The commitment to exceptional patient care begins with revolutionary discovery. University Hospitals Case Medical Center is the primary affiliate of Case Western Reserve University School of Medicine, a national leader in medical research and education and consistently ranked among the top research medical schools in the country by U.S. News & World Report.

Through their faculty appointments at Case Western Reserve University School of Medicine, physicians at UH Case Medical Center are advancing medical care through innovative research and discovery that bring the latest treatment options to patients. All National Institutes of Health (NIH) funding for basic and clinical research is awarded to the School of Medicine at Case Western Reserve University.
CLINICAL

- Forty-seven Department of Medicine full-time faculty members were recognized as “Top Doctors” by Cleveland Magazine.
- Physician services grew at a rate of seven percent year over year, while patient satisfaction, as measured against comparative internal and national data, again showed the faculty providing an exceptional experience in several categories.
- In-hospital contributions by the faculty to quality, efficient resource utilization and financial success again increased.
- The annual Medicine Quality Summit built upon past successes and brought together a broad cross-section of providers to focus on key health quality and reform initiatives.

RESEARCH

- Awarded funds to the departmental faculty, including the University Hospitals Seidman Cancer Center, totaled $63 million.
- Research expenditures again favored the highly competitive national venue with nearly 67 percent coming from federal sources.
- The Harrington Discovery Institute at University Hospitals continued to expand by supporting 43 physician-scientist research initiatives nationally and internationally.
- The department’s intramural research-related activities including the annual Research Day, Team Science Challenge and mentorship programs remained robust and well-subscribed.

EDUCATION

- The Department of Medicine full-time faculty contributed nearly 30 percent of the total teaching time at Case Western Reserve University School of Medicine.
- A significant increase in total applications drove another highly successful residency match, including the retention of eight Case Western Reserve University students into the department’s Internal Medicine Residency program.
- The legacy of exceptional education continued with three additional faculty members selected as Master Clinician Educators.
- The visibility of the clerkship and residency programs persisted through program directors’ leadership roles at national educational meetings.
Welcome to the Annual Report of the Department of Medicine for the academic period 2014 – 2015. Our faculty, staff and trainees had an outstanding year in advancing our clinical, research and teaching missions. This is a time of significant transition as Richard Walsh, MD, has stepped down as Chairman after nearly 17 years of service. He leaves the department in exceptional shape in all of the areas of our mission.

Research support within the Department of Medicine remains strong with overall grant awards for the department at $63 million for academic year 2014 – 2015. This represents a broad portfolio of research across the divisions, centers and institutes ranging from molecular mechanisms of disease to national clinical trials. As an example, the Division of Gastroenterology & Liver Disease had a particularly strong year securing the highly competitive Silvio O. Conte Center grant under the direction of Fabio Cominelli, MD, PhD. Other divisions highly invested in the research mission include Infectious Diseases & HIV Medicine, Cardiovascular Medicine and Hematology & Oncology. The recruitment of Rodney Folz, MD, PhD, as the new Division Chief of Pulmonary, Critical Care & Sleep Medicine should also enhance our research portfolio; while Mukesh Jain, MD, through his recent appointment as Chief Scientific Officer for University Hospitals, will initially focus on the infrastructure supporting translational and clinical research.

In 2014 – 2015, the department again sponsored strong intramural research-related initiatives. Three additional Team Science Challenge grants were awarded to departmental faculty (Alvin Schmaier, MD, and Marvin Nieman, PhD; Donald Anthony, MD, PhD, and Saba Valadkhan, MD, PhD; Shigemi Matsuyama, PhD, Richard Zigmond, DVM, PhD, and David Wald, MD, PhD) to stimulate interdisciplinary translational research between divisions and departments. The fifth annual Department of Medicine Research Day was attended by over 150 faculty and trainees with nearly 100 posters presented by our young investigators.
The department is focused on exploring new opportunities by further leveraging the success of the full-time faculty in all areas of our mission.

Robert Salata, MD, FACP, FIDSA  Interim Chairman, Department of Medicine

The Harrington Discovery Institute at University Hospitals in Cleveland, Ohio – part of The Harrington Project for Discovery & Development – continued to expand by supporting 43 physician-scientist research programs across the nation, including investigators at Case Western Reserve University. New relationships were established with the Gund Foundation, the Alzheimer’s Drug Discovery Foundation, Takeda Pharmaceuticals and Oxford University. In partnership with the American Society of Clinical Investigation, the second Harrington Prize for Innovation in Medicine was awarded in 2014. The State of Ohio Third Frontier Commission bestowed a $25 million grant to the Harrington Discovery Institute to improve current programs, provide enhanced support for physician-scientists, and ensure that the impact is felt in Ohio.

Our clinical programs continue to grow in both volume and quality. Our faculty members admitted over 20,000 patients and provided nearly 200,000 physician service visits between University Hospitals health system and the Louis Stokes Cleveland VA Medical Center. Patient services volume per physician, as measured by Medicare’s relative value unit system, increased on average by seven percent. Patient satisfaction ratings of their physician visit experience, as sampled by the CGCAHPS assessment tool and reported through Press-Ganey, exceeded comparative national values overall. Forty-seven of our full-time faculty members were awarded “Top Doctor” status by Cleveland Magazine in 2015. The fourth annual Medicine Quality Summit was held in November 2014 and has built upon the successes of previous summits with a focus on quality metrics and contemporary health care reform topics.

Our educational programs remain enormously robust and are strongly supported by our faculty. The 2015 match was again highly successful with a substantial increase in total applications. This academic year marked the second time for our enhanced
and successful recruitment process for Harrington pathway residents to fast-track into the ACGME-endorsed program for physician-scientists. This year also marked the strongest subspecialty match ever. University Hospitals Case Medical Center remained by a wide margin the top choice for our medical students completing internal medicine acting internships. Our full-time faculty continue to provide nearly 30 percent of the total teaching time in the School of Medicine. Three additional medicine faculty were selected as Master Clinician Educators in the spring of 2015 (Keith Armitage, MD, Karen Horowitz, MD, and Arthur Halle, MD). This list, developed over five years, truly represents our department’s clinical and educational Hall of Fame.

As I embark on my new position as Interim Chairman of the Department of Medicine, we have plans to enhance the mentoring programs for young faculty, increase our activities in the recruitment of women and minorities among our faculty and trainees, establish new high-level priorities in the clinical and research realms of diabetes, obesity, bone disease, hypertension, adult asthma, cystic fibrosis, congenital heart disease, end-stage renal disease, respiratory health in conjunction with the development of the Respiratory Health Institute (COPD, ICU and sleep medicine) as well as focus on our strengths in cancer, cardiovascular

The visibility and vitality of the departmental leadership, faculty and staff remains high. We are committed to work with our institutional partners to preserve past gains and achieve new future successes.
leadership

medicine, infectious diseases, gastroenterology and liver diseases. To enhance our programs in diversity and faculty development, Usha Steifel, MD, has been appointed as Vice Chair for Diversity and Faculty Development. In the near future, a new Vice Chair for Clinical Affairs will be appointed as well to assist me in navigating the clinical enterprise. With the appointment of Marco Costa, MD, PhD, as Chief Innovation Officer at University Hospitals, the department has significant opportunities to develop innovative clinical and research programs that will transform our institutions.

I invite you to become more familiar with our department by examining this report and by visiting our website at medicine.case.edu. It is my distinct honor and pleasure to lead our outstanding faculty, staff and trainees.

