. It's very gratifying to me that this platform has been very effective at documenting the incredible history of Duke Pathology.

Of course, we also bring you the stories of today. You will find that our annual scientific retreat continues to be an exciting event where the entire department gets together to learn from one another and to brainstorm how we can evolve and improve by combining the expertise of people across different disciplines. Also, over the past few years, the department has made great strides toward the targeted, focused recruitment of prostate cancer researchers, and we now have critical mass to accomplish things that are difficult for a single laboratory to achieve on their own. Finally, our educational programs are thriving. In this issue, we highlight our prized PA program, the first in the nation and still the gold standard after 50 years.

The outpouring of support from our alumni and faculty has been beyond anyone's imagination. You will find inside a story of our current faculty couple Sara Miller, PhD and David Howell, MD PhD, whose generous gift endows the Rollie Assistant/Associate Professorship in Correlative Pathology. With this gift, we were able to recruit a rising star, Jung Wook Park, PhD from UCLA. Dr. Park has quickly established his prostate cancer research program and has attracted new extramural funding from the Mark Slive Foundation.

Our highly talented colleague, Susan Reeves, put together this beautiful issue for all of us to enjoy. Many of you know Susan and have benefitted from her extraordinary photography skills, but you probably didn't know that she also oversaw the revamping of our new website, in addition to publishing our new articles, newsletters, and annual reports. Please drop her a line at susan.reeves@duke.edu and let us know if you have any news to share.

I hope you enjoy these stories as much as I do. Happy reading!

Jiaoti Huang MD PhD
Chairman, Department of Pathology
Duke University School of Medicine
TWISTS AND TURNS

SOMAN N. ABRAHAM, BS MS PhD, the Grace Kerby Professor of Pathology, has interacted with hundreds of students in the twenty-three years he has spent as an educator at Duke, but he never tires of welcoming a fresh new face.

“Getting to know incoming students is one of the most gratifying aspects of my job as Director of Graduate Studies in Pathology and Co-Director of the Duke Summer Research Opportunities Program” says Abraham. “There are few things more rewarding than helping a student identify their innate strengths, and then watching them grow in confidence and achieve success.”

“I find that most students come to Duke with specific plans for the future,” he says with a smile. “I try to gently advise students to keep an open mind. It is good to have a plan, but life has a way of surprising you. When opportunities arise, you need to be ready to take them quickly, even if they deviate from your original plan.”

This philosophy has served Abraham, a world-renowned researcher in the field of infectious diseases, well throughout his career. “Exceptional mentorship, perseverance, and my ability to make the best of unexpected opportunities is the reason why I am here at Duke today.”

Lighting the spark

Adapting to life’s twists and turns is something that Abraham was forced to learn very early on. “My life as a child was unusual and particularly challenging,” he says. Abraham was born in Ethiopia to parents of Indian origin who later relocated to Nigeria. He was a pre-teen when the Nigerian Civil War broke out in 1967. “I was exposed to a lot of the horrors and devastation associated with war,” he recalls. “Since schools were all closed, I was homeschooled by my father until the war ended in 1970.” It was during this tumultuous time, however, that Abraham’s father, a physics professor, lit the spark that would eventually grow into a deep love for the field of microbiology. “He always spoke about science with a great deal of passion, and that, in turn, inspired me.”

Abraham went on to obtain his Bachelor of Science Degree and his Master of Science at Ahmadu Bello University in Nigeria. Here, he became fascinated with the field of microbiology. “Although Ahmadu Bello is one of the largest universities in Africa, we lacked a lot of the sophisticated equipment and supplies necessary for high-level research,” says Abraham. Once again, Abraham’s father stepped in and encouraged Abraham’s career by supporting his move to England, where he obtained his Ph.D. in microbiology at Newcastle University.

Twists and turns

“My move to the United States was not part of a deliberate plan, but it changed my life forever in a positive way,” Abraham recalls with a smile. While chatting with the department chair at Newcastle one day, Abraham confessed that he didn’t know what his next step would be upon completion of his Ph.D program. “Imagine my surprise when two months later, he came back to me with a job offer from The University of Tennessee Health Science Center. It was during this tumultuous time, however, that Abraham’s father, a physics professor, lit the spark that would eventually grow into a deep love for the field of microbiology. “He always spoke about science with a great deal of passion, and that, in turn, inspired me.”

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Soman N. Abraham

by LAUREN MARCILLIAT
As luck would have it, I found myself in a superb lab with a world-renowned scientist, Dr. Edwin H. Beachy, who was also a very nurturing mentor,” says Abraham. “Beachy was a leading expert in microbial pathogenesis and immunology in the early 1980s. He devoted his career to the study of the intricate ways microorganisms initiate disease and how to protect against those diseases. I credit him with training me to become the scientist that I am today,” he adds. Abraham continued to work with Beachy for seven years, during which he completed his fellowship and joined the faculty at the University of Tennessee at Memphis. When Beachy sadly passed away from cancer in 1989, Abraham relocated to Washington University in St. Louis, a prominent hub for the study of microbial pathogenesis.

“One day, I came across an advertisement for a position in the Department of Pathology at Duke University,” says Abraham. “I had no intention of taking a new job, but I was curious, so I sent in my CV.” When offered an interview, he once again decided to take a leap of faith. “When I arrived at Duke, I was blown away by the people, and the beautiful campus, especially the Duke Gardens in full bloom. It didn’t take me long to realize that this is where I wanted to be!”

The Abraham Laboratory

At Duke, Abraham found the ideal environment to pursue his research interests. “Perhaps what I am proudest of is my work in uncovering the critical physiologic role of mast cells,” he explains. “Mast cells had always been associated with the negative role that they play in asthma and other allergic reactions. But if they were so harmful, why weren’t they removed through evolution? This is the key question I wanted to answer.”

“Our lab was the first to reveal that mast cells play a key sentinel role in initiating an immune response to fight bacterial and viral infections,” says Abraham. “Now, our lab is focused on finding innovative ways to boost the activity of mast cells so that we can prevent infections from developing. There is a dire need to find new ways to treat infections as we continue to encounter bacteria that are resistant to all antibiotics. This research has significant implications for those with immunodeficiency, such as the elderly.”

Abraham’s research could also prove life-changing for the growing number of adults and children who suffer from severe food allergies. By manipulating the function of mast cells and the cytokines released in response to an allergen, potentially life-threatening reactions can be prevented. In recent studies, Abraham and his team successfully reprogrammed the immune systems of mice with peanut allergies to avoid anaphylaxis with subsequent peanut exposure. “Tests in humans are not that far off,” he says.

