MISSION
The mission of the Department of Internal Medicine at Rush is to improve the health of the individuals and diverse communities we serve through the integration of outstanding patient care, education, research and community partnerships.

VISION
The Department of Internal Medicine will be the leading department of medicine in the region and nationally recognized for transforming health care.

VALUES
The Department of Internal Medicine embraces the Rush I CARE values.

INNOVATION • COLLABORATION • ACCOUNTABILITY • RESPECT • EXCELLENCE
MESSAGE FROM THE CHAIRPERSON

Pursuing Our Vision for Medicine at Rush

In recent years, the Department of Internal Medicine has been transformed into a major driver of clinical, research and educational growth at Rush. Thanks to the recruitment of approximately 95 faculty members and a total of more than 500 faculty, the department will continue to be an essential health care leader in the Midwest and nationally.

At Rush, we recognize that the most exciting innovations in academic medicine occur through collaborations. To that end, the Department of Internal Medicine has forged alliances with local, national and international organizations, providing a foundation for subspecialty care, groundbreaking research and the education of future clinicians. The department also has close ties with other institutions in the Illinois Medical District, including a unique academic affiliation with John H. Stroger, Jr. Hospital of Cook County. Our joint residency program — the only one of its kind in Chicago — also shares faculty, giving trainees an opportunity to learn from a wide range of experts.

In the Department of Internal Medicine, we also have created a highly collaborative environment and infrastructure for basic science, translational and clinical research. We strongly believe that such research is the foundation for transformative discoveries and innovations that will be the key to advancing patient care. Through our leading-edge research programs, we are committed to helping patients by developing new therapies and medical devices, and by expanding scientific and medical knowledge.

Jochen Reiser, MD, PhD
The Ralph C. Brown, MD, Professor of Internal Medicine
Chairperson of Internal Medicine

Sumant Chugh, MD, Vice Chairperson for Strategy and Development
Chugh provides leadership with a focus on performance excellence for strategic clinical opportunities, clinical productivity, resource utilization, financial results and clinical access. Chugh develops and maintains a resolution system that responds to issues raised in a timely and effective manner.

Scott Hasler, MD Vice Chairperson for Education
Hasler provides oversight for the development, direction and coordination of all medical education activities. He administers the CME program, ensures compliance with the Accreditation Council for Graduate Medical Education and actively participates with various staff committees to recommend policies and to provide leadership in all phases of departmental medical education.

Suja Mathew, MD, Chairperson, Department of Medicine, Cook County Health and Hospitals System
Mathew provides oversight and direction for leadership with Cook County Health and Hospitals System. She serves as the liaison from the Department of Medicine at CCHHS to raise concerns and opportunities across both organizations. She also serves as a liaison to create research and education synergies across both organizations and promote best practices across both organizations’ departments of medicine.

Monnie Wasse, MD, MPH, Vice Chairperson for Quality and Patient Safety
Wasse provides medical leadership on patient safety and quality improvement issues for the department. She is responsible for departmental oversight of safety, quality and the patient experience and the patient safety officers and medical directors. She collaborates with division leadership on creating a multidisciplinary approach for achieving the quality and safety goals of the department and Rush University Medical Center in both inpatient and outpatient settings. Wasse reviews and develops annual and long-term plans around safety and quality and serves as chairperson of the Departmental Quality Improvement Committee.

Vineet Gupta, PhD, Vice Chairperson for Research and Innovation
Gupta provides support to the department to create a productive research environment. He heads the Office of Research in the Department that assists all of the Department faculty, staff, fellows and students in their research activities, including grant writing, grant submissions, post-award activities, clinical trial planning and its management. This office partners with all of our Divisions in these activities. Gupta also facilitates planning, budgeting, benchmarking, program evaluation, accountability and development of policy decisions for the department. He provides direction and administrative management for all aspects of the department’s research operation. Gupta also mentors and develops junior and mid-career researchers and faculty.
$2.1 million income from clinical trials and industry

84 Grant Submissions

$9.8 MILLION in NIH funding in FY17

$2.1 million income from clinical trials and industry

>2X increase in external funding (including gifts and monetary contributions) in FY17, representing $24.8 million (24% of all of Rush funding)

50+ active clinical trials (does not include Rush University Cancer Center)

$8.8 MILLION in research expenditures by department faculty in FY17

SPECIALTIES
RANKED BEST IN THE COUNTRY BY U.S. News & World Report
Rush has been named among the top hospitals in the country for quality, safety and efficiency four times by the Leapfrog Group, a national organization that promotes health care safety and quality improvement. The Department of Internal Medicine and the Internal Medicine Residency support institution-wide quality efforts and spearhead many quality improvement and safety projects that complement the institution’s broader initiatives.