Respectfully,

Robert A. Salata, M.D.

Robert A. Salata, MD, FACP, FIDSA
Interim Chairman and Professor
Department of Medicine
Case Western Reserve University
Physician-In-Chief
Master Clinician in Infectious Diseases
University Hospitals Case Medical Center
The objective of the Division of Cardiovascular Medicine is to advance care through innovation to help our patients achieve optimal cardiovascular health. We would like to highlight new disruptive technologies in clinical and research programs that are benefiting our patients every day.

• Transcatheter aortic valve replacement. UH Case Medical Center is one of only three hospitals in the United States performing transcatheter aortic valve replacement (TAVR) in the awake and talking patient. UH Harrington Heart & Vascular Institute is one of the highest volume centers in the United States, performing nearly 250 cases annually. The average length of stay is just three days, with some patients discharged in 48 hours.

• Minimally invasive mitral valve repair. We established a percutaneous mitral valve repair program in the Valve & Structural Heart Disease Center. The MitraClip device is based upon the Alfieri edge-to-edge mitral valve repair technique. We are also performing valve-in-valve and valve-in-ring procedures for patients with recurrent, severe mitral regurgitation after prior mitral valve procedures.

• Onco-Cardiology program. The UH Harrington Heart & Vascular Institute Onco-Cardiology program assesses and monitors cancer patients who are receiving cardiotoxic drugs or chest radiation, allowing for prompt treatment adjustments when cardiac problems arise. The multidisciplinary Onco-Cardiology program is embedded within University Hospitals Seidman Cancer Center, thereby facilitating seamless treatment of cancer as well as prevention and treatment of cardiovascular disease.

• First clinical FFR-CT case in the United States. UH Harrington Heart & Vascular Institute performed the first clinical fractional flow reserve-computed tomography (FFR-CT) case in the U.S. FFR-CT provides both anatomic assessment and functional significance of coronary artery disease noninvasively, providing the potential to completely transform the diagnosis of coronary artery disease.
Our expertise, dedication, and compassion are combined with research, discovery, and innovation to deliver superior clinical outcomes through leading-edge medical advancements and practices.

Daniel Simon, MD  Division Chief, Cardiovascular Medicine

• Highest-quality, personalized care. We are the recipients of numerous awards for our clinical programs, including, among others, Beacon Award for Excellence in the Edna & Thomas F. Zenty Cardiac Intensive Care Unit, American Heart Association Get with the Guidelines Gold Plus for Heart Failure, Joint Commission Certification for Advanced Heart Failure and Mechanical Circulatory Assistance, and Magnet Recognition from the American Nurses Credentialing Center.

• Research & Innovation Center. UH Harrington Heart & Vascular Institute’s Research & Innovation Center continues to spearhead translational and clinical research efforts. The Research & Innovation Center is now enrolling and following more than 2,500 patients in 85 active clinical trials investigating new drug, device and regenerative medicine therapies.

• Prentiss Foundation Research Grant. We were most fortunate to receive a $3.3 million grant from the Prentiss Foundation for the investigation of novel therapies for heart failure, for which Daniel Simon, MD, Chief of the Division of Cardiovascular Medicine and President of UH Harrington Heart & Vascular Institute, serves as Program Director and Mukesh Jain, MD, Director of the Case Cardiovascular Research Institute and Chief Scientific Officer of the University Hospitals health system, serves as Principal Investigator. The Prentiss Strong Heart Program will seed and catalyze a transformative program in heart failure treatment and direct patient care, which will serve as a local and national paradigm for addressing this major health care gap.
The goals of the division include providing outstanding individualized specialty-focused medical care for patients, advancing the knowledge in the specialty through basic and clinical research, as well as educating the next generation of leaders in the field. The academic contributions and achievements of the Division of Clinical & Molecular Endocrinology have been nationally and internationally recognized for many years. These contributions are rich in content and duration, and encompass several disciplines within the specialty including diabetes mellitus, thyroid, adrenal and pituitary diseases. Over the past five decades, our faculty members have had leading roles in initiating and conducting fundamental landmark NIH-supported studies that eventually led to setting the standards for the care of patients with endocrine disorders such as diabetes. Examples of such studies include the University Group Diabetes Program (UGDP’s study), the Diabetes Control and Complication Trial (DCCT), the Bypass, Angioplasty, Revascularization, Investigation in Type-2 Diabetics (BARI-2D study) and the Action to Control Cardiovascular Risk in Diabetes (ACCORD study). The newly initiated Glycemia Reduction Approaches in Diabetes (GRADE) study sponsored by the NIH is yet another example of the continued academic contributions of our physician-researchers. Alongside these clinical investigations, basic research studies are being conducted to examine the mechanisms involved in diabetes complications and explore potential treatment options for them.
The division prides itself for having a highly dedicated and strongly motivated team of physicians, scientists, trainees, nurses and nurse practitioners working synchronously to achieve our strategic goals. Our faculty provide nationally and internationally recognized expertise in practically all disciplines of the specialty. A unique and important feature of our faculty is that many have secondary appointments in basic science departments such as biochemistry and pharmacology. This attribute has promoted and strengthened high-level collaborations and provided a great potential for advancing basic and multidisciplinary translational research projects.

All faculty members are engaged in teaching and passing their knowledge and skills to the next generation of trainees. Our fellowship program emphasizes independent learning, inquiry, debate and critical appraisal of literature along with deep and thorough appreciation of patients’ individuality. Our trainees are given ample opportunities to be involved in clinical, translational or bench research activities. They proceed to have successful careers in academic institutions as well as in clinical practice.

Our educational program also offers clinical and research training to many of our own residents and medical students as well as applicants from other institutions. The program offers city-wide multidisciplinary weekly clinical and research conferences covering all aspects of the field. Our faculty members provide talks and research presentations locally and regionally as well as at national and international meetings.

The long history of uninterrupted academic contributions and provisions of outstanding medical care by the faculty members with excellent expertise in the field have led to the division being highly regarded by patients and their families.
The division is committed to identifying new ways to bring the highest quality gastrointestinal prevention and treatment procedures to patients and improve the health of our community at large.

Fabio Cominelli, MD, PhD  Division Chief, Gastroenterology & Liver Disease

This past academic year was marked with seminal moments that will define the Division of Gastroenterology & Liver Disease for many years to come. Leading the way were the successful funding of the Cleveland Digestive Disease Research Core Center P30 grant, the approval of a major capital project to fully renovate the UH Case Medical Center Endoscopy Unit, and the establishment of the Lansing C. Hoskins Education and Research Fund. These three endeavors will further our goals of being a nationally renowned academic division that produces top quality research, exemplary training programs and outstanding clinical care.