“In the future, averting a potentially deadly allergic reaction could be as simple as taking a pill before being exposed to an allergen,” says Abraham, who is currently collaborating with Herman F. Staats, PhD, a professor researching immune responses, to develop such medicine. In 2019, Abraham was honored with the Duke Incubation Fund Award, which will help him continue to pursue this critical research. “It’s incredibly exciting work,” he says.

Legacies of mentorship

Abraham, who believes strongly in the importance of mentorship, pays homage to those who invested in his career by investing in others. He has served as Director of Graduate Studies in Pathology since 2000. “Completing a Ph.D. program at Duke is incredibly stressful and requires considerable tenacity and resilience. The students who are often struggling the most are the ones who appear to be happy on the surface,” he says. “You must pay close attention and identify the students who are struggling early on.”

Abraham’s desire to inspire is felt in other areas at Duke as well. For the past 21 years, he has served as Co-Director of the Duke University Summer Research Opportunity Program, which exposes minority students from across the nation to research early in their undergraduate training. Abraham also mentors and researches at the Duke-NUS Medical School, a graduate-entry medical school in Singapore that offers high-level research programs.

Many of his trainees go on to work for world-class industries and consulting firms or serve on the faculty at other prominent institutions. “Helping inspire students to reach beyond their expectations and grasp opportunities that come their way is what motivates me to continue serving in these roles. One of my favorite aspects of being an educator, however, is the opportunity to reminisce with former students about their experience at Duke many years later,” says Abraham. “Often, they are struck by how much their worldview has evolved and grown since their early graduate school days, and they’re impressed by how much their graduate school experience shaped their subsequent career decisions. I am proud of the role that I have played in their lives.” When they return, he greets his former students with a familiar smile. “Tell me how that plan of yours worked out,” he says, “and just what is it that you intend to do next.”
FOCUSING ON THE BIG PICTURE

Bridging the gap between diagnostic and investigative pathology with The Rollie Assistant/Associate Professorship in Correlative Pathology

by LAUREN MARCILLIAT and SUSAN REEVES

For as long as she can remember, SARA MILLER, PHD has been fascinated by intricate visual images and how they can be used to communicate information. Over the years, this fascination developed into a love of the arts, a deep appreciation for the beauty and fragility of the natural world, and a long and fruitful career as Professor of Pathology and Director of the Research Electron Microscopy Service at Duke. These interests are shared by her husband and fellow Professor of Pathology, DAVID HOWELL, MD PHD, who first met Miller at Duke in the late 1970s when he took her electron microscopy course as a graduate student. Together, this couple is using their passion for small details to make a huge impact on the future of science through the creation of The Rollie Assistant/Associate Professorship in Correlative Pathology.

The Rollie Professorship, which is named after a cherished companion animal, was created to foster "By giving this gift, we wanted to invest in a young person whose career is just beginning and hopefully inspire others to give," says Miller. "By giving this gift, we wanted to invest in a young person whose career is just beginning and hopefully inspire others to give," she adds. This is not the first time that the couple has given their time, talents, and resources to the university that has played such an important role in their lives. They also support the Nasher Museum of Art, the Nearly New Shoppe (which funds scholarship programs for nursing and medical school students), and the Duke Lemur Center’s conservation efforts in Madagascar.

Outside of work hours, they can frequently be found on campus sharing their musical and vocal talents through the Choral Society of Durham, of which they have been a part for over 35 years. "We have been fortunate to have the resources to give back in so many ways, but when it comes to philanthropy, there is no contribution that is too small," says Howell. "If there is one thing that we have learned over the course of our careers, it’s that little things can have a big impact," adds Miller with a smile. There is no doubt that the beneficial effect of The Rollie Assistant/Associate Professorship will be felt for many years to come.

"We have received so much support from our colleagues here at Duke," says Miller. "By giving this gift, we wanted to invest in a young person whose career is just beginning and hopefully inspire others to give," she adds. This is not the first time that the couple has given their time, talents, and resources to the university that has played such an important role in their lives. They also support the Nasher Museum of Art, the Nearly New Shoppe (which funds scholarship programs for nursing and medical school students), and the Duke Lemur Center’s conservation efforts in Madagascar.

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NEW FACULTY

Zijun Xu-Monette, PhD
Assistant Professor

Dr. Xu-Monette earned her PhD from Michigan Technological University in 2009, followed by postdoctoral fellowships at the University of Wisconsin, Madison and the University of Texas/MD Anderson Cancer Center. She was appointed Instructor at the latter institution in 2015 and held that position until she came to Duke as Assistant Professor in August 2019. Dr. Xu-Monette is an expert on the pathobiology of B-cell lymphomas, with over 70 refereed publications in the field. At Duke, she joins the research group of Dr. Ken Young.

Mark Lee, PhD
Assistant Professor

Dr. Lee joined our Department in July 2019 and was appointed as Assistant Director in the Clinical Microbiology Laboratory. He completed his PhD at McGill University and a CPEP Microbiology Fellowship at UCLA, followed by laboratory leadership positions at the esteemed New York State Department of Health Wadsworth Center and at LabCorp. Dr. Lee brings substantial molecular diagnostic experience, with a focus on genetic determinants of antimicrobial resistance. His research interests include molecular-based susceptibility prediction, discovery of novel mechanisms of antimicrobial resistance, and development of next generation diagnostic tests.

Jung Wook Park, PhD
Assistant Professor

Dr. Park joined Duke Pathology in August 2019; he is the first individual to hold the endowed Rollie Assistant Professorship in Correlative Pathology. He relocated to Duke from the University of California – Los Angeles, where he worked as a postdoctoral fellow in the laboratory of Owen Witte, MD. He earned his PhD at the University of Wisconsin – Madison, where his research defined the interplay between human papillomavirus (HPV)-associated carcinogenesis, oncogenes and cellular DNA damage repair processes using animal models. Dr. Park’s research utilizes a novel ex vivo 3D organoid culture system using human cells to (1) identify cells of origin for human prostate cancer and (2) define key genetic drivers or determinants of prostate cancer development and differentiation. His research is supported by an NIH K99 award: “Defining the essential determinants of prostate cancer differentiation states.”

William Jeck, MD PhD
Assistant Professor

Dr. Jeck earned his undergraduate degree in Mathematics from Pomona College, followed by an MD/PhD from the University of North Carolina. His dissertation was in Genetics and Molecular Biology, and he also obtained certification in Bioinformatics and Computational Biology. He then moved to Massachusetts General Hospital for an AP residency after which he completed a fellowship in Gastrointestinal Pathology at the Brigham and Women’s Hospital in Boston. Dr. Jeck joined our department in July 2019, where his primary focus is in GI Pathology; he also signs out Soft Tissue and Bone Pathology and serves as an attending on the Autopsy Service.