**RESIDENT-DRIVEN QUALITY IMPROVEMENT**

Internal medicine residents play a vital role in the department’s safety and quality efforts and in the delivery of safe, effective and high-quality patient care. The residency program now offers a two-year track specializing in patient safety and quality improvement, where participating residents work closely with departmental safety and quality leaders to identify safety problems and develop QI initiatives using a multidisciplinary team approach. The track also offers an opportunity for residents to work alongside hospital leadership through the Office of the Chief Medical Officer to gain a broader understanding of ongoing efforts to improve safety and quality on an institutional and national level.

Under the mentorship of Manya Gupta, MD, director of the track, and other core faculty, several innovative resident-led projects are underway, including projects on decreasing the usage of unnecessary telemetry monitoring, optimizing and standardizing the use of supplemental oxygen and decreasing the time to de-escalation of broad-spectrum antibiotic use.

**RESIDENT PARTICIPATION IN PATIENT SAFETY INITIATIVES**

Internal medicine residents participate in a number of activities related to patient safety, such as the House Staff Quality Improvement Committee, which involves a multidisciplinary monthly meeting with residents and faculty from different residency programs, as well as representation from the Office of Graduate Medical Education and the Office of the Chief Medical Officer.

Additionally, residents participate in monthly case-based patient safety conferences that highlight specific safety issues, such as near misses or adverse events, and actively engage residents in the processes of evaluating medical errors and conducting root cause analyses. The chief residents also regularly participate in the department’s bimonthly quality committee, overseen by Monnie Wasse, MD, MPH, the department’s chief quality officer, and contribute to adverse event adjudication and the development of electronic health record modifications and processes of care to improve patient safety.

By emphasizing a collaborative and transparent approach to patient safety and quality improvement, the Department of Internal Medicine and the Internal Medicine Residency are solidifying a culture in which issues of patient safety and quality improvement can be discussed openly. This ultimately helps support a delivery model that provides safe, efficient, high-quality, high-value and patient-centered care.
UNDERGRADUATE MEDICAL EDUCATION

Each year more than 200 medical students spend critical months of their training time in our department learning from our faculty. All third-year medical students rotate through internal medicine as they begin to grow their understanding of clinical medicine. This is supervised by our outstanding student educators, Viju John, MD, director of the internal medicine clerkship, and Rupel Dedhia, MD, director of the primary care clerkship. Most students will return during their final year of medical school to further practice their skills for internship. This is supervised by Michelle Sweet, MD, director of the subinternship.

GRADUATE MEDICAL EDUCATION

Since 1991 the Internal Medicine Residency at Rush has had only three Graduate Medical Education Program directors. The newest of those, Scott Hasler, MD, assumed leadership of the program this year from Richard Abrams, MD. This leadership stability has proven an outstanding base on which to pursue the ultimate vision of our program: to be a nationally known internal medicine residency program of choice that demonstrates clinical and academic excellence in its trainees while providing innovative educational programs that prepare graduates for future leadership roles in clinical medicine, education and research. To attract the best students to the residency, department leaders have developed an innovative curriculum. In addition to outstanding clinical training in the medical center, our residents have the opportunity to work in underserved areas of the city and the world through our specialized training track in global and community health. This program, under the supervision of Stephanie Crane, MD, offers training experiences in Haiti and the Dominican Republic. The Internal Medicine Residency program consisted of more than 100 residents this year and a large part of their intensive training was in patient safety and quality improvement. This residency track is led by Manya Gupta, MD, and focuses trainees on solving the systems issues of medicine through designing and implementing their own quality improvement projects.