The division is comprised of over 40 members; our nationally ranked group of gastroenterologists, hepatologists, PhDs and nurse practitioners together create the medical anchor of the UH Digestive Health Institute. Over the past year, strategic recruitment efforts welcomed Brooke Glessing, MD, to expand our therapeutic endoscopy capabilities at University Hospitals Ahuja Medical Center. In addition, Maneesh Dave, MD, joined our faculty ranks to enhance our research portfolio with his expertise in stem cell-based therapies for human inflammatory bowel disease. Within his first year, Dr. Dave was successful in obtaining a DOD grant to study the role of adipose stem cells in the pathogenesis of Crohn’s disease. In addition
to our new faces, our existing faculty members continue their industry-leading research in numerous subspecialties through the following funding mechanisms:

- Digestive diseases and metabolism: P30 center (PI: Fabio Cominelli, MD, PhD)
- Inflammatory bowel disease: P01, R01 (PI: Fabio Cominelli, MD, PhD)
- Barrett’s esophagus: U54 (PI: Amitabh Chak, MD)
- Gastrointestinal cancers: P50 (Co-PI’s: Amitabh Chak, MD; Greg Cooper, MD)
- Alcoholic hepatitis: U01 and P50 application (PI: Pierre Gholam, MD)
- Therapeutic endoscopy: U01 (PI: Amitabh Chak, MD)
- Education and training: T32 (PI: Fabio Cominelli, MD, PhD)
- Esophageal cancer outcomes: ACG CDA (PI: Linda Cummings, MD)

As previously mentioned, our clinical care will be greatly enhanced by a fully renovated UH Case Medical Center Endoscopy Unit estimated to be completed in July 2016. The new unit will boast a larger waiting room, additional prep and recovery bays to improve throughput, and larger procedure rooms furnished with state-of-the-art equipment to improve the overall experience for both health care providers and patients.

The creation of the Lansing C. Hoskins Education and Research Fund was established by Lanse Hoskins, MD, who has been a faculty member within the division for 51 years. The purpose of the endowment is to provide resources to fellows and junior faculty who are interested in pursuing careers expanding the boundaries of the contemporary medical practice in the specialty of gastroenterology. The allocation of resources will be made by a committee comprised of Lanse Hoskins, MD, Fabio Cominelli, MD, PhD, and other senior faculty members. The endowment is one example of the commitment the division has to the education and training of our future academicians, assuring that our fellowship program maintains its national reputation as a vibrant and highly competitive program.
The Division of General Internal Medicine seeks to provide high-quality comprehensive patient care while pursuing clinical inquiry, research and teaching in a stimulating academic environment. The division is home to a diverse group of clinician-educators and researchers whose professional interests span across multiple areas, including health care services and outcomes research, hospital medicine, primary care education, population health, patient safety and quality improvement, health care disparities, cancer screening, cancer genetics, medical informatics and medical education.

Academic year 2014 – 2015 proved to be another excellent year for the division with several milestone accomplishments. This past year, three of our division’s primary care physicians were featured in Cleveland Magazine’s “Top Doctor” list. Additionally, two of our faculty members at the Louis Stokes Cleveland VA Medical Center received the Wings of Excellence Award from the Federal Executive Board of Cleveland for their exemplary leadership of quality improvement programs in the care of veterans and medical education for residents and hospital staff.

In the area of patient care, our hospital medicine group at UH Case Medical Center maintained its high-quality and efficient clinical work, posting a mortality index (observed/expected) of 0.48 and average length of stay of 5.1 days, both of which were below the University Hospitals Consortium average of 0.56 and 5.98 days, respectively.

In medical education, our faculty who are known for their excellent teaching and who have previously won multiple teaching awards, continued that tradition with our division’s fourth faculty member recognized with the prestigious Master Clinician Educator award. In 2014, several faculty also received Scholarship in Training awards from the School of Medicine and two were honored as Alpha Omega Alpha Society faculty inductees.
As generalists, we formulate a comprehensive treatment plan for our patients that does not only address temporary illnesses, but also focuses on the restoration of health and wellness in hospital and beyond.

Rajesh Chandra, MD  Division Chief, General Internal Medicine

Furthermore, under the leadership of our faculty who serve as Medicine Clerkship Directors, Case Western Reserve University medical students received the American College of Physicians Ohio Chapter Silver Medal Award for Excellence in Medical Student Abstract Acceptance. At a national level, one of our senior faculty members was appointed Editor for the Society of General Internal Medicine’s monthly newsletter, SGiM Forum.

The Section of General Medicine at the Louis Stokes Cleveland VA Medical Center continued its outstanding work with the “Center of Excellence in Primary Care Education,” a fully funded $5 million education project whose success led to its continued funding of another $3 million through 2019, and with “Allies for Better Care in Patient Aligned Care Teams,” a $3 million grant-funded program that sends resources out to high system utilizers with hopes of saving expenditures on emergency room and inpatient visits.

Looking ahead to 2015 – 2016, issues of value-based care, patient satisfaction and cost efficiency will continue to dominate the national narrative on health care. It will be important that our clinician-educators in primary care and hospital medicine incorporate these principles in their teaching and remain receptive to the creative innovations in their practice that can help them achieve high standards of patient care and clinical instruction. Our faculty are proud of their contributions to the medical community as clinician-educators and remain committed to their role in providing high-quality health care and effective medical training.
Our goal is to provide compassionate, quality health care to older adults and increase their involvement in health outcomes through personalized education about prescribed medications, warning symptoms and proactive health care.

Stefan Gravenstein, MD, MPH  Interim Division Chief, Geriatrics & Palliative Care

The Division of Geriatrics & Palliative Care offers compassionate and comprehensive health care to adults and seniors. Through the Center for Geriatric and Palliative Care Medicine, the Geriatrics Research, Education and Clinical Center (GRECC) at the Louis Stokes Cleveland VA Medical Center and the associated Section of Geriatrics, and the Program for All-inclusive Care for the Elderly (PACE), our faculty provide inpatient geriatric and palliative care consultative services, outpatient geriatric primary care, subacute rehabilitative care at UH Case Medical Center, the Louis Stokes Cleveland VA Medical Center as well as at other community settings.

The program continues to develop educational, clinical and research programs. PACE is led by Peter DeGolia, MD, and Cindy Balina, MD; Christine Koniaris, MD, leads the palliative care service; Stefan Gravenstein, MD, MPH, oversees the Medical House Calls Program; Gowrishankar Gnanasekaran, MD, MPH, and Dr. Gravenstein manage the Hanna House; Taryn Lee, MD, directs UH Foley ElderHealth and the geriatrics fellowship program; Robert Bonomo, MD, leads the GRECC; and Thomas Hornick, MD, manages programs at the Louis Stokes Cleveland VA Medical Center. The division piloted a nurse practitioner apprenticeship program organized by Cathy Roscoe-Herbert, CNP, DNP, for geriatrics and Cindy Cohen, ACPHN, and Lauren Donnelly, ACPHN, for palliative care.

The Palliative Care consultation service focuses on reducing pain, stress as well as physical and spiritual suffering, assists with developing goals of care and improving communication between care providers, patients and their caregivers. The Palliative Care consult service has grown five-fold since opening in 2008, with over 1,000 consults each year. The geriatrics programs, like the palliative care program, aim to improve the quality of life regardless of the underlying conditions or prognosis.
The faculty from all of our programs educate residents on in-depth evaluation of seniors, focusing on geriatric syndromes, functional disabilities and the impact of medications on the health and well-being of older adults. All of the venues host learners that include medical students, family medicine and internal medicine house staff, and four geriatric fellows. These learners gain a full range of inpatient, outpatient and house call experience to prepare them for independent practice of older patients.