Ken Young, MD PhD
Professor

Dr. Young joined our faculty in August 2019. He received his MD from Zhejiang University School of Medicine in China in 1984 and his PhD from the University of Lund School of Medicine in Malmö, Sweden in 1995. From 1995-1999, he pursued a Cardiovascular Research Fellowship at the University of Oklahoma Health Science Center, after which he completed Residency (1999-2003) and Fellowship (2003-04) in Pathology, with emphasis on hematopathology and molecular pathology, at the University of Nebraska Medical Center. From 2005-2010, he was Assistant Professor of Pathology at the University of Wisconsin School of Medicine and Public Health. He moved to the University of Texas/MD Anderson Cancer Center in 2011 as Associate Professor, and was promoted to Professor with Tenure in 2016. Dr. Young is an internationally recognized expert in the field of B-cell lymphomas, for the study of which he organized and leads a 25-center research consortium. He recently won NIH R01 funding to support his work, which he will continue at Duke in addition to joining our diagnostic Hematopathology service.

“We are pleased to introduce you to the talented new faculty who have recently joined us, and to give you a glimpse into their incredible achievements.”

Jiaoti Huang, MD PhD, Chairman
PROFESSOR EDWARD BOSSEN, MD

Every Day
SURPRISES

Dr. Edward Bossen, In His Own Words

I arrived at Duke
for medical school in
1961 planning to be
a family practitioner. I
had never heard of
Pathology until my
second year in medical
school when I took my
Pathology course. It was
a surprise to me that you
could make a career of
something as interesting
as diagnostic pathology.
I decided Pathology was
the career for me, and
Duke the best place for
my training.

I was blessed to have as mentors during residency
Drs. Hackel, Vogel, Smith, Johnston, and, of course,
Fetter. Current residents might be aghast at a
typical autopsy case sign-out with Dr. Fetter. You
didn’t count hours, because the sign-out could
last days. We had around 800 autopsies a year
Duke had 550 beds and the VA had about 250
beds (Duke: ~979). There was a requirement that
hospitals autopsy 65% of deaths. Recently, I read
that reinstituting a similar rule has been discussed
because the age-old figure of 33% of autopsies
was considered inadequate. The typical number

The VA had only one autopsy table, so one
of us would dissect organs from
a previous autopsy
between the legs of the current autopsy.

The surgical pathology
grossing room at Duke was
primitive, and probably
illegal by today’s standards.
The room was on the 4th
floor and was basically a
closet with no ventilation.
There was a small
oscillating fan. You would
gross for 15 minutes or so
and then leave the room
to recover from the formaldehyde fumes. Fortunately,
after a couple of years, grossing was moved to a room
fitted with a hood.

Surgical pathology sign-out was also quite
different from today. The only separate service
was Neuropathology, so we dealt with all other
specimens, e.g., skin, bone marrows, lymph nodes.
The annual case load was about 10,000 cases.
You reviewed your cases, wrote out in long hand
your description and diagnoses and then took
your cases to the lone senior resident on Surgical
Pathology who reviewed the cases before you took
them to the attending. This meant late nights for
the poor senior resident.

There were no multichannel microscopes
during my early years of training. You sat quietly in
a chair while the attending reviewed your cases,
occasionally asking you questions. You were
expected to have reviewed the patient’s chart if the
case was particularly challenging (this was before
the days of computer records which meant you
had to make a trip to the ward). Sign-outs could
last hours or even days. One attending, however,
was famous for saying, “Show me the key slide.”
Fortunately, he did this only with autopsies and with
senior residents. The idea was to see if you knew
what was really important.

When you finished signing out a case you gave it to
secretaries who typed up the report. Turnaround
time was in the 7-10-day range. No one cared
about the lag time. There was no rush to discharge
patients because the payment system did not
demand it, so no one complained. A prostatectomy
patient, for example, would remain in the hospital
until his catheter was removed, which was about 2
weeks, not the 3-4 days given now.

I started doing research in my second year of
residency, and in my fourth and fifth years became
a fellow in immunopathology under Dr. David
Rowlands, later the Chair at Pennsylvania and South
Florida. One research focus was renal transplantation which had just begun
at Duke, and there is a record of my
involvement with the third transplant at
Duke. I was invited to pursue a PhD in
Immunology, but that was not possible
because of my military commitment.

In those days all male doctors—and
over 90% of doctors were males—were
required to serve in the military or public
health service, signing up in the last
year of medical school. You could be
called to active duty any time after your
first year of postgraduate training, but
pathologists were usually not activated
until they finished training.

I was very fortunate. The chair, Dr. Kinney,
was on the Board of the Armed Forces
Institute of Pathology (AFIP), which was
the premier referral site for military
and civilian pathology cases at that
time (no charge!). I had received a list of
possible duty posts from the Army with
instructions to select my preferences.
This I knew was a hoax: the Army would
put you where they wanted. I went to
Dr. Kinney and asked his advice. He turned around
in his chair, picked up the phone, and called the
officer in charge of assignments for pathologists,
Duke medical graduate. Dr. Kinney turned around
to face me and said I was going to the AFIP, the
prime assignment in those days. Furthermore, I
was to be in the Laboratory of the Deputy Director,
Colonel James Hansen, another ex-Duke graduate.
The Lab was known as the Laboratory of Skeletal
Muscle Research, but was absorbed into the
Neuropathology Branch, so I picked up some
neuropathology as well. We consulted
on patients at Walter Reed and performed open
muscle biopsies on adults. Children’s biopsies
were performed by surgeons because of general
anesthesia requirements.

My second year at the AFIP, I was seated at my
desk one day with my back to the door. I heard it open
and a voice asked: “Want a job?” I turned around,
saw it was Dr. Kinney, and said yes. The door closed.
A few weeks later I received a letter announcing that
I was to be an Assistant Professor at Duke.
In July 1972, I returned to Duke, and practiced Surgical Pathology and Cytopathology. I was appointed Associate Director of the latter and in the late 1970s became Director of Surgical Pathology. I was also the Director of the Residency Training program for 3 years in the mid-1970s.

The renal pathology transplant faculty I had worked with had left, so I applied my newfound knowledge of skeletal muscle to create a muscle pathology service, which expanded to provide consultations to regional and national practitioners, and it still does now. I also renewed my lecture series to the ENT residents which I had begun as a resident.