Preparing graduates for future careers in academic medicine involves developing the clinical skills of residents, but also their skills in teaching and research. In the department trainees work on all three skills as they move on to their practice or their fellowships. The department also trains 90 fellows each year. These fellows are learning cutting-edge knowledge and skills in every subspecialty of medicine as well as taking the first steps to train the next generation of students and residents.

AWARDS DURING ACADEMIC YEAR 2016-2017

Rush University Excellence in Mentoring: Elizabeth Baker, MD, MHPE
Phoenix Award (given to the best clinical teacher): Elizabeth Van Opstal, MD
Induction into the Mark Lepper Society: Scott Hasler, MD and Viju John, MD

PROMOTIONS DURING ACADEMIC YEAR 2016-2017

Senior Associate Dean for Rush Medical College, Elizabeth Baker, MD, MHPE
Vice Chairperson for Education, Scott Hasler, MD
Through our leading-edge research programs, we are committed to helping patients by developing new therapies and medical devices, as well as by expanding scientific and medical knowledge.

At Rush, we find answers to important science and patient care questions through cross-disciplinary collaborations within and across divisions in the Department of Internal Medicine. From basic science and translational research to clinical and epidemiological research, our focus is on developing high-quality research projects that, ultimately, will provide more options for patients. The department has significantly increased its grant funding as well as the number of submissions in dramatic ways. Our top five funded investigators received more than $12 million in externally funded awards.

**EXECUTIVE COMMITTEE ON RESEARCH AND MENTORING**

In 2017, ECOR and the mentoring program provided seed and bridge funding to several principal investigators in the department. The goal is to help researchers complete the work they need to receive NIH funding or to publish in a leading journal. Those enrolled in the program enter into a formal mentoring relationship with a senior investigator to help them develop their research ideas. Recipients of the ECOR grant award include: Alison Finnegan, PhD; Niranjan Jeganathan, MD; Joel Block, MD; Andrew Zloza, MD, PhD; Neeraj Jolly, MD; Susan Buehler, PhD; Helen Burgess, PhD; Steven Feinstein, MD; Vineet Gupta, PhD; Anne-Marie Malfait, MD, PhD; Elizabeth McAninch, MD; Aimee Hodowanec, MD; Kyle Popovich, MD, MS; Mariam Aziz, MD; Mary Jo Fidler, MD; Abde Abukhdeir, PhD; Sharon Jedel, PsyD; Joshua Melson, MD, MPH; Reem Karmali, MD, MS; Amanda Marzo, PhD; and Annabelle Volgman, MD.

**RESEARCH INFORMATICS PLATFORM**

The Department of Internal Medicine is leveraging the institution’s IT resources and data governance infrastructure to create a research informatics platform under the leadership of Bala Hota, MD, a nationally recognized IT expert and member of the Division of Infectious Diseases. He is developing a platform that will allow investigators to query the vast amounts of clinical data collected in the EHR. Additionally, Hota has created bioinformatics and biostatistics core services to support investigators in their data needs across all departments at Rush.

**STRONG RESEARCH LEADERSHIP**

Vineet Gupta, PhD, vice chairperson for research and innovation, oversees the department’s research program. Gupta’s team focuses on ensuring investigators have the tools available to be successful in their submission of scientific grant applications for external support. The department also works to proactively connect early career faculty investigators with mentors in the department and elsewhere at Rush and in the city of Chicago.

**RESEARCH GRAND ROUNDS AND COLLABORATIONS**

The department hosts a monthly Research Grand Rounds to share knowledge among students, residents, fellows and faculty and help foster collaborations between departments. It showcases various basic and translational research being conducted on the Rush campus and provides an excellent opportunity to get more involved. Additionally, department leaders regularly invite faculty from different disciplines to present their research projects so they may identify potential collaborators.
“As the population ages, more people are living longer with heart disease and comorbidities such as cancer, dementia and kidney disease. To better care for the complex needs of these patients, cardiologists at Rush are partnering with their colleagues across disciplines to develop specialized clinics that combine multiple areas of expertise.” – Kim A. Williams, Sr., MD, MACC, FAHA, MASNC, FESC