The division’s research programs have garnered national attention. At the GRECC, the Patient Centered Non-Institutional Long-Term Care grants were renewed, with focus on delirium, heart failure, infectious disease management, transitional care, preoperative geriatric evaluation and care. Also, the GRECC received approval for three VA Research Initiative Projects on oral hygiene, cognitive rehabilitation and infectious disease education. The GRECC program served as the lead for the National Collaborative project to decrease falls and injuries, offered caregiver education for delirium prevention, and established a post-hospitalization transitional care team. Research at both the Louis Stokes Cleveland VA Medical Center and UH has focused on infections in elderly (bladder infections, C. difficile, influenza, antibiotic stewardship), delirium prevention and management, falls reduction and care transitions. The research spans basic biomedical, applied and health services domains. The UH program has grants funded from Americorp, the Cleveland Foundation (at PACE), AHRQ related to care transitions, and the Cleveland Foundation for delirium prevention (PRIDE: Prevention of Incident Delirium). Between the Louis Stokes Cleveland VA Medical Center and UH, our research teams have produced over 20 peer-reviewed publications over the past academic year.
The overall goal of the Division of Hematology & Oncology is to advance the field through clinical and basic research, while providing innovative leading-edge clinical care, and training the next generation of leaders in hematology and oncology. Our 75 divisional faculty include physician-scientists, PhDs conducting laboratory research, clinical researchers, and clinical members focused on patient care and teaching. We also bring high-quality care and innovative clinical trials to communities throughout Northeast Ohio through our well-integrated regional practice network. Our hematology and oncology faculty serve in a variety of national positions, including National Cancer Institute (NCI) Board of Scientific Counselors (Sanford Markowitz, MD, PhD), NCI Board of Scientific Advisors (Stanton Gerson, MD), American Association of Cancer Institutes (President, Stanton Gerson, MD), NCI Gastrointestinal Steering Committee (Chair, Neal Meropol, MD), and American Society of Clinical Oncology Board of Directors (Neal Meropol, MD). Many of our faculty serve on national research review committees and editorial boards.

The division is closely aligned with UH Seidman Cancer Center, a principal member of the NCI-designated Case Comprehensive Cancer Center (Case CCC), and our faculty play key roles in Case CCC research and clinical activities. Leadership roles in the Case CCC include Center Director (Stanton Gerson, MD); Associate Director for Clinical Research (Neal Meropol, MD); and leaders of genetics (Sanford Markowitz, MD, PhD), developmental therapeutics (Afshin Dowlati, MD), breast cancer
Our commitment to excellence is driven by the personal stories of our patients; we are honored to offer targeted, personalized and highly effective medical programs put together by the multidisciplinary team of outstanding hematology and oncology experts.

Neal Meropol, MD  Division Chief, Hematology & Oncology

(Lyndsay Harris, MD), hematopoietic disorders (Marcos de Lima, MD), and basic science scientific programs (Clark Distelhorst, MD). This year, 16 of our division members were recognized as “Top Doctors” by Cleveland Magazine. In 2015, we were also instituted as members of the National Comprehensive Cancer Network, an elite group of 26 of the nation’s top cancer centers that work together to develop clinical pathways that are widely recognized worldwide.

Our division research efforts follow six general themes (senior investigator): 1) hematology and vascular biology (Alvin Schmaier, MD); 2) cancer cell biology (Clark Distelhorst, MD); 3) developmental therapeutics and translational research (Afshin Dowlati, MD); 4) cancer genetics and genomics (Sanford Markowitz, MD, PhD); 5) hematologic malignancies (Marcos de Lima, MD); and 6) patient decision-making and health services research (Neal Meropol, MD). Our faculty members hold a contract for Phase II trials as part of the NCI Early Therapeutics Clinical Trials Network (Neal Meropol, MD), an NHLBI Blood and Marrow Transplant Clinical Trials Network grant (Hillard Lazarus, MD), and an NCI Specialized Program of Research Excellence (SPORE) award for translational research in gastrointestinal cancers (Sanford Markowitz, MD, PhD).

The division has an ACGME-accredited hematology and oncology fellowship program, in addition to training medical students, basic science graduate students, postdoctoral scholars and residents. Our faculty also oversee an NCI-funded K12 training program for clinical investigators, and an NCI-sponsored T32 cancer biology training program. We encourage and support our fellows and junior faculty to participate in a variety of national educational and professional development opportunities. Our strong commitment to training is exemplified by the participation of several faculty members as mentors in the annual American Association of Clinical Research/American Society of Clinical Oncology Cancer Clinical Trials workshop.
Our division’s research programs are strong with major programs in HIV/AIDS, tuberculosis, antimicrobial resistance, infections in elderly, sexually transmitted infections, and global health/international infectious diseases. Although there are challenges to securing funding to support our research, the division remains strong with approximately $20 million in funding. International research continues to develop, mostly based in Uganda. Funds were awarded from the National Institutes of Health for a Basic HIV and HIV/AIDS-Related Diseases Science training program for Uganda (PI: Henry Boom, MD). This will continue to strengthen our long-standing collaboration between Case Western Reserve University and Makerere University in Uganda. Two other recent awards ($750,000 from the NIH and the Gates Foundation; PI: Henry Boom, MD) will focus on mycobacterium tuberculosis infection. Additionally, the NIH-supported Center for AIDS Research was refunded for an additional five years. The Phase I clinical trials unit supported through the NIH and the Division of Microbiology and Infectious Diseases (PI: Robert Salata, MD) was refunded for another 10 years.

The Infectious Diseases and Immunology Institute (Director: Robert Salata, MD) was established to coordinate activities of associated departments, centers and programs outside of the School of Medicine and strengthen research and education in priority areas.

Through the STERIS Foundation, additional funding was secured to support research projects to investigators from community hospitals. Funding has been received for over 12 years, and 53 awards have been made to investigators from 10 departments. Fifty-four publications have resulted from this research; additional funding has been procured for 34 of the STERIS initiatives, including 17 from the NIH.
There are robust clinical programs in the inpatient and ambulatory settings. Outpatient activities at UH Case Medical Center, UH Chagrin and Westlake health centers include general infectious diseases, HIV/AIDS, travel medicine, hepatitis, wound infections and transplant infections. Our outpatient HIV program (Director: Barbara Gripshover, MD) represents a “medical home” and is strongly supported by federal Ryan White funding.

The inpatient Carpenter service accommodates admissions of more than 100 patients a month with HIV/AIDS and other infectious disease problems. There are two infectious diseases consult services with 150 – 200 consults per month. Our community-based physicians continue to provide excellent care for the inpatient population at University Hospitals Ahuja Medical Center and University Hospitals Richmond Medical Center, a campus of UH Regional Hospitals. For 2014, we were at the 99th percentile for clinical productivity.

The Antimicrobial Stewardship Program in its first year of development has progressed under the direction of Constantine Tsigrelis, MD, and Riane Ghamrawi, PharmD. The goal is to optimize antimicrobial use, reduce rates of antimicrobial resistance and decrease mortality, thus decreasing costs.

A generous gift of $5 million was donated to the division by UH benefactor and frequent traveler Roe Green which will allow the Roe Green Center for Travel Medicine to provide targeted support for facilities, programs, training and educational activities as well as advance physician-investigators’ research in travel medicine and international infectious diseases. Funding to complete or seed Master Clinician awards for Robert Salata, MD, and Keith Armitage, MD, are also included in this gift. Our highly competitive fellowship program ensures the sustainability and progress of our clinical and research activities by attracting talented trainees dedicated to advancing the specialty in new and meaningful ways.
The division’s group of experienced clinicians excels in renal replacement therapy, providing care to more than 400 hemodialysis patients throughout Northeast Ohio. The division has maintained its long-standing relationship with the Centers for Dialysis Care (CDC), bolstered by two Master Clinician awards funded by the organization in the past four years and presented to Donald Hricik, MD, and Thomas Hostetter, MD. Members of the division play key roles in the kidney and pancreas transplant programs at University Hospitals Transplant Institute, including active participation in an outreach clinic that provides services for the evaluation of potential transplant recipients in Akron, Ohio. Clinical collaboration between UH Case Medical Center and the Louis Stokes Cleveland VA Medical Center continues to be strong with Mahboob Rahman, MD, named new Nephrology Section Chief at the VA.