I was also fortunate to add cardiac muscle research with Joe Sommer. Some of that research involved finches, and occasionally the research subject would escape and fly around the lab. We wisely kept the doors closed so the bird couldn’t escape. Finch hearts beat at 450 beats per minute resting and up to 1000 a minute when exercising. This meant that the finch could only be airborne a few minutes before needing to rest on a lab bench where it could be recaptured.

I dropped my duties in Cytopathology in the mid-1980s when my duties as Director of Surgical Pathology and the growing muscle biopsy service took up most of my time. Eventually I became Director of Anatomic Pathology.

I owe much to the past chairs, Drs. Kinney, Jennings, and Pizzo for their support. I also had the good fortune to know Dr. Forbus, though he was then no longer chairman. I must also mention Dr. John Shelburne who became acting chair after Dr. Jennings retired. This was a very difficult time for the department and John handled the situation with wisdom and grace. I know Dr. Huang will continue the tradition of great leadership.

I have fond memories of many of the technical and clerical staff. There is not room to list everyone who helped me. I must, however, mention Susan Watson, Terrie Harris, and Bonnie Lynch, who did their best to keep me out of trouble. Wayne Terrell and Bert Dotson were essential to the muscle service. Of course, the PhotoPath folks, Susan Reeves and Steve Conlon, whose function is vital to this visually-oriented department, are owed a debt of gratitude for their excellent work. I cannot mention PhotoPath without remembering Carl Bishop who started out as the first autopsy diener in the Department in the early 1930s and later became the department’s superb photographer. He was extremely compulsive, known to thoroughly clean the room before every new photography session. Documenting publication photomicrographs together at the Zeiss Ultraphot microscope was a process passed through from Mr. Bishop to Bill Boyarsky and then to Susan, and was always a highlight.

I am happy to say that I picked the right career and institution for me. As a pathologist you are not bound to a single area of medicine. Every day there are surprises to be seen under the microscope that may spark a research interest or just make you want to explore the disease process you have observed.

Every day is a learning experience. If you are a compulsive observer and learner, Pathology is the field for you.

Edward Bossen

Attending the Residents Luncheon in 1978, next to Dr. Dana Copeland

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Looking back at Dr. Christine Hulette’s 32-year career at Duke

On any given day, you can find CHRISTINE HULETTE, MD working diligently in her new garden in Duncan, South Carolina. “Caring for plants isn’t all that different from caring for people,” laughs Hulette. “The secret to success is quite simply to pay close attention. Find out what their strengths are, figure out they need, steer them in the right direction, and then sit back and watch them blossom,” she says. Nurturing others—whether people or plants—is a skill that Hulette has developed over the course of a lifetime. Until her retirement last June, Hulette worked at Duke for thirty-two years as a tenured professor and associate professor in medicine. She is remembered as a kind educator, a brilliant researcher, and an internationally-recognized expert on neurodegenerative disease and brain banking. Developing compassion and curiosity

“I learned empathy at a young age watching my mother serve as a caretaker for my aunt, who had severe cerebral palsy from infancy,” says Hulette. “Even as a small child, I wondered why she was the way she was. It was more than just a desire for understanding—I wanted to be able to do something about it,” she explains. It was this combination of curiosity and a desire to help others that inspired Hulette to pursue a career in medicine. She obtained her medical degree at the University of Louisville and completed three years of residency and one year as a research fellow in the Department of Pathology at the University of California at Los Angeles (UCLA) before her arrival at Duke in 1987. (see 1987 Staff Photo)

“Relocating from UCLA to Duke was not part of my original plan, but it turned out to be highly fortuitous,” says Hulette. “I sat down with my program director and expressed my desire to relocate to North Carolina to be with my husband—who had recently taken a job in the Triangle—and he said ‘Well, if you want to pursue a career in neuropathology, Duke is where you need to be,’ so that worked out well for me,” she laughs. “I thrived at Duke. I was Chief Resident, completed my Fellowship in neuropathology, and had the opportunity to train under Drs. F. Stephen Vogel and Peter C. Burger, who were exceptional mentors.”

The path to Alzheimer’s Disease research

“At the completion of my training, I had the opportunity to examine the brain of an individual who had kernicterus. That person had very similar symptoms to my aunt, and after questioning older family members, I realized that my aunt’s lifelong disability was the result of severe untreated jaundice in infancy due to Rh incompatibility,” says Hulette. “What was even more fascinating was the realization that what happened to my aunt can now be prevented with medication,” she adds. “Thanks to these medical advances, no one else in my family has been negatively affected. This realization helped solidify my desire to help identify cures and improve quality of life for individuals with neurological disorders.”

“Around this same time, I witnessed firsthand the destructive effect of Alzheimer’s Disease, which both of my grandmothers developed in their final years,” says Hulette. “It was devastating. I felt a personal responsibility to learn more about this disease and do my part to save future generations from the heartache of this debilitating condition.”

At the encouragement of Dr. Burger, who recognized her passion and dedication, Hulette began working in the Bryan Alzheimer’s Disease Research Lab under the leadership of Chief of Neurology Allen Roses, MD. Hulette was part of the team that first linked the APOE gene to Alzheimer’s Disease (AD), a seminal discovery in AD research that has led to significant progress in learning how to manage this disease, and she has published extensively in the field.

New approaches to tissue banking

In 1995, leadership of the Alzheimer’s research program at Duke changed, and Hulette unexpectedly found herself blazing new trails in brain and tissue banking. “It started out as a very small project with just a few brains that were being stored in a freezer in the psychology department—I never dreamed that I would play an instrumental role in standardizing brain and tissue banking at the national and international level.”

“Running an efficient and effective brain banking program is really quite complex,” says Hulette. Working in close collaboration with Rivka Ravid, PhD, founder of Brain Bank Consultants in The Netherlands, and former Duke pathologist Barbara Crain, MD, Hulette established new protocols to identify and train the coordinators who assist families at the time of death, efficiently bank and store brains, document and maintain precise records, and effectively distribute tissue to researchers. Her banking protocols were the impetus behind numerous groundbreaking discoveries at Duke in Alzheimer’s Disease, Parkinson’s Disease, other dementias, and depression. Over time, these protocols have become standard practice for banking human tissues and brain.

In 1993, with Drs. Stephen Vogel, Peter Burger, and Herb Fuchs...
she is internationally renowned for her work in this area. Hulette continued to promote autopsy-based research in her role as Director of the Duke Hospital Autopsy Services from 2016-2019.