CLINICAL The division of cardiology is comprised of four sections: noninvasive cardiology, interventional cardiology, cardiac electrophysiology and advanced heart failure and transplantation. The division is also home to many multidisciplinary and novel clinical programs such as the Rush Heart Center for Women and the Rush Center for Adult Structural Heart Disease, as well as emerging programs that have gained recent national attention such as cardio-nutrition, cardio-cognitive clinic, and cardio-oncology. In 2017 the division implemented new clinical services, including a cardiac rehab program at Rush Oak Park Hospital, a coronary CT program for measuring coronary calcium and a dedicated atrial fibrillation clinic.

RESEARCH The division focuses its research in three areas: early detection, prevention and innovation. Screening programs in the community, cholesterol lowering diet and medication trials and new device research that fit our patient population are ongoing. Cardiology researchers work with international companies to offer a wide range of clinical trials that bring cutting edge technologies to a variety of cardiac conditions.

MEDICAL EDUCATION The division’s highly competitive fellowship program, led by joint faculty from Rush and Stroger Hospital, offers extensive clinical opportunities to learn from experts in imaging, heart failure and other areas. Fellows see patients in Rush’s modern, 28-bed coronary intensive care unit, one of the largest in Chicago. Similarly, fellows benefit from Rush’s state-of-the-art interventional platform, which brings together diagnostic testing, surgical and interventional services, and recovery for closer collaboration between clinicians.

2017 brought growth and depth to the Division of Cardiology in the areas of clinical programs, education and research as well as new community outreach programs. In 2017, Rush ranked 43rd in the nation for cardiology and heart surgery according to U.S. News & World Report.

The division has several esteemed faculty who have reached significant accomplishments.

Cardiology’s clinical researchers, under the direction of Gary Schaer, MD, continue to offer our patients access to the most advanced therapies such as stem cell therapy. The DREAM-HF trial is the largest stem cell trial for heart failure in the world, using adult donor stem cells, and subjects are currently being enrolled at Rush. Results of the ixCELL-DCM study were published in the journal Lancet, showing bone marrow cells could be harvested, processed, expanded and returned to the body for transcatheter injection safely.

Annabelle Santos Volgman, MD, medical director and co-founder of the Rush Heart Center for Women, was featured in O, The Oprah Magazine and Elle Décor highlighting the center’s holistic treatment approach. One year out of his fellowship, Parikshit Sharma, MD, has already added 16 publications to his extensive list of research accomplishments. Clifford Kavinsky, MD, PhD, was named to the 2017 class of master fellows of the Society of Cardiovascular Angiography and Interventions.
“Digestive health encompasses a wide range of complex problems beyond traditional GI diseases including cancers, obesity, microbial dysbiosis, and disrupted brain-gut axis and associated consequences like Parkinson’s disease and depression. Gastroenterologists at Rush are working with other specialties to give our patients the latest therapies to ensure optimal gut health to prevent and treat these GI and systemic diseases.” – Ali Keshavarzian, MD, FRCP, FACP, AGAF, MACG

CLINICAL Gastroenterologists at Rush diagnose and treat the full range of gastrointestinal conditions, including Crohn’s disease, ulcerative colitis, celiac disease and many others. Our interventional gastroenterologists offer the full range of endoscopic procedures for patients with gastrointestinal cancers, Barrett’s esophagus, complex polyps and more. In addition to nationally recognized physicians, the division includes dietitians and psychologists who help people manage GI problems.

RESEARCH Our research focus is to investigate how factors associated with lifestyle (diet, alcohol, behavior, circadian rhythms and sleep) promote chronic diseases via the GI tract, liver and brain-gut axis. Our research program has extensive grant funding from the National Institutes of Health, Department of Defense, the American Cancer Society, NASA, the Michael J. Fox Foundation, Nestle and other industry sponsors.

MEDICAL EDUCATION The gastroenterology and hepatology fellowship is a three-year ACGME-accredited program providing training in digestive diseases and endoscopic procedures. Upon completion, graduates are board-eligible for certification in gastroenterology, with a fourth year of training in advanced endoscopy also available. Home to one of the Midwest’s most active liver transplant centers, Rush treats patients with a wide variety of gastrointestinal and hepatologic illnesses, exposing fellows to a broad range of pathologies.