Two new faculty members joined the division this year: Sharmeela Saha, MD, and Arash Rashidi, MD. Dr. Saha is serving as the Medical Director of the Hemodialysis Unit at UH Case Medical Center. Drs. Saha and Rashidi both see general nephrology patients at UH Case Medical Center as well as at UH Chagrin Highlands Health Center.

Two major honors were awarded to our faculty members this year. Joshua Augustine, MD, received the Kidney Foundation’s Man of the Year award, presented at the Kidney Foundation of Ohio’s annual gala. Donald Hricik, MD, received the American Society of Transplantation’s Lifetime Achievement Award, presented at the 2015 meeting of the American Transplant Congress.
The division has provided major leadership for key NIH-sponsored multicenter research trials including the African-American Study of Kidney Disease and Hypertension, the Chronic Renal Insufficiency Cohort – a study focusing on uremic toxins and factors that influence the progression of chronic kidney disease – and the NIH-sponsored SPRINT trial. UH Case Medical Center is a leading participant in a multicenter consortium enrolling patients into the NIH’s clinical trial on Organ Transplant initiative, evaluating the utility of noninvasive immune monitoring tests to facilitate individualization of immunosuppression in kidney transplant recipients. Donald Hricik, MD, presented the pivotal findings of the Clinical Trial in Organ Transplant at the 2013 American Transplantation Congress on behalf of the consortium of nine centers in North America. He was also first author of a manuscript published in the Journal of the American Society of Nephrology, presenting the results of the CTOT-09 trial. Recently the division received notice of a follow-up seven-year NIH grant funding the multicenter CTOT-19 study.

The division has a successful training program for clinical nephrology fellows and an NIH training grant for the education of physician-scientists. During the past year the training grant, under the direction of John Sedor, MD, was renewed for an additional five years. We are also accredited by the American Society of Transplantation to train fellows in transplant nephrology. Our trainees benefit from both bench and translational opportunities in a multidisciplinary environment including the departments of medicine, pathology, physiology and biophysics. The ultimate goal of the division is to prepare tomorrow’s academic physicians, scientists and clinical educators to continue our legacy.
The Division of Pulmonary, Critical Care & Sleep Medicine continues the legacy of clinical excellence and innovative research. Our faculty members hold editorial board membership in prominent academic journals, while serving as senior scientific advisory members at national scientific conferences. The Medical Intensive Care Unit is seen as a national leader in critical care, recognized with an unprecedented sixth consecutive American Association of Critical-Care Nurses Beacon Award, the only ICU in the nation to achieve such recognition.

Our multidisciplinary pulmonary, critical care and sleep programs provide a full range of services from the diagnosis and management of common conditions to state-of-the-art distinguishing technologies such as lung transplantation, diaphragm pacing or management of pulmonary vascular disease. Other subspecialty centers include lung cancer, cystic fibrosis, interventional bronchoscopy, sleep, asthma/emphysema, pulmonary rehabilitation, dyspnea and critical care.

Jordan Kazakov, MD, performs minimally invasive endoscopic procedures for the diagnosis and treatment of pulmonary and airway disorders. Robert Schilz, DO, PhD, working in collaboration with physicians from UH Harrington Heart & Vascular Institute, has initiated two new programs. One offers state-of-the-art evaluation of cardiopulmonary dyspnea; the other is the diagnosis and surgical removal of chronic blood clots in lungs through a procedure known as pulmonary thromboendarterectomy. Our multidisciplinary lung transplant program has been reactivated with our first successful transplant in early 2015. Steven Strausbaugh, MD,
working in conjunction with pediatric pulmonary colleagues at University Hospitals Rainbow Babies & Children’s Hospital, directs our adult primary ciliary dyskinesia program. The pulmonary hypertension program encompasses the latest therapeutic interventions and leading-edge clinical research trials.

The division supports a broad-based research enterprise from basic to clinical and translational science, representing epidemiology, physiology, neuroscience, cell and molecular biology. With numerous individual research grants from the NIH, VA, American Lung Association and a T32 training grant that supports graduate students as well as PhD and MD postdoctoral fellows, novel therapies for the treatment of pulmonary diseases are being developed. Our division is particularly strong in studying mechanisms controlling the regulation of respiration, pulmonary hypertension and immunobiology of tuberculosis infection. Our faculty collaborate with members of the Department of Environmental Health Sciences to examine the role indoor air quality plays in COPD exacerbations and COPD control. Newer research projects are examining the role biological variability plays in the outcomes of patients with complex pulmonary and critical care diseases. Rodney Folz, MD, PhD, recruited as the new Division Chief, was recently awarded a five-year NIH R01 grant examining factors important in asthma control in elderly patients. Clinical research performed at UH Case Medical Center on a new therapy for obstructive sleep apnea earned a Top 10 Clinical Research Achievement award from the Clinical Research Forum. Kingman Strohl, MD, sleep medicine specialist and principal study investigator, co-authored the study published last year in the New England Journal of Medicine. UH Case Medical Center was the first hospital in Ohio to use the implantable, minimally invasive system the study highlighted.

The division supports 12 clinical fellowship positions in pulmonary and critical care as well as four clinical fellowship positions in sleep medicine. Training future pulmonary physicians and medical scientists continues to be one of the main priorities of the division.
The Division of Rheumatology is a widely recognized center for outstanding clinical care, unsurpassed training site for rheumatology fellows as well as an innovative clinical and basic research hub. The division offers specialized health care through its renowned centers including:

- The Sjögren’s Syndrome Center which provides specialty care for patients with Sjögren’s Syndrome as well as a database of information on patients that can be employed in clinical research studies. Through its multispecialty team of physicians, including staff from ophthalmology, otolaryngology, neurology, urology, dental medicine, gynecology, gastroenterology and pathology, the center helps patients receive the highest-quality care.

- The Osteoporosis Center is at the forefront of diagnosis and treatment of osteoporosis patients at nearly every level. The Certified DEXA scan technologists perform bone density analysis, which limits radiation exposure while providing direct evidence of bone mineral density levels that aid in the design and treatment of patients with osteoporosis.

- The Infusion Center offers advanced technical support for infusion of biologic drugs that have become a mainstay of advanced care for many rheumatic diseases.

The Clinical Integration Report provided to the system’s Operations Committee on March 4, 2015, ranked rheumatology with the highest number of outpatient visits in 2014.

Our research program, supported by a basic science core, is focused on applying the principles of evidence-based medicine and translational research to the discovery of novel solutions for the care of patients with rheumatoid arthritis, osteoarthritis, systemic lupus erythematosus and other related rheumatic disorders. Our researchers are nationally renowned investigators, particularly in the field of complement and T-cell function in hepatitis C and a recent project on lupus. The division’s distinguished specialists continue to develop innovative therapies, collaborating with colleagues in a spectrum of musculoskeletal services such as orthopaedic surgery, physical and occupational rehabilitation, neurosciences and diagnostic radiology.
Our faculty members are internationally renowned clinicians, widely published researchers and respected educators dedicated to training the next generation of leaders in rheumatology.