**A legacy of education and mentorship**

“I am excited to see the legacy we created at Duke continuing on through the work of others I have trained,” says Hulette. Teaching others is one of her greatest joys. She served as Director of Undergraduate Education for the Department of Pathology from 2003 to 2015, and Director of the Neuropathology Fellowship Program from 2016 to 2019. “I like to joke that I was born to teach,” laughs Hulette, who is the oldest of eight children. “I have been teaching for as long as I can remember. I cannot say that my younger siblings always wanted to be taught, but I taught them anyway!”

Hulette believes that there are always opportunities to teach, and she has no intention of stopping, in spite of the fact that she is now technically retired. “I loved working at Duke. I loved the physical environment, the academic environment, but most of all I loved the people,” she says. “It feels good to step back now and tend to my family and my garden,” she smiles. “I know that others will carry on the work that I began. I look forward to watching them grow.”

“I loved working at Duke. I loved the physical environment, the academic environment, but most of all I loved the people.”

Christine Hulette

[Photograph of Dr. Hulette and Dr. Bossen share the holiday luncheon in 1999]

[Photograph of Medical student teaching]

[Photograph of Bringing holiday cheer in 2005]

[Photograph of Brain cutting in 2016]
A HALF CENTURY OF EXCELLENCE

JANUARIO “HENRY” ESTRADA, BSMT/HT(ASCP) retired in June 2019 after 50 years of service to the Department of Pathology. Estrada was a molecular laboratory scientist specialist who had a particular expertise in electron microscopy (EM). He was dedicated to his profession with a passion for excellence, teamwork, and for serving the patients whose diseases were difficult or impossible to diagnose by any means other than EM. Estrada recounts some memories of his tenure in a June 2019 interview.

The early days
Henry Estrada came to Duke from the Philippines, where his mother was a schoolteacher and his father a lawyer, and they stressed the importance of a good education to their 7 children.

“So all of us, luckily, finished college in the Philippines. And that’s when the mass exodus began to come to the United States to make a better life for all of us.” Estrada proudly lists the professional careers of his siblings: three doctors, a nutritionist, an engineer, and a businessman. “It was all new to me, such a big deal to come to the United States and enjoy a new life, which I enjoyed so much.”

Estrada came to the US in 1969 at the urging of his aunt, who worked at Duke. “She told me and my cousin Vicky Gadrinab to apply to the medical technology school. There we came across Mr. Phillip Pickett, and he accepted the two of us, and after the two-year training he hired us as his own technologists.”

“I started as a histology technician, and then Mr. Pickett told me about the certification exams, which I did and passed. In the afternoons when we didn’t have anything to do, he would ask, ‘Does anybody want to learn something new?’ So I always raised my hand and volunteered to learn something. And that’s when I got started doing electron microscopy, which fortunately I love so much.”

Duke has been the setting for many of Estrada’s life-changing moments. “This is the place where I met my wife Lulu, here at the hospital. And we had three children, and they were all of course born at Duke Hospital.”

Decades of change
Over fifty years, Estrada experienced many changes of personnel, techniques, and physical plant. “When I first came, the chairman was Dr. Thomas Kinney, and Dr. Wiley Forbus (Pathology’s first chairman) had stepped down a year before. The only buildings that I knew existed were Duke South and the Bell Building. And you could park almost anywhere!”

“I worked with the crew of histology lab technicians—my cousin Vicky Gadrinab, Nate Brinn, Betty Schiltz (Goodfellow), Ursula Pope, Bernard Lloyd, Beverly Ellen, Nora Haynes, Wayne Terrell, Barbara Dowrey, and Bobby Tyndall, who’s still here at Duke—and we were a big happy family.”

Initially Estrada worked mornings in EM, and with Jim Burchette in Immunopath in the afternoons. Estrada worked with several Medical Directors, starting with Dr. Benjamin Trump, followed by Drs. Joachim Sommer, John Shelburne, Rex Bentley, Barbara Crain, Allan Tucker, Sara Miller, and Anne Fordham.
Buckley. He enjoyed working with and learning from other faculty on the service including Dr. David Howell, and Dr. Edward Bossen, who taught him ultrastructural pathology and photography. He recalls other technicians in the lab including Mike Hale, engineer Jay Benbow, and photographer Jessie Calder. “Forty years ago, we had three technicians doing photography. Digital was non-existent, so film negatives were developed and then printed in hard copy. We would fill rooms with prints by now if digital had not come along!”

“Philip Pickett—my mentor, the inventor!—was already inventing different things in the labs. So when he took me under his wing and I learned some EM, I started doing some inventions on my own. I have 9 or 10 designs that we actually still use in our lab. One of those inventions is the moisture chamber used in Immunopath.”

“Dr. Sara Miller also came into the picture, and she taught me how to differentiate between normal cellular components and viruses, because to the untrained eye they look the same. And now we have Dr. Buckley on board, who along with Drs. McLendon and Cummings is a big contributor to what I’ve learned regarding muscle and brain biopsies.”

Excellence, teamwork, and service

Estrada found much inspiration and fulfillment in his work. “Patient care is so important to me. I felt this sense of urgency on the part of pathology residents to get the answer right away, and it got into me as well. Then I was able to give them the answer they were looking for, especially in difficult cases that they can’t decide under the light microscope. The accolades you get when you find the answer make you keep going, make you drive to do more cases. When I feel like I have helped a patient get a diagnosis, then it makes me feel good going home.”

Estrada recalls some research projects. “The neuropathologist Dr. Stephen Vogel worked with monkeys that were sent up into outer space and back to see how weightlessness affects the brain, and we did a lot of EM; we got 20 or 30 vials a day. Along with other research projects, like James Wilson doing dog lungs, we would sometimes get 80–100 vials a day back then.” Estrada took these high-volume requests in stride. “Dr. Shelburne stressed...”

CELEBRATING CAREERS

“At the 1989 picnic with son RJ

Reminiscing about social events in the department, Estrada recalls, “We used to have Cookie Day on Tuesday afternoons, and a couple family picnics where we represented Philippines’ folk dancing. And on weekends the residents wanted volunteers to play basketball on East Campus, so I said, Yes, I will join you guys. And we played at the East Campus along with (Drs.) Sal Pizzo and Bill Bradtford, Fred Sanfilippo, and Charlie Steenbergen.”

Retirement will be full of family, travel, and photography. “I was in photography when I was young, so now I’m trying to gear up again. And of course, when we visit our grandchildren, they will be the focus of my attention, to take good pictures while they’re still young and cuddly and cute!”