Our goal as a division is to continue growth and innovation in the areas of clinical programs, education and research.

The Division of Digestive Diseases and Nutrition has several esteemed faculty who have had significant accomplishments.

Our division director, Ali Keshavarzian, MD, is a dedicated clinician-researcher with more than 550 published articles, book chapters and abstracts, and an h-index of 69.

Faraz Bishehsari, MD, PhD, chaired and organized the first symposium with a special focus on circadian rhythms and pathologies related to the gastrointestinal system in May 2016.

The division’s research team has had more than 100 active studies during the past year and submitted 17 grants in 2016. The team uses translational research approaches including in vitro, in vivo and animal models and clinical research studies to investigate mechanisms of and treatments for GI and chronic systemic diseases where gut-derived inflammation plays a mechanistic role.
“Endocrinology touches all areas of human life, with hormonal diseases affecting almost every individual at some point in their journey. The Division of Endocrinology and Metabolism team members are working to provide outstanding care for patients while developing new approaches to preventing and treating diabetes, thyroid problems, bone disease and obesity in collaboration with colleagues from across Rush.” – Brian W. Kim, MD

**CLINICAL** In addition to the inpatient endocrinology consult service, key clinical programs in endocrinology include a high volume, APN-led inpatient diabetes management service that provides diabetes care for virtually all surgical patients with diabetes as well as patients recovering in the Johnston R. Bowman Center; a fracture liaison service that is identifying and improving the care of patients suffering from bone disease in conjunction with colleagues from orthopedics and rheumatology; and a thyroid cancer program that includes a multidisciplinary tumor board bringing together physicians from surgery, oncology, pathology and other disciplines.

**RESEARCH** Studies conducted in the Bianco Lab (deiodinase.org), led by Antonio C. Bianco, MD, PhD, are challenging paradigms of thyroid hormone therapy and attracting international attention and acclaim. Our team members continue to work with industry to gain better understanding of how current therapeutics can be used to treat diseases from diabetes to osteoporosis to thyroid cancer. Our team is also partnering with the Department of Preventative Medicine and Fitness Formula Clubs to study how patients may benefit from a gym based medical nutrition counseling and weight loss program.

**MEDICAL EDUCATION** Together with colleagues from Stroger Hospital, endocrinologists at Rush participate in a successful fellowship training program that takes advantage of the breadth of disease seen across the combined institutions. Our team also provides a lecture series for residents and hosts residents and students from around the world.

2017 brought further growth to the Division of Endocrinology, with Disha Narang, MD, and Anila Bindal, MD, joining our team to become leaders in weight management and obesity here at Rush. These young faculty are partnering with Naomi Parrella, MD, and the team led by Alfonso Torquati, MD, MSCI, FACS, to make Rush a leader in this important area. Sanford Baim, MD, leading our bone health effort, has continued to improve the quality of bone densitometry across Rush, and the fracture liaison service continues to grow in volume with effectiveness data coming soon. Finally, Rasa Kazlauskaite, MD, MSc, FACE, has joined our division and will be leading our efforts stay on the cutting edge of diabetes care as the director of diabetes technology at Rush.
“The Division of General Internal Medicine helps physicians cultivate versatility and resilience that will be vital as we face the challenges brought by the increasing emphasis on quality and efficiency in clinical care and as we change the way we educate our trainees in the future.”

– Daniel P. Dunham, MD, MPH
The greying of America has impacts that range from expanding vitality in later life to growth in chronic conditions and the burdens they often provide. Through research, education and clinical practice the Division of Geriatrics and Palliative Care works to address some of the most complex and important health issues of our time with thoughtfulness, creativity and a spirit of optimism.”

– Anthony J. Perry, MD
Abde Abukhdeir, PhD, is focused on finding the preclinical evidence needed to test the effects of specific drugs on breast cancers with NF1 mutations.

Nurses in the infusion center have been instrumental in improving distress screening and connecting patients with the supportive services they need.