Ali Askari, MD Division Chief, Rheumatology

In addition to boasting clinical practices at 14 sites in the Cleveland metropolitan area and leading clinical research on rheumatic disorders and related conditions, the division is dedicated to providing a comprehensive curriculum for continuing education of faculty, fellows, residents and medical students. Over the past four decades, numerous highly qualified rheumatologists graduated from our fellowship program and were certified in internal medicine and the subspecialty of rheumatology. Fellows are trained as investigative diagnosticians, leading-edge researchers and compassionate clinicians. Our fellowship program graduates are now involved in dynamic academic practices and are spearheading clinical research across the country. The division’s postdoctoral fellowship program, through the School of Medicine, is nationally recognized and fully accredited by the ACGME through 2019.

The division’s CME program consists of weekly grand rounds with faculty and guest speakers and is well-attended by alumni and rheumatologists systemwide. The division has been actively involved in community public education and has been raising the awareness of rheumatoid diseases with the annual Regional Sjögren’s Syndrome Conference and Lupus Summit over the past several years.
service

The core missions of the Louis Stokes Cleveland VA Medical Center are to provide high-quality patient-centered care and train the next generation of physician leaders. Our medical service has outstanding clinical sections dedicated to these goals.

The General Internal Medicine Section encompasses primary care services, inpatient hospital medicine and emergency care, as well as specialized women’s health clinics. A Center of Excellence in primary care delivery, quality, implementation science and translational research is highly active, while women’s health serves as a model for all VAs.

The Cardiology Section is a major referral center among the VA Healthcare System. The section has earned the American Heart Association Heart Failure Gold Plus Quality Achievement award and is unique among VA medical centers to offer left ventricular assist devices (LVADs) as destination therapy in end-stage congestive heart failure.

The Pulmonary, Critical Care and Sleep Medicine Section takes care of patients with complex lung ailments. Nationally funded programs in ventilation mechanics health and disease, tuberculosis, allergy and sleep apnea highlight the research accomplishments of this section.

Physicians in the Gastroenterology Section are leading the country in the establishment of evidence-based guidelines in the screening and treatment of hepatitis C patients in collaboration with the United States Centers for Disease Control and Prevention and World Health Organization.
The Endocrinology Section provides quality care at our main campus and at Parma Multi-Specialty Outpatient Clinic. The Diabetes Registry, LEADER, DEVOTE and GRADE trials are actively enrolling participants in research protocols to improve the care of patients suffering from diabetes.

The Section of Geriatrics is expanding its services to a new state-of-the-art community living center and has research programs that address patient-centered care of hospitalized elderly, vitamin E and memantine, role of PET scan in diagnosis of HIV-associated neurocognitive disorders as well as management of delirium.

The Nephrology Section conducts clinical and research programs in hemodialysis, chronic ambulatory peritoneal dialysis, continuous venous hemofiltration and kidney transplantation. In addition, nationally recognized research in hypertension and chronic renal diseases are in progress.

The Infectious Disease Section is a nationally recognized leader in management of C. difficile, methicillin-resistant Staphylococcus aureus, and the molecular epidemiology of bacterial drug resistance. Federally funded research programs span bacterial, viral, parasitic and mycobacterial diseases. The infectious diseases and HIV clinic serves the needs of veterans with complex infectious diseases syndromes, travelers and immuno-compromised hosts.

The Hematology and Oncology Section contains physicians dedicated to the multidisciplinary care of complex medical and surgical patients with cancer. A Center of Excellence in Specialty Care is featured. The section is a national leader in the implementation of a novel program optimizing timely diagnosis and treatment of patients with lung cancer. The section boasts physicians with world-class thrombosis expertise.
UH Case Medical Center and the Louis Stokes Cleveland VA Medical Center serve as the major teaching venues for our training programs. The Department of Medicine faculty remain active participants in medical student teaching, annually contributing nearly 12,000 hours to the third-year core clerkship, basic science curriculum and fourth-year students combined. This represents approximately 30 percent of total faculty teaching time at Case Western Reserve University School of Medicine. UH Case Medical Center and the Louis Stokes Cleveland VA Medical Center remain the teaching hospitals of choice for students doing their core medical clerkships as well as internal medicine acting internships (AIs), with 113 students completing their AIs in 2014 – 2015.

Our residency program is based on two themes: patient care and career development. Our residents continue to succeed in academic careers, successfully competing for the most prestigious and rigorous fellowships or preparing for life as general internists.

Noted below are select accomplishments from academic year 2014 – 2015:
• The 2015 residency match in the Department of Medicine was highly successful, with the recruitment of a talented and diverse intern class. Thirty-six interns matched and medical schools represented included Case Western Reserve University, Weill Cornell Medical College, University of North Carolina at Chapel Hill, Albert Einstein College of Medicine, Rush Medical College, University of Texas, University of Chicago, University of Rochester, University of Pittsburgh and Columbia University. The recent residency match included seven underrepresented minorities.
• The program introduced a new residency track focused on training future educators called Leadership in Medical Education.
Supported by a culture of collaboration and teamwork, our trainees work with outstanding faculty to develop and strengthen their skills in clinical care, critical thinking and autonomy to excel in caring for the most complex patients every day.

Keith Armitage, MD  Vice Chairman, Education

• Our residents showed outstanding results in the 2014 – 2015 internal medicine specialty match with the majority receiving the fellowship of their first choice.
• In addition to residents entering strong subspecialty fellowship programs, several exceptional residents will be joining UH and the Louis Stokes Cleveland VA faculty in general internal medicine practices.
• The leaders of our student and resident educational programs have been active at national meetings on education, with six presentations and workshops in 2014 – 2015.
• At our annual graduation dinner, residents honored our outgoing Chairman Richard Walsh, MD, by presenting him with a plaque commemorating the renaming of the Department of Medicine conference room the Richard Walsh, MD, Department of Medicine Conference Room.

The core internal medicine clerkship program at UH Case Medical Center and the Louis Stokes Cleveland VA Medical Center continues to thrive. Clifford Packer, MD, Internal Medicine Clerkship Director at the Louis Stokes Cleveland VA Medical Center, received national recognition for his innovative program on teaching cost-effective care. Debra Leizman, MD, Internal Medicine Clerkship Director at UH Case Medical Center, received recognition for an innovative curriculum in patient safety and for initiating a medical student nightfloat rotation.

In addition to these core accomplishments, the continuing education component of the educational program remains strong with inspiring institutional and prominent guest speakers leading our grand rounds as well as morbidity and mortality conferences. Our faculty members offer a wide variety of research opportunities, providing effective mentorship to our trainees. The annual Department of Medicine Research Day included poster presentations by 70 residents and attendance by over 150 house staff, fellows and faculty.

The Department of Medicine is prepared to meet new health care challenges through the strength and balance provided by the excellence and expertise of our faculty in fulfilling our mission of exemplary medical care, development and application of new knowledge as well as superior training of health care professionals.
Overall research support to the Department of Medicine remains strong. Total awarded funds to the departmental faculty, including UH Seidman Cancer Center, totaled $63 million in 2014 – 2015. Direct cost expenditures were nearly $50 million, with 67 percent coming from federal sources. In 2014 – 2015, the fraction of funded salary to the NIH cap for physician-scientists and PhD scientists remained impressive at 51 percent and 60 percent respectively.