“It’s been a fantastic ride. This job really gave me motivation, satisfaction, it was fulfilling to me. And I’m very thankful that I was given this opportunity and trust, because with this job, I was able to educate my children, and they’re now successful in their own right and gave me four beautiful grandchildren. And I thank everybody in the department. You know, you work with smart people, you try to be smart and also to be good like them, to be part of the team, and I feel like in my small work that I contributed, I feel like I’m part of the team.”

Henry Estrada

“When you come to work, you’re ready to work,” and I lived that.”

“DUKE PATHOLOGY 2019 ANNUAL MAGAZINE

At Jim Burchette’s retirement party in 2012

(L–R) Dr. Joachim Sommer, Jay Benbow, Mike Hale, Henry Estrada, Dr. Allan Tucker in 1991

It’s been a fantastic ride. This job really gave me motivation, satisfaction, it was fulfilling to me.”

Henry Estrada
The year 2019 marked the 50th anniversary of the Pathologists’ Assistant (PA) profession. For Duke, the birthplace of the PA, this was an especially poignant and celebrated occasion. PA’s are highly trained professionals who work primarily in surgical pathology and autopsy labs and assist in the education of residents. They provide invaluable assistance to attending pathologists and are considered indispensable to the profession of pathology, but it hasn’t always been that way.

A controversial start
The Pathologists’ Assistant profession was the brainchild of Duke Professor of Pathology and Chairman Thomas D. Kinney, MD, the R.J. Reynolds Professor of Medical Education. Dr. Kinney was inspired by fellow Duke physician Eugene A. Stead Jr, MD, Professor and Chairman of Department of Medicine who created the first Physician Assistant Training Program at Duke in 1965 to address a critical shortage of physicians. Like the Physician Assistant Training Program, the Pathologists’ Assistant Program (which began four years later in 1969), was designed to address human resource needs. Unlike the Physician Assistant profession, which was accepted and adopted nationwide, the Pathologists’ Assistant profession met with resistance from the Pathology community for many years. Both the Physician Assistant and Pathologists’ Assistant professions were fundamentally different from pre-existing allied health professions because these individuals were trained to perform tasks previously performed only by physicians. For Pathologists’ Assistants, those tasks included surgical pathology grossing and autopsy gross dissection.

In the early days of the program however, many pathologists were too distrustful of PAs to allow them to obtain the hands-on training they needed.

The first PA class in 1969 completed a 12-month academic and clinical certificate program jointly supported by the Duke University Medical Center (DUMC) and Durham Veterans Administration Hospital (DVAH) Departments of Pathology, and the DUMC School of Allied Health. The DVAH provided Federal grant money to support students and PA Program administration while the academic support came from Department of Pathology and School of Allied Health faculty and staff. The original 12-month certificate program was considered inadequate in both the length and depth of training, so Dr. Philip Pratt, Program Director, and Dr. Ken Broda, Associate Program Director, made adjustments. The curriculum and clinical rotations were revamped and lengthened; prerequisites were adjusted to require at least 2 years of study at an accredited institution and/or extensive background as a medical corpsman. At the same time, Duke University approved the DUMC School of Allied Health to grant the Bachelor of Health Science (BHS) degree to several Allied Health Programs. In 1973, the PA Program was granted approval to matriculate toward the BHS degree. Although PA students were then required to complete one year of basic science courses taught by medical school faculty and complete one year of anatomic pathology clinical training, many DUMC pathologists remained skeptical and reluctant to allow PA students to train in surgical pathology.

“Who would have thought Duke’s first PA Program, established 50 years ago, would pioneer the growth of the PA profession to the current 11 PA Training Programs in the USA, graduating approximately 160 PA’s per year, and leading to more than 2500 board certified American Society for Clinical Pathology (ASCP) practitioners throughout the USA?” – Ken Broda
I am incredibly proud of how far we have come in fifty years and I am excited to see what the next chapter holds for our program.”

Pam Vollmer

The culmination of the two-year program is the final presentation of an autopsy or surgical case, demonstrating mastery of each facet of training. Knowledge of anatomy, pathologic processes, gross and microscopic photography, and PowerPoint skills are all on display. Micayla Zynda presents her case in July 2019.

Bringing the PA program back

For eight years, Duke’s PA program was dormant. In the early 1990s, however, Dr. Lewis petitioned to bring the PA program back. With the support of the chairman, Distinguished Professor of Pathology Salvatore Pizzo, MD PhD, he succeeded. Lewis quickly recruited Vollmer, who was working as a PA in Duke’s surgical pathology lab at the time, to help teach.

“1990 was a big turning point at Duke for PA’s,” says Vollmer. “As you will recall, as a student I wasn’t allowed to touch anything,” she explains. “When I came back to work at Duke North as a PA in 1990, I was the first PA to ever don a pair of gloves, walk into the surgical pathology lab, and perform gross analysis on surgical pathology specimens. When Jim was working to restart the program, he asked me if Duke would be willing to extend the same opportunity to students in the surgical pathology lab and I said ‘Absolutely!’ So, in 1994 we matriculated the American Society for Clinical Pathology (ASCP) Board of Certification Exam. “Deciding to become a PA was a big chance to take for all early graduates because there was no good way to find a job," explains Robin Foss, a graduate of the class of 1979. “The AAPA newsletter wasn’t current, the internet did not exist, and individual schools were reluctant to share information. We didn’t know if the profession would survive and progress. Thankfully, it stabilized and Duke’s program today remains the gold standard for our profession.”

Like Foss, Vollmer was able to obtain a job in the field prior to her graduation from the program in 1978. When she returned to Durham in 1979, Dr. Broda recruited Vollmer as Assistant Associate Director to support the PA program from which she had so recently graduated. Together with James “Jim” Lewis, PhD, who supervised the autopsy service (and who graduated from Duke’s PA program in ’75), Broda and Vollmer ran the PA Program successfully until 1985, when Duke Hospital made the decision to discontinue many of its allied health programs.

Following a tradition of creating a clever class photo, the class members of 1999 wear Dr. Jim Lewis-like moustaches.

The culmination of the two-year program is the final presentation of an autopsy or surgical case, demonstrating mastery of each facet of training. Knowledge of anatomy, pathologic processes, gross and microscopic photography, and PowerPoint skills are all on display. Micayla Zynda presents her case in July 2019.

2013 Graduates receive the Master of Health Science degree.

2013 Graduates receive the Master of Health Science degree.
the first class of Duke PA students who not only had obtained hands-on experience in the Duke Surgical Pathology lab during their training, but were also awarded a Master of Science degree in 1996. It was an incredibly gratifying experience," she recalls with a smile.