**CLINICAL** The division provides extensive services to patients through the Rush University Cancer Center. Patients have access to comprehensive clinics dedicated to conditions such as brain cancer, breast cancer, leukemias, lymphomas and prostate cancer. Patients also have access to supportive services, such as distress screening and survivorship planning. The division supports an urgent care center specifically for cancer patients, helping patients to avoid unnecessary emergency room utilization and access to specialized care.

Through a partnership with Tempus, cancer patients at Rush now have the option of undergoing a genetic analysis that may allow their oncologists to customize treatments for their particular cancer. Advances in genetic science and cancer care increasingly are enabling researchers and clinicians to design treatments for cancer that specifically target genetic mutations that lead to disease.

**RESEARCH** Research and clinical trial activities are growing rapidly within the division. As the division chief, Timothy Kuzel, MD, is committed to making clinical trials more accessible to patients. The division also supports a strong basic sciences research program. The scientific research conducted through the division has made a strong impact in the field of hematology and oncology.

**MEDICAL EDUCATION** The division supports two fellows each year for the three-year hematology-oncology fellowship. This ACGME-accredited program provides an opportunity for clinical training in hematology, medical oncology and stem cell therapy. In addition to diverse clinical experiences, fellows have the opportunity to participate in the ongoing research activities across the division.

Abde Abukhdeir, PhD, received two core scholarships from the Lynn Sage Foundation’s Lynn Sage Scholars Program to fund research focusing on molecular variants that lead to or contribute to drug resistance in breast cancer. Collaborating with Melody Cobleigh, MD, medical oncologist, Abukhdeir hopes that his research will help determine how cancers with NF1 mutations will react to certain drugs, with the ultimate goal of providing more targeted treatments to breast cancer patients.

Sasha Shafikhani, PhD, is looking at how the presence of tumor and infection may lead to a state of immune confusion affecting both antitumor and antibacterial immune defenses.

Vineet Gupta, PhD, is developing novel, immune-targeted small molecule therapeutics to treat both cancer and autoimmune diseases.

Amanda Marzo, PhD, is attempting to identify and characterize the molecular mechanisms underlying head and neck squamous cell carcinoma initiation and progression, with the goal of enabling earlier diagnosis and developing more effective treatments.

Mary Jo Fidler, MD, is one of the principal investigators for a phase 1 clinical trial testing the experimental photoinmunotherapy technique for patients whose advanced head and neck cancer has not responded to chemotherapy or radiation and cannot be addressed surgically. Rush is the only center in Illinois offering this treatment.

“Patients are coming to Rush for trials because we offer the novel trials they are seeking.”

– Timothy M. Kuzel, MD
“The Division of Hospital Medicine at Rush is a national leader in clinical care, education and the disciplines of patient safety and quality improvement. Through our clinical expertise, investment in educating our trainees and the extensive work we put into improving patient safety and quality at our institution, we are able to provide high quality, efficient and safe care for all of our patients — with superior outcomes.” – Suparna Dutta, MD, MS, MPH
“Infectious disease involves problem solving, differential diagnosis and appropriate therapeutic decisions. When the division was started by Dr. Stuart Levin, outpatient ID was minimal and inpatient was quite busy. The division has grown from four faculty members in 1975 to 28 today.”

– Gordon M. Trenholme, MD

CLINICAL Infectious diseases specialists diagnose and treat a wide range of diseases caused by germs such as bacteria, viruses, fungi and parasites. The division’s areas of special expertise include HIV and AIDS, as well as infections related to organ transplantation, orthopedic surgery, tropical disorders from traveling abroad, invasive fungal infections, antibiotic resistance and weakened immune systems.

Other activities include infection control, Institutional Review Board membership, transplant support and direction of the clinical microbiology lab.

RESEARCH The major areas of research in the division are in hospital epidemiology and HIV. The Prevention and Intervention Epicenter grant from the CDC funds a year of research for one ID fellow. Many fellowship applicants are interested in doing a third year of research in the epicenter and are possible NIH Young Investigator Award candidates.

MEDICAL EDUCATION The division educates medical students, physician assistants, residents in medicine and ophthalmology, and fellows in infectious diseases and neurointensive care. Didactic lectures and bedside teaching are taken seriously. A number of the ID faculty members provide research experiences for residents and medical students.