Select highlights in research include the Division of Gastroenterology & Liver Disease. Fabio Cominelli, MD, PhD, was awarded $6 million from the NIH to establish a Silvio O. Conte Digestive Diseases Research Core Center. The center will be one of only 17 in the nation and will focus on digestive inflammation, metabolic disease and gastrointestinal cancer.

In the Division of Clinical & Molecular Endocrinology, Tim Kern, PhD, received a new five-year R24 focusing on characterizing and testing potential therapies for diabetic and other ischemic retinopathies with total costs for the project life of the grant in excess of $8 million.

The Division of Infectious Diseases & HIV Medicine contributes the largest portion of direct research expenditures in the department (over $14 million). The division sustained its year-over-year excellence with several new awards. Notably, Henry Boom, MD, secured a new $3.5 million U01 from the National Institutes of Health/National Institute of Allergy and Infectious Diseases for the study and identification of natural resistance mechanisms to Mycobacterium tuberculosis. Michael Lederman, MD, was awarded a new R56 and R21 totaling nearly $1 million supporting work in the study of vascular inflammation in treated HIV infection and targeting cytolytic cells to lymphoid sites of HIV persistence.

Mukesh Jain, MD, Division of Cardiovascular Medicine, received another four-year RO1 totaling over $1 million whose scientific aim is to define the mechanisms by which endothelial cells’ Krüppel-like transcription factors regulate the prothrombotic response to antiphospholipid antibodies.
The Department of Medicine is committed to creating dynamic and ambitious partnerships to catalyze new knowledge and push the boundaries of modern medical research to ensure our patients benefit from the latest medical breakthroughs.

Thomas Hostetter, MD  Vice Chairman, Research

curiosity

The Louis Stokes Cleveland VA Medical Center has highly funded programs in implementation, quality and education research, and is home to one of eight VA National Quality Scholars program sites.

Other specific accomplishments associated with the research enterprise include:
- Research Day 2015 attracted posters from a record number of house staff, fellows, graduate students and postdoctoral scholars.
- A second round of intramural Team Science Challenge grants were awarded. The three awardees from the inaugural round last academic year were center stage at the 2015 Department of Medicine Research Day presenting their progress under the award.
- The Department of Medicine again identified and broadcasted research opportunities for undergraduate medical students completing their research thesis. We work to inspire and attract students early on in their careers by providing personalized mentorship and focused guidance in research.

The unique collaborative atmosphere in the Department of Medicine puts faculty members at the forefront of discoveries. It is our unified dedication to excellence that makes us push the boundaries of medical innovation.
Over the past year, the Harrington Discovery Institute at University Hospitals in Cleveland, Ohio – part of The Harrington Project for Discovery & Development – has increased opportunities for the nation’s best medical inventors and validated our model for drug discovery and development. By expanding current programs, we have broadened our scope, strengthened our model for drug development support, and seen successes for our scholar-innovators.

The inaugural class of 12 Harrington Scholar-Innovators, who began the program in 2013, have completed their two-year grant, graduating several projects that are currently working with large pharma and one project that has formed a company with The Harrington Project’s for-profit accelerator, BioMotiv. Scott Oakes, MD, and Feroz Papa, MD, PhD, two Harrington Scholars at the University of California, San Francisco, created a company with BioMotiv, OptiKira, around technology that will prevent the death of retinal cells in patients with retinitis pigmentosa.

With the first class’s exit from the program, we recently welcomed our third class of Harrington Scholars from a wide pool of highly qualified physician-scientists across the country. The third class further broadens our field of reach, adding osteoporosis and dystonia to the conditions that Harrington Scholars are working to treat.

Our partnerships with the Alzheimer’s Drug Discovery Foundation, the Foundation Fighting Blindness, and the University of Oxford have each expanded within the past year. We have increased the number of Foundation-Scholars and Oxford-Harrington Scholars from three to 10, numbers which will continue to grow in the upcoming year.
In partnership with the American Society for Clinical Investigation, the second Harrington Prize for Innovation in Medicine was awarded to Douglas Lowy, MD, who exemplified the prize’s intention of honoring innovation, creativity and clinical application. Dr. Lowy was nominated by Francis Collins, MD, PhD, Director of the National Institutes of Health, and recognized for the study and development of a vaccine against the human papillomavirus.

Dr. Lowy, the Harrington Scholars, and our partner organizations all gathered in Cleveland for our third annual Scientific Symposium, which celebrated the excellent science and dedication to advancing medicine central to our mission. With our Scientific Advisory Board members, Innovation Support Center members, and Investment Advisory Board members also present, the event was an opportunity for leaders in their fields of nonprofit academia and for-profit pharma to convene on the mission of drug development.

In the upcoming year, we expect our trend toward growth and our record of partnering academic researchers with technology accelerators to continue. With support from foundations, academic institutions, the State of Ohio’s $25 million Third Frontier Technology Commercialization Center and a $25 million strategic investment in BioMotiv from Takeda, the largest pharmaceutical manufacturer in Japan, we are poised to further validate our open model of drug development to ensure that patients get the best that medicine has to offer.

For more information about the Harrington Discovery Institute, please visit HarringtonDiscovery.org.
Academic year 2014 – 2015 included several notable achievements for departmental and divisional administration including once again successfully supporting the growth of the department through strong financial stewardship of nearly $300 million in operating, research, philanthropic and developmental resources.

Strong performance in traditional administrative areas such as grants management, business planning, mentorship, recruitment and clinical operations all contributed to moving our complex enterprise forward. Less traditional areas such as e-media communications, web design and social networking helped strengthen professional and referral relationships and set the standard for several new ways of supporting departmental development.

Of special note, this past academic year marked a significant change to the faculty compensation system involving clinical time and salary. This institutional initiative was carefully modeled in the final six months of academic year 2014 – 2015 and became effective July 1, 2015. Under this approach, the component of salary associated with clinical effort will be reset annually based upon individual results against productivity and salary benchmarks as compiled by the Medical Group Management Association. A clinical productivity-based incentive is also a feature of this new program.

The potential impact that institutional and government initiatives may have upon the new compensation program will also be monitored. As examples, the upcoming implementation
The principal goals of the administration are to facilitate the success of full-time faculty, use decades of collective experience in advancing managerial effectiveness, and identify creative solutions to complex operational challenges.

Frederick Creighton, MHA, FACMPE, FACHE  Chief Administrative Officer

of an electronic means to capture patient care charges will put the faculty center stage for recording the associated productivity metric that will drive their clinical compensation. This new software will be implemented late in 2015 and into 2016. Longer term, government-mandated move to “value-based” reimbursement for clinical services will increase the emphasis on quality, patient satisfaction and controlled utilization, versus the new system that is largely based on clinical volume to benchmark.