From that point on, the program flourished. In 1996 there were four graduates; in 1997 there were six. Since 2009, the program has consistently graduated eight students each year and there are now 239 graduates from the Duke program. Vollmer continued to play a key role in the growth and development of the program, taking on a part-time role as associate director in 2005. It became her full-time job in 2010.

A unique program with a bright future

Today, Vollmer and Program Director Rex Bentley, MD run a robust and competitive program that attracts students from across the country. The classes in the ’70s and ’80s were predominantly male. “My class in 1976 was about 50% female. Today, that number is closer to 90%. It has been great to see women take a more active role in our profession over the years. Our goal now is figuring out how to attract more underrepresented minorities to diversify and strengthen our program even further,” says Vollmer.

“Duke is one of the top-ranked national universities with a Pathologists’ Assistant program,” says Vollmer. “Applicants are attracted by our small class size, relatively low tuition rates, and the fact that students learn their basic sciences through the School of Medicine. It also doesn’t hurt that all of our clinical rotations are within a 20-mile radius of campus. Perhaps the greatest strength of our program is the fact that students get a very hands-on experience here. The program has changed quite a bit didactically since the 70’s and 80’s and we have a very good reputation. Students have access to an incredible number of specimens. They get to do everything from small biopsies to large tumor resections. Students are encouraged to interact with the attending pathologists and residents, who are very supportive of our program.”

“I’ve been involved with Duke’s PA program for so long that it’s like one of my children,” says Vollmer. “I can’t seem to distance myself from it, although someday I might like to,” she laughs. “I am incredibly proud of how far we have come in fifty years and I am excited to see what the next chapter holds for our program.”

How do you get faculty and trainees, working across the vast School of Medicine campus, together for a day of sharing knowledge and ideas? You create the Pathology Scientific Retreat. Developed from a vision of Jiaoti Huang, MD PhD when he arrived as the new Chairman in 2015, the Retreat now provides an intra-departmental platform for collaboration. Three years of full-day programs have made an impact.

2016: Our first Science Retreat was at Durham’s 21c Museum Hotel in December 2016. Speakers at the inaugural event included Chancellor Eugene Washington, MD MPH MSc, and School of Medicine Dean Nancy Andrews, MD PhD.

“This is really eye-opening for me.”

Pakawat Chongsathidkiet

Left: Taylor Biddulph presents a poster as a Student Delegate to the 2017 AAPA Fall Conference.
2016: Carter Suryadevara receives the prize for Best Graduate Student Poster from Jiaoti Huang, MD PhD. His topic was investigating the interaction of host lymphopenia with tumor-specific T cells used to treat glioblastoma.

2018: Breakfast starts the day at the second Retreat, with PhD student Teilo Schaller and clinical faculty member Jadee Neff, MD PhD. At the 2019 Retreat, Teilo presented his talk “Bench to Bedside: A Bispecific Antibody for Treating Brain Tumors,” from his work in Dr. John Sampson’s Lab.

“When I came here, I noticed a separation of our research community from clinicians, with very limited interaction between the two groups. I thought this was a missed opportunity, as they would really benefit from face-to-face interactions and knowing one another better. The same was true for our trainees: the graduate students would benefit from the expertise of pathologists, and our residents and fellows would benefit from knowing scientists working at the cutting edge of scientific research. For this reason, I initiated the annual scientific retreat, where faculty and trainees from the whole department could spend an entire day together in an offsite location.”

The first retreat took place in December 2016, followed by one in April 2018, and the third in October 2019. Talks on diverse topics fill the morning and afternoon sessions. Provided breakfast, snacks, and lunch fuel the participants, and an afternoon poster session combined with a reception provides opportunities for networking. Since 2018, the events have been on the top floor of University Tower, where the 360-degree view over the area is another reward for attending. Accomplished alumni have given keynote speeches that have provided encouragement and mentorship. Todd Brady (MD ’99, PhD ’98) inspired the group in 2018 with tales of his journey from the MD PhD program at Duke to the office of the President and CEO of Aldeyra Therapeutics, opening minds to career paths often overlooked in academic programs. Pakawat Chongsathidkiet, a doctoral student working in Dr. Peter Fecci’s neurosurgery lab, says, “This is really eye-opening for me. It contributes to what I am going to do in the future, the direction of study I am going to pursue, so this has really broadened my horizons with more options to think about.” In 2019, Tim Stenzel, MD PhD (’92), currently the Director of In Vitro Diagnostics at the FDA, spoke about career paths in relation to working with the FDA. “I learned the rationale for going through the regulatory process with the FDA for our artificial intelligence (AI) applications in pathology,” says second-year resident Richard Davis, MD MSPH.

Subjects discussed at the Retreats have included nanopore sequencing, AI applications, biobanking, and nasal vaccination. Sharing ideas has been fruitful for many faculty as well. William Jeck, MD PhD, gave a presentation at the 2019 Retreat, “I noticed a separation of our research community from clinicians, with very limited interaction between the two groups. I thought they would really benefit from face-to-face interactions and knowing one another better.”

Jiaoti Huang

RESEARCH

2019: Resident Richard Davis, MD MSPH describes his research findings to neuropathologist Shih-Hsiu (Jerry) Wang, MD PhD.

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33

2019: Hard decisions are made by the poster judges, research faculty Everardo Macias, PhD, Jung Wook Park, PhD, and Ming Chen, PhD.

2019: Mixing all the parts of our department together is the purpose of the Retreats. Shown here is resident Natasha Iranzad, MD, graduate student Amelia Schirmer, and neuropathology faculty member Giselle Lopez, MD PhD (’14).

2019: First-year residents enjoy a break with Residency Program Director and Neuropathology chief Thomas Cummings, MD PhD (’01) (right). (L-R) Drs. Gina Sotolongo, David McKenzie, Derald Charles, Monica Abdelmalak, and Evelyna Kliassov.

“...the Retreats have definitely been worth giving up a whole Saturday for! It is about knowing the sort and depth of work being done by others that may lead to collaborations in the future.”

Laura P. Hale

“I think the Retreats have definitely been worth giving up a whole Saturday for! It is about knowing the sort and depth of work being done by others that may lead to collaborations in the future.”

Laura P. Hale

Dr. Huang would love to hear from any Duke alumni who have ideas for or would be interested in participating in future Retreats. The next Retreat will be held in 2021.