As part of the division’s joint fellowship with John H. Stroger, Jr. Hospital of Cook County, fellows are trained by faculty at Rush, Stroger Hospital and the CORE Center. More than 150 ID fellows have trained in our program, the largest of its kind in the Midwest. During the past three years, seven fellows have attained academic positions and eight have entered private practice after completing the fellowship program. The division director also leads the fellowship program, which includes two associate directors from Rush and Stroger Hospital. The fellowship program coordinator is at Rush.

To attract the best fellows, recruitment is an intensive effort. Reviews of the program and faculty are generally excellent.

Kyle Popovich, MD, MS, examines the epidemiology of methicillin-resistant Staphylococcus aureus in community as well as hospital settings, and studies racial, ethnic and gender disparities in MRSA colonization and infection rates. She currently has an NIH-funded project underway that is using whole genome sequencing to examine the genomic epidemiology of MRSA in correctional facilities and the impact MRSA has in the surrounding community.

Mary K. Hayden, MD, received a large epicenter grant from CDC this year. The division also has more than a dozen clinical trials ongoing that offer our patients choices for treatment.

*Alan Harris, MD, was named interim division chief after Trenholme’s retirement in January 2018.
Kidney disease is one of the nation’s most common medical conditions. Although a cure for kidney disease is still not a reality, the Division of Nephrology at Rush has fostered a unique approach by combining its basic science with clinical experience to bring the cure closer to our patients.” – Vasil Peev, MD

CLINICAL The Division of Nephrology consists of the following three sections:

- General nephrology led by Vasil Peev, MD
- Interventional nephrology led by Monnie Wasse, MD, MPH
- Transplant nephrology led by Samuel N. Saltzberg, MD

The nephrology program at Rush is consistently named among the best in the country by U.S. News & World Report. The nephrology team at Rush has developed innovative treatments for kidney disease, including slowing the progression of kidney disease in people with diabetes. The interventional nephrology program at Rush specializes in providing routine and complex care for the management of hemodialysis fistulae, grafts and catheters. The transplant nephrology team includes skilled transplant surgeons and medical specialists, as well as a nurse coordinator who is available to answer patients’ questions about treatment.

RESEARCH For decades, nephrologists at Rush have advanced the understanding of kidney disease and transformed how clinicians care for patients here and abroad. Rush is home to specialized clinics for kidney transplant patients, as well as individuals with diabetic kidney disease, glomerular diseases, renal stones and anemia due to kidney disease.

MEDICAL EDUCATION Education also is a strength at Rush, and division faculty have earned eight teaching awards from the Department of Internal Medicine. Since 1973, 105 nephrology fellows have trained at Rush.

Today, the division maintains a highly active, basic science research program, backed by 12 NIH grants. Following are some of the key new discoveries at Rush:

- Jochen Reiser, MD, PhD, is investigating the permeability factor (suPAR) that causes glomerular injury such as focal segmental glomerulosclerosis and diabetic nephropathy.
- Sumant S. Chugh, MBBS, MD, is describing the major molecular basis of human minimal change nephrotic syndrome.
- Vineet Gupta, PhD, is using state-of-the-art technologies to discover novel treatments for kidney disease.
- Stephen Korbet, MD, has collaborated with NIH researchers to understand the genetic abnormalities that lead to the development of FSGS.
- The Collaborative Study Group is testing pyridorin to slow the rate of progression of type 2 diabetic nephropathy.
- Steve Mangos, PhD, has developed genetic models of renal disease using zebra fish to test promising new agents.
- Researchers in the Division of Nephrology are partnering with Chinese scientists at Peking University First Hospital on studies focused on kidney disease.
"The Division of Pulmonary, Critical Care and Sleep Medicine is excited about our recent growth and the strategic changes that have further enhanced our clinical programs, research endeavors and fellowship training programs. We are planning further enhancements by partnering with the cardiovascular service line, ENT, allergy and immunology, and thoracic surgery for multispecialty clinical care that will add to our mission and vision for future growth" – Robert A. Balk, MD

CLINICAL The Section of Pulmonary Medicine under the leadership of Mark Yoder, MD, has an expanded repertoire of interventional pulmonary procedures that includes cryobiopsy, argon plasma coagulation, eBUS, navigational bronchoscopy, percutaneous tracheostomy placement and pleurX catheter placement. The Section of Critical Care Medicine under the leadership of David Gurka, MD, PhD, continues to provide comprehensive critical care for patients in the medical intensive care unit, which has recently expanded to a total of 27 beds. The Section of Sleep Medicine under the leadership of James Herdegen, MD, has continued to grow in patient volume and polysomnographic studies performed. Visits to the sleep center have increased 93 percent since 2016.

RESEARCH Following are some of the basic science, translational, clinical and quality improvement projects underway:

- Basic research conducted by Sanda Predescu, PhD, and Dan Predescu, MD, including an NIH/NHLBI study investigating the cleavage of intersectin-1s by Granzyme B and pulmonary arterial hypertension
- A preclinical study investigating the usefulness of 12 months of nintedanib treatment in a genetic model of pulmonary fibrosis
- Translational research on acute lung inflammation/injury/acute respiratory distress syndrome (ARDS)

MEDICAL EDUCATION Members of the division serve as key faculty for medical education programs across the medical center. In addition, basic scientists Sanda and Dan Predescu teach courses in the College of Health Sciences and Rush Medical College. Sara Mirza, MD, MS, regularly brings attending physicians and fellows to the Rush Center for Simulation Training to ensure we have competency for providing complex care and using sophisticated equipment and techniques to take care of our critically ill patients.

The division has made significant changes during the past year that have improved clinical care, medical education and research. Clinical programs have been improved with the recruitment of three new attending physicians, one of whom is postfellowship trained in pulmonary hypertension and has revitalized the pulmonary hypertension program. Interventional procedures continue to grow in volume and complexity. Our critical care efforts have expanded to include rounding in the CVT-ICU and participation in the ELSO Gold Certified adult ECMO program for patients with profound cardiac and/or respiratory dysfunction.

The fellowship programs had successful matches and continue to provide excellent clinical and research training.

Our research program also added two basic scientists who are conducting a number of research studies evaluating the vascular changes in pulmonary arterial hypertension and the pathogenesis and treatment of pulmonary fibrosis.
“In addition to being home to the pioneers in patient-reported outcomes in rheumatoid arthritis and systemic lupus, the Division of Rheumatology has a long, multidisciplinary history of studying the biology, biomechanics and clinical care of osteoarthritis. Today, it maintains one of the largest and best respected osteoarthritis groups internationally, as well as one of the most important groups evaluating the physiology of osteoarthritis pain.” – Joel A. Block, MD

The Division of Rheumatology also offers onsite X-rays, bone densitometry scans and ultrasound. This ensures that our patients receive many of the necessary rheumatic services within a single facility. This is especially convenient for our patients who suffer from limited mobility due to their rheumatic condition.

According to Sobia Hassan, MD, there are many indications for ultrasound use in rheumatology practice. One is to guide injections of deep joints, such as the hip, or other joints that may be difficult to inject without guidance. The machine can also be used to look for signs of joint inflammation or damage that may be missed by clinical examination or X-ray. It can also sometimes detect signs of gout.

The findings seen on ultrasound can help diagnose and guide treatment in our patients. A major advantage of ultrasound is that there is no radiation exposure involved. The test can be performed right here in our rheumatology clinics.
To learn more about the Department of Internal Medicine at Rush, visit rush.edu/internalmedicine

HOW TO MAKE A GIFT TO THE DEPARTMENT

To learn how you can make a difference in the lives of our patients, please contact us at giving@rush.edu or call (312) 942-6830 or make a gift any time using our secure online form at rush.convio.net/internalmedicine. Thank you.

Rush is an academic health system comprising Rush University Medical Center, Rush Copley Medical Center and Rush Oak Park Hospital.

PLEASE NOTE: All physicians featured in this publication are on the medical faculty of Rush University Medical Center. Some of the physicians featured are in private practice and, as independent practitioners, are not employees or agents of Rush University Medical Center.