Organizationally, a long-time strength of the Department of Medicine has been the support staff that was able to effectively manage multiple priorities by understanding and sustaining the initiatives of both the health system and School of Medicine. Institutional support for this model has begun to change and poses a challenge moving forward for an academically oriented clinical department like the Department of Medicine. As we move forward, it will be important to build upon past administrative success as the thinking evolves on how best to maximize support for the faculty.
BY THE Numbers

245
TOTAL NUMBER OF FULL-TIME FACULTY

2.8
RATIO OF CLINICIAN-EDUCATORS TO PHYSICIAN-SCIENTISTS

28
18% OF CWRU STUDENTS RETAINED FOR RESIDENCY

140
TOTAL NUMBER OF RESIDENTS

95
TOTAL NUMBER OF FELLOWS

74
74 PRINCIPAL AND CO-PRINCIPAL INVESTIGATORS

400
DEPARTMENT-BASED IRB REVIEWS

$90M
CURRENT BIOMOTIV PROJECT ACCELERATOR CAPITALIZATION

$504
CWRU-FUNDED RESEARCH PER SQUARE FOOT

150,000
SQUARE FOOTAGE OF BASIC AND CLINICAL RESEARCH SPACE
600,000 TOTAL WORK RELATIVE VALUE UNITS (wRVUs)

111,000 UHMG-BASED AMBULATORY PHYSICIAN SERVICE ENCOUNTERS

225 YEARS OF AGGREGATE SENIOR STAFF EXPERIENCE

$35.4M 2014 NET PATIENT SERVICES REVENUE

+ 7% YEAR OVER YEAR CLINICAL SERVICES INCREASE (wRVUs) / CLINICAL FTE

+$300M ANNUAL FINANCIAL STEWARDSHIP RESPONSIBILITY

+ 10% YEAR OVER YEAR PATIENT REVENUE INCREASE / CLINICAL FTE
Our physicians are all proud faculty members of
CASE WESTERN RESERVE UNIVERSITY

LEADERSHIP

Robert Salata, MD, FACP, FIDSA
Interim Chairman, Department of Medicine
Physician-in-Chief, University Hospitals
Master Clinician in Infectious Diseases
Professor

Baha Arafah, MD
Chief, Division of Clinical & Molecular Endocrinology
Director, Endocrinology Fellowship Program
Professor

Keith Armitage, MD
Vice Chair for Education
Director, Internal Medicine Residency Program
Professor

Ali Askari, MD
Chief, Division of Rheumatology
Director, Rheumatology Fellowship Program
Professor

Robert Bonomo, MD
Vice Chair, Veterans Affairs
Chief, Medical Service, The Louis Stokes Cleveland VA Medical Center
Professor

W. Henry Boom, MD
Interim Chief, Division of Infectious Diseases & HIV Medicine
Professor

Rajesh Chandra, MD
Chief, Division of General Internal Medicine
Associate Professor

Fabio Cominelli, MD, PhD
Chief, Division of Gastroenterology & Liver Disease
Associate Dean for Program Development
Director, Case Digestive Health Research Institute
Director, Digestive Health Institute
Hermann Menges Jr. Chair and Professor

Marco Costa, MD, PhD
Chief Innovation Officer, University Hospitals
Director, Interventional Cardiovascular Center
Co-Director, Valve & Structural Heart Disease Center
Angela and James Hambrick Master Clinician of Cardiovascular Innovation
Professor

Rodney Folz, MD, PhD
Chief, Division of Pulmonary, Critical Care & Sleep Medicine
Hubbel Professor

Stanton Gerson, MD
Director, UH Seidman Cancer Center at UH Case Medical Center
Director, Case Comprehensive Cancer Center
Asa and Patricia Shiverick – Jane Shiverick (Tripp) Professor of Hematologic Oncology

Stefan Gravenstein, MD
Interim Chief, Division of Geriatric Medicine & Palliative Care
Director, Center for Geriatric Medicine
Associate Director for Research, Center for Geriatric Medicine
Professor

Donald Hricik, MD
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Director, UH Transplant Institute
Professor

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Master Clinician in Nephrology II, UH Case Medical Center
Professor

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Chief Scientific Officer, University Hospitals
Chief Research Officer, UH Harrington Heart & Vascular Institute
Ellery Sedwick Jr. Chair and Distinguished Scientist in Cardiovascular Research
Scientific Director, Harrington Discovery Institute
Director, Case Cardiovascular Research Institute
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Associate Director for Clinical Programs, UH Seidman Cancer Center
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Herman K. Hellerstein Chair in Cardiovascular Research
Professor

Jonathan Stamler, MD
Robert S. and Sylvia K. Reitman Family Foundation Distinguished Chair in Cardiovascular Innovation
Director, Harrington Discovery Institute
Director, Institute for Transformative Molecular Medicine
Professor

Usha Stiefel, MD
Vice Chair for Diversity & Faculty Development
Section Chief, Infectious Diseases, the Louis Stokes Cleveland VA Medical Center
Associate Professor
### MENTIONED PHYSICIAN FACULTY

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Donald Anthony, MD, PhD</td>
<td>Assistant Professor</td>
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<tr>
<td>Joshua Augustine, MD</td>
<td>Associate Professor</td>
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<tr>
<td>Cynthia Balina, MD</td>
<td>Clinical Instructor</td>
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<tr>
<td>Amitabh Chak, MD</td>
<td>Professor</td>
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<tr>
<td>Gregory Cooper, MD</td>
<td>Professor</td>
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<tr>
<td>Linda Cummings, MD</td>
<td>Assistant Professor</td>
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<tr>
<td>Marcos de Lima, MD</td>
<td>Professor</td>
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<tr>
<td>Maneesh Dave, MD, MPH</td>
<td>Visiting Instructor</td>
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<tr>
<td>Peter DeGolia, MD</td>
<td>Professor</td>
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<tr>
<td>Clark Distelhorst, MD</td>
<td>Professor</td>
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<td>Afshin Dowlati, MD</td>
<td>Professor</td>
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<td>Pierre Gholam, MD</td>
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<td>Brooke Glessing, MD</td>
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<td>Gowrishankar Gnanasekaran, MD, MPH</td>
<td>Assistant Professor</td>
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<td>Barbara Gripshover, MD</td>
<td>Associate Professor</td>
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<td>Lyndsay Harris, MD</td>
<td>Professor</td>
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<td>Karen Horowitz, MD</td>
<td>Associate Professor</td>
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<td>Jordan Kazakov, MD</td>
<td>Assistant Professor</td>
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<td>Timothy Kern, PhD</td>
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<td>Christine Koniaris, MD</td>
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<td>Hillard Lazarus, MD</td>
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<td>Michael Lederman, MD</td>
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<td>Debra Leizman, MD</td>
<td>Assistant Professor</td>
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<td>Taryn Lee, MD</td>
<td>Assistant Professor</td>
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<td>Sanford Markowitz, MD, PhD</td>
<td>Professor</td>
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<td>Clifford Packer, MD</td>
<td>Associate Professor</td>
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<td>Mahboob Rahman, MD</td>
<td>Associate Professor</td>
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<td>Arash Rashidi, MD</td>
<td>Clinical Assistant Professor</td>
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<td>Sharmeela Saha, MD</td>
<td>Assistant Professor</td>
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<td>Robert Schilz, DO, PhD</td>
<td>Associate Professor</td>
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<td>Alvin Schmaier, MD</td>
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<td>Steven Strausbaugh, MD</td>
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<td>Kingman Strohl, MD</td>
<td>Professor</td>
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<td>Constantine Tsigrelis, MD</td>
<td>Assistant Professor</td>
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<tr>
<td>Richard Walsh, MD</td>
<td>Professor</td>
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University Hospitals Case Medical Center is also ranked in the “Best Hospitals” in America by U.S. News & World Report.

medicine.case.edu

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