(Programs for all three Retreats are linked here.)
Total number of Anatomic Pathology Cases: **118,590**

**2019 Grants**

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<th>Grants Type</th>
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**Autopsies:** 260

**Cytology Cases:** 32,211

**Number of Laboratory Tests:** 10,039,453

**Paraffin Blocks:** 225,968

**Electron Microscopy Cases:** 999

**Electron micrograph of a kidney biopsy**

Neuropathologist **Anne Buckley, MD PhD** discovered behind her cases.

**Head of Autopsy Service Carolyn Glass, MD PhD** who specializes in Cardiovascular Pathology.

Ciliocystophthoria, detached ciliary tufts from cyst fluid.

Photo: Xiaoyin "Sara" Jiang, MD FCAP.
Case review at the Hematopathology sign-out room, with (L-R) residents Natasha Iranzad, MD and Gina Sotolongo, MD, and attending Anand Lagoo, MD PhD, medical director of the Clinical Flow Cytometry Laboratory.

**Flow Cytometry Cases:** 4,660

**Glass Slides:** 546,093

Histotechnologist Deon Kendall in his workflow, cutting tissue in the Research Histology Laboratory.

**Immunohistochemical Stains:** 49,411

Case review at the Hematopathology sign-out room.

Cytopathologist Sarah Bean, MD works with Cytology Fellow Rachel Jug, MB Bch BAO on diagnosing an on-demand FNA sample that they had just obtained, stained, and reviewed at the microscope.

**Number of FNAs:** 3,699
COMING TOGETHER for Prostate Cancer Research

Working in close proximity can kindle creative connections. The Pathology Department has expanded its prostate cancer research group, and the labs are now housed together in the Snyderman Building. The new research direction began with our Chairman Dr. Jiaoti Huang, and newly recruited scientists include Drs. Qianben Wang, Everardo Macias, Ming Chen, and Jung Wook Park. These investigators have received many individual grants, but more importantly they have received multi-PI grants and program project funding within the group and with other prostate cancer researchers at Duke. Funding sources include both federal agencies and private foundations such as the National Cancer Institute, the Department of Defense Prostate Cancer Program, the Prostate Cancer Foundation and the Mike Slive Foundation. Investigators in the group have published in high-impact scientific journals and given talks at other academic institutions and at national and international conferences. This gathering of multiple prostate cancer research teams in a dedicated space promotes collaborations that will advance the field more rapidly.

Amelia Schirmer, a graduate student in the Macias Lab, tests the effects of hormone deprivation and androgen receptor-targeted drugs on the expression levels of specific proteins by western blot. The goal of these studies is to identify new molecular drug targets in prostate cancer.
Qianben Wang, PhD helps visiting graduate students Lu Tang, BS (center) and Furong Huang, BS (right) edit a manuscript. Dr. Wang’s lab uses genomic and epigenomic approaches to identify transcriptional and post-transcriptional dependencies in lethal prostate cancer, and aims to target these vulnerabilities using CRISPR-based technologies and small molecule inhibitors.

Zoe Loh, a graduate student in the Chen Lab, is selecting bacterial colonies to produce plasmids for use in human cancer cell lines. Mu-En Wang, PhD, a postdoctoral fellow, also works on cancer metabolism, which is the focus of the lab.

William Hankey, PhD, postdoctoral fellow in the Wang Lab, sonicates a sample containing prostate cancer cells for chromatin immunoprecipitation. The Lab uses this technique to identify binding sites for transcription factors and epigenetic marks across the prostate cancer genome.

Funding sources include the National Cancer Institute, the Department of Defense Prostate Cancer Program, the Prostate Cancer Foundation and the Mike Slive Foundation.

Lucy Driver, research technician and post-baccalaureate scholar, verifies tumor spheroid formation of a prostate cancer cell line. The Macias Lab uses 3D tumor spheroid models to test investigational drug candidates because they model in vivo tumor growth more accurately than standard 2D cell culture.
“Getting the Most from Your Microscope” is the topic for first-year residents in a class taught each year by Susan Reeves, Supervisor in PhotoPath and Website Director. L-R: Drs. Evelyna Kliassov, David McKenzie, Derald Charles, Gina Sotolongo; Susan Reeves; Dr. Monica Abdelmalak.

Drs. Robert Jennings and Keith Reimer were two Duke cardiovascular pathologists who discovered that myocardial infarcts evolve as a “wavefront” and not all at once. Their work is the basis for how heart attacks are treated the world over leading to a 93% survival from acute MIs. If you or anyone else you know has received emergency treatment for a heart attack, you can thank them. Their work is in part responsible for saving more lives than virtually any other physicians.”

- Lou DiBernardo, MD, presenting Grand Rounds in October

Keeping our Congressman G.K. Butterfield (2nd left) up to date with the operations and issues facing our laboratories at Duke is Mike Datto, MD PhD, Associate Vice President and Medical Director of DUHS Clinical Laboratories (left). Brittany Heinrich, MLT(ASCP) of Duke Central Automated Laboratory, is reviewing a blood smear using Cellabvision, which captures images of white and red blood cells for evaluation of CBC and differential results.
In the midst of the global pandemic, I feel an overwhelming sense of gratitude for the expertise of Duke physicians and scientists as we navigate the impacts of COVID-19. Duke’s critical mission as an academic medical center is on display like never before as we care for our community, conduct innovative research, and begin testing novel therapies. As always, the Department of Pathology is playing a critical role in Duke’s multi-disciplinary efforts to combat the virus.

With uncertainty in just about every aspect of life right now, please know how much we appreciate the many individuals who provide philanthropic support for the Department. Your ongoing generosity provides invaluable resources that propel our tripartite mission of research, education, and clinical care. We are grateful to each and every donor who chooses to support Duke Pathology.

As you make plans for philanthropic giving in calendar year 2020, the Coronavirus Aid, Relief, and Economic Security Act may provide unique opportunities reduce taxes through charitable giving. The Act provides charitable deductions, even for those who do not itemize; increases the cap on charitable deductions up to 100% of adjusted gross income; and temporarily waives required minimum distributions from IRAs and other retirement plans. Like many, I am encouraged to see that Congress recognizes the critical role Duke and other nonprofit organizations are playing during the pandemic.

If you would like to discuss the CARES Act or consider other strategic philanthropy, don’t hesitate to reach out. Above all, I wish you and your families health and well-being during the days ahead.

With gratitude,

Morgan P. Pope
Director of Development
Department of Pathology
morgan.pope@duke.edu
(919) 385-3121

See our website for larger photo: https://pathology.duke.edu/newsletter-